TRANSITION EXPERIMENTS

Exploring societal changes towards sustainability

Suzanne van den Bosch 2010

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Transitie-experimenten

Verkennen van maatschappelijke veranderingen richting duurzaamheid

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Preface

"You are a hot-headed woman, your husband must be very patient." These were the words that an Indian Ayurvedic doctor spoke to me when I was half way down my PhD research. I usually do not consider myself as being "hot-headed", though my forehead did feel hot for a long time, which seemed to relate to my overactive mind. During my PhD research I certainly had to learn how to keep body and mind balanced. Now my PhD research is finished, I have not only learned a lot about my research subject and how to do meaningful research, but I have also learned a lot about myself and life in general. And similar to learning that takes place in a 'transition experiment', my learning process was facilitated by 'space' that was provided by several organisations and people. This space enabled me to do things in a different way, to be creative, to discover, to make mistakes and learn from this.

I am eager to take this opportunity to thank the many organisations and people that have been important in my learning process. First, I would like to thank the Knowledge Network for System Innovation and Transitions (KSI). KSI did not only financially support my PhD research, it also allowed me to be part of an inspiring network of both established and young 'transition researchers'. The KSI winter schools with the three Js and the other PhD students in particular have been a great inspiration and boosted me with high-quality presentations, discussions, music and creative performances. In between these 'scientific retreats', I worked with great pleasure at the Dutch Research Institute for Transitions (DRIFT). I thank all DRIFTERS for being such unique individuals and an extraordinary collective: you have been the most intellectual, symbiotic, energetic, non-TV watching, well-read and chaotic group I have ever worked with! I reminisce our 'DRIFT outings' to all those special, green places and hope that we will keep connected in some way. Thirdly, I would like to thank the Netherlands Organisation for Applied Scientific Research (TNO) for financially participating in my KSI supported PhD research, and enabling publishing intermediate research results in several practice-oriented essays. I am especially grateful to Tom van der Horst, Emma van Sandick and René Kemp (ICIS) for their motivating guidance during the first three years of my research. A special thanks also goes out to Martin van de Lindt, for his stimulating support in my case study of the Transumo programme.

With regard to all the case studies that I conducted for this research, I would like to thank several programmes and their related projects and organisations: the Learning for Sustainable Development programme, the Transumo programme, the Transition Programme in Long-term Care and ACT-Youth Rotterdam. The people with whom I cooperated in these programmes all shared an interest and effort to contribute to sustainability transitions and were eager to learn about how Transition Management (TM) theory could support them. I would like to thank these 'TM practitioners' for providing me with unique learning environments for conducting my research and further developing the ideas about transition experiments. One 'TM practitioner' I would like to thank in particular is Jord Neuteboom, who created the op-

portunity to conduct exciting action research in the nearly unexplored area of the transition to sustainable care.

In the process of writing this PhD thesis my colleague PhD students at DRIFT and my promotor Jan Rotmans have been truly supportive. To support each other with writing (or starting to write) our PhD theses, the DRIFT PhD students invented "GORR" sessions (the meaning of this Dutch abbreviation remains secret). In these sessions I could discuss my first draft chapters, which was very useful (and I admit sometimes very frustrating because of the fierce criticism!). Without the other DRIFT PhD students my research would not have been such a pleasant and challenging experience. I would especially like to thank my roommate Mattijs for his good company in our 'ordered-chaos' office (with piles of papers to-be-read, plants to-be-watered and "yes, we can!" poster).

I would like to express my most fundamental thanks to my promotor prof. Jan Rotmans, who has inspired and guided this PhD research on transition experiments from start to finish. My meetings with Jan Rotmans were always illuminating and provided me with sharp feedback and new directions. I once heard a joke about promotors who view their PhD students as "brains on a stick", but this certainly does not apply to Jan Rotmans. About one year ago (in January 2009), I walked into Jan's room and told him that I had great news. Jan guessed that it might had something to do with a new step in my career. But when I told him I was pregnant, Jan immediately recognised the greatness of this news and took the time to talk with me about how it is to expect your first child. The birth of Luna was certainly the most wonderful experience in my life and after that my life was (indeed) "fundamentally transformed". After my maternity leave, Jan Rotmans had to remind me that despite all the major changes in my life, my PhD thesis was still the same and that I only had to finish it (instead of completely rewriting it). Jan, thank you for giving me the 'human' and scientific guidance that I needed.

I finally would like to thank my friends and family for being who they are and also giving me the space to just *be*. Dad, when I was little you wrote to me to walk the road of life without fear, that is one of the wisest lessons a father could teach his daughter. Mom, your ever present optimism and "can do" mentality are a great joy and inspiration to me. Ruud, your teasing brotherly advice at my wedding day that I should "dare to be a good housewife" appeared to be quite challenging! Yvonne, you will always be my little 'opposite' sister (a rebel, a good football player and full of humour); we can definitely learn a lot from each other.

I would like to dedicate this book to Max and Luna. Max, thank you for supporting me in everything I do and enriching my life with your endless love and wisdom. Luna, you are so pure and sweet, I feel humble and blessed for being your mama. Because of your love, I can now finish this book and accept it as it **is**.

Suzanne van den Bosch – Ohlenschlager
Leiden, January 2010

LEAVE IT TO ME AS I FIND A WAY TO BE
CONSIDER ME A SATELLITE FOREVER ORBITING
I KNEW ALL THE RULES BUT THE RULES DID NOT KNOW ME
GUARANTEED

- EDDIE VEDDER

Eddie Vedder (2007)
"Guaranteed", Into the Wild
Recorded at Studio X, Seattle, Washington
J Records, Sony BMG Music Entertainment

Contents

CHAPTER 1

Introduction

1.1 Societal and scientific relevance of this research

This first section introduces what transition experiments are and why understanding and facilitating them is important for researchers and practitioners. The subtitle of this book preludes that transition experiments are about 'exploring societal changes towards sustainability'. Fundamental societal changes are necessary because the present ways in which many societal needs (e.g. the need for energy, mobility, health care and agriculture) are fulfilled are unsustainable. Within society there are increasing concerns about various *symptoms of unsustainability*, such as climate change, depletion of energy resources, congestion, a decreasing workforce and increasing costs of health care, and outbreaks of diseases in agriculture. Because these types of problems are highly uncertain and complex, short-term and 'ready made' solutions are not available or not sufficient. Society therefore needs an approach that makes it possible to overcome persistent problems (i.e. problems that have not been solved for decades) and stimulate *transitions* to a more 'sustainable society' in which "the needs of the present are met without compromising the ability of future generations to meet their own needs"[1]. These *transitions* take at least one generation and can be understood as fundamental changes in the dominant ways societal needs such as energy, mobility, health care, housing and agriculture are fulfilled.

In order to influence transitions towards sustainability, Dutch scientists in interaction with policy makers and social actors have developed the governance approach *Transition Management (TM)* (Rotmans et al., 2001). A core notion of TM is that sustainable development requires searching, learning and experimenting. Within the TM literature 'experimenting' refers to innovative, small-scale experiments that are conducted in practice[2] to address persistent societal problems (Rotmans and Loorbach, 2006, Loorbach, 2007). This literature is related to the literature on *Strategic Niche Management (SNM)*, which also attributes an important role to experimenting, but is based on a different approach (Chapter 2). One of the key instruments of TM is a *transition experiment*. Transition experiments are conducted in practice to explore radically new ways to fulfil societal needs; for example, fulfilling the need for health care in a fundamentally different way (Chapters 6 and 7). Transition experiments were initially defined as "practical experiments with a high level of risk (in terms of failure) that can make a potentially large contribution to a transition process" (Rotmans, 2005:50). This definition, however,

1. This refers to the Brundtland definition of sustainability "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (WCED, 1987)

2. In this book 'experimenting' therefore does not refer to scientific experiments (that originated in the natural sciences but are also widely applied in the social sciences), which usually test a certain theory in a controlled environment such as a laboratory.

did not describe how transition experiments differ from other types of experiments. Furthermore, the "potentially large contribution to a transition" was not explained. Additional questions that were brought forward by TM practitioners and scientists were "how can the contribution of transition experiments to a transition be influenced?" and "how can ongoing innovation projects or experiments be transformed into transition experiments?". Because the literature on transition experiments is limited and lacks an integrated conceptual framework, a general question was "what kind of framework could support TM practitioners and scientists in analysing and managing transition experiments?".

This book is written to answer these questions *and* bring up new challenging questions for further research and practice. The PhD research that was conducted for this purpose therefore has an explorative character and is oriented towards both science and practice.

1.2 Research objective and questions

The research that underlies this book started with two ambitions: (1) to contribute to theory development about transition experiments in the field of 'transition studies' and specifically Transition Management (Rotmans et al., 2001, Loorbach, 2007) and additionally to contribute to the literature on Strategic Niche Management (Kemp et al., 1998, Weber et al., 1999, Hoogma et al., 2002) and (2) to contribute to the development of practice-oriented concepts (targeted at policy makers, programme managers and project managers) regarding how transition experiments could be used as instruments to further sustainable development. Before describing the research approach that enabled combining these two ambitions, this section first describes the research objective and questions.

The main objective of this research is to increase the insight into *transition experiments*, and specifically their characteristics and potential contribution to sustainability transitions and how these can be influenced ('managed'). To realise the above ambitions, this 'insight' should include the development of theoretical and practice-oriented concepts. Therefore, the desired research result is a *conceptual framework on transition experiments*, which is empirically tested and theoretically grounded. This framework should support scientists and practitioners in analysing and managing transition experiments, to stimulate their contribution to transitions towards a more sustainable society. This leads to the following research question:

How can a transition experiment and its potential contribution to a sustainability transition be analysed and managed and what conceptual framework could support this?

This central research question can be specified in the following sub-questions:

1) *What are the distinguishing characteristics of a transition experiment?*

2) *How to transform an ongoing innovation project into a transition experiment?*[3]

3) *Through which mechanisms does a transition experiment contribute to a sustainability transition?*

4) *How to manage transition experiments?*

These research sub-questions are demarcated as follows:
Ad 1: Distinguishing characteristics in comparison to a 'classical innovation experiment'[4]
Ad 2: Ongoing innovation projects with a potential contribution to a sustainability transition
Ad 3: Mechanisms in terms of how the contribution to a sustainability transition could 'work' (e.g. which processes take place and with what results)
Ad 4: Managing in terms of influencing or 'guiding' transition experiments and their potential contribution to sustainability transitions. Possible management activities include selecting transition experiments, facilitating learning and monitoring.

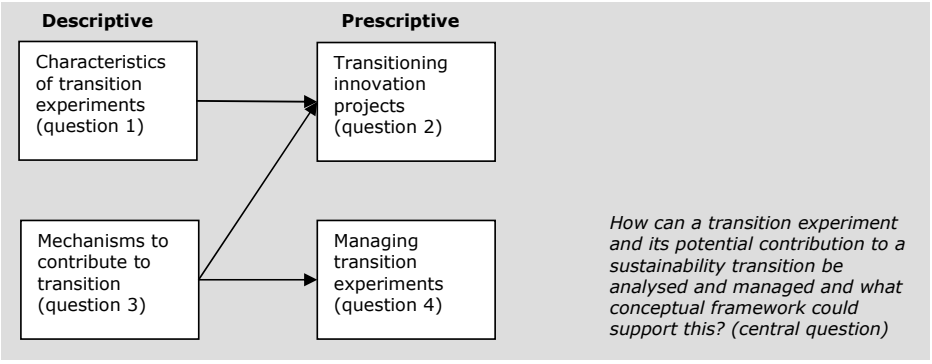

Figure 1.1 Relation between research sub-questions

3. This transformation of an ongoing innovation project into a transition experiment is referred to as 'transitioning'. Chapter 5 elaborates on this concept.

4. 'Classical innovation experiments' refer to the dominant instruments to stimulate innovation (e.g. pilot projects and demonstration projects that are supported by subsidies or private R&D investments). Chapter 3 elaborates on this distinction.

The answers to questions 1 and 3 are mainly *descriptive*, describing what a transition experiment is and how it could contribute to a transition. This provides a basis for answering questions 2 and 4, which *prescribe* how practitioners (e.g. policy makers, programme managers and project leaders) can influence the characteristics of transition experiments and their potential contribution to sustainability transitions. This is illustrated in Figure 1.1.

1.3 Research methodology and approach

Deduction & Induction

This research has an explorative character because transition experiments are a new type of experiment and the specific literature on this concept (Rotmans, 2005, Kemp and van den Bosch, 2006, Raven et al., 2008, Van den Bosch and Rotmans, 2008) is limited. The research objective and questions require the development of a conceptual framework, which can only partly be *deduced* from existing theories on sustainability transitions, Transition Management and Strategic Niche Management (described in Chapter 2).

This research therefore builds upon this existing literature and develops an integrated conceptual framework on transition experiments. The purpose of this framework is to improve the (scientific) understanding and (practical) influencing of transition experiments. The development of the framework is based on a combination of *deduction* and *induction*. Research sub-question 3 - "Through which mechanisms does a transition experiment contribute to a sustainability transition?" - is an exception, because this question can only be answered in a deductive way by conducting a literature study. Answering research sub-question 3 in an inductive way would require a historical case study. However, historical examples of 'targeted transitions' (Rotmans, 2005: 16) with a normative sustainability goal and with transition experiments as a key instrument to stimulate the transition are not available. All other research sub-questions are answered by an iterative approach of *deducing* concepts from theory and testing and further developing new concepts in practice (Figure 1.2). *Induction* is considered crucial for the development of the conceptual framework, for three main reasons. First, existing theory lacks specific concepts on transforming an ongoing project into a transition experiment and stimulating the contribution of transition experiments to transitions. Second, analysing and managing a transition experiment is always context dependent and general theoretical concepts therefore need to be generalised from the specific experiences of transition experiments. The third reason is that the conceptual framework should contain practice-oriented concepts, so it is important to develop these concepts in practice and test if they actually work.

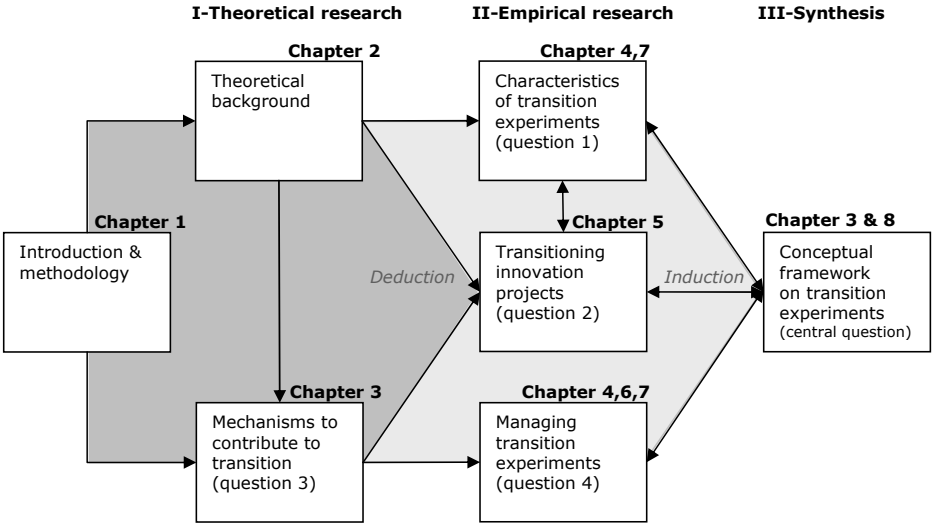

Figure 1.2 Structure of research and thesis

Methods

The development of the conceptual framework is based on two main methods: a *literature study* and *case study research*. The literature study explores existing theories related to transition experiments and includes theories on innovation (e.g. niches, learning, diffusion) sustainability transitions (e.g. multi-level perspective, transition patterns), Strategic Niche Management (e.g. niche-development, niche-regime interaction) and Transition Management (e.g. TM-cycle, TM-instruments, transition experiments). Based on this literature study, research sub-question 3 can be answered, which results in the identification of mechanisms through which a transition experiment contributes to a transition. These mechanisms can be regarded as the core of the conceptual framework on transition experiments. The literature study and these key mechanisms provide the theoretical basis for conducting four case studies on transition experiments. Based on these case studies the conceptual framework is further elaborated with concepts regarding the characteristics of transition experiments, transitioning ongoing innovation projects and managing transition experiments (research sub-questions 1, 2 and 4).

A case study approach is chosen because this enables an in-depth study of transition experiments within their specific context. A case study can be defined as "an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly defined" (Yin, 2003:13). The data for the case studies is gathered by conducting open interviews, analysing documents, participating in meetings and workshops, and in some cases by directly participating in management activities (e.g. the selection or monitoring of

transition experiments). The case studies and different research roles in each case study are introduced and explained in the next section.

Action research approach

An important methodological choice that underlies this research is to follow an approach in which the researcher actively interacts with practitioners to develop and test new theory and practices. In this interactive process the researcher and practitioner strongly influence each other and scientific research and practical action are interwoven with one another.[5] This implies that in some cases the practitioner is further developing theoretical concepts to support his or her practical activities. An example is the case study that is described in chapter 5, in which the practitioners involved in the Transumo programme further developed concepts on 'transitioning' in interaction with TM researchers. It also implies that in some cases the researcher is conducting practical activities to support further theory development. Examples are the case studies that are described in chapters 6 and 7 in which the researcher involved in the Transition Programme in Long-term Care played both a scientific researcher role and a practical 'Programme Team member' role aimed at further developing TM theory *and* stimulating the transition towards sustainable care.

This type of research, in which researchers and practitioners actively support each other with the purpose of developing theory and taking action to stimulate societal change in a more sustainable direction, is labelled here as *action research*. Within the literature on action research various interpretations co-exist.[6] In this research the interpretation of action research is based on the following definition by Greenwood and Levin (1998:6) "Action research is a form of research that generates knowledge claims for the express purpose of taking action to promote social change and social analysis". This research on transition experiments deals with a specific type of social change (transitions) and social analysis (transition analysis) and a specific type of actions (transition management activities) to stimulate transformative change. According to Greenwood and Levin (1998:49) "the important point is how the discourse between researchers and local group members gradually shapes a mutual learning situation, affecting both research and actions". Building upon these definitions, the specific action research approach in this research can be defined as "the interaction between researchers and practitioners involved in transition experiments, who together develop knowledge and

5. This methodology is also referred to as 'interaction research', which is based on three assumptions: (1) action is always related to *the context* in which action is taken; (2) research and action are interwoven with one another and (3) research and action are connected by experiment, test, and social intervention (Zouridis, 2003).

6. It is not the purpose of this chapter to present an extensive overview of action research literature. A general overview of some of the main action research positions is provided by Greenwood and Levin (1998). A review of recent literature and trends in action research is provided by Dick (2004).

practices to better understand and influence transition experiments and their contribution to transitions towards sustainability". The choice to follow this action research approach is based on three lines of argumentation:

1. Transition Management has been developed recently (Rotmans et al., 2000, 2001, Loorbach, 2007), therefore, many transition experiments have only recently started. To study these experiments requires *real-time* empirical research. This type of research enables direct interaction between the researcher and the research subject.
2. Various discussions with practitioners involved in transition experiments brought forward that these practitioners have a need for a type of research that *supports* them in translating theoretical TM concepts to the specific contexts of their transition experiments. This type of research also allows the researcher to learn from these interventions to improve both theory and practices.
3. When researchers and practitioners actively interact and together apply and further develop theory and practices, then this enables researchers to gain an *in-depth* understanding of empirical phenomena (i.e. what really happens in practice). Furthermore, it enables both researchers and practitioners to test the practical value of theoretical concepts (i.e. does the theory work) to improve the way practitioners address issues and solve problems (i.e. does the theory have added value).

Though the term 'action research' characterises the core of the research approach, this research is also based on other methodological notions. The section below describes the most important notions: 'Mode 2 knowledge production' and 'sustainability science'.

Mode 2 knowledge production

The notion of *Mode 2 knowledge production* (Gibbons et al., 1994) refers to a new type of knowledge production, which is transdisciplinary and hence transcends scientific institutions (e.g. universities and knowledge institutes) and disciplines. Mode 2 knowledge is produced in the context of application, which differs from classical 'Mode 1 knowledge production' which produces knowledge in an academic context.[7] Because this research aims to develop theoretical *and* practice-oriented concepts, a choice is made to develop these concepts in the context of the case studies in interaction with practitioners. The underlying rationale is that this produces more valuable knowledge in comparison to first developing knowledge and only later applying this in practice. Furthermore, it

7. These different types of research also result in different types of research output. Mode 1 results in knowledge that is published in disciplinary research journals (preferably with a high scientific impact) and is judged by disciplinary peers. While, Mode 2 knowledge production results in both scientific publications in interdisciplinary research journals (which often have a lower scientific impact) and societal publications, which can also be judged by 'novel forms of quality control' that include a wider set of quality criteria (e.g. the societal impact of knowledge). Hessels and Van Lente (2008) state that "Due to the wider set of quality criteria, it becomes more difficult to determine 'good science', since this is no longer limited to the judgement of disciplinary peers."

speeds up the knowledge development process because there is continuous learning, reflection and adjustment. The development of knowledge together with practitioners (e.g. programme managers, project leaders, consultants) can be understood as a *co-production* process.[8]

Sustainability Science

A second important methodological notion underlying this research is *sustainability science*, which refers to an emerging field of science that is "defined by the problems it addresses rather than by the disciplines it employs (…) the field seeks to facilitate (…) a transition toward sustainability (Clark, 2007:1737)". Sustainability science uses the concept of sustainable development as a normative, directive framework to "simultaneously understand phenomena and solve problems"[9]. The field of 'transition studies' (Chapter 2), to which this research on transition experiments aims to contribute, is based on the same notion. It takes up the challenge to stimulate transitions that are already underway in the direction of a (more) sustainable society (Rotmans, 2005).[10]

Building upon this notion, this research on transition experiments is based on three main normative assumptions:

- A sustainable society is better than the current society;
- Transitions towards a sustainable society should be stimulated;
- Transition experiments and their potential contribution to sustainability transitions should be better understood and facilitated.

It is evident that these normative assumptions influence the research approach. However, this research does not aim to define *what* is or is not sustainable without taking into account the perceptions of societal actors. Within the Transition Management approach the analysis of problems of unsustainability and the development of sustainability visions is facilitated by TM researchers, but the most important input is provided by TM practitioners (e.g. the participants of a transition arena or transition experiment). In this research, sustainable development is therefore mainly applied as a normative starting point in the selection of cases and in the recommendations that are provided to practice during and after the case studies.

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8. The outcome of this research therefore does not only include this thesis and several scientific publications on transition experiments (Van den Bosch and Taanman, 2006, Raven et al., 2010) but also includes three essays oriented at practitioners and researchers (Kemp and van den Bosch, 2006, Van den Bosch and Rotmans, 2008, Van de Lindt et al., 2009) and several reports that were developed in interaction with practitioners (including a 'competence kit' on transition experiments and a handbook for transition monitoring of the transition experiments in health care).

9. This quotation is derived from the description of the journal Sustainability Science, which is published by Springer (www.springer.com).

10. Other types of transitions, which do not have a normative sustainability goal, are therefore excluded from this research.

1.4 Introduction to case studies & different research roles

Availability of cases: ideal cases vs adequate cases

Transition experiments that are implemented as part of a broader Transition Management approach (which is aimed at influencing and directing sustainability transitions), are a recent empirical phenomenon. After the concept of sustainable development was introduced by the Brundtland report in 1987 (WCED, 1987), the concepts of transitions and Transition Management (TM) were developed in 2000 (Rotmans et al., 2000) and were first applied in practice in 2001 (Chapter 2). The first examples of TM in practice mainly involved 'transition arenas' (e.g. Parkstad Limburg and Flanders in Loorbach, 2007 and Zeeland in Henneman, 2008), which were facilitated and supported by TM researchers. Hence, existing case studies of TM processes mainly focus on the process of setting up an arena and developing a sustainability vision and transition pathways (Loorbach, 2007). In general, the outcome of these arenas includes a portfolio of transition experiments that fit within the developed vision and pathways. However, when this research started the ongoing transition arenas had not yet implemented their portfolios of transition experiments in practice, which limited the possibilities for case study research. Transition experiments had been set up in other examples of TM in practice in which TM researchers were not directly involved. However, in these examples the TM approach was not fully implemented, which influenced the character of the experiments. For example, in the Dutch Energy Transition the so-called 'transition experiments' included mainly technology and economy oriented experiments that were focussed on short-term results instead of learning in order to contribute to a transition (Kemp and van den Bosch, 2006).

The fact that TM was developed and implemented only recently and that application of TM in practice could deviate from the theoretical TM approach, limited the availability of 'ideal' cases of transition experiments. Such an ideal case would involve transition experiments that are set up and managed based on the outcomes of a transition arena. Moreover, transition researchers should be directly involved in these transition experiments to enable an *action research* approach (section 1.3) and further develop the theory and practice of transition experiments. In such an 'ideal case study' the researcher could specifically study the interaction between transition experiments and other TM instruments (including a transition arena, sustainability vision and transition pathways). However, this type of case study was not available within the time span of this research. Therefore, a choice was made to select 'adequate cases' of transition experiments based on selection criteria and the opportunities to conduct action research.

Selection of cases

The selection of cases can be understood as an iterative process in which the development of the conceptual framework on transition experiments influences the selection of cases and the case studies influence the further development of the conceptual framework, which can then lead to the selection of new cases.[11] Based on the developed definition of a transition experiment (Chapter 3), an *adequate* example of a transition experiment should at least encompass:

- an innovation project with potential contribution to a sustainability transition;
- a connection to a societal challenge;
- a focus on learning;

To contribute to a general insight into transition experiments, a *variety* of cases is selected that vary in terms of:

- the specific sustainability transition to which the experiment can contribute;
- the phase of the experiment, ranging from just started to completed;
- the success of the experiment in terms of its potential to contribute to a sustainability transition;

Furthermore, a methodological criterion for the selection of case studies is the possibility to conduct *action research* and interact with the practitioners involved in the transition experiments (e.g. project managers and programme managers). This requires case studies with a 'learning-by-doing and doing-by-learning' environment which enables the researcher to:

- contribute to the objectives of the transition experiment as well as the research objectives;
- *switch* between playing a reflective, analytical researcher role and a participative, intuitive practitioner role;
- conduct research *parallel* to the activities that are conducted in the transition experiment (or programme that facilitates experiments); the time span of the experiment should therefore fit the time span of the research;

The applied selection approach can best be explained (ex-post) by introducing each case study and the context in which each case was selected:

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11. An example of this iterative process is the selection of the case studies of the Transition Programme in Long-term Care (Chapters 6 and 7). Prior to this case study, a 'pilot-case study' was conducted about a transition experiment in the care sector (Hubertus Drieschoten). The lessons that were learned in this case study, contributed to the development of the conceptual framework on transition experiments, which was further developed and applied in the case study of the Transition Programme in Long-term Care. Based on selection criteria that were developed in this programme, the transition experiment ACT-Youth was selected, which provided an additional case study. (This iterative process could be further continued by a follow-up case study on the transition experiment District Care, which could further develop the concept of scaling up).

Chapter 4: Ex-post analysis of Learning for Sustainable Development (LfSD) projects

This case study involved 6 projects of the Learning for Sustainable Development (LfSD) programme (2004-2007), which were aimed at learning about and implementing sustainable development at a local level. These projects varied in learning objectives and societal challenges, and could potentially contribute to specific transitions in spatial planning/housing, water and energy. The LfSD-programme management requested DRIFT[12] to analyse a selection of their projects, with the following, straightforward question as a starting point: "Are LfSD-projects transition experiments?". The case study could therefore mainly contribute to answering research sub-question 1: *What are the distinguishing characteristics of a transition experiment?* The case study also contributed to initial insights into research sub-question 4: *How to manage transition experiments?*

The case study was conducted between June 2007 and January 2008 and enabled applying and improving the conceptual framework on transition experiments in an *ex-post* analysis, since the LfSD-projects had already or almost been completed. The aim of the case study was to formulate concrete recommendations regarding increasing the contribution of LfSD-projects to sustainability transitions. These recommendations provided an *intervention* between two programme periods of LfSD, and thus enabled the researcher to apply theory on transition experiments to support the development of the new LfSD programme (2008-2011). Hence, the researcher could play both an *ex-post analyst role* (analysing the 6 LfSD-projects) and an *ex-ante co-designer role* (providing input to the design of the succeeding LfSD-programme).

Chapter 5: Transitionising innovation projects in Transumo programme

This case study was actually a combination of 3 case studies of innovation projects that were supported by the Transumo (TRANsition SUstainable MObility) programme (2004-2009). Within Transumo, both project leaders and programme managers were interested in receiving support regarding implementing a transition perspective in their ongoing projects. The cooperation between Transumo and KSI[13] (including DRIFT and TNO) enabled supporting three Transumo projects with a 'transitioning' process: People Mover on the Road (POW), European Networks (EN) and Rush Hour Avoidance (RHA). These three projects all aimed to stimulate a transition to sustainable mobility, but varied in phases and level of success. The three case studies contributed to answering research sub-question 2: *How to transform an ongoing innovation project into a transition experiment?*

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12. DRIFT is the Dutch Research Institute For Transitions of the Erasmus University Rotterdam, where this PhD research was conducted.

13. KSI is the Dutch Knowledge network on System Innovations and transitions. It comprises over 80 researchers from a dozen universities and research institutes with specific knowledge and expertise of transitions and system innovations (www.ksinetwork.org).

The case studies were conducted between 2006 and 2008 as part of a KSI project with a double track approach: (I) this PhD research on transition experiments and (II) the development of practical methods and tools for transition experiments. Within this KSI project, TNO and DRIFT developed the 'transitioning method' that supported the transformation of ongoing innovation projects into transition experiments. This method was developed and tested based on the experiences with transitioning the three Transumo projects. The research roles in these case studies included an *ex-post analyst role* in all three projects (analysing the transitioning process), and a *real-time participant role* in European Networks and Rush Hour Avoidance (participating in workshops and discussions).

Chapter 6: Managing a portfolio of transition experiments in health care

This case study involved the development and management of a portfolio of transition experiments, as part of the Transition Programme in Long-term Care (2007-2010). DRIFT shared the responsibility of managing this transition programme together with experts on health care (CC Care Advisors) and organisational management (Ernst&Young). In total 26 transition experiments were supported to stimulate a transition in long-term care. Hence, this case study provided insight into research sub-question 4: *How to manage transition experiments?*

The case study was conducted between 2006 and 2008, while continuously switching between two roles: (1) a researcher role to provide scientific support and (2) a Programme Team member role to provide practical support.[14] This enabled developing theory and practices regarding the management of transition experiments at the *programme level* (e.g. selecting promising experiments, providing space to set up the experiments, facilitating social learning and transition monitoring). Because DRIFT was already involved before the Transition Programme in Long-term Care started, this enabled an *ex-ante co-designer role* (providing theoretical input to the action plan of the programme). During the programme the research role included an *ex-post analyst role* (analysing the management activities, e.g. the selection process), a *real-time participant role* (participating in the Programme Team) and a *real-time co-designer role* (developing and improving the management activities, e.g. selection criteria and monitoring framework).

Chapter 7: Managing transition experiment ACT-Youth Rotterdam

This case study involved the development and management of *one* of the 26 transition experiments in the Transition Programme in Long-term Care: "ACT-Youth Rotterdam". With support of DRIFT, this experiment was set up and managed as a transition experiment as much as possible. Hence, this case study also contributed to answering research

14. These two roles are interrelated and were not strictly separated in practice. Chapter 6 elaborates on this.

sub-question 1: *What are the distinguishing characteristics of a transition experiment?* and research sub-question 4: *How to manage transition experiments?*

The case study was conducted between 2007 and 2008, and implied continuously switching between a researcher role and Programme Team member role. The direct involvement in this transition experiment and the intensive interaction process with the managers of ACT-Youth enabled *in depth* insight into what happens in a transition experiment. The case study describes the approach that was followed in setting up and managing ACT-Youth, the barriers that were encountered in practice, the way in which the management dealt with these barriers and the interaction between ACT-Youth and the Transition Programme in Long-term Care. The research role included an *ex-post analyst role* (analysing the development of ACT-Youth), a *real-time participant role* (participating as a Programme Team member) and a *real-time co-designer role* (developing and improving how the experiment was set up and managed).

Differences in research perspectives, roles and writing styles

Table 1.1 gives an overview of the variety of perspectives in which the cases were studied, including an *ex-ante, ex-post* and *real-time* perspective. These three perspectives enabled three different types of research roles. An ex-ante perspective, doing research before a project or programme actually started, enabled providing input to the development of new transition experiments (*co-designer role*). In addition, an ex-post perspective provided good conditions for analysing how a potential transition experiment had developed (*analyst role*). And a real-time perspective made it possible to participate in the management of transition experiments (*participant role)*, and change and improve the way in which transition experiments were set up and managed (*co-designer role*).

Eventually, the different research perspectives and roles also resulted in different *styles of writing* the case studies:

– The ex-post analysis of the 6 projects supported by the Learning for Sustainable Development programme resulted in an analytical writing style, which was focussed

Table 1.1 Different research perspectives related to different roles in case studies

Roles	**Research perspectives**		
	Ex-ante	*Ex-post*	*Real-time*
Analyst	-	LfSD, Transumo (POW, EN, RHA), TPLC, ACT-Youth	-
Participant	-	-	Transumo (EN, RHA), TPLC, ACT-Youth
Co-designer	LfSD, TPLC*	-	TPLC, ACT-Youth

*TPLC = Transition Programme in Long-term Care

on formulating recommendations to support the design of the succeeding LfSD programme.
- The three case studies of the Transumo projects resulted in a detailed description of the *process* to transform these projects into transition experiments. However, the focus on this 'transitioning process' decreased the space for describing the *substance* of each Transumo project.
- In the Transition Programme in Long-term Care the researcher was already indirectly involved before the programme had started and the researcher was directly involved during the first phase of developing and managing a portfolio of transition experiments. This resulted in a case study with a very close description of the process.
- The case study of ACT-Youth enabled the most elaborate description of a transition experiment, because of the direct involvement of the researcher in setting up and managing this transition experiment. However, since the researcher was not involved in ACT-Youth right from the beginning (ACT-Youth already started in 2005), this enabled applying a more distant, analytical perspective in writing this case study as compared to the case study of the Transition Programme in Long-term Care.

Reflection on the quantity, diversity and quality of case studies:
The four case studies encompass in total 35[15] (potential) transition experiments.[16] Each case study contributes to answering one or two of the research sub-questions with the exception of question 3, which is answered with a literature study. Hence, the conducted case studies are sufficient to answer the main research question and enable developing and testing the conceptual framework on transition experiments. It is regarded as sufficient because conducting *more* case studies would result in a too broad conceptual framework that would be less valuable scientifically and practically. Furthermore, conducting more case studies (with similar characteristics) would not necessarily have to lead to fundamentally different insights. This is based on the assumption that with each additional case study the relative learning effect is reduced further. Conducting *fewer* case studies was not considered as a valuable option either because this would limit the possibility to answer all research sub-questions. Furthermore, this would also limit the possibility of generalizing the case studies to theoretical concepts (note: this differs from generalizing to populations; Yin, 2003:10).

15. 6 LfSD-projects (*Chapter 4*) + 3 Transumo projects (*Chapter 5*) + 26 transition experiments in health care (*Chapter 6 and one detailed description of ACT-Youth Rotterdam in Chapter 7*) = 35

16. Because the focus of the case studies is on the analysis and management of these experiments, not every case study includes a detailed description of the substance of each experiment.

Because the research has an explorative character and a limited number of case studies, the conceptual framework does need to be further generalised in follow-up research. However, the *diversity* of the case studies that are conducted in this research is considered as sufficient because the studied (potential) transition experiments aim to contribute to different sustainability transitions (e.g. in mobility, health care and sustainable development in general), vary in terms of the phase of the experiments and the related research perspectives (ex-ante, ex-post and real-time), and their level of success (in terms of potential contribution to a transition).

The *quality* of the case studies can be assessed by looking at the extent to which the case studies have added value for both science and practice. The case studies show that different questions that were asked in practice can be directly related to the research sub-questions. For example, the LfSD programme was mainly interested in studying *ex-post* if their projects could be characterised as a transition experiment (question 1). And the Transumo programme had an explicit interest in transforming their ongoing innovation projects into transition experiments (question 2). The Transition Programme in Long-term Care was the first programme that applied TM in practice, without first developing a vision in a transition arena; the initial interest in this programme was to develop and manage a portfolio of transition experiments (question 4).

This research is therefore based on the methodological assumption that the number, nature and choice of the conducted case studies can be regarded as valid because they enable gaining *sufficient in-depth insight into the analysis and management of transition experiments*. Furthermore, the case studies provide sufficient opportunities to further *develop the conceptual framework on transition experiments and test its scientific and practical value* (e.g. do the theoretical concepts work in practice? and do they have added value for practitioners?).

1.5 Structure of the research and thesis

This thesis encompasses both theoretical and empirical research, which is synthesized into a conceptual framework on transition experiments. The *theoretical research* consists of two parts. First, a literature study is conducted on the theoretical background and existing theoretical concepts related to transition experiments (Chapter 2). This is followed by the development of a conceptual framework for analysing and managing transition experiments (Chapter 3). The central mechanisms in this framework are deduced from a literature study on sustainability transitions, Transition Management and Strategic Niche Management; all other concepts in the framework are based on both a literature study (deduction) and case study research (induction). The *empirical research* encompasses four case study chapters that each address one or two of the research sub-questions

(Chapters 4 to 7). Because the research has a *non-linear (iterative)* character, the order of the chapters cannot be presented in a completely chronological way. A choice is made to present the conceptual framework *after* the theoretical background and *before* the case studies, because this provides the reader with a theoretical basis for understanding the case studies. As most of the cases were studied in parallel (between 2006 and 2008), they are presented as chronologically as possible: starting with the ex-post analysis of the LfSD-projects (Chapter 4), which was the first completed case study, and ending with the case study of ACT-Youth Rotterdam (Chapter 7), which was the last completed case study. After the case studies, the results are synthesized and the central research question is answered (Chapter 8).

Figure 1.2 illustrates the (non-linear) structure of this research and thesis. The Figure is not chronological but shows the relations between the research approach, research questions and chapters. It also shows that the development of the conceptual framework on transition experiments is based on a combination of *deduction* and *induction* (section 1.3).

The following chapters consist of three main parts:

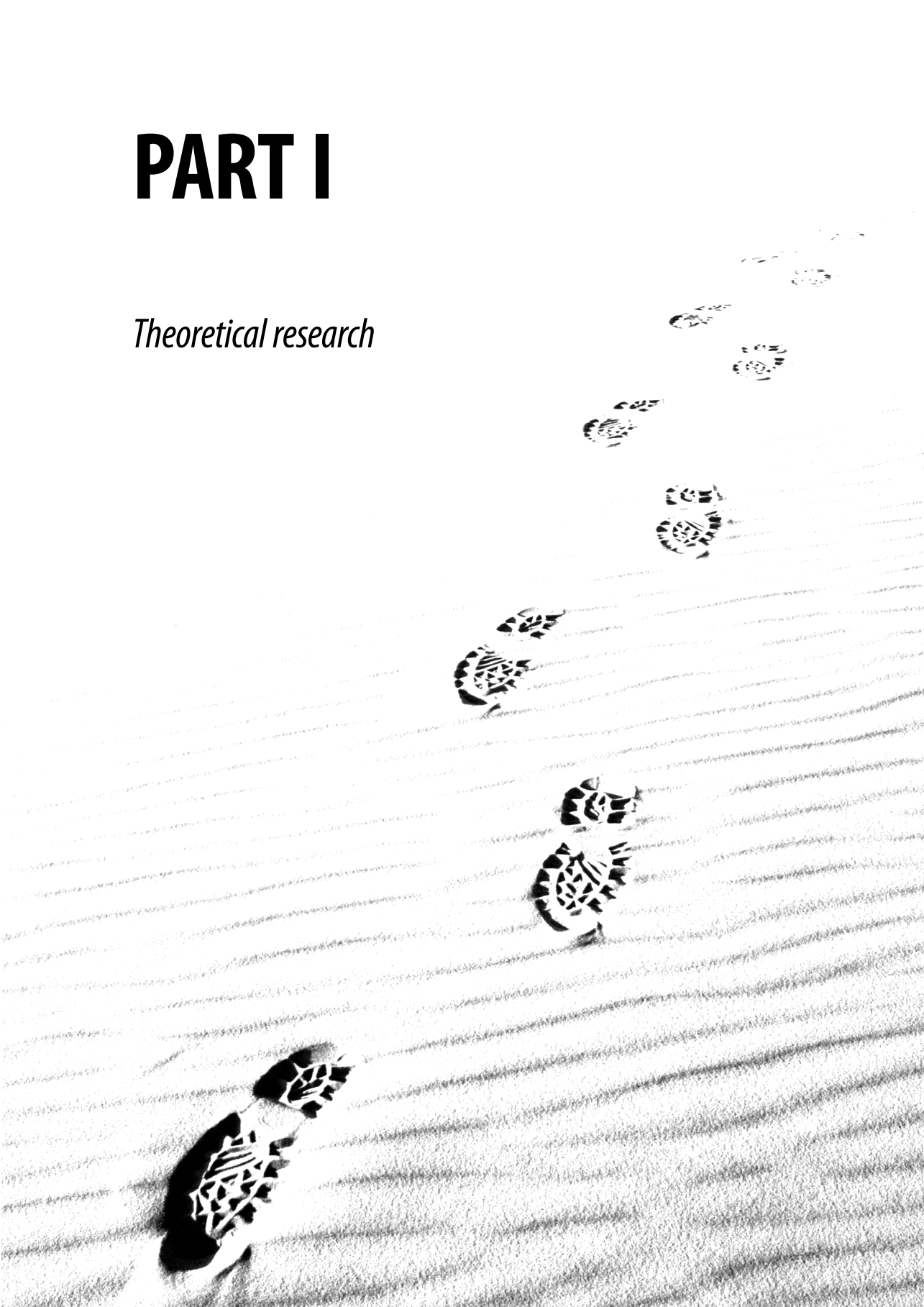
Part I Theoretical research (Chapters 2-3)
- literature study
- development of conceptual framework
- answer to research sub-question 3 (deduction)

Part II Empirical research (Chapters 4-7)
- case studies
- elaboration and illustration of conceptual framework
- answers to research sub-questions 1, 2 and 4 (induction + deduction)

Part III Synthesis (Chapter 8)
- conclusions
- evaluation and reflection on conceptual framework
- answer to central research question (synthesis of different case studies)

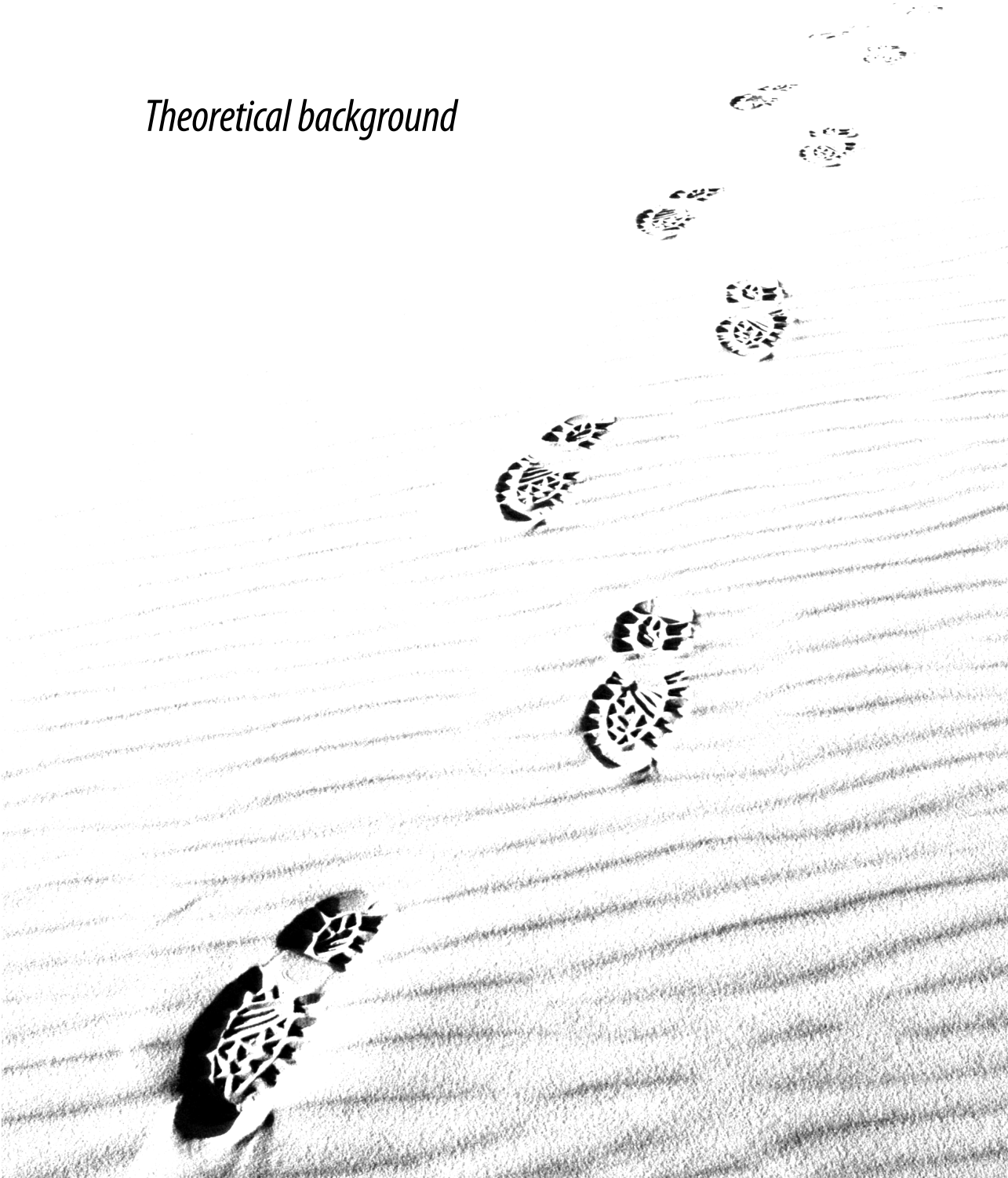
PART I

Theoretical research



CHAPTER 2

Theoretical background



2.1 Introduction to transition studies

Transition studies is a recent field of research that encompasses the development of a transition theory in order to better understand and influence the phenomenon of *transitions.*[1] The subject of study includes contemporary sustainability transitions in societal systems such as energy, mobility, agriculture, water management and health care, as well as transitions in the past (Figure 2.1).

Transitions can be understood as a specific type of social change, which is characterised by non-linearity, a long time frame (covering at least one generation) and structural transformation. In a transition the dominant way in which a societal need (e.g. the need for energy, health care, mobility, housing or agriculture) is fulfilled, changes fundamentally. These fundamental societal changes include interrelated changes in behaviour,

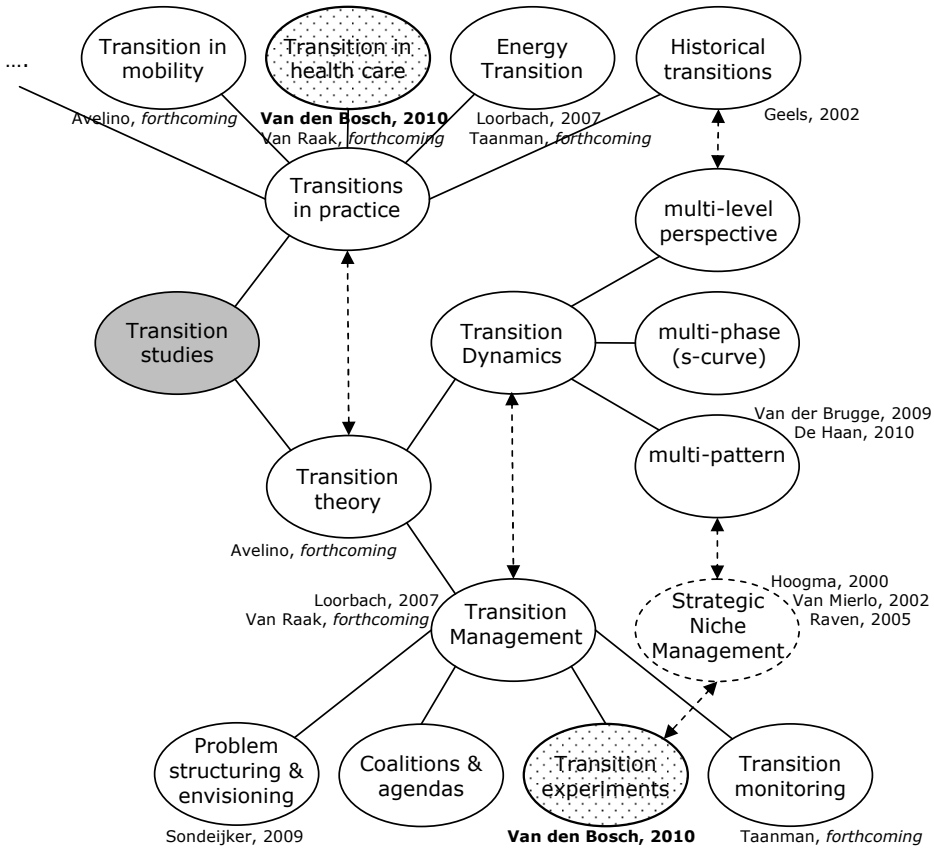


Figure 2.1 Transition studies and focus of this thesis (in relation to other PhD theses)

1. This is also the objective of the Dutch Knowledge network on System Innovations and transitions (KSI).

technology, environment, rules & regulation, financing systems and perceptions. A transition was first defined as a structural societal change that is the result of a co-evolution of economic, cultural, technological, ecological and institutional developments at different scale-levels (Rotmans et al., 2000). More recently, Rotmans and Loorbach (2010:109) defined a transition as "a fundamental change in structure, culture and practices". The changes in a transition process can therefore be characterized in terms of (Rotmans and Loorbach, 2010, Van Raak, *forthcoming*):

- *Structure:* the physical structures (infrastructure, technologies, resources, materials), institutional structures (rules, regulations, power structures, collective actors such as organisations) and economic structures (market, financing, consumption, production). Changes in structure comprise changes in how actors organise the things they do, either physically, institutionally or economically;
- *Culture:* the sum of shared images, norms and values (paradigms) that together constitute the perspective from which actors think and act. Changes in culture comprise shifts in thinking, mental models and perceptions;
- *Practices:* the sum of activities (routines, behaviour, ways of handling and implementation). Changes in practices comprise changes in what actors actually do, how they work or behave;

The development of a transition theory can be distinguished into two main sub-fields:

1. *Transition Dynamics*; aimed at developing fundamental knowledge on the dynamics of transition processes, including past, ongoing and future transitions (elaborated in section 2.2).
2. *Transition Management (TM);* aimed at developing fundamental knowledge *and* practical knowledge to influence and direct transitions towards sustainability (elaborated in section 2.3).

Both sub-fields are characterised by multi- and interdisciplinary knowledge development (involving researchers with a background in history, political science, public administration, innovation studies, environmental science, natural science, computer modelling, etc.). Transition Management in particular is also characterised by transdisciplinary knowledge development, which is part of the 'Mode 2' notion (Gibbons et al., 1994, elaborated in Chapter 1). Transdisciplinarity requires working across disciplines and involving societal actors in a non-scientific context (Rotmans, 2005).

Figure 2.1 illustrates how the different sub-fields of transition studies relate to each other and to PhD theses[2] that contribute to the development of the field. This thesis spe-

2. Figure 2.1 focuses on PhD theses and excludes other important literature (e.g. books and papers), because PhD theses can be regarded as a key indicator for how this relatively young field of research emerged and developed.

cifically aims to contribute to the sub-field of Transition Management and additionally aims to contribute to the literature on *Strategic Niche Management (SNM)*. SNM can be regarded as a related field of research, which also attributes an important role to transition experiments; the similarities and differences between TM and SNM are elaborated in sections 2.3 and 2.4.

Sections 2.2 and 2.3 first introduce Transition Dynamics and Transition Management, including their theoretical and empirical foundation, their main concepts and instruments, and the concepts that are specifically valuable for this research on transition experiments. Section 2.4 then elaborates and reflects on the existing theoretical concepts regarding transition experiments (developed within the literature on sustainability transitions, TM and SNM), which provides a basis for the development of an integrated conceptual framework (Chapter 3). It is important to note that this chapter includes only *existing* theoretical concepts and instruments, while the following chapter *integrates* these concepts into one framework and also presents *new* concepts and instruments.

2.2 Transition Dynamics

Transition Dynamics is concerned with understanding and explaining how transitions in societal systems (e.g. sectors or regions) come about and how they can be recognised. This section does not aim to give a complete overview of this sub-field of transition studies, but will introduce its main concepts and will elaborate on the concepts that are considered relevant for the development of a conceptual framework on transition experiments.

The three main Transition Dynamics concepts include (Figure 2.1):

1. The *multi-level perspective (MLP)*, which describes the dynamics of transitions as the interactions between three different functional scale levels: the macro-, meso- and the micro-level. Transitions take place when developments on these three levels strengthen each other in one and the same direction, i.e. when modulation occurs (Rip and Kemp, 1998, Geels and Kemp, 2000, Rotmans and Loorbach, 2010).
2. The *multi-phase concept*[3], which describes the dynamics of transitions in terms of different stages: pre-development, take-off, acceleration and stabilisation (Rotmans et al., 2001, Rotmans, 2005).
3. The *multi-pattern concept*, which distinguishes different patterns of transitions (Geels and Schot, 2007, De Haan, 2007, 2010).

3. Because the case studies in this thesis mainly take place in the pre-development stage, this chapter will not elaborate on the multi-phase concept. A recent elaborate description of this concept is provided by Rotmans and Loorbach (2010).

The field of Transition Dynamics is theoretically grounded in different scientific disciplines, the most important ones being complex systems theory and integrated systems theory (Rotmans and Loorbach, 2010).[4] Empirically, Transition Dynamic concepts have been applied in multiple case studies: the multi-level perspective was most frequently applied in various historical case studies of transitions (Verbong, 2000, Geels, 2005); the multi-phase concept was applied to analyse various past and ongoing transitions in sectors such as energy, water management and waste management (Rotmans et al., 2000, Rotmans, 2003, Van der Brugge et al., 2005, Loorbach, 2007) and the more recent multi-pattern concept is based on existing historical case studies but has not been applied in new case studies yet.

The *multi-level perspective* can be applied as an analytical tool to separate a societal system in three (nested) levels of aggregation. Figure 2.2 illustrates how each lower level is nested in a higher level that is more resistant to change and therefore changes more gradually. A transition is the result of non-linear interactions between these three levels of a societal system. A societal system can be further distinguished in three different sub-systems (regimes, niches and niche-regimes) that are embedded in the landscape (Haxeltine et al., 2008, De Haan and Rotmans, 2009, Rotmans and Loorbach, 2010, De Haan, 2010). In recent literature on transitions these three sub-systems are understood as constellations.

A *constellation* is defined as a societal sub-system that contributes a specific part to meeting a certain societal need (De Haan and Rotmans, 2009). The regime is dominant in fulfilling the societal need. Examples are the fossil fuel regime that is dominant in

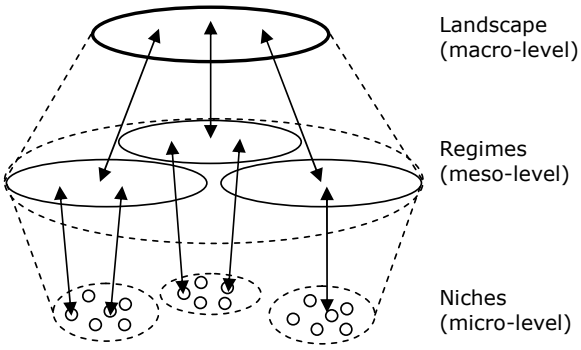


Figure 2.2 Multi-level perspective (Geels and Kemp, 2000)

4. This thesis will not elaborate on the scientific disciplines that underlie the sub-fields of the field of transition studies. The conceptual framework on transition experiments that is developed in this thesis, is aimed at contributing to the field of transition studies; therefore, this field of research (and not the disciplines on which its sub-fields are based) is regarded as the main theoretical background.

the energy domain and the automobile regime that dominates the mobility domain. A *regime* can be defined as the dominant structure, culture and practices with the incumbent power and vested interests in a societal system (Rotmans, 2005). *Niches* are societal sub-systems that deviate from the regime[5] and provide a context for experimenting with new, sustainable practices and related culture and structure. Early literature on transitions mainly described niches as a deviant selection environment or as a (partly) protected space that enables experimenting and learning (Kemp et al., 1998, Hoogma et al., 2002). In more recent transition literature, the niche concept is used to study how from sequences of local projects or experiments a niche-level emerges (Geels and Raven, 2006).[6] Experiments therefore also contribute to *niche development*. Hence, the relationship between experiments and niches is recursive: niches enable learning processes in experiments and are also shaped by learning processes (Figure 2.3). However, the literature lacks a clear definition of niches that unites both perspectives (section 3.3 will elaborate on this as part of the conceptual framework on transition experiments).

A *niche-regime* can be defined as a constellation of culture, practices and structure that challenges the power of the regime in fulfilling a societal need.[7] "A niche-regime represents a niche that has grown powerful enough to gain a number of new characteristics, the most important of which is the ability to attack (sometimes effectively) an incumbent regime" (Rotmans and Loorbach, 2010:136).

The constellations of niches, niche-regimes and regimes are nested in the *landscape*, which can be understood as the environment of the societal system. The landscape encompasses large-scale and long-term developments like cultural trends, demographics, international politics, worldviews, etc.

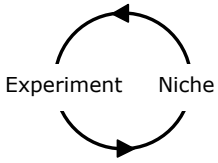


Figure 2.3 Recursive relation between niche and experiment: niches make transition experiments possible and at the same time experiments also create or reinforce niches (Van den Bosch and Rotmans, 2008)

5. Niches also have less power, lower stability and more flexibility than the regime.

6. Geels and Raven (2006) distinguish *local projects* that are carried by local networks and characterised by local variety from a *global niche-level* that is carried by an emerging field or community and characterised by shared rules. In the process of niche-development sequences of local projects can gradually add up to a global niche-level.

7. "Constellations providing a viable or even competitive functioning when compared to the regime and thus do have considerable power, though not dominating the functioning of the societal system, are called niche-regimes. As their name suggests they have characteristics somewhere between niches and the regime." (De Haan and Rotmans, 2009:6)

An important basic notion in transition literature is that new practices can influence the related structure and culture and vice versa. Though constellations of practices, culture and structure have a certain rigidity, they are also dynamic, which makes a change in a sustainable direction possible. Constellations that interact can therefore influence each other. However, regimes are much more difficult to influence than niches and the landscape has a highly autonomous character and can only be influenced in the long-term or by external shocks like a disaster or crisis.

The *multi-phase* concept can be used to describe the dynamics of transitions in time, in terms of alternating phases of relatively fast and slow dynamics that together form a strongly non-linear pattern (Figure 2.4, Rotmans et al., 2001):

1. A *predevelopment* phase of dynamic equilibrium where the status quo does not visibly change.
2. A *take-off* phase where the process of change gets under way because the state of the system begins to shift.
3. An *acceleration* phase where visible structural changes take place through an accumulation of socio-cultural, economic, ecological and institutional changes that react to each other. During the acceleration phase, there are collective learning processes, diffusion and embedding processes.
4. A *stabilization* phase where the speed of social change decreases and a new dynamic equilibrium is reached.

Based on the multi-phase concept, transitions can thus be understood as a shift from one dynamic state of equilibrium to the other. However, there are still a number of unknown aspects of the multi-phase concept (including the indicator on the vertical axis, the time period on the horizontal axis, the number of transition phases and the ultimate

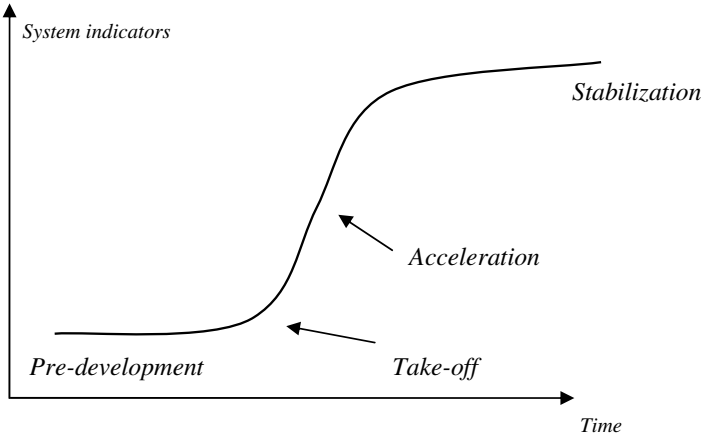


Figure 2.4 Multi-phase concept (Rotmans et al., 2001)

point of irreversibility) (Rotmans and Loorbach, 2010). Moreover, the literature on the multi-phase concept does not describe how the different transition phases relate to the concept of transition experiments. Therefore, the multi-phase concept is not applied as a central concept in this thesis.

The *multi-pattern concept* is a recent Transition Dynamics concept that has been studied from different perspectives (Geels and Schot, 2007, De Haan, 2007, Haxeltine et al., 2008). This thesis builds upon the recent theoretical research of De Haan and Rotmans (2009) and De Haan (2007, 2010), who have developed three key concepts to understand the dynamics of transitions: (I) conditions for transitional change, (II) patterns in transitions and (III) transition paths. This section will only introduce the multi-pattern concept because this concept is most relevant in understanding the role of transition experiments in processes of transitional or 'transformative' change. The multi-pattern concept distinguishes between three transition patterns[8]:

- *Empowerment:* Small constellations gain power and become a competitor for the incumbent regime. Through empowerment niches can grow into niche-regimes, in other words 'small-scale initiatives become viable alternatives to mainstream ways of doing'. Empowerment for example is when biological agriculture becomes responsible for a considerable part of our food supply.
- *Reconstellation:* A constellation is 'installed' (through influences from outside the societal system) and powerful enough to be a direct viable alternative for the regime functioning. Reconstellation would be that a large-scale biological agricultural system was constructed, for instance on government initiative.
- *Adaptation:* The regime responds to conditions for transitional change and adapts its functioning to keep on meeting societal needs. A regime can adapt by taking over some functional aspects of other constellations.

Transition experiments mainly play a role in the patterns of empowerment and adaptation because reconstellation does not start with small-scale experimentation.

2.3 Transition Management

Related to the development of Transition Dynamics concepts, the governance approach *Transition Management (TM)* was developed to influence transitions towards sustainable directions (Rotmans et al., 2000, 2001, Rotmans, 2003, Loorbach, 2007). Transition experiments are on of the key TM instruments, therefore, this section introduces what

8. Underlying these patterns are three elementary mechanisms: creation, co-evolution and clustering (De Haan and Rotmans, 2009). Transitions can occur through the *creation* or *clustering* of niches into a niche-regime or through the *co-evolution* of niches with the regime.

Transition Management is, including its main concepts and framework, how it has been developed and how it is related to and also differs from Strategic Niche Management.

Transition Management is a new mode of governance for sustainable development that is aimed at enabling, facilitating and guiding transitions to sustainability (Loorbach, 2002, Kemp and Loorbach, 2003, Loorbach, 2007). The underlying assumption is that full control and management of transitions is not possible, but Transition Management claims that it is possible to influence the direction and pace of transitions in subtle ways by a series of interventions at different levels using different instruments (Rotmans and Loorbach, 2010).

The Transition Management approach does not start with focusing on a solution, but is explorative and design-oriented. Transition Management uses the concept of sustainable development as a normative frame to develop a future orientation (vision) and to structure and organise a search-and-learning process (Loorbach, 2007:25). Important characteristics of Transition Management, in comparison to classical process management approaches, are that it is selective in who participates in this process ('frontrunners' and 'first movers') and that it focuses on the content as well as on the process.

The development of the TM approach can be characterised as a co-production process, in which theory development and implementing TM in practice reinforced each other. In 2000 initial TM principles were formulated in a report on transitions and Transition Management by Rotmans et al. (2000). In 2001 the concepts of 'transition' and 'Transition Management' were first applied by national policy-makers in the Netherlands. In the following years TM was applied and further developed in multiple case studies in different sectors and regions in the Netherlands and Belgium (Loorbach, 2007). Theoretically, the concept of Transition Management is grounded in two scientific disciplines: complex systems science and research on new forms of governance.[9] Based on a combination of deducing concepts from complex systems theory and new forms of governance and inducing new concepts and practical guidelines from case studies, a *practical management framework* was developed (Rotmans and Loorbach, 2001, Loorbach, 2002, Loorbach and Rotmans, 2006). The TM framework encompasses a portfolio of systemic instruments: a complex systems analysis, sustainability visions, transition arena & transition pathways, a transition agenda, transition experiments, monitoring & evaluation and transition coalitions & networks. The Transition Management cycle (Figure 2.5) integrates and structures the different TM instruments in four activity clusters (Loorbach, 2002, Rotmans, 2003, Loorbach and Rotmans, 2006, Loorbach, 2007): (i) structuring the problem in question, establishing the transition arena and envisioning; (ii) developing coalitions and transition agendas (transition images and related transition paths); (iii) establishing

9. The theoretical embedding of Transition Management is extensively described in Loorbach (2007).

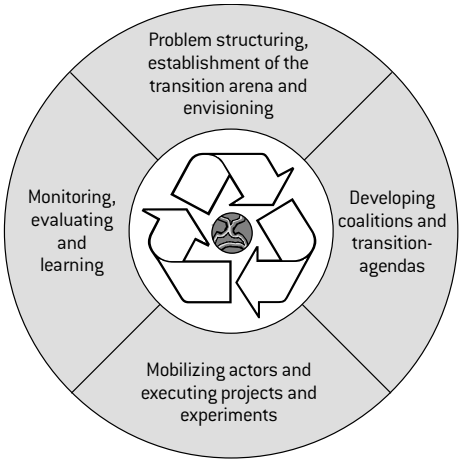


Figure 2.5 The transition management cycle (Rotmans and Loorbach, 2006, Loorbach, 2007)

and carrying out transition experiments and mobilising the resulting transition networks; (iv) monitoring, evaluating and learning lessons from the transition experiments and, based on all these, adjust the vision, agenda and coalitions. According to Loorbach (2007) there is no fixed sequence of the steps in Transition Management as Figure 2.5 suggests and the steps can differ in weight per cycle: "In practice the transition management activities are carried out partially and completely in sequence, in parallel and in a random sequence". However, most examples of Transition Management in practice, such as in Parkstad Limburg and Flanders (Loorbach, 2007) and in Zeeland (Henneman, 2008), start at the 'top' of the TM cycle: first a *transition arena*[10] is set up, which develops a long-term sustainability vision and related transition pathways and only later in the process transition experiments are selected. This can be labeled as a 'top-down TM approach' (which refers to the top of the TM-cycle, and not to conventional top-down policy approaches).

The development of the TM-approach was related to, and in some ways also co-evolved[11] with the development of the *Strategic Niche Management* (SNM) approach (Schot et al., 1994, Kemp et al., 1998, Weber et al., 1999, Hoogma et al., 2002). The concept of SNM was invented by Arie Rip, a Dutch philosopher and sociologist of technology, and was further developed by Johan Schot, Remco Hoogma, René Kemp, Frank Geels, Matthias

10. "The transition arena as a multi-actor governance instrument intends to stimulate and coordinate innovation through creating shared (new) problem definitions and shared long-term goals. The transition arena is a virtual arena, an open and dynamic network in which different perspectives, different expectations and different agendas are confronted, discussed and aligned where possible" (Loorbach, 2007: 132-133).

11. "The co-evolution between SNM and TM is especially visible in the analytical work on transition dynamics [transition patterns] and in some operational experiments" (Loorbach and Rotmans, 2009). This is also illustrated in Figure 2.1.

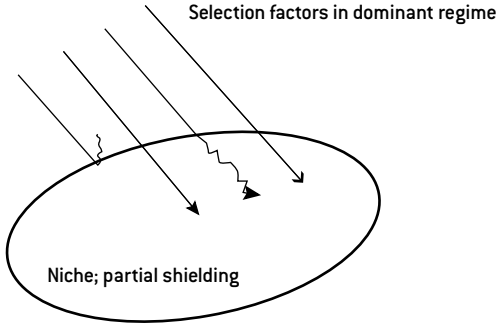


Figure 2.6 A niche offers selective protection against selection pressure from the regime (Hoogma, 2000:82)

Weber, Bernard Truffer, Barbara van Mierlo and Rob Raven. SNM is aimed at stimulating learning processes and processes of societal embedding of socio-technical innovations. A core element of SNM is to experiment in practice in (partly) protected niches. SNM can be applied as a policy tool to support initiatives and protect them, temporarily, from selection pressure from the dominant regime (Figure 2.6).

Both SNM and TM use similar concepts (e.g. sustainable development, transitions, regimes, niches, providing space for experimentation) and try to translate these theoretical notions into a managerial perspective on sustainability transitions. This 'managerial perspective' encompasses theoretically grounded and practice-oriented guidelines and recommendations that are targeted at specific actors. For SNM the typical central actor is in most cases the relevant policy-maker, whereas for TM it might be any actor with significant resources that wants to further a transition (e.g. a Ministry, local government, NGO or a company) (Loorbach and Rotmans, 2009:6). However, SNM has been mainly applied in ex-post analyses of technological innovations (e.g. Hoogma, 2000, Van Mierlo, 2002, Raven, 2005). A typical SNM study analyses how a technological innovation, which is regarded as a sustainable alternative to the dominant socio-technical regime, contributes to niche development. Because of the evaluative nature of these SNM studies, their outcomes mainly include lessons learned (regarding how SNM was or was not successfully applied) and recommendations for future policy. Though neither the TM approach nor the SNM approach offer a fully operational and empirically validated management model, it can be concluded that the managerial perspective in SNM is less developed than in TM. In a recent discussion paper about SNM and TM, Loorbach and Rotmans (2009:10) bring up the following questions: "What SNM aims at is clear, but *how* this should be done and *who* should do what remains unclear. In SNM no indication or analysis is given *if* or *how* the selected technologies are likely to change a regime because of *whose* actions."

While TM and SNM share the ambition to stimulate sustainability transitions, the ambition, focus and scope of TM are broader than SNM: TM aims to stimulate ongoing and future transition processes in societal systems, while SNM aims to set up and

analyse protected spaces for experimentation with technological innovations. Loorbach and Rotmans (2009) explain how this difference in focus and goal is related to historical differences, differences in analytical basis and differences in prescriptive basis.

The next section will specifically elaborate on the similarities and differences regarding the role of transition experiments in TM and SNM.

2.4 Transition experiments

Though literature that exclusively addresses the concept of transition experiments is limited (Van den Bosch and Taanman, 2006, Kemp and van den Bosch, 2006, Van den Bosch and Rotmans, 2008, Raven et al., 2010), this research on transition experiments can build upon the broader literature on sustainability transitions, Transition Management and Strategic Niche Management. This section aims to identify the most important existing concepts that can be applied in this research regarding transition experiments, and it also aims to identify the main gaps in the existing literature.

The development of the concept of transition experiments within the field of transition studies is described first. This is then followed by a reflection on to what extent existing theory is sufficient to answer the research questions. This provides a basis for the next chapter, in which a conceptual framework on transition experiments is developed by integrating existing concepts and developing new concepts (Chapter 3).

The origin and context of transition experiments[12]

The term 'transition experiment' originates from the early literature on transitions and Transition Management (Rotmans et al., 2000), and was first defined by Rotmans as "practical experiments with a high level of risk (in terms of failure) that can make a potentially large contribution to a transition process" (Rotmans, 2005:50). However, this literature provided only limited theoretical and empirical support of the concept. It is one of the aims of this thesis to elaborate on this.

Theoretically, the concept of transition experiments is based on common notions in evolutionary theory, complex systems theory and innovation theory. *Evolutionary theory* addresses the importance of variation and selection (Nelson and Winter, 1977, 1982). Variation is necessary to randomly generate variations which can lead to optimisation or to the emergence of a distinct 'regime' (which can be considered as the equivalent of a new 'species' in natural selection theory). Selection is necessary to provide direction to the evolutionary process; the selection environment consists of markets and institutional factors (Schot and Geels, 2007). *Complex systems theory* explains how in

12. This section is based on a similar section in Van den Bosch and Rotmans (2008).

complex systems, in which many interactions take place, small changes can have large consequences (Prigogine and Stengers, 1984, Kauffman, 1995). Prigogine and Stengers explain how microscopic changes can lead to macroscopic structures that can then lead to further microscopic change. Kauffman introduced the logic of 'patches' which provides a way for complex systems and organisations to solve 'hard' problems. When a system is divided into 'patches' (which are not too numerous and not too small), local experimenting and searching for local optimums can lead to co-evolution towards excellent solutions (Kauffman, 1995:252). *Innovation theory* addresses the importance of developing innovations in niches. Levinthal (1998) explains that when a minor innovation is implemented in a new domain of application (a niche that is isolated from the mainstream), which has distinct selection criteria and resources, this may trigger a substantially new and divergent evolutionary trajectory.

Within the TM approach, these theoretical notions are translated in the TM instrument transition experiments. The concept of transition experiments also builds upon the related literature on *Bounded Socio-Technical Experiments (BSTE)* (Brown et al., 2003, Brown and Vergragt, 2008) and *Strategic Niche Management (SNM)* (section 2.3). SNM elaborates on the notion of setting up niches to conduct experiments with sustainable innovations that deviate from the regime. However, experiments in SNM differ from transition experiments because these experiments have a *socio-technical* nature in which the starting point is often a technological innovation. Examples of experiments in SNM include experiments with electric vehicles (Hoogma, 2000), experiments with photo-voltaic systems in housing (Van Mierlo, 2002) and experiments with biomass technologies (Raven, 2005). TM literature further extended the concept of experimentation in niches by developing the transition experiment instrument as part of a broader governance approach aimed at stimulating sustainability transitions. In transition experiments not a technological innovation but a *societal challenge* is the starting point for experimentation. Examples of societal challenges are how to meet the need for energy, transportation, housing or health care in a sustainable way. Because transition experiments are guided by these broad societal needs, transition experiments cover a broad range of innovations that are not only socio-technical by nature, but also institutional, legal, financial or socio-cultural. Examples of transition experiments in practice are experiments with sustainable ways to fulfil the need for: housing and care for the elderly (Box 2.1), mobility in urban areas, nutrition for school-children and water management (Luiten and Van Sandick, 2006, Van Sandick and Weterings, 2008).

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13. As part of this PhD research a 'pilot case study' of this transition experiment was conducted, which preceded the case study of the Transition Programme in Long-term Care (Chapter 6). The lessons learned from this pilot case study included that formulating a 'societal challenge' provided an essential starting point for a transition experiment and that the concepts 'structure, culture and practices' could be applied to characterise the radical changes that were aimed at in transition experiments.

Transition experiment 'Housing and care for the elderly'[13]

The Dutch health care system is facing persistent problems regarding the ageing of the population (the 'grey wave'), increasing costs and a decreasing workforce in the care sector. These problems are specifically visible in the field of housing, care and welfare for senior citizens, who want to live independently as long as possible while their need for care increases. Combined with the general need to reduce the environmental pressure in society, these societal needs require a transition in the 'housing and care system' for the elderly.

The societal challenge "How can the elderly live independently with a higher quality of life, at acceptable costs?" was a starting point for setting up a transition experiment in Hubertus Drieschoten (a district in Apeldoorn). The experiment was conducted by a care institute and housing corporation, working together with TNO (Netherlands Organisation for Applied Scientific Research). The transition experiment involved the development of an innovative concept for sustainable 'housing and care for the elderly' in the district Hubertus Drieschoten. First, a sustainability vision was developed, which included desirable future images of how the elderly in the future could receive care in a domestic environment. Based on this vision, an integrated innovative housing and care concept for the elderly was developed, which will be (partly) realised in 2009/2010. The project puts much emphasis on user participation and involve both the elderly and care professionals to develop innovative solutions for social issues and eventually contribute to far reaching social change (www.tno.nl).

This transition experiment can be characterised by the following changes in structure, culture and practices:

Structure:

- Living and well-being is central, instead of care (the elderly are receiving care in their home environment instead of are living in a care institute);
- Different roles and power structures between the elderly and care workers (residents are the main 'directors' and the care worker 'works in the world of the customer');
- Changing role of housing corporation and care institute, which for example becomes a 'comfort provider' and produces and provides sustainable heat and cooling.

Culture:

- Elderly people actively participate in social activities in mixed neighbourhoods;
- Attention for symbolism: within the district mainly living is visible and care institutions are invisible (for example, care workers do not have a front office);
- Organisation culture of care provider changes: the customer is central and providing care is not a solo activity but a joint activity (together with welfare organisations, etc.);

Practices:

- Practice of care provider changes: from providing 'supply-driven' care to passive elderly people to providing 'demand-driven' care to active elderly people;
- District contains front office where the elderly can get help from a counsellor about housing, care and wellbeing.

Box 2.1 Example of a transition experiment

The early literature on TM already acknowledged that small-scale experiments can only be a successful instrument for stimulating transitions if they are applied in strong interaction with other instruments (section 2.3). Unlike the early SNM literature, TM literature does not view transition experiments as isolated instruments, but as part of a broader governance approach including *strategic, tactical and operational activities*. Transition experiments are therefore supported by different types of TM activities: creating a common understanding of a problem, a shared sense of urgency and a shared direction and ambition *(strategic activities)*; developing coalitions and transition agendas, involving a larger number of actors and creating broader support; developing images and paths that give direction to different transition experiments and provide a basis for cooperation *(tactical activities)*; mobilising actors and setting up and executing transition experiments with the goal to translate visions and agendas in concrete actions *(operational activities)* (Loorbach, 2007). A core notion of TM is to develop and manage a *portfolio* of transition experiments that is connected to a long-term sustainability vision. Hence, a transition experiment is not a goal in itself, but an instrument to explore and learn about sustainable and radically different ways of meeting societal needs, now and in the future.

Empirically, the concept of transition experiments is grounded in both historical and contemporary case studies. Historical case studies of transitions emphasize the important role of experiments with practices that deviate from dominant regime practices (Verbong, 2000, Geels 2002, 2005).[14] The paradox is that case studies of contemporary experiments with sustainable practices show that small-scale experiments seldom break through and do not become part of dominant practices (Hoogma et al., 2002, Smith, 2007). Recent literature on SNM and sustainability transitions therefore increasingly acknowledges that a focus on individual experiments in niches is too limited. This has resulted in more theoretical and empirical studies on the importance of conducting multiple experiments in niche-trajectories (Geels and Raven, 2006), aggregation activities (Geels and Deuten, 2006), niche-regime interaction (Raven, 2005) and translating practices between niches and regimes (Smith, 2007). Though this literature is a valuable contribution to the emerging field of transition studies, an integrated framework for *understanding* how experiments in niches contribute to transitions or regime-shifts is still lacking. Furthermore, the literature pays little attention to the question how practitioners that are involved in experiments can *influence* ('manage') the contribution of experiments to transitions towards sustainability (Mourik and Raven, 2006, Caniëls and Romijn, 2006, 2008).

14. Such experiments are conceptualised as happening in niches. Recent transition literature acknowledges that there is a bias of focusing on the role of niches and shows that this is only one of the possible transition pathways (e.g. Geels and Schot, 2007).

It can be concluded that the literature on sustainability transitions, Transition Management and Strategic Niche Management has introduced a new type of experiments, based on theoretical and empirical research. These experiments are conducted in niches and can potentially contribute to sustainability transitions. The literature still lacks a precise description of what a transition experiment is, how it can be recognised and how it can be used as an instrument in transitions (Van den Bosch and Rotmans, 2008). In general it can be concluded that existing literature lacks specific theoretical and practice-oriented concepts on how transition experiments can be analysed and managed.

Reflection on existing theory in relation to research questions

In the introduction of this thesis (section 1.3) it was concluded that "The research objective and questions require the development of a conceptual framework, which can only partly be *deduced* from existing theories on sustainability transitions, Transition Management and Strategic Niche Management." This section reflects on the existing theory in relation to the research sub-questions. This provides a basis for the development of an integrated conceptual framework on transition experiments, which is presented in the following chapter. Hence, while this chapter is aimed at identifying the 'building blocks' and gaps in the existing literature, chapter 3 will develop the conceptual framework and will introduce new definitions and concepts.

1) What are the distinguishing characteristics of a transition experiment?

The literature on TM assigns several characteristics to transition experiments, including: practical, high level of risk, a high potential to contribute to a transition, contributing to sustainability objective, innovation in a wide range of areas, stimulating and developing new forms of cooperation and social learning (Rotmans, 2005). However, the literature lacks a systematic comparison of how transition experiments differ from classical innovation experiments. Furthermore, detailed empirical descriptions of transition experiments are lacking. The unique characteristics of transition experiments therefore need to be further grounded in theory and empirical research.

2) How to transform an ongoing innovation project into a transition experiment?

Existing TM and SNM literature has been mainly concerned with setting up *new* transition experiments that can 'start from scratch'. The literature has not yet addressed the issue of transforming *ongoing* innovation projects into transition experiments ('transitioning'). This issue mainly originates from practice: several ongoing innovation programmes and projects, which aim to stimulate sustainability transitions, have expressed a need for practice-oriented concepts to transform ongoing innovation projects into transition experiments (Chapter 5).

3) Through which mechanisms does a transition experiment contribute to a sustainability transition?

The literature on sustainability transitions, TM and SNM provides valuable theoretical insights into the way in which transition experiments could contribute to sustainability transitions. However, most of this literature (specifically SNM literature[15]) is focused on the relation between experiments and niche development and does not explain how transition experiments can eventually scale up and contribute to regime change (transitions). Furthermore, SNM does not clearly distinguish experiments from niches. In general, an integrated perspective on the key mechanisms through which transition experiments contribute to sustainability transitions is lacking. The following notions can be used as theoretical building blocks for developing such an integrated perspective (Chapter 3):

(i) Notions about (social) learning processes (Röling, 2002, Grin and Loeber, 2007, Wals et al., 2007) and experimenting and learning in niches (Kemp et al., 1998, Schot and Geels, 2007).

(ii) Notions from transition literature on the importance of diverse experiments in a variety of contexts (Raven, 2005, Geels and Raven, 2006, Rotmans and Loorbach, 2006) and innovation literature on diffusion and the application of existing innovations in new domains (Rogers, 1995, Levinthal, 1998, Nooteboom, 1999).

(iii) Notions that build upon the multi-level perspective, conceptualising the step from local projects to niches and eventually regime-shifts (Weber et al., 1999, Geels and Raven, 2006) and the translation or societal embedding of sustainable niche practices in the regime (Deuten et al., 1997, Van Mierlo, 2002, Kivisaari et al., 2004, Rotmans and Loorbach, 2006, Smith, 2007).

4) How to manage transition experiments?

The TM approach provides a general framework for developing and managing a portfolio of transition experiments that can potentially contribute to sustainability transitions. The various TM activities can be characterised as *strategic-, tactical- and operational activities* (Loorbach, 2007). However, the theoretical and empirical research on TM mainly focused on *strategic and tactical activities,* in which the 'transition arena' plays a central role. The literature lacks theoretical and empirical research on *operational activities* regarding how the management of a transition experiment (portfolio) exactly takes place. How should a portfolio of transition experiments be selected (e.g. Who selects? What are the criteria?) and how should a selected transition experiment be set up and managed (e.g. Who manages? How to facilitate learning and monitoring?).

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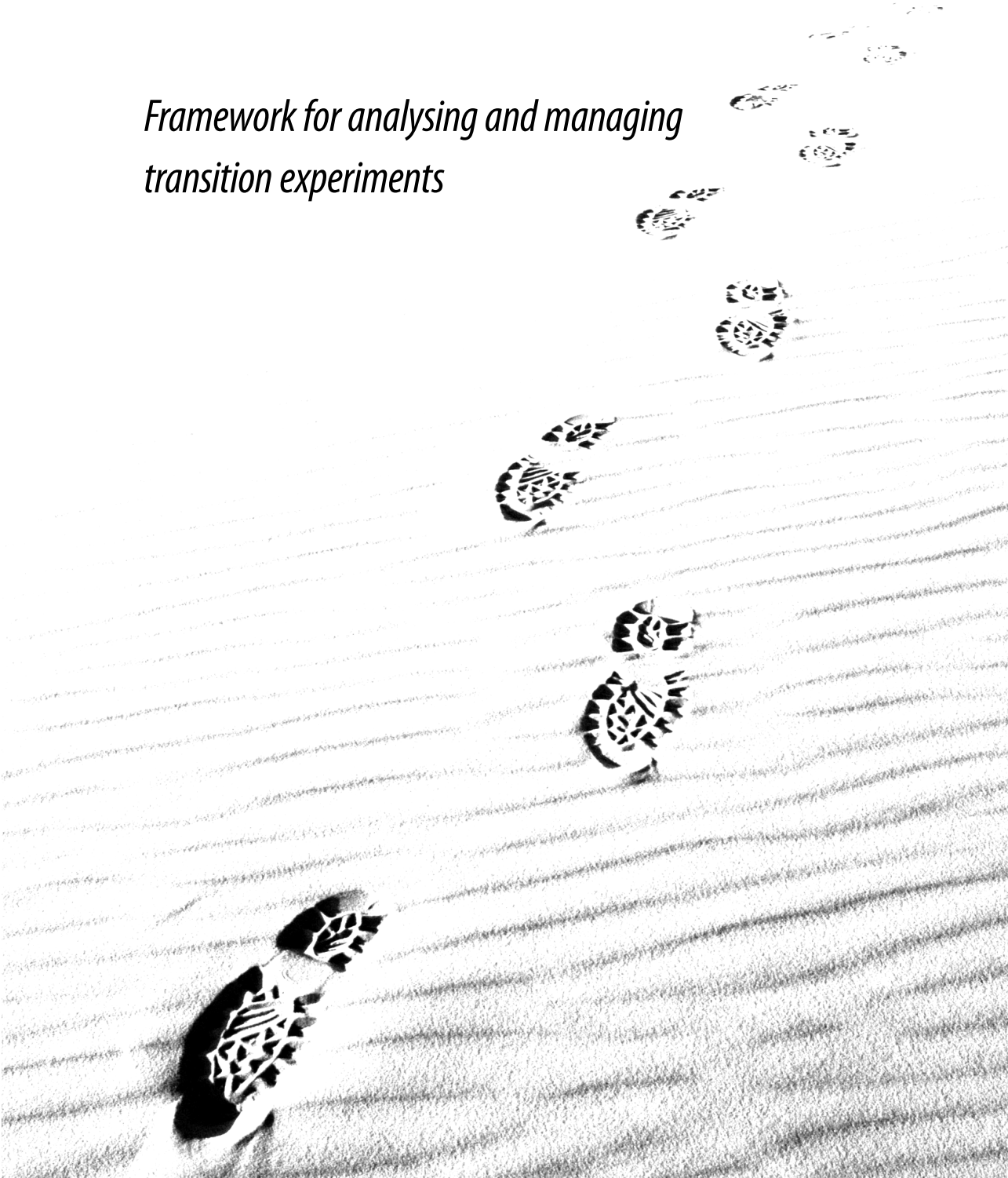
15. The SNM approach includes five stages of a Strategic Niche Management process, which mainly concern "the organisation of experiments leading to niche formation" (Weber et al., 1999:31).

Though the SNM approach refers to 'strategically managing niches', the managerial perspective in SNM is still underdeveloped (Raven et al., 2010). The SNM literature does emphasize the importance of creating 'space' for experimentation; however, the literature does not elaborate on this notion (e.g. What types of space can be distinguished? Who creates this space?).

It can therefore be concluded that an operational management model for transition experiments is still lacking.

CHAPTER 3

Framework for analysing and managing transition experiments



3.1 Introduction

This chapter develops an integrated conceptual framework on transition experiments. This framework is based on the theoretical background that was presented in Chapter 2 and the case studies that are presented in Chapters 4 to 7. The framework (illustrated in Figure 3.1 and 3.5) adds to the field of transition studies in two ways: it integrates existing concepts that are related to transition experiments and presents new concepts that enable analysing and managing transition experiments.

The framework has an *integrative* character because it connects existing key concepts of transition studies with the concept of transition experiments. These key concepts include the concepts of system innovation and transitions, which are the main research phenomena, and the concepts of Transition Management and the multi-level perspective, which are key concepts to study these phenomena (Chapter 2). The literature on sustainability transitions, Transition Management and Strategic Niche Management acknowledges that transition experiments are related to these concepts, but does not fully specify these relationships. The framework therefore adds four main *new concepts* that further specify these relationships, including: the differences between a classical innovation experiment and a transition experiment (*1. distinguishing characteristics*), the transformation of an ongoing innovation project into a transition experiment *(2. transitioning*), the contribution of a transition experiment to a transition or regime-shift (*3. mechanisms*) and the management of transition experiments as part of Transition

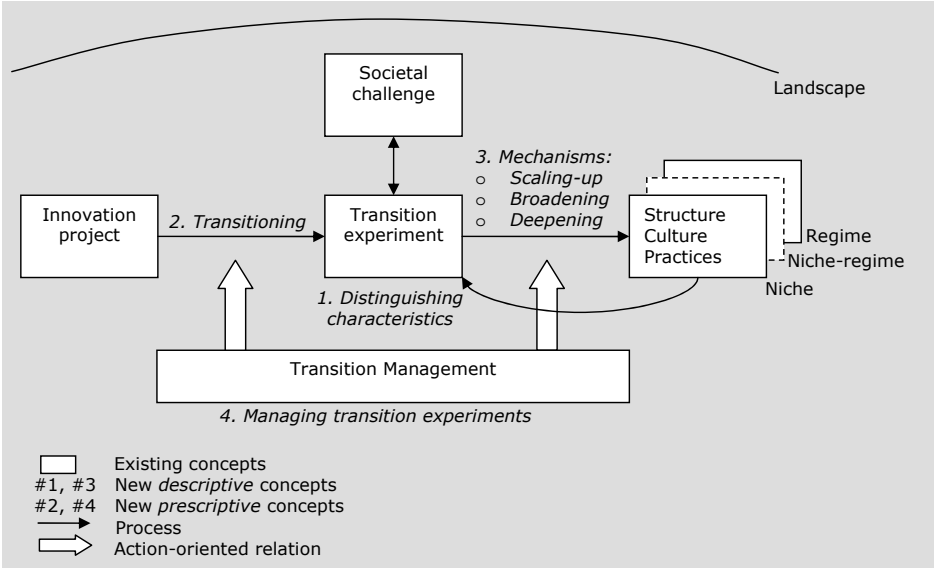


Figure 3.1 Integrated conceptual framework on transition experiments

Management (*4. managing transition experiments*). The numbers of these four main new concepts correspond to the research questions (Chapter 1).

With the exception of the mechanisms[1] the new concepts that are added to the existing literature are partly deduced from theory and partly induced from the case studies (the methodology used is explained in Chapter 1). Sections 3.2 to 3.5 integrate existing concepts and present the four main new concepts, including the related 'sub-concepts', and section 3.6 synthesises the resulting conceptual framework and describes how it can be applied in practice (which is elaborated and illustrated in the case studies, Chapters 4 to 7).

3.2 Transition experiments vs classical innovation experiments[2]

In the previous chapter it was concluded that the literature lacks a systematic comparison of how transition experiments differ from other types of innovation experiments. This section first presents a new definition of transition experiments, which is the outcome of this theoretical and empirical research. Based on this definition the distinguishing characteristics of transition experiments can be defined.

Building on literature on transitions (Rotmans, 2005, Loorbach and Rotmans, 2010), innovation (Rogers, 1995) and learning (Argyris, 1976, Leeuwis, 2003), the following definition can be developed: "A transition experiment is an innovation project with a societal challenge as a starting point for learning aimed at contributing to a transition". This definition positions transition experiments as a specific kind of innovation project, which makes it possible to compare transition experiments with other types of innovation projects. The definition emphasises that while the starting point of classical innovation experiments is often a pre-defined result or solution, the starting point in transition experiments is a societal challenge related to overcoming persistent societal problems. Apart from the category *innovation projects* and the starting point *societal challenge*, the definition also describes that the objective of a transition experiment is contributing to a specific transition and the main means for this is *learning*. This section first elaborates on these three central concepts in the definition of transition experiments: (i) societal challenge, (ii) innovation and (iii) learning. Based on this, a table is presented that compares the characteristics of transition experiments with classical innovation experiments.

1. The mechanisms are completely derived from the literature (section 3.3).
2. This section is based on a similar section in Van den Bosch and Rotmans (2008).

(i) Societal challenge

The starting point of a transition experiment is a long-term *societal challenge* at the level of a societal sector or region (Rotmans, 2005). These societal challenges provide a direction for experimenting and learning aimed at a sustainability transition, in which specific sectors or regions develop in such a way that they can meet societal needs (such as health care or energy needs) in the present *and* nearby future. A societal challenge can be defined as a question related to a persistent societal problem, which guides the search and learning process in a transition experiment. Examples of societal challenges are questions related to the problem of the ageing population and rising costs in health care (Box 3.1) or the question how to overcome the problem of climate change and realise a clean, reliable and affordable energy supply system. When these questions are formulated in a positive and challenging way they can be regarded as transformed perceptions of *persistent problems*. Because of their complexity and uncertainty, it is not possible to learn about these persistent problems from classical innovation experiments that typically start from *a priori* defined and well-structured problems or a possible solution. Furthermore, because persistent problems are embedded in the dominant structure, culture and practices of society (Dirven, Rotmans and Verkaik, 2002), solutions

Societal challenge of transition experiment 'Housing and care for the elderly' (2)

The societal challenge "How can the elderly live independently with a higher quality of life, at acceptable costs?" was defined as the starting point of the "Housing and care for the elderly" project in Hubertus Drieschoten. This societal challenge is related to persistent problems regarding the ageing population, increasing costs and a decreasing workforce in the care sector (Chapter 2, Box 2.1). The societal challenge is difficult to realise within the dominant structure (e.g. financing, rules and regulation) of the existing Dutch care sector, which assesses and finances care institutes on the number of care 'actions' that are taken. This dominant 'production paradigm' has not been able to overcome the persistent problems in the care sector. Moreover, the production paradigm increases the workload of care workers, which puts further pressure on the decreasing workforce. An innovative concept for sustainable 'housing and care for the elderly' therefore requires a radically different structure and culture. Central in the development of the innovative housing and care concept in Hubertus Drieschoten, is the quality of life of the elderly and the quality of the interaction between the elderly and the care workers (instead of the quantity of care and housing services provided by institutions).

To support the quality of life and working in Hubertus Drieschoten, TNO has developed and tested several innovations, such as technologies that facilitate easy communication among residents and care workers and technologies that provide a 'personal indoor climate', which increases the comfort of both residents and professionals. However, the main challenge in this experiment is not realising technological changes, but realising changes in structure, culture and practices (Box 2.1).

Box 3.1 Example of a societal challenge as a starting point for a transition experiment

to these problems cannot be found within the dominant way of thinking. Therefore, to explore new directions for solutions, the search and learning process needs to be guided by a challenging question (and not a preconceived answer) that is related to a persistent societal problem (and not a possible solution).

(ii) Innovation

The second central concept in the definition of a transition experiment is *innovation*, which can be understood as anything that is perceived as new (based on Rogers, 1995:11). A transition experiment is a specific type of innovation project[3] in which the nature of the innovation differs from conventional innovation projects. The type of innovation in a transition experiment can be characterised as a 'system innovation'. *System innovations* are organisation-transcending innovations that drastically alter the relationship between the companies, organisations and individuals involved in the system (Rotmans, 2005:11). The 'system' can be understood as the overarching level at which individuals, companies and organisations have organised themselves (e.g. a sector, societal domain, town or region). System innovations involve changes in these societal systems and subsystems that go beyond conventional types of innovations such as a product-, service- or process innovation. The underlying notion of typologies of innovations is that an innovation fulfils a new or existing need in a new way. A difference between innovations and system innovations is that a system innovation fulfils an existing or future *societal* need in a *fundamentally* different way. Also the societal need itself can change fundamentally.[4] For example, system innovations are necessary to fulfil the changing needs for health care (Broerse and Grin, *forthcoming*).

Transition experiments can contribute to transitions within a sector or region (e.g. Parkstad Limburg and Flanders in Loorbach, 2007), but the experiments take place at a smaller scale (e.g. at the scale of several organisations, a neighbourhood or municipality). In transition experiments, actors experiment with radically new and sustainable ways to fulfil an existing or future societal need in a small part of the overall societal system. Based on recent transition literature (Loorbach and Rotmans, 2010 and Van Raak, *forthcoming*) the nature of the innovation in a transition experiment can be characterised as a novelty in terms of interrelated (radical) changes in *structure, culture* and *practices* (Chapter 2).

3. An innovation project is regarded as a temporary endeavour undertaken to develop a new way to fulfil a need or function.

4. Hence, at the start of a transition process future societal needs are often unknown and it can be difficult to identify these latent needs (both at the individual and the collective level).

(iii) Learning

The third central concept is *learning*. In general, learning can be understood as an active or interactive process of obtaining and developing new knowledge, competences or norms and values.[5] The aim of learning in transition experiments is to contribute to a transition: a fundamental change in structure, culture and practices. The learning process in transition experiments is therefore characterised by a process in which multiple actors across society develop new ways of thinking (culture), doing (practices) and organising (structure). An important characteristic of a transition experiment is that the experiment does not take place in a controlled or partly controlled "laboratory" environment, but in a real-life societal context, which makes *high quality learning* possible. Based on the literature on sustainability transitions three characteristics of a high quality learning process can be identified. Research within Strategic Niche Management (section 2.4) explains that successful experiments have learning processes that are (i) *broad* - learning about many dimensions of a problem (e.g. institutional, technological, socio-cultural, environmental, economic) and the alignment between these dimensions; and (ii) *reflexive* - there is attention for questioning underlying assumptions such as social values, and the willingness to change course if the innovation does not match these assumptions (Raven, 2005). Furthermore, literature on sustainability transitions emphasises the importance of (iii) *social learning* - a process in which multiple actors interact and develop different perspectives on reality (Leeuwis, 2003). In transition processes social learning is specifically aimed at 'reframing', changing the 'frame of reference' (Schön and Rein, 1994) and perspective of actors involved (Rotmans and Loorbach, 2006). Reflexive and social learning can also be understood as a 'second order learning process' (Hall, 1993) or 'double-loop learning' (Argyris, 1976) (Figure 3.2). A *second order learning process* fundamentally changes existing frames of reference, assumptions and ways of looking at a problem or solution.

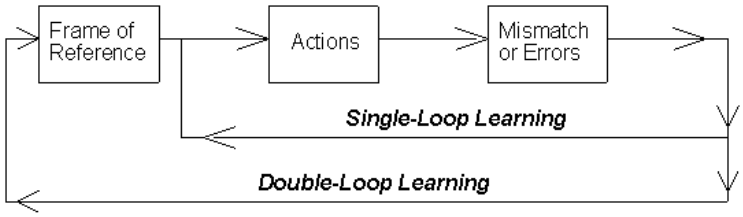


Figure 3.2 Second order or double-loop learning (Argyris, 1976)

From the literature it can be concluded that an adequate learning process in transition experiments facilitates: broad learning about different dimensions of a broad societal

5. This general definition of learning is also used in a practitioner oriented publication on transition experiments published by the Competence Centre on Transitions (Raven, Van den Bosch et al., 2008).

challenge; reflexive learning that questions existing ways of thinking, doing and organising; and social learning to develop an alternative perspective on reality through interaction in heterogeneous groups. This type of learning is one of the distinctive characteristics of transition experiments, as presented in Table 3.1.

Comparing transition experiments with classical innovation experiments

Based on their previously discussed definition, transition experiments can be systematically compared with other types of innovation experiments. In this section transition experiments are compared with 'classical innovation experiments', which refer to the dominant instruments to stimulate innovation (e.g. pilot projects and demonstration projects that are supported by subsidies or private R&D investments). Table 3.1 compares the characteristics of the TM instrument transition experiments with classical innovation experiments by placing both types of innovation projects at extreme ends. This table is applied in several case studies of innovation projects and transition experiments (Chapters 4, 5 and 7). Table 3.1 is therefore the outcome of both theoretical and empirical research.

In practice the differences between characteristics appear to be more subtle and different characteristics can co-exist in one project. For instance, in transition experiments not only second order learning takes place (rethinking the frame of references) but also first order learning (optimising within an existing frame of reference). Transition experiments also do not always start with an explicit long-term perspective (illustrated in Chapter 7). This results in the existence of many hybrid forms, in between classical innovation experiments and transition experiments. Furthermore, in practice many potential transition experiments are set up in a classical project management context. An ideal type of transition experiment would require a Transition Management context that supports transition experiments with other TM instruments (e.g. a complex systems analysis, long-term sustainability vision, transition arena and transition pathways).

Before many existing innovation projects can qualify as transition experiments, a process of 'transitioning' (Chapter 5) is needed to create the conditions for contributing to a sustainability transition. Experiences with applying Table 3.1 in existing innovation projects show that it can provide a new way of looking at innovation projects and can support a reflection and reframing process, which can lead to transforming the characteristics of an ongoing innovation project into the characteristics of a transition experiment.

Table 3.1 Distinctive characteristics of transition experiments[6]

	Classical Innovation Experiment	*Transition Experiment*
Starting point	Possible solution (to make innovation ready for market)	Societal challenge (to solve persistent societal problem)
Nature of problem	*A priori* defined and well-structured	Uncertain and complex
Objective	Identifying satisfactory solution (innovation)	Contributing to a transition (fundamental change in structure, culture, practices)
Perspective	Short- and medium-term	Medium- and long-term
Method	Testing and demonstration	Exploring, searching and learning
Learning	1st order, single domain and individual	2nd order (reflexive), multiple domains (broad) and collective (social learning)
Actors	Specialised staff (researchers, engineers, professionals, etc.)	Multi-actor alliance (across society)
Experiment context	(partly) controlled context	Real-life societal context
Management context	Classical project management (focused on project goals)	Transition management (focused on societal transition goals)

3.3 Mechanisms: deepening, broadening and scaling-up

This section addresses the research sub-question: "Through which mechanisms does a transition experiment contribute to a sustainability transition?". In chapter 2 it was concluded that existing transition literature provides valuable theoretical insights into the way in which transition experiments could contribute to sustainability transitions, but lacks an integrated perspective on the key mechanisms. This section therefore builds upon relevant theoretical notions in the literature and identifies three mechanisms through which transition experiments can contribute to sustainability transitions: deepening, broadening and scaling-up.[7]

Deepening

The mechanism 'deepening'[8] is defined as a learning process through which actors can learn as much as possible about a transition experiment within a specific context. It

6. Based on the experiences in three case studies (Chapters 4, 5 and 7) the table was further optimised. Optimisations include: making explicit that the objective is to contribute to a specific transition instead of to general societal change, and defining this transition as a fundamental change in structure, culture and practices; making explicit that next to a long-term perspective, a medium-term perspective is also necessary in transition experiments; and making explicit that Transition Management extends project goals and is directed towards societal 'transition' goals.

7. The mechanisms 'deepening, broadening and scaling-up' were first described in (Rotmans and Loorbach, 2006) and elaborated in a paper by Suzanne van den Bosch and Mattijs Taanman (2006).This section is based on a similar section in Van den Bosch and Rotmans (2008).

8. The mechanism 'deepening' should not be confused with 'deep' or narrow learning processes.

builds upon the literature on sustainability transitions, which emphasises the importance of social learning processes through which actors interact and develop different perspectives on reality (Röling, 2002, Grin and Loeber, 2007, Wals et al., 2007). Deepening also builds upon the concept of experimenting and learning in niches (Kemp et al., 1998, Smith et al., 2005, Schot and Geels, 2007) that deviate from the regime and provide a context for experimenting with sustainable practices. The importance of learning in a context that deviates from the regime can also be recognised in the work of Nooteboom (2006), stating that "Emerging novelties cannot achieve their potential under the systemic limitations imposed by existing structures, practices and ways of thinking."

A transition experiment enables actors to learn about local shifts in ways of thinking, values and perspectives (culture), shifts in doing things, habits and routines (practices) and shifts in organising the physical, institutional or economic context (structure). In this learning process actors can look at the existing structure, culture and practices in a new way and can recognise emerging or potential changes. These changes in structure, culture and practices are strongly related to each other and their broader context. Loeber et al. (2007) emphasise the importance of *system learning* in innovation projects: "enabling participants to look at the interrelationships between the structures in which they operate and their own practices in a new light". Through deepening, actors can also learn about this complex relation between new structure, culture and practices. For example, in the transition experiment Rush Hour Avoidance (Chapter 5) different actors learned about the effect of a financial reward system (a change in structure) on the mobility behaviour of car drivers (a practice). This is based on the notion that "structure produces behaviour, and changing underlying structures can produce different patterns of behaviour" (Senge, 1990). Within the transition literature 'culture' is distinguished from 'structure' to emphasise that apart from 'hard' physical, institutional or economic structures, 'soft' ways of thinking, values and perspectives are also related to practices in societal systems (Rotmans and Loorbach, 2006). An example of how different ways of thinking and looking can stimulate a transition is the Dutch initiative "Roof Transition", in which a different way of thinking about roofs was a starting point for developing new types of roof structures that fulfil different needs in a sustainable way (e.g. energy, water management and air quality needs).[9]

The learning process 'deepening' results in the development or reinforcement of a deviant, local constellation of structure, culture and practices. In other words, deepening refers to "learning in a local context how to fulfil a societal need in a deviant way". The outcome of deepening is a local constellation that fulfils a present or future societal need in a fundamentally different way. Because of its locality and relative immaturity,

9. The "Roof Transition" is an initiative that is part of the "Climate Transition", promoted by the Earth Recovery Open Platform (www.earthrecoveryopenplatform.nl).

this constellation is characterised by low influence, instability and low dominance in comparison to the regime (which is characterised by high influence, stability and dominance).

Within a transition experiment, the learning process is characterised as contextual, because the same experiment in another context with possibly a different social network, different institutions, differences in culture etc., would yield, at least partially, different outcomes (Van den Bosch and Taanman, 2006). Learning in a transition experiment is also characterised as partial, because what can be learned is limited to the specific real-life context and small scale of the experiment. Transition literature therefore emphasises the importance of *variation;* different experiments need to be conducted in a variety of contexts to learn as much as possible about a societal challenge. Furthermore, both transition and innovation literature emphasise the importance of *selection* processes. A basic notion is that novel sustainable innovations can often not survive in the general selection environment (the regime), but require a distinct selection environment (a niche). Experimentation in niches enables innovations to develop and grow because of two characteristics of the selection process within niches: (1) distinct selection criteria and (2) substantial resources (Levinthal, 1998).[10]

For a better understanding of the role of learning processes in transitions, it is useful to distinguish transition experiments from niches. In the previous chapter it was concluded that the literature lacks a clear definition of niches that addresses the recursive relation between transition experiments and niches (Figure 2.3). A transition experiment can be understood as a specific type of innovation project and an instrument of Transition Management (section 2.3) whereas a niche can be understood as a specific type of societal subsystem (or constellation) and is one of the levels of the multi-level perspective, which is a key concept of Transition Dynamics (section 2.2). Building on the theoretical work of De Haan and Rotmans (2009), the following definition can be developed: "A niche is a societal subsystem which can be understood as a local constellation of structure, culture and practices that deviates from the regime (or dominant structure, culture and practices)". A niche is relatively powerless in comparison to the regime, but can meet quite specific societal needs, often in unorthodox ways (De Haan and Rotmans, 2009). The characteristics of niches (distinct selection criteria and substantial resources) *enable* experimenting and learning about novel or deviant structure, culture and practices.[11]

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10. The development of an innovation is driven by the particular demands of the niche to which the innovation must adapt; the pace of development is influenced by the resources that the niche is able to provide (Levinthal, 1998)

11. Learning processes in transition experiments are thus enabled by the characteristics of niches and often constrained by the regime. However, the development of sustainable innovations in niches can also be enabled by external developments or powerful actors within the regime (Raven, 2005, Geels and Raven, 2006). The case study of the Transition Programme in Long-term Care (Chapter 6) also shows how a regime can facilitate transition experiments.

Niches can therefore facilitate transition experiments. On the other hand, transition experiments that take place in niches can also enable niches to develop and grow. This is supported by the research of Geels and Raven (2006), which shows how niches are shaped by learning experiences from local projects that become aggregated in shared rules. Niches or deviant constellations of structure, culture and practices can therefore be shaped by transition experiments. It can be concluded that 'deepening' is an important mechanism that underlies this process of niche-development. The following two mechanisms describe how niches can grow further and contribute to a regime-shift (transition).

Broadening

The mechanism 'broadening' is defined as repeating a transition experiment in different contexts and linking it to other functions or domains. Broadening is about conducting diverse experiments in a variety of contexts, which is an important notion in transition literature (Rotmans and Loorbach, 2006). Broadening relates to the notion that different experiments that exist simultaneously can build on each other over time and gradually add up to an emerging field or community (Raven, 2005, Geels and Raven, 2006). Repeating and linking a transition experiment to other domains also relates to important mechanisms in innovation processes, such as diffusion (Rogers, 1995), the application of innovations in new domains ('speciation' or generalisation) (Levinthal, 1998, Nooteboom, 1999) and geographical or spatial 'scaling-up'[12] (Douthwaite et al., 2003).

What is repeated or linked is the new or deviant constellation of structure, culture and practices, which is the outcome of innovation and learning processes (deepening). Through broadening, this constellation is extended to broader contexts or broader functions and thus its influence and stability are increased.[13] Two types of result of *broadening* can be distinguished: (1) the new or deviant structure, culture and practices get diffused or adopted in a variety of contexts or (2) the new or deviant culture, practices and structure fulfil a broader function. For example, a shift in thinking (culture), new method or routine (practice) or infrastructure (structure) gets diffused within a certain context or to other contexts (e.g. application domains, sectors or regions), or fulfils more societal needs (for example, the need for mobility, energy, housing, recreation). In other words, through broadening "new application domains or functions for a transition

12. Geographical or spatial 'scaling-up' can be understood as spreading change geographically or widening the scale of operation. This differs from the mechanism scaling-up, which refers to changes at higher (institutional) levels.

13. Influence is increased because the number of contexts in which the constellation influences how a certain societal function is fulfilled is increased. Stability is increased because the constellation is less context dependent, and therefore more robust. Geels and Raven (2006) also describe how in the process of niche-development, global niche rules and expectations that are initially diffuse, broad and unstable, become more articulated, specific and stable.

experiment or a societal subsystem are explored" or "the functioning of a societal subsystem is broadened". This is illustrated by the example of the "Roof Transition", in which the existing function of a roof (providing protection from the elements) is broadened to different functions (including climate safety, air quality, water management and energy). Furthermore, the "Roof Transition" experiment is also broadened to other domains of application; the same way of thinking and developing new functions is applied to transform roads and dykes.

It is important to note that broadening does not refer to repeating without further variation. In other words, in the process of broadening "each experiment is a new adventure"[14]. The opportunities a new context provides for further variation is emphasised in the research of Levinthal (1998). He describes how structural change takes place when a substantial period of development of an innovation in a particular niche is followed by an *invasion of other niches*, possibly including the mainstream market. From the literature on innovation and transitions we thus learn that before new practices break through the mainstream context, innovations need to be developed in a variety of contexts. The importance of broadening, as an intermediate mechanism between deepening and scaling-up, can also be recognised in other conceptions found in innovation literature, such as the learning cycle of Nooteboom (1999). This learning cycle explains how through a sequence of learning activities (deepening) in a variety of contexts (broadening) new structures may emerge (scaling-up) from novel practices. The interaction between broadening and deepening can be recognised in Nooteboom's central notion that a variety of contexts opens up new 'variety of content'. As a result, a new practice becomes adapted to different contexts. However, as pointed out by Nooteboom, a negative result of broadening might be that a new practice "becomes more and more differentiated across contexts, causing efficiency losses, lack of standardisation, economies of scale and increased complexity because of *ad hoc* add-ons". For the success of a new practice it is therefore essential that elements from different practices and contexts become integrated in novel combinations, which Nooteboom refers to as *accommodation*. Finally, in Nooteboom's stage of *consolidation* the variety of content (of the novel concept or practice) is further reduced, and gets consolidated in a new architecture of elements.[15] This new architecture enables the novelty to realise its full potential and develop into a 'dominant design'. These last notions point out the importance of the interaction between broadening in a variety of contexts and embedding an innovation in new dominant practices and related structures and ways of thinking, which can be defined as 'scaling-up' (next section).

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14. This is a quotation from Michel Callon in a short meeting about this PhD research during the Midterm Review of the KSI network (Amsterdam, March 2007).

15. Geels and Deuten (2006) talk about the importance of aggregation activities, which include standardisation, codification, model building, formulation of best practices, etc.

Scaling-up

The mechanism 'scaling-up' is defined as embedding a transition experiment in dominant ways of thinking (culture), doing (practices) and organising (structure), at the level of a societal system. This societal system can either be the incumbent regime or an emerging niche-regime. The mechanism scaling-up builds upon the literature on transitions describing similar mechanisms and resulting patterns, which refer to the scales of niches and regimes in the multi-level perspective. Within this literature some authors focus more on the importance of niche-development while others focus on the importance of interactions between niches and regimes. This results in two types of conceptualisations of scaling-up. The first conceptualisation (focused on niche-development) understands scaling-up as the step from experiments to the level of niches and eventually a regime-shift (Weber et al., 1999) or as the aggregation of learning experiences in local projects to a global niche-level (Geels and Raven, 2006, Geels and Deuten, 2006). The second type of conceptualisation understands scaling-up as the translation of sustainable practices in niches to mainstream practices in the regime (Smith, 2007), the societal embedding of experiments (Deuten et al., 1997, Van Mierlo, 2002, Kivisaari et al., 2004), the embedding of experiments in the existing structures of a regime (Rotmans and Loorbach, 2006:12) or niches growing into niche-regimes (De Haan and Rotmans, 2009).

In this thesis the definition of scaling-up builds upon the second type of conceptualisation (focused on niche-regime interaction). What is scaled up is not the activity of experimentation, but the deviant structure, culture, practices that are experimented with (the constellation). Through scaling-up, a new or deviant constellation of structure, culture and practices attains more influence and stability and increases its share in meeting a societal need. The constellation increasingly becomes part[16] of the dominant way in which a societal need is fulfilled. The outcomes of scaling-up are fundamental changes in the dominant way societal needs are fulfilled, which extend the scale of the initial innovation project. Scaling-up implies that sustainable practices that are initially deviant or unusual, become the dominant or mainstream practice. Through scaling-up, transition experiments can thus influence the way societal needs are fulfilled in a more sustainable direction. In other words, scaling-up refers to "moving sustainable practices from experimentation to mainstream".

16. To define this 'part', indicators are necessary that refer to how a societal function is fulfilled. For example, in order to fulfill the need for energy, fossil fuels are still dominant and renewables only contribute with a small percentage. Experiments with renewables have scaled up and are embedded in structure, culture and practices of the regime. However, renewables are still "a niche within the regime" and are not fully embedded in the regime. Another example are hybrid cars (Prius) or organic food. Both examples have changed ways of thinking, doing and organising, but are still not dominant in fulfilling societal needs. The outcome of scaling-up is therefore not fixed, but a continuous process with outcomes at different ends of a continuum between niches and regimes.

Recent empirical research on transitions, however, demonstrates that sustainable practices in niches are difficult to *translate* to the dominant practice in the regime, because these deviant practices do not work in a mainstream context (Smith, 2007). Smith's exploratory empirical research suggests that this is caused by differences in performance criteria in niches and regimes, broad vs shallow sustainability visions, unequal power relations, and regulations that only help practices that fit easily into the mainstream context or that can be added on without too much cost or difficulty. This confirms the paradox that niches provide a good context for experiments with sustainable practices, but at the same time adaptation to this specific and deviant context makes it difficult to scale up experiments to the dominant context (regime).

This paradox is partly caused by the dichotomy between regimes and niches, which are distinguished in the multi-level perspective as developed by Geels and Kemp (2000). This distinction has analytical value; however, in practice the step from niche to regime is not a single step but the result of a process of many intermediate steps. Therefore, *broadening* an experiment in different contexts is an important intermediate mechanism between *deepening* in the context of one niche and *scaling up* to the regime context. By repeating a transition experiment in a variety of contexts and linking it to different functions, broadening helps to strengthen learning experiences (deepening) and increases the influence and stability of niches that can eventually grow into a niche-regime or change the incumbent regime (scaling-up).

Notions of scaling-up within the research on transition experiments differ from general notions of scaling-up geographically or scaling up markets. Scaling up transition experiments is less about scaling up products, services or users; it is more about scaling up perspectives, ways of thinking, routines, legislation, institutions, etc. This is supported by the scaling-up typology of Douthwaite et al. (2003) that distinguishes scaling-up from scaling-out (geographically) and spatial scaling-up. This typology has been applied in an empirical study of projects that contribute to changes in complex agricultural systems (Douthwaite et al., 2003):

- Scaling-out (*geographically*): innovation diffusion from farmer to farmer, community to community, within the same stakeholder groups;
- Scaling-up: an institutional expansion from grassroots organisations to policy makers, donors, development institutions, and other stakeholders key to building an enabling environment for change.
- Spatial scaling-up: the widening of scale of operation from, for example, experimental plot, to field, to farm, to watershed, etc.

In this typology, scaling-up is understood as institutional expansion from 'frontrunners' and 'niche-players' to incumbent organisations and 'regime-players'. It also emphasises the importance of key stakeholders that can support and encourage processes of scaling-up. Within the literature on transitions, the importance of involving such key

stakeholders or frontrunners is also emphasised. The empirical research of Smith (2007) identifies the importance of "pragmatic systems builders who make compromises and help translate some niche practices into forms amenable to actors in the regime". These systems builders can provide a 'linking pin' between niches and the regime. However, a basic notion of Transition Management is that no single actor has the managing capabilities to control a transition process fully in a top-down manner (Rotmans and Loorbach, 2006). Examples of key stakeholders for scaling-up are actors that have the power and willingness to influence the regime directly (e.g. frontrunners within Ministries, agencies that develop protocols and standards, visionary policy makers, politicians or directors) and actors that influence the regime directly or indirectly, because they have an interest in embedding sustainable practices in society (e.g. sustainability programmes, NGOs, sustainability ambassadors, frontrunners in a sector or policy domain).

Summary: relation between transition experiment and transition (regime-shift)
Figure 3.3 provides a schematic overview of the contribution of a transition experiment (taking place in niches) to a transition (regime-shift). The relationship between transition experiments and transitions can be summarised as follows. The mechanism *deepening* relates to the direct context of the transition experiment (the niche). Through deepening, the actors in a transition experiment learn about new structure, culture and practices that deviate from the existing regime (in Figure 3.3 deepening is therefore

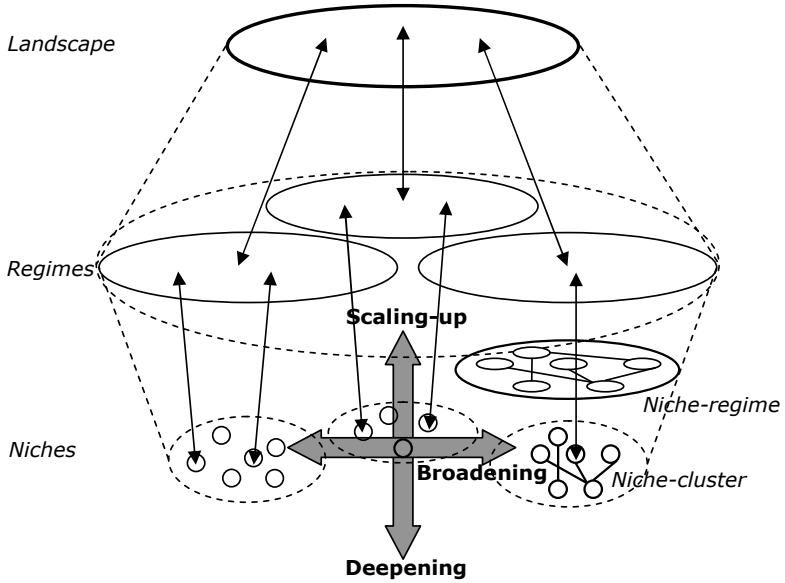

Figure 3.3 Deepening, broadening & scaling up transition experiments in niches in relation to multi-level perspective (based on Geels and Kemp 2000, De Haan and Rotmans, 2009)

illustrated as an opposite arrow that is 'breaking away from the regime'[17]). Because of the recursive relationship between transition experiments and niches, the learning process in transition experiments is both enabled by the niche and can contribute to niche-development. The mechanism *broadening* relates the transition experiment to other niches, either within or outside the initial domain or function of the experiment. Through broadening, different niches get linked, which can lead to a niche-cluster that can eventually grow into a niche-regime. Within this multi-level perspective (based on De Haan and Rotmans, 2009) the niche-regime exists at a higher scale level, illustrating its higher stability and influence which can challenge the power of the regime. The mechanism *scaling-up* relates the transition experiment to the regime. Scaling-up takes place in many intermediate steps through which initially small changes in niches can eventually lead to broader changes in the dominant structure, culture and practices of the regime. Two possible patterns for scaling-up are the pattern of 'empowerment' in which niches grow into niche-regimes and the pattern of 'adaptation' in which the regime directly adapts and takes over (parts of) the deviant structure, culture and practices of niches (De Haan and Rotmans 2009, De Haan, 2010).

To summarise even further, Figure 3.4 provides a more simple, schematic representation of *how* and *what* transition experiments contribute to transitions. Through cycles of deepening, broadening and scaling-up (*mechanisms*), transition experiments contribute to changes in constellations of structure, culture and practices (*outcomes*). A transition experiment can directly influence the level of *niches*, and through the empowerment of niches it can indirectly influence the emergence of *niche-regimes* and eventually *regime-*

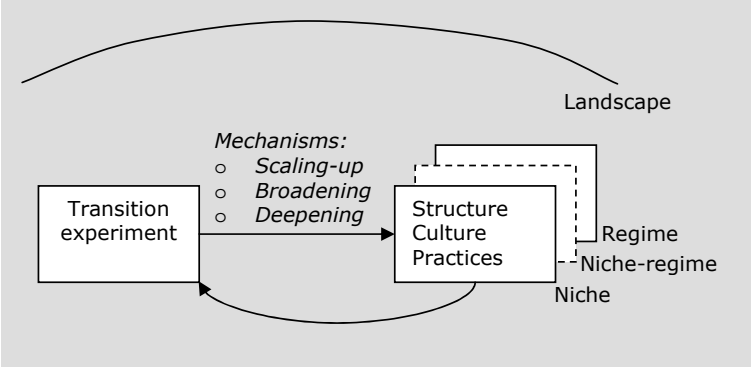

Figure 3.4 Core of the conceptual framework on transition experiments

17. Smith (2007:443) identifies this as a specific kind of "regime to niche" translation which he refers to as "(…) green niches are created in opposition to the incumbent regime. This opposition is deep-seated and derives from second order lessons about regime unsustainability."

shifts. The feedback loop in Figure 3.4 indicates that the existing and changing structure, culture and practices also influence the transition experiment.

3.4 Transforming innovation projects into transition experiments

The previous chapter concluded that the literature on transitions has not yet addressed the transformation of ongoing innovation projects into transition experiments, which is referred to as 'transitioning'. In Chapter 5 a case study is presented in which three projects of Transumo are at least partly transitioned. Based on these experiences in practice a 'transitioning framework' was developed in strong interaction with practitioners (including consultants, project managers and programme managers). This transitioning framework is part of a transitioning method that is aimed at supporting project managers and programme managers with transforming existing innovation projects into transition experiments, to increase the chance that their projects scale up and contribute to a transition (Van de Lindt et al., 2009).

The 'transitioning framework' is a combination of two dimensions: (1) deepening, broadening and scaling-up, which provide central guiding dimensions, and (2) project characteristics distinguished in substance and process, which together provide possible 'intervention points' to transform an ongoing innovation project. These two dimensions result in 6 management challenges for transition experiments (Table 3.2), which are supported by management guidelines (Table 3.3). The transitioning framework can provide a practical instrument to reflect on the process and substance of an ongoing innovation project and to develop concrete (process and substance) actions aimed at contributing

Table 3.2 Management challenges related to 6 clusters of guidelines for transition experiments

Guiding dimensions / **Project characteristics**	**Deepening** Learning as much as possible from a project in its context	**Broadening** Replicating and linking to other contexts and functions	**Scaling-up** Embedding in dominant ways of thinking, doing and organising
Process	From: realising results To: searching & learning	From: coincidental links To: directed linking	From: operational… To: strategic management
Substance	From: incremental innovation To: developing new ways of thinking and doing	From: context specific results To: adapting to other contexts	From: handing over results To: changing dominant ways of thinking and doing

to a transition.[18] The framework is practice-oriented because it translates general project management concepts (which are familiar to managers) into challenges and guidelines that are specific for transition experiments.

An example of a management challenge is how to move from focusing the process on realising short-term results to focusing the process on searching and learning. An example of related management guidelines are "allocating resources (time, money, knowledge, etc.) to an open search and learning process" and "building in space for reflection on and adjustment of the vision and learning goals". In practice, a manager will have to find a balance between both sides of these challenges.

The added value of this framework with regard to classical project management is that it focuses on the importance of making space for *learning processes*, while at the same time stimulating *interaction processes* between the experiment and its broader context and actively working on *embedding processes* to increase the impact of the experiment at a higher scale level.

3.5 Managing transition experiments

In chapter 2 it was concluded that the Transition Management (TM) approach provides a general framework for developing and managing a portfolio of transition experiments, but lacks specific theoretical and practice-oriented concepts on how to manage transition experiments at the *operational level*. This section develops a managerial perspective on transition experiments, which is further illustrated and elaborated in the case studies (mainly Chapters 5, 6 and 7).

First it should be noted that the term 'management' does not refer to classical command-and-control, top-down management, but builds upon notions from Transition Management. Within TM literature, managing is interpreted as searching, learning and experimenting (Rotmans and Loorbach, 2006; Loorbach, 2007), creating space for frontrunners and first movers and empowering them gradually (Rotmans et al., 2007), reflexive governance (Grin, 2006, Voß et al., 2006) and influencing the process of change of a complex system in a certain (sustainable) direction (Smith et al., 2005, Loorbach and Rotmans, 2010). To be able to manage a transition experiment successfully, it is important to define what a successful transition experiment is. Explicit success criteria can support the selection, execution and monitoring of transition experiments. Based on initial experiences with applying criteria in practice[19], two types of criteria for success

18. It the case studies in Chapter 5 the transitioning framework was only tested to *reflect* on ongoing projects; follow-up research should test to what extent the framework supports developing *concrete actions*.

19. Both types of criteria were developed in co-production between theory and practice within Transumo,

Process criteria[20]

- room in budget and planning
- space in the process
- quality of learning process
- supportive incentives / accountability mechanisms
- motivation, resources and competences of project participants (transition competences)
- strategic management

Substance criteria[21]

- connection to societal challenge (how the project goals fit with societal 'transition' goals)
- connection to promising paths of development (transition paths)
- innovativeness (in terms of deviating from dominant structure, culture and practices)
- sustainability of explored solutions (in terms of a balance between economic, social and ecological development)

Box 3.2 Process and substance criteria for successful transition experiments

can be distinguished: (i) process criteria for the quality of the project management and (ii) substance criteria for the quality of the explored solutions (Box 3.2).

The first type of criteria is mainly about conventional 'good' project (and process) management, such as having sufficient room in the project budget and planning, stimulating a high quality learning process, developing adequate incentives / accountability mechanisms that support the project and selecting project participants with high motivation, resources and competences. Even though these general process criteria are also applied in conventional project management, in a successful transition experiment the specific way in which these criteria are applied is different. For example, in conventional project management the 'supportive incentives / accountability mechanisms' are focused on realising short-term results and mainly financial impacts, while in the management of a transition experiment, similar accountability mechanisms (such as contractual agreements or monitoring indicators) are focused on stimulating learning and a broad societal impact.

Moreover, 'good' project management in transition experiments differs from classical project management in several ways. The first difference is that in transition experiments

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Transition to Sustainable Mobility Programme (Chapter 5) and within the Transition Programme in Long-term Care (Chapter 6). More research is necessary to test if these criteria can be generalised to transition experiments in different contexts (such as different sectors).

20. The process criteria were developed and tested in a KSI research project (Emmert et al., 2006) aimed at supporting project and programme managers with transforming existing innovation projects into transition experiments with a high potential to contribute to transitions (described in Chapter 5).

21. The substance criteria have been partly applied during the selection of transition experiments for the Transition Programme in Long-term Care (Chapter 6).

it is important to create enough *space* in the process for learning, reflection and different ways of thinking, doing and organising. In the literature on Strategic Niche Management (Kemp et al., 1998, Weber et al., 1999, Hoogma et al., 2002) this is conceptualised as creating a partially *protected space*, in which an innovation is protected from the mainstream selection environment. The different types of space that can be provided to a transition experiment include financial space, organisational space, (transition) management space, mental space, juridical and geographical space (illustrated in Chapter 7).

Another important difference is that the successful management of a transition experiment requires specific *competences*. Apart from conventional programme and project management capabilities, 'programme managers' and 'project managers' involved in managing a transition experiment also need several additional competences (illustrated in Chapters 6 and 7).

A third difference is that in transition experiments the project managers should connect the project results to the societal challenge. This requires *strategic management* targeted at connecting the project with a strategic level and linking up with other projects and developments that are oriented towards the same societal challenge.

The second type of criteria addresses the substance of a transition experiment, referring to the quality of the solutions that are explored. These criteria are about how innovative the experiment is in terms of deviating from dominant structure, culture and practices, how sustainable the explored solutions are, how the project goals fit with societal 'transition' goals, and how the experiment fits within promising paths of development (transition paths). All these substance criteria are related to the Transition Management approach and are therefore characteristic for the management of transition experiments.

Management strategies and guidelines

Based on the mechanisms deepening, broadening and scaling-up (section 3.3), the transitioning framework (section 3.4) and the identified process criteria and substance criteria for successful transition experiments, this section develops management strategies and guidelines for transition experiments.

It should be noted that this section is not aimed at providing a 'cook book' for how to manage transition experiments in a successful way, but is aimed at presenting general management strategies and guidelines for 'guiding' transition experiments that provide practitioners with a guide along their own path. Because every transition experiment is unique, the implementation of the developed strategies and guidelines should be sensitive to the specific character and context of each experiment.

A second notion is that the management strategies and guidelines are not focused on regular project management but are specifically aimed at increasing the 'transition potential' of transition experiments; in other words, at increasing the chance that a tran-

sition experiment is successful and contributes to a transition or that a niche practice becomes a regime practice.

A third notion is that the three central dimensions for guiding transition experiments (deepening, broadening and scaling-up) are not related in a sequential or chronological way, but can act upon a transition experiment simultaneously. For example, during the start of a transition experiment it is essential that the management pays attention to creating the conditions to learn as much as possible in the specific context (deepening), while at the same time creating conditions to extent the experiment to broader contexts and functions (broadening) and involving regime players to anticipate scaling-up. When making strategic choices for focusing on deepening, broadening or scaling-up, the timing of actions is crucial (for example, adapting to a sense of urgency), as is being sensitive to barriers and opportunities (for example, stress in the regime or developments in the landscape).

Based on Table 3.2, the three guiding dimensions for transition experiments can be distinguished in 6 management strategies, which are interrelated in a non-linear way:

- *Deepening-process:* The essence of this strategy is to transform an innovation project into a transition experiment, by creating the conditions for an open search-and-learning process in which a societal challenge is a starting point.
- *Deepening-substance:* Essential in this strategy is formulating explicit learning goals that are connected to societal (transition) goals in order to develop new ways of thinking, doing and organising.
- *Broadening-process:* This strategy is directed at linking the innovation project to a broader context, by interacting with new domains and partners.
- *Broadening-substance:* The essence of this strategy is assigning new functions to the innovation and adapting to other contexts.
- *Scaling-up-process:* Essential is strategic management, which involves key actors (with power and willingness to change) at a strategic level from the outset of the process.
- *Scaling-up-substance:* This strategy is aimed at changing dominant ways of thinking, doing and organising, by stimulating structural support and resources for the innovation.

In Table 3.3[22] these management strategies are further specified in concrete management guidelines, which build upon the process and substance criteria for successful transition experiments (Box 3.2). The next section presents specific examples of how this can be applied in practice, which is further elaborated and illustrated in the case studies.

22. The management guidelines that are presented in Table 3 are an elaboration of the guidelines that were developed by Martin van de Lindt and Suzanne van den Bosch (2007) as part of the transitioning method (Chapter 5).

Table 3.3 Management guidelines for transition experiments (based on Van de Lindt and Van den Bosch, 2007)

Guiding dimensions / **Success criteria**	**Deepening** actions aimed at learning as much as possible from the experiment in the specific context	**Broadening** actions aimed at repeating the experiment in other contexts or connecting to other functions and domains	**Scaling-up** actions aimed at embedding the experiment in dominant ways of thinking, doing and organising
Process			
Room in budget and planning	allocating resources (time, money, knowledge, etc.) to an open search-and-learning process;	allocating resources to interaction with other domains and partners;	allocating resources to (early) involvement of key actors at a strategic level;
Space in the process	building in space for reflection on and adjustment of the vision and learning goals;	building in space for reflection on the connection to the broader context;	building in strategic reflection on barriers and opportunities in dominant ways of thinking, doing and organising;
Quality of learning process	organising a broad, reflexive and social learning process;	focusing the learning process on how experiments can reinforce each other;	focusing the learning process on how learning experiences can be embedded in dominant ways of thinking, doing and organising;
Supportive incentives / accountability mechanisms	developing supportive incentives / accountability mechanisms that increase the quality of learning;	developing supportive incentives / accountability mechanisms that stimulate interaction with other domains and partners;	developing supportive incentives / accountability mechanisms that stimulate feeding back results to key actors at a strategic level;
Competences of project participants	selecting project participants with an open mind and willingness to learn;	selecting project participants that are able to look outside the borders of their discipline and are strong 'connectors';	selecting project participants that are able to communicate and 'anchor' project results at a strategic level;
Strategic management	the management guarantees that project results are related to the societal challenge;	the management guarantees the interaction with other domains and partners;	the management guarantees connection to key actors and developments at strategic level;
Substance			
Connection to societal challenge	connecting project goals explicitly to societal (transition) goals;	cooperating with partners and developing new partnerships to realise shared societal goals;	adapting to sense of urgency with regard to societal challenge;
Sustainability vision / future perspective	project participants share a long-term sustainability vision;	developing an overarching sustainability vision to provide guidance to different experiments;	drawing attention to the sustainability vision at a strategic level;
System analysis (dominant culture, practices, structure in sector)	project participants share perspective on dominant ways of thinking, doing and organising in the sector (from which the experiment deviates);	identifying similar experiments and potential new partners, application domains and functions;	identifying key actors with power and willingness to influence dominant culture, practices and structure;
Learning goals/ desired changes (innovation)	formulating explicit learning goals with regard to desired (interrelated) changes in culture, practices and structure;	repeating the experiment in other contexts and experimenting with new functions is part of the learning goals;	anticipating and learning about barriers and opportunities in dominant culture, practices and structure is part of the learning goals;
Intended results	distinguishing results in generic and context specific;	sharing results with other experiments and potential application domains;	stimulating structural (regime) support and resources for results;

3.6 Integrated conceptual framework on transition experiments

In Chapter 2 it was concluded that though the literature on sustainability transitions, TM and SNM provides useful 'building blocks', it lacks an integrated conceptual framework on transition experiments. This section synthesises the relevant existing concepts (Chapter 2) and the four main new concepts that were presented in the previous four sections, and presents an integrated conceptual framework on transition experiments (Figure 3.5). The framework is developed in strong interaction with ongoing programmes and projects aimed at stimulating transitions towards sustainability (Chapter 4 to 7). The framework is the outcome of exploratory research that is practice-oriented, however, it is not comprehensive and needs to be further developed in follow-up research. The purpose of this section is to describe how the conceptual framework can be applied, based on the initial experiences from the four case studies. Since not all concepts of

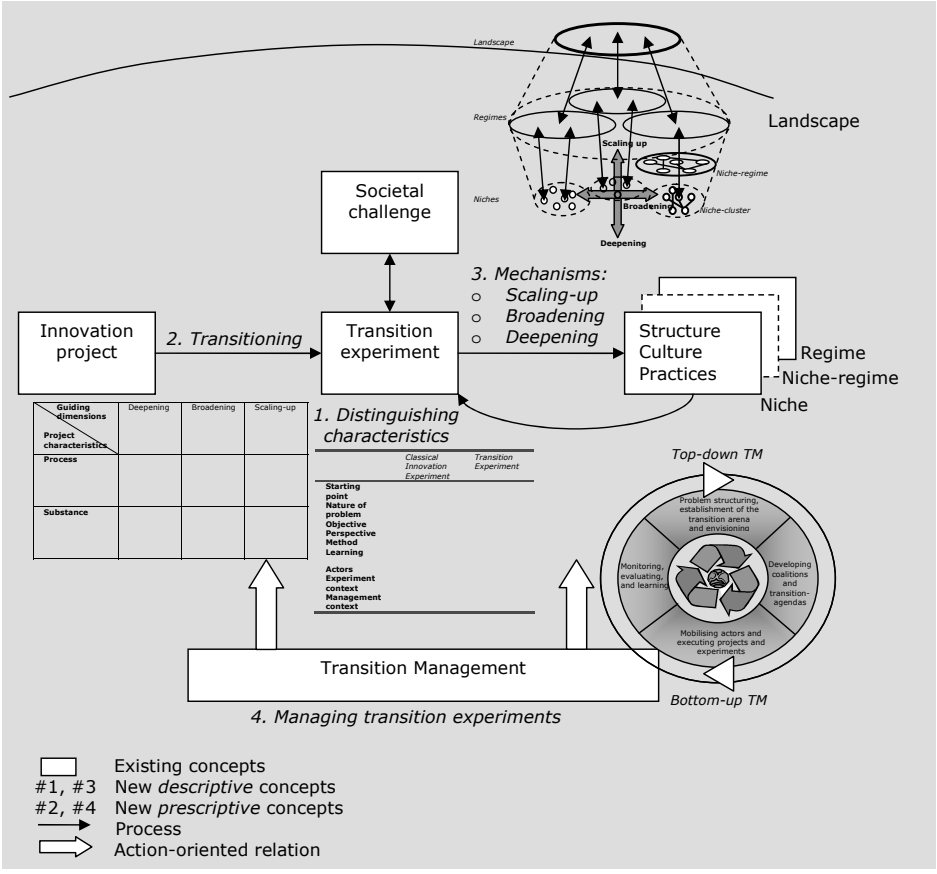


Figure 3.5 Integrated conceptual framework on transition experiments, illustrated with main new sub-concepts for analysing and managing transition experiments

Table 3.4 Main new concepts, related concepts or sub-concepts and practical applications of the conceptual framework on transition experiments

New concepts	Related concepts or sub-concepts	Practical applications
1. *A definition and the distinguishing characteristics of a transition experiment*	Table that compares transition experiments with classical innovation experiments (Table 3.1)	– Analysing – Evaluating – Developing actions (Illustrated in Chapters 4, 5 and 7)
2. *Transitioning: transforming an ongoing innovation project into a transition experiment*	Transitioning framework (Table 3.2)	– Reflecting – Reframing – Developing actions (Illustrated in Chapter 5)
3. *The mechanisms deepening, broadening and scaling-up*	The relation between the mechanisms and the Multi-Level Perspective (Figure 3.2) and constellations of culture, structure and practices	– Analysing
4. *Managing transition experiments*	The relation between managing transition experiments and Transition Management ('bottom-up' vs 'top-down' TM approach)	– Selecting – Making space – Facilitating learning – Monitoring – Developing actions (Illustrated in Chapters 4, 6 and 7)

the framework are applied in each case study, Table 3.4 specifies which concepts of the conceptual framework are applied in which case study.

The framework consists of a descriptive part (for analysing transition experiments) and a prescriptive part (for managing transition experiments):

(i) The descriptive part of the framework provides analytical concepts and tools to describe *what* a transition experiment is, *how* it can be recognised and *how* (and *what*) it can contribute to a sustainability transition. This part of the framework includes the *distinguishing characteristics* (#1) of transition experiments and relates the *mechanisms* (#3) deepening, broadening and scaling-up to desired outcomes or changes in established ways of thinking (*culture*), doing (*practices*) and organising (*structure*);

(ii) The prescriptive part of the framework provides practice-oriented concepts and tools to stimulate the contribution of transition experiments to sustainability transitions. This part of the framework includes the general management strategies and guidelines for *transitioning* (#2) innovation projects and/or *managing transition experiments* (#4). The case studies provide specific examples of how the developed concepts and tools can be applied in practice (e.g. to select and monitor transition experiments). Furthermore, the case studies elaborate on key issues such as *who* is managing, what are essential *competences* and what can a *management approach* for transition experiments look like.

(i) Analysing transition experiments

In section 3.2 the *distinguishing characteristics* of transition experiments were defined and compared with classical innovation experiments (Table 3.1). This table can be applied as an analytical tool to analyse or evaluate (*ex post* or *real-time*) if a specific innovation project can be characterised as a transition experiment. A key question in the analysis of a transition experiment is how it can contribute to a sustainability transition. To analyse this contribution it is important to distinguish between substance and process. The *substance* of the contribution of a transition experiment to a sustainability transition can be indicated by its desired outcome in terms of radically changing the dominant *structure, culture* and *practices* (Chapter 2). In all case studies these three concepts are applied to describe how the substance of the transition experiments deviates from the incumbent regime. The *process* can be indicated by the mechanisms *deepening, broadening* and *scaling-up*, which are deduced from theory on sustainability transitions (section 3.3). These three mechanisms indicate how the contribution of a transition experiment to a sustainability transition could 'work'. It should be noted that the case studies in this thesis do not *describe* the process of how transition experiments contribute to sustainability transitions (methodology is explained in Chapter 1). In the case studies the mechanisms deepening, broadening and scaling-up are mainly applied in a *prescriptive way*, addressing how practitioners can influence the contribution of transition experiments to transitions. This is further elaborated in the next section.

As a starting point for analysing transition experiments, it is important to demarcate the societal system to which a transition experiment aims to contribute (e.g. a certain domain, sector or region). A complex systems analysis can provide insight into the dominant structure, culture and practices (regime) of this societal system. This can also provide a basis for analysing the 'deepening' of transition experiments. *What* actors learn in a transition experiment (in terms of substance) can be characterised as shifts in ways of thinking (culture), doing (practices) and organising (structure). However, *how* these learning experiences specifically take place, requires further research, since the case studies mainly describe the learning processes in transition experiments at a system level and not at an individual or organisation level. Theoretically, the outcome of 'deepening' can be indicated by the development or reinforcement of a deviant (local) constellation of structure, culture and practices (a niche). This niche provides the context for experimenting and learning about radical changes and at the same time during this learning process, transition experiments can influence and reinforce the niche.

In analysing the 'broadening' of transition experiments it is important to identify linkages with other experiments and niches and linkages with other domains and functions. *What* is repeated or linked is the deviant constellation of structure, culture and practices (the outcome of 'deepening'). The outcome of 'broadening' can be indicated

by the emergence of replicated, recombined or clustered transition experiments and the development of *multi-functional* and *multi-domain* transition experiments. If the 'broadening' of a transition experiment is limited, the experiment will remain an isolated event with limited potential for social learning and limited influence to empower the niche to develop into a niche-regime.

Analysing the 'scaling-up' of the transition experiment includes identifying which changes in the dominant structure, culture and practices of the societal system the experiment contributes to. *What* is scaled up is not the activity of experimentation, but a constellation of deviant structure, culture and practices, with increased influence and stability (an empowered niche or an emerging niche-regime). The outcome of scaling-up can be indicated by the emergence of fundamental changes in the dominant way a societal need is fulfilled (i.e. influencing the mainstream or the regime). A possible way to identify to what extent these changes are taking place is by applying an *actor perspective*. Such a perspective would enable analysing: the awareness of actors in the societal system (*do they have knowledge and awareness about a problem? do they talk about the problem and possible solutions?*), shifts in thinking of actors (*do they change their existing way of thinking? do they perceive a problem differently? do they show intention or commitment to change their actions?*), practices of actors (*do they actually do what they say? do they make an effort to change their existing behaviour and routines?*) and structures that are (re)produced by actors (*do they change existing infrastructure, financial structures, physical structures, etc.?*). Follow-up research could apply this perspective in empirical research and could also elaborate on the notion that in a scaling-up process different types of actors are important (e.g. 'linking pins' between niche and regime, section 3.3).

(ii) Managing transition experiments

Ideally, the management of transition experiments takes place within a Transition Management (TM) context. Previous case studies of transition management processes show that transition experiments play a crucial role as part of the transition agenda, which is developed by a 'transition arena' and includes a problem analysis, sustainability vision, transition pathways and experiments. Within such a transition agenda "transition experiments form the link between the often as abstract perceived long-term vision and the concrete reality of today" (Loorbach and Rotmans, 2010:195). Regarding the relation between transition experiments and the TM approach two different ways of implementing the TM cycle (Loorbach, 2007) can be distinguished: 'top-down TM' that starts with developing a sustainability vision in a transition arena and 'bottom-up TM', which starts with selecting a portfolio of transition experiments (illustrated in Chapter 6). To support the management of a transition experiment and stimulate the contribution to a transition process, the conceptual framework on transition experiments includes management strategies and guidelines for *deepening, broadening* and *scaling-up* (Table 3.3).

In general, it can be concluded that the prescriptive part of the conceptual framework on transition experiments is not yet fully operational. However, the three mechanisms deepening, broadening and scaling-up enable "explicitly linking a transition experiment to an ongoing transition process" (Loorbach and Rotmans, 2010:195). In all case studies these three mechanisms are applied as key 'guiding dimensions' to stimulate the potential contribution of transition experiments to sustainability transitions. Based on the initial experiences with applying the concepts deepening, broadening and scaling-up in a prescriptive way, specific guidelines for managing transition experiments can be developed. The following guidelines are specifically targeted at a 'transition team' that manages a portfolio of transition experiments at the programme level (based on Chapters 4 and 6):

- *Deepening* can be stimulated by: providing different types of space for setting up and conducting transition experiments in specific contexts, supporting transition experiments with expertise on process and substance aspects, facilitating social learning (within and between experiments), providing support to overcome organisational, institutional or financial barriers, structuring discussion and activities within the experiment, stimulating adequate monitoring and evaluation, continuously feeding back learning experiences to the societal challenge and distinguishing between context-specific and generic learning experiences (applicable in other contexts).
- *Broadening* can be stimulated by: selecting 'context-independent' transition experiments (experiments which can be repeated in different contexts), stimulating multi-functional and multi-domain transition experiments, providing resources (e.g. money, knowledge, people) to repeat radically new practices in different contexts (e.g. regions, target groups, organisations), facilitating interactions between similar experiments, stimulating the development of themes or pathways that give direction and binding to transition experiments, stimulating network building (either regional or theme based), sharing learning experiences within the sector and stimulating linkages with adjacent sectors.
- *Scaling-up* can be stimulated by: selecting and supporting frontrunners with the motivation and ability to experiment ánd scale up, selecting 'icon projects' with a high appeal and high sense of urgency, stimulating the continuity of transition experiments (e.g. by developing a societal business case or involving 'project guards'), balancing between providing protection from the regime and directly involving regime-actors who have the willingness and power to change existing structures (e.g. financial structures, regulation), realising agreements with the regime, actively feeding back learning experiences to the regime.

The following management guidelines and examples of management activities are specifically targeted at 'project managers' (based on Chapter 7):

- *Deepening:* structure the learning process (e.g. define learning objectives, regular learning meetings, reporting of learning experiences), involve different types of actors in the learning process (e.g. the professionals who actually work with a new practice and the target group themselves), feed back learning results to strategic actors (e.g. directors, policy makers) and learn about all relevant aspects of a societal challenge (e.g. financial aspects, institutional aspects).
- *Broadening:* experiment with new practices in a different context (e.g. a different target group or location), learn about similarities and differences of different contexts, connect to similar innovations with a different function, add a function to the existing transition experiment and link to other transition experiments or niches.
- *Scaling-up:* embed new practices in the dominant structure and related culture and practices of an organisation or regional network, cooperate in a network with a shared aim (niche-cluster), investigate how the experiment could be structurally financed (e.g. by developing a Societal Business Case) and bring the experiment under the attention of the regime (e.g. politics and media).

These guidelines for managing transition experiments provide a first translation of the theoretical concepts deepening, broadening and scaling-up into practice-oriented concepts and tools to stimulate sustainability transitions. Follow-up research is required to apply and test these guidelines in more case studies.

Application of the conceptual framework in practice

This final section describes how the theoretically and empirically grounded conceptual framework on transition experiments can be applied in practice. Key questions are *who* could apply this framework, *for what purpose* and what *competences* are required.

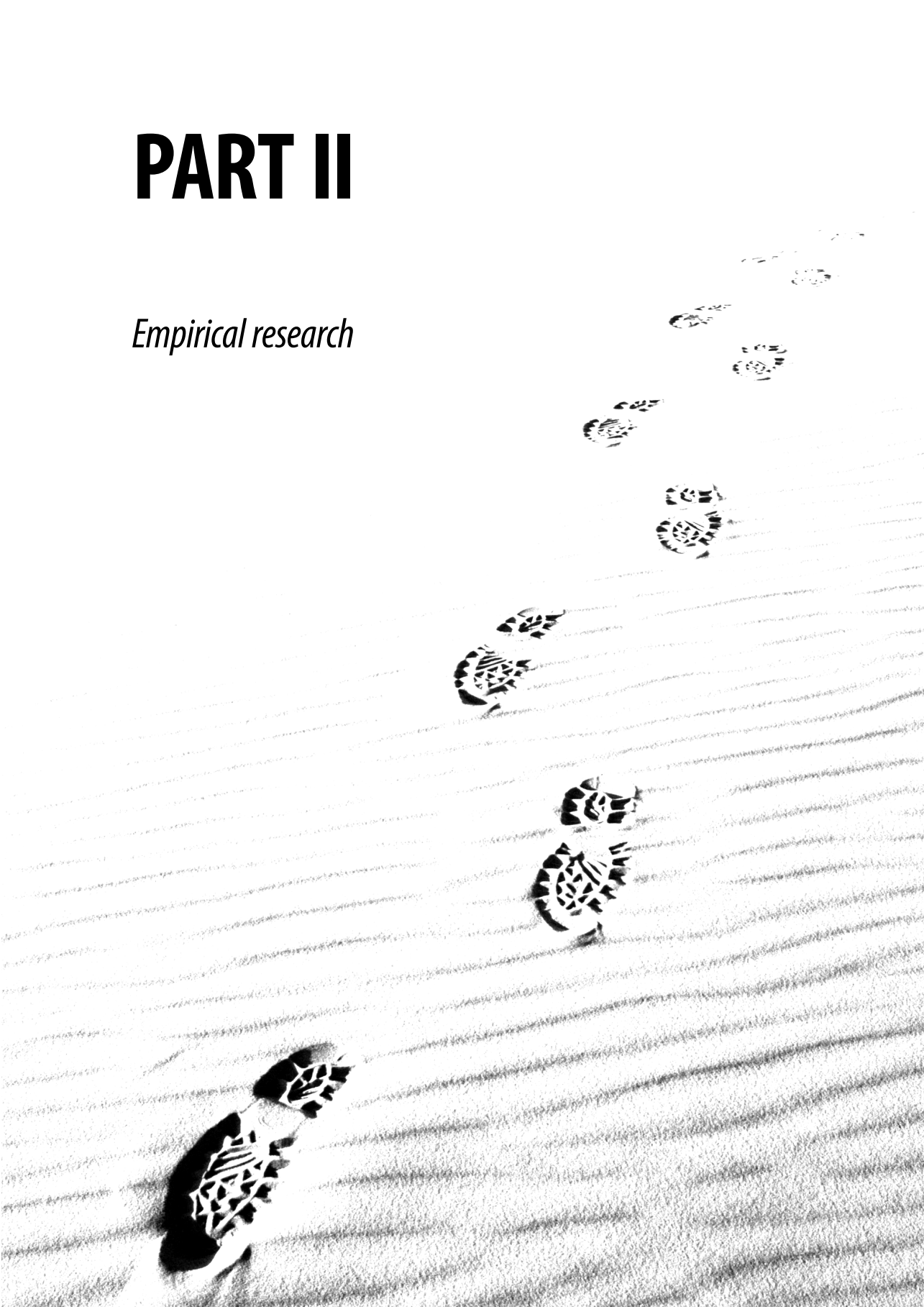
The conceptual framework can be specifically applied (and further developed) by different types of TM researchers and practitioners who are involved in the analysis and management of transition experiments. For *transition researchers*, the framework can provide an analytical or evaluative tool to analyse past, ongoing and future transition experiments and their (potential) contribution to sustainability transitions. For '*action researchers*' specifically, the framework can also provide action-oriented concepts (e.g. the transitioning framework), which could be applied and further developed in interaction with practitioners, to influence ongoing and future transition experiments. For *consultants* who apply TM theory in practice, the framework can provide more analytical insight into the 'black box' of transition experiments and their relation to other transition concepts (e.g. the multi-level perspective and the concepts structure, culture and practice). For *programme managers and project managers in general*, the framework can be applied to bring in a transition perspective into the management of innovation projects that are aimed at furthering sustainable development. Specifically for *managers of transition experiments*, the framework can support and structure various management

activities, including selecting promising transition experiments, facilitating learning and monitoring.

Hence, the integrated conceptual framework on transition experiments can be applied in multiple ways, such as in analysing, evaluating, structuring and/or developing actions to manage transition experiments (Table 3.4). However, applying the conceptual framework in practice requires a basic knowledge of transitions and Transition Management and specific 'transition competences', including integral thinking, analytical and conceptual strength and second order learning (Andringa and Weterings, 2008). The conceptual framework on transition experiments being the outcome of explorative scientific research, it still needs to be further translated into a conceptual language that is directly applicable to practice. Fortunately, in the Netherlands several institutions exist that are specifically aimed at providing an interface between transition research and practice (e.g. the Competence Centre on Transitions) and translating TM theory to professionals who work on transitions (e.g. the post-academic TM course). On the specific subject of transition experiments, there is still a lot of development and 'translation' work to be done. However, this chapter has tried to integrate existing and new concepts that enable a better analysis and management of transition experiments; the following four case study chapters will further illustrate and elaborate on this.

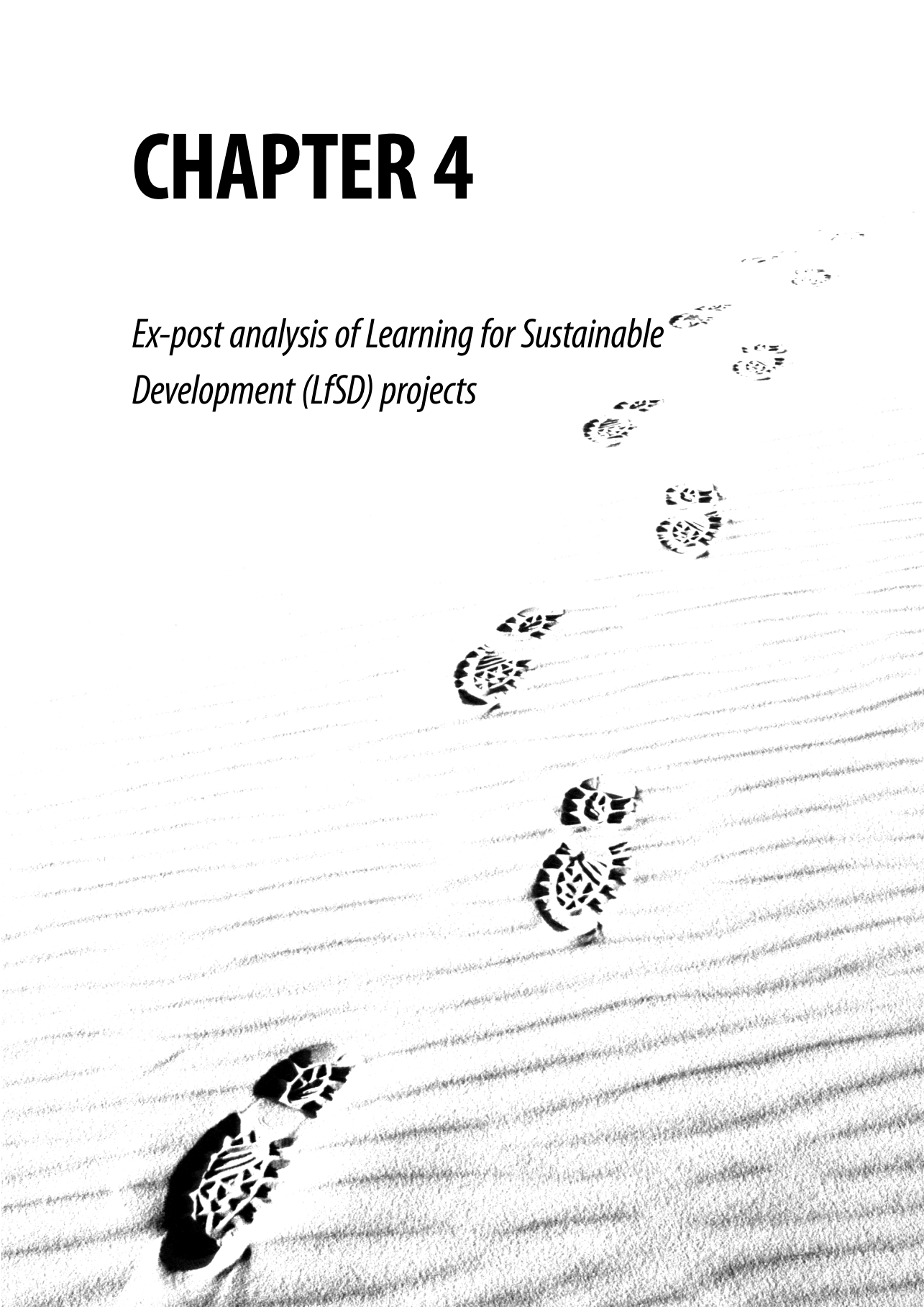
PART II

Empirical research



CHAPTER 4

Ex-post analysis of Learning for Sustainable Development (LfSD) projects



4.1 Introduction

This case study contributes to answering the research sub-questions "What are the distinguishing characteristics of a transition experiment?" and "How to manage transition experiments?". The conceptual framework on transition experiments (Chapter 3) is applied in an *ex-post* analysis of 6 projects, which were aimed at learning about and implementing sustainable development at a local level. The projects were supported between 2004 and 2007 by the Dutch "Learning for Sustainable Development" (LfSD) programme. The motto of this programme, "from margin to mainstream", indicated the ambition to give sustainable development a structural place in Dutch society. However, this raised the question if the LfSD-projects do indeed contribute to such a transition to a more sustainable society and if these projects are indeed transition experiments.

This question was the starting point of a research project that was commissioned to DRIFT by the LfSD-programme management. The research was conducted by Suzanne van den Bosch and Jan Rotmans between June 2007 and January 2008. The research objectives were twofold. The first objective was to formulate concrete recommendations with regard to how the contribution of LfSD-projects to sustainability transitions could be increased. These recommendations provided an intervention between two programme periods of LfSD; the recommendations could be implemented in a follow-up "Learning for Sustainable Development" programme, which started in 2008 and will continue to 2011. A second objective was to contribute to the theoretical and empirical research on transition experiments.

The research approach involved: the selection of 6 suitable projects (out of 160 LfSD-projects in total), the analysis of these projects based on interviews and desk research, the formulation of recommendations (also based on interviews with LfSD-programme managers) and an interactive workshop (with project leaders, project advisors, programme managers and DRIFT researchers) to elaborate on the conclusions and recommendations. In all these research activities the conceptual framework on transition experiments (Chapter 3) was applied. The research roles in this case study involved an *ex-post analyst role* regarding the analysis of the 6 projects, and an *ex-ante co-designer role* regarding the formulation of recommendations that could contribute to the design of the succeeding LfSD-programme (2008-2011).

In this chapter the background and context of the LfSD-programme and the DRIFT research project are described first. In section 4.3 the main outcomes of the transition analysis of the 6 LfSD-projects are presented, followed by a reflection (section 4.4) and main conclusions and recommendations (section 4.5). The chapter ends with a reflection on the implementation and follow-up of these recommendations (section 4.6).

4.2 Background and context

The history of the development of the Learning for Sustainable Development (LfSD) programme 2004-2007 involves two national education programmes on Nature and Environment (1990-1995, 1996-1999) and the Learning for Sustainability (LfS) programme (2000-2003). The LfS-programme shifted the focus from (narrow) education to (broader) learning processes and from nature and environment to sustainability. The LfSD-programme (2004-2007)[1] was aimed at "Creating effective learning processes in order to enable judgements and choices in favour of sustainable development". Such sustainable judgements and choices would involve: the consideration of 'people, planet, profit' interests, long-term effects and effects on other parts of the world. The LfSD-programme was distinguished in three "pillars" related to three target groups:

1. the learning individual (involving formal education)
2. the learning (governmental) organisation
3. the learning society

The DRIFT research project that was conducted for LfSD only focussed on "pillar 3", which was aimed at "processes within society as a whole in which more and better sustainable decisions are made." This part of the LfSD-programme is managed at the provincial scale.[2] In each province a "LfSD-director" allocates resources (money and expertise) to facilitate projects in which societal decision processes are central. These LfSD-projects involve many actors (e.g. provincial councils, municipal councils, district water boards, businesses, civil society organisations, NGOs and individual citizens) and many societal sectors and sub-sectors (e.g. water, agriculture, building, energy). What all these projects have in common is that the learning process should contribute to sustainability. This can be regarded as a transition process or a radical shift from an "unsustainable" to a sustainable Dutch society. However, the LfSD-programme (2004-2007) was not set up based on a transition perspective and did not explicitly apply transition management (TM). But during the second half of the programme, TM was recognised as a possible approach to realise the ambitions of the LfSD-programme. The LfSD-programme managers were specifically interested in the TM instrument "transition experiments" (partly influenced by the practitioner-oriented essay by Kemp and Van den Bosch, 2006). As a result, the

1. The Programme Learning for Sustainable Development is funded by the Ministries of Housing, Spatial Planning and the Environment; of Foreign Affairs/Development Co-operation; of Agriculture, Nature and Food Quality; of Economic Affairs and Energy; of General Affairs; of Transport, Public Works and Water Management; of Education, Culture and Science; and by all the provinces. The District Water Boards are also involved in the programme.

2. Each province fulfils a director role in the implementation of pillar 3 of the LfSD-programme, and develops a Provincial Ambition Statement PAS LfSD (for a specific programme period). This PAS should clearly indicate, consistent with the LfSD implementation framework, which ambitions will be realised in the planned period.

pillar 3 coordinator of the LfSD-projects in the provinces commissioned DRIFT to analyse the LfSD-projects from the perspective of transition experiments. The starting point of the research was therefore the question: "Are LfSD-projects transition experiments?". The answer to this question should contribute to improving the quality of the follow-up LfSD-programme (2008-2011) and specifically to increasing the contribution of the LfSD-projects to transitions. In order to realise this aim, the following research approach was applied (Figure 4.1):

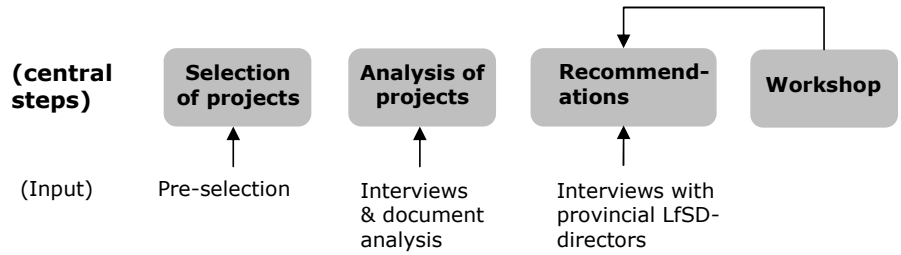


Figure 4.1 Research approach[3]

4.3 Transition analysis of 6 LfSD-projects

Based on a pre-selection of LfSD-projects (conducted by the LfSD-programme coordinator), a choice was made to focus the analysis on transitions in three sectors: spatial planning/building, water and energy. For each transition, 2 projects were selected based on a variety in learning objectives and societal challenges.[4] These 6 projects were also distributed among the provinces:

1. LOGO Pernis → Sustainable Spatial Development
2. AquaRO → Water Transition
3. Keek op de Beek → Water Transition
4. Development of Hotspot Tilburg → Energy Transition (Climate change)
5. Future Oriented Building in Municipality of Werkendam → Sustainable Building
6. Energy Valley: Learning for Sustainable Mobility in the North of the Netherlands → Sustainable Mobility (part of the Energy Transition)

3. The outcome of the workshop is not specifically described in this chapter but is integrated in the conclusions and recommendations in section 4.5. The complete report of the workshop is included as an appendix in the report "Van den Bosch, S. and Rotmans, J. (2008a). LvDO projecten als transitie-experimenten. Rotterdam, DRIFT."

4. The 6 projects were not selected based on the criteria for transition experiments (Table 4.1), because a comparison of the projects with these criteria was part of the ex-post analysis.

The 'transition analysis' of these LfSD-projects is based on the conceptual framework on transition experiments (Chapter 3) and analyses the context of the projects, the transition characteristics of the projects (based on Table 3.1 with characteristics of classical innovation projects vs. transition experiments) and the 'transition potential' of the projects. The 'transition potential' is defined as the extent to which the opportunities to contribute to a sustainability transition are actually utilised; the transition potential of the LfSD-projects is analysed by applying the mechanisms deepening, broadening and scaling-up.

Section 4.3.1 first introduces the context and main characteristics of the 6 LfSD-projects. This is followed by a comparison of each project with the 'ideal' characteristics of transition experiments (section 4.3.2) and an analysis of their transition potential (section 4.3.3).

4.3.1 Introduction, context and main characteristics of 6 LfSD-projects

LOGO Pernis

The project "LOGO Pernis" can be characterised as an experiment with new *practices* and a new *structure* at a local level[5]. The experiment involved active citizen participation in the development of a plan for 325 new houses in Pernis; the plan integrated environmental measures and spatial planning. The (local) societal challenge involved enabling sustainable spatial development in an area under high environmental pressure (Pernis is located in the Rotterdam harbour area). The experiment can be regarded as part of the transition to sustainable spatial planning: spatial planning that balances environmental, social and economical aspects.

To support this project the LOGO-method (LOGO is the Dutch abbreviation for Local Environment and Region Research) was applied. The project consisted of sustainability workshops with 15 Pernis residents and workshops with various professionals in environment, health, town-planning, traffic and transport and the public domain. The outcome of the project was a broadly supported plan with ambitions and measures, which provided input to a sustainable Pernis Development Plan. The project was set up in April 2006 by the District Council of Pernis, the DCMR Environmental Protection Agency and the Rotterdam municipal Department for Urban Planning and Housing (dS+V), and was concluded in July 2007.

5. The approach that was applied in the experiment in Pernis had already been applied in other places, therefore the 'innovation' in this experiment involved a change in practice and structure at a local level.

AquaRO

The project "AquaRO" can be characterised as an experiment aimed at changing the *practices* at the interface of water and spatial planning. The project involved the development of a method that stimulates the cooperation between professionals who work in the water and spatial planning discipline. In phase 1 of the project the water board River Land and the municipality of Nijmegen developed the AquaRO-method: a website that inspires water and spatial planning. The website AquaRO aims to stimulate the water discipline to participate more in spatial planning processes, and the spatial planning discipline to involve water aspects in spatial planning earlier and better. The website consists of a general part with inspiring examples and information important for the integration of water and spatial planning, and a location-specific part with process advice and support. In phase 2 of the project, the AquaRO-method was further developed and implemented in cooperation with 3 municipalities: Nijmegen, West Maas and Waal, and Tiel. The innovation in this project involved a new information and communication structure with regard to spatial planning and water; if this innovation also leads to the desired change in practices, still needs to be evaluated. The project can be regarded as part of the transition to a safe and natural water system which is embedded in its environment (the 'water transition'). The societal challenge that is connected to this project involves making the Netherlands ready for climate change (the 'national water challenge').

AquaRO was financially supported by the Bsik-programme Living with Water; the support of LfSD enabled extra attention to external communication and learning effects. In terms of substance, the project was supported by an engineering agency (Grontmij), an ICT agency (Vicrea), a spatial planning advisory agency (AmerAdviseurs) and an organisation advisor (Guido Starmans advice). The project was initiated in May 2005 by the water board River Land and the municipality of Nijmegen, and ended in April 2008.

Keek op de Beek

The project "Keek op de Beek" can be characterised as a pilot project that experimented with a change in *practice*. In this project the water board Regge and Dinkel in the Province of Overijssel gained experience with citizen participation in a very early stage of a spatial re-arrangement project. An existing participation approach was applied (a series of 'design workshops'), which was new for the local context of this specific water board and village, and also differed from the dominant approach of water boards in the Netherlands. In the project, the villagers themselves designed the re-arrangement plan of the 1,2 km section of the Deurninger creek that runs through their village. The local societal challenge, which was the starting point of this project, involved making the creek a natural part of the environment and involving villagers in this process. This

project can also be regarded as part of the transition to a safe and natural water system which is embedded in its environment ('water transition').

The design process, which took place from October 2005 to November 2006, was supported and guided by an external independent advisor.

Development of Hotspot Tilburg

The project "Development of Hotspot Tilburg" can be characterised as a pilot project in the *tactical sphere* of transition management. The project can also be regarded as an experiment with a different *practice*. In this tactical experiment, the municipality of Tilburg involved various stakeholders, as a first step of a trajectory in which a local climate programme was to be jointly developed. The aim of this programme is both limiting climate change (mitigation through CO2 reduction) and adapting to the effects of climate change (adaptation) at a local level. With this approach Tilburg is a frontrunner in the Netherlands. The project can be regarded as part of several transitions (e.g. the energy transition, water transition), which are related to the societal challenge of climate change. The project consisted of a large number of interviews with companies and organisations in the Tilburg region (including Goirle and Waalwijk) and a conference in which about 60 stakeholders participated (including the Efteling, the Chamber of Commerce, Interpolis, installation companies, the Red Cross, knowledge institutes and water boards). The project was initiated by the municipality of Tilburg in August 2006 and continued until December 2006, with support of the consultancy company Build Desk (the former CEA).

Future Oriented Building in the Municipality of Werkendam

The project "Future Oriented Building in the Municipality of Werkendam" can be characterised as an experiment with a change in *structure* and *culture*. In this project, the municipality of Werkendam cooperated with three local housing corporations, with the eventual aim to build 1,000 houses in 2015 as sustainably as possible (also at the district level). The starting point of the project involved a (local) societal challenge to offer an attractive living environment to the current and future generations of Werkendam. The project can be regarded as part of the transition to sustainable building (related to transitions in energy, water and construction), which can be defined as a building sector in which social, economical and environmental aspects are balanced.

The project included: an initial workshop in which 80 parties participated (including project developers and installation companies); excursions with the local council, corporations and construction companies; the development of a programme of requirements for the sustainable houses and districts; and workshops with the future buyers of the sustainable houses. The development of the programme of requirements was supported with the DCBA method of the consultancy company CEA/BOOM. Because of

the limited duration of the LfSD-project, the results did not include the realisation of the sustainable houses (a change in *structure*). Furthermore, the desired physical changes in the structure of the houses were not radically new for the Netherlands. Instead, the desired result of this project was the translation of sustainable building policy in Werkendam to a sustainable 'perspective to act' (change of *culture*) involving various actors. The project has succeeded in realising a shift in thinking of various actors, but was not yet successful in reaching the future residents. The project started in September 2005 and continued until 2007.

Energy Valley: Learning for Sustainable Mobility in the North of the Netherlands

The project "Learning for Sustainable Mobility in the North of the Netherlands" can be characterised as a learning trajectory aimed at a change in *structure* (economic structure) and mainly a change in *practice* (stimulating the regional demand for sustainable fuels). The regional societal challenge that was the starting point of this project involved strengthening the economic structure of the North of the Netherlands, by stimulating the use of sustainable fuels. The project can be regarded as part of the transition to sustainable mobility (which is also one of the platforms of the Energy Transition, initiated by several Dutch Ministries).

The learning trajectory was connected to a project of Ecofys, which conducted car fleet scans at 50 companies in the North of the Netherlands, to make the fleet owners aware of the possibilities of using sustainable fuels. In the Energy Valley project, the Energy Valley foundation cooperated with the municipality of Leeuwarden, the provinces of Friesland, Groningen and Drenthe to stimulate the exchange of information and knowledge between the 50 companies that participated in the car fleet scans. The approach applied in this project involved a shift from the usual approach applied in the Energy Valley region; instead of stimulating the supply of sustainable fuels, this project was specifically focused at stimulating the demand. The project consisted of three meetings with the fleet owners, aimed at calling attention to opportunities, taking away barriers and sharing experiences. During the final meeting, which took place at the conference 'Sustainable Mobility' (in November 2006), the results of the project were shared with a large group of interested parties. The project was supported by the communication agency Noordtij and took place between March 2006 and May 2007.

4.3.2 Comparing the characteristics of LfSD-projects

Table 4.1 indicates the extent to which each analysed LfSD-project meets a transition experiment characteristic. This is followed by general observations about each characteristic in relation to the LfSD-projects and a conclusion about the question if the analysed LfSD-projects can be characterised as transition experiments.

Table 4.1 Comparison of LfSD-projects with characteristics of transition experiment

		LfSD-projects					
Characteristics of transition experiment		Keek op de Beek	LOGO Pernis	Hotspot Tilburg	Future oriented building in Werkendam	Aqua RO	Energy Valley
Starting point	Societal challenge	+/–	+/–	+	+/–	+	+/–
Nature of problem	Uncertain and complex	+/–	+	+	+	+	+
Objective	Contributing to societal change	–	–	+/–	–	+	–
Perspective	Long-term	–	–	+/–	–	–	–
Method	Exploring, searching, learning	+	+/–	N/A*	+/–	+	+/–
Learning	2nd order, collective, multiple domains	+/–	–	+/–	–	+/–	–
Actors	Multi-actor alliance (across society)	+	+/–	+	–	+/–	–
Experiment context	Real-life societal context	+	+	N/A *	+	+	+
Management context	Transition management	–	–	–	–	–	–

*N/A: not applicable because the project does not involve a concrete experiment but has a tactical nature
++: good; +: sufficient, but could be better; +/–: partially; –: insufficient; ––: bad

Starting point: The societal challenge mainly plays a role at the start of most of the projects. During the project actors seem to have little awareness about the possible contribution of their project to broader societal challenges in society. In the projects "Hotspot Tilburg" and "AquaRo" the societal challenge did remain a starting point during the project.

Nature of the problem: In general, the problems for which the projects are searching a solution, are complex and uncertain. This relates to the persistency of the problems, the large number of actors that are needed to arrive at a good solution and the integrated approach inherent in sustainable development. The project "Keek op de Beek" is less complex, because this involves a demarcated section of a creek and the direct neighbours of the creek had relatively few conflicting interests.

Objective: Most projects do not have an explicit objective to contribute to a societal change at a scale level that transcends the project. The project "Hotspot Tilburg" does, because climate change is a problem that crosses boundaries. Within "AquaRO" the water board consciously takes societal responsibility, by stimulating the cooperation between the water and spatial planning discipline, which transcends the own water board area.

Perspective: With the exception of "Hotspot Tilburg", the projects do not build in an explicit future perspective (e.g. in the form of a future orientation study or scenario method). Most projects do take place within a long-term perspective, but then the projects themselves are aimed at exploring solutions at the short or medium term.

Method: Characteristic for the projects is that an open search & learning process is central in their approach. This is related to 'space' in terms of time and resources that are provided by the LfSD-programme.

Learning: Within the projects "Keek op de Beek", "Hotspot Tilburg", "Future Oriented Building" and "AquaRO" the learning process is explicitly aimed at letting actors look differently at their current routines, problems and/or solutions (2nd order learning). Most projects do not involve all relevant actors in the social learning process (*described in next aspect*). The projects "LOGO Pernis" and "Keek op de Beek" are mainly focused on individual learning and not at organisational learning. Learning about different domains (technological, socio-cultural, institutional, etc.) does take place. Within the "Future Oriented Building" and "Energy Valley" projects the learning about more aspects of a problem is not an explicit learning goal.

Actors: In most projects a multi-actor alliance (across society) is involved as much as possible. However, the "AquaRO" project is focussed on public actors and less on private actors, while the "Energy Valley" project is primarily focussed on companies. In the "Future Oriented Building" project the users are not involved right from the start. And in "LOGO Pernis" the industries that are located around Pernis do not actively participate in the project, with the exception of the Port of Rotterdam Authority.

Experiment context: All projects take place within a societal context: in daily practice instead of in a testing environment. (N/A for the project "Hotspot Tilburg" because this does not include experiments yet)

Management context: The management of the projects cannot be characterised as transition management. The projects are not connected to a guiding vision, transition path or similar projects. The support of the LfSD-programme does offer space for an open search & learning process.

Conclusion: are LfSD-projects transition experiments?
Based on the comparison with the characteristics of transition experiments (Table 4.1) it can be concluded that the 6 analysed LfSD-projects cannot be characterised as transition experiments. In other words: they are not innovation projects with a societal chal-

lenge as a starting point for learning aimed at contributing to a transition. Regarding the nature of the *societal challenge, learning* and *innovation* in the analysed LfSD-projects the following conclusions can be drawn:

1) The societal challenge was a starting point at the beginning of the projects (this was also a criterion to select these projects for the analysis). However, during the projects, most of the actors were not aware of what their learning experiences could mean for the societal challenge that transcends the project context.
2) Learning mainly took place with regard to local challenges (at the level of one organisation or municipality) and less with regard to broader societal challenges that are important in transitions. Related to this, not all relevant societal actors were involved in the learning process. The social learning was therefore limited.
3) The nature of the innovation in the projects can mainly be characterised as a change in *practices* within a local or regional context. This involved learning about existing approaches or methods (e.g. LOGO, design workshops) in a new context. Some projects (AquaRO and Development of Hotspot Tilburg) also developed approaches or methods that were new at the scale of the Netherlands. One project (Future Oriented Building in Werkendam) also explicitly aimed to bring about a (local) change of *culture*.

The conclusion that the 6 LfSD-projects cannot be characterised as transition experiments[6], can be explained by the fact that the LfSD-programme was not set up with the ambition to contribute to a transition. The programme mainly focused on stimulating sustainability decisions at a local scale (municipalities, water boards, etc.). Hence, most of the projects that were selected for this analysis did not start from the ambition to contribute to a transition that transcends their local context (exceptions are AquaRO and Hotspot Tilburg).

4.3.3 The potential contribution of LfSD-projects to transitions

In general, the 'transition potential' of the 6 projects analysed is low. This is not a statement about the actual contribution to a transition, but it says something about the extent to which the opportunities to contribute to a transition are actually utilised. The transition potential is analysed by looking at the activities[7] for *deepening, broadening* and *scaling-up*, which are conducted by LfSD-project managers and LfSD-programme managers (working at the province and national level).

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6. This conclusion about the characteristics of the 6 LfSD-projects cannot be generalised to all LfSD-projects (about 160 projects).

7. A more detailed analysis of these activities is described in the appendix of the report by Van den Bosch and Rotmans (2008a).

Management activities regarding 'deepening'

Within the projects mainly activities for deepening take place: learning as much as possible about a project within its local context. Projects are facilitated to allocate extra money and time to the learning process, because of the support of the LfSD-programme. An example is the project "Energy Valley: Learning for Sustainable Mobility in the North of the Netherlands", in which the learning trajectory with fleet owners would not have been brought about without the support of LfSD.

Most projects have the character of an open process, in which actors are directed as little as possible with regard to exploring directions for solutions. For example, in the project "LOGO Pernis", the citizen participation process did not focus on possible financial barriers. Characteristic for many projects is that the users of an innovation or the target group of the change are central in the learning process (e.g. the residents in "Keek op de Beek" and "LOGO Pernis", the fleet owners in "Energy Valley" and the spatial planning and water professionals in "AquaRO"). In the "AquaRO" project also key persons for the scaling up of the project, in a later stage, were involved in the learning process (e.g. the ministry of VROM, Rijkswaterstaat[8], Union of Water Boards). The results of this project were also regularly fed back to a strategic level (an expert advisory group including representatives of the water boards and municipalities), with the aim to strengthen the dialogue and learning from each other. The continuity of the learning process in AquaRO was guaranteed by a 'learning organisation' that will be set up after the project.

Other activities that are set up within the projects to learn as much as possible include: explicit formulation of learning objectives, involving different types of users/target groups, building upon knowledge and experience from other projects, reporting learning experiences, transfer of learning experiences within organisations, external communication about learning experiences by means of articles, websites, networks, workshops, conferences, etc.

Management activities regarding 'broadening'

Activities for repeating the project in a different context or connecting the project to other functions or domains, take place at a limited scale. In several projects, actors are developing their own activities for diffusing (broadening) their project, for example, by transferring the learning experiences from the project to other actors who are setting up similar projects. The citizen participation approach in "Keek op de Beek" was transferred to another water board and the culture shift with regard to sustainable building in the municipality of Werkendam was diffused to neighbouring municipalities. In the diffusion of projects, external advisors often play an important role, but also 'ambassadors'

8. Rijkswaterstaat is the "Netherlands Directorate-General for Public Works and Water Management", which constructs, manages, develops and maintains the Netherlands' main infrastructure networks.

of a project play a role here (e.g. the alderman in Werkendam and the LfSD-manager of the province in the "LOGO Pernis" project). Characteristic for the project "Learning about Sustainable Mobility in the North of the Netherlands", is that the Energy Valley foundation[9] is an ambassador for the diffusion of learning experiences in the region, but has no interest in diffusion at the scale of the Netherlands.

Within the project "LOGO Pernis", the province of South-Holland was playing an important role in broadening the project by connecting the project to other experiences and actors, by setting up learning groups and by extending the number of pilots. In the other projects, the provinces lacked an explicit strategy for broadening. This can be explained by the dominant strategy of the LfSD-programme to support learning in a local context, by the lack of guiding themes that could give direction to connecting different projects and by the limited resources for setting up activities for broadening.

It is remarkable that the project leaders and ambassadors of projects perceive the diffusion of their project as an autonomous process that takes place similar to the spread of an 'oil stain' or 'snowball effect'[10]. An explicit strategy for broadening is lacking in nearly all projects, which could be explained by the project leader's perception of broadening as a process that takes place automatically without steering. Another explanation is the small-scale level of the LfSD-projects, which limits the opportunities for broadening (e.g. because the projects focus on few functions or a limited context).

In the project "AquaRO", actors did think about the diffusion of the AquaRO-method to broader contexts, by first developing a generic method and then specifying the method for a specific context. Other activities that are set up for the broadening of LfSD-projects include: signing a shared manifest (in Werkendam), excursions to similar projects, workshops for exchanging experiences, connecting to other policy domains, involving actors with an interest in the diffusion of an approach (e.g. sector level organisations such as the Union of Water Boards).

Management activities regarding 'scaling-up'

None of the projects is aimed at scaling up or embedding sustainable practices in society. In some projects, activities aimed at embedding the project in organisations do take place. For example, in the project "Keek op de Beek", the citizen participation approach was embedded in the standard approach of one water board (through protocols). The project in Werkendam did have an (implicit) scaling-up strategy, aimed at key-players in the regional organisations, who should internalise sustainability to bring about change

9. The Energy Valley foundation is a public private partnership, which aims to strengthen the economy and employment in the North of the Netherlands by stimulating new energy activities.

10. In the interviews they often referred to these metaphors with regard to 'scaling-up'. However, this use of the word scaling-up (as an increase of scale) differs from the definition of scaling-up within the context of transitions (as embedding in a higher scale, Chapter 3).

and mobilise people from within. A central aspect of this strategy is a step-by-step approach to influence and seduce people to think and act differently.

In a number of projects, ideas exist about embedding a sustainable practice in the provinces. In the project "Hotspot Tilburg" the possibilities of scaling up to a provincial climate programme were anticipated. And in the project "LOGO Pernis", the LfSD-manager in the province saw opportunities to embed sustainability workshops in all development plans of South-Holland. However, these ideas were not yet translated to concrete activities for scaling-up. The Energy Valley project included a study of the possibilities for embedding the acquired knowledge in a regional catalyst centre about Sustainable Mobility.

It can be concluded that the lack of activities for scaling up to an organisation-transcending, municipality-transcending or province-transcending scale level is related to the small-scale level of LfSD-projects. The small-scale level implies that there are limited resources (people, money, knowledge) to scale up. Moreover, scaling up to a scale level that transcends the context of their own project is not a direct interest of the involved actors. Also the competences for scaling-up, including the capacity to anticipate, enterprise, allure, network and lobby (Andringa and Weterings, 2008) are often lacking in a project. This is related to the fact that most projects lack ambassadors with the interest and competences to stimulate the embedding of a sustainable practice in society.

The project AquaRO is the only project analysed in which diverse activities for scaling-up were set up, with the aim to embed the AquaRO-method in the dominant practices of water boards and municipalities. Activities for scaling-up in AquaRO include: the development of a strategy for successful implementation of AquaRO in water boards and municipalities (supported by an organisation advisor), connecting to the interests of Ministries (VROM and V&W) and involving actors (Union of Water Boards and NIROV) with an interest in embedding AquaRO in the current practices within the Dutch water and spatial planning discipline.

LfSD-programme strategy for deepening, broadening and scaling-up

Based on the analysis of the projects and interviews with the LfSD-directors in the provinces, it can be concluded that the LfSD-programme mainly supports projects at a relatively small-scale level that are aimed at *deepening*. However, most projects do not involve the development of new sustainable practices, but involve experimenting with existing methods or approaches in a new context (e.g. the LOGO-method in Pernis, the design workshops in "Keek op de Beek", the DCBA-method in Werkendam). At the level of the national LfSD-programme, the support of these projects can therefore be regarded as a strategy of *broadening* (repeating an existing sustainability practice in a new context). This suggests a mismatch: while the strategy of the LfSD-programme is explicitly framed in terms of *deepening* (learning), the actual steering of the LfSD-programme is

implicitly aimed at *broadening* (repeating). This results in LfSD-projects that are mainly repeating existing sustainable practices in a different local context (e.g. municipality). At the scale of the Netherlands this broadens the existing knowledge about sustainability, but it does not lead to totally new learning experiences.

Two of the projects analysed, "Hotspot Tilburg" and "AquaRO", could be regarded as *front-runners* in the Netherlands, because in these projects new approaches were developed for the societal challenge of (local) climate change and integration of water and spatial planning. Therefore, the support of these projects by the LfSD-programme is a strategy of *deepening*, in which actors learn about approaches that are new in the Netherlands.

The LfSD-programme (2004-2007) does not have an explicit strategy for scaling-up (embedding sustainable practices at a scale level that transcends the level of separate projects). This could be explained by the fact that the starting points of the LfSD-programme between 2004 and 2007 did not include the aim to scale up and contribute to specific transitions (e.g. no choices for large-scale projects or trajectories were made and no priority themes were defined). However, in the follow-up LfSD-programme (2008-2011) the potential contribution of LfSD-projects to transitions could be strengthened, both at the project and programme level. The next section develops conclusions and recommendations for this purpose.

4.4 Reflection on characteristics and transition potential of LfSD-projects

In section 4.3.2 it was concluded that the 6 LfSD-projects analysed cannot be characterised as transition experiments, which is related to the fact that they were not set up with the ambition to contribute to a transition. The aim of this *ex-post* analysis is therefore not to *demonstrate* what transition experiments are, but to apply the developed framework for transition experiments to *evaluate* existing projects and to develop recommendations for follow-up projects (section 4.5). This research aim is consistent with the aim of the LfSD-programme management, which is interested in learning from the transition experiments framework to increase the contribution of the succeeding LfSD-programme and projects (2008-2011) to the transition to a more sustainable society.

Based on the analysis, several lessons can be drawn regarding the extent to which the actors involved in the 6 LfSD-projects (implicitly or explicitly) try to influence or 'manage' the potential contribution of a project to a sustainability transition. Within the LfSD-projects, learning often remains local and does not transcend the project context (*deepening*). This can be explained by the fact that the learning process is often facilitated by one person (a project leader or external advisor), and the resources (knowledge, time, money) to transfer the learning experiences to other contexts are limited. As a result of

follow-up activities of external advisors who get involved in similar projects at a new location or organisation (e.g. Keek op de Beek), some projects do get repeated in a different context (*broadening*). However, in this way broadening is too much dependent on single persons that are temporarily involved in projects.

The LfSD-programme lacks an *explicit* strategy for broadening, hence, the results in terms of connections between different contexts and links to other functions and domains are limited. Moreover, the LfSD-programme does not have clear expectations regarding the broadening activities that should or could be conducted within LfSD-projects. The limited broadening activities in the LfSD-projects are also related to the perception of project leaders and project ambassadors, who assume that innovations will automatically spread to other contexts, similar to oil or ink that spreads unchecked.[11] Theoretically this could be explained with the diffusion theory of Rogers (1995), which describes how innovations diffuse through a population by means of communication between adopters. However, a transition to a sustainable society requires structural changes of the societal system. The diffusion of radical innovations is constrained by the *regime* in which dominant ways of thinking and working are hard to change. Therefore, a successful diffusion of sustainable innovations across society requires strategic management, which implies that *broadening* and *scaling-up* should be anticipated early in a project, for example by exploring the possibilities for repeating the project and anticipating different kinds of (regime)resistance. Some LfSD-projects (Future Oriented Building and AquaRO) do have an – implicit – strategy for *scaling-up;* however, the scale level that can be influenced by these projects is often limited to a region (e.g. neighbouring municipalities) or a certain type of organisation (e.g. water boards).

In section 4.3.3 it was concluded that the LfSD-programme also does not have an explicit strategy for scaling-up, which is related to the fact that the aim to scale up and contribute to specific transitions was not a starting point of the LfSD-programme 2004-2007. However, the LfSD-programme does have the ambition to give sustainable development a structural place in society. The analysis of the 6 LfSD-projects has shown that the current focus on learning in local projects does not contribute enough to this ambition. The succeeding LfSD-programme (2008-2011) should therefore also stimulate the broadening and scaling-up of projects. The responsibility for this should not be shifted upon the projects, but should be taken by the LfSD-programme management (at the national and province level). In some of the LfSD-projects analysed, the LfSD-programme management does stimulate broadening, mainly by stimulating the diffusion of local sustainable practices within and across the provinces in the Netherlands. The main instruments that are used are shared themes and connecting learning experiences

11. In Dutch the metaphor of an "oil stain" or "inkblot" is used to refer to something that spreads quickly and unavoidably.

from different projects.[12] The broad theme of LfSD – sustainable development – also offers opportunities to connect projects related to different themes, or to connect LfSD-projects to theme-specific sustainability programmes. However, the opportunities for connecting projects to themes or pathways are insufficiently utilised. Similar to what happens at the project level, the broadening of LfSD-projects at the programme level is too much dependent on specific persons (e.g. 'frontrunners' within the provinces).

In general, it can be concluded that within the LfSD-programme and projects some activities for increasing the transition potential of LfSD-projects do take place, but a shared strategy (at the national level) and dedicated resources for broadening and scaling-up are lacking. A 'transition perspective' on stimulating the structural embedding of sustainable practices in society requires a different role of the LfSD-programme in society. The following section translates this challenge in concrete recommendations for the succeeding LfSD-programme period (2008-2011).

4.5 Conclusions and recommendations

This section develops general conclusions regarding two research sub-questions and develops concrete recommendations for the new LfSD-programme period (2008-2011).

This case study provided important insights regarding the research sub-question: "What are the distinguishing characteristics of a transition experiment?". The table with characteristics of classical innovation projects vs. transition experiments was applied to analyse *(ex-post)* if LfSD-projects can be regarded as transition experiments. From this analysis it can be concluded that the characteristics in this table have a distinctive value and provide a new framework to look at ongoing innovation projects. However, none of the analysed LfSD-projects fulfilled all ideal transition experiment characteristics. Most of the LfSD-projects did not meet the characteristics "contributing to societal challenge (objective)", "medium- and long-term perspective", "second order, collective, multiple domain learning" and "transition management". However, a lesson learned is that the distinction between classical innovation projects and transition experiments can be regarded as extreme ends of a continuum. Characteristics can also differ in the various phases of an innovation project (e.g. the societal challenge can be a starting point only in the beginning of a project) or at the various activity levels of a project (e.g. a long-term perspective can be mentioned in the project proposal, while not being translated to concrete activities such as a future orientation study or scenario method).

12. In the province of South-Holland the LfSD resources are explicitly not allocated to deepening in more pilots, but the resources are mainly allocated to support trajectories for broadening (e.g. learning groups about a specific theme).

Furthermore, the analysis shows that different characteristics can also co-exist in one project (e.g. both first and second order learning takes place).

With regard to the research sub-question "How to manage transition experiments?" the ex-post analysis of the LfSD-projects shows that the mechanisms deepening, broadening and scaling-up can be applied as an analytical framework to get insight into the 'transition potential' of existing projects. This 'transition potential' indicates the extent to which actors within a project actively try to influence the contribution of their project to a sustainability transition. The analysis shows that in the six LfSD-projects different management activities for deepening, broadening or scaling-up could be recognised. However, most activities involved learning (*deepening*) and in only one project (AquaRO) diverse activities for scaling-up were set up. Therefore, the transition potential of the analysed LfSD-projects is low. This conclusion also relates to the question *who* should conduct these management activities. Within the LfSD-projects, most actors were not specifically interested in scaling up their project to a level that transcends their direct context. Some project leaders or ambassadors were interested in scaling up their project to a regional level or to a specific organisation. Follow-up research could study which actors, with broader societal interests, could be involved in experiments to set up specific activities for scaling up to higher scale levels. The analysis of the LfSD-projects provided several examples of management activities that project and programme managers could set up to influence the contribution to a transition (section 4.3.3). However, these activities sometimes only included an (implicit) strategy or ideas, which were not translated to concrete actions. Project managers and programme managers could be further supported (with expertise and financial resources) to develop explicit strategies and set up concrete management activities for deepening, broadening and scaling-up.

This section ends with concrete recommendations for the new LfSD-programme period (2008-2011).[13] The recommendations are specifically directed towards the LfSD-programme management, but can also be applied in a more general way (e.g. in similar programmes). The recommendations address the question: *How can the contribution of LfSD-projects to sustainability transitions be increased?* In addition, general recommendations with regard to improving the management of the LfSD-programme have also been developed (Van den Bosch and Rotmans, 2008a) but these recommendations are excluded from this thesis.[14] One general recommendation that is particularly relevant

13. The recommendations build upon the interviews and workshop with the LfSD-directors in the provinces, project leaders and advisors. The recommendations exclude project-specific recommendations, which are presented in Van den Bosch and Rotmans (2008a).

14. The excluded recommendations address the more general question: *How can the LfSD-programme stimulate that the role of LfSD-projects within the transition to a sustainable society is enforced?* These recommendations distinguish between the operational, tactical and strategic level of Transition Management. The recommendations that are described in this thesis are mainly focussed at the operational level (where transition experiments take place).

for the LfSD-projects, is to divide the resources (e.g. knowledge, people, money) of the LfSD-programme not only among the different projects in the provinces, but also to allocate these resources strategically to the deepening, broadening and scaling-up of LfSD-projects. Furthermore, the projects that are supported by the LfSD-programme should have a minimum scale level (larger than many of the previous LfSD-projects), with sufficient resources to set up activities for deepening, broadening and scaling-up. A minimum scale level would enable involving sufficient people with different expertise in a project (like a consortium), allocating sufficient resources to reflect on the project and connecting the project to other contexts and the broader societal challenge.

Recommendations for deepening: learning as much as possible in projects

1. Supporting the quality of the learning process in projects by means of a 'pool of experts' with expertise on process and substance aspects (e.g. social learning, sustainable development, transition management).
2. Stimulating continuous feed back of learning experiences from projects to a societal challenge. For example by reporting about what the project can mean for a societal challenge that transcends the project context.
3. Stimulating that projects distinguish between and report about context-specific and generic learning experiences (applicable in other contexts).

Recommendations for broadening: increasing the transferability of projects

4. Selecting 'context independent' projects, in other words projects that are potentially transferable to other contexts (e.g. other locations, organisations, policy domains, etc.). Subsequently, within these projects the possibilities for repeating the project in a different context should be explored.
5. Stimulating that projects are 'multi-functional', involving experimentation with different functions (e.g. an experiment that combines mobility with recreation, or health care with housing).
6. Developing leading themes to give direction and binding to different projects. These themes should be connected to urgent societal developments and trends, and important political themes. Within these themes the programme can search specifically for projects that reinforce each other. The projects can also use these themes to communicate about project results and transfer these to other contexts.

Recommendations for scaling-up: increasing the potential to scale up projects

7. Selecting a limited number of 'icon projects' (large-scale projects with a high appeal and high sense of urgency) that are connected to the leading themes of the programme. These icon projects can for example originate from the cooperation

between provinces on a certain theme and can fulfil an 'umbrella-function' to other smaller-scale projects.

8. Stimulating that the continuity of projects is guaranteed. Right from the start the planning should include the follow-up and embedding of the project. Moreover, 'project guards' should be involved who have the ability and motivation to broaden and scale up the project in a different context (instead of consultants who are only temporarily involved in a project and then switch to the next project). These project guards have different competences from the pioneers in the projects: they can be characterised as 'connectors and seducers' who can put the project on strategic agendas (e.g. within politics and media).
9. Right from the start, projects should take in different kinds of (regime) resistance and also anticipate on barriers that can be encountered further on in the process (e.g. rules and legislation).

4.6 Reflection on implementation and follow-up of recommendations

The report of the transition analysis of the LfSD-projects (Van den Bosch and Rotmans, 2008a) was used by the LfSD-programme management to set up the new LfSD-programme (2008-2011). The new[15] LfSD-programme coordinator, who is responsible for all the LfSD-projects in the provinces, expressed the following reaction to the report: "The conclusions of the transition analysis are not surprising, but are a reason for the programme management to formulate new starting points for the period 2008-2011". These new starting points for the LfSD-programme emphasise the importance of connecting LfSD-projects to themes and broader trajectories of change, creating synergy on these themes, embedding sustainable development within organisations (including the provinces), and a focus on learning-by-doing (Box 4.1). The starting points reflect several of the previous recommendations (section 4.5), including a minimum scale level of projects, developing leading themes in which projects can reinforce each other and more focus on follow-up and embedding of projects.

Another concrete implementation of the recommendations is the creation of a 'pool of experts' who can support the quality of the learning in the LfSD-projects with regard to substance or process. The LfSD-programme management created a list with professionals that are or could be involved in LfSD-projects as an advisor, trainer or coach. As a direct follow-up activity of the transition analysis of the LfSD-projects, these professionals were invited for a 'transition perspective' meeting. Since the new LfSD-programme is

15. Within the LfSD-programme management, the coordinator who had been actively involved in this research project, was replaced by a new coordinator just before the new LfSD-programme started.

- *From small to large and from project to trajectory:* Because the relatively small projects of LfSD have a limited contribution to transitions, from 2008-2011 the LfSD-resources will be more and more focused on important 'trajectories of change' (which are connected as much as possible to priority themes) within the provinces. This considerably reduces the number of supported projects, but increases the quality (in terms of relations to a higher scale level and contributing to a transition). In this light, it is also possible, or sometimes even desirable, to finance projects for multiple years.
- *Focus on priority themes and creating more synergy:* For each province a maximum of 3 to 5 themes are chosen, which are connected as much as possible to the priorities of the provincial board (GS). Provinces are willing to create a maximum synergy on these themes by:
  - Cooperating in 'communities of practice' with provinces that chose similar themes;
  - Cooperation and searching synergy with other programmes than LfSD (provincial and national) with support of the national programme.

  Next to these themes, the provinces can still finance incidental projects with respect to innovation and broadening (creative 'pearls').
- *Embedding within the provinces:* Provincial LfSD-managers are searching/finding allies in their direct environment and in other policy sectors. More movement will emerge: "from solo to team". This relates to the ambition of integrated working. (. . .). The provincial LfSD-manager, together with the national programme, works out a strategy to embed sustainable development administratively and organisationally within the heart of the province.
- *From "putting it on the agenda" to doing:* At this moment sustainable development is high on the agenda. Results of evaluations and research (e.g. transition research, multi-stakeholder approach) are explicitly applied in the executive practice. The emphasis of "Learning" for Sustainable Development is on "learning by doing".

Box 4.1. Part of the new starting points[16] for the LfSD-programme 2008-2011. Source: "The most important criteria to test the Provincial Ambition Statements LfSD 2008-2011". LfSD. Internal document, February 2008.

set up with a new ambition which also explicitly includes contributing to sustainability transitions, the programme management considered it valuable to organise a meeting in which professionals could share their vision and experiences with regard to working on transitions.

The meeting included three sessions in which John Grin (KSI/University of Amsterdam), Jose Andringa (Competence Centre Transitions) and Suzanne van den Bosch (DRIFT) reflected from a transition perspective on the experiences of 20 professionals. In Box 4.2 an example is provided of a project in which the project leader successfully integrates a transition perspective, partly as a result of his active involvement in this re-

16. Among other things, the new starting points were used to assess the LfSD Ambition Statements of the Provinces.

Reflection on project "Nature and Health – from global idea to system innovation"

The transition: nature fulfils a role in societal needs ("nature for people" instead of "people for nature") and specifically the need for health care

Transition management: concrete pilots and exploring scaling-up routes, connecting to regime dynamics

Transition experiments: examples in practice of interventions in nature that have health effects (e.g. the projects 'exercising in nature' and 'green rooms in health care institutions')

Deepening, broadening, scaling-up: from examples in practice to general application, proving that it works, early adopters, embedding/connecting to the regime

Questions for further discussion:

- The regime (the Ministry of Agriculture, Nature and Food Quality, the health care institutions) lacks a vision on nature and health; how can opportunities for a vision trajectory with frontrunners (niches) be utilised?
- At this moment the focus of the project is on examples in practice and scaling-up routes; how can this project be embedded in a long-term process (including visioning)?

Box 4.2 Reflection on a project of NovioConsult, which was one of the cases during the LfSD 'transition perspective' meeting at December 18, 2008.

search about the 6 LfSD-projects. This project involves a first step to develop knowledge and stimulate developments with regard to the theme 'nature and health'. This project is ambitious because it attempts to stimulate the integration of two domains (nature and health), which each have their own regime. To realise this ambition the project leader applies elements of transition management (e.g. experimenting in practice and 'transition paths' that are specified as 'scaling-up routes'). Furthermore, the project explicitly stimulates the embedding of new sustainable practices in the regime ("from examples in practice to general application"). However, one project will not be enough to realise all this. Therefore, it is important that this project gets embedded in a long-term process in which multiple actors across society participate.

Overall, the transition perspective meeting was regarded as valuable because it enabled learning from both theoretical and practical 'transition knowledge' and 'transition competences'. The LfSD-programme management intends to follow up this meeting, to further support the practitioners that attempt to connect LfSD-projects to a transition perspective.

"The main objective now is to focus all efforts on concrete learning and action, hence the motto of Learning for Sustainable Development for 2008-2011 is: From strategy to (general) practice. (…) The ambition of the LfSD-programme is to realise that: Sustainable development is in the mindset. Sustainable development has to become a common policy principle for schools, NGOs, businesses and governments at all levels. (…) Practical sustainability can be learnt."

Box 4.3 Part of the new brochure of the LfSD programme (2008-2011)

Another recent initiative of the LfSD-programme management involves the organisation of 'scaling-up trajectories' to support several 'citizen initiative' projects related to LfSD. Within these trajectories, DRIFT is requested to reflect critically on the projects from the perspective of deepening, broadening and scaling-up.

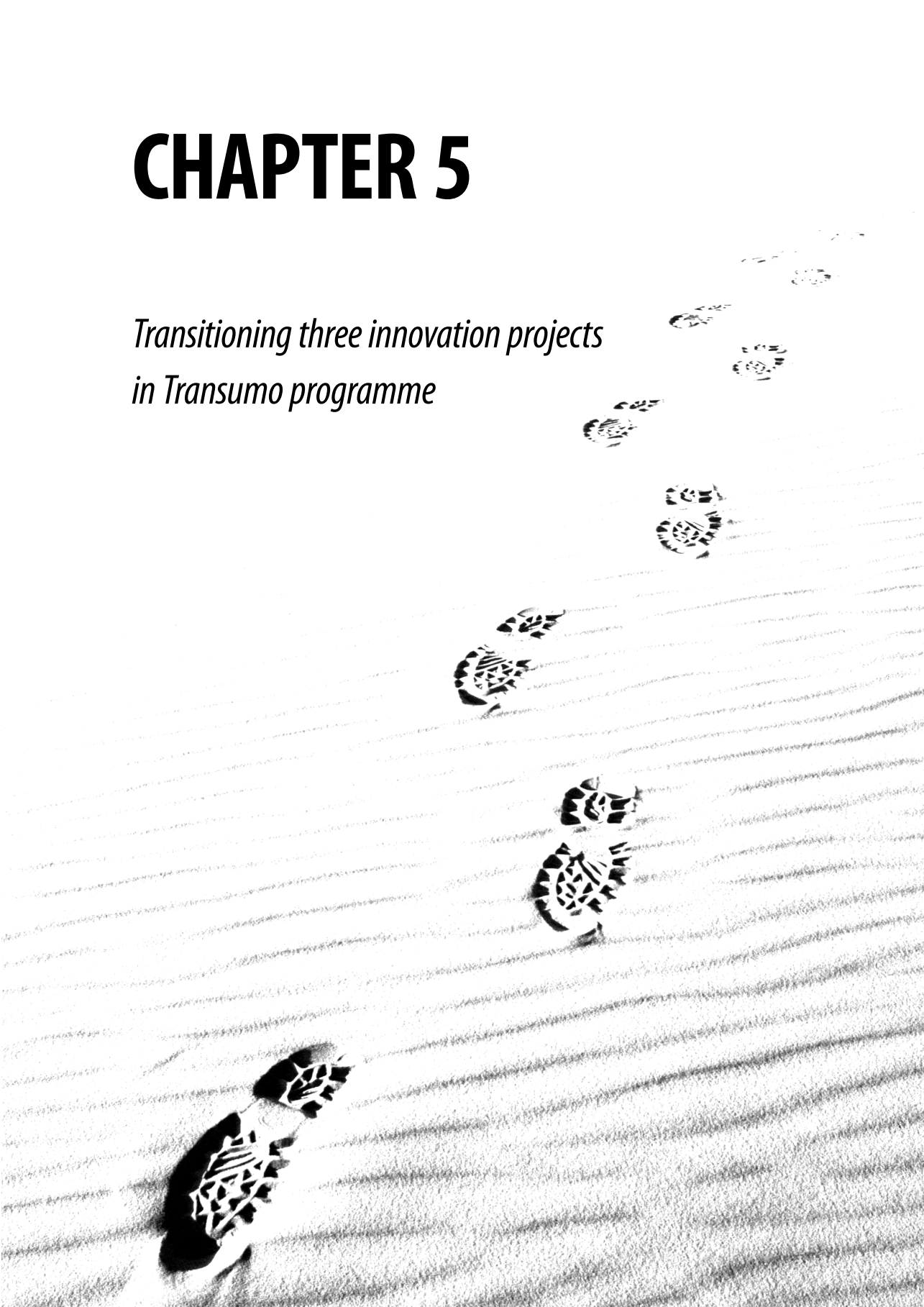
At the end of 2008 only a few new LfSD-projects had started off, so it is too early to reflect on the impact of the new LfSD-programme starting points on the quality of the projects. However, the new motto of the LfSD-programme "from strategy to (general) practice (Box 4.3)" reflects the ambition to move sustainable development from strategic agendas to the general daily practice within Dutch society.

LfSD aims to realise this ambition by shifting their management approach: while the previous LfSD-programme was mainly steered by 'stimulating learning for sustainable development in local projects', the current LfSD-programme attempts to strengthen its 'steering role' by focusing on promising themes, selecting projects of a larger scale, repeating and connecting different projects and embedding 'learning for sustainable development' in society.

Follow-up research should study to what extent the new LfSD ambition will be realised and how their new management approach will have contributed to this.

CHAPTER 5

Transitioning three innovation projects in Transumo programme



5.1 Introduction

This chapter encompasses three case studies that together contribute to answering research sub-question: "How to transform an ongoing innovation project into a the transition experiment?". Such a transformation process is referred to as *transitioning*[1], which can be understood as applying the Transition Management (TM) approach and instruments in *ongoing* programmes and projects. Ongoing activities that can be 'transitioned' include a visioning process, arena process, monitoring process or innovation project; this chapter focuses on the transitioning of innovation projects. The case studies involve three innovation projects that were (partly) transitioned between 2006 and 2008: (1) People Mover on the Road, (2) European Networks and (3) Rush Hour Avoidance. The three projects were part of a portfolio of 45 projects that were supported between 2004 and 2009 by Transumo (TRANsition SUstainable MObility). Transumo was a Dutch programme that included a network of more than 300 private parties, public parties and knowledge institutes, which cooperated in the development and distribution of knowledge on innovations with regard to sustainable mobility. The mission of Transumo was to "accelerate/encourage the transition to sustainable mobility"; this transition should lead to "advances that help to strengthen the competitiveness of the Dutch transport sector ('Profit') and to preserve and improve spatial and ecological ('Planet'), and social ('People') aspects of mobility"[2]. Transumo did not apply the 'full-fledged' TM approach, but from 2007 onwards the programme management explicitly aimed to apply and further develop the knowledge on transition management in their ongoing programme and projects. To realise this, Transumo cooperated with several transition researchers and consultants and the Competence Centre for Transitions (CCT).

The cooperation between Transumo and transition researchers (KSI/DRIFT[3]) and consultants (TNO[4]) enabled mutual learning about transitioning the Transumo programme and projects. As part of a specific KSI research project[5] on transition experiments, the

1. The concept 'transitioning' was first introduced by Jan Rotmans in 2006 during a workshop with the People Mover project (section 5.4). Source: Rotmans, J., Lindt, M.C., van de (2006). Transities, Transitiemanagement en Opschaling People Movers op Weg. Presentation DRIFT/TNO May 16, 2006.

2. Source: http://www.transumo.nl/En/Organisation/Mission.aspx

3. The DRIFT researchers who were directly involved include Jan Rotmans (in various Transumo projects, including People Mover on the Road and Rush Hour Avoidance), Janneke van Bakel (in People Mover on the Road) and Suzanne van den Bosch (in all three projects as an analyst, and in European Networks and Rush Hour Avoidance also as a direct participant).

4. The consultants involved from TNO (Netherlands Organisation for Applied Scientific Research) include: Martin van de Lindt, Sophie Emmert and Emma van Sandick.

5. This KSI project had a double track approach: (I) this PhD research on transition experiments and (II) the development of practical methods and tools for transition experiments. The role of Suzanne van den Bosch in track II was to introduce new theoretical concepts and actively participate in translating these concepts into a practical framework and testing this in several ongoing innovation projects.

conceptual framework on transition experiments (Chapter 3) was applied and further developed to support the transitioning process of three Transumo projects. Based on these experiences, a practice-oriented 'transitioning method' was also developed (Van de Lindt et al., 2009).

The three case studies of Transumo projects that are described in this chapter are aimed at developing a better understanding of what a transitioning process can look like, what type of projects can be transformed into transition experiments and how such a transitioning process can be organised and supported. The case study of the People Mover project is fully based on an *ex-post* analysis of the transitioning process, while the (*real-time*) case studies of the European Networks and Rush Hour Avoidance projects are also based on direct participation of the author in workshops and discussions.

This chapter first describes the background and context of the three case studies, explaining why the Transumo programme was interested in 'transitioning' their ongoing projects and how they initiated and organised a transitioning process (section 5.2). Section 5.3 then explains why a 'transitioning method' was developed, what the method is about and how it was further developed and tested in the three Transumo projects. This is followed by presenting the case studies of the transitioning processes within the People Mover project (section 5.4), European Networks (section 5.5) and Rush Hour Avoidance (5.6); each case study is ended with specific recommendations to the practitioners involved in these projects. The chapter ends with formulating general lessons learned (section 5.7) and conclusions and general recommendations regarding follow-up research and practice (section 5.8).

5.2 Background and context (I): Transumo programme

5.2.1 Why the Transumo programme was interested in 'transitioning'

The Transumo programme (2004-2009) was one of several Dutch programmes that was explicitly aimed at influencing a sustainability transition in a specific sector, including: the Energy Transition, PSIB (focused on a transition in the construction sector), the Innovation Network and Transforum (both focused on the transition to sustainable agriculture). Transumo had received a Bsik[6] grant on the condition that this programme would stimulate sustainable system innovation and specifically a transition towards a more sustainable Dutch transport sector. But, though the title of Transumo explicitly referred to a Transition to Sustainable Mobility, the programme was not set up with a Transition

6. Bsik programmes were initiated by the Dutch government to improve the Dutch knowledge infrastructure. This included 37 research consortia that were granted with in total 802 million euro subsidies, derived from the Dutch natural gas revenues. Most of the consortia have set up extensive and multi-disciplinair programmes that take up 4 to 6 years (www.senternovem.nl/bsik).

Management (TM) approach.[7] Hence, the programme did not start with setting up a transition arena, developing a long-term sustainability vision, transition agenda and transition pathways. Transumo did select and support 45 innovation projects, which were clustered in 7 themes.[8] These Transumo projects had to contribute to a transition to sustainable mobility and the project leaders were requested to indicate how they would approach this. However, the project leaders were not familiar with the TM approach and the Transumo programme management did not have enough expertise to support them with translating TM theory into practice.

An analysis[9] of the Bsik-programmes Transumo, Transforum and PSIB showed that their projects did not have an explicit societal challenge as a starting point for learning, did not have a long-term perspective (partly because the Bsik grant asks for short-term results) and had a limited focus on sustainability (Krom, 2006). The TM theory would therefore suggest that these projects would have a limited potential to contribute to a sustainability transition and therefore could not be characterised as transition experiments.

In several dialogues[10] between transition researchers and practitioners, the practitioners brought forward that TM theory lacked concrete guidelines for stimulating the contribution of their ongoing projects to transitions. Furthermore, they asked for an active participation of transition researchers to support their ongoing programmes and projects. Hence, Transumo was one of several Dutch programmes with an interest in receiving scientific and practical support to 'apply the TM approach in their ongoing programme and projects' and specifically 'transforming ongoing projects into transition experiments'. In the remainder of this chapter this will be referred to as 'transitioning'.

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7. This can be explained by the fact that when Transumo was developed (in 2002-2003, during the call for Bsik proposals), the Transition Management approach had just been developed and had not been fully translated to practice.

8. The 7 Transumo themes include: self regulation, traffic management, spatial developments, governance processes, chain integration, network integration and public transport.

9. This analysis was based on a database study of 81 potential transition experiments, which were supported by several programmes (including: the Energy Transition, Transumo, PSIB, the Innovation Network and Transforum). The database was developed at the end of 2006, as part of the research of the Knowledge Centre for system innovations and Transitions (KCT).

10. These dialogues between transition researchers and practitioners were facilitated by the Competence Centre for Transitions. This chapter specifically refers to the various group discussions between transition researchers and practitioners at the "Grensverleggend Vernieuwen" meeting in April 2006, and the "7de verdieping" meeting (in which Rob Raven and Suzanne van den Bosch presented theory about transition experiments and debated with various practitioners) and the various meetings to discuss the "Competence Kit for Transition Experiments" (Raven et al., 2008), which was developed by transition researchers (Ruth Mourik, Rob Raven and Suzanne van den Bosch), the Competence Centre for Transitions (Rob Weterings and Jose Andringa) and practitioners (mainly Gert-Jan Fonk from the Innovation Network)

5.2.2 How Transumo initiated a transitioning process

Starting from early 2006, Transumo obtained first experiences with transforming an ongoing Transumo project, the People Mover[11] project, into a transition experiment. In this first transitioning process at the project level, TM researchers and consultants supported the People Mover consortium with broadening the scope of their ongoing project in terms of process and substance, by applying TM theory (this is described in detail in section 5.4).

The People Mover project was not the only Transumo project that was interested in a transition perspective (other projects included Logistic Networks, PROTECT and Traduvem). At the end of 2006, when all Transumo projects had been started, the Transumo programme management concluded that there was a mismatch between requesting projects to contribute to a sustainability transition on the one hand and the lack of *practical* knowledge (at both the project and programme level) on *how* projects could do this on the other hand. During a "project day" organised by Transumo in December 2006, an idea emerged to organise "transition accelerator" sessions that would address:

- Relevant aspects of TM theory
- Setting up transition experiments
- Changing an ongoing project

In February and March 2007 Transumo, together with the Competence Centre for Transitions (CCT), organised three "transition accelerator" sessions that were aimed at: "Strengthening the working on Transumo projects from a transition perspective. (…) Eventually it is intended that the project leaders of Transumo will take up the challenge to set up their projects according to the principles of transition management"[12]. The sessions were attended by all project leaders (for whom the sessions were compulsory) and several project participants of the 45 Transumo projects. For each session different KSI/DRIFT researchers[13] were invited to increase the knowledge about transition management, to inspire a group discussion and address specific problems put forward by project leaders. These sessions increased the knowledge of project leaders about transition management and provided them with a conceptual framework to reflect on their projects, which brought out several dilemmas (Box 5.1).

However, three sessions were not sufficient to meet the needs of project leaders for more support with implementing a transition perspective in their ongoing projects. The most important dilemma was that while Transumo required projects to contribute to the

11. Unfortunately the People Mover project was stopped because of bankruptcy of the company that produced the People Movers.

12. Source: "Aankondiging leertraject Transumo". De Transitieversneller. Transumo, January, 2007.

13. These KSI/DRIFT researchers included: Jan Rotmans (first session), Rene Kemp and Suzanne van den Bosch (second session) and Derk Loorbach, Harry te Riele, Henk Diepenmaat and Pepik Henneman (third session).

During the Transumo "transition accelerator" sessions, project leaders expressed the following dilemmas:

- *Transition vs. optimisation:* Some Transumo projects were perceived by the project leaders as 'optimisation' projects instead of projects that are really aimed at fundamental changes. Transumo should be clear about the distinction between optimisation and transition, though both types of projects could also complement each other.
- *Learning vs. short-term results:* TM theory states that some projects that fail (in terms of short-term results) can contribute to a transition process because of valuable learning experiences. But many actors are more interested in concrete short-term results than innovation in the long-term. A project leader should always find a balance between concrete realisation (which is also necessary in transitions) and learning about all aspects of a problem.
- *Including vs. excluding regime players:* TM theory states that (change-inclined) regime players should be involved early to anticipate resistance. But a general fear was that regime players would immediately start to steer the project and if they are involved early they might stop the project based on negative impressions. It is difficult to determine the adequate moment to involve regime players.
- *Protection vs. transparency:* The dilemma: informing regime players about project results (transparency) versus keeping project results quiet (protecting from regime pressure).
- *Deepening vs. broadening:* In practice deepening is quickly transformed into broadening, but when promising projects (with a high learning potential) are implemented in a broader context too soon, this might lead to project failure (for example because of differences between the pilot location and follow-up locations).

Box 5.1 Dilemmas formulated by Transumo project leaders in "transition accelerator" sessions

transition to sustainable mobility, at the same time projects had to realise short-term results and apply traditional project management. This was related to the fact that within the organisation of Transumo "the supervisory board (traditionally oriented) was not convinced about the added value of TM" (Gorris and Pommer, 2008:5). However, within the different layers of the Transumo organisation the interest in TM increased, which was caused by "the growing insight into the deficiencies of the traditional means (of project management) and their impossibility to solve the problems of today, let alone those of tomorrow" (Gorris and Pommer, 2008:5). Transumo also learned that "more and more project managers were facing certain issues they could not solve themselves by means of traditional project management; issues raised by the regime (a Ministry which stands in the way of an innovation) or issues regarding cooperation within the private sector - in fact those issues that are the cause of the present lock-in situation in the transport sector. Knowledge of the TM basics was not sufficient. Project managers were not able to make it applicable to their situation and urged for more tailor-made support" (Gorris and Pommer, 2008:5-6). To address these issues, it was acknowledged that Transumo projects should receive "tailor-made" support to translate TM to their own project context and gain practical experience with the TM approach.

5.2.3 Setting up the Transumo Transition Programme

Following up the Transumo "transition accelerator" sessions and various ad hoc TM activities within Transumo, the Transumo board decided in April 2007 that the TM activities within Phase II of Transumo would be intensified. This space for increasing the focus on TM theory and practice was a result of learning experiences at both the programme and project level (Gorris and van den Bosch, 2008). Furthermore, this decision was influenced by KSI-research and advice.[14] Transumo requested KSI/DRIFT and other TM and sustainability experts to participate in the Transumo Transition Programme (TTP).[15] The TTP was organised as a separate project within the Transumo programme to accommodate all transition-aimed activities of Transumo. The TTP project plan (July 2007) stated:

> "The objective of the Transition Programme is setting up, enabling, encouraging and coordinating all transition-aimed activities within Transumo. With this Transumo wants to realise a concrete translation of the concept transition management, within the Transumo Programme as a whole and within all projects separately. This originates from the ambition to make the Transumo programme a recognisable step in the transition to sustainable mobility.
>
> The 'leitmotiv' for all actions within this programme is: it must be of practical use to project leaders and management, the Transition Programme must 'offer' them something. Hence, the accent in the Transition Programme is on making applicable and applying the knowledge on transition management, although the development of knowledge on this area is also part of the programme."
>
> *Source: Project plan Transumo Transition Programme, July 2007*

The TTP involved different 'transition activities' at three different levels (project-, programme- and societal level). These activities included the development of a sustainability vision, transition monitoring, setting up transition arenas and developing a transitioning method (described in following section).

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14. The KSI research network is also supported with a Bsik grant. At the start of Bsik it was agreed that KSI research on transitions would provide input to the more practical Transumo programme. One influential KSI research project about Transumo was a transition analysis on two logistic projects (Avelino and Rotmans, 2007). As a result of this KSI-analysis the Transumo board decided to stop these two projects abruptly. They also requested for similar analyses of all Transumo projects, but this was not possible because of limited time of DRIFT. Transumo then requested DRIFT to participate in the Transumo Transition Programme.

15. Participants in the Transumo Transition Programme included: DRIFT (Dutch Research Institute For Transitions), CCT (Competence Centre Transitions), TNO (Netherlands Organisation for Applied Scientific Research), AT Osborne (a management consultancy) and CE (a sustainability consultancy).

5.3 Background and context (II): Developing a 'transitioning method'

The previous section described the experiences of Transumo, between 2006 and July 2007, with reflecting on their ongoing programme and projects from a transition perspective, which eventually resulted in setting up the Transumo Transition Programme (TTP). Parallel to these experiences, as part of a KSI project, TNO and DRIFT developed a first version of the 'transitioning method' that supports the transformation of ongoing innovation projects into transition experiments.

5.3.1 The relevance of a transitioning method

The previous sections have shown that practitioners involved in ongoing innovation projects have a need for practice-oriented support to translate theory about transition management to their own project context.[16] Regarding the specific TM instrument transition experiments, the available practice-oriented theory and methods are mainly focused on *setting up* (*new*) transition experiments. For example: the MiXT method aimed at setting up new Societal Innovation Experiments (Van Sandick and Weterings, 2008) and the Competence Kit for Transition Experiments (Raven et al., 2008). However, these methods do not specifically address issues that are faced by project leaders of *ongoing* innovation projects that aim to contribute to a transition. Examples of such issues are: How to guarantee a high-quality learning process, while also realising short-term results; How to maintain a focus on developing radical innovations; How to stimulate interactions with related innovation projects; How to transfer learning experiences to other contexts; How to stimulate broader societal embedding; And finally, how to influence and change dominant (mainstream) practices.

To address these issues, and bring in (and maintain) a transition perspective in ongoing innovation projects, the 'transitioning method' was developed in strong interaction between TM researchers and practitioners. From a scientific perspective[17], developing this method was relevant because it enabled further developing and testing the conceptual framework on transition experiments (Chapter 3).

5.3.2 Development of prototyping version of transitioning method

In 2006 a prototyping version of the transitioning method (Emmert et al., 2006) was developed based on available scientific knowledge and practical experiences. The main theoretical concepts were derived from this PhD research on transition experiments, in-

16. This need for support is also described in a recent article about transitioning the Transumo programme (Avelino, 2009).

17. The development of the transitioning method can be characterised as a 'Mode 2' research approach in which scientists (DRIFT), consultants (TNO) and practitioners (Transumo) together developed knowledge "in the context of application".

The **transitioning method** offers support for the *transitioning* of ongoing innovation projects into transition experiments with potential to scale up.

Transitioning involves that an ongoing innovation project, which started from the ambition to contribute to a transition, is transformed in terms of substance and process, during the implementation process, into a transition experiment with potential to scale up.

The objective of the transitioning method is to increase the chance that ongoing innovation projects really get embedded in the broader societal context and consequently can contribute to sustainable system innovation.

The transitioning method is composed of four modules (explained in section 5.4.3):

1. Contextualising
2. Reflection
3. Reframing
4. Concretising

Box 5.2 Prototyping version of transitioning method for experiments (Emmert et al., 2006)

cluding the distinguishing characteristics of a transition experiment and the mechanisms deepening, broadening and scaling-up (Chapter 3). The main practical experiences were derived from the transitioning process within the People Mover project (section 5.4). In this transitioning process the conceptual framework on transition experiments (Chapter 3) was applied, but this was not integrated in a method yet. Partly based on the learning experiences from the People Mover transitioning process, the prototyping version of the transitioning method was developed. This version of the transitioning method consisted of four modules (Box 5.2). The module 'reframing' made use of the experiences within the People Mover project with applying the table with characteristics of transition experiments (Table 3.1). The module 'concretising' built upon the experiences with translating the mechanisms deepening, broadening and scaling-up to the context of the People Mover project.

5.3.3 Further development and testing of transitioning method

To test and further develop the transitioning method in practice, different innovation programmes with the ambition to contribute to a sustainability transition were explored as possible 'test-beds'. Based on interviews with five managers of innovation programmes (PSIB, SKB, Innovation Network, Transforum and Transumo), conducted by TNO between February and April 2007, it was concluded that the prototyping version of the transitioning method first needed to be optimised. The programme managers recommended to improve the method with a clear framework. Consequently, a specific

'transitioning framework' was developed, consisting of two matrices (Table 3.2 and 3.3). This framework was inspired by the experiences of DRIFT with the monitoring matrix of the Transition Programme in Long-term Care (Chapter 6).

In follow-up discussions with several programme managers, possible projects were explored that could be supported with the transitioning method. Finally, the Transumo programme was selected because their project leaders expressed an explicit need for transition management support (instead of conventional project and process management support). Furthermore, the development of the transitioning method could fit in with the Transumo Transition Programme that was being set up at that time (described in section 5.2.3).

Two specific Transumo projects were selected as potential test cases, because of the character and phase of their transitioning process. The project European Networks was selected as a first test case, because this project had just restarted with the ambition to increase its contribution to a transition (as a consequence of the KSI-analysis by Avelino and Rotmans, 2007). The Rush Hour Avoidance project was selected as a second interesting test case, because this project was already quite successful[18] in terms of transitioning and would therefore make it possible to learn about transitioning at a more advanced level. As part of the Transumo Transition Programme, in 2007 intake meetings with both projects were organised (in which CCT, DRIFT and TNO participated).

In the intake meeting with European Networks, the project participants expressed a high willingness to apply the transitioning method. This resulted in several follow-up workshops (first with the overall project and later with one of the pilot projects) in which the transitioning framework was applied to reflect upon the current project and develop concrete 'transitioning interventions' (described in section 5.4). In the intake meeting with Rush Hour Avoidance (RHA) it was decided to organise a workshop to position the RHA experiment with regard to its context and with regard to a vision on sustainable mobility (Gorris and van den Bosch, 2008). In this workshop the transitioning method was discussed as a possible means to support the ongoing transitioning process of RHA. In follow-up discussions, the potential added value of the transitioning framework (and TM in general) was discussed with two process managers who were managing the Rush Hour Avoidance project.

5.3.4 First version of transitioning method

The experiences with developing and testing the transitioning method in the three Transumo projects (People Mover on the Road, European Networks and Rush Hour Avoidance) resulted in a first version of the transitioning method, which adds to the

18. A successful transitioning process results in a transformed project (or parts of a project) with the characteristics of a transition experiment, which has a high potential to contribute to a transition.

existing methods for transition experiments (e.g. MiXT and the Competence Kit for Transition Experiments). The transitioning method specifically addresses the previously identified issues and dilemmas of project leaders in *ongoing* innovation projects that aim to contribute to a transition. This section will briefly introduce the transitioning method; a more elaborate description of the method is presented in a practice-oriented essay by Van de Lindt et al. (2009).

Based on the experiences with transitioning the three Transumo projects, the core of the transitioning method can be defined as: providing practitioners with a *transition perspective* and translating this into substance actions and process actions in a *participative* way. The method is aimed at supporting practitioners involved in ongoing innovation projects with translating TM theory into context specific actions. Central in this method is the 'transitioning framework' (section 3.4), which includes 6 management challenges for transition experiments (Table 3.2), which are supported by management guidelines (Table 3.3). In the transitioning method, these management challenges and guidelines are applied to reflect upon the current status of an innovation project, to reframe the project characteristics (translating them into transition experiment characteristics) and to develop concrete interventions and actions to transition the project. A key aspect of the transitioning method is to connect an ongoing innovation project to its broader societal context and to develop process and substance actions to influence this context. Hence, the transitioning method can encourage and support practitioners in an ongoing innovation project to increase their impact on societal changes towards sustainability.

The following sections describe the experiences with transitioning the three Transumo projects and also specify how these experiences contributed to developing the transitioning method.

5.4 People Mover on the Road (POW)

5.4.1 Introduction to the experiment

The "People Mover on the Road" project started as a classical, technology driven, innovation project. It involved the development of self-steering electric vehicles (without a driver), that are technically speaking safe, cheap, environmentally friendly, fast and efficient to transport people within a city or municipality. The project was supported by Transumo and was aimed at testing the people mover as a possible addition to the existing public transport in the town of Almere. The project participants included the municipality of Almere, various companies (Frog, Sick, MobilEye, ANT), a public transport provider (Connexxion) and various departments of TNO (Innovation & Environment, Mobility & Logistics, Industry & Technology). The project started in 2005 with the following objectives (Van de Lindt, 2008):

1. Clearly indicating the role of people movers within future urban transport.
2. Taking a first step in mixing people movers with other traffic to increase the possibilities for fitting in people movers in existing urban infrastructure. This includes a further development of the sensor technology and mapping dangerous situations, for which solutions need to be found.
3. Developing a toolbox for city planners to evaluate and provide dimensions to people movers.
4. Setting up an "experimental garden" for the city of Almere, to prepare, set up and conduct a demonstration project with people movers.

These project objectives were organised in four working packages. In 2006, when the project was still in a starting-up phase and the demonstration project had not yet started, a transition perspective was brought into the project. This resulted in several adaptations in the working packages and changed the project from a classical innovation experiment to a transition experiment. This 'transitioning process' was initiated by the NIDSI (New Initiative Sustainable System Innovation) Mobility project[19] of TNO, in which DRIFT also participated.

Unfortunately, the People Mover project was ended in 2007, because the company that produced the people movers went bankrupt.

5.4.2 Transitioning process

The People Mover project was the first Transumo project, and possibly the first innovation project in the Netherlands, which was 'transitioned'. This was the result of the active involvement of several transition researchers and advisors from TNO and DRIFT, who participated in the NIDSI Mobility project.[20] People movers were regarded as a potential transition experiment to explore the transition path Automatic Guided Vehicles (AGVs). The People Mover on the Road project in Almere was selected as a promising case for the NIDSI Mobility project because (Van de Lindt, 2008):

– it could in principle provide a clear contribution to the desired transition;
– it was supported by motivated partners;
– it was in a development stage that provided flexibility regarding project set-up;

19. The NIDSI Mobility project (Van de Lindt, 2008) was one of four projects in the NIDSI programme, which was aimed at (1) setting up experiments that could potentially contribute to system innovations in four domains: housing and care for the elderly, food, water management and mobility and (2) learning about and further developing the DSI (Sustainable System Innovation) method. This method was followed up by the MiXT method (Van Sandick and Weterings, 2008) and the Transitioning method (Van de Lindt et al., 2009).

20. Within DRIFT, Jan Rotmans and Janneke van Bakel were directly involved in the transitioning process of the People Mover project. Suzanne van den Bosch was indirectly involved by bringing in theoretical concepts on transition experiments. Within TNO, Martin van de Lindt and Sophie Emmert were directly involved.

In 2006, the two projects People Mover on the Road (supported by Transumo) and NIDSI Mobility (supported by TNO in cooperation with DRIFT) were connected, and a transitioning process was started. The central question was: "How to transform such a largely supply-driven project into a more demand-driven transition experiment in such a manner that it might contribute to a more sustainable mobility system?"

A first step in the transitioning process was a reorientation on the starting points, the scope and the process aspects of the People Mover project. This reorientation was stimulated by three workshops with the project partners. In the first workshop transition and transition management concepts were discussed, including the difference between classical innovation projects and transition experiments (Table 3.1). In the following workshops the project partners applied these concepts to the People Mover project (Table 5.1).

As a result of these workshops, the project partners learned that their initial technology-oriented demonstration project had potential to explore and learn about a 'customer-oriented collective transport system' as part of the transition to sustainable mobility. This transformed the initial technological starting point of the project into a starting point in which the following societal challenge was formulated: "How can we realise an environmentally friendly, cost effective, attractive and safe mobility system?". Moreover, the perspective on the problem was changed from 'embedding people mov-

Table 5.1 Reframed characteristics of the People Mover project, based on Table 3.1

	People Mover: Classical Innovation Experiment (pilot)	*People Mover: Transition Experiment*
Starting point	Sensor technology, traffic mix, municipal parking policy (Almere)	To an environmentally friendly, cost effective, attractive and safe mobility system
Nature of problem	Technological and embedding in municipal parking policy and infrastructure	Complex: scaling up and embedding in mobility system (3P's)
Objective	Technological innovation and municipal market for people movers	Contributing to (sub)transition to 'customer oriented collective transport'
Perspective	2-5 years	>10 years
Method	Testing and demonstration on site in Almere	Testing and demonstration on site in Almere, learning for (sub)transition and other applications
Learning	New (technological) insights, behavioural change municipalities	Changing societal perspective on mobility, reflection on objectives of experiment
Actors	Project group	Project group + new parties (companies, governments)
Management context	project management, aimed at project goal	Transition management (process), Transumo (vision and (sub)transition), aimed at societal goal and project goal

ers in the existing infrastructure and parking policy' to thinking about the problem in terms of scaling up and embedding the project in the mobility system in Almere.

The process aspects of the People Mover project were also transformed. While in the initial project the project partners played a central role and classical project management was applied (aimed at the project goal), after the connection to the NIDSI Mobility project it was intended to involve other stakeholders in the project and apply a transition management approach to stimulate a process of societal change (aimed at a societal goal).

During the process of transitioning the People Mover project, first experiences with applying the steering principles deepening, broadening and scaling-up were also gained. The participating TM researchers and consultants introduced these concepts to the project consortium, by illustrating their meaning for the People Mover project in Almere (Van de Lindt, 2008, Van den Bosch and Rotmans, 2008):

- Deepening: learning as much as possible about the People Mover project in a specific context
  - Learning in the context of the Almere site with regard to 'customer-oriented collective transport';
  - Formulating explicit learning objectives and monitoring them.
- Broadening (in Almere): repeating the People Mover project in different contexts and making connections to other functions and domains
  - Exploring different functions for the people mover, for example: individual transport, goods and services, industrial logistics;
  - Exploring domains other than transport: e.g. recreation and tourism, trade and industry, agriculture;
  - Involving different stakeholders from outside the transport sector: e.g. tourism agencies, banks and societal organisations;
  - Coupling with other Transumo experiments;
  - Exploring opportunities to apply People Movers in other contexts (cities).
- Scaling-up (in Almere): embedding the People Mover project in dominant culture, practice and structure, at a higher scale level
  - Culture: citizens of Almere have accepted the people mover;
  - Practice: people movers play a role in spatial planning and are incorporated in the future mobility policy plans;
  - Structure: people movers are a structural part of the mobility system in and around Almere

The reframing of the project characteristics (Table 5.1) and the possible examples for deepening, broadening and scaling-up, contributed to changes within the working

packages of the People Mover project (Van de Lindt, 2008).[21] For example, the context analysis was broadened from including only the effect of traffic developments on a people mover system, to looking also at the effect of societal developments in Almere on the mobility system in general and on people movers specifically. And, with regard to the design of the test site (focused on one location in Almere) a scaling-up perspective was added. In addition, the simulation of the effects of people movers on this site was extended to the effects of people movers on the mobility system in Almere.

A key aspect of the transitioning of the People Mover project was that an initial limited demonstration project was connected to a broader context (the mobility system in Almere) and a societal challenge (sustainable mobility). An important follow-up step was setting up a transition arena in which a vision on sustainable mobility would be developed and in which people movers could be a possible transition pathway to a sustainable mobility system in Almere. Unfortunately, during the process of setting up this transition arena in Almere, the leading partner of the People Mover project went bankrupt and the project was ended.[22]

5.4.3 Contribution to transitioning method

The experiences with transitioning the People Mover project provided an important empirical basis for developing the prototyping version of the transitioning method (section 5.3). Based on these experiences, four modules for the transitioning method were developed: contextualising, reflecting, reframing and concretising (Emmert et al., 2006). *Contextualising* was considered an important first module to (re)connect an ongoing innovation project with a broader context and societal challenge. This was a key aspect in the People Mover transitioning process. The People Mover project also made clear that it takes time and 'mental space' to reflect on the current status of an ongoing project and its potential to contribute to a societal challenge and transition. Therefore, a *reflection* module was developed in which a 'transitioning team' could facilitate a reflection process with a broad group of actors who are involved in the project. In the People Mover project this reflection process was stimulated by the workshops that were facilitated by the team of advisors and researchers who participated in the NIDSI Mobility

21. Furthermore, the reframing of the project from a technological concept to a broader concept about sustainable mobility in general, created opportunities to incorporate people movers in the political agenda of Almere (Van Bakel, 2007). Two civil servants of the municipality of Almere, who were involved in the People Mover project, tried to embed the project at a higher scale level in their organisation and bring it to the attention of the responsible alderman and the mayor of Almere.

22. Bankruptcy was the most important cause for ending the People Mover project, but another important barrier to the progress of the project was that the two civil servants of the municipality of Almere did not succeed in gaining short-term support for the project at a higher level in the municipality (which was partly caused by a change of aldermen and related priorities after the elections). With hindsight, an important lesson learned is that a transitioning process should also focus on improving strategic actions to create political support.

project. In the *reframing* module the 'frames of reference' that provide a starting point for the project are discussed and transformed. These starting points include substance and process aspects. In the People Mover project, Table 5.1 was used to transform the characteristics of the initial classical innovation project into the characteristics of a transition experiment. This provided a starting point for conducting the experiment within a societal context. Based on the reframing of the project, concrete steering activities can be developed, which are aimed at scaling up the project. In the *concretising* module the management guidelines for deepening, broadening and scaling-up (Chapter 3) can be applied to develop these concrete actions. In the People Mover project this resulted in changing the working packages and starting setting up a transition arena.

5.4.4 Conclusions and recommendations

From the experiences within the People Mover project it can be concluded that the conceptual framework on transition experiments (Chapter 3) could be translated to the practical context of the ongoing People Mover project. The framework supported a process in which the initially technology-driven innovation project was transformed into a transition experiment that was aimed at contributing to the transition to sustainable mobility. This transitioning process resulted in several changes with regard to how the problem and possible solution were framed and how the project was set up and managed. Furthermore, a process was started to include different stakeholders and develop a vision on sustainable mobility (transition arena). However, because the project came to an early end, no conclusions can be drawn on how this transitioning process could have increased the success of the project. The recommendations that follow from this case study are therefore directed at similar innovation projects, within or outside the Transumo programme:

- Being selective as to what innovation project can be transitioned; minimal criteria include: potential contribution to a transition, motivated partners and flexibility in the project set-up.
- Making time and resources available for reflection and reframing (second order learning process);
- Defining the boundaries of the societal system or systems in which the project should be embedded (for example the Dutch mobility system and the mobility system in Almere) and taking this as a starting point for developing a scaling-up strategy;
- Embedding the transitioning process in the project organisation (for example in working packages).

5.5 European Networks (EN)

5.5.1 Introduction to the experiment

European Networks was a research project supported by Transumo to investigate the opportunities for setting up alternative flexible logistics distribution networks. The project was aimed at reaching a transformation in thinking and acting in logistics networks.[23] The project started in 2005 and was 'restarted' in 2007 (phase II, continuing to 2009).[24] The project aimed at combining logistics innovation and knowledge from experts at universities and knowledge institutes with the practical needs of manufacturers, logistics service providers and customers within the Netherlands. To bring about this combination of theory and practice, phase II of the project included two knowledge projects and three pilot projects, interacting with each other:

- Knowledge project 1 involved determining the substance problems with regard to the transition in European Networks (including supply and demand in European transport systems, concepts for change and transformation);
- Knowledge project 2 involved determining the processes behind the transition (the added value of cooperation/alliances between parties within the logistic networks to bring about the transition at several levels, and the conditions that need to be fulfilled);
- Pilot project 1 involved a paper case: Waste Paper Mining (encompassing different ways of production, reduction of import flows, less transport, less energy use);
- Pilot project 2 involved a fruit case: chain logistics in the fruit sector (encompassing different modalities, packaging and product characteristics, new transport systems);
- Pilot project 3 involved a regional case: the synergy between a regional airport and agribusiness (when this case study was conducted this project was still in a start-up phase).

The project partners included two knowledge institutes (RUN and HAN), a consultancy (Buck) and three companies (related to the three pilot projects). The restart of the European Networks project (Phase II) in 2007 can be regarded as the beginning of a transitioning process. This transitioning process was supported by the Transumo Transition Programme, which included testing the 'transitioning method' as part of a KSI research project (section 5.3). Later in the process a choice was made to focus the transitioning support on the Waste Paper Mining pilot project. This support had a temporary charac-

23. The objective of phase II of the European Networks project was: "To obtain an understanding of the hidden processes behind the logistics and transport systems and to develop a theory of transformation processes within logistics thinking and acting. To guide and assist and implement best practices concepts and projects on a longitudinal basis." Source: Project plan European Networks, Phase II, May 2007.

24. Phase II of the European Networks project aimed at simplifying the theoretical and practical focus, reinforcing the focus on transition aspects and improving the most important conditions for cooperation between the project partners.

ter and did not lead to a successful transitioning process. However, several lessons were learned regarding the transitioning method and facilitating a transitioning process in general.

5.5.2 Transitioning process

The transitioning process of European Networks was initiated by a transition analysis of Avelino and Rotmans (2007), who critically analysed phase I of European Networks (2005-2006). As a result, Transumo decided to restart the project and the project proposal of phase II paid explicit attention to contributing to the transition to sustainable mobility. Stimulated by the transition analysis, the European Networks partners concluded that the first phase of their project had been insufficiently focused on a transition to sustainable mobility (both in terms of substance and management).[25] In their reflection on phase I of the project, the new project leader stated: "The now dominant idea of bringing about transitions was from the first moment onwards never viewed as the most important objective of the partners. Only gradually it became clear that Transumo was more and more attached to this and that the research projects were expected to contribute to this." Hence, the project plan of phase II included numerous references to a transition to different transport systems and stated that "the way of thinking about transitions will be further elaborated within European Networks and will be applied in three pilot projects". At the start of phase II the project partners called on the help of the Transumo Transition Programme, to support their ambition to actively work on a transition to 'sustainable logistic networks'.[26]

In September 2007 an intake meeting was organised, which was attended by various people from Transumo, the knowledge institutes and consultant participating in European Networks and experts in Transition Management (from TNO, DRIFT and CTT). During this meeting, the European Networks partners appeared specifically interested in the transitioning method (Box 5.3). Hence, this first joint meeting mainly included discussing the transitioning method as a possible means to translate concepts from TM to phase II of the European Networks project.

The result of this meeting was that all partners expressed the ambition to set to work with the transitioning method in a series of workshops. The first transitioning workshops[27] would focus on the whole European Networks project, and later workshops might focus on one of their pilot projects (and would also involve the related companies).

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25. Source: Note "Reflection on Transumo-programme European Networks I (EN-1), 2005-2006 and anticipating EN-2 (2007-2009). Rob van der Heijden. September, 20 2007.

26. Source: Note "Information about transition programme with regard to European Networks. To the consortium partners of European Networks. Teije Gorris (Transumo). August, 22 2007.

27. Transumo also attended these first transitioning workshops.

The transitioning method was presented as a "participative search for concrete interventions" aimed at transforming an ongoing innovation project into a transition experiment. The central framework in this method encompassed two matrices in which the steering notions deepening, broadening and scaling-up were related to process and substance project characteristics (Table 3.2 and 3.3). When the European Networks project partners were asked what they got out of the models that were presented to them, they quoted:

- "The matrix provides a summarised picture that enables looking at your project from a different perspective" / "The matrix puts different spectacles on the project"
- "We had already downscaled the project to process and substance, but here other dimensions are also added"
- "Aha-erlebnis"
- "We can use this framework for reflection" / "We can let this point of view inspire us"

Box 5.3 Perceived value of the transitioning method for European Networks

In advance of the first transitioning workshop, all project partners were requested to score their project in the elaborated matrix of the transitioning framework (Table 3.3).[28] This matrix consisted of several statements with regard to 'ideal' process and substance project characteristics in relation to the three dimensions deepening, broadening and scaling-up. During the first workshop the project partners compared and discussed their different scores and perceptions on the European Networks project. This resulted in final scores that reflected the shared perception.

Table 5.2 Priorities of European Networks with regard to setting up concrete transitioning interventions (based on Table 3.2)

Guiding dimensions / **Project characteristics**	**Deepening** Learning as much as possible from a project in its context	**Broadening** Replicating and linking to other contexts and functions	**Scaling-up** Embedding in dominant ways of thinking and doing
Process Accountability mechanisms	From: realising results To: searching & learning	From: coincidental links Network analysis To: directed linking	From: operational… To: strategic management
Substance System analysis & Societal challenge	From: incremental innovation To: developing new ways of thinking and doing	From: context specific results To: adapting to other contexts	From: handing over results To: changing dominant ways of thinking and doing

28. Red, orange and green scores could be assigned to the different statements in the matrix depending on the extent to which the project satisfied this condition.

The project partners agreed that the following management challenges could be regarded as priorities in the transitioning process of European Networks (Table 5.2):

- *Deepening process:* In phase II of the project the space for learning was facilitated in regular meetings, but the current accountability mechanisms (by Transumo) gave only limited space for learning because the Transumo supervisory board was mainly interested in successful pilots. Special attention should therefore be provided to transitioning the accountability mechanisms.
- *Deepening substance:* The learning objectives of the project were connected to a societal challenge (defined in terms of People, Planet & Profit), but were not specifically aimed at fundamentally changing the dominant ways of thinking and doing in logistic networks. Hence, priorities were conducting a system analysis to get insight into the dominant structure, culture and practices in logistic networks and clearly defining the societal challenge and use this as a continuous starting point.
- *Broadening process:* within the project no systematic linking with key actors in logistic networks took place. An important next step was conducting a network analysis together with Transumo, as they had a better overview of key actors.

At the end of this first workshop a choice was made to focus the transitioning process on one of the pilot projects within European Networks: Waste Paper Mining (WPM). This pilot project involved the application of a new technology to separate waste paper flows, to increase the quality of paper resources for paper production and decrease the need for wood resources. Currently most of the waste paper in Europe is transported to China. The new technology would enable more paper production in Europe, which could fundamentally reduce transport flows and would also fundamentally change existing logistic networks.

In terms of substance this pilot project was regarded suitable because of its potential to change the paper industry and related logistic networks fundamentally in a more sustainable direction. In terms of process the WPM pilot project was regarded suitable because the phase of the project was transforming from "a pile of reports" to conducting a pilot in practice, and the two entrepreneurs that had initiated this project seemed[29] competent and motivated for a transitioning process.

In the summer of 2008 three transitioning workshops with the WPM pilot project took place.[30] In the first two workshops the Waste Paper Mining project was discussed (based on the transitioning framework), to get insight into its transition potential. The learning experiences of these workshops were that the WPM concept could indeed po-

29. This was based on the initial perceptions of the project partners of European Networks, but was not further assessed by TNO and DRIFT.

30. Participants in these workshops included: the two WPM entrepreneurs, two advisors from TNO/DRIFT, one consultant from Buck and one researcher from HAN.

tentially change the paper industry. However, the project was not set up as a transition experiment (in terms of process and substance) and it became clear that contributing to a transition was not the interest of the two entrepreneurs. They were mainly interested in realising a 'demo-factory' which would demonstrate their new technology. The last transitioning workshop addressed the opportunities for developing a broad consortium to learn about and eventually broaden and scale up the WPM demo-factory. However, at that time the two entrepreneurs were mainly focused on involving one large actor from the waste sector who was interested in participating in the demo-factory. The entrepreneurs stated that this actor would not be interested in broadening the consortium. The entrepreneurs were mainly interested in support for developing different business models and related scenarios. This type of support was already provided by the European Networks consortium. Furthermore, because the KSI project which facilitated the transitioning workshops came to an end, the specific transitioning support to the WPM pilot project was stopped in September 2008.[31] Hence, the several transitioning workshops had not brought about successful results in terms of setting up concrete actions to increase the potential contribution to a transition.

5.5.3 Contribution to transitioning method

The experiences with starting up a transitioning process in the European Networks project contributed to the further development of the transitioning method and specifically the *transitioning framework* (Table 3.2 and 3.3), which was first applied and tested within European Networks. In the transitioning workshops with the European Networks project (including the WPM pilot project) it was learned that the transitioning framework provided a concrete tool to *reflect* upon the current characteristics of how a project is set up and managed in terms of process and substance. The framework also enabled *defining priorities* for intensifying or setting up new (process and substance) activities based on the guiding dimensions deepening, broadening and scaling-up. However, the transitioning method did not succeed in initiating new activities at the level of the WPM pilot project. It can be concluded that there was a mismatch between the defined (transition) priorities at the level of the overall European Networks project and the (business) interests at the level of the WPM pilot project. The multiple levels of the European Networks project (an overall project, two knowledge projects and three pilot projects) are an example of a rather complicated project set-up, which also has implications for applying the transitioning method. A lesson learned was that before the transitioning method is applied, a general analysis of the project should be conducted first to gain insight into the project set-up, aims, participants and their main interests (Van de Lindt

31. The temporary character of the transitioning support had been communicated to the European Networks consortium, right from the start.

et al., 2009). Another lesson learned was that to apply the transitioning method successfully a project should meet specific conditions (selection criteria for 'transitionable projects' are formulated in section 5.8).

5.5.4 Conclusions and recommendations

European Networks can be regarded as an example of a project in which a transitioning process was successfully *started*, but did not bring about successful results because of two main reasons. On the one hand, temporary interventions by researchers and consultants who were not directly involved in the project did not provide sufficient support to the transitioning process. On the other hand, European Networks (and mainly the Waste Paper Mining pilot project) lacked the right conditions for a transitioning process.

The transitioning process of the European Networks project was *initiated* by the critical transition analysis of Avelino and Rotmans (2007), which had profound consequences for the project. The added value of the *transitioning method* was that it supported and facilitated *starting up* the transitioning process after the restart of the project. The method succeeded in providing a tool for reflection and defining priorities for deepening, broadening and scaling-up. However, when a choice was made to focus the transitioning process on the WPM pilot project, the transitioning method did not succeed in stimulating further 'transitioning progress'. This was partly caused by the mismatch between the transition objectives of the European Networks project and the limited (business) interests of the entrepreneurs involved in the WPM pilot project. Furthermore, because of the small scale of this pilot project (in terms of people and resources involved) there was a lack of time, resources and expertise to broaden the scope of the initial project. Expertise on transition management was only temporary brought into the WPM pilot project during several workshops organised by TNO to apply and test the transitioning method. An important lesson learned was that experts on transition management should be *directly* involved in a transitioning process because transitioning 'from a distance' was not possible. Based on these lessons learned, the following recommendations targeted at transition researchers, advisors and programmes similar to Transumo, can be formulated:

- To improve the starting conditions of a transitioning process, selection criteria for 'transitionable' projects should be developed (section 5.8);
- A transitioning process should pay attention to reinforcing project-consortia, which should include niche-players and regime-players with the ability and motivation to change existing ways of doing and thinking;
- A possible tool that can be applied in a transitioning process is a *societal business case* that broadens the focus on making short-term profit to making explicit the long-term societal costs and benefits of a project;

– The further development of the transitioning method should pay more attention to facilitating an ongoing transitioning process, in which continuous and direct support by transition researchers and advisors is provided.

5.6 Rush Hour Avoidance (RHA)

5.6.1 Introduction to the experiment

Rush Hour Avoidance (in Dutch: "Spitsmijden") started as a classical innovation experiment in which the aim was to test a new 'solution' for the traffic congestion problem. This solution was based on the idea that rewarding 'good' behaviour of commuters can lead to changes in their mobility behaviour and routines. In the mobility sector this idea is contrary to the mainstream idea of punishing people for traffic usage. The development of the Rush Hour Avoidance (RHA) experiment included 3 phases, which were built up around 3 pilots (RHA 1, 2 and 3).

The first Rush Hour Avoidance pilot (RHA 1) was aimed at creating new insights into the mobility behaviour of commuters in relation to positive stimuli. This pilot took place at the Dutch A12 motorway from Zoetermeer towards The Hague. During 50 weekdays in October to December 2006, 340 frequent drivers participated in this pilot. They were rewarded (by either a financial reward or credits for a free smart phone) if they were successful in avoiding the rush hour, compared with their initial behaviour.[32] This type of positive stimuli had a significant effect on changing driving behaviour. While the initial objective was to stimulate 6% of the pilot participants to avoid the rush hour, the result revealed a 50% avoidance. The first phase of the RHA experiment therefore was a success; it confirmed the hypothesis that a rewarding system persuades motorists to avoid the rush hour (Spitsmijden, 2007a). Another part of the success was the successful cooperation between local, regional and national government, several private parties and three universities. The success of RHA 1 resulted in a statement from the Dutch Minister of Transport, Public Works and Water Management to the Dutch House of Representatives that more RHA projects should be stimulated.[33]

In 2008 the second phase of the RHA experiment started, consisting of a follow-up pilot (RHA 2) to explore in more depth the long-term effects on behavioural change. In RHA 2, the perspective of the RHA project consortium was broadened from 'avoiding rush hour' to contributing to the transition to sustainable mobility. This second pilot also involved employers who wanted to stimulate sustainable mobility behaviour (as

32. The experimental design of Rush Hour Avoidance is further explained in Knockaert et al. (2007).

33. Source: letter from the Dutch Minister of Transport, Public Works and Water Management to the House of Representatives, about "A Different Way of Paying for Road Use" (ABvM), November 30, 2007.

part of their Corporate Social Responsibility ambitions) and involved NS Dutch Railways to experiment with the possibilities of the RHA concept in the train. Furthermore, the project consortium of RHA 2 included several researchers who focus on the question how RHA can contribute to a transition to sustainable mobility.[34]

The third phase, scaling up RHA 2 from 800 to 5,000 participants (RHA 3), was started in 2009. During 2009 and 2010 more RHA projects are to be expected (not included in this case study).

5.6.2 Transitioning process

The development of the RHA experiment can be characterised as a continuous transitioning process in which an initially limited mobility experiment (RHA 1) is being transformed into a transition experiment (RHA 2+3) that is explicitly connected to the transition challenge of realising sustainable mobility. This transitioning process was started by the project consortium (consisting of a steering group, project leader, work flow leaders and project participants) and stimulated and further supported by the Transumo Transition Programme (consisting of Transumo, transition researchers[35] and consultants). From RHA 2 onwards many characteristics of the initial RHA experiment were broadened, including the:

- starting point (*from* possible solution 'avoiding rush hour' *to* transition to sustainable mobility);
- nature of the problem (*from* traffic congestion *to* unsustainable mobility behaviour, which is interrelated with how people work and live[36]);
- objective (*from* identifying satisfactory solution for traffic congestion *to* contributing to sustainable mobility transition);
- perspective (*from* temporary behavioural change *to* long-term effects);
- method (*from* testing and demonstrating the effect of reward systems on driving behaviour *to* an open search and learning process about how RHA could contribute to the transition to sustainable mobility);
- actors (*from* limited consortium *to* new partners with more diverse interests and learning objectives);
- management context (*from* classical project management, added with process management *to* process management and intention to apply transition management).

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34. The results of this transition research, conducted by Delft University of Technology and OC Mobility Coaching, had not yet been published when this case study was conducted.

35. Specifically two presentations, by prof. Jan Rotmans (DRIFT) for the RHA consortium about transition management, gave a positive impulse to the transitioning process.

36. The RHA consortium learned that a sustainable mobility system is strongly related to a sustainable working and living system (for example employers that stimulate working from home).

With regard to management, the first phase of the experiment (RHA 1) was mainly about good project management (setting up the pilot project, selecting the respondents, developing the reward system, realising short-term results, etc.). In the second phase of the experiment (RHA 2), active process management became more important. The environment of the RHA experiment became much more complex (many similar initiatives, high political interest, more research, etc.). This required not only managing the pilot project, but also managing the interaction with the environment and linking the RHA experiment to the broader context (the transition to sustainable mobility).

In addition to process management issues, in RHA 2 several transition management dilemmas were faced. These dilemmas can be related to the deepening, broadening and scaling-up of the Rush Hour Avoidance concept:

- *Dilemma related to deepening:* learning as much as possible about the RHA experiment by conducting further research versus repeating the initial successful pilot and shifting the focus from learning to implementation. This is also related to a long-term versus a short-term focus.
- *Dilemma related to broadening:* RHA needed to position itself with regard to many similar experiments (e.g. experiments in 6 regions by the Taskforce Mobility and at two locations by private parties), which were set up after the first successful RHA pilot. Important questions are what the different learning objectives of all these experiments are and how RHA can continue researching different aspects of sustainable mobility behaviour. Furthermore, the RHA consortium needed a vision that could give direction to connecting RHA to other experiments and developments (e.g. new mobility arrangements which combine rewarding and pricing).
- *Dilemma related to scaling-up:* in order to scale up, the RHA experiment needed to learn about and overcome technical, juridical, fiscal and socio-cultural scaling-up issues. Another dilemma was who should be guiding the scaling-up: the project consortium, the Transumo programme or external actors?

To address these dilemmas in the second phase of the RHA experiment, the RHA consortium requested additional support from the Transumo Transition Programme (TTP). Because the TTP was looking for cases to develop its 'transition tools', a joint search and learning process was started to connect theory about transitions and TM to the practical experiences of RHA. In an intake meeting RHA participants together with additional TM experts (who participated in the TTP) explored how the transition dilemmas and questions of RHA could be approached. A choice was made to organise a first transition workshop, which focused on positioning the RHA experiment with regard to its context and with regard to a vision on sustainable mobility (Gorris and van den Bosch, 2008).[37]

37. Source: report "Intake Transitie Ondersteuning Spitsmijden", Transumo, December 12, 2007.

Deepening
Learning about the effect of a financial reward system (a change in structure) on the mobility behaviour of motorists (a practice) in a local context.

Broadening
Linking to other mobility domains (public transport, car sharing) and other societal needs (not only sustainable mobility but also housing, spatial planning and corporate social responsibility) and repeating the experiment with different learning objectives and different partners (for example, the second Rush Hour Avoidance pilot was also aimed at learning more about alternative modes of transport behaviour and also involved employers).

Scaling- up
Scaling up RHA would imply that avoiding traffic rush hour changes the dominant practice of commuters, and positive stimulation of sustainable mobility becomes part of the dominant culture and structure of companies and government.

Box 5.4 Possible examples of deepening, broadening and scaling-up in the RHA project

The last part of the first transition workshop[38] with RHA included a discussion on the 'transitioning method' (section 5.3), aimed at enhancing the project success (by addressing the dilemmas experienced) and the perspective to scale up (Box 5.4).

After this workshop a second transition workshop was organised, which was specifically focused on "transition arenas". This was a specific request of the RHA consortium as a result of an earlier presentation by prof. Jan Rotmans (DRIFT), which inspired them to learn more about the transition management approach.[39] The outcome of the second transition workshop was that the RHA consortium learned about how a transition arena could support (scaling up) their experiment. However, to mobilise the support of other partners for a transition arena, the RHA participants concluded that the knowledge on the transition arena concept should be made 'transferable' to practice. The RHA participants expressed a need for a further translation of the current scientific knowledge on transition arenas into practical knowledge (e.g. short publications) that could be easily transferred to their partners. This workshop therefore reinforced the idea that transition-

38. The workshop contributed to the formation of a separate work flow "external relations and transitions" in which the connection of Spitsmijden with its broader context is secured. This work flow is also aimed at structurally embedding the concept of RHA in an independent platform that transcends the objectives of individual organisations.

39. One of the recommendations of Jan Rotmans was to set up a transition arena (in addition to the RHA steering group). In the existing set-up of the RHA experiment, the steering group both tries to realise successful pilots and make space and create legitimacy for the RHA concept. However, the main interests of the current steering group members are realising successful pilot projects. In contrast, the participants in a transition arena have a shared sustainability interest.

ing requires translating general theory about TM instruments into context-specific and practical knowledge.

5.6.3 Discussing the transitioning method

In the first transition workshop with RHA, the 6 management challenges for transition experiments (Table 3.2) were presented. The project leader of RHA recognised these challenges, and perceived this as an important framework for sustainable project management, process management and programme management.[40] The workshop participants stated that the theoretical framework would become stronger if the management challenges were elaborated in practical guidelines. In the last part of the workshop a sub-group developed a list of practical guidelines for transition experiments (Box 5.5).

In several follow-up discussions with the project leader of RHA and the manager of the RHA workflow "external cooperation and transition", the added value of the transitioning method and TM in general was discussed. The outcome of these discussions was a

Deepening process: allocating time, budget and resources for the learning process; leaving space in the project plan for a broader perspective; calling for "helping troupes" in time (to guarantee the quality of learning).

Broadening process: setting up the project with a separate shell for the context (in RHA the context is addressed in a separate work package); in other words: "If you want specific TM goals, you must make them part of the project plan/results and budget"; appointing somebody as 'connector'.

Scaling-up process: organising the project and process management in parallel, with a connection (different agenda, same objectives); appointing a 'leading figure'; involving key actors: let them do the work! ("don't go dragging and pulling yourself").

Deepening substance: the project is not a goal in itself but part of a broader development; learning about new business models should occur.

Broadening substance: visualising other projects; specifying new actors in RHA 2 (don't continue with old actors out of convenience); learning about the difference with RHA 1.

Scaling-up substance: specifying the present context and the relevant actors; thinking about new business models and financial structures.

Box 5.5 Practical guidelines developed in the first transition workshop with RHA

40. An important remark about the framework is that in a transitioning process not only project or process managers can stimulate deepening, broadening and scaling-up, but that also managers at the level of programmes (such as Transumo) play an important role in making space for a transitioning process.

shared insight into how conventional process management and transition management share certain basic characteristics but are also inherently different. Both approaches start without a predefined problem and solution, focus on problems that are highly unstructured and dynamic with many actors involved, are based on 'steering' instead of controlling, and leave space for changing direction. However, TM has an important added value in experiments such as RHA that aim to contribute to a transition process.

A first added value of TM, with regard to process management, is that TM links process to substance: it takes a societal challenge (to overcome persistent problems) as a starting point and has a normative focus (to realise sustainability and radical system change). Contrary to process management, TM always provides a normative direction to a process. To realise this, TM is strongly based on variation and selection: creating space for frontrunners instead of cooperating with "everybody". In the process of transitioning the RHA experiment, the linking of process (developing the rush hour avoidance concept) to substance (sustainable mobility) appeared to be a crucial success factor. Furthermore, TM is about linking experiments at a *micro-level* to a transition goal at a *meso and macro-level* (Figure 2.2).

Another lesson learned in the RHA experiment is that for a successful application of a TM approach, it is crucial to integrate TM theory and practice in one context in which researchers and practitioners cooperate. In the second phase of the RHA experiment, research on TM[41] was included as a separate workflow of RHA 2, but the research results were insufficiently used to support the management process. This can be explained by a traditional role of researchers who do not want to influence their research subject with intermediary research results. However, the TM approach has been developed by researchers who continuously search for a balance between conducting scientific research and doing interventions in practice (based on research) to influence sustainability transitions.

In addition to the transition research that was conducted within RHA 2, the two transition workshops that were organised as part of the Transumo Transition Programme did intervene in the experiment. However, these interventions were conducted by transition researchers and consultants who were only indirectly and temporarily involved in RHA. Because of limited time and resources no continuous support to the transitioning process of RHA could be provided. Hence, a lesson learned with regard to the transitioning method is that the method should be applied with continuous and direct involvement of active transition researchers and consultants. Furthermore, the timing and character of the interventions is dependent on the right moment that allows sufficient space (e.g. using the momentum to discuss and set up a transition arena).

41. This research on TM was conducted by the Delft University of Technology, which participated in the RHA consortium.

The discussions with the process managers of the RHA experiment also raised questions about how RHA could best be managed with regard to process and substance and theory and practice in order to scale up and influence the dominant mobility system: Who should manage this scaling-up process? What can be the role of Transumo? Should the RHA steering group be continued? Or should the RHA concept be embedded in a more independent organisational structure? What is the relation with other systems, apart from the mobility system? How can we know if a change in these systems is truly sustainable? For example, if Rush Hour Avoidance leads to working more from home, does this have a negative effect on energy consumption? What are the system barriers? Etc. These questions can be used to further develop and improve the transitioning method and specifically to further support the transitioning process of RHA.

5.6.4 Conclusions and recommendations

The development of the Rush Hour Avoidance experiment provides an example of a successful transitioning process that is still continuing. It is successful because an initially limited pilot project (RHA 1) is being transformed into a transition experiment (RHA 2 and 3) with *potential* to contribute to the transition to sustainable mobility. This potential can be characterised in terms of deepening, broadening and scaling-up (Box 5.4). On all these dimensions the RHA consortium had to deal with dilemmas (for which extra additional support by the Transumo Transition Programme was requested), but has also realised important results. With regard to deepening, the scope of the RHA experiment was broadened in terms of process (broader learning objectives) and substance (contributing to transition to sustainable mobility). With regard to broadening, the success of the first RHA pilot resulted in several new experiments. The RHA concept was linked to other contexts (e.g. different locations, partners) and functions (e.g. public transport) or domains (e.g. working and living). With regard to scaling-up, the RHA workflow "external cooperation and transition" is actively searching for ways to embed the RHA concept in the dominant *practices* of commuters and the financial and organisational *structures* of government and employers. Many dilemmas still need to be overcome, hence it is too early to conclude if the RHA experiment contributes to a transition to sustainable mobility. However, RHA can be regarded as a transition experiment because it has potential to contribute to a transition *and* has a high risk of failure (Rotmans, 2005).

With regard to supporting the transitioning process of RHA it can be concluded that interventions such as presentations and workshops have given an impulse, but these temporary interventions are not sufficient.[42] The following recommendations can further support the transitioning of the RHA experiment:

42. This was also concluded in the European Networks case study (section 5.5)

- Integrating TM research with the practice of the RHA experiment. This type of research should enable continuous practical interventions (providing TM instruments, selection criteria, conceptual language, management guidelines) and reflection on ongoing practices from a TM perspective.
- Setting up a transition arena, or transforming an existing arena (e.g. the current RHA steering group), which can provide continuity to the RHA concept in relation to sustainable mobility. Selecting frontrunners with a general interest in sustainability rather than a particular interest resulting from their institutional affiliation. Making this transition arena responsible for the scaling up of the RHA concept. Transumo could play the role of initiator, but the transition arena should be independent from temporary support such as Transumo.
- Involving (change-inclined) regime-players from the onset in order to anticipate future resistance.
- Conducting an integrated systems analysis to get a better insight into the unsustainability of the current mobility system (this can also serve as a 'zero measurement' for evaluating the sustainability of the desired mobility system). Taking into account related systems (such as working and living), but defining clear system boundaries.
- Developing a long-term vision, together with frontrunners in the mobility system and related systems, with regard to the contribution of RHA to sustainable mobility. This vision is also important to increase the legitimacy of the RHA concept [43] and to guide the broadening and scaling-up process.
- Conducting an analysis of the potential societal costs and benefits, when the RHA concept would be applied at a large scale (e.g. at 1000 locations) and would be embedded in the mobility system (e.g. becomes part of the dominant structure, culture and practices).
- Developing a strategy for deepening, broadening and scaling-up, and paying attention to the relation between these three mechanisms. For example, anticipating scaling-up (e.g. analysing juridical and institutional barriers) can lead to learning experiences which can in turn lead to different choices for repeating and linking the experiment.
- Managing the expectations of follow-up pilot projects: learning is the most important outcome and not just realising a high percentage of rush hour avoiders. The financial support of the RHA experiment should include enough space (in time and budget) for learning and for making adjustments in the process.

43. The RHA consortium learned that an important legitimacy problem is rewarding frequent drivers, while people who already show responsible driving behaviour are excluded. Another legitimacy problem is who should pay for the reward (employers or the government?).

5.7 Lessons learned regarding transitioning

Based on the three case studies described in the previous sections, the following lessons can be drawn with regard to transforming ongoing innovation projects into transition experiments:

1. In general, transitioning involves the application of the TM approach and instruments in ongoing programmes and projects. Transitioning requires the translation of general (theoretical) knowledge on TM into *context-specific and practical knowledge* that provides practitioners with a short-term and long-term *perspective to act*.
2. Transforming an ongoing innovation project into a transition experiment is a specific type of transitioning (other types include transitioning an arena or visioning process); it includes making explicit to which sustainability transition a project aims to contribute, defining a societal challenge that provides a starting point for learning and defining and conducting activities to increase the contribution to the transition (in terms of deepening, broadening and scaling-up).
3. In addition to the existing TM approach and instruments, practitioners have a need for *methods and tools* to apply TM instruments in their own project context (for example do's & don'ts and practical information and guidelines).
4. The core of the recently developed *transitioning method* is providing practitioners involved in innovation projects with a *transition perspective* and translating this in process and substance actions, in a *participative* way (however, it is not a top-down method prescribing what practitioners should do).
5. The transitioning method should be enriched with more practical "how to do it" management guidelines for *deepening, broadening and scaling-up*, which are targeted at different types of managers (e.g. programme managers, project leaders, working package leaders, advisors, researchers), who are involved at different levels of the project.
6. Transition researchers or advisors who aim to support projects with transitioning, should be *directly* involved in the transitioning process from the onset to realise a good interaction between theory and practice. It is important that during a project both the substance and the process can be adjusted based on recent transition research results.
7. Because projects consist of several nested levels, and perceptions on 'what' the project is can differ among different project participants, a transitioning process should clearly demarcate what part of the project is being transformed (e.g. the total programme, sub-programme, project, sub-project, working package).
8. A transitioning process requires specific competences, including: openness to change, willingness to take risks, being able to look outside the borders of one's own discipline, both divergent and convergent thinking, both abstract and concrete

thinking. These competences partly overlap, but also add to the competences for transition experiments defined by the Competence Centre for Transitions: ability to mobilise, ability to organise and second order learning (Andringa and Weterings, 2008).

9. Applying a TM approach in an ongoing innovation project has added value with regard to conventional project and process management. Distinctive values are: the starting point is a societal challenge/persistent problem, the normative dimension (sustainability & radical system change), linking process and substance, linking micro-level experiments to meso and macro-level transition goals and linking TM theory and practice.

5.8 Conclusions and recommendations

Based on the case studies of the Transumo projects 'People Mover on the Road' and 'Rush Hour Avoidance' it can be concluded that an ongoing innovation project can be transformed into a transition experiment by following a *transitioning approach*. The core of this approach can be understood as a 'second order learning process' in which the existing perspective on the project is transformed into (or added by) a transition perspective, leading to new actions in terms of substance and process. A successful transitioning process results in a transformed project or parts of a project, with the characteristics of a transition experiment (Table 3.1), which has a high potential to contribute to a transition (in terms of the mechanisms deepening, broadening and scaling-up, Chapter 3).

The Transumo case studies show that a transitioning process consists of several main, interrelated steps. A key step is to bring a transition perspective into the context of an ongoing innovation project. This includes defining the sustainability transition to which the project could contribute and defining the societal challenge that can provide a starting point for learning. It could also include conducting an integrated systems analysis to position the project in its broader context and to get insight into the regime on which the project should anticipate. An additional step is to reflect on the existing project characteristics and actions (in terms of substance and process), leading to an adjustment of these characteristics and actions (reframing). The table with characteristics of transition experiments in comparison to classical innovation projects (Table 3.1) can be used to reframe specific characteristics. Furthermore, the mechanisms deepening, broadening and scaling-up can be applied to adjust the actions within a project. A crucial step in a transitioning process is setting up concrete actions that are aimed at increasing the contribution of the project to a transition. Within all three Transumo projects concrete actions were defined, for example setting up a transition arena, conducting a system

analysis or network analysis. However, the case studies did not include studying if and how these actions were implemented.

It should be noted that transitioning is not a one-time effort but a continuous process that takes time, dedicated people, resources and continuous support. The three case studies of Transumo projects show that when one of these factors is lacking, a transitioning process can suddenly be stopped: in the People Mover project the process was stopped by a sudden lack of resources (bankruptcy) and in the WPM-pilot of the European Networks project the transitioning process was stopped because of a lack of time, motivation and continuous transitioning support. The transitioning process of the Rush Hour Avoidance project was more successful. However, for the success of this transition experiment (in terms of scaling-up and contributing to a sustainability transition) it is also crucial that continuous support to an ongoing transitioning process is provided.

Another main conclusion is that not every ongoing innovation project can be transformed into a transition experiment. Based on the lessons learned in the case studies, eight *selection criteria* for suitable or 'transitionable' projects can be distinguished and can be retrospectively applied to the three case studies (Table 5.3).

The proposed selection criteria for 'transitionable' projects should be evaluated and refined in follow-up research, in which ongoing innovation projects could be selected for a transitioning process based on these criteria. Furthermore, the criteria could be used to improve the conditions at the start of a transitioning process.

Follow-up research could also further distinguish between projects that are completely transitioned and projects that are only partly transitioned (for example one subproject or working package). With regard to the last type of project, it is important to define the minimum objectives that should be realised in a transitioning process. For example, the objectives: the transition to which the project aims to contribute should be clearly defined and the project should include coordinated (process and substance) actions that are aimed at stimulating this transition. In general it could be stated that if the transition perspective is not translated in a short-term and long-term perspective to act, this is not regarded as transitioning (but rather a type of 'window dressing'). Furthermore, if the transitioning process is not embedded in the project organisation it is too loose and has low potential to change the project structurally. However, a transitioning process should also not be too 'tightly' organised because then the focus will be more on "programming a transition" instead of "transitioning a programme".[44] In general, the scope of follow-up research on transitioning could be elaborated from the project level to the programme level, and from transition experiments to other instruments of

44. This is a quotation from Bonno Pel, a PhD student at the Erasmus University Rotterdam, who researches innovation attempts in Dutch traffic management.

Table 5.3 Selection criteria for 'transitionable' projects[45]

	*Case studies**		
Selection criteria	POW	EN	RHA
1. the project has potential to contribute to a transition, but still lacks a strong transition perspective and/or a related perspective to act	+	+	+
2. the project participants are interested in broadening the scope of their original project to contribute to a societal challenge	±[46]	±	+
3. the project participants have expressed a need for support to increase the success of the project (in terms of contributing to a transition)	+	+	+
4. the project participants have the willingness and motivation to adjust their project (by reflecting and reframing)	+	+	+
5. the programme that supports the project provides enough space for adjusting the project	±	±	±
6. the programme that supports the project is committed to a transition management approach	±	±	±
7. the project includes an experiment in practice	+	±	+
8. the project has (potential) time and resources to set up extra activities	±[47]	–	+
9. the project is supported by people with expertise on transition management, who are directly involved in the project	+	–	±
Total	+++ ++	+	+++ +++

transition management (e.g. transitioning arenas, system analyses, visioning, scenario development, monitoring).

Based on the lessons learned in the three case studies of Transumo projects, the following recommendations (targeted at similar projects, programmes and intermediary actors) can be formulated:

– A transitioning process can start off at the level of a programme or a project, but for a successful transitioning process both levels need each other: a programme that aims to contribute to a transition needs transition experiments at the project level, and projects that aim to contribute to a transition need to receive sufficient space and resources from the programme level.

45. These selection criteria are applied to the complete project; however, in some cases only parts of a project meet these criteria and other parts do not (this is indicated with a "±"). E.g. the transitioning of the European Networks project was focused on the overall project and on one of their pilot projects.

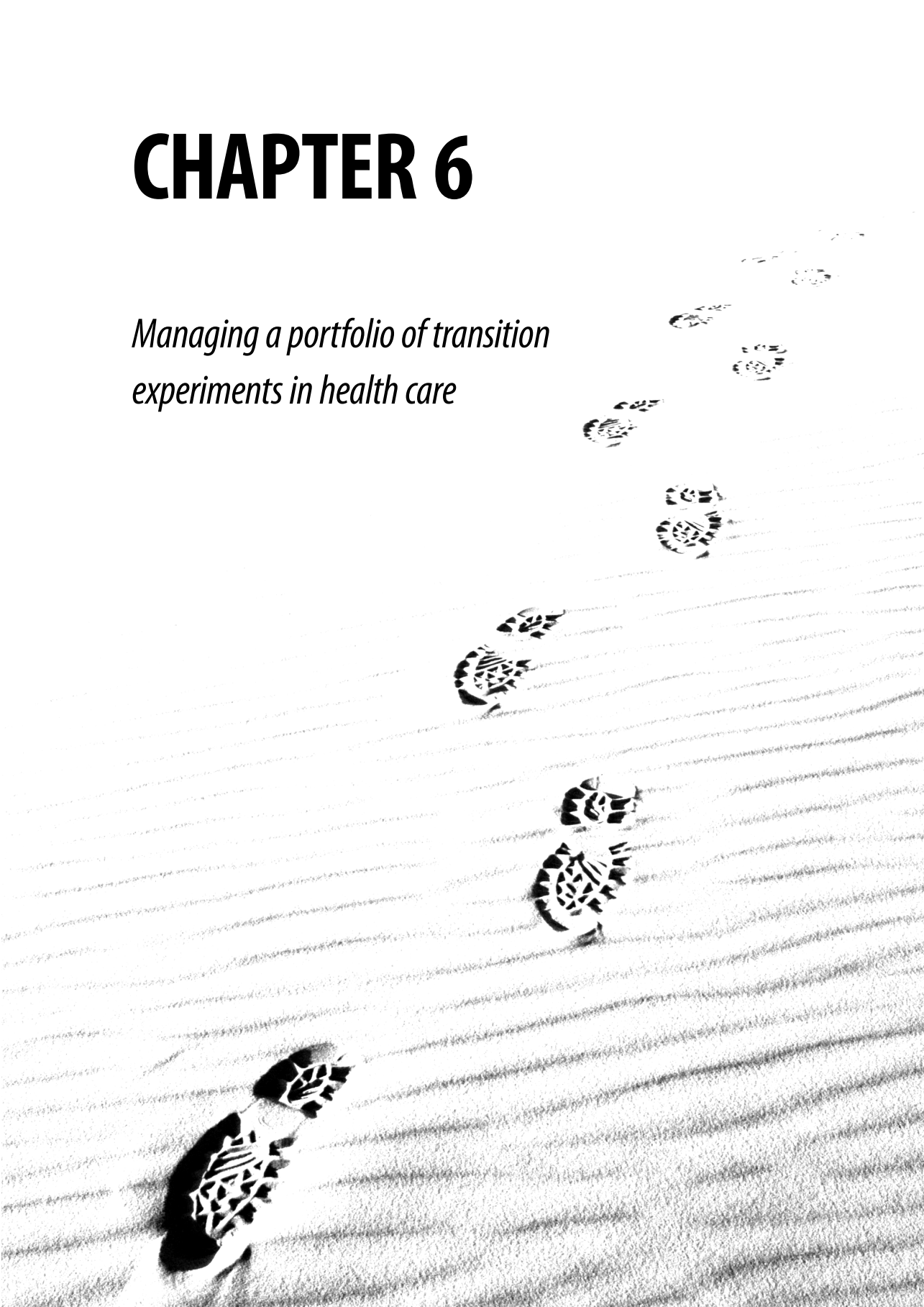
46. The POW project started as a 'technology push' project and therefore in the transitioning process a lot of effort had to be directed towards broadening the scope of the original project. The RHA project started with an innovation of a much broader nature (in which behavioural change instead of technology played a central role), which was further broadened during the transitioning process.

47. The resources for the POW project were suddenly withdrawn because of bankruptcy. However, at the start of the project this was unknown.

- To enable the transformation of a project, a transitioning process should not be organised as an additional organisational layer (adding an extra layer around the core of the project organisation) but should be embedded in the existing project organisation (such as a working package with dedicated people, time and financial resources).
- It is possible to organise a transitioning process separate from the 'mainstream' programme or project (e.g. in a sub-programme or sub-project, or 'niche'), following a *shadow track* approach. However, this requires finding a balance between continuing with the 'mainstream' programme or project, while creating sufficient space to conduct a 'niche' programme or project and eventually to embed these learning experiences in the regular programme or project set-up.
- The 'transitioning method' provides a promising approach to support projects with a transitioning process, but applying this method is *not sufficient* for a successful transitioning process. It is recommended to reinforce the process component of this method, meaning that more resources (e.g. time, money, knowledge) should be allocated to setting up *and* continuing a transitioning process.
- Intermediary organisations within the field of transition studies (e.g. TNO, CCT, consultancies, programme-managers) could reinforce their role as an *interface* between transition science and practice. In order to translate scientific knowledge into practical knowledge, they should continue developing toolkits, competence kits and master classes in which practitioners exchange specific knowledge and experiences. Furthermore, they could develop concrete guidelines for specific TM instruments and tools. This recommendation follows from the need for more practical knowledge on TM, which was expressed by various actors in the case studies. However, because this knowledge is context dependent, TM instruments and tools should always be translated to a specific context.

CHAPTER 6

Managing a portfolio of transition experiments in health care



6.1 Introduction

This chapter describes the experiences and lessons with regard to developing and managing a portfolio of transition experiments within the "Transition Programme in Long-term Care (2007-2010)". This programme was initiated by the Dutch Ministry of Health, Welfare and Sports and the Dutch care sector organisations. The programme aimed at enabling the care sector to fulfil the need for long-term care in the Netherlands in a radically different way. To realise this aim, Transition Management (TM) was applied as the central steering approach and transition experiments were applied as a central instrument. The programme encompassed two rounds of 26 transition experiments in total, which were conducted in practice to explore radically new ways to fulfil the need for long-term care. This case study focuses on how this portfolio of transition experiments was managed, including: how the transition experiments were selected, how space was created to set up the selected experiments, how learning was facilitated and how the experiments were monitored. In addition, this case study describes initial experiences and lessons regarding scaling up successful transition experiments in health care.

Next to the transition experiments, the transition programme itself had an experimental character which allowed a *learning-by-doing* and *doing-by-learning* approach. This implied that the transition programme provided a 'learning environment' to both TM practitioners and researchers, while at the same time it provided space to experiment in practice with concrete examples of how *sustainable* care could be provided to the Dutch population. The Programme Team responsible for the daily management of the transition programme consisted of three organisations, which included DRIFT. The direct involvement of DRIFT enabled applying and further developing theoretical TM notions, and specifically the conceptual framework on transition experiments (Chapter 3), in co-production with the other actors involved in the transition programme. Contrary to what is suggested in the TM literature, the Transition Programme in Long-term Care immediately started off with a first round of transition experiments, instead of first setting up a transition arena and developing a sustainability vision. While this had several consequences for how the transition experiments were managed, it also enabled *real-time* empirical research on the management of transition experiments at the *programme level*. This case study therefore contributes to answering the research sub-question: "How to manage transition experiments".

Two different roles were applied in conducting this case study (Table 6.1): (1) a researcher role to provide scientific support and (2) a Programme Team member role to provide practical support (from June 2007 to June 2008). These two roles supported each other and enabled an *action research approach* (Chapter 1).

The structure of this chapter follows the chronological process of the Transition Programme in Long-term Care. Section 2 describes the background and introduces

Table 6.1 Two different roles of the author in conducting this case study

	Researcher role	Programme Team member role
General activities	• Providing theory and examples of transition experiments	• Supporting ACT-Youth transition experiment (Chapter 7)
Selecting transition experiments	• Theoretical input to project formats and selection criteria • Portfolio analysis	• Participating in and reporting selection process of 2nd round transition experiments
Facilitating learning	• Observing and providing (theoretical) reflections	• Participating in and reporting learning sessions of 1st round
Transition monitoring	• Developing transition monitoring framework	• Participating in and reporting monitoring of ACT-Youth (Ch. 7)

the programme. Sections 3, 4 and 5 include a detailed empirical analysis of the first three phases of this transition programme (2006-2008), describing its predevelopment (phase I), the first round of transition experiments (phase II) and the selection of the second round of experiments (phase III).[1] Each of these three sections ends with a reflection. This provides a basis for deriving specific practical lessons and generic theoretical lessons regarding developing and managing a portfolio of transition experiments (section 6). Section 7 draws conclusions about the consequences of starting a TM approach with transition experiments, how the TM approach was integrated in the programme management activities and what type of 'transition manager' is necessary to realise this. The chapter ends with recommendations for follow-up research.

6.2 Transition Programme in Long-term Care: background and introduction

6.2.1 Why a transition in long-term care is needed

The societal system for long-term care in the Netherlands is largely considered to be unsustainable.[2] *Symptoms of unsustainability* involve: the low level of internal cooperation, lack of external societal integration, increasing and uncontrollable costs, dissatisfied care professionals, increasing labour shortage and a pressure on human values. The increasing rigidity in the structure, culture and practices of the care system is limiting the adequate and flexible adaptation to societal developments and needs. The current

1. Parallel to phase III a transition arena was set up (phase IV), with the aim of providing guidance towards the portfolio of transition experiments. This phase is excluded from this thesis because it did not match with the planning of this case study (the empirical research ended in June 2008). Furthermore, the experiences with the transition arena and how this interacted with the transition experiments will be described in a separate PhD thesis (Van Raak, *forthcoming*).

2. Because sustainability is a normative topic that should be agreed upon by participants in a transition process (and not by solo scientists), this explanation of the unsustainability of the Dutch care system is based upon the shared problem analysis of the transition arena in health care (Transition Arena Care, 2009).

crisis originates from the 1970s when major changes in the environment of the care system took place (influenced by globalisation, privatisation, liberalisation, market forces, individualisation, immigration and the ageing population). These dynamics in the environment demanded new things from the care system (Transition Arena Care, 2009). This can be understood as a *tension* between the care system (regime) and its environment (landscape) (De Haan and Rotmans, 2009). "The response of the care system was aimed at excessive command and control and mechanisation, by applying the mechanism of financial accountability" (Transition Arena Care, 2009). This can be understood as *stress* (De Haan and Rotmans, 2009) within the care regime to fulfil the increasing demand for long-term care. This combination of tension and stress in the care system has contributed to the many symptoms of unsustainability.

Underlying these symptoms are persistent problems such as the culture of fear and distrust on which the care system is based and the oppressing rules of the care system that neglect individual human values. Hence, the current care *system* is oppressing the *humans* in need of care. A further optimisation of this system will provide insufficient perspective on a care system that is sustainable in the long term. A sustainable care system would imply a system that is human centred (centred on the persons with care needs and the care professionals), financially sustainable and embedded in society (Transition Arena Care, 2009).

The persistent problems in the care system cannot be solved by conventional policy measures, they require an approach that acknowledges the complexity and uncertainty and that makes space for experimenting with radically new ways to provide care.

6.2.2 AWBZ covenant 2005-2007

The AWBZ is the national insurance scheme for long-term care (AWBZ is the Dutch abbreviation for Exceptional Medical Expenses Act).[3] This scheme is intended to provide the insured[4] with long-term care, which involves considerable financial consequences, such as care for disabled people with congenital physical or mental disorders. As a result of rising AWBZ expenditures and an expected short-term growth in the demand for long-term care, the Dutch Government and care sector organisations created in August 2004 the 'AWBZ covenant 2005-2007'. The main outcome of this covenant was

3. The prevailing financing procedure in the Dutch care system involves the distribution of "AWBZ-resources" among different care regions. The AWBZ-resources are collected through the income and payroll tax systems, along with the contributions for the other national insurance schemes. Regional Care Offices are responsible for the allocation of the AWBZ-resources to the care providers by means of contracting. Each year a policy rule 'contractual space' determines the maximum annual budget that care offices can use to contract out health care. The financing procedure is supervised by the NZa (the Dutch Healthcare Authority).

4. In the Netherlands everyone who meets the criteria spelled out in legislation is automatically insured and consequently obliged to pay the statutory contribution (through income tax).

that AWBZ expenditures could only grow within the budgetary framework of the coalition agreement. To compensate partly for this limited budget for long-term care, the covenant parties agreed that they would cooperate to improve the entire AWBZ and provide additional incentives for innovation. The total resources for innovation in long-term care that were agreed upon in the covenant included 90 million euros. One part of these innovation resources was allocated to the ZonMW programme (focussed on implementing existing innovations in long-term care). After a long and cumbersome process another substantial part of the innovation resources was allocated to the Transition Programme in Long-term Care (focussed on experimenting with radical innovations in long-term care).[5]

6.2.3 Transition Programme in Long-term Care (2007-2010)

The Transition Programme in Long-term Care was initiated by the Dutch Ministry of Health, Welfare and Sports and the Dutch care sector organisations as a result of the AWBZ covenant. The programme is aimed at enabling the Dutch care sector to fulfil the need for long-term care in a radically different way. The main approach in the programme is Transition Management, with a central focus on transition experiments. These experiments involve exploring and learning about radical innovations in practice, in a real-life context in which the end user is central. The sharing of learning experiences with the entire care sector is a key underlying value in the Transition Programme in Long-term Care.

In 2007 ten care institutes received free 'space' and financial support to start the first round of ten transition experiments to explore new and often still unknown pathways in long-term care. In September 2008 the second round of another 16 transition experiments started. The frontrunner care institutes that are conducting these experiments are spread all over the Netherlands and include all sectors of long-term care: elderly care, nursing and care, home care, and health care for physically or mentally disabled persons.

In March 2008 a *transition arena* was set up in addition to the transition experiments. The frontrunners participating in this arena developed a problem definition, a sustainability vision and transition pathways for long-term care (Transition Arena Care, 2009). These frontrunners did not participate directly in the transition experiments, but the Transition Programme will connect the learning experiences from the transition experiments to the (strategic and tactical) outcomes of the transition arena (Van Raak, *forthcoming*).

The 'Working Group Innovation in Long-term Care[6]', consisting of the Ministry of Health, Welfare and Sports (VWS) and various care sector organisations (GGZ Nederland,

5. In 2007 and 2008 in total 16,495 million euros were allocated to two rounds of transition experiments in health care. These resources were subtracted from the AWBZ-premiums (collected through income tax).

6. In the remainder of this chapter this will be referred to as the Working Group Innovation.

Actiz, BTN, VGN)[7], was officially responsible for the programme, and a Programme Team (consisting of about 8 advisors from Ernst&Young, CC Care Advisors, DRIFT and one care sector organisation) was responsible for the national support and daily management of the programme. Partly because of the involvement of DRIFT, the focus in this programme evolved from 'innovation' (with labour productivity as a central *innovation theme*[8]) to a transition to 'sustainable care'.[9]

6.3 Predevelopment of the Transition Programme in Long-term Care (2006)

6.3.1 How Transition Management became the central steering approach (September 2006)

In September 2006, the potential of a Transition Management approach in the care sector was first presented by DRIFT[10] at a meeting organised by the Working Group Innovation. The working group was responsible for advising a Board of Directors from the Ministry of Health, Welfare and Sports and the care sector organisations about implementing the AWBZ covenant 2005-2007. However, two years after the completion of the covenant, the resources for innovation in the care sector had not yet been allocated, because the Working Group Innovation was still searching for an adequate approach.[11] When DRIFT presented the Transition Management approach, the Working Group Innovation, and several innovative care institutes which also attended this meeting, immediately recognised the potential of Transition Management for the long-term care sector (Box 6.1).

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7. Since November 2007 the national client advisory body LOC-LPR and Zorgverzekeraars Nederland also participated in the Working Group Innovation.

8. To broaden the central innovation theme from the Ministry, in 2006 the Working Group Innovation had formulated 4 innovation themes which provided possible directions for the transition experiments: (1) prevention and redefining care demand, (2) social and societal support systems, (3) remote care and (4) efficient management. Just before the second round of the transition experiments the Ministry decided that the transition experiments should also focus on "logistics" and "small-scale" (within the 4 themes).

9. Quote from the Ministry "The programme originated from the necessity to address the future labour problems. For this purpose innovation is an important instrument. The theme of this programme has further evolved to sustainable care, a term that covers the scope more adequately, since it is not only about providing more quantitative care with the same amount of labour, but also about qualitatively better (sustainable) care." (Source: Presentation Ministry VWS, Instruction meeting, April 2, 2007)

10. The presentation was conducted by Jord Neuteboom (DRIFT), elaborating upon the TM theory as it was being developed by prof. Jan Rotmans (DRIFT) and others. Jord Neuteboom started working at DRIFT in 2006 to take up the challenge of both stimulating a transition in the care system and providing a basis for conducting dedicated research to understand and influence this transition.

11. A previous effort by SenterNovem to develop a programmatic approach failed because it did not gain the support and confidence of the Working Group Innovation. This was related to a too early focus on the care providers, a lack of expertise in the care sector, a lack of expertise on Transition Management and a too large distance between SenterNovem and the Ministry of Health, Welfare and Sports.

The core of the Transition Management approach:

- a new approach for steering (not a trick or panacea)
- changing the care sector from within using outside support: small sheltered experiments
- with visionary thinking and practical acting
- in small steps with a long-term focus
- resulting in a societal movement

Box 6.1: Possibilities of Transition Management in the care sector (Source: DRIFT presentation, AWBZ meeting, September 4, 2006).

Following up this meeting, a consortium[12] of Ernst&Young, CC care advisors and DRIFT was commissioned to develop an action plan for a Transition Programme in Long-term Care. It was agreed that in this programme Transition Management would be used as a central steering approach.[13] Within DRIFT, Jord Neuteboom (a senior consultant whose main task at DRIFT is stimulating a transition in health care) was leading the intensive process of preparing the programme action plan, together with the other consultants and the Working Group Innovation members, while making continuous connections to different researchers at DRIFT[14], who were further developing the Transition Management concepts and tools.

6.3.2 Preparing the programme action plan (September - December 2006)

During the preparation of the programme action plan numerous decisions were made with regard to how the Transition Management approach would be applied in the long-term care sector. Three important decisions involved: (1) starting with transition experiments instead of developing a sustainability vision in a transition arena, (2) selecting a

12. To commission a consortium instead of one organisation was perceived by the Working Group Innovation as an 'innovation' as well (Source: presentation Eugenie van Es, Open Learning Meeting, November 11, 2008). The consortium was actually a compromise between the Ministry, who preferred Ernst&Young, and care sector organisations, who had a first interest in DRIFT, and suggested to balance the financial expertise of Ernst&Young with the care expertise of CC Care Advisors.

13. Initially the Working Group Innovation (WGI) requested the two consortium partners E&Y and CC to work out the new approach, and DRIFT to monitor this process and to evaluate its transition aspects. However, the three organisations took the initiative and proposed the WGI to work out jointly an integrated Transition Management approach, in which DRIFT provided the methodological TM tools and instruments. This proposal was accepted by the WGI and created a conceptual and organisational framework for the three organisations to work jointly on the programme, and later onwards in the execution and implementation phases. This phase also helped the persons working in the three different organisations to get to know each other, while sharing and combining their different expertise and elaborating this into a tailored TM approach for the care sector. (Van den Bosch and Neuteboom, *forthcoming*)

14. The DRIFT researchers who were directly involved in the Transition Programme in Long-term Care include: Jan Rotmans, Roel van Raak and Suzanne van den Bosch. Mattijs Taanman was indirectly involved in monitoring this transition programme (Taanman, *forthcoming*).

limited number of experiments and (3) focusing on transition experiments instead of different types of experiments.

Initially, DRIFT suggested a double track approach in which a transition arena would be a starting point for formulating a project portfolio and transition experiments. Starting with a transition arena (Van Raak, *forthcoming*) was explained as being important for thoroughly analysing the persistent problems in the care sector, for developing a strong vision on a sustainable care sector, for building up trust and belief in change, and for strategically influencing existing societal and administrative/political networks. Following up the transition arena, DRIFT suggested that transition experiments could be set up to provide practical "transition spaces", which were explained as:[15]

- Aiming at societal challenges/paths
- High potential contribution to transition process
- High risk (in terms of chance of failure/risky) regarding the applicability in the current situation
- Ideally consisting of a mix of innovation types (Box 6.2)
- Involving different perceptions: (societal) experiment versus project (participants)

However, during the process of preparing the programme action plan, it was decided that instead of starting the programme with setting up a transition arena, the first priority was to set up transition experiments. This decision was strongly influenced by the Ministry of Health, Welfare and Sports and the care sector organisations, who felt pressure to quickly spend the 90 million euros for innovations, as agreed in the AWBZ covenant 2005-2007. Because the implementation of this covenant had been delayed, they wanted to give an immediate impulse to innovations in long-term care, by "developing good ideas, implementing innovations and rewarding innovative care institutes". A transition arena process, with a focus on integrated problem analysis and visioning, did not meet their interests for the short term.[16] Furthermore, they were not interested in another "steering group". The consortium of DRIFT, Ernst&Young and CC Care Advisors not only lacked support for developing a transition arena, but also lacked capacity and funding.

With regard to the allocation of resources to experiments in long-term care, an initial idea of the care sector organisations was to support all their member care institutes with a relatively small amount of money. However, the consortium convinced them that this would be a waste of money which would only lead to incremental innovations and

15. Source: DRIFT presentation, AWBZ meeting September 4, 2006.

16. Because the budget had to be spent within a few years, a conventional 'top-down' transition management approach that starts with a transition arena would have taken too much time. Furthermore, the Ministry had already defined the main problems (e.g. labour problems) and had already developed a vision (including the four innovation themes). A 'bottom-up' TM approach that starts with transition experiments better fitted the context (e.g. interests, aims, time perspective).

Experiments in long-term care (AWBZ sectors)			
Types: Aspects:	**Optimisation experiments**	**Innovation experiments**	**Transition experiments**
Starting point	Working more effectively and efficiently: realising and diffusing optimisations	Realising same objectives in different way. Initiating innovations and making ready for market	Societal challenge: demonstrating fundamentally different structure & culture
Nature of problem	Practical/technological and diffusion	Different domains, inter-organisational, institutional barriers	Uncertain and complex: end goal and pathways are changing, part of societal debate
Perspective	Highly short-term: 1-2 years	Short-term and medium-term: 5-10 years	Long-term: 10 – 20 years
Method	Solution driven application	Testing and demonstration	Exploring, searching and learning
Learning	First order learning about applications	First order learning (individual)	Second order learning (collective)
Involved disciplines	One or a few	A few	Many
Actors	Professionals, managers, end users	Professionals, managers, end users, engineers, etc.	Multi-actor alliances (across society)
Management context	Classical project management	Programme management	Transition management (visions, arenas, paths)

Box 6.2 Three different types of experiments (Source: Draft action plan Transition Programme in Long-term Care, September 27, 2006)

would not stimulate fundamental changes. The approach was therefore focussed on selecting a limited number of experiments, which fitted the idea of supporting frontrunner care institutes with initiatives that could really make a difference.

The first draft of the action plan proposed an approach that distinguished between various types of experiments[17], in which 'transition experiments' would fulfil only a small part (Box 6.2). However, eventually it was decided that all experiments would be supported under the heading of 'transition experiments' because 'optimisation experiments' and 'innovation experiments' were already supported by the ZonMW programme (section 6.2.2).

6.3.3 Action plan of Transition Programme in Long-term Care (January 2007)

The final action plan of the Transition Programme in Long-term Care was rapidly realised by CC Care Advisors, Ernst&Young and DRIFT in December 2006. Because of the failed previous attempts to implement the AWBZ covenant 2005-2007, the action plan strongly

17. This distinction was an elaboration of the table with classical innovation experiments and transition experiments (Chapter 3), and added 'optimisation experiments' which would be mainly aimed at a better implementation of existing innovations.

recommended to keep up the current speed and start with the Transition Programme before a definitive political decision about the portfolio of transition experiments would have been made. The action plan suggested starting immediately in February 2007 with a multi-phase approach:

– a pilot phase to build up the project organisation and start the first transition experiments (recruited and selected based on a top-down "push" strategy)
– a follow-up phase to prepare a broad tender open to all AWBZ care institutes ("pull" strategy).

The underlying idea of the pilot phase was to start off a minimum of 3 to 5 'pilot' transition experiments, which would demonstrate to the Ministry and care sector organisations that a Transition Management approach was possible. The action plan contained many explicit Transition Management concepts (e.g. persistent problems, societal transition challenge, transition arena, deepening, broadening and scaling-up) and stated that: "The core of the programme encompasses the development and execution of *transition experiments*, executed by frontrunners and innovative parties, which are selectively and directly supported in such a way that the entire care sector can learn from this."

At the beginning of February 2007, the Ministry and directors of the care sector organisations formally agreed upon the action plan, which kicked off the Transition Programme in Long-term Care. From this moment onwards the consortium of CC Care Advisors, DRIFT and Ernst&Young cooperated as a 'Programme Team' to develop and manage a portfolio of transition experiments in long-term care.

Reflection on Predevelopment of Transition Programme in Long-term Care (2006)

The action plan can be regarded as a 'milestone' in the scientific and practical development of Transition Management (TM), and specifically the TM instrument transition experiments. Before 2007 the care sector was still an unexplored domain within TM research and practice. Moreover, the care sector did not have a history of radical innovation and therefore the implementation of the TM approach was a break-through in the innovation culture of the sector.

The realisation of the Transition Programme in Long-term Care was the result of both strategic action and contingency. It first required strategic actions from the Working Group Innovation, including the development of innovation themes (which was mainly stimulated by the care sector organisation Actiz) that broadened the narrow focus of the Ministry on 'labour productivity'. The implementation of Transition Management was the result of strategic actions of DRIFT, which aimed to understand and influence the transition to a sustainable care system. To realise these aims, DRIFT could make use of various (partly contingent) opportunities. First, the AWBZ covenant provided political commitment and resources to set up a large innovation programme in health care. Secondly, the Working Group Innovation was in

search of an adequate approach, after the failed attempt of SenterNovem to develop such an approach. Thirdly, SenterNovem had already written a report about TM for the Ministry, but because of their lack of TM expertise they could not convince the Ministry. These opportunities together enabled DRIFT to come into contact with the Working Group Innovation (including the Ministry) and convince them about the value of TM for the care sector (based on DRIFT's scientific expertise and practical experiences in other sectors, such as the energy sector).

The resulting consortium of DRIFT, Ernst&Young and CC Care Advisors was also partly contingent (and not based on the theoretical TM model). However, this consortium provided an opportunity to combine the expertise on TM processes of DRIFT with the expertise on care substance of CC Care Advisors, and the expertise on financial and organisational aspects of Ernst&Young. Hence, this consortium was unique and an experiment in itself.

6.4 First round of 10 transition experiments in health care (2007)

This section consists of four parts. The first part describes the selection strategy, procedure and criteria of the first round of transition experiments in health care. The second part describes the development of the final project plans and the first shared learning session with the selected transition experiments. The description of this "pilot phase" also illustrates the many barriers that had to be overcome to finance the first round of transition experiments in health care. The third part describes how the (financial) space for the transition experiments was eventually created and how learning and monitoring within the "start-up phase" of the transition experiments was facilitated. The fourth part analyses the political impact of the first round of transition experiments in health care.

6.4.1 Pilot phase: selecting first round of transition experiments (Feb - Apr 2007)

The selection process of the first round of transition experiments was conducted by the Programme Team and included: (1) the development of a short-list, (2) extensive visits to short-listed care institutes, (3) supporting the care institutes with preparing adequate project proposals, (4) informing them about the Transition Programme (including the financing of the transition experiments) and (5) assessing submitted project proposals based on 8 selection criteria.

Selection strategy and procedure

The selection strategy can be characterised by a "push strategy". Instead of a broad tender with an open call, a short-list[18] of 11 potential transition experiments and related

18. The short-list was selected from a "long-list" of 23 projects; the selection was mainly based on a balanced portfolio, e.g. distribution among sectors and themes.

care institutes was developed. This short-list included frontrunners that were already known by or engaged in the Transition Programme in Long-term Care. Remarkably, this number of potential transition experiments in the long-term care sector was quite low. This could be explained by the fact that the Dutch care sector did not have a tradition/culture for radical innovation and was also suffering from cost reductions which limited the (financial and mental) space for innovation.

The selection procedure started in March 2007 with extensive visits to the 11 short-listed care institutes, which were followed up by two reports and a personal letter of advice to increase the quality of the project proposals. All care institutes were invited to submit a 'free format' project proposal and were requested to add a *transition explanation* (Box 6.3)[19], which had to address the transition aspects of the project specifically.

Instruction meeting

The 'instruction meeting' (April 2, 2007) was an important meeting to inform the care institutes involved in the 11 potential transition experiments, about the Transition Programme in Long-term Care. This was also the first shared meeting of all actors involved in the Transition Programme (the care institutes, the Ministry of Health, Welfare and Sports, the care sector organisations and the Programme Team). A very important underlying process goal of this instruction meeting was to provide clearness with regard to the financing of the first round of experiments.[20]

However, despite the preparations and efforts of the Programme Team, the representatives of the Ministry did not provide a clear message with regard to the available financial resources and administrative ways to finance the first round of transition experiments in health care. It was stated that: "At this moment the Ministry, in cooperation with the [Dutch health care authority] NZa is exploring possible ways for financial contributions and/or how an extra policy regulation can/should be created such as a policy regulation for innovation in the care sector. Next to this, additional support will be anticipated."[21] The instruction meeting therefore made visible a discrepancy between the (substance) objective of the Ministry to provide space for experimentation, while at the same time failing to make this space concrete in (process) terms of dedicated resources.

Final selection based on selection criteria

Despite the uncertainty that was reinforced by the instruction meeting, all short-listed care institutes did submit a project proposal. This was the result of the high commitment

19. This format was heavily based on the conceptual framework on transition experiments (Chapter 3) and was 'coproduced' by Suzanne van den Bosch, Roel van Raak (DRIFT) and Ernst&Young.

20. Source: internal progress report of the Transition Programme in Long-term Care, March 30, 2007.

21. Source: internal report of the instruction meeting April 2, 2007, Transition Programme in Long-term Care, April 5, 2007.

Format for the transition explanation added to the project proposal

Transition aspects of project	Elements that could be addressed
1. Societal challenge	What is the essence of the problem; Does this problem apply to an important part of the sector and/or society in a broader sense; Does the problem have a persistent character; Which dilemmas are related to the problem; Can the problem be solved with conventional solutions or are radical solutions needed;
2. Objectives of transition experiment	What are the key objectives and secondary objectives; What is the connection to a societal challenge; Which contribution does it give to sustainable care in practice; Does it contribute to desired developments, e.g. the focus on the end user, not bounded in place, transmural care, chain approach, fusing of cure and care; Does it relate to the key themes: prevention, social support systems, efficient management and remote care; What are the broader learning objectives (learning about policy, cooperation, rules & regulation, behaviour, culture, technology, economy, society, etc.);
3. Innovative characteristics of experiment	What is the core of the approach; What are the innovative characteristics; Does it refer to a break-through in the dominant structure, culture or practices; What does it teach about persistent problems;
4. Design of the experiment who (&why) where (&scale) when (&perspective)	What is the involvement of different actors, specifically end users, diverse involved actors from inside/outside the care institute/sector and *outsiders* (actors outside the care, outside the health care system, outside the public sector); What is the scale of experimentation; What is the connection between short-term results and a long-term perspective;
5. Space in the experiment (for unorthodox approach)	Is there space for a deviant approach to try different things; What creates/supports this space; Is the culture innovative and 'in the spirit of entrepreneurs';
6. Potential to scale up Deepening Broadening Scaling-up	What are the precise learning objectives; How is learning as much as possible stimulated in the experiment; How is quality brought into the learning process (regarding monitoring, reflection, adaptation, building upon learning experiences in other experiments, etc.); How will learning experiences be shared; How do connections to experiments with the same societal challenge take place; What can be learned about the conditions for scaling-up at the level of the regime or sector (e.g. necessary rules & regulation, financing, key actors, shifts in thinking and culture, types of organisations);
7. Support for the experiment	What can the care institute contribute to conducting the experiment adequately in terms of: Persons, partners, (supportive) resources Own experiences (track record of innovations)

Box 6.3 Transition explanation format for project proposals in first round (in addition to free format project proposals)

of the care institutes and the active involvement of the Programme Team to inform and support them. The 11 submitted project proposals were discussed and assessed by the Programme Team, based on 8 selection criteria (Box 6.4). These criteria were the result of combining 35 criteria[22] brought forward by Ernst&Young, CC Care advisors, DRIFT and the Working Group Innovation in Care. This was an important step in integrating the different objectives and perspectives of the three organisations in the Programme Team. However, this process of 'expertise integration' did require continuous attention, with the risk of resulting in unsatisfactory compromises.

Only one project proposal was assessed with a 'no-go', because of a limited ability of the care institute and its direct environment to provide sufficient support to this experiment. All other project proposals were assessed with a 'go' because of a high score on the eight criteria. These high scores could be explained by the selection strategy in which only known and engaged frontrunners were invited to submit a project proposal (*push strategy*). Furthermore, the extensive visits of the Programme Team to these care institutes and the follow-up advice and support can be regarded as a 'transitioning process' (Chapter 5) in which the care institutes translated the transition perspective to their specific project context. Hence, almost all submitted project proposals met the requirements of a transition experiment.

Selection criteria	**Example of a selected transition experiment: District Care (Buurtzorg)**
1. Connection to persistent problem	√ persistent problem: increasing costs and decreasing quality of home care
2. Connection to themes and solution directions	√ efficient management (+prevention and social support)
3. Plausible and well-substantiated	√ project plan is well considered, solid and convincing
4. Motivation	√ entrepreneur with high personal drive
5. Ability	√ own investment
6. Radically innovative	√ providing high quality, low cost personal care at home (independent from existing care providers)
7. Growing potential and learning potential	√ high ambition to grow and share learning experiences
8. Added value, programme<->project	√ high added value: only entrepreneur (in this programme), high risk project in need of support

Box 6.4 Selection criteria applied to one of the selected transition experiments

22. The integration of 35 diverse criteria into the final 8 criteria was conducted by Roel van Raak (DRIFT).

1. Assertive Community Treatment (ACT) for young people in Rotterdam:	*Multi-disciplinary and outreaching ACT-teams support youngsters with psychiatric problems*
2. Transmural network STEM:	*Starting up a societal dialogue about dying*
3. WEIS in the neighbourhood:	*Improving the quality of life in districts*
4. District care ("Buurtzorg"):	*Innovative autonomous teams of district nurses*
5. Permanently better:	*Providing care to long-term psychiatric patients in their own environment (with FACT method)*
6. Case manager dementia:	*Case managers who support people with dementia to live at home as long as possible*
7. At home with dementia:	*One point of support for treatment and counselling in all phases and aspects of dementia*
8. Smart Caring Community (Omkeer 2.0):	*Developing an ideal social support system in a city district and rural area*
9. Video networks – a plan for scaling-up:	*Further developing and scaling up "telecare"*
10. Meeting place Prinsenhof:	*A self-organised district meeting place for senior citizens and disabled people*

Box 6.5 First round of transition experiments in health care

The resulting number of 10 (instead of the initial idea of 4 to 8) transition experiments was considered appropriate by the Programme Team because the distribution of the innovation themes, learning opportunities, and budgets was well-balanced. Therefore, the Programme Team sent a positive advice, regarding the selection of the first round of 10 transition experiments (Box 6.5), to the Working Group Innovation in Care.

6.4.2 Pilot phase: final project plans and first learning session (June-July 2007)

Final project plans

The selection advice regarding the first round of transition experiments in health care did not directly lead to a political decision about the selection. After several weeks of uncertainty, the Ministry demanded that the ten selected care institutes would be requested to "submit a final project plan to strengthen their project proposals and lay the foundations of a business case". The Programme Team emphasised to the care institutes that the original project proposals would remain a starting point, but these final project plans were primarily aimed at "speeding up the process of contracting and financing and to stimulate a positive outcome of this process". The format of the final project plan was provided by Ernst&Young and mainly included general project management aspects (e.g. project goals, results, regulatory and financial conditions, activities and planning and budget), added with several aspects related to Transition Management (e.g. learning goals, transition goals, transition effects in terms of different culture, structure and practices). Contrary to the Transition Management approach, the

care institutes were requested to describe their project proposal as SMART (Specific, Measurable, Acceptable, Realistic and Time-restricted) as possible. This was the first time that the Programme Team applied this existing 'project management' model to the management of the transition experiments. However, within Transition Management (which is about experimenting, searching and learning about unknown pathways) it is not desirable to formulate a project plan in a SMART way, because the outcome of a transition experiment cannot be predicted *a priori*. Hence, the requested final project plans were in conflict with the central TM approach of the Transition Programme. This is illustrated by the fact that several care institutes complained about the request to formulate their project plan as SMART as possible, because they were convinced that this was not possible and would limit their creativity.[23]

First learning session

A week after the completion of the final project plans, the Programme Team organised the first learning session of the Transition Programme in Long-term Care. This session was attended by all selected care institutes, several representatives from the Ministry of Health, Welfare and Sports and the care sector organisations, and the NZa (the Dutch Healthcare Authority). The learning goals were:

1. To provide a shared thinking and working framework for the Transition Programme: the policy and intentions of the Ministry and a first exploration of the system barriers in health care;
2. To exhibit the unique main aspects of the different transition experiments (to inspire and to synchronise and exchange);
3. Letting policy and practice meet each other, by inspiring contacts between actors involved in the programme.

Following up the 'failed' instruction meeting, an important underlying process goal of this first learning session was to inspire and put positive pressure on the Ministry to support the transition experiments financially. Therefore, the Programme Team had specifically requested the care institutes to present their transition experiment with "heart and soul" and to put the essence "on the stage".

The 10 presentations were very authentic and exceptionally creative, personal and convincing. For example the "hearth and soul" presentation about *STEM* (the Dutch abbreviation for *"Dying Your Own Way"*) involved a live interview with Corrie, a woman with cancer who made a strong personal plea for a more dignified and humanised type of care system, with attention for the personal wishes of clients.

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23. Eventually, all care institutes completed their project plans (with support of the Programme Team). The requested SMART formulation did not strongly influence the content of the transition experiments, because the original project proposals remained a starting point.

Several shared ideas emerged from these "heart and soul" presentations, such as giving back power to the client and the care professional and making use of the power of relationships and neighbourhoods to take care of each other in social networks. Together these presentations had a profound personal impact and underlined that the end user truly is in the heart of the programme.

The presentations about the transition experiments were preceded by a speech about the policy and intentions of the Ministry of Health, Welfare and Sports. The quotes of its director of care (Arnold Moerkamp – represented by another civil servant) were exemplary for the complex political financing and contracting procedure for the transition experiments in health care:

- On the one hand the Ministry stated that still no decision on the financing of the experiments had been made and on the other hand it stated that the Ministry wanted to start as quickly as possible.
- As a reason for the complicated financing procedure, the Ministry stated that they wanted to get rid of "pilotitis", referring to their observation that many subsidised experiments never transcend the status of experiment and never get structurally embedded (after completion of the experiment).
- Contrary to only providing subsidy grants, the Ministry wanted to involve the current financing system (e.g. care insurers and care offices) in the experiments, right from the start. The Ministry stated that this approach would have an advantage, as it would enable learning about how the system works or does not work.

The Ministry valued the commitment of the 10 selected care institutes, illustrated by the quotation: "In fact you offer us your contribution to the transition". But the Ministry did not make any long-term promise to support the 10 transition experiments. To reduce the perceived risks of the care institutes in case no grant contribution would be provided, the Ministry did make a short-term financial promise to compensate for the extra activities that were conducted in the context of the Transition Programme (this was strongly recommended by the Programme Team, to build up trust amongst the participating care institutes).

6.4.3 Start-up phase of the transition experiments (Aug-Dec 2007)

Creating (financial) space for the transition experiments

Though the Transition Programme originated from the AWBZ covenant 2005-2007, which included a large budget of 90 million euros for innovation, in the pilot phase of the Transition Programme it had become clear that this money merely existed 'on paper'. Shortly before the *start-up phase* of the transition experiments, concrete agreements

about if and how the transition experiments would be financed were still lacking.[24] The Ministry learned that the existing regulations and procedures did not provide sufficient space to finance the transition experiments (which had already been foreseen by the Programme Team). This resulted in *tensions* between the Ministry and the NZa (the Dutch Healthcare Authority). These tensions were caused by a feared decrease in power of the NZa and the Care Offices and a fundamental disagreement about the decision of the Ministry to allocate the innovation resources to preselected transition experiments instead of giving all care institutes access to the innovation resources.[25]

Eventually on August 17th, 2007, the Ministry sent a letter to the NZa, with an indication to change the policy regulation 'Contractual space 2007'. The letter announced that the resources from the AWBZ covenant had been allocated to the 10 transition experiments, added by the total amount of the allocated sum for each experiment. Following up this letter, the NZa modified the policy regulation[26], which enabled the Care Offices to finance the start-up phase of the transition experiments from September 1st, 2007 onwards.

Facilitating learning: second and third learning session

To support the care institutes with starting up or further developing their transition experiments and to enable maximum learning from each other, the Programme Team facilitated monthly learning sessions with all project leaders of the 10 transition experiments. The second and third learning sessions focussed on discussing the most important persistent problems (and possible solutions) that the care institutes encountered in their daily practice and in realising their societal challenge. The aim of these discussions was deepening insight into the persistent problems that were identified in the first learning session.

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24. This slow process was in contrast to the AWBZ covenant, which stated that "closer negotiations between the [State Secretary and care sector organisations] before 01-11-2004 need to examine through which administrative way these resources are applied (..). The resources will be allocated with a minimum amount of administrative burden". Because the AWBZ covenant did not specify *where* the resources would be subtracted from (e.g. from the budget of the Ministry or the AWBZ-premiums) and through *which* procedure they would be allocated, this resulted in a lot of uncertainty.

25. The normal procedure for allocating resources for innovation in health care, takes place through 'policy regulations'. In the existing policy regulations, the NZa divides the resources among the Care Offices and the whole care sector can apply for these resources. In this normal procedure the NZa and Care Offices have a lot of power. Because the transition experiments had already been selected in the Transition Programme in Long-term Care, the role of the NZa would be reduced to 'passing on' predefined resources to preselected care institutes.

26. The modification included an incidental raise of the contractual space in 2007 with 3,495 million euros (without a subsequent calculation by the NZa) to finance specific transition experiments. The contractual space 2007 of each Care Office (responsible for the implementation of the AWBZ in a certain region) was raised with a specific sum and was earmarked for innovation.

ACTIONS → / INDICATORS ↓		DEEPENING	BROADENING	SCALING-UP
		Actions aimed at learning as much as possible from the experiment in the specific context	Actions aimed at repeating the experiment in different contexts or linking it to other functions and domains	Actions aimed at embedding the experiment at a higher scale level
DIRECTION	*Indicators aimed at the long-term vision: the problem, future image and pathway*	How has the vision of the experiment developed and why?	In which way is the experiment vision aligned with and stimulated within the own organization, peer groups or similar projects?	In which way is the vision of the experiment brought into notice or embedded at sector level?
CHANGE	*Indicators aimed at dealing with opportunities and barriers in daily practice*	In which way are new possibilities and barriers utilised within the specific context of the experiment?	How does the experiment cooperate with similar projects, to deal with the possibilities and barriers in a broader context?	In which way does the experiment remove institutional barriers at sector level and which support is needed for this?
SUSTAINABILITY	*Indicators aimed at testing future image and results of sustainability ambition*	In which way are lasting benefits realised in the experiment and how is evidence provided?	In which way do the lasting benefits apply to other contexts and what does the experiment do to research and improve this?	In which way are lasting benefits diffused at sector level and negative side-effects prevented?

Box 6.6 Transition monitoring matrix (Source: Transition monitoring handbook, Transition Programme in Long-term Care, August 2007)

Monitoring: annual reports 2007 & first monitoring meetings

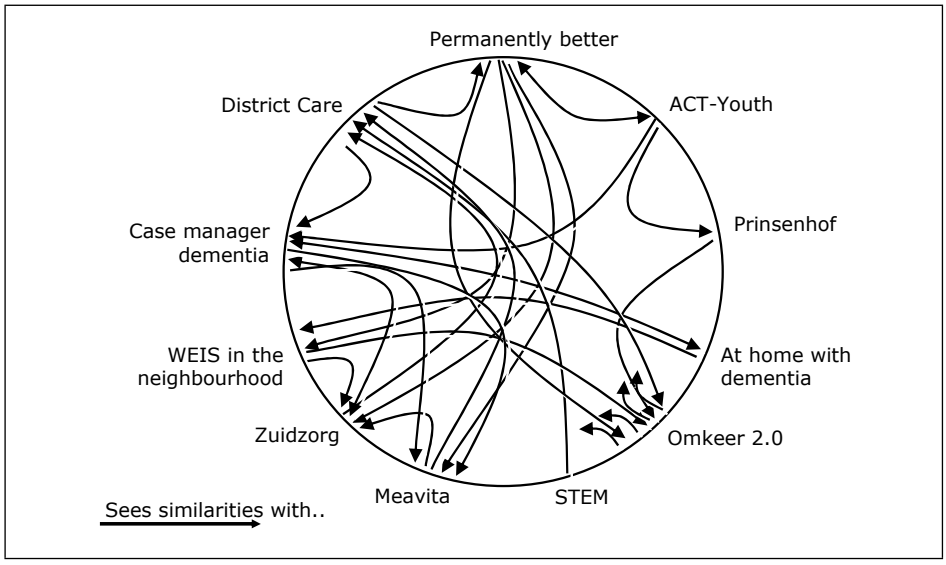
In the start-up phase also first experiences were obtained with monitoring the transition experiments. A "Transition Monitoring Handbook" was developed in which the mechanisms deepening, broadening and scaling-up and three transition monitoring indicators (Taanman, *forthcoming*) were translated in a matrix with 9 central monitoring questions (Box 6.6).

This *monitoring matrix* was applied as a basic monitoring instrument within the Transition Programme in Long-term Care. The 9 central questions had to be answered in the annual report that each project leader had to write about his/her transition experiment. Furthermore, the monitoring matrix was applied in regular monitoring meetings between the project leaders and the Programme Team, which were aimed at getting insight into the progress of the transition experiments (further described in Chapter 7).

The format for the annual reports about the transition experiments in 2007 included general aspects (such as the critical success factors, most important barriers, learning experiences and shareable learning products) and several transition-specific questions

that followed from the Transition Monitoring Handbook. Based on these reports, several lessons could be drawn regarding the progress of the transition experiments in terms of deepening, broadening and scaling-up:

– Much attention was initially focussed on deepening (learning with regard to the 'direction' and 'changes') within the experiments; this resulted in various 'learning products' that the project leaders could share with each other (including various handbooks, literature studies, simulation models, documentaries, teaching material, videos etc.);
– On a slightly smaller scale broadening was already taking place; this is illustrated by the many (potential) connections between the 10 transition experiments (Box 6.7);



Box 6.7 Picture of (possible) relations between 10 transition experiments (Video networks is split up in Zuidzorg and Meavita, resulting in 11 experiments). Source: Cross-section annual reports 2007. Transition Programme in Long-term Care, January 2008.

– One experiment, District Care (Buurtzorg) was already in need of a second step and already scaling up (Box 6.8);
– It was expected that in the coming period parts of the experiments would make a movement towards the right-hand below corner of the matrix, and hence will be scaling up (sustainability).

District Care was the only first round transition experiment that already started to scale up. With regard to deepening, broadening and scaling-up, the following lessons learned can be directly derived from the annual report (2007) of District Care:

Open search & learning process (deepening)

- Giving freedom to the District Care teams to be entrepreneurs.
- Stimulating the creation of standards that are 'owned by' the care professionals (instead of by the organisation).
- Conducting research to evaluate (and spread) the results regarding care substance and development of the organisation.

Repeating and connecting (broadening)

- Incorporating a large number of new teams in the District Care practice.
- Expanding and reinforcing connections with essential partners and stakeholders (e.g. family doctors, hospitals, health insurers, knowledge and education institutes, voluntary organisations, etc.), which creates sustainable networks.

Embedding in the regime (scaling-up)

- Bringing the vision of District Care to the attention of 'regime players' (e.g. the Ministry, political parties, Innovation Platform, care insurers). From this various activities emerged, such as working visits, workshops and tv shows, which speeded up the process of allowing District Care in all Care Office regions.
- Realising necessary production agreements with the Care Offices.
- Providing a standard plan of action to new District Care teams (balancing between giving freedom to work and standardisation).
- Designing and realising adequate ICT support.

Box 6.8 Lessons learned regarding the scaling up of District Care (Buurtzorg)

6.4.4 Political impact of Transition Programme in Long-term Care

At the end of the start-up phase of the Transition Programme in Long-term Care, the first round of transition experiments became the subject of parliamentary deliberations.[27] This was caused by a letter (December 4th, 2007) in which the State Secretary of Health, Welfare and Sports Jet Bussemaker informed both chambers of parliament about experiments in the AWBZ care. This letter was followed up by a parliamentary paper (February 12, 2008) in which the State Secretary answered previously handed in questions from members of the permanent parliamentary committee on Health, Welfare and Sports.[28]

27. At the end of 2008 (when the second round of transition experiments had just started) a second parliamentary debate (on paper) took place. This is excluded from this case study because of time demarcations.

28. Various political parties in parliament (CDA, VVD, SP, PVV) asked 23 questions about innovation and experiments in the AWBZ care, of which 4 questions and answers explicitly referred to the Transition Programme and the transition experiments in health care.

This parliamentary paper is interesting for three main reasons. First, it illustrates what *issues* with regard to the transition experiments political actors emphasised as being important. Second, it gives insight into the *changes* to which the Transition Programme in Long-term Care (partly) contributed. Third, this parliamentary discussion reflects different *transition patterns* that were (implicitly) anticipated by the Ministry.

(1) The **issues** that were mentioned in these parliamentary questions mainly included the results, monitoring and evaluation of the transition experiments. The parliamentary committee was specifically interested in being periodically informed about the progress in the transition experiments. One question addressed the issue if *the amount of 13 million euros for experiments in 2008 was extensive enough to expect quick and positive results.* The State Secretary answered that with the separate transition experiments the necessary space within the care sector had already been created; and the additional amount of 13 million[29] would provide the sector with an extra opportunity to utilise the existing innovative potential, while simultaneously keeping an eye on the financial accountability. This issue shows the tension between creating space for experimentation on the one hand and the short-term, result-driven political expectations on the other hand. However, the additional resources for short-term small-scale experiments in health care could fulfil the political need for positive results in the short term.

More general issues involved the follow-up and structural implementation of experiments in health care and the relation to the persistent problems in the labour market.

(2) This parliamentary paper also reflected several **changes** that were influenced by the Transition Programme in Long-term Care. The most concrete changes involved the modifications of existing policy regulations and procedures to make space for the transition experiments - and indirectly also the creation of a new policy regulation with regard to experimentation in health care. The parliamentary paper also reflected a different perspective (or discourse) regarding innovation in health care, in which small-scale experiments are perceived as an important means to change the existing care system. The discourse that was used in this parliamentary paper includes the following phrases: "innovating means experimenting", "these small-scale experiments are about innovation that cannot be financed within the existing rules", "making available learning lessons", "creating space", "structural implementation", "in principle new types of care will replace the old ones" and "a successful innovation can be incorporated in the regular system".

29. This additional sum of 13 million euros could be applied for short-term experiments in the cure and care sector, as a result of the creation of a new policy regulation "Innovation for new care achievements", starting from July 1st, 2008.

(3) In terms of transition **patterns** (De Haan and Rotmans, 2009) the answers of the State Secretary indicated a desired *adaptation* pattern in which new innovations are incorporated in the existing care system. Examples of this pattern included: the modification of existing policy regulations, the adoption of successful innovations in the regular (financing) system and the principle that innovations in health care will replace old practices. Another type of pattern that was (implicitly) stimulated by the Ministry is an *empowerment* pattern, which creates space for innovations (in niches) outside the regime. An example is the focus on small-scale experiments and specifically the allocation of resources to experiments that cannot or can only partly or with considerable administrative difficulty be financed by the present system.

Reflection on first round of 10 transition experiments in health care (2007)

The development and management of the first round of transition experiments in health care was a learning process for the Programme Team. Regarding the applied strategy to select the transition experiments, the "push" strategy was successful in quickly engaging frontrunners to start off a transition process in the care sector. This active engagement before an actual political decision about the transition experiments had been made, resulted in a high commitment of the involved care institutes towards the Transition Programme (and vice versa). From a TM perspective this was positive in terms of mobilising frontrunners and starting up projects. However, because a transition perspective was already brought into the projects before the selection had actually started, this might have limited the objectivity of the selection process. Furthermore, no selection moments after the start-up phase took place (which is contrary to the TM theory emphasising the importance of variation and selection).

To make financial and juridical space for conducting the transition experiments, the Programme Team had to deal with a lot of tensions within the 'regime' (e.g. Ministry, NZa and Care Offices). This also limited the possibilities to fully apply TM in the management of the transition experiments. Hence, the management process was a compromise between the aims of the Ministry and TM aims. Successful examples of TM theory that were translated to the context of the Transition Programme in Long-term Care included: the selection criteria, learning sessions and monitoring framework. Less successful was the SMART format for the project proposals, which was related to the cumbersome process to finance the transition experiments. This process required a lot of time and energy from the Programme Team.

During the pilot phase and start-up phase of the Transition Programme, the Programme Team therefore had to deal with three main challenges: (1) integrating the different objectives and perspectives within the Programme Team into a shared management approach, (2) together overcoming the barriers in the regime and (3) stimulating and supporting the transition experiments (including providing financial, juridical, organisational, geographical and mental space; Chapter 7).

6.5 Selecting 2nd round of 16 transition experiments (January-April 2008)

At the end of the start-up phase of the first 10 transition experiments in health care the selection of the second round of transition experiments started. This section analyses this selection process, including the applied selection strategy, procedure and criteria. Furthermore, this selection process is compared with the selection process of the first round of transition experiments. The section ends with an analysis of how the final selection of 16 transition experiments took place and a portfolio analysis of the 26 transition experiments.

6.5.1 Selection strategy, procedure and criteria

The selection process of the first and second round of transition experiments differed in several ways (Table 6.2).

These differences are based on different selection strategies, which are related to the different phases in the Transition Programme (pilot and start-up phase versus a 'growth' phase). Following up the "push strategy" of the first round, the selection process of the second round of transition experiments was characterised by a "pull strategy". In a broad tender all AWBZ acknowledged care institutes were invited to submit project proposals: "Wanted: *Radical changes*. The Ministry of VWS, Actiz, BTN, VGN, GGZ the Netherlands, the LOC and ZN are looking for *frontrunner* institutes - in the four sectors within the AWBZ: home care, health care for physically or mentally disabled persons and elderly care – who want to put radically new concepts into practice. Institutes that actively want to look for *changes in structure, culture and practices*, to find answers to the *major challenges* of long-term care (care-sector). Challenges like the increasing health care demand and labour shortage. The call is an invitation of the involved parties to jointly boost the *searching, experimenting and learning* in health care." *(italics added*) This public announcement illustrates that transition concepts had been integrated in the programme discourse.[30] Furthermore, the criteria to select the second round of transition experiments were optimised by the Programme Team, which resulted in a better integration of transition concepts in the selection criteria (Box 6.9).

The optimised selection criteria included three transition management criteria:

– *Connection to persistent problem/ societal challenge*. This criterion made explicit that a societal challenge, related to overcoming a persistent problem, is a starting point of transition experiments.

30. After one year of intensive working and learning together, all Programme Team members shared a basis of expertise and knowledge with regard to Transition Management and its concepts. This "cross-fertilisation" of knowledge is illustrated by the fact that in 2007 two Programme Team members followed a post academic course on Transition Management (facilitated by DRIFT at the Erasmus University Rotterdam).

Table 6.2 Comparison between selection process of first and second round transition experiments in health care

	Selection of first round (section 6.4.1)	**Selection of second round**
Selection strategy	"Push-strategy", starting with *short-list* of known potential transition experiments and related care institutes	"Pull-strategy", broad tender open to all AWBZ acknowledged care institutes
Procedure to increase quality of submitted project proposals	Highly personal procedure with extensive visits to all (11) short-list care institutes, followed up by two reports and a personal letter of advice (to increase the quality of project proposals)	Formal procedure that started with assessment of pre-applications (129 in total), followed up by a letter of advice (100 standardised negative and 29 personal positive recommendations to increase the quality of project proposals)
Format for project proposal	Free format + transition explanation (+ after the selection by the Programme Team a *final project plan* was requested to speed up the financing and contracting procedure)	Standardised format, similar to format of *final project plans* in the first round (added with one extra question to specify project activities in terms of deepening, broadening and/or scaling-up)
Number of submitted project proposals	11	42
Number of selected experiments	10	16
Selection criteria	8 criteria (derived from 35 criteria put forward by the separate organisations of the Programme Team) -> Box 6.4	9 optimised criteria (which integrated the three perspectives: transition management, a broad care approach and an organisational perspective) -> Box 6.9
Duration of selection process (from project proposal invitations to the selection by the Programme Team)	1,5 months	4 months (caused by the round of pre-applications, a meeting day and the extra involvement of the care sector organisations during the last phase)
Time between selection by the Programme Team and start of the transition experiments	4 months (caused by a complex contracting and financing procedure)	4 months (caused by necessary time to 'transition' and improve the quality of project plans)

- *Radically changing the structure, culture and practices*. This criterion further defined the original criterion "radically innovative" and explicitly distinguished the innovativeness of a project from common practices (and related structure and culture).
- *Learning-, growing- and changing potential (deepening, broadening and scaling-up)*. It was explained to the care institutes that "The project should have a high *transition potential*; the potential of solutions, within three years, a) to learn from it, b) to get repeated in a different context within the care sector and c) to be able to influence the structure, culture and practices in the sector."

Optimised selection criteria	Example of a selected transition experiment: Imagination as a working method
Innovation themes[31]	
1. Connection to innovation themes	√ Social support systems
Transition management	
2. Connection to persistent problem / societal challenge	√ Poor communication between elderly people with memory problems and their environment
3. Radically changing the structure, culture and practices	√ Changing the prevailing way of thinking and communicating with elderly people
4. Learning-, growing- and changing potential (deepening, broadening and scaling-up)	√ Aimed at transferring new working method (based on imagination) to 200 care locations and embedding this in daily practices
Care broad approach	
5. Focus on end user	√ Elderly people and their direct environment
6. Involving other actors within and outside the care sector	√ Cooperation between different care institutes and a theatre production agency
Motivation and ability	
7. Intrinsic Motivation (track record, supportive environment, space for unorthodox approach)	√ High motivation to 'use experiment as a catalyst in the care sector'
8. Thorough and plausible business case	– Needs to be further specified
Quality of the proposal	
9. To the point, clear and SMART formulation	√ Clear proposal

Box 6.9 Optimised selection criteria applied at one of the selected transition experiments

6.5.2 Final selection of project proposals

The selection criteria (Box 6.9) provided a basis for assessing and discussing the submitted project proposals (42 in total) for the second round of the Transition Programme in Long-term Care. Each project proposal was assessed by a team of two or three Programme Team members who assigned a green, orange or red score to each criterion. This resulted in a first advice, which provided a basis for discussing all project proposals during a one-day Programme Team meeting.[32] After this plenary discussion it was decided that it was too difficult to make a final decision about the selection of the transition experiments based on project proposals only. Therefore, a 'meeting day' was organised, in which the Programme Team could have individual meetings with the project leaders and substance experts of 14 potential transition experiments. The main objective of these meetings was to take away doubts and gain more insight into ability

31. The 'Innovation themes' had been developed within the Working Group Innovation, and were considered an important starting point of the Transition Programme in Long-term Care.

32. An extensive analysis of the selection process was presented as an appendix of an internal programme report (Source: The past year in retrospect. Transition Programme in Long-term Care, September 2008). Based on this analysis several lessons can be drawn regarding how the selection criteria were applied in selecting the transition experiments (and how they can be further improved, section 6.6).

and intrinsic motivation. In these meetings a role play was conducted too, in which a Programme Team member played the role of end user to get insight into what the innovation or new concept encompassed and what it could contribute to him/her.

During the last phase of the selection process, also the advice of the members of the Working Group Innovation was incorporated. Regarding several project proposals, the advice of the care sector organisations and the Ministry opposed the selection of the Programme Team (which was based on the selection criteria and meeting day). Opposing arguments (of VGN, BTN and VWS) could be characterised as 'regime' interests, such as a lack of relation to existing practices in a specific sector or to the AWBZ in general.[33] However, the Programme Team succeeded in convincing the Working Group that the opposed project proposals should get included in the final selection because of their radical innovativeness and their demonstrable learning-, growing- and changing potential. The advice of the Working Group Innovation did influence the final outcome of the selection process in two ways:

1) One additional transition experiment ("Early continuous and integral", Box 6.10) was selected based on the advice of the care sector organisation for the disabled (VGN). Their argument was that this experiment was really an example of "chain care" and an integrated approach that transcended the sector[34].
2) One project ("the Care Company[35]"), which was advocated by the care sector organisation for maternity care and home care (BTN), was selected as a "focus initiative". A focus initiative is not a transition experiment but a project that researches and supports initiatives that evidently contribute to the aims of the Transition Programme.

The final outcome of the selection process included 16 second round transition experiments (Box 6.10). In the eventual letter of advice that was sent to the Working Group Innovation (on April 25th, 2008), each transition experiment was described in terms of deepening, broadening and scaling-up and/or changes in structure, culture, practices.

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33. The relation between the transition experiments and the AWBZ was a difficult dilemma. On the one hand the transition experiments had to change the existing (AWBZ) system for long-term care while on the other hand the experiments were financed from the AWBZ-premiums which required a direct relation to AWBZ acknowledged care activities.

34. According to the Programme Team the initial project plan had "the characteristics of an implementation programme instead of a transition project that is still searching in practice". Therefore, in the months succeeding the selection, this care institute needed to 'transition' and improve the quality of their initial project plan (which was also the case for several other selected projects).

35. This project aimed to develop a centre for flexible care and labour: the Care Company ("Zorgzaak"), which is a shopping formula to reach people in need of care and (potential) care workers in an easy accessible way, regarding receiving or providing care. A choice was made to exclude the Care Company from the selected transition experiments because "the project proposal was not radically innovative enough and the business case was not convincing enough".

1. From harness to summer dress /doing less…achieving more:	*Realising a break-through in dominant mindset and working practices of care professionals*
2. "Dementelcoach":	*Providing support (by telephone coaching) to informal care providers of people with dementia*
3. Village health centre:	*Introducing district nurses to realise small-scale 24-hours home care in a village*
4. Giving meaning to life as business:	*Developing a new business model to support clients with fundamental questions about life*
5. "Tailor made" care by lifestyle monitoring:	*Developing new care arrangements based on the monitoring of activity patterns of the elderly at home*
6. Work for "experience experts" ("*ervaringsdeskundigen*"):	*Integrating the knowledge and experience of former psychiatric patients in mental care teams*
7. The free rein:	*Creating a challenging and inspiring learning/ working/ care environment*
8. Presence (radical connection from zero to a hundred):	*Learning communities of 'present' care providers with attention for and commitment to their clients*
9. Telecare for new target groups:	*Applying telecare technology to support migrants, mentally disabled and psychiatric clients*
10. Good neighbours wanted:	*Developing individual living arrangements for mentally disabled people in new district in Almere*
11. Early, continuous and integral:	*Developing care chains for integrated support of disabled or chronically ill children and their parents*
12. Twente approach "well cared for" living:	*Developing new sustainable business models to improve care for the elderly and the physically disabled*
13. Societal learning places:	*Enabling clients with psychiatric background to provide (housing) services in elderly care*
14. Care home for Islamic Turkish and Moroccan elderly people:	*Developing an expertise centre and multi-cultural home for the Islamic Turkish and Moroccan elderly*
15. Being your own director with schizophrenia:	*Developing a care programme for people with schizophrenia that stimulates self management*
16. Imagination as working method:	*Transferring imagination method to improve communication with elderly people with memory problem*

Box 6.10 Second round of transition experiments in health care

This was a result of an extra request from the Working Group Innovation, because GGZ Netherlands was especially interested in the transition potential of the selected projects.

6.5.3 Portfolio analysis

The selection of individual experiments for the second round of the Transition Programme in Long-term Care was added with a portfolio analysis. This portfolio analysis was conducted by DRIFT[36] to get insight into the diversity and coherence between the

36. The analysis was conducted by Elise Hooijmaijers, Suzanne van den Bosch, Mattijs Taanman, Jord Neuteboom and Roel van Raak (Source: Portfolio analysis first and second round experiments TPLZ, DRIFT, May 27, 2008).

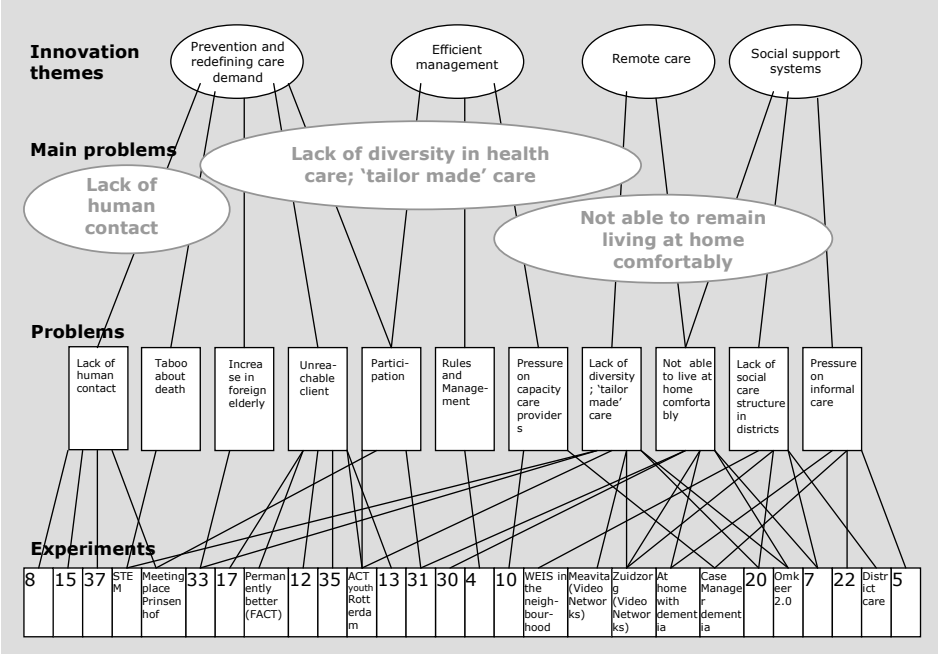

Figure 6.1 Part of the portfolio analysis

transition experiments of both the first and second rounds. The analysis demonstrated the *variety, coherence and scope*[37] of the portfolio:

- In terms of *variety*, the analysis showed a good variety of target groups, innovation themes and new practices.
- In terms of *coherence* (in problems, target groups and practices[38]) different clusters of experiments could be recognised. Based on coherence in problems, the 26 transition experiments could be clustered in three main problems: 'lack of diversity in health care', 'not able to remain living at home comfortably' and 'lack of human contact' (Figure 6.1). Clustering based on coherence in target group or new practices resulted in a large number of clusters, in which most experiments were part of more than one cluster.
- In terms of *scope* the analysis provided preliminary insights into the extent to which the transition experiments together contribute to a transition in health care. Figure 6.1 shows the scope of the Transition Programme in terms of the degree to which the 26 transition experiments cover the innovation themes, which can be related to the three clusters of main problems.

37. The conceptual framework for this portfolio analysis was developed by Mattijs Taanman (DRIFT) as part of his PhD study on *transition monitoring* (Taanman, *forthcoming*).

38. Next to a clustering in terms of 'practices', a clustering in 'structures' and 'cultures' would also be valuable (but this was excluded from the portfolio analysis because of time limitations).

The portfolio analysis was used to support the selection of the second round of transition experiments in health care, though it did not change the outcome of the selection process.

Reflection on selecting 2nd round of 16 transition experiments (2008)

The selection process of the second round of transition experiments in health care was an optimisation of the first round (in terms of optimised selection criteria). But because the selection strategy was different (pull strategy instead of push strategy) this also required a different procedure. The Programme Team learned that even though the pull strategy did not allow enough time to visit the care institutes, meetings with several potential transition experiments were crucial to gain insight into motivation and ability.

A methodological lesson learned was that in order to be able to conduct 'action research' (Chapter 1), it was necessary to 'switch roles' continuously during the various activities of the selection process: e.g. providing theoretical TM input to the selection criteria (as a researcher), scoring the project proposals based on the selection criteria (as a Programme Team member), observing and providing short reflections on the plenary discussion of the project proposals (as a researcher), reporting the selection process (as a Programme Team member) and conducting a portfolio analysis (as a researcher).

Because of several reasons the TM approach could not be fully integrated in the selection process (e.g. the portfolio analysis was added to the selection process but not fully integrated). One reason was that the often "last minute" and ad hoc interventions of DRIFT did not match the strict procedures of the Ministry (which were mainly managed by Ernst&Young). Another important reason was that the other organisations within the Programme Team had their own objectives and perspectives, which did not always correspond to the objectives of TM. For example, the other organisations did not immediately see the short-term value of the portfolio analysis that was conducted by DRIFT as part of the selection process.

One Programme Team member characterised his role as a "regime player" that sometimes (consciously) opposed the alternative approach of DRIFT. On the one hand these different roles within the Programme Team enabled a critical perspective on the added value of TM concepts and tools. On the other hand it also made it more difficult to implement TM theory in practice. Hence, the described selection process was not a 'straightforward' application of existing TM theory in practice, but a 'co-production' process in which TM researchers, consultants and regime actors together developed knowledge and redefined their own role and approach.

6.6 Lessons learned regarding managing transition experiments

This section draws practical and theoretical lessons from the experiences with developing and managing the portfolio of transition experiments in health care. The lessons for practice are *context specific* (mainly relevant for the context of the Transition Programme in Long-term Care), while the theoretical lessons are *generic (*relevant for the development of the conceptual framework on transition experiments; Chapter 3).

6.6.1 Lessons and recommendations for practice

Since the Transition Programme in Long-term Care will continue until 2010, it is only possible to draw tentative lessons based on first experiences (between 2006 and June 2008) with developing and managing the portfolio of transition experiments. The lessons learned can be used to optimise this Transition Programme further and therefore include recommendations for follow-up activities. The lessons and recommendations can be related to four different programme management activities[39]:

1) Lessons learned regarding selecting promising transition experiments:

- The applied selection strategy, procedures and criteria enabled a selection process that was as *objective* and *transparent* as possible. Because many actors and related interests were involved in the selection of the second round of transition experiments, this resulted in some compromises; however, these were based on argumentations and discussion and are inevitable in a *co-production* process between scientists and practitioners (or 'Mode 2' science, Chapter 1).
- The developed selection criteria for transition experiments (Box 6.9) provided a useful tool to select *potential*[40] transition experiments. Transition Management criteria were successfully integrated in this shared set of selection criteria (including the three perspectives of the Programme Team).
- The selection criterion "radically changing the structure, culture and practices" appeared to have important distinctive value. Two further distinctions to this criterion could be added: (i) the scale at which an innovation is new (e.g. the entire care system or a sub-system) and (ii) if the radical innovation is initiated from within the system (regime) or outside the existing structure, culture and practices (niches).

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39. Two other TM activities conducted by the Programme Team are excluded from this section: transition monitoring and setting up a transition arena. These TM activities will be described in two separate theses (Taanman, *forthcoming* and Van Raak, *forthcoming*).

40. The potential contribution of these experiments to the transition in health care was assessed in the selection process and was also monitored during the Transition Programme. However, this case study did not include an in-depth analysis of the content of the transition experiments and therefore no concluding statements can be made about how radically innovative all the 26 experiments are.

- Instead of the applied criterion "learning-, growing- and changing potential", separate and specific criteria for assessing the potential for deepening, broadening and scaling-up could be developed (to guarantee that all three dimensions get equal attention in the selection process).
- Especially when the portfolio of transition experiments grows (>10-20), the selection process should pay attention to how an experiment fits the total portfolio. In a follow-up selection round of the Transition Programme in Long-term Care, future images and transition pathways (developed by the transition arena) could be used to select a balanced portfolio of transition experiments.
- Meetings with the project leaders[41] of potential transition experiments appeared to be essential in the selection procedure, specifically to get more insight into intrinsic motivation and ability. In addition, project proposals could include 'profiles' of project leaders.[42]
- While the Transition Programme in Long-term Care stated that the "end user" should be central in the transition experiments, the selection procedure was not directed towards them (but towards the care institutes). Follow-up selection procedures could stimulate end users to be actively involved in developing transition experiments (e.g. in specific transition pathways in which end users play a key role).
- Conducting a role play with project participants appeared to be a valuable instrument to get insight into what actually happens in a potential transition experiment. The format of the project proposal could also be improved by adding a 'story telling' section.
- Involving "change-inclined regime players" (e.g. care sector organisations[43]) in the selection process can result in a tension between regime interests and the intention to contribute to identifying promising radically new experiments. Important conditions are that various regime players (e.g. from different care sectors) are involved to balance interests and that regime players cannot force decisions (e.g. the Programme Team should have enough decision power).
- The selection *moments* in the Transition Programme in Long-term Care involved the start of two rounds of transition experiments. During these rounds no new experiments were selected and also none of the selected experiments was stopped.

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41. Next to project leaders, the people that are crucial for the success of a transition experiment in health care include managers (e.g. directors), professionals and end users. Hence an optimal selection process pays attention to all these actors, e.g. in meetings on the location of a potential transition experiment.

42. In a recent research project the personality profiles of the project leaders of the first round of transition experiments in health care were studied (Timmermans et al., 2008). This research could also be used during the selection process.

43. Not all care sector organisations are characterised as a 'regime player', e.g. the care sector organisation Actiz had been actively stimulating innovation in health care and also participated in the Programme Team (and could therefore be characterised as 'niche player').

However, since Transition Management is about continuous variation and selection (Chapter 3), it is recommended to include the possibility that transition experiments can be stopped before the end of the Transition Programme. It is not recommended to add formal selection moments, because this decreases the *mental space* to experiment and "learn by failure[44]". Extra selection moments should only be applied when necessary (e.g. because the potential for further learning and broadening turns out to be too low).

2) Lessons learned regarding providing (financial) space for transition experiments

- The covenant between the Ministry for Health, Welfare and Sports and the care sector organisations was a successful instrument to create space for setting up transition experiments. However, this space that was created by the 'regime' also resulted in a tension between short-term opportunities within the regime to spend resources on the one hand and a time-consuming cumbersome process to allocate these 'regime' resources to the experiments on the other hand. With hindsight, it can be stated that the agreements in the covenant should have been more precise with regard to how the resources could be allocated.
- Instead of by subsidy grants, the transition experiments in health care were financed by modifications in existing financial structures (policy regulations). The Ministry stated that this provided opportunities to learn about these financial structures. However, the modified policy regulations concern only *temporary* measures to support small-scale experimentation. This does not learn much about the changes that are necessary to *structurally* finance radically new practices in long-term care. Therefore, learning about structural financing should always be an explicit learning goal in a transition experiment.[45]
- The first round of transition experiments started off with still a lot of uncertainty about the financial resources. This had a negative impact on the legitimacy and expectations with regard to the Transition Programme in Long-term Care. However, the willingness of the project leaders and the Programme Team members to take this "risk" can be regarded as an important competence in managing transition experiments. Without taking risk a transition process can come to a standstill. Taking risk can be crucial to overcome barriers, utilise opportunities and enforce the required space (also related to the competence of being tenacious).

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44. Failure is defined here as not realising short-term project results. Learning by failure implies that learning experiences are more important than short-term results.

45. Mid-2008 the Transition Programme in Long-term Care started to support each first round transition experiment with developing a 'societal business case'. For each experiment the (societal) costs and benefits were calculated (by Ernst&Young) and solutions for structural financing were explored.

3) Lessons learned regarding facilitating learning between experiments[46]

– The monthly (compulsory) learning sessions with all project leaders and Programme Team members proved to be an important instrument to facilitate learning within and between the transition experiments. The project leaders got to know each other and all Programme Team members very well, which created a "protected" space in which frontrunners could discuss their problems and help each other with solutions. In the next phase of the Transition Programme, the learning sessions might be divided in different 'communities of practice' that focus upon certain themes (which could emerge from the portfolio analysis) or transition pathways (which are developed in the Transition Arena).
– To share learning experiences with the entire care sector, each participating care institute had to create complete openness about their transition experiment. The sharing of learning experiences could be stimulated further by the Programme Team, Working Group Innovation and Transition Arena, who could play a role in attracting and mobilising larger groups in society.

4) Lessons learned regarding scaling up successful transition experiments

– In the start-up phase of the Transition Programme in Long-term Care, only one experiment (District Care, "Buurtzorg") was successful in scaling up and embedding new practices at the level of a sub-system (home care).[47] The learning experiences of District Care regarding deepening, broadening and scaling-up (Box 6.8) could be used by other successful transition experiments. Furthermore, in the next phase of the Transition Programme the Programme Team could actively stimulate and support the scaling-up of more transition experiments by facilitating a 'scaling-up' team with a selection of project leaders and different experts on scaling-up (juridical, socio-cultural, institutional, etc.) and formulating explicit scaling-up objectives and strategies.[48]
– The Programme Team could further support the scaling-up of successful transition experiments, by: paying more attention to coaching project leaders, conducting supportive analyses and creating conditions to take away regime barriers (e.g. with regard to procedures, financing structures), extending the linkages with regime players, connecting the transition experiments to strategic activities in a transition

46. The facilitation of learning within a single transition experiment is addressed in Chapter 7.

47. Regarding this process of scaling-up, District Care needed only limited support of the Transition Programme. However, the successful scaling-up of District Care can be partly explained by an active 'scaling-up strategy' of the initiator of District Care (further explained in Box 7.5).

48. Following up this recommendation, in 2009 a scaling-up "theme group" was facilitated by the Programme Team.

arena (sustainability vision, transition pathways) and mobilising frontrunners in the transition arena to support specific transition experiments.

6.6.2 Theoretical lessons

In addition to the many practical lessons, this case study provided an important contribution to the development of the conceptual framework on transition experiments (Chapter 3). The following six theoretical lessons have a generic value with regard to developing and managing a portfolio of transition experiments, as part of a broader TM approach.

1. Stress within the regime can create space for transition experiments. *The (financial) space for the transition experiments in health care originated from stress within the care regime. This stress resulted in the AWBZ covenant 2005-2007 in which the Ministry of Health, Welfare and Sports and care sector organisations agreed that the care sector would be supported with 90 million euros for innovation to partly compensate the limited budgets for care.*
2. The *substance* of the potential contribution of transition experiments to a transition can be indicated by their desired outcome in terms of radically changing the dominant structure, culture and practices. *In the Transition Programme in Long-term Care 'radically changing the structure, culture and practices' was applied as an important selection criterion and was an important part of the programme discourse (both in internal and external communication). Moreover, the involved 'regime-players' used these concepts to indicate what was desired from the transition experiments.*
3. The *process* of the potential contribution of transition experiments to a transition can be indicated by the mechanisms deepening, broadening and scaling-up. These mechanisms can be used as steering 'dimensions' to select, monitor and influence the progress of ongoing transition experiments.[49] *In the Transition Programme in Long-term Care a selection criterion, monitoring framework and more general 'discourse' on deepening, broadening and scaling-up was developed and applied.*
4. A 'transition team' that consists of experts on substance, transition management and financial and business aspects can play a central role in managing (e.g. facilitating, selecting, structuring, stimulating) a portfolio of transition experiments. Furthermore, the direct involvement of TM researchers enables a co-production process in which theory on TM is translated into practice (providing instruments, concepts, formats, criteria, etc.) and practical experiences contribute to theory development. *The unique cooperation between CC Care Advisors, DRIFT and Ernst&Young in the*

49. The theoretical lessons with regard to deepening, broadening and scaling-up only include (prescriptive) management notions, because the character of this case study did not allow a historical (descriptive) analysis on the contribution of transition experiments to transitions.

Programme Team enabled managing the transition experiments in health care with a successful mix of expertise. The integration and cross-fertilisation of expertise appeared to be crucial.

5. The cooperation of different types of actors in the management of a portfolio of transition experiments can result in tensions between an 'ideal' TM approach and other interests and between the role of TM researchers and other actors. A *methodological* lesson learned is that TM concepts can be successfully translated into practice when these concepts are integrated in a shared approach that fits the specific context. This requires continuous interaction and clear communication between TM consultants and researchers and other actors. *Transition Management concepts were successfully translated to the context of the Transition Programme in Long-term Care, with regard to: the action plan, selection criteria, learning sessions, monitoring framework and general discourse. The portfolio analysis was an example of a TM concept that was not fully integrated in the Transition Programme, which might be the result of insufficient involvement of the other actors in preparing and conducting the portfolio analysis*.
6. The mechanisms deepening, broadening and scaling-up can be translated into (programme) management guidelines for transition experiments. The following guidelines are specifically targeted at the 'transition team' (and not at the project leaders of the experiments, which is part of Chapter 7):
   - *Deepening* can be stimulated by: providing (financial, juridical and mental) space for setting up and conducting transition experiments in specific contexts; facilitating social learning (within and between experiments); providing support to overcome barriers (e.g. organisational, institutional, financial); structuring discussion and activities within the experiment; stimulating adequate monitoring and evaluation.
   - *Broadening* can be stimulated by: providing resources (e.g. money, knowledge, people) to repeat radically new practices in different contexts (e.g. regions, target groups, organisations); facilitating interactions between similar experiments; stimulating network building; sharing learning experiences within the sector and stimulating linkages with adjacent sectors.
   - *Scaling-up* can be stimulated by: selecting and supporting frontrunners with the motivation and ability to experiment *and* scale up; balancing between providing protection from the regime and directly involving regime-actors who have the willingness and power to change existing structures (e.g. financial structures, regulation); realising agreements with the regime; actively feeding back learning experiences to the regime.

6.7 Conclusions

This case study of the Transition Programme in Long-term Care showed how developing and managing a portfolio of transition experiments can be a key instrument to influence a transition.[50] Contrary to what is suggested in the literature on Transition Management (TM), the Transition Programme in Long-term Care immediately started off with developing a portfolio of transition experiments instead of first setting up a transition arena and developing a sustainability vision. This resulted in a *bottom-up* TM approach, with at least three important consequences for managing a portfolio of transition experiments (regarding the selection, creation of space and interaction with a transition arena).

First, because a sustainability vision and transition pathways were lacking, the portfolio of transition experiments could not be developed based on an existing 'transition agenda'. Instead, a selection procedure and specific selection criteria were developed. The *selection procedure* included both a "push" and a "pull strategy" (section 6.5.1) with the underlying aim to build upon the existing, bottom-up initiatives within the care sector, by selecting frontrunners (niche-players) that are in need of (financial, juridical or mental) space. The developed *selection criteria* (Box 6.9) included three TM criteria: (1) the extent to which the desired outcome of the experiment radically changed structure, culture and practices (*radical innovation criterion*); (2) the potential of the experiment to learn, grow and change the existing care sector (*deepening, broadening and scaling-up criterion*) and (3) the connection of the experiment to a persistent problem and related societal challenge (*sustainability criterion*).[51]

A second consequence was that because a transition arena was lacking, the space for setting up the transition experiments was not provided by frontrunners. Instead the financial and juridical space for the selected transition experiments was created by the regime (the covenant between the Ministry of Health, Welfare and Sports and the care sector organisations). Hence, the regime was directly involved in the transition experiments[52], which resulted in many tensions regarding developing and managing the portfolio of transition experiments (e.g. keeping up the speed vs slow financial procedures, open search and learning process vs SMART project plans, radically changing the regime vs involving regime interests). However, the direct involvement of regime players also

50. Conclusions about the extent to which the transition experiments in health care influenced a transition cannot be drawn, because the Dutch care system is still in a very early phase of transition.

51. A "high risk of failure", which was defined by Rotmans (2005) as a key characteristic of transition experiments, was not explicitly applied as a selection criterion. A "high risk" was implicitly included in the "radical innovation" criterion. Follow-up research might analyse how "high risk" could be operationalised and how these risks could then be managed.

52. Next to the Ministry for Health, Welfare and Sports and the care sector organisations the NZa and Care Offices were also directly involved in the financing and contracting of the transition experiments.

provided opportunities (e.g. financial and legislative support, knowledge about the care sector, mobilising a large number of care institutes).

A third consequence was that the interaction between the first round of transition experiments and the transition arena (which was set up almost one year later) was very limited. In the first phase of the Transition Programme in Long-term Care, the transition experiments were not supported by a shared vision on a sustainable care sector and were not connected by transition pathways. Instead, a *bottom-up* TM approach was followed in which the learning experiences in the transition experiments were used to get insight into the persistent problems in the care sector and provided *building blocks* for developing a shared sustainability vision. The management of the transition experiments was not so much determined by a normative direction that is developed *a priori* (including a problem analysis, sustainability vision and transition pathways), but was determined by an open search and learning process, with a strong shared drive to change the existing *structure, culture and practices* in the care sector and stimulate the *deepening, broadening and scaling-up* of transition experiments. These concepts were therefore important steering notions that were translated to the context of the Transition Programme in Long-term Care.

With regard to the mechanisms deepening, broadening and scaling-up specifically, the following conclusions can be drawn. The start-up phase of the Transition Programme mainly included deepening and broadening; only one experiment (District Care) already started to scale up (Box 6.8). However, scaling up more transition experiments was an important overall objective and will be a core activity in the last phase of the Transition Programme. Hence, the mechanisms contributed to the broad scope of the Transition Programme, in which experiments were not applied as a goal in itself but as a means to change the existing care sector fundamentally and explore transition pathways to a sustainable care sector.

Even though TM was the central steering approach within the Transition Programme in Long-term Care, it took considerable effort to apply TM in all management activities. This was caused by the fact that within the Programme Team, TM consultants and researchers cooperated with other process and substance experts. Furthermore, as was stated before, the direct involvement of the regime caused tensions between an ideal TM approach and the interests of the regime. This had several implications for the competences that were required from the 'transition manager' (e.g. TM consultant). Observed (clusters of) competences include:

- *Daring to take risks:* being a creative entrepreneur who utilises opportunities, being open to 'learning by failure', even if this requires taking high risks;
- *Tenacity:* being ambitious, holding on to long-term vision, anticipating barriers and not being limited by failures along the way;

- *A feeling for politics:* being a networker, building bridges, being able to deal with conflicts, but also being able to take up a strong position and convince powerful actors (lobbying);
- *Communicative:* being a team worker, cooperating with different disciplines, being able to translate TM theory to practice and integrate TM in a shared approach;
- *Being a systems thinker:* understanding the 'big picture', recognising patterns, continuously balancing between the regime, the programme and the experiments (niches), combining operational, tactical and strategic activities.

These competences follow from empirical observations in this case study, and need to be further researched (both empirically and theoretically) at the level of single transition managers but also at the level of a transition team. Follow-up research could build upon the 'competence profiles for transition professionals' developed by Andringa and Weterings (2008). Furthermore, follow-up research could build upon the work of Timmermans et al. (2008) and further study and apply 'personality profiles' of project leaders (e.g. in the selection process). The personality of project leaders in the first and second rounds of transition experiments could be further researched and might help explaining which transition experiments have a higher chance to scale up.

Follow-up research could also elaborate on the role of politics and power in managing transition experiments; this case study illustrated how niche-actors can be *empowered* to exercise 'innovative power', but are also linked to regime-actors that exercise 'constitutive' power (Avelino and Rotmans, 2009:562).[53] Follow-up research should specifically elaborate on the consequences of different types of TM approaches ('top-down' vs 'bottom-up') in relation to different contexts and in relation to different types of 'niche / regime interactions'. It is important to note that the TM approach that was applied in this case study might inspire similar approaches to manage a transition experiment portfolio, but each approach should always be sensitive to the specific contexts of these experiments.

This case study has shown that the *bottom-up* development and management of transition experiments in health care, was the result of a specific context in which the care regime enabled space (niches) for innovation but also caused barriers. A crucial question for follow-up *action research* is to what extent the transition experiments will be able to scale up and influence the care regime, and how Transition Management can support this scaling-up process.

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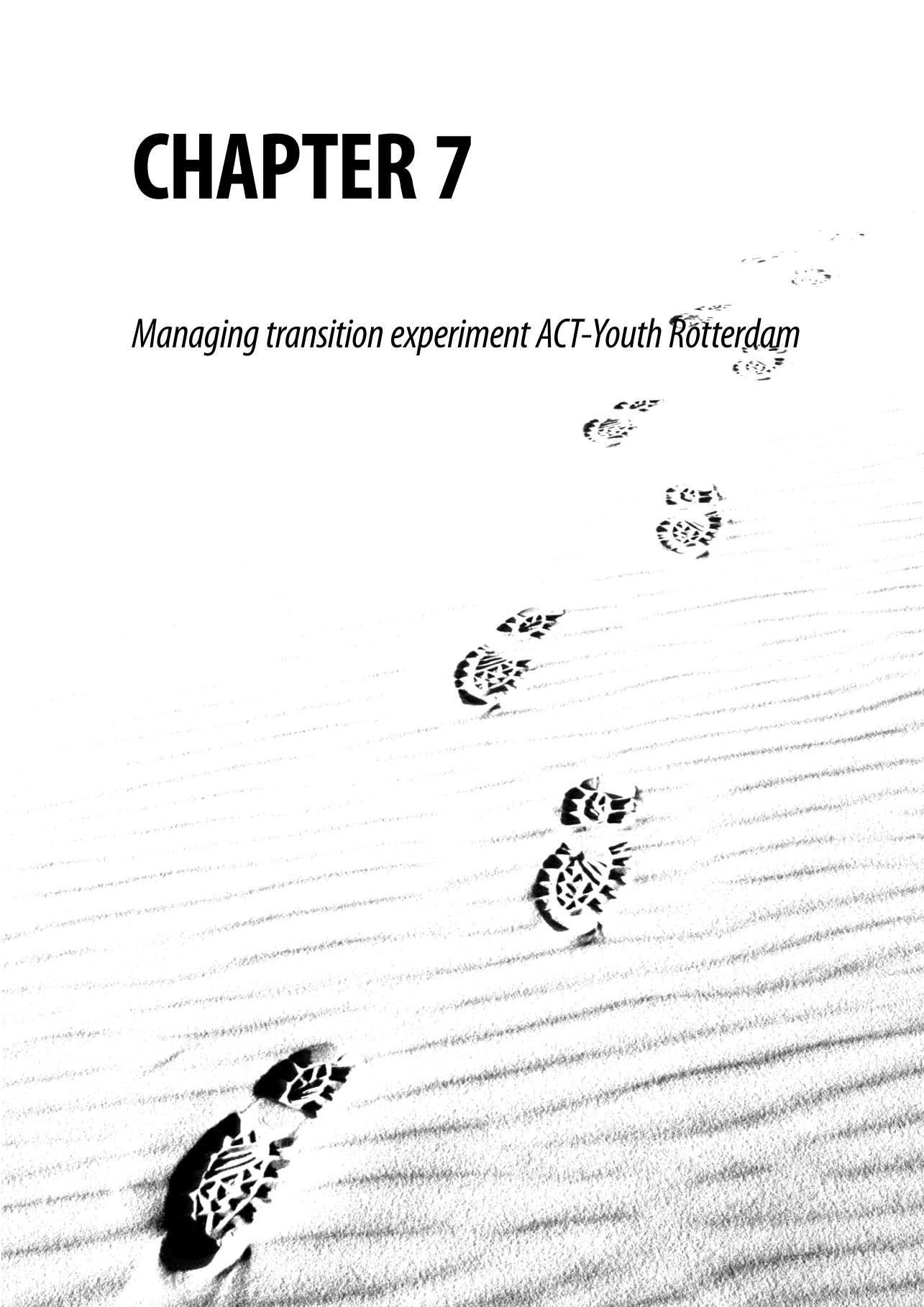
53. Avelino and Rotmans (2009:552) define *innovative power* as the capacity of actors to create or discover new resources and define *constitutive power* as the capacity to constitute the distribution of resources. To ´constitute` something means to establish, institute or enact it.

CHAPTER 7

Managing transition experiment ACT-Youth Rotterdam



7.1 Introduction

The previous chapter described the Transition Programme in Long-term Care from the perspective of developing and managing a portfolio of transition experiments. This chapter specifically describes the experiences with setting up and managing *one* of these 26 transition experiments: "ACT-Youth Rotterdam" (in the remainder of this chapter this will be referred to as "ACT-Youth"). ACT-Youth was initiated in 2005 by a large mental health care institute in Rotterdam to address the *societal challenge* that youth with complex psychosocial and psychiatric problems are not reached by the existing care providers. The experiment encompassed five multi-disciplinary and outreaching ACT teams at various locations in Rotterdam, which provided integrated mental health care to youth in a way that fundamentally differs from the dominant *practices, structure* and *culture* (Box 7.1). ACT-Youth was selected by the Transition Programme in Long-term Care (Chapter 6) because it could potentially contribute to a transition in the mental health care system for youngsters in Rotterdam and eventually the Netherlands. Hence, with support of this Transition Programme (between 2007 and 2009) ACT-Youth was set up and managed as much as possible as a transition experiment. This support not only involved providing financial space, but it also involved supporting the innovation manager of ACT-Youth with a Transition Management perspective, concepts and tools. The case study of ACT-Youth therefore contributes to answering the research sub-questions "What are the distinguishing characteristics of a transition experiment?" and "How to manage transition experiments?".

The research approach that was followed in this case study can be characterised as *action research* (Chapter 1), because it involved active (scientific and practical) support to ACT-Youth with the aim to stimulate a sustainability transition in the long term. Similar as in the previous case study (Chapter 6), the action research approach was enabled by combining two different roles: a researcher role and a Programme Team member role (from 2007 to July 2008). The researcher role involved: conducting interviews; analysing and reflecting on how ACT-Youth was set up and managed; participating in strategic sessions with the actors involved in ACT-Youth; giving presentations and putting forward theoretical knowledge about transition experiments. The Programme Team member role (together with one other Programme Team member) involved: supporting the innovation manager of ACT-Youth with various management activities (e.g. writing the project plan, contracting, reporting); participating in a number of formal and informal meetings with the innovation manager of ACT-Youth; participating in "transition meetings" with the innovation manager and general manager of ACT-Youth and participating in meetings to monitor the progress of the transition experiment.

This chapter specifically discusses the approach that was followed in setting up and managing ACT-Youth, the barriers that were encountered in practice, how the manage-

ment dealt with these barriers and the interaction between ACT-Youth and the Transition Programme in Long-term Care. Section 7.2 first describes the background and context of ACT-Youth, including what happened *before* the support of the Transition Programme (in 2005-2006). Section 7.3 then introduces the content of ACT-Youth and describes the first results of this transition experiment. Section 7.4 analyses how the transition experiment ACT-Youth was managed (in 2007 and the first half of 2008), followed by a reflection and lessons learned in section 7.5. The chapter ends with conclusions and recommendations, regarding follow-up theoretical and practical work on the management of transition experiments.

7.2 Background and context of ACT-Youth Rotterdam (2005/2006)

ACT-Youth originated within the context of the *persistent problems* in the Dutch long-term care system (Chapter 6). In the subsystem of mental health care for youngsters these problems led to the following *symptoms of unsustainability*: an increasing number of often homeless youngsters with multiple complex problems (e.g. emotional problems, behavioural problems, school drop-out problems, financial and social problems), a failure of care providers to provide adequate support or reach these youngsters at all[1], which can lead to increasing social problems in present and future society (e.g. high societal costs related to an increase in school drop-outs, crime, vandalism, etc.). In 2004 the Municipality of Rotterdam wanted to address these problems by stimulating specialised care to youngsters with multiple problems between ages 14 and 23. Two mental health care institutes in Rotterdam (GGZ Group Europoort and Bavo RNO Group, which later merged in one mental health care institute) took up this challenge. Their objective was to develop a suitable mental health care approach for this target group.

A first step in the development process was a request from the directors of the mental health care institute in Rotterdam to their 'innovation manager'[2], to conduct a *field and literature study*. This study was initially aimed at getting insight into the size and nature of the problems of 'homeless youngsters in Rotterdam'. After conducting a problem analysis and visiting the existing youth-related organisations in Rotterdam (e.g. schools, the municipality, social services), the innovation manager concluded that within the

1. Researchers from the Netherlands Court of Audit (2004) concluded that the number of 'homeless youngsters' is increasing, while the capacity of care providers is still insufficient. Furthermore, the care supply is too much fragmented and too difficult to reach and the various care providers are inadequately connected to each other and to the care demand of the youngsters.

2. The 'innovation manager' had a 'free role' within the mental health care institute to develop innovations for youngsters with psychiatric problems.

Rotterdam region approximately 600[3] youngsters between the ages of 12 and 24 suffered from serious multiple problems (Zimmermann, 2004). From the field research it was also learned that 'homeless youngsters' often do not sleep on the streets like adult tramps, but are well dressed and sleep at friends' or relatives' houses.[4] Being homeless was therefore not the main problem of these youngsters, but it was one of the problems regarding different aspects of their life, including: lacking a permanent and safe place to sleep, lacking a supportive social network, having problems at school, fines and running into debts, being dependent on drugs and suffering from psychiatric problems (e.g. ADHD, anxiety, borderline, depression). However, the regular mental health care institutes did not reach these youngsters and the youngsters themselves could not find their way to adequate care. The field research therefore concluded that these youngsters are in need of a care provider that connects to their wishes and way of life.

To fulfil the needs of these youngsters, the Rotterdam mental health care provider adopted the *Assertive Community Treatment (ACT)* model. The ACT-model was developed in the USA for adults with serious psychiatric problems and was gaining increasing attention in the Netherlands (Mulder and Kroon, 2005). Inspired by the ACT-model, a new variation of the ACT approach was developed, which was specifically aimed at addressing the problems of youngsters in Rotterdam. Key characteristics of this "ACT-Youth approach" included: outreaching (searching and approaching youngsters in their own environment), multi-disciplinary team composition based on problems of the target group, shared case load, low client-professional ratio, independent and flexible treatments and support offered by the team, no limits in the duration of a treatment and the number of contacts, a 24-hour availability and an unorthodox approach.

A *business plan ACT-Youth* (ACT-Youth, 2005) was developed and in January 2005 the first ACT-Youth team in Rotterdam was started. The first two years of ACT-Youth can be regarded as a 'pioneering phase' (2005-2007), characterised by improvisation and flexibility, a lack of organisational embedding and structured management (described in section 7.4.2) and a quick 'organic'[5] growth in the number of teams (5 in total).

In 2006 ACT-Youth got engaged with the Transition Programme in Long-term Care. The director and the innovation manager of ACT-Youth were invited for the meeting in which DRIFT first presented the opportunities of the Transition Management approach for the care sector (AWBZ meeting, Chapter 6). They recognised the added value of the

3. The group of youngsters with problems of a lower complexity (e.g. concerning only one of multiple aspects) is approximately 10 times higher. Source: ACT-Youth (2009), Societal Business Case, drafted for the Transition Programme in Long-term Care.

4. The initial field research and literature study resulted in *second order learning*, because the perspective on the target group and their problems was broadened (from initially only homeless youngsters to eventually youngsters with complex problems).

5. This "organic" approach was explained by the innovation manager of ACT-Youth as "basing the work completely on the (care) demand of the clients, free from existing structures".

Structure:
- Youth is not subdivided in either youth care or youth psychiatry: care is offered in an integrated way, centred around the individual youngster; *(institutional structure)*
- Different role for care professional: the youngster is central and is approached in his/her own environment (and not in the working environment of the care professional); *(institutional and physical structure)*
- Different way of financing: preferably ACT-Youth Rotterdam wants to work with a lump-sum amount (15,000 euros) for each youngster per year; *(financial structure)*

Culture:
- Connecting to the attitude of the youngster (respect for his/her own territory, dress codes, behavioural codes, etc.) in relation to his/her cultural context; *(culture sensitive attitude)*
- The starting point is not anymore "no care is given if the youngster isn't willing or able to accept it", but "care starts with imagining the problems and connecting to what the youngster *is* willing or able to accept"; *(way of thinking)*

Practices:
- Care does not start with research and diagnosis, but with offering practical help (this enables building up trust, a quick break-through of vicious circles, and eventually the development of a better diagnosis and the prevention of problems); *(working method)*
- Different specialists work together on location (e.g. a district) and when necessary will visit a youngster together (this increases the insight into the problems and the professionals learn from each other at the same time); *(behaviour and area of work)*

Box 7.1 Changes in structure, culture and practices in ACT-Youth (based on transition analysis ACT-Youth, DRIFT, December 2006).

TM approach, specifically because innovative practices, like ACT-Youth, need the space and conditions to carry on. The director quotes: "*Every time it is exciting, because they blame it on me that we don't meet the requirements…[of the present institutions], but anyhow we have stayed around. And now you can see people coming from the 'grandstand' (from where they were watching how we would fail), because they now want to join us.*"

Based on an interview with the director and the innovation manager of ACT-Youth, DRIFT developed a short transition analysis to get insight into the potential of ACT-Youth to contribute to a transition in health care (Box 7.1). Following up the AWBZ meeting and transition analysis, ACT-Youth was included in the short-list with 11 potential transition experiments in health care (Chapter 6). This short-list was the starting point for the selection process of the first round of the Transition Programme in Long-term Care. As part of this selection process ACT-Youth was visited by the Programme Team and the innovation manager was supported with writing the final project plan. ACT-Youth was selected as one of the transition experiments in the Transition Programme because of its positive score on all selection criteria (Box 7.2).

Selection criteria	Scores of ACT-Youth
1. Connection to persistent problem	√ persistent problem: youngsters that are not reached by mental health care
2. Connection to themes and solution directions	√ prevention
3. Plausible and well-substantiated	√ high quality business plan
4. Motivation	√ willingness to share learning experiences
5. Ability	√ high innovative ability and sufficient support within organisation
6. Radically innovative	√ radically new multi-disciplinary and outreaching mental health care approach
7. Growing potential and learning potential	√ potential to scale up
8. Added value, programme<->project	√ special target group adds to programme portfolio; project needs more space

Box 7.2 Scores of ACT-Youth regarding the selection criteria (Chapter 6)

From September 2007 onwards, ACT-Youth received financial support from the Transition Programme in Long-term Care and the project was further developed and managed as much as possible as a 'transition experiment' (with support of two Programme Team members from DRIFT).[6]

ACT-Youth was selected as a case study for this thesis because many characteristics of a transition experiment could already be recognised in the existing ACT-Youth experiment (section 7.4.1). Furthermore, in the pioneering phase of ACT-Youth (2005-2006) many system barriers had already been encountered (section 7.4.2), which provided many opportunities to learn about how the management of ACT-Youth dealt with these barriers (section 7.4.3).

7.3 Introduction and first results of transition experiment ACT-Youth

This section introduces the content of ACT-Youth (including the target group, objectives, team composition and working method) and describes the first results of the transition experiment ACT-Youth.

The *target group* of ACT-Youth was initially defined as: "Youngsters between 12 and 24 that are characterised by fragmentation in their functioning regarding multiple developmental aspects and multiple domains of life. This also results in fragmentation at the level of thinking and doing; a realistic perspective is lacking on their own functioning and their functioning in relation to others. This means that they do not ask

6. The team of two Programme Team members that provided personal support to ACT-Youth were John van den Hout (CC Care Advisors) and Suzanne van den Bosch (DRIFT) in June 2007, and from July 2007 to July 2008 Jord Neuteboom (DRIFT) and Suzanne van den Bosch (DRIFT).

and search for care or that because of their problems they are very disappointed in the care that has been offered to them so far (ACT-Youth, 2005)". In practice the ACT teams also provided care to youngsters that are slightly younger or older than the age limit of 12 to 24. The mental health problems of these youngsters include emotional and behavioural problems, autism, mental retardation, psychoses and post-traumatic stress disorders. In practice it appeared that these problems are often coupled with or are the result of domestic violence or problematic family situations, war violence, sexual abuse, mistreatment or neglect (Van Dijk et al., 2006).

The *objective* of the ACT-Youth approach was defined as "offering specialist mental health care to youngsters that cannot find their way to or cannot hold on to the regular care providers (ACT-Youth, 2005)". The ambulant ACT teams pro-actively search for youngsters with complex problems and provide integral support, diagnosis and treatment. The care provided by ACT-Youth often starts with solving practical problems, such as problems related to housing, finances, daily activities or education. After this enough trust has been built up to spend time to look at and work on the underlying problems. A key aspect of ACT-Youth is that integrated care is offered in different domains of life at the same time and by the same (multi-disciplinary) ACT team. This is illustrated by the following quote of a youngster:

> *"I receive support by ACT-Youth in all areas (..); I don't have to go everywhere [different organisations] or ACT-Youth is going with me. Also at moments when I don't feel like it or don't dare to, they always keep on coming and supporting me. (…) I receive clear support from one team and one institute that is helpful with everything".*

The *composition of an ACT team* resembles the different types of problems of the youngsters. The teams include care professionals from multiple disciplines (e.g. child and youth psychiatrists, social psychiatric nurses, (social) psychologists, system therapists, social workers and care managers). A key aspect of ACT-Youth is that these different specialists work together to provide integral support, diagnosis and treatment with a shared case load.

The *working method of an ACT team* can best be described with a description of a 'normal' working day. This example is based on a narrative of the independent journalist Peter Sierksma (2009), who followed one ACT team for several days:

> The ACT team in the Rotterdam district The Old North (which includes about 6 ACT professionals and one ACT team manager) provides care to about 60 youngsters. Every morning at 9 o'clock the team goes through a list of all these youngsters. On a whiteboard the team manager ticks off every name that is discussed or writes down the name of the ACT professional or professionals who will meet up with this

youngster that day. When one of the ACT professionals is not able to meet a youngster, another member of the team can take over because all team members know all youngsters. The different disciplines work together in supporting the youngsters and are complementary to one another. For example, the care manager supports youngsters with getting into contact with different organisations, the social psychiatric nurse registers the medications of all the youngsters, and the child and youth psychiatrist has the final responsibility for a treatment. In this way one ACT team can provide *integrated* support, diagnosis and treatment.

After the morning meeting, which lasts one hour at most (but preferably shorter) all ACT professionals 'fly out' the office. During the day the ACT professionals have various meetings with youngsters at different locations (also outside the district whenever this is necessary, e.g. when a youngster has moved). Often youngsters do not show up at a meeting; an ACT social worker explains: "Sometimes these 'no shows' do not matter, when the meeting is about having a long talk over a cup of coffee, but most often this is a signal for us, as it may mean that medicines are not taken or that somebody falls back into old habits. It is even more problematic when it is a meeting with an organisation. This can then put a stop to an unemployment benefit or a potential job." An example is "Erkan", a Turkish-Dutch boy who did not show up at a meeting the other day. He is not feeling well and has stolen money from his mother, who was so disappointed that she turned him out of the house. He now sleeps with friends and wanders about during the day. He is starting to avoid contact. The ACT team tries to find him at MacDonalds, to prevent losing contact with him. When youngsters are difficult to find (e.g. because they lack a permanent place to sleep), the ACT team *pro-actively* looks for them at locations where the youngsters often go.

An example of how the integrated, pro-active approach of ACT-Youth can structurally improve the quality of life of youngsters, is provided by the story of an ACT professional, who tells about his experiences with helping an 18-year-old boy named Anton (source: ACT web paper, www.transitieprogramma.nl):

Anton had been involved with the care system for youth since he was twelve. He lived in many youth care institutes and was often thrown out because of aggression and drugs. Together with Anton, ACT-Youth made an inventory of what he urgently needed. The first thing he wanted was a permanent place to live and an income (he temporarily lived in the house of a woman who tried to help him because he lacked a house and income). He was very disappointed in care providers; he felt nobody listened to him and did not know where to go. ACT-Youth explored the possibilities for 'guided housing', which were very limited because aggression and

drug problems are regarded as a contra-indication. ACT-Youth could finally register him with an organisation that is specialised in finding suitable housing solutions for youngsters with problems like Anton. ACT-Youth could continue offering him integrated support, which included practical support because the ACT team also included a care manager and social worker. Anton thought this was great. He finally had the feeling that somebody cared for him and listened to him and supported him in putting his life back in order, without having to account for his past.

Apart from the many micro-level successes that were realised at the individual level of the youngsters, ACT-Youth has also realised important *results at a societal level*. After a quick growth in the pioneering phase (2005/2006) and a short reorganisation in the beginning of 2008, at the end of 2008 in total 5 ACT teams were operational at various locations in Rotterdam. This included one 'Mobile Diagnosis, Consultation and Expertise Team' (MDCET), which was set up in response to questions from other societal organisations. This team had a mobile character and could meet the demand of organisations (e.g. schools, social services) for diagnosis, mental health care expertise and consultation 'on the spot'. This added a function to ACT-Youth and increased the flexibility and accessibility of specialized mental health care in Rotterdam.

In the first two years of the transition experiment ACT-Youth (2007 and 2008) about 400 youngsters received care, with a marginal drop-out rate and no incidents or suicides. These results can be mainly attributed to the highly motivated ACT professionals (which is emphasized by the low employee turnover and low absence due to illness), who believed in the ACT approach despite of the internal and external threats (section 7.4.2).

In general an important result of ACT-Youth was that it obtained a strong position in Rotterdam. Because of ACT-Youth the Rotterdam mental health care institute could 'descend from its ivory tower' and could connect to the other organisations that are dealing with youngsters in Rotterdam (e.g. Social Services, youth care providers, educational institutes, the Rotterdam Public Health Service). Because of ACT-Youth the Rotterdam mental health care institute was an active partner in the regional programme "Every Child Wins" (2007-2009).

Outside Rotterdam, ACT-Youth was also brought under the attention of important national media and policy makers. Concrete results of the *broadening* of ACT-Youth (section 7.4.3) included similar ACT-Youth initiatives in The Hague and Brabant. With regard to *scaling-up*, ACT-Youth has succeeded in embedding its radically new approach at the level of their own organisation, the (regional) network and to a lesser extent the (national) system (section 7.4.3). However, at the end of 2008 many institutional and financial barriers (section 7.4.2) still had to be overcome and the last year of the ACT-Youth transition experiment (2009) will therefore be crucial in realising ACT-Youth's potential to scale up.

7.4 Managing ACT-Youth Rotterdam (2007/2008)

This section analyses how ACT-Youth was managed, by applying the concepts of transition management and specifically the conceptual framework on transition experiments (Chapter 3). The analysis consists of four parts: (1) the approach that was followed in this transition experiment, (2) the barriers that were encountered, (3) the management activities (in terms of *deepening, broadening and scaling-up*) to overcome these barriers and contribute to a transition process and (4) the interaction with the Transition Programme in Long-term Care. The section focuses on the period July 2007 to July 2008 (in which the researcher was actively involved), but it includes previous developments whenever this is relevant. It should also be noted that this section describes the experiences with managing ACT-Youth in a systematic, analytical way (to illustrate how the conceptual framework on transition experiments can be applied for analysing transition experiments), while section 7.5 elaborates on this analysis with a reflection and by drawing general lessons.

7.4.1 Approach: transition experiment characteristics

The approach that was followed to experiment with the ACT-Youth teams in Rotterdam can be framed in terms of the characteristics of a transition experiment (Table 3.1, Chapter 3):

Starting point: ACT-Youth started from the *societal challenge* that a substantial group[7] of youngsters who suffer from complex psychosocial and psychiatric problems are not reached by the current mental health care institutes. These youngsters are in urgent need of mental health care in order to prevent an increase of their specific problems *and* to prevent an increase in societal problems and related costs (e.g. school drop-outs, crime, vandalism).

Nature of the problem: The problem that ACT-Youth addressed can be understood at the level of society and at the individual level of the youngsters: (1) At a societal level the main persistent problem is that the current mental health care system (and the related youth care system) is not able to reach a substantial group of youngsters. This problem is persistent because previous initiatives in the previous decades have not been able to overcome this problem (e.g. to improve the mental health care system in the eighties the RIAGGs – Regional Institutes for Ambulant Mental Health Care- were founded. The RIAGGs were initially aimed at working close to people in need of care, but because

7. Based on field research and a literature study the target group of ACT-Youth was estimated at 600 youngsters between ages 12 and 24 in Rotterdam (Zimmermann, 2004).

of bureaucracy and institutionalisation now most professionals in the (former) RIAGGs work from behind their desks). This persistent problem is highly *complex* because there are many actors and factors involved and the resulting costs for society are *uncertain*. (2) The problems at the individual level of the youngster can also be characterised as *complex* because they involve many areas of life (e.g. housing, finance, school, work, family, daily activities, psychiatry) and are related to different institutions (rules and regulations, care providers, financial structures). The exact cause and nature of these problems are also often very *uncertain*.

Objective: The ACT-Youth project plan, drafted for the Transition Programme in Long-term Care, included three different types of objectives: substance objectives, learning objectives and transition objectives (Box 7.3). The latter explicitly stated the ambition to *contribute to societal change* within the sub-system of mental health care for youngsters in Rotterdam and eventually the Netherlands.

Perspective: The experiment with the ACT teams did not start with an explicit *long-term* perspective. However, during the experiment a strategy was developed to work towards a future image of 20 ACT teams in Rotterdam. Different types of ACT teams could then cover various degrees of psychological and psychiatric problems within the total estimated target group in Rotterdam (approximately 2000 youngsters, with problems of various degrees of complexity).

Method: ACT-Youth did not follow an explicit method for experimentation. ACT-Youth started with a learning-by-doing approach, that was (partly) protected from mainstream pressure and that stimulated pioneering. When ACT-Youth was supported by the Transition Programme, more attention was provided to learning, evaluation and monitoring. The experimentation approach can be characterised as an *open search and learning process*.

Learning: Right from the beginning the learning process of ACT-Youth can be characterised as *second order*. The existing institutions were questioned and new practices were developed that were based on a different frame of reference (e.g. not the institution but the youngster is central). The learning also took place at a *collective level* (including managers, professionals, youngsters) and involved *multiple domains* (e.g. mental health care institutes, schools, the Rebound Centre, Social Services).

Actors: The core of ACT-Youth is that care professionals from multiple disciplines (e.g. child and youth psychiatry, social psychiatric nursing, (social) psychology, social work) work together as a team. Furthermore, *'multi-actor alliance (across society)'* were devel-

oped that included other youth-related organisations to provide a balanced care chain, which is centred around the youngster.

Experiment context: After the initial field research and literature study (Zimmermann, 2004) the first ACT team was set up in January 2005. The team was located in an old industrial hall in the Rotterdam harbour area (the Schiehaven), where the 'Rebound Centre[8]' for youngsters with multiple problems was also located. Based on the first 'hands on' experiences, 5 ACT teams in total were set up at different locations in Rotterdam (schools, Rebound Centre, district centre, cultural centre). These 5 ACT teams received direct (financial) support from the Transition Programme in Long-term Care (from 2007 to 2009). This enabled learning in a *real-life societal context.*

Management context: The management of the ACT teams consisted of several management layers: the management of the daily operation of the ACT teams (responsibility of team managers), the management of the overall organisation of ACT-Youth (responsibility of general manager), the management of the innovation process (responsibility of innovation manager) and the 'management' of the transition process (responsibility of both the innovation manager and the Transition Programme in Long-term Care). The broader management context of the ACT-Youth experiment can be characterised as *Transition Management (TM)*, which was the main steering approach in the Transition Programme in Long-term Care. However, the 'bottom-up' TM approach that was applied in the Transition Programme deviated from the 'top-down' approach as described in the existing literature (Chapter 2). The main difference was that ACT-Youth was not selected based on a long-term vision and transition pathways (Chapter 6). Also some elements of TM were practised differently in ACT-Youth, including: a field research instead of an integrated systems analysis, starting with solving urgent societal problems instead of starting with developing a long-term version. Similarities with the theoretical TM approach (Loorbach, 2007) included: mobilising actors (frontrunners) and executing a transition experiment, monitoring, evaluation and learning.

7.4.2 Barriers

ACT-Youth encountered many barriers, especially during the start-up phase (August-December 2007) of the Transition Programme in Long-term Care. Based on various reports that were drafted for the Transition Programme, this section identifies three types of barriers: (1) institutional (system) barriers, (2) financial (system) barriers and (3) organisational/management barriers (also related to 'mental/psychological barriers').

8. The Rebound Centre, Centre for New Education and Innovation offers practice-oriented education, sport, internships and work to youngsters that need 'a new chance to score'. www.reboundcentre.nl

1. Institutional (system) barriers

The ACT teams were set up within the institutional context of the mental health care system in the Netherlands (the Dutch abbreviation for this system is "GGZ"). In the annual report of ACT-Youth 2007[9] this system was characterised as follows: "The mental health care system is primarily aimed at and is paid for diagnosis and, related to this, treatment of psychiatric problems. If an indication for mental health problems is lacking or the youngster does not want to be helped, then the usual practice is that nothing happens. The mental health care system for the youth is organised in this way: supply-driven, long waiting lists and institutionally organised around specific problem areas. Since the current system is already under pressure, it lacks incentives for creating a new integrated supply which is only partially financed and where youngsters are helped without first diagnosing their mental problems according to the protocols (DSM-4 diagnostic criteria). In fact, ACT-Youth cannot become successful within the boundaries of the mental health care system."

Within the context of this system, it was very difficult for ACT-Youth to contribute to a transition process. The vision of the innovation manager of ACT-Youth was to move the ACT approach outside the Rotterdam mental health care institute (because the demand for mental health care for youngsters was much larger than the available supply). Keeping ACT-Youth within its own institutional boundaries would limit further growth in meeting the needs of youngsters. However, this was not the main priority of the mental health care institute (like every organisation in a market-driven sector, like the current Dutch care sector, its main priority was economic survival and continuation). Other institutional barriers and dilemmas involved:

Barriers regarding structure:

- *Fragmentation*. ACT-Youth aimed to help youngsters who think, act and feel in a fragmented way, while the existing supply of mental health care and social work was also highly fragmented.
- *Specialisation*. The ACT approach aimed to influence all the domains in a youngster's life (e.g. school, housing, working, family), while the mental health care system was focussed on psychiatric problems and further specialised in specific psychiatric problems (e.g. anxiety, borderline, depression, schizophrenia, autism).

Barrier regarding culture:

- *Problem perception.* ACT-Youth acknowledged that youngsters don't perceive their problems as 'mental', but experience different types of related problems (e.g. dropping out of school, lack of money). Hence, the ACT approach often started without a clearly defined mental health care question, whereas the mental health care system

9. Source: ACT Youth (2008). (Chapter "Learning experiences")

was based on the perception that "when somebody doesn't want mental health care or can't be treated, no care can be provided".

Barrier regarding practice:

– *Complaint-diagnosis-treatment*. In the ACT teams the treatment of psychiatric problems was often started with building up trust and providing practical support, without first conducting a diagnosis, whereas the current care system only finances treatment that is based on DSM-4 diagnostic criteria (related to the dominant practice of 'complaint-diagnosis-treatment', Van Raak, *forthcoming*).

2. Financial (system) barriers

The current financing of mental health care for youngsters takes place through the AWBZ system (Chapter 6). Because the ACT approach deviated from the prevailing mental health care system, the ACT teams faced many financial barriers. Necessary costs that were *not* financed by the current financing system included:[10]

– More than one contact moment a day (which was necessary for the target group)
– No-show contacts (especially in the beginning of a therapy the clients of ACT-Youth often did not show up, because of care-avoiding and 'therapy disloyal' behaviour; hence the ACT teams needed to actively approach the clients with the risk of not finding them);
– Contacts with clients that were temporarily staying in an external clinical setting, because this was regarded as double granting (it was often necessary to remain in contact with a client to achieve a lasting impact of interventions);
– Visits to clients by two care professionals, instead of one (this was required in case of safety or a high complexity of the problems);
– Contacts that take longer than 45 minutes;
– Time that is spent for client finding and contacts with third parties (e.g. meetings with other care institutes);

These barriers threatened the continuation of the ACT teams and led to a financing shortage. The project plan of ACT-Youth estimated[11] that for each ACT team 300,000 euros financial support a year was needed, to cover all activities that were not covered by the present (AWBZ) financing system. This financing shortage was temporarily compensated by the financial support of the Transition Programme in Long-term Care. However, searching for structural financing was explicitly defined as a learning objective in the ACT-Youth project plan.

10. Source: ACT-Youth (2007).

11. The innovation manager of ACT-Youth experienced many difficulties with writing the "business case", as part of the project plan, because the financial shortage could not be precisely calculated.

3. Organisational/management barriers

In 2007 important developments in the organisational context of ACT-Youth took place, including economy measures and a merger with another large mental health care institute. This resulted in a downscaling of the organisational budget, a limit to further growth and waiting lists for the ACT teams.[12] The 5 ACT teams that were operating at various locations had been developed by a quick, 'organic' (pioneering) type of growth. However, this growth was insufficiently based on strategic choices and adequate organisational management was lacking.[13] At the end of 2007 ACT-Youth had grown out of the 'pioneering phase' and was in need of organisational restructuring. The Transition Programme in Long-term Care supported this process by conducting an experiment scan.[14] This led to the conclusion that "ACT-Youth had grown too fast, without 'crystallising out' the primary process and business case, and without organising the related governance".

Identified organisational barriers included:

- The management provided insufficient attention to the professionals working in the ACT teams; the case loads were too high, the teams were too small and did not include all the necessary disciplines and very little attention was paid to training and expertise development. This resulted in a 'stripped' organisational structure of the ACT teams (with a high risk of "imploding"), which could only survive because of the high motivation of the ACT-Youth professionals (who risked getting "burned out").[15]
- The development of the ACT-Youth project (including the barriers) was insufficiently systematically reported. The communication and information supply was weak.
- A strategic plan for broadening or scaling-up was lacking. An underlying cause was the lack of strategic management.
- The people who were directly involved in ACT-Youth experienced insufficient support (or "sponsorship") from the top of the organisation (partly because of a low visibility of directors).
- The management was unclear about the division of roles, tasks, responsibilities (e.g. regarding treatment) and power within the different levels of ACT-Youth (e.g. overall management, innovation management, team leaders, professionals).

These organisational barriers also resulted in a loss of trust in the ACT approach, both external (e.g. other care institutes and network partners) and internal (e.g. the directors and other departments of the parent organisation), which can be regarded as '*mental barriers*' that limited the successful development of ACT-Youth.

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12. Source: ACT-Youth (2008). (chapter "Barriers")
13. Source: ACT-Youth (2008). (chapter "Learning experiences")
14. Source: Demoulin and Felius (2007).
15. Source: SWOT analysis, ACT-Youth meeting, November 8, 2007 and interview with new general manager of ACT-Youth (who started in January 2008)

The experiment scan provided a confirmation of what had been discussed in meetings, but because this was now reported it provided a good starting point for communication and further action.

7.4.3 Management activities: deepening, broadening and scaling-up

This section focuses on the 'management activities' of the innovation manager and the general manager of ACT-Youth (and excludes the activities of the ACT team managers), to overcome the encountered barriers and contribute to a transition process. The Transition Programme in Long-term Care supported these management activities, which included facilitating and structuring activities for learning, strategy development and monitoring (elaborated in Chapter 6). In the monitoring of ACT-Youth the guiding dimensions *deepening, broadening* and *scaling-up* were explicitly applied to structure and prioritise management activities. In this section *deepening, broadening* and *scaling-up* are applied to describe concrete examples of the various management activities and to provide additional theoretical explanations about how ACT-Youth was managed (within a transition context).

Management activities regarding 'deepening'

In its pioneering phase (2005-2007), ACT-Youth was set up as a *niche* within the mental health care institute in Rotterdam. This niche fulfilled an existing societal need in a radically different way and was (partly) *protected from mainstream pressure* in the organisation. Within this niche learning could take place, but it was not structured (e.g. no learning objectives were defined, learning experiences were not reported or monitored) and therefore mainly resulted in 'tacit knowledge'. The *reporting of learning experiences* mainly took place just before the first ACT team was set up (when the innovation manager conducted a field research, Zimmermann 2004) and after the start-up phase of the first ACT team (when a research project evaluated the ACT approach, Van Dijk et al., 2006).

In this pioneering phase the first ACT team (located in the Rebound Centre) was quickly followed up by similar teams in different contexts (two schools, a district centre and a cultural centre). However, no explicit learning took place about the differences in each context. When the Transition Programme in Long-term Care started to support ACT-Youth, explicit *learning objectives* were formulated by the innovation manager (Box 7.3).

In the start-up phase of the Transition Programme in Long-term Care (August to December 2007) it became clear, through formal and informal meetings with the innovation manager of ACT-Youth, that the quick and unstructured growth of the ACT-Youth teams had resulted in many barriers (previous section). The Transition Programme in Long-term Care stimulated a reorganisation of ACT-Youth to overcome the barriers and

Substance objectives:
- Further developing the current five ACT teams to reach a large group of youth, who are not reached by the incumbent institutes such as the mental health care institutes (GGZ), social services and schools. The current five teams are located in various environments of youngsters: in the Rebound Centre, in the Albeda college, in a VMBO school, in a district centre and in a cultural centre that organises pre- and after-school activities. The further development of these five teams is part of this transition project.
- Searching for a suitable financing structure that provides continuity to the innovative and preventive approach;

Learning objectives:
- Insight into administrative, organisational and managerial aspects that make the project possible;
- Insight into success factors and barriers (if possible distinguishing between specific factors for the Rotterdam context and more general factors);
- Positioning the project in a development direction (transition) (among other things by participating in the Transition Programme in Long-term Care);

Transition objectives:
- Influencing the dominant way of organising, thinking and doing with regard to the guidance, care and support of 'problem youth' that are difficult to reach. Working towards scaling-up within the Rotterdam region (transcending existing institutes), as well as within the Netherlands (broadening to other cities);

Box 7.3 Project objectives in final project plan (ACT-Youth, 2007)

develop clear organisational structures, culture and practices (next section). This also further *structured the learning process*, e.g. in 2008 regular transition meetings were facilitated (with the innovation manager, a new general manager of ACT-Youth and two Programme Team members) to discuss the progress in the transition experiment. Every few months a *monitoring meeting* also took place to discuss and report the learning experiences and define or redefine management priorities (Box 7.4).

In the beginning of 2008 a *strategic session* was organised with the team managers of ACT-Youth, as was a *policy session* with the ACT-Youth employees.[16] These sessions contributed to involving more actors in the learning process and together defining problems and solutions. One problem that was experienced was the lack of attention, within the ACT teams, for educating and further developing the knowledge and expertise about the ACT approach. Hence, in 2008 an *education programme* was developed, which allowed all ACT-Youth teams to develop a shared understanding about the ACT method.

16. In 2007 and 2008, the target group of ACT-Youth (the youngsters in Rotterdam) were only involved as clients of the ACT approach, but did not participate in the transition experiment (e.g. in the learning and monitoring process). In 2009 a first step to stimulate more client participation involved the realisation of an interactive website "Active Youngsters Rotterdam". www.transitieprogramma.nl/act

	Deepening	Broadening	Scaling-up
Direction	*1. Strategy session (to redefine the mission, vision and approach of ACT-Youth together with team managers)*	*4. Informing the top of the organisation* *6. Communication/PR-plan (internal & external)*	*5. External media (e.g. independent journalists)*
Change	*2. Structuring the teams (to overcome organisational barriers)* *3. Team meetings & meetings Transition Programme* *3b Transition monitoring* *3c Client participation (e.g. in web paper)*	*9. Broadening within region (e.g. cooperating with partners, pilot The New Chance)* 10. Broadening outside region (supporting in setting up ACT-Youth in different cities)	
Sustainability	*7.Business case (including long-term structural financing)* 8.Social Return on Investment (insight into societal costs& benefits)	11. Knowledge centre (positioning ACT-Youth in national ACT knowledge centre and related literature and research)	

Box 7.4 Management priorities defined in first transition monitoring meeting of ACT-Youth (italic activities have short-term priority). Based on transition monitoring framework (Chapter 6). Note: scaling-up was not defined as a priority yet.

The ACT-Youth employees also expressed a need for sharing their learning experiences within the organisation. This need was addressed by setting up an interface between the professionals and the management of ACT-Youth (in so-called *product groups* the ACT professionals could further develop and improve the ACT-Youth approach).

A general learning experience involved the problems with financing the ACT approach, since a substantial part of the work of the ACT teams could not be financed by the existing (AWBZ) financing system (previous section). An important management activity was to develop a *Societal Business Case* (with support of the Transition Programme), which would investigate the possibilities for structural financing of ACT-Youth.

To share learning experiences within the sector, the management of ACT-Youth gave various presentations and workshops at conferences in the Netherlands (five), USA and Curaçao.

Management activities regarding 'broadening'

When ACT-Youth started, the basic approach was adopted from the existing ACT approach that was *developed in another context* (adults with psychiatric problems in the USA). However, because the target group (youngsters with complex problems in

multiple aspects of life) and context (e.g. school, social network) in Rotterdam were different, at first ACT-Youth *took distance* from ACT-adults. This space to "do it our own way" was considered necessary because the problems and networks of youth strongly deviate from adults. After the pioneering phase of ACT-Youth, the management wanted to get more *insight into the similarities and differences* with ACT-adults and wanted to *cooperate in conducting research*. Therefore, renewed connections to ACT-adults within the own organisation were initiated by the new general manager of ACT-Youth (who had also previously worked for ACT-adults).

The first ACT team was located in the innovative Rebound Centre, which was initiated and managed by a Rotterdam entrepreneur (a successful 'niche-actor'). This *connection to another innovation with a different function* (training of youngsters that had dropped out of school) was an important initial success factor of ACT-Youth. The success of the Rebound Centre reinforced the success of the ACT teams and both approaches complemented each other: the Rebound Centre could make use of the ACT team to support youngsters with psychiatric problems and the ACT team could easily reach a large number of "drop outs" with a high risk of suffering from mental problems. As a result of active networking in the Rotterdam region, the ACT approach was also incorporated in the Rotterdam pilot 'The New Chance (DNK)', which was part of a national pilot programme for youngsters with behavioural problems at six locations. The mental health problems that emerged from this target group were assessed and dealt with by the ACT teams.

In 2008 a *specialised ACT team* was set up which could provide 'Mobile Diagnosis, Consultation and Expertise' in order to provide temporary mental health care expertise in other youth-related organisations (e.g. schools, district centres, youth care providers). This team had a high flexibility and accessibility and *added a function* to the normal ACT teams.

Other concrete examples of 'broadening' included the involvement of the management of ACT-Youth Rotterdam in *setting up similar ACT teams* within other organisations and regions (e.g. Tender Youth Care in Brabant, De Jutters in The Hague). The innovation manager of ACT-Youth also explored *connections to other transition experiments* in the Transition Programme in Long-term Care (e.g. Permanently Better -with FACT method- and Meeting Place Prinsenhof), to learn from each other and cooperate in knowledge development (e.g. setting up an ACT knowledge centre) and *exploring other target groups of ACT* (e.g. the elderly). In 2008, a first connection with District Care was initiated too.[17] ACT-Youth and District Care could learn a lot from each other because of their similarities and differences (Box 7.5).

17. At the end of 2008, this connection was further supported by the Transition Programme in Long-term Care by facilitating a cluster of transition experiments in Rotterdam, including ACT-Youth, District Care (which was also active in Rotterdam), Prinsenhof and Presence (Chapter 6).

Management activities regarding 'scaling-up'

In the ACT-Youth transition experiment three levels of embedding can be recognised: (1) (local) organisational embedding, (2) (regional) network embedding and (3) (national) system embedding. At all these levels, which are nested and interrelated, different management activities took place. These activities can be characterised in terms of stimulating the embedding of ACT-Youth in –new- dominant structure, culture and practices. This can be theoretically conceptualised in terms of stimulating developments in different 'constellations' (e.g. niches, niche-regimes and regimes, Chapter 2).

(1) (local) organisational embedding

The 'organisational embedding' involved all activities aimed at making the new ACT practice, and related structure and culture, a stable part of the mental health care institute in Rotterdam. The underlying idea was that by *obtaining a stable position*, ACT-Youth would have a higher chance of continuing to exist in the long term and influencing the mainstream organisation (in a sustainable direction). Theoretically this process can be understood as increasing the stability and influence of the *niche* that was created within the existing mental health care institute. In their pioneering phase ACT-Youth had developed independently of the regular organisational structures and related practices and culture, but from 2008 onwards the new general manager of ACT-Youth tried to embed the ACT approach in the organisation. Concrete examples of management activities aimed at organisational embedding included:

- In the beginning of 2008 the new general manager *reorganised the ACT teams*. One of the recommendations from the experiment scan was to limit the number of teams and focus on small cores with a high quality. In a strategic session with the ACT team managers it was decided to reduce the number of teams from 5 to 3. In addition, the general manager stimulated a 'standard ACT-Youth *practice*' (e.g. by providing education and training programmes to ACT-Youth professionals and by working towards an evidence-based ACT-Youth approach) and related *structures* (e.g. protocols and standards such as the minimum number of daily contacts) and organisation *culture* (e.g. stimulating the outreaching approach by reducing the time for meetings).
- ACT-Youth was *incorporated in a new independent care company* 'Child and Youth Psychiatry', which was part of the existing mental health care institute. Next to the ACT approach, this independent care company included regular mental health care approaches for youngsters (e.g. the former 'RIAGG', forensic psychiatry, autism teams). The ACT approach thus became further embedded in the dominant organisational structure and practices, next to the existing approaches.
- In 2008 ACT-Youth also started to *refer some youngsters to the regular mental health care approaches*. In this way the ACT-Youth teams could keep their focus on their

core target group: "youngsters with psychiatric problems who cannot find their way to the regular care system (source: Child and Youth Psychiatry website, www.lucertis.nl)". This also reduced the waiting lists of ACT-Youth.

(2) (Regional) network embedding

The 'network embedding' involved all activities aimed at making the ACT teams a regular partner in the total network that provides (mental) health care to youngsters in the Rotterdam region. The aim of this regional embedding was improving the network structure, to the benefit of the youngsters in Rotterdam.

Theoretically this process can partly be explained by the development of a *niche-cluster* in the Rotterdam region, which connected the ACT approach to other new approaches (*niches*). However, to embed ACT-Youth further in the Rotterdam region, many connections to existing organisations were also stimulated. Theoretically this can be understood as a process of aligning the *niche* with the mainstream environment or *regime*, which Smith (2007) explains as '*the translation of niche practices to the regime*'. Concrete examples of management activities aimed at (regional) network embedding included:

- The director and the innovation manager of ACT-Youth actively participated in the *regional programme 'Every Child Wins'* (2007-2009). This programme was set up by a network of youth-related organisations in the Rotterdam region (e.g. municipalities, youth health care, education, the welfare sector, Social Services, youth care providers, youth mental health care, the Ministry of Justice, the police, child judges). Their *shared aim* was to realise a break-through in the current mismatch between the 'supply' of the youth-related organisations in Rotterdam and the 'demands' of youth with developmental or behavioural problems.
- The reorganisation of ACT-Youth in 2008 contributed to *positive "image-building"* (after an initial period of distrust caused by the many organisational problems of ACT-Youth). This increased the demand for the ACT approach from other youth-related organisations. By linking to these organisations, ACT-Youth could further contribute to a *network of youth-related organisations in Rotterdam* centred around the youngster (*niche-cluster*).

(3) (National) system embedding

The 'system embedding' involved all activities aimed at overcoming the temporary status of the ACT-Youth transition experiment and making the ACT approach a lasting part of the (mental health) care system in the Netherlands. In 2007 and the beginning of 2008, this type of embedding at the national level was acknowledged as very important but did not have the first priority of the ACT-Youth management. Hence, only few activities aimed at system embedding were conducted. Both theoretically and practically, a

In 2008 ACT-Youth increased its contacts with the transition experiment District Care, to share experiences and learn from each other. Regarding scaling-up at the system level, several lessons can be learned from District Care (described in Chapter 6). Just like ACT-Youth, the District Care transition experiment started with 5 teams (in September 2007). But at the end of 2007 15 District Care teams had been realised, which rapidly increased in 2008 and in the beginning of 2009 a total number of 100 District Care teams had been realised all over the Netherlands. Both ACT-Youth and District Care had the objective to scale up their innovative care practices within the Netherlands. However, their 'scaling-up strategies' and related transition patterns were quite different. District Care was created independently from the prevailing care institutes (*regime*) and provided a deviant home care approach (*niche*), which quickly grew and could fulfil a substantial part of the need for home care. Theoretically this growing number of District Care teams can be understood as the development of a new constellation of structure, culture and practices (*niche-regime*) that could compete with the dominant constellation (*regime*). Contrary to this *empowerment pattern* (Chapter 2), the ACT-Youth approach was developed as a *niche* within an existing care institute. The management activities of ACT-Youth were mainly aimed at embedding the ACT approach in the existing regime, which can be understood as a *pattern of regime adaptation* (Chapter 2). While both District Care and ACT-Youth had to cooperate with 'regime-actors' (e.g. Care Offices) to realise their goals, their position regarding this regime was fundamentally different. District Care developed as an *outsider* to the regime and ACT-Youth developed in a (partly) protected space *within* the regime. The quick scaling up of District Care could partly be explained by its independent and flexible character, which allowed setting up new District Care teams all around the Netherlands. Other important success factors included cutting down unnecessary management layers and the special competences of the initiator of District Care. The quick growth of District Care can be characterised by *little initial organisational and institutional resistance*; however, as a result of its success District Care encountered *much regime resistance at a later stage* (e.g. the regime was 'striking back').
For ACT-Youth such a quick scaling-up strategy was more difficult because of its dependence on the existing mental health care institute (which caused *many initial institutional and organisational barriers*, section 7.4.2). However, ACT-Youth could learn from the regime resistance that was encountered by District Care. Because of the different starting position of ACT-Youth, the regime resistance during scaling-up might also be different. Follow-up research could elaborate on these differences between the scaling up of District Care and ACT-Youth.

Box 7.5 Learning from the scaling up of District Care

lot can be learned from the experiences of District Care, regarding system embedding (Box 7.5).

- In 2008 structural financing of ACT-Youth was still a major challenge (structural or permanent for a period of at least 5 years). With support of the Transition Programme in Long-term Care, ACT-Youth started to develop a *Societal Business Case* to calculate and demonstrate its societal costs and benefits.
- The ACT-Youth management continuously stimulated *media attention* at the national level. The Transition Programme in Long-term Care supported this by com-

missioning an independent journalist to write an in-depth story about ACT-Youth and bringing ACT-Youth to the attention of documentary makers.
– The ACT approach was brought to the notice of *important policy makers*, e.g. by inviting the Minister of Youth and Families for a working visit.

7.4.4 Interaction with Transition Programme in Long-term Care

The interaction between ACT-Youth and the Transition Programme in Long-term Care can be characterised as a process in which ACT-Youth and the Transition Programme were interdependent. The Transition Programme needed ACT-Youth because this transition experiment had a high appeal and high sense of urgency and could be used to learn about and stimulate a transition in long-term care. And ACT-Youth needed the support of the Transition Programme to obtain enough *space* for further development, change and learning within the ACT-teams. This section focuses on the *different types of space* that were provided to ACT-Youth: (1) financial space, (2) organisational space, (3) (transition) management space, (4) mental space, (5) juridical space and (6) geographical space. This space was enabled by different *resources* of the Transition Programme, including money, knowledge and expertise (e.g. regarding organisational management and Transition Management), language (e.g. transition discourse) and connections with regime-actors (e.g. the Ministry and Care Offices). *Activities* in which the interaction between ACT-Youth and the Transition Programme took place included: providing personal guidance (e.g. by regular meetings with two members of the Programme Team[18]), facilitating learning within ACT-Youth (section 7.4.3) and between ACT-Youth and the other transition experiments (Chapter 6), monitoring, research and analysis (e.g. interviews for reflection) and PR and communication.

Financial space was provided by means of a grant from the Transition Programme between September 2007 and December 2009 (in total 3,500,000 euros), which was directly spent on the different ACT teams (minus 10% for the project organisation). This provided enough space to continue with the ACT teams, without being completely dependent on the regular financing system (which did not finance all the necessary costs, section 7.3.2). To obtain this grant the innovation manager of ACT-Youth had to write an additional final project plan according to a strict format, which was designed to speed up the contracting and financing process and did not correspond to the steering philosophy of Transition Management (Chapter 6). The innovation manager of ACT-Youth protested against this format because this did not meet his expectation with regard to creating space for experimenting and learning (Box 7.6).

18. ACT-Youth was provided with personal guidance by Jord Neuteboom and Suzanne van den Bosch (DRIFT), in 2007 and 2008. In October 2008 Marieke de Vries (DRIFT) followed up Suzanne van den Bosch.

During the first learning session (Chapter 6) with the first round of transition experiments in the Transition Programme in Long-term Care, the innovation manager of ACT-Youth expressed his vision on guiding transitions. The last slide of his "heart and soul" presentation about ACT-Youth Rotterdam stated:

Transition is change of a different order

Problems cannot be solved within the context in which they originated (Einstein)

If you let go, you can use both hands to make changes (block-calendar for the Coach)

Suggestion not to think SMART for a moment

Box 7.6 Protests against requested SMART formulation of project plan (Source: Heart and soul presentation ACT-Youth, July 12, 2007)

In addition to providing a temporary grant, the Transition Programme also supported ACT-Youth with developing a Societal Business Case to investigate the possibilities for structural financing.

Organisational space was provided by stimulating a reorganisation of ACT-Youth, which increased the quality of the ACT teams and also increased the internal and external trust in the ACT approach. An important initiator of this reorganisation process involved the experiment scan that was conducted by two Programme Team members (from Ernst&Young).

(Transition) Management space was provided by supporting the innovation manager of ACT-Youth with expert knowledge on developing and managing a transition experiment. Theoretical knowledge on Transition Management was translated into the context of ACT-Youth in three ways. First, the many meetings and sessions with the two Programme Team members (a TM advisor and TM researcher from DRIFT) enabled structuring and stimulating the management activities within ACT-Youth based on TM concepts and tools (e.g. structure / culture / practices, deepening / broadening / scaling-up, transition monitoring). Second, the innovation manager of ACT-Youth participated in the monthly learning sessions with the other transition experiments in the Transition Programme in Long-term Care (Chapter 6). This enabled sharing ideas and experiences with other frontrunners, regarding TM in practice. Third, the innovation manager also participated in a post-academic course on Transition Management, which was facilitated by DRIFT/ Erasmus University Rotterdam. In this way he could increase his expert knowledge on TM and share his practical experiences with other practitioners who were actively involved in transitions (in various sectors).

As a result, the innovation manager of ACT-Youth internalised the TM approach and concepts, which provided new *substance* to how he framed ACT-Youth. This is illustrated by the many presentations in which he integrated slides with TM concepts (including Boxes 7.1, 7.4, 7.6 and 7.7).

Mental space was provided to different participants in ACT-Youth:
(1) The innovation manager, who had to deal with the many barriers in the pioneering phase, was supported by the broader perspective of the Transition Programme. With the support of the Transition Programme ACT-Youth could be *perceived* as a transition experiment, which emphasised its experimental nature and transition potential and prevented ACT-Youth from getting isolated because of institutionalisation. This is illustrated by the following quote: "Other cities are also interested, but my management is mainly focussed on our own organisation. Therefore, it is very nice that you are looking more broadly. I can use some support! We need to look at ACT-Youth from a higher abstraction level." The regular (monitoring) meetings with the two Programme Team members (from DRIFT) also played a role in 'coaching' and empowering the innovation manager.
(2) The highly motivated team managers and professionals working in the ACT teams were further empowered with support of the Transition Programme (e.g. by involving them in a policy session and a 'product group' to develop the ACT approach further). Quotes from the team managers: "The Transition Programme gives a different perspective on our work", "Only now I realise that ACT-Youth is very special" and "It generates positive energy".
(3) The youngsters themselves were provided with a virtual platform (the 'web paper' Active Youngsters Rotterdam) to stimulate participation and online dialogues. This web paper was directly connected to the website of the Transition Programme in Long-term Care (www.transitieprogramma.nl).

Juridical space mainly related to the financial space that was provided to ACT-Youth. The financial resources were allocated to ACT-Youth by means of a modification in an existing policy regulation. The Care Office that had to implement this policy regulation could make use of a standard contract (developed by the Programme Team) which included a lump sum amount to support ACT-Youth. This contract provided a lot of space and flexibility to conduct the ACT-Youth Transition Experiment (e.g. if the resources for the first year were not fully used, they could be utilised in the second year). ACT-Youth therefore did not have to comply with the normal procedures and rules of the Care Offices and related NZa.

Geographical space was mainly provided by stressing the importance of the high 'geographical' flexibility of the ACT teams. An important starting point of the transition

experiment was the fact that normally care providers divide youngsters by their postal code. Whenever a youngster does not fit (anymore) in the postal codes that are related to a certain care provider, then the care usually stops. This results in a fragmented care system; ACT-Youth worked against this system by also helping homeless youngsters without a postal code and by continuing the ACT approach whenever a youngster moves. The Transition Programme in Long-term Care provided this geographical space, and also stimulated broadening ACT-Youth to different locations in the Netherlands (this was an important transition objective in the final project plan of ACT-Youth, Box 7.3).

During a mental health care congress, the innovation manager of ACT-Youth ended his presentation slides with the following interpretation of the different types of spaces:

Make space for change and start with the arenas!

Financial space
'A swan only swims graciously because it peddles fiercely beneath the surface'
(being a show horse and workhorse at the same time)
No more working visits without 'covenant' with concrete agreements independent from existing regimes

Organisational space
'Many managers are like horsemen that tighten the reins just when the horse wants to jump'
Trust is a necessary form of efficiency

Mental space
'Planning does not make things happen, people do'
Give the youngsters the perspective and space to develop themselves (Web paper)
Give the professional development space within his work (Product group)

Juridical space
'In the extreme life has its value, in the average its conservation',
The YOUNGSTER and the professionals are in charge
Cooperate with setting up a regional YOUTH COUNCIL

Geographical space
'You can't always be found at your postal code address'
Not the consultant but the user group determines (relates to the Web paper)

Box 7.7 Interpretation of different types of space (Source: Presentation ACT-Youth, Rehabilitation Congress, December 18, 2008)

7.5 Reflection and lessons learned

This section reflects on the specific way ACT-Youth was managed and draws general lessons regarding setting up and managing a transition experiment. Building upon the previous section, this section is structured in four parts that include a reflection and lessons learned, regarding: (1) the approach that was followed in the experiment, (2) the barriers that were encountered, (3) the management activities (in terms of *deepening, broadening and scaling-up*) and (4) the interaction with the Transition Programme in Long-term Care.

Reflection and lessons learned regarding the approach

The approach that was followed to experiment with the ACT-Youth teams (in 2007 and 2008) was the outcome of the existing management approach of ACT-Youth and the supportive interventions of the Transition Programme in Long-term Care. This approach could be described based on the characteristics of transition experiments (section 7.4.1). Almost all characteristics of transition experiments (Table 3.1) could be recognised in ACT-Youth. A key characteristic of ACT-Youth was that it took a *societal challenge*, which was the outcome of extensive field research, as a starting point to develop a radically different way of mental health care provision to youngsters. One transition experiment characteristic that was initially lacking in ACT-Youth was an explicit *long-term perspective*. A long-term perspective was developed during the transition experiment and was not considered essential at the start of ACT-Youth. This different starting point might be related to the nature of the care sector, in which professionals are driven by the short-term, often urgent needs of people in need of care. This is illustrated by a quote from the innovation manager of ACT-Youth: "The youngsters themselves are my main drivers. And my other driver is that I want to increase the efficiency and effectiveness of mental health care; with the same budget I want to help three times as many youngsters as I do now. I don't know if this is a realistic number, but it is the same thing as starting with the 5 teams, you have to start somewhere."

Follow-up research could study if this drive to solve urgent problems and start experimenting as soon as possible without first developing a long-term vision, is typical for the entire care sector. Furthermore, it would be interesting to elaborate on the differences between applying Transition Management, and specifically the TM instrument 'transition experiments', in the care sector and other sectors.

A general lesson learned is that the *Transition Management context*, which was provided by the Transition Programme in Long-term Care (between 2007 and 2009), influenced how ACT-Youth was selected, how space was provided to develop and manage this transition experiment, how learning was facilitated and how the contribution of ACT-Youth to a transition process in health care was monitored and stimulated (elaborated

in Chapter 6). However, several elements of the TM approach were practiced differently in ACT Youth (section 7.4.1). Furthermore, TM theory lacks an integrated management model at the level of *one* transition experiment. Based on the initial experiences with managing ACT-Youth, building blocks for such a management model can be defined (section 7.6).

Reflection and lessons learned regarding barriers

The barriers that were encountered in the different phases of ACT-Youth (e.g. pioneering phase, reorganisation and start-up phase of the Transition Programme), could be characterised as *institutional (system) barriers, financial (system) barriers* and *organisational / management barriers* (section 7.3.2). These barriers were partly anticipated (e.g. the lack of financing) and were partly the result of a lack of adequate management (e.g. the many organisational problems in the pioneering phase). A general lesson learned is that transition experiments should anticipate different types of barriers, including the identified three categories, added by other possible categories (e.g. *mental / psychological barriers* and *technological barriers*). The ACT-Youth case study shows that dealing with these barriers requires a type of management that balances between being flexible and structuring activities, between taking risks (e.g. financial risks) and looking for temporary protection (e.g. a grant) and between leaving options open and strong decision making. This balance in the management of the ACT-Youth transition experiment was partly realised because of the two different roles of the innovation manager and general manager. The first role was mainly aimed at stimulating radical innovation (changing the dominant structure, culture and practices), while the second role was mainly aimed at making the innovative ACT-Youth approach a stable and permanent part of the organisation. To overcome the identified barriers, the two different managers also cooperated a lot (e.g. in internal meetings, networking activities and contacts with external partners).

Reflection and lessons learned regarding management activities

The different types of managers in ACT-Youth (e.g. an innovation manager, general manager and team managers) were related to the institutional context of ACT-Youth (a large mental health care institute) in which this management model was the standard. However, a transition experiment also requires fundamentally different management activities that are based on specific starting points and objectives. The different types of management activities of ACT-Youth could be described in terms of *deepening, broadening* and *scaling-up* (section 7.4.3). With these three guiding dimensions the Transition Programme also supported the general manager and innovation manager of ACT-Youth with structuring and prioritising their activities (illustrated in Box 7.4). However, to provide further guidance to project managers these guiding dimensions should be

worked out in more detail. Specific lessons learned regarding managing the transition experiment ACT-Youth, include the following key management activities:

- *Deepening:* (i) Structuring the learning process, which resulted in: explicit learning objectives, learning about all relevant aspects of a societal challenge (e.g. financial aspects, institutional aspects), regular learning meetings and reporting of learning experiences. (ii) Involving different types of actors in the learning process: so-called 'product groups' were set up in which the ACT professionals could further develop and improve the ACT-Youth approach, and the youngsters themselves were involved by a virtual platform (the 'web paper' Active Youngsters Rotterdam). (iii) Feeding back the learning results as much as possible to strategic actors (including directors and policy makers).
- *Broadening:* (i) Experimenting with the ACT approach in different contexts (e.g. ACT-Youth addressed a new target group, and the ACT teams were repeated at different locations). (ii) Connecting ACT Youth to similar innovations with a different function (e.g. the Rebound Centre in Rotterdam). (iii) Adding a function to the existing ACT-Youth teams (e.g. the 'Mobile Diagnosis, Consultation and Expertise' team). (iv) Setting up similar ACT teams within other organisations and regions (e.g. Tender Youth Care in Brabant, De Jutters in The Hague).
- *Scaling-up:* (i) Embedding ACT-Youth in the dominant structure and related practices and culture of the Rotterdam mental health care organisation (e.g. ACT-Youth was incorporated in a new independent care company 'Child and Youth Psychiatry'). (ii) Cooperating with other organisations in the regional network 'Every Child Wins' (niche-cluster), which aimed at realising a breakthrough in the current mismatch between the *supply* of the youth-related organisations in Rotterdam and the *demands* of youth with developmental or behavioural problems. (iii) Bringing ACT-Youth to the attention of important national media and policy makers (who are part of the 'regime'). (iv) Investigating how ACT-Youth could be structurally financed (e.g. by developing a Societal Business Case).

Reflection and lessons learned regarding interaction with the Transition Programme

The interaction between ACT-Youth and the Transition Programme in Long-term Care mainly took place through regular meetings with the managers of ACT-Youth and two members of the Programme Team. In addition the innovation manager of ACT-Youth participated in the monthly learning sessions with the other transition experiments of the Transition Programme. In 2007 and 2008 no interaction with the Transition Arena took place, because the Arena had just started (in March 2008).

The support that was provided by the Transition Programme in Long-term Care could be characterised in terms of *financial space, organisational space, (transition) management space, mental space, juridical space* and *geographical space* (section 7.4.4). Next

to providing financial and juridical space (e.g. fewer rules), the interaction with the Transition Programme mainly provided 'mental space' for the various participants of ACT-Youth. This mental space was important for reinforcing the *special (experimental) status* of ACT-Youth and for broadening the perspective on ACT-Youth by connecting it to a transition that transcends their own organisation.

Without the support of the Transition Programme in Long-term Care, it would have been very difficult (if not impossible) for ACT-Youth to survive the many organisational, institutional and financial problems (section 7.4.2). Furthermore, the Transition Programme supported ACT-Youth with a Transition Management approach (e.g. stimulating learning, reflection, transition monitoring and strategic activities for deepening, broadening and scaling-up), which also changed the set-up, objectives and priorities of ACT-Youth (illustrated in Box 7.3 and 7.4).

A general lesson learned is that the main function of a Transition Programme should be enabling different types of space for experimentation. However, because a programme is often temporary it should also stimulate the continuation of successful transition experiments, for example by: investigating the possibilities for structural financing, stimulating organisational embedding, coaching project managers, stimulating the embedding of radically new approaches in the dominant system (e.g. by taking away constraining rules and regulations) and stimulating broadening the geographical scale of the experiment.

7.6 Conclusions and recommendations

This case study contributed to answering the research sub-questions: "What are the distinguishing characteristics of a transition experiment?" and "How to manage transition experiments?". ACT-Youth provides an example of a transition experiment that can potentially contribute to a transition in the mental health care system for youngsters. The Transition Programme in Long-term Care had an important role in recognising the transition potential of ACT-Youth (which was the outcome of an extensive selection process, Chapter 6) and providing *different types of space* to develop and manage ACT-Youth as a transition experiment. ACT-Youth can be characterised as a transition experiment because it started with a clear societal challenge (section 7.4.1) and paid explicit attention to learning aimed at contributing to a transition. The desired 'transition effects' were framed in terms of changes in structure, culture and practices (Box 7.1). Many of the barriers that were encountered while setting up ACT-Youth can be related to these desired system changes (including institutional and financial barriers). The management activities within ACT-Youth included various activities for *deepening, broadening* and *scaling-up* (section 7.4.3.). This case study therefore shows that these

three guiding dimensions can be recognised in a transition experiment and can also be applied to structure and guide the management activities (e.g. illustrated in Box 7.4). When ACT-Youth started, an integrated management model for transition experiments did not exist. Just like the experiment itself, the management approach was characterised by searching and learning and trial-and-error. From this case study *10 building blocks* for developing such an integrated management model for transition experiments can be derived, including: (1) clearly defining a societal challenge (e.g. by conducting a field research), (2) developing an innovative practice (e.g. by translating innovative practices to a new context), (3) exploring related innovative practices (e.g. within a certain region), (4) developing a broad consortium that could address different aspects of the societal challenge (e.g. by linking to existing innovative initiatives in the region), (5) starting with the radically new practice, and related structure and culture on a local scale (e.g. by setting up a team at a specific location), (6) developing an environment for learning, monitoring and reflection (e.g. by developing learning objectives and reporting learning experiences), (7) adjusting the course of the experiment based on learning experiences (e.g. by reorganisation of people and resources), (8) developing a strategy for broadening and scaling-up (e.g. by redefining priorities and related resources), (9) evaluating the transition potential of the experiment (e.g. by monitoring the progress in terms of deepening, broadening and scaling-up) and (10) embedding the experiment in more permanent structures and related culture and practices (e.g. financial structures, organisation structures).

Apart from these building blocks, a successful approach for managing a transition experiment is highly dependent on *competent people*. Clusters of competences that can be observed in the case study of ACT-Youth (mainly at the level of the innovation manager and general manager) include:

- *Communicating with the 'field':* being in touch with what happens at the different levels within society: the operational level of the experiment, the organisational context and the external context (other niches and the regime);
- *Seeing the big picture:* not losing oneself in operational details, understanding the dynamics of the system, seeing the connection with the transition;
- *Being a creative thinker*: out-of-the box thinking, finding new solutions, making new combinations, etc. (supported by Timmermans, 2008);
- *Learning by doing:* setting goals and learning along the way (not waiting too long before actually doing something), making decisions about further actions based on learning experiences;
- *Daring to take risks:* being afraid to fail is normal, but this does not stand in the way of engaging in high risk activities, being confident about one's own ability to overcome barriers (doing what others might not dare or can do);

These observed competences need to be further researched (just like the competences that were identified in Chapter 6). Other recommendations for follow-up research include:

- Elaborating on the comparison of ACT-Youth and District Care (Box 7.5), specifically regarding the different transition patterns and management approaches for scaling-up;
- Further developing and specifying the management guidelines for deepening, broadening and scaling-up and testing these in specific transition experiments;
- Using the identified *10 building blocks* to develop an integrated approach for managing transition experiments;
- Stimulating and studying the interaction between ACT-Youth (and the other transition experiments) and the Transition Arena in the Transition Programme in Long-term Care;
- Comparing the transition in health care with other transitions, with a focus on the different types of Transition Management approaches and the consequences for the management of transition experiments.

To conclude this chapter it should be noted that this case study did not analyse *if* ACT-Youth really contributed to a transition. This question would require a different research design with a longer time frame. The focus of this case study was on the *management* of ACT-Youth (in 2007 and 2008), specifically regarding influencing the contribution to a transition. Based on this *real-time* case study, no conclusions can be drawn regarding the long-term effect of the temporary support and interventions of the Transition Programme in Long-term Care (which ends in 2010). A critical question for follow-up evaluative research is if the Transition Programme mainly enabled the continuation of ACT-Youth (which already started in 2005), or if it contributed to structural changes in mental health care provision in Rotterdam and eventually the Netherlands.

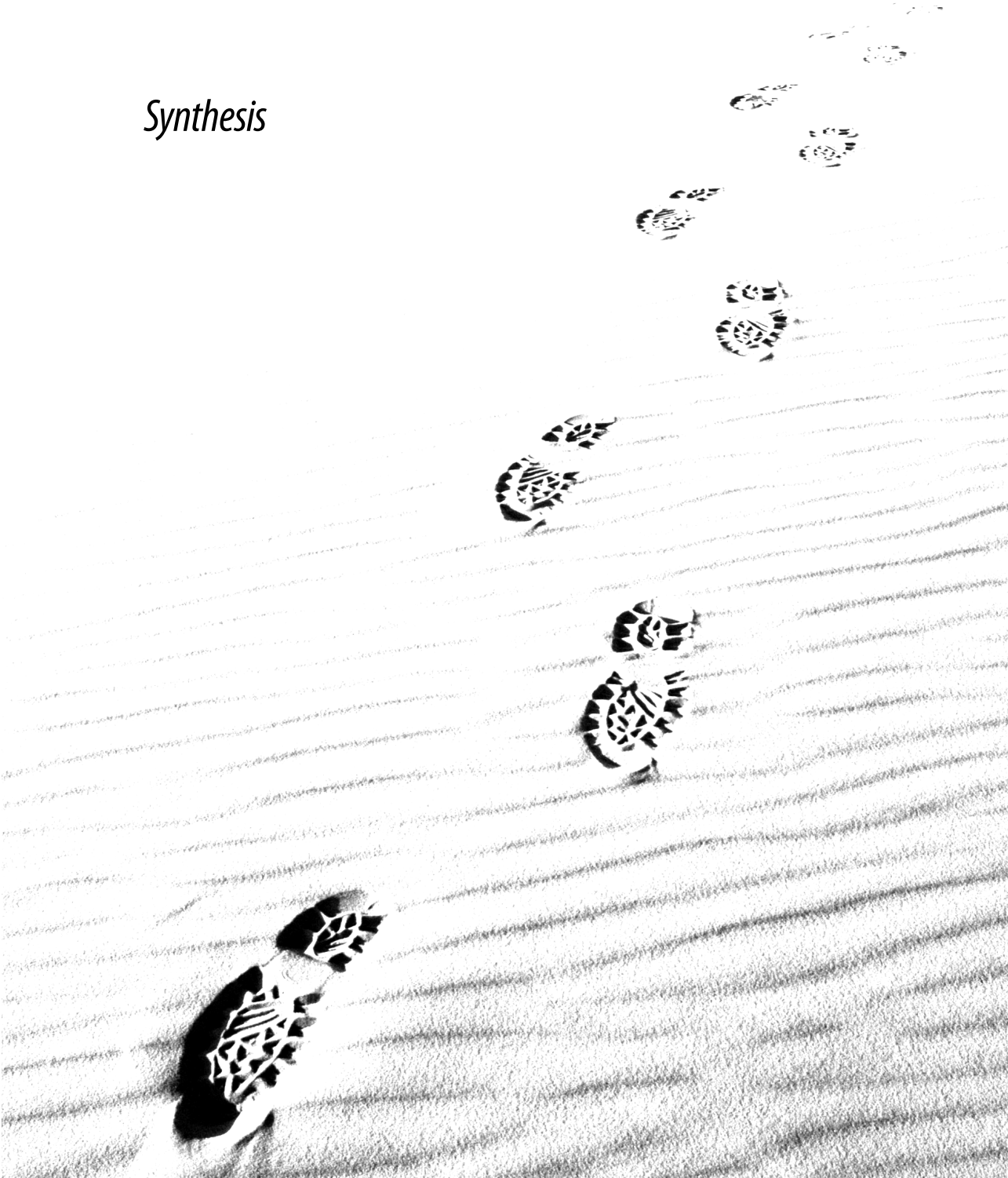
The *action research* approach (combining a researcher and Programme Team member role) enabled active participation in management activities, which increased the insight into what actually happens inside the 'black box' of a transition experiment. However, this type of research also made it difficult to look at ACT-Youth from a distance during the transition experiment. In this chapter therefore a choice was made to describe the case study in an analytical way, to allow a more reflective perspective. Follow-up case studies might succeed in combining these two perspectives (insider's view and reflection) *during* a transition experiment. A methodological recommendation that follows from the experiences in this case study is to pay more attention to structuring the action research process *right from the beginning*. For example, by developing clear research objectives together with the participants in a transition experiment and by providing regular input for reflection. In the case study of ACT-Youth, the researcher role and Programme Team role were combined in a rather *ad hoc* way. However, this also contributed to an open

view, which was sensitive to the specific context of ACT-Youth and allowed developing and testing theoretical notions whenever this was considered relevant.

This case study therefore was an experiment in itself, which has contributed to increasing the understanding of managing transition experiments and can be highly relevant for the further development of theory, practice and methodology in follow-up research on transition experiments.

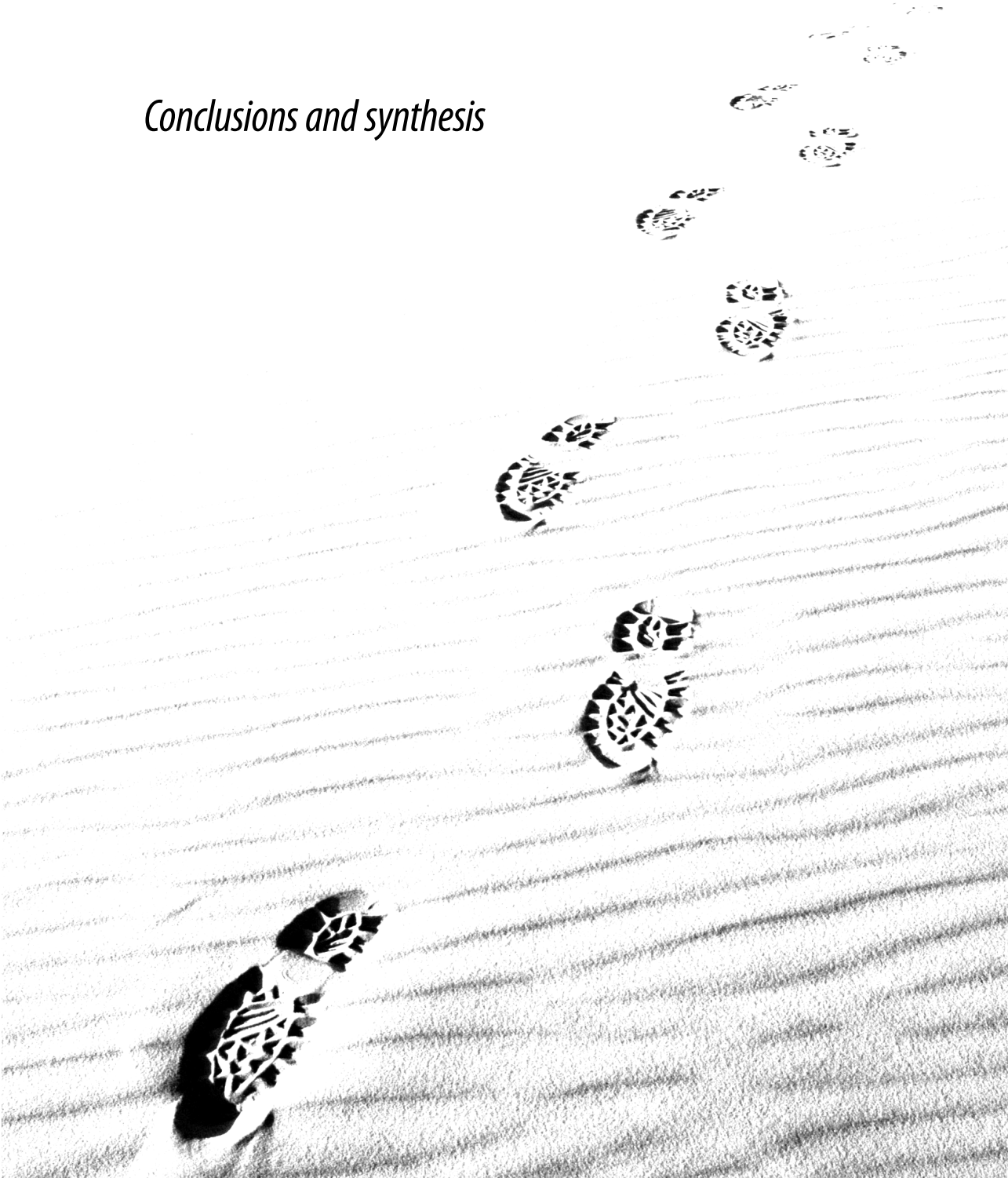
PART III

Synthesis



CHAPTER 8

Conclusions and synthesis



8.1 Main conclusions

Based on the theoretical and empirical research conducted in this thesis, this section answers the central research question as formulated in Chapter 1:

How can a transition experiment and its potential contribution to a sustainability transition be analysed and managed and what conceptual framework could support this?

To answer this question in a systematic way, first four main conclusions are formulated, related to the four sub-questions that were formulated in Chapter 1. This is followed by a reflection on the research results (Section 8.2), a reflection on the research methodology and approach (Section 8.3) and recommendations for follow-up research and practice (Section 8.4).

1. Distinguishing characteristics of a transition experiment
The first conclusion is about understanding what a 'transition experiment' is and how it differs from other types of experiments (sub-question 1). In Chapter 3 a transition experiment was defined as "an innovation project with a societal challenge as a starting point for learning aimed at contributing to a transition". Based on the literature study that underlies this definition (encompassing literature on transitions, innovation and learning), the distinguishing characteristics of transition experiments in comparison to classical innovation experiments were summarised in a table (Table 3.1). This table was applied and further optimised in three case studies. In Chapter 4 the table was applied to analyse (*ex-post*) six projects of the Learning for Sustainable Development programme, which led to the conclusion that these projects could not be characterised as transition experiments. In Chapter 5 the table was applied in two ways: to facilitate a reflection and reframing process aimed at transforming the ongoing People Mover project into a transition experiment; and to analyse to what extent the transitioning process of the Rush Hour Avoidance project was successful. In Chapter 7 the table was applied to describe the characteristics of the transition experiment ACT-Youth, which showed that almost all characteristics of a transition experiment could be recognised in ACT-Youth.

All case studies confirmed that the main distinguishing characteristic of a transition experiment is its connection to a *societal challenge*. Such a societal challenge provides the starting point for a searching and learning process aimed at addressing persistent problems at the level of a societal system. This differs from classical innovation projects, which often involve testing and demonstrating possible solutions. The connection to a societal challenge is also related to a medium and long-term perspective that is necessary to overcome persistent problems in society. However, the case study of ACT-Youth showed that in a transition experiment such a long-term perspective does not have to be

explicitly defined in terms of a future vision or scenario. This case study suggested that when a societal challenge is formulated and recognised by relevant actors, a transition experiment can be started without first developing a long-term vision. Such a 'bottom-up' approach can also be understood as a specific type of Transition Management (which is elaborated in the fourth main conclusion).

The second key characteristic of a transition experiment is that it is an innovation project that is aimed at developing and learning about a specific type of *innovation*[1]. All case studies showed that the recently developed transition concepts 'structure, culture and practices' (Chapter 2) can be applied to analyse the nature of the innovation in transition experiments. In a transition experiment, the innovation that is experimented with can involve a radical change of *practice* (e.g. a new approach, method or type of behaviour), and/or a radical change of *culture* (e.g. a new way of looking at a problem, organisational culture, perceptions), and/or a radical change of *structure* (e.g. a new way of financing/rewarding, organisational structure, rules and regulation, technology). This is a fundamental difference between a transition experiment and a classical innovation experiment (in which often a new product, process or service is central, and the other types of necessary changes are only regarded as 'context'). Furthermore, the type of innovation in transition experiments is broader than in related experimentation approaches such as Strategic Niche Management (which is focussed on technological innovations).

The third key characteristic of a transition experiment inherently relates to *learning*[2]. The nature of the learning process in a transition experiment differs from classical innovation experiments and scientific experiments (which are mostly conducted in a – partly – controlled context). The case studies showed that transition experiments are conducted in a real-life societal context and involve multi-actor alliances (including private or public organisations, end-users, researchers, government, consultants, etc.). Within transition experiments multiple actors can interact and develop alternative perspectives on reality (*social learning*). An important characteristic of the learning process in a transition experiment is that existing frames of references or 'mental models' are not the starting point of learning, but the subject of learning. When an existing frame of reference changes, *second order learning* takes place. The case studies, however, did not include a detailed description of how second order learning took place. The case studies of Rush Hour Avoidance (Chapter 5) and ACT-Youth (Chapter 7) did demonstrate that in

1. An innovation can be understood as anything that is perceived as new (based on Rogers, 1995:11). The type of innovation in a transition experiment is a *system innovation*: organisation-transcending innovations that drastically alter the relationship between the companies, organisations and individuals involved in the system (Rotmans, 2005:11).

2. Learning can be understood as an (inter)active process of obtaining and developing new knowledge, competences or norms and values. The learning process in a transition experiments can be characterised as second order (reflexive), multiple domains (broad) and collective (social learning).

these transition experiments the existing way of thinking and doing, regarding mobility behaviour and mental health care practices, was questioned right from the beginning.

To sum up, the first main conclusion is that the developed definition and the distinguishing characteristics of transition experiments can be applied as analytical 'tools' to better understand and facilitate transition experiments in different phases of development. The developed definition of a transition experiment has empirical and theoretical value because it enables distinguishing transition experiments from other types of innovation projects and emphasises the importance of a *societal challenge, innovation* and *learning*. However, from a practitioner's perspective the central concepts in this definition are quite abstract. It can therefore be concluded that the definition has less practical value: e.g. in order to communicate in practice what a transition experiment is, the definition needs additional explanations. It is therefore recommended to develop the definition of transition experiments further into a more practice-oriented definition that is as concise and concrete as possible. Such a redefinition of transition experiments could emphasise that a transition experiment explores sustainable and radically different ways of doing, thinking and organising.

In the table that distinguishes transition experiments from classical innovation projects, the specific nature of the innovation in a transition experiment could be added as a separate characteristic. During several presentations and workshops conducted in the case studies, it was learned that this table does have added value for practitioners. Therefore, the definition and table of transition experiments together provide an important part[3] of a practice-oriented conceptual framework for the analysis and management of transition experiments.

2. Transforming an ongoing innovation project into a transition experiment

Building upon the above insights into the distinguishing characteristics of transition experiments, the second main conclusion is about if and how an ongoing innovation project can be transformed into a transition experiment (sub-question 2). Such a 'transitioning' process was the subject of Chapter 5, in which three ongoing innovation projects from the Transumo programme were (partly) transitioned. At the time these cases were studied, the literature had not yet addressed the transformation of ongoing innovation projects into transition experiments[4], therefore these three Transumo case studies were of a highly exploratory nature. Based on the practical experiences with transitioning the Transumo project "People Mover on the Road", a prototyping version of a 'transitioning

3. In addition to this conclusion about the distinguishing characteristics of transition experiments, the fourth main conclusion will define the criteria that can be applied to select potential transition experiments.

4. Recently, Flor Avelino published an article on the first experiences with transitioning ongoing Transumo projects in a special issue of Policy Sciences on Transition Management (Avelino, 2009).

method' was developed (Van de Lindt et al., 2009). The transitioning method provides a concrete example of how project managers and programme managers can be supported with a transitioning process. Central in this method is the *transitioning framework* (Table 3.2 and 3.3) in which the mechanisms deepening, broadening and scaling-up (Chapter 3) are translated into management challenges and guidelines. This framework was applied and further developed in two Transumo projects: to support reflecting on and reframing the European Networks project and to discuss the ongoing transitioning process of the Rush Hour Avoidance project.

The transitioning of ongoing innovation projects can be understood as a second order learning process in which the existing perspective on a project is transformed into (or added with) a transition perspective, leading to new actions in terms of substance and process. The Transumo case studies showed that a successful transitioning process involves several main interrelated steps: (1) bringing a transition perspective into the context of a project (including defining the transition and the societal challenge and conducting an integrated systems analysis); (2) reflecting on and reframing the existing project characteristics and actions (in terms of substance and process) and (3) setting up concrete actions that are aimed at increasing the contribution of the project to a transition. However, because of limitations in time not all steps could be fully tested in the case studies. The (ex-post) analysis of the Rush Hour Avoidance project did provide an example of a successful transitioning process that resulted in a transformed project with the characteristics of a transition experiment. Important lessons learned from the three Transumo case studies were that transitioning is a continuous process that requires time, dedicated people, resources (e.g. money, knowledge) and continuous support (to bring in a transition perspective, stimulate reflection and reframing, and set up concrete 'transitioning actions'). Furthermore, not every ongoing innovation project has the right characteristics and context to be transformed into a transition experiment. Based on first lessons learned, eight selection criteria for 'transitionable' projects were defined (section 5.8). Follow-up research could apply, evaluate and optimise these criteria. With regard to the prototype of the transitioning method a lesson learned was that applying this method is not sufficient for successful transitioning; transitioning should have a structural place in the management of a project, either within a sub-project or working package or by following a 'shadow track' approach that is aimed at transforming the existing project organisation.

Hence, the second main conclusion regarding the research question is that a transitioning approach (in which the transitioning framework can be applied as a key instrument) can support the transformation of ongoing innovation projects into transition experiments. Transitioning provides a new way of looking at ongoing innovation projects, by bringing in a transition perspective and translating this in a perspective to act. Follow-up research could elaborate on what type of concrete actions can follow

from a transitioning approach and how (and under what conditions) these actions can contribute to sustainability transitions.

3. Mechanisms through which a transition experiment contributes to a transition

The third main conclusion is about how a transition experiment can contribute to a sustainability transition (sub-question 3). This was a central theme in this thesis; however, based on the conducted research no empirical answer can be provided.[5] A theoretical answer *can* be provided based on the literature study that was conducted, which included literature on innovation, sustainability transitions, Transition Management and Strategic Niche Management (Chapters 2 and 3). In Chapter 3 three key mechanisms through which a transition experiment can contribute to a sustainability transition were identified: *deepening, broadening* and *scaling-up*. The mechanism *deepening* was defined as "a learning process through which actors can learn as much as possible about a transition experiment within a specific context." This mechanism emphasises the importance of learning about radically new practices, structure and culture that are experimented with in a small part of the societal system. The mechanism *broadening* was defined as "repeating a transition experiment in different contexts and linking it to other functions or domains". This mechanism explains how radically new practices, structure and culture can diffuse across a societal system or sub-system by repeating a transition experiment in a larger part of the societal system and/or by broadening its function or domain of application. The mechanism *scaling-up* was defined as "embedding a transition experiment in dominant ways of thinking (culture), doing (practices) and organising (structure), at the level of a societal system". This mechanism emphasises the importance of processes of societal embedding, in which niche practices (and related structure and culture) can scale up and become part of the mainstream.

These three mechanisms integrate existing theoretical notions regarding transition experiments and can be regarded as an important theoretical contribution to the field of 'transition studies' (Chapter 2). However, to fully understand how transition experiments could contribute to sustainability transitions, the mechanisms need to be further developed by integrating several other concepts of transition studies. Possible questions for follow-up research are: How do the mechanisms deepening, broadening and scaling-up relate to different transition patterns and conditions? And how do the mechanisms relate to different ways in which actors exercise power to influence processes of scaling-up? Chapter 3 illustrated how the three mechanisms relate the concept of transition experiments to several other concepts of transition studies (e.g. the concepts of niches, constellations and culture/ structure/ practices). In Figure 3.2 the relationship between

5. Answering sub-question 3 would require a historical case study; in Chapter 1 it is explained why this type of research was not possible within the context of this research.

deepening, broadening, scaling-up and the multi-level perspective was illustrated. Based on this, several (interrelated) hypotheses for future research can be developed. The first hypothesis is that transition experiments that take place in societal sub-systems that deviate from the regime (*niches*) can increase their influence on the regime by making strategic connections to transition experiments in other contexts (*niche-cluster*). Such strategic connections could involve sharing learning experiences, broadening the domain of application or connecting different functions. The second hypothesis is that transition experiments that are connected in a niche-cluster can grow into a new constellation of structure, culture and practices (*niche-regime*) that challenges the power of the regime. The third hypothesis is that niches or niche clusters that have grown into a niche-regime can bring about a transition or a fundamental change in structure, culture and practices (*regime-shift*). Theoretically these hypotheses are supported by the fundamental transition research of De Haan (2010), in which different transition patterns and pathways are distinguished. Empirically these hypotheses could be tested in a follow-up case study of the Transition Programme in Long-term Care (Chapter 6), which includes one promising example of a transition experiment that has scaled up to a 'niche-cluster' that is growing into a niche-regime (District Care or "Buurtzorg"). In this thesis the scaling-up of District Care was briefly analysed (box 6.8 and box 7.5)[6]; however, in follow-up research this transition experiment could be further analysed to test the developed hypotheses. Follow-up case studies could also analyse to what extent developments in the *landscape* are important in processes of scaling-up. In addition to the multi-level perspective on transitions, it would also be valuable to apply an *actor perspective* in empirical research on deepening, broadening and scaling-up. This could enhance the insight into what type of actors play crucial roles in processes of scaling-up and what their 'scaling-up strategies', actions and competences are.

The case studies that were conducted in this research provided insight into how the mechanisms deepening, broadening and scaling-up can be applied to understand and influence various parts of the management process in transition experiments. In the case study of the 6 LfSD-projects (Chapter 4) the mechanisms were applied to analyse (*ex post*) the management activities in these projects. This analysis showed that regular project management mainly focuses on deepening (learning in a specific context) and often lacks strategic activities for broadening (repeating and linking to other contexts) and scaling-up (embedding in established ways of thinking, doing and organising). In

6. In the beginning of this research a choice was made to select one of the transition experiments in health care as a separate case study. At that moment both District Care and ACT-Youth had set up 5 teams (in the sub-sectors home care and mental health care for youngsters). ACT-Youth was selected because it met all the selection criteria that were developed for conducting the case study research (Chapter 1). A high potential to scale up was not defined as a selection criterion, because scaling-up was not a starting point of this research. The concept of scaling-up can be regarded as an important theoretical outcome of this research; follow-up research can further ground this concept in empirical research.

the case study of ACT-Youth (Chapter 7) the three mechanisms were applied to analyse (*real-time*) the management activities aimed at contributing to a transition. This analysis showed that the distinction between deepening, broadening and scaling-up helps to structure and prioritise the various management activities in a transition experiment. Furthermore, the mechanisms deepening, broadening and scaling-up were applied as 'guiding dimensions' to reflect on and reframe process and substance activities in ongoing innovation projects (Chapter 5), to select a portfolio of promising transition experiments (Chapter 6) and to monitor the progress of transition experiments (Chapters 6 and 7). This is elaborated in the fourth main conclusion.

To sum up, the third main conclusion is that the mechanisms *deepening, broadening* and *scaling-up* provide valuable concepts for understanding and trying to influence the potential contribution of transition experiments to sustainability transitions. Theoretically, these concepts are valuable because they provide an integrated perspective on how transition experiments could contribute to the development of niches, niche-regimes and regime-shifts. However, in follow-up research other theoretical concepts and perspectives could be added and (historical) empirical research needs to be conducted on transition experiments that have indeed contributed to sustainability transitions (elaborated in section 8.4).

4. Managing transition experiments

The fourth and last main conclusion elaborates on how transition experiments can be managed (sub-question 4). This conclusion is mainly based on the empirical research that was conducted for this thesis, but also builds upon the literature on Transition Management and Strategic Niche Management. In this thesis, 'managing' refers to influencing or guiding transition experiments and includes: selecting promising transition experiments; creating space to set up the selected experiments; facilitating social learning; and monitoring the learning process in transition experiments.[7] 'Managers of transition experiments' include directors, innovation managers, general managers, project leaders, programme managers or consultants who are actively trying to influence a transition experiment and its contribution to a sustainability transition.

All case studies in this thesis described examples of (potential) transition experiments that were set up and managed within the context of an innovation or transition programme (including the Learning for Sustainable Development programme, Transumo programme and Transition Programme in Long-term Care). The case studies showed that programmes can play an important role in translating TM theory into practice and supporting project managers with setting up and managing their innovation project

7. Influencing the scaling up of a transition experiment is also an important part of managing transition experiments. However, since the case studies did not focus on scaling-up, this part was excluded from this thesis.

as a transition experiment. However, this does not imply that a transition experiment should always be part of a broader programme. Innovation projects with a societal challenge as a starting point can also be set up and managed independently by societal entrepreneurs (an example is the transition experiment "Roof Transition", which was briefly introduced in Chapter 3). Follow-up research could focus on the management of transition experiments that are not supported by a programme and it could elaborate on the role of individuals involved in transition experiments. However, the conceptual framework that was developed in this research lacks precise analytical concepts to analyse transition experiments at the level of individuals.[8] The case study of the Transition Programme in Long-term Care did bring forward several clusters of competences that are important to manage a portfolio of transition experiments, including: *daring to take risks, tenacity, a feeling for politics, communicative* and *being a systems thinker* (section 6.7). And in the case study of the transition experiment ACT-Youth the following competences were observed: *communicating with the 'field', seeing the big picture, being a creative thinker, learning by doing* and *daring to take risks* (section 7.6). Follow-up research could test and elaborate on these identified competences.

Characteristic for the management of a transition experiment is the focus on long-term societal transition goals instead of on short-term project goals. The TM approach suggests that first a long-term sustainability vision should be developed and based on this vision transition experiments can be set up and managed. However, the case study of the Transition Programme in Long-term Care provided the first example of a transition programme in which a TM approach started with developing a portfolio of transition experiments, instead of first developing a sustainability vision in a transition arena. This different TM approach had several consequences for managing transition experiments at the programme level (elaborated in Chapter 6). An important consequence was that instead of receiving support *from* a 'transition arena', the transition experiments in health care first provided support *to* the transition arena (which was set up almost one year later). The transition experiments supported the arena with providing examples of the persistent problems in the care sector and providing building blocks for developing a shared sustainability vision that could give direction to further searching and learning. Follow-up research could study if and how the transition arena and its recently developed sustainability vision "*People Care. A Transition Movement*" (Transition Arena Care, 2009) have influenced the transition experiments in health care.

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8. With hindsight, it can be concluded that a framework on transition experiments should include different levels of analysis and management: (i) the individuals involved in a transition experiment, (ii) a single transition experiment, (iii) a cluster of related transition experiments and (iv) a complete portfolio of transition experiments that is connected to a shared sustainability vision. In this research the focus was mainly on the second and fourth level, which is related to the fact that when this research started neither TM theory nor practice paid much attention to analysing and facilitating the first and third level.

The *selection* of a portfolio of transition experiments was an important part of the case study of the Transition Programme in Long-term Care (Chapter 6). The case study described the applied selection strategies, procedures and criteria. Three general selection criteria for transition experiments were developed and applied in this programme: (i) Connection to persistent problem/ societal challenge; (ii) Radically changing the structure, culture and practices; (iii) Learning, growing and changing potential (deepening, broadening and scaling-up). It should be noted that these criteria are only applicable when a *transition perspective* is embedded in the programme that selects the transition experiments (i.e. transition experts are involved, transition expertise is shared and transition concepts are part of the programme discourse). In follow-up research, researchers *and* practitioners could try to integrate a *portfolio analysis* (section 6.5.4) in the selection process of transition experiments (to analyse the coherence, variety and scope of the portfolio).

In the existing theory on managing transition experiments it is a key assumption that in order to be able to experiment with radical changes in structure, culture and practices, transition experiments need partly protected spaces (*niches*). This was demonstrated in the case study of the transition experiment ACT-Youth (Chapter 7). Moreover, this case study showed that the Transition Programme in Long-term Care supported ACT-Youth with different types of space, including: *financial space, organisational space, (transition) management space, mental space, juridical space* and *geographical space*. These different types of space add to the knowledge on Strategic Niche Management and could be further studied in follow-up empirical research. An interesting research topic would be to study the different ways in which space could be created, for example by a programme, ambassador, sponsor, temporary grant or exemption from rules and legislation. In addition it would be interesting (for both theory and practice) to learn more about the process that *precedes* the creation of space.[9]

With regard to facilitating *social learning* the case studies in the care sector (Chapter 6 and 7) showed that learning processes should be facilitated at different levels: within transition experiments; between transition experiments; between transition experiments and sector; and between transition experiments, sector and transition arena. Interaction processes between transition experiments (for example, by means of monthly learning sessions) can then result in the development of clusters of experiments (for example, the cluster of ACT-Youth and related transition experiments in Rotterdam). An

9. This type of follow-up research could also build upon the recent empirical research of Ulmanen et al. (2009), who draw three conclusions on the issue of 'protection', which can be related to the concept of 'space": (1) *different types* of protection include the creation of exemptions from general rules, the creation of specific favourable rules and the mobilisation of resources. (2) the *creation* of a protected space involves dedicated lobbying by a variety of actors joined in advocacy coalitions, and (3) the *evolution* of protection is a result of strategic actors that lobby, negotiate and mobilise discourses to reach common goals and interests.

interesting question for follow-up research is how scaling up a single transition experiment would differ from scaling up a cluster of (re)combined transition experiments.

The *monitoring* of the learning process in transition experiments was also part of the case studies of the transition experiments in health care (Chapters 6 and 7). The monitoring framework that was developed and applied in these case studies connects the mechanisms deepening, broadening and scaling-up to three transition monitoring dimensions that have been developed in the PhD research of Taanman (*forthcoming*).[10] This monitoring framework enables monitoring the progress of transition experiments in terms of contributing to a transition. However, the case studies showed that (second order) learning experiences are difficult to capture in formal monitoring meetings and reports. Furthermore, it is still a challenge to translate context-specific learning experiences to general lessons that extend a single transition experiment; this would require dedicated people, time and resources (which are scarce).

In general, an important contribution of this research is that it has contributed to several practice-oriented concepts, including selection criteria, different types of space and a monitoring framework which could support the management of transition experiments. Additional practice-oriented concepts include the process and substance criteria for successful transition experiments (Box 3.2) and the management strategies and guidelines for deepening, broadening and scaling up of transition experiments (Chapter 3). Furthermore, the case study of ACT-Youth (Chapter 7) brought forward 10 building blocks for developing an *integrated management model* for transition experiments: (1) clearly defining a societal challenge; (2) developing an innovative practice; (3) exploring related innovative practices; (4) developing a broad consortium that could address different aspects of the societal challenge; (5) starting with the radically new practice, and related structure and culture on a local scale; (6) developing an environment for learning, monitoring and reflection; (7) adjusting the course of the experiment based on learning experiences; (8) developing a strategy for broadening and scaling-up; (9) evaluating the transition potential of the experiment and (10) embedding the experiment in more permanent structures and related culture and practices. These building blocks could provide a starting point for conducting more practice-oriented research on managing transition experiments.

The added value of these practice-oriented concepts does not lie in prescribing exactly how a transition experiment needs to be managed; the potential added value is *supporting* managers in setting up and further developing a transition experiment. All case studies in this thesis suggested that in the management of transition experiments, the mechanisms deepening, broadening and scaling-up can be used as central 'guiding

10. Because transition monitoring is a separate, new field of research, the monitoring of transition experiments was not a focus of this thesis.

dimensions'. The case studies also suggested that the personality and competences of the people involved in transition experiments are a key success factor.

8.2 Reflection on the research results

In the previous section the results of this research were summarised and main conclusions were drawn. This section looks back at the initial starting points of this research and reflects on the added value of the research results for future research and practice. In addition, the following section will reflect on the research methodology and approach.

When this research started, 'transition experiments' had only just been defined as a key instrument of the governance approach Transition Management (Rotmans, 2005). In theory, setting up a portfolio of transition experiments connected to a long-term sustainability vision was a promising approach to influence and direct transitions to sustainability. However, since both the theory and practice of TM were still being developed, the empirical examples and knowledge about transition experiments were rather limited. Applications of TM in practice mainly involved transition arenas in which sustainability visions had been developed, but transition experiments were still in the initial phase. Some programmes aimed at furthering sustainability transitions (e.g. the Energy Transition, Transumo, Transforum, PSIB) supported innovation projects that could potentially be characterised as transition experiments. However, in an initial database study (Krom, 2006) it was concluded that these projects deviated from the general notions on transition experiments as described in TM theory. TM theory, however, did not include a precise description of what a transition experiment was and how it could be set up and managed in such a way that it could further sustainable development. This was also brought forward in several dialogues between transition researchers and practitioners. Practitioners lacked an integrated, practice-oriented framework that could support them with setting up and managing transition experiments, and hence contributing to sustainability transitions. This research, therefore, set out with two challenges: to find and describe adequate examples of transition experiments on the one hand and to develop an adequate conceptual framework for analysing and facilitating these transition experiments on the other hand.

During this research it became clear that the challenge of finding adequate examples of transition experiments was a rather difficult one. As a result, the case studies that were conducted in this research did not include ideal type TM processes in which transition experiments were set up and managed based on the outcome of a transition arena. All case studies therefore started with *potential* examples of transition experiments (35 in

total)[11]; during the case studies this potential was assessed based on a transition analysis, a transitioning process or a selection procedure. This research brought forward two detailed descriptions of transition experiments: one example of an innovation project that was successfully transformed into a transition experiment that could potentially contribute to a transition to sustainable mobility (RHA in Chapter 5) and one example of a transition experiment that was set up and managed to contribute to a transition towards sustainable care (ACT-Youth, Chapter 7). In addition, this research contributed to the development and management of a portfolio of 26 transition experiments in health care (Chapter 6). However, this research did not result in detailed descriptions or comparative case studies of all the transition experiments that were set up in the care sector; this is to be done in follow-up research (section 8.4). An example of a follow-up research project is the comparative case study of the transition experiments ACT-Youth and Telecare (Ter Haar and Van den Bosch, *forthcoming*). This research thus contributed to the recently developed theoretical and empirical knowledge about the transition to sustainable health care (Broerse and Grin, *forthcoming*). Follow-up research should further study how transition experiments in health care are related to other TM instruments (e.g. the transition arena and a long-term vision on sustainable health care) and the multi-level perspective (e.g. what landscape developments are important to scale up transition experiments in health care).

In order to meet the challenge of developing an adequate conceptual framework to analyse and manage transition experiments, existing theoretical concepts were integrated and new concepts were added (Chapter 3). Moreover, the conceptual framework was applied and further developed in practice to support practitioners who were involved in (potential) transition experiments. This resulted in specific recommendations to these practitioners (including project managers and programme managers) and it also resulted in the translation of theoretical concepts into a set of practice-oriented concepts used by these practitioners (including selection criteria, the guiding dimensions deepening/ broadening/ scaling-up, the transitioning framework and a monitoring framework). However, though the conceptual framework on transition experiments was developed in interaction with practitioners, the case studies did not include a systematic evaluation of how these practitioners valued the recommendations and concepts. Furthermore, because the framework was developed and applied within specific contexts, no empirical conclusions about the generic value of the framework can be drawn. Hence, follow-up empirical research is needed to further develop, test, evaluate

11. Based on the case studies it can be concluded that these 35 potential transition experiments included: 6 projects that could not be characterised as transition experiments (Chapter 4), 2 projects that failed to transform into a transition experiment and one project that was successfully transformed into a transition experiment (Chapter 5) and a portfolio of 26 projects that were selected and set up as transition experiments (Chapter 6).

and generalise the conceptual framework on transition experiments. Section 8.4 will elaborate on the main themes for follow-up research within the field of transition studies. However, although this research was specifically aimed at contributing to the field of transition studies, it would also be valuable to further explore possible contributions of this research to ongoing debates in other fields of research (e.g. innovation studies, organisation studies, monitoring and evaluation studies, and public administration). This type of follow-up theoretical research could, for example, provide more insight into the differences between transition experiments and classical innovation projects or public policy experiments. Follow-up research could also elaborate on how the management of transition experiments differs from existing management approaches (e.g. project, process and programme management).

Despite the need for follow-up theoretical and empirical research, the research results can already be used to support future activities of different types of TM practitioners. Three potential 'users' of the conceptual framework on transition experiments can be distinguished: The first 'user group' are programme managers responsible for setting up and managing programmes aimed at stimulating sustainability transitions. These TM practitioners can use the general framework and instruments of TM (as defined in Loorbach, 2007) as a basis for managing their programme. The added value of this research on transition experiments is that it provides a set of 'tools', which can be used in programme management activities that specifically involve transition experiments or innovation projects in general. This added value was demonstrated in the case study of the Transition Programme in Long-term Care (Chapter 6).[12] In this programme the conceptual framework on transition experiments provided a different perspective on developing and managing a portfolio of innovation projects. This perspective included not only a conceptual language, a discourse, but also a *perspective to act* and do things differently. These different activities included: using different protocols and criteria to select promising transition experiments, providing different types of space for setting up these experiments, facilitating learning at different levels and monitoring their progress differently (in terms of deepening, broadening and scaling-up).

The second 'user group' are project or process managers responsible for setting up and managing a transition experiment or transforming an ongoing innovation project into a transition experiment. For this type of TM practitioners, this research has increased the knowledge about what a transition experiment is and how its contribution to a sustainability transition can be influenced ('managed'). However, this research did not result in a 'cookbook' with a step-by-step approach for setting up and managing a

12. It should be noted that this example cannot be generalised to transition programmes in other contexts. However, the conceptual framework that was developed in this research can be regarded as a generalisation of the case study results into theoretical concepts, which can be applied and further tested in follow-up case studies.

transition experiment. The case study of ACT-Youth did result in ten building blocks for managing a transition experiment, which could inspire managers of future transition experiments. But the main added value of this research for project or process managers is that the conceptual framework on transition experiments can be used to reflect on, adjust, stimulate, structure and prioritise management activities. This added value was demonstrated in the case studies of the three Transumo projects (Chapter 5) and the transition experiment ACT-Youth (Chapter 7). The TM approach in general, the transitioning framework and specifically the steering dimensions deepening, broadening, scaling-up provided a different perspective on the management of these projects. Key aspects of this management perspective include: providing space for learning about radically new practices; linking and adapting to other contexts and functions; and working strategically towards embedding the experiment at a higher scale level and changing dominant ways of thinking, doing and organising. In follow-up practice-oriented research, this perspective could be further developed into a 'toolbox' for managers of transition experiments (elaborated in section 8.4).

The third potential 'user group' encompasses TM consultants or advisors involved in transition experiments with the specific task of applying TM theory in practice and thereby stimulating sustainability transitions. These TM practitioners can use the outcome of this research to initiate and support more transition experiments or to bring in a transition perspective in ongoing innovation projects. The main added value of this research for TM consultants is that it provides both an analytical framework and a perspective to act. This added value was demonstrated in the case study of the six projects that were supported by the Learning for Sustainable Development programme (Chapter 4). Similar to the transition analysis that was conducted in this case study, TM consultants can assess if ongoing projects meet the characteristics of transition experiments and analyse to what extent the opportunities to contribute to a transition are utilised. The conceptual framework also provides a perspective to act, because it enables developing concrete recommendations to increase the contribution to sustainability transitions. However, it should be noted that recommendations always require adequate follow up and it is the responsibility of a TM consultant to continuously transfer TM knowledge to other practitioners involved in transition experiments. The case study of the Transition Programme in Long-term Care provides a good example of how transition expertise was successfully integrated in the programme management (Chapter 6). From this case study it can also be learned that when TM consultants actively cooperate with TM researchers this enables bringing in more reflection, analytical support and recent theoretical knowledge, while TM consultants can simultaneously support the translation of practical knowledge about transition experiments into theory.

In general, it can be concluded that the main achievement of this research is that it has built a potential 'bridge' between the theory and practice of transition experiments.

When this research started such a bridge was lacking; TM theory about transition experiments had not been fully implemented in practice and practical experiences with transition experiments had not been translated into theory. In this initial situation with no 'bridge', the TM researchers and practitioners involved in transition experiments were standing on opposite sides; they could see each other and (when talking loud enough) they might have heard each other. However, this research has provided TM researchers and practitioners (including programme managers, project managers, TM consultants and advisors) with a *language* to better communicate about and understand transition experiments and their potential contribution to sustainability transitions. Furthermore, this research has provided them with a *perspective to act*, which enables taking actions[13] to better facilitate and stimulate transition experiments and use them as instruments in realising sustainable development.

8.3 Reflection on research methodology and approach

At the start of this research a methodological choice was made to follow an *action research* approach and base this on notions of *Mode 2 knowledge production* and *sustainability science* (Chapter 1). This research approach enabled interacting with the research object, while taking a normative position, and developing knowledge and practices together with other actors. As in every research, the research methodology and approach have highly influenced the research results. Hence, the developed conceptual framework on transition experiments was the outcome of an interactive process between researchers and practitioners involved in (potential) transition experiments. These interactions took place in a variety of workshops, presentations, discussions, learning sessions, monitoring meetings and informal meetings (described in Chapters 4 to 7). Because the research results were partly based on interactions between people, a key question for reflection is "When *other* people would have been involved in this research, would this have fundamentally influenced the research results?". It is likely to assume that other people would have made different choices, which would have altered the direction of this research. However, it can also be assumed that the final research outcome would not have been *fundamentally* different because the foundation of this research was an existing theory (transition theory and specifically the Transition Management concept), which was applied and further developed in practice. This research was therefore grounded in both theory and practice and was conducted as objectively as possible, which was realised by continuously analysing if what was observed in practice was consistent with theory.

13. These actions include: assessing (potential) transition experiments, selecting, reflecting, reframing, monitoring, facilitating learning and interaction, prioritising and structuring management activities.

This research also resulted in the further development of several new concepts within the existing transition theory (e.g. the transitioning concept and the mechanisms deepening, broadening and scaling-up). In retrospect this research could therefore also be viewed as a *creative process.* This semi-structured creative research process, which was a combination of deducing concepts from theory and inducing concepts from practice, cannot be repeated under exactly the same conditions and with exactly the same outcomes. However, the *methods* that were applied in this research and the related *research roles* could be repeated when the research conditions would be similar (as described in section 1.4), though repetition without learning about previous research would not be desirable. Before elaborating on the improvements that could have been made to this research, this section will first describe the methodological lessons that were learned during this research.

Lessons learned regarding research approach and methodology

An important lesson learned was that the *action research* approach required a large degree of flexibility of the researcher, including: switching between research roles; translating 'scientific language' into 'practical language' and vice versa; writing both practice-oriented and scientific publications; contributing to the aims of practitioners and contributing to the research aim; stimulating sustainable development and stimulating scientific progress. A disadvantage of such a 'flexible' research approach was that in some cases the interventions of the researcher might have been too much 'ad hoc'. A lesson learned is that it is necessary to find a balance between conducting practice-oriented research with an 'open mind' and planning and preparing the research as much as possible. This balance could be realised by connecting questions from practice to specific research questions in an early stage of the research. Furthermore, the interventions of the researcher should be structurally embedded in a project or programme that is specifically aimed at translating (TM) theory into practice and vice versa.

Several lessons were learned with regard to the different *research roles* that were applied in this research. The different research roles were related to the different interactions with other actors in developing (Mode 2) knowledge about transition experiments. In some case studies practitioners involved in (potential) transition experiments asked TM researchers to *analyse* and critically reflect on their projects or programme. In other cases, TM researchers were provided with the opportunity to *participate* in a project or programme and bring in specific TM expertise and make TM knowledge applicable to practice. In these cases the researcher could also contribute to *designing* TM processes or improving the way existing projects or programmes were set up. The researcher therefore had to switch between the roles of analyst, co-designer or active participant in the management of transition experiments. An advantage was that these

different roles were often complementary with regard to further developing TM practice and theory. For example, by participating in the management of a portfolio of transition experiments, selection criteria for transition experiments could be designed together with other actors and the application of these criteria in the selection process could then be analysed (Chapter 6). A lesson learned was that during the research it can be difficult to be always conscious about the different roles that a researcher plays. Therefore, it is crucial to think about the different roles at the beginning of a research and communicate clearly to other actors what role the researcher will play in different situations. Transparency about what role will be applied when and how, will avoid differences in expectations about the contribution of the researcher. A simple and effective way to reinforce a role is to choose consciously the position a researcher takes in a room (e.g. actively participating requires being at the table, but observing and analysing requires being seated at a small distance). Another lesson learned was that when the researcher plays more than one role in a particular situation, it can sometimes be necessary to delegate roles to other actors. For example, when the researcher has prepared input to a discussion, but also needs to analyse the discussion, the input can be provided by someone else.

A general lesson learned about conducting *real-time* case studies was that when the research object is 'in motion', and the researcher is 'on board', it is sometimes difficult to take enough analytical distance. This lesson was specifically learned when writing down the case studies of the Transumo programme and the Transition Programme in Long-term Care (Chapters 5 and 6); in the first versions of these chapters the distance between the objects of study and the researcher was much too close. This problem was partly solved by withdrawing from active participation in these programmes and writing down the case studies in seclusion, while receiving regular feedback from scientific peers.

Possible improvements with regard to the research approach

A key question for reflection on the research methodology is: "What would I do differently if I could start over?". This is not a question about follow-up research that can be conducted from this moment onwards (which is addressed in the next section), but a question about repeating this research under similar conditions. I would not *fundamentally* change the general methodology of this research, because similar to when this research started, the applied research methodology is still regarded as the best 'fit' for both the research on transition experiments and the researcher.[14] However, to increase the value of this research for science and practice I would make several improvements with regard to the research approach.

14. The research methodology matches my interests and competences (e.g. working together with different scientific disciplines, discussing the needs of practitioners, developing and applying analytical concepts, contributing to sustainable development in various sectors, etc.).

The first improvement relates to *demarcation*. Without undermining its explorative nature, this research could have been more demarcated. Specifically the research sub-question "How to manage transition experiments?" could have been more narrowly defined. 'Management' could have been limited to 'selecting transition experiments and making space' and could have excluded 'facilitating learning and monitoring'. This would have allowed more time for a specific literature study on these subjects and a more in-depth analysis of the cases. However, the research should still allow enough room for exploring aspects of the management process that emerge out of the research (e.g. the management strategies and guidelines for deepening, broadening and scaling-up).

The second improvement relates to *research planning*. While acknowledging that it is not possible to plan everything in this type of explorative research, some of the research activities could have been planned more effectively. An example is the database study of (potential) transition experiments that was conducted in an early stage of this research, but was not extensively described in this thesis because of the limited contribution to the research results. If this database study had been conducted at a later stage it would have been possible to use more specific concepts to structure and analyse the data. Furthermore, the database could have been used as a 'tool' to share learning experiences between ongoing (potential) transition experiments. Some of the case studies that were conducted in this research could also have benefitted from better planning. For example, the case study of the Transition Programme in Long-term Care could have started with a specific 'action research plan' that would anticipate crucial research interventions. Such a plan could also clearly communicate the required research roles and how these relate to the desired research results. Another example is the case study of the Transumo programme; the research interventions in this case study were part of a temporary KSI project, but it would have been more effective (in terms of adequate follow up) to develop an independent research plan.

The third improvement to the research approach relates to how the normative concept of *sustainability* was applied.[15] The (potential) transition experiments that were studied in this research were all part of larger programmes that were explicitly aimed at realising sustainability transitions. However, because of the character or phases of these programmes, sustainability visions had not been explicitly defined. Furthermore, it is still to be proved if the desired transitions will be truly sustainable. It is therefore highly uncertain if the studied (potential) transition experiments are part of a sustainability transition. In order to deal better with this uncertainty the researcher could have taken a more critical stance in analysing the cases, with regard to how sustainable these transition experiments are. Such a critical reflection could still take into account the

15. In Chapter 1 it was explained that sustainable development was mainly applied as a normative starting point in selecting the case studies and in developing recommendations to practice.

perceptions of other actors involved in the cases, by analysing why actors perceive a transition experiment as sustainable and by critically reflecting on this.

The challenge of Mode 2 knowledge production

In a *Mode 2 type of knowledge production* and in *sustainability science* in general, the challenge is to continuously combine an orientation towards science *and* practice. This is based on the belief that science *should be*[16] valuable for practice and what happens in practice is highly valuable for science. However, because science and practice can still be regarded as two separate systems (with different institutions, cultures, measurement systems, etc.), it is difficult to conduct a research that aims to contribute to progress in both 'worlds'.[17] In this research it was experienced that a researcher can then sometimes feel as if the conducted research is not valued in any of these worlds. For example, in one world a publication of the research results can be considered as too much practice-oriented and in the other world this publication can be regarded as too scientific. This type of research is therefore all about building bridges between both worlds, and possibly even contributing to creating a new type of world in which science and practice truly support one another. Institutes such as the Dutch Research Institute for Transitions (DRIFT), where this research was conducted, and the research network KSI (that supported this research) enabled such a practice-oriented research approach. An additional advantage was the inspiring effect of working together with a multi- and interdisciplinary network of transition researchers and practitioners. Without the many inspiring discussions and meetings, the conceptual framework on transition experiments would not have been as rich in concepts as it currently is.

8.4 Recommendations for follow-up research and practice

Throughout this research, recommendations have been formulated that were specifically targeted at the project managers and programme managers involved in the case

16. This claim that science should be relevant for practice should be viewed in the context of sustainability science. In other scientific fields, such as physics or mathematics, it can be perfectly justifiable to conduct science for the sake of science. My personal view is that science can be highly valuable in itself, without having direct societal relevance (similar to art). However, every scientist should be aware of the (often unexpected) consequences his or her research can have for society.

17. During this research it was experienced that it is essential that both the scientific and the practical value of the research are continuously monitored. This requires adequate supervision and teamwork with both scientific peers and skilled practitioners. In this research the quality of the research process was periodically monitored by a 'supervision team' of scientists and practitioners from DRIFT and KCT (Knowledge Centre for Transitions and System Innovations). The support of the KCT also enabled publishing the research results in two practice-oriented essays, which were received positively by both transition researchers and practitioners.

studies (Chapters 4 to 7). In this final section, general recommendations are formulated that extend the specific case studies. These recommendations are primarily targeted at researchers in the field of transition studies, who are interested in conducting follow-up research on the theory and practice of transition experiments. Because this research had an exploratory character, it has resulted in many conceptual ideas that need further theoretical and empirical grounding. To give a direction for follow-up research, this section will identify three research themes that are considered as most relevant and most ambitious.

The first theme of research is about generating more examples of transition experiments in practice. Within this theme two types of research are relevant: *Descriptive research* is needed to inspire further theory development on the characteristics of transition experiments *and* inspire practitioners (e.g. policy makers, programme managers, entrepreneurs) to set up transition experiments to contribute to sustainability transitions. In this type of research, the developed conceptual framework on transition experiments could be applied to describe ongoing transition experiments (which have not been fully described in this thesis). These experiments include the portfolio of currently almost 30 transition experiments in health care (with the exception of ACT Youth, which is described in Chapter 7), the transition experiment Rush Hour Avoidance (partly described in Chapter 5) and the Roof Transition (introduced in Chapter 3). Furthermore, because this thesis only includes transition experiments in the Netherlands, follow-up research could explore if transition experiments can be recognised in initiatives abroad that are also aimed at stimulating sustainability transitions. It would be specifically interesting to focus this research on international examples of transition experiments in health care, because this would allow a comparative case study with the Dutch Transition Programme in Long-term Care.

The second type of research with regard to creating examples of transition experiments, is *action research* aimed at facilitating more transition experiments. In this type of research, transition researchers could be actively involved in developing ongoing and new transition experiments that are part of a Transition Management approach. This research could also elaborate on the management of transition experiments, which is a separate research theme. Two different approaches could be applied: a 'bottom-up' TM approach (starting with experimenting in practice) or a 'top-down' TM approach (starting with developing a sustainability vision). These two approaches could also be compared with regard to possible differences in the roles of transition experiments in stimulating sustainability transitions.[18] It should be noted that setting up this type of research will require a lot more effort than setting up descriptive research; similar to

18. Follow-up research could also elaborate on the advantages and disadvantages of starting with transition experiments instead of first developing a sustainability vision in a transition arena.

the Transition Programme in Long-term Care the success of initiating such an action research project will depend on both strategic action and contingency (Chapter 6).

A second theme of research should address the subject of "scaling up transition experiments". Theoretically this is a highly relevant research subject, because the theory on transition experiments is based on the assumption that experiments with sustainable practices conducted in niches can scale up to mainstream practices. This research has contributed to the theory development on scaling-up by developing a new conceptualisation of scaling-up and distinguishing between three mechanisms (deepening, broadening and scaling-up), and developing several hypotheses (section 8.1), which could be tested in follow-up empirical research on scaling-up. Such empirical research would require *historical case studies* of transition experiments that have scaled up successfully and thus have contributed to fundamental changes in societal structure, culture and practices. A major challenge for future research is to find adequate examples of transition experiments that have scaled up successfully. The transition experiment District Care (which was introduced in Chapter 6 and 7) could provide a promising follow-up case study.

The subject of scaling-up is also highly relevant for practitioners of TM that want to actively influence processes of scaling-up. This research has resulted in new empirical knowledge on management activities that could influence processes of deepening, broadening and scaling-up. A challenge for follow-up *practice-oriented research* is to further translate the mechanisms deepening, broadening and scaling-up into concrete management strategies and guidelines. This also relates to the following research theme.

The third major theme of research lies at the interface between transition studies and practice. This theme is also the most ambitious and is inspired by a vision of society in which societal actors who aim to further sustainable development can be supported by professionals who are specialised in Transition Management. Part of this specialism could be the management of transition experiments, which is distinctively different from classical project, process and programme management. To realise this vision, the TM approach (including the management of transition experiments) should be established as a 'profession' that is supported by research, education, guidebooks, TM journals and national and international networks. This is still a long way to go and probably the vision of what is desirable will change along the way. However, this research has resulted in several small steps forward by developing practice-oriented concepts to analyse and manage transition experiments. Follow-up research should further develop, test and generalise these concepts in more cases. These cases should specifically focus on the different strategies for managing a transition experiment, the different activities that managers undertake to stimulate the deepening, broadening and scaling-up

of transition experiments and the competences these managers need to have. Future *practice-oriented* research could also support the development of a 'toolbox' for project managers, process managers and programme managers involved in transition experiments. Contrary to this thesis about transition experiments, such a toolbox should be written in a practical language and should include more concrete examples, guidelines and supportive methods. The *theoretical knowledge* about influencing sustainability transitions in general and managing transition experiments in particular, needs to be further translated into *practical knowledge* (and vice versa). Possible settings in which this 'translation work' could be done would be: in education (e.g. the Post Academic Course on Transition Management); in organisations that work at the interface between transition research and practice (e.g. TNO or the Competence Centre for Transitions); in cooperation with managers interested in adapting their management approach to contribute to sustainability transitions (e.g. the managers that were involved in the Rush Hour Avoidance project); and in cooperation with societal actors that have successfully set up and managed transition experiments (e.g. the project managers of the transition experiments in health care). To coordinate these various activities at the interface between transition studies and practice, it would be vital to develop the recently established European network of TM researchers further into an international network that also includes TM practitioners, who share the ambition of developing TM (including the management of transition experiments) into both an established field of research and an established 'profession' aimed at furthering sustainable development.

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Summary

This book presents the outcome of exploratory research on how transition experiments can be used as instruments to further sustainable development. A transition experiment is a specific type of innovation project that is aimed at exploring radically new ways to meet societal needs, such as the need for energy, mobility and health care. Transition experiments are a key instrument of the governance approach Transition Management (TM), which has recently been developed and applied to influence and direct transitions towards sustainability. This thesis presents a conceptual framework for analysing and managing transition experiments and their potential contribution to sustainability transitions. The framework was developed in interaction with practitioners in three Dutch sustainability programmes: Learning for Sustainable Development, Transumo (TRANsition to SUstainable MObility) and the Transition Programme in Long-term Care.

Chapter 1 introduces the societal and scientific relevance of understanding and facilitating transition experiments and explains how this research is approached and structured. Within society there is increasing concern about various *symptoms of unsustainability*, such as climate change, depletion of energy sources and a pressure on human values in the health care system. Because these types of problems are uncertain and complex, short-term and 'ready made' solutions are not available or not sufficient. Transition Management (TM) is a new mode of governance that aims to deal with persistent societal problems by exploring and furthering transitions to a more sustainable society. These transitions take at least one generation and can be understood as fundamental changes in the dominant ways societal needs are fulfilled. *Transition experiments* are a key TM instrument and were originally defined as "practical experiments with a high level of risk (in terms of failure) that can make a potentially large contribution to a transition process" (Rotmans, 2005:50). However, the literature on transition experiments is limited and lacks an integrated conceptual framework that can support scientists and practitioners with analysing and managing transition experiments and their potential contribution to sustainability transitions. This thesis aims to develop such a framework.

The development of this conceptual framework on transition experiments is based on an iterative approach of deducing concepts from theory, and testing and further developing new concepts in practice. The main research methods are a literature study (encompassing literature on innovation, sustainability transitions, Transition Management and Strategic Niche Management) and case study research (encompassing 35 potential transition experiments in total). The methodology that is applied to study the different cases of transition experiments can be characterised as a combination of action research, 'Mode 2' knowledge production and sustainability science. In all case studies the researcher actively interacts with practitioners involved in innovation

programmes and projects, to develop knowledge and practices aimed at furthering sustainability transitions. Within the different case studies, the researcher takes a role as analyst, participant and co-designer, relating to different research perspectives (including an ex-ante, real-time and ex-post perspective). The selection of 'adequate cases' of transition experiments is based on selection criteria and the opportunities to conduct action research. The selected case studies encompass various innovation projects that are supported by three different innovation and transition programmes implemented in the Netherlands between 2004 and 2010. These innovation projects could potentially contribute to sustainability transitions, they are connected to a societal challenge and have a focus on (social) learning.

Chapter 2 presents the theoretical background and existing theoretical concepts related to transition experiments. Transition studies is a recent field of research that encompasses the development of a transition theory in order to better understand and influence the phenomenon of *transitions*. The subject of study includes current sustainability transitions in societal systems such as energy, mobility, agriculture, water management and health care, as well as transitions in the past. A transition can be defined as "a fundamental change in structure, culture and practices" (Loorbach and Rotmans, 2010). Changes in *structure* comprise changes in how actors organise the things they do, either physically, institutionally or economically; changes in *culture* comprise shifts in thinking, mental models and perceptions; and changes in *practices* comprise changes in what actors actually do, how they work or behave.

Within transition studies, the sub-field 'Transition Dynamics' is concerned with understanding and explaining how transitions in societal systems (e.g. sectors or regions) come about and how they can be recognised. The *multi-level perspective (MLP)* is a key concept of Transition Dynamics that can be used as a main building block for the development of a conceptual framework on transition experiments. An important existing theoretical concept related to transition experiments is the concept of *niches*, which can be understood as societal sub-systems that deviate from the *regime* and provide a context for experimenting with new (sustainable) practices and related culture and structure. The *multi-pattern concept* is another valuable concept because it distinguishes different patterns of transitions and explains how transition experiments mainly play a role in the patterns of *empowerment* and *adaptation*. This thesis mainly aims to contribute to the sub-field of *Transition Management (TM)* and additionally aims to contribute to new insights into *Strategic Niche Management (SNM)*.

In relation to the research questions, several building blocks and gaps in the existing literature on sustainability transitions, Transition Management and Strategic Niche Management are identified: (1) While the literature on Transition Management assigns several characteristics to transition experiments, the literature does not clearly distinguishes

transition experiments from classical innovation experiments. Furthermore, since case studies of Transition Management in practice mainly involve the TM instrument 'transition arena', detailed empirical descriptions of transition experiments are still lacking. (2) Existing Transition Management and Strategic Niche Management literature is mainly concerned with setting up *new* transition experiments that can 'start from scratch'; the literature has not yet addressed the issue of transforming *ongoing* innovation projects into transition experiments ('transitioning'). (3) The literature on sustainability transitions, Transition Management and Strategic Niche Management explains how experimentation relates to niche development, but it does not explain how transition experiments can eventually scale up and contribute to regime change (transitions). An integrated perspective on the key mechanisms through which transition experiments contribute to sustainability transitions is lacking. (4) The TM approach provides a general framework for developing and managing a portfolio of transition experiments that can potentially contribute to sustainability transitions. However, the literature lacks theoretical and empirical research on how the management of transition experiments exactly takes place. The Strategic Niche Management literature emphasises the importance of creating 'space' for experimentation; however, the literature does not elaborate on this notion. In general, the managerial perspective in SNM is still underdeveloped and an operational management model for transition experiments is still lacking.

Chapter 3 develops an integrated conceptual framework on transition experiments, by integrating existing concepts and introducing new concepts that enable analysing and managing transition experiments. The *descriptive* part of the framework provides analytical concepts and tools to describe a transition experiment, how it can be recognised and how (and what) it can contribute to a sustainability transition. The *prescriptive* part of the framework provides practice-oriented concepts and tools to stimulate the contribution of transition experiments to sustainability transitions. The case studies provide specific examples of how these concepts and tools can be applied in practice. The framework is the outcome of exploratory research that is practice-oriented; the 'target group' of the framework includes different types of Transition Management researchers and practitioners that are involved in (potential) transition experiments. The framework can be applied in multiple ways, such as in analysing, evaluating, structuring and/or developing actions to manage transition experiments. However, applying the conceptual framework in practice requires a basic knowledge of transitions, Transition Management and specific 'transition competences'.

The conceptual framework encompasses four main new concepts and related sub-concepts that add to the existing literature. The first is a definition of transition experiments and their distinguishing characteristics. Transition experiments are defined as "innovation projects with a societal challenge as a starting point for learning aimed

at contributing to a transition". To compare transition experiments systematically with classical innovation experiments a table is developed (Table 3.1). The second concept is *transitioning*, which refers to the transformation of ongoing innovation projects into transition experiments. The related 'transitioning framework' (Tables 3.2 and 3.3) can provide a tool to reflect on ongoing innovation projects and develop process and substance actions to increase the potential contribution of a project to a specific sustainability transition. The third concept includes the mechanisms *deepening, broadening* and *scaling-up*, which are deduced from the literature to gain a better understanding of how transition experiments can contribute to sustainability transitions. It explains how through cycles of deepening, broadening and scaling-up, transition experiments contribute to changes in constellations of *structure, culture* and *practices*. The mechanism *deepening* emphasises the importance of experimenting with and learning about radically new practices, structure and culture in a small part of the societal system. *Broadening* explains how radically new practices, structure and culture can diffuse across a societal system or sub-system by repeating a transition experiment in a larger part of the societal system and/or by broadening its function or domain of application. *Scaling-up* emphasises the importance of processes of societal embedding, in which niche practices (and related structure and culture) can scale up and become part of the mainstream.

The fourth new concept encompasses the management of transition experiments within a Transition Management context. Regarding the relation between transition experiments and the TM approach, two different ways of implementing the TM cycle (Loorbach, 2007) can be distinguished: 'bottom-up TM', which starts with selecting a portfolio of transition experiments and 'top-down TM', which starts with developing a sustainability vision in a transition arena. To manage a transition experiment and stimulate its contribution to a transition process, the conceptual framework includes management strategies and guidelines for deepening, broadening and scaling-up.

In **Chapter 4** the conceptual framework on transition experiments was first applied in an ex-post analysis of six projects of the Learning for Sustainable Development (LfSD) programme (2004-2007). These projects could potentially contribute to specific transitions in spatial planning/housing, water and energy. Based on an analysis of the characteristics of these projects (by applying Table 3.1) it was concluded that these LfSD-projects could not be characterised as transition experiments. The 'transition potential' of these projects was further analysed by looking at the activities (of project and programme managers) for *deepening, broadening and scaling-up*. This analysis showed that within the LfSD-programme and projects, the management activities were mainly focused on *deepening* (learning in a specific context). A shared strategy and dedicated resources for *broadening* (linking and repeating in different contexts) and *scaling-up* (embedding in

established ways of thinking, doing and organising) were lacking. Based on this analysis concrete recommendations for the new LfSD programme period (2008-2011) were formulated to increase the contribution of LfSD-projects to sustainability transitions. These recommendations were used by the LfSD programme management to formulate new starting points, including a minimum scale level of projects, developing leading themes in which projects can reinforce each other and more focus on follow up and embedding of projects.

In **Chapter 5** the conceptual framework on transition experiments was applied and further developed in interaction with practitioners to support the *transitioning process* of three innovation projects of the Transumo (TRANsition SUstainable MObility) programme. Within the People Mover project, the framework supported a process in which the initial technology-driven innovation project was transformed into a transition experiment. This transitioning process resulted in several changes with regard to how the problem and possible solution were framed and how the project was set up and managed. Unfortunately, the People Mover project came to an early end because of financial problems.

In the European Networks project the 'transitioning framework' (Tables 3.2 and 3.3) was developed and applied to reflect on the process and substance of the existing project and prioritise project activities in terms of *deepening, broadening and scaling-up*. However, this transitioning process lacked the right support and conditions and therefore did not bring about successful results.

The Rush Hour Avoidance project provided an example of a successful transitioning process in which an initial limited pilot project was transformed into a transition experiment that learned about the effect of a financial reward system (a change in *structure*) on the mobility behaviour of motorists (a *practice*). The transition potential of Rush Hour Avoidance could be characterised in terms of *deepening, broadening and scaling-up*; on all these dimensions the RHA consortium had to deal with dilemmas, but had also realised important results.

Based on first lessons learned in the three case studies of Transumo projects, eight selection criteria for 'transitionable' projects were distinguished. Furthermore, three main interrelated steps of a transitioning process were distinguished. Based on these experiences a practice-oriented 'transitioning method' was also developed. This method aims at supporting project managers and programme managers with transforming ongoing innovation projects into transition experiments, to increase the chance that their projects can be scaled up and contribute to a transition (Van de Lindt et al., 2009).

Chapter 6 describes the experiences and lessons with regard to developing and managing a portfolio of transition experiments within the "Transition Programme in Long-term

Care". This programme encompassed two rounds of 26 transition experiments in total, which were conducted in practice to explore radically new ways to fulfil the need for long-term care. In this transition programme a 'bottom-up TM' approach was applied, which had several consequences for how the portfolio of transition experiments was managed. The various programme management activities encompassed: selecting promising transition experiments, creating space to set up the selected experiments, facilitating social learning, and monitoring the progress of the experiments in terms of contributing to a transition process. In all these activities the conceptual framework on transition experiments was applied and further developed in co-production between Transition Management researchers and other actors. Key concepts that were applied as guiding notions and became part of the programme discourse were 'the connection to persistent problems /societal challenge', 'radically changing the structure, culture and practices' and 'deepening, broadening and scaling-up'. These concepts were also applied as selection criteria for transition experiments. Furthermore, the mechanisms *deepening, broadening and scaling-up* were applied in a monitoring framework for transition experiments.

Within the Transition Programme in Long-term Care a 'transition team' played an important role, which included experts on substance, Transition Management and financial and business aspects. The specific competences of the 'transition manager' (e.g. TM consultant) within this transition team included: *daring to take risks, tenacity, a feeling for politics, communicative* and *being a systems thinker*. The Transition Programme in Long-term Care included one promising example of a transition experiment that has scaled up to a 'niche-cluster' that is growing into a niche-regime (District Care or "Buurtzorg"). Scaling up more transition experiments was an important overall objective and will be a core activity in the last phase of the transition programme. This needs to be studied in follow-up research.

Chapter 7 describes the development and management of *one* of the 26 transition experiments in the Transition Programme in Long-term Care: "ACT-Youth Rotterdam". This transition experiment was initiated by a large mental health care institute in Rotterdam to address the societal challenge that existing care providers cannot reach youth with complex psychosocial and psychiatric problems. The experiment involved five multidisciplinary and outreaching ACT teams at various locations in Rotterdam which provide integrated mental health care to youngsters in a fundamentally different way. Almost all characteristics of a transition experiment (Table 3.1) could be recognised in ACT-Youth. However, ACT-Youth started without first developing an explicit long-term perspective. The transition goals of this experiment were framed in terms of desired changes in *structure* (e.g. changing power structures between professionals and youth), *culture* (e.g. changing organisational culture and meeting youth culture) and *practices* (e.g. an

integrated and outreaching approach). Many of the institutional, financial and organisational barriers that were encountered whilst setting up ACT-Youth could be related to these desired system changes. To overcome the encountered barriers and contribute to a transition process, various management activities were conducted that could be described, structured and prioritised in terms of *deepening, broadening* and *scaling-up*. Based on the experiences with managing ACT-Youth 10 building blocks for developing an *integrated management model* for transition experiments could be derived at.

The Transition Programme in Long-term Care supported ACT-Youth with different types of space for experimentation: *financial space* (e.g. grants), *organisational space* (e.g. commitment of powerful actors in the organisation), *transition management space* (e.g. instruments and expertise on managing transition experiments), *mental space* (e.g. an inspiring environment that stimulates out-of-the-box thinking), *juridical space* (e.g. exemption from rules and legislation) and *geographical space* (e.g. geographical flexibility in providing care). To manage this transition experiment successfully, the innovation manager and general manager of ACT-Youth also needed to have specific competences, including: *communicating with the 'field', seeing the big picture, being a creative thinker, learning by doing* and *daring to take risks*.

Chapter 8 synthesises and reflects on the research results and formulates recommendations for follow-up research and practice.[1] Four main conclusions are formulated which together answer the central question of this research: *How can a transition experiment and its potential contribution to a sustainability transition be analysed and managed and what conceptual framework could support this?* The first main conclusion is that the developed definition and distinguishing characteristics of transition experiments can be applied as analytical 'tools' to better understand and facilitate transition experiments in different phases of development. However, it is recommended to further develop the definition of transition experiments into a more practice-oriented definition that is as concise and concrete as possible. Such a redefinition of transition experiments could emphasise that a transition experiment explores sustainable and radically different ways of doing (*practices*), thinking (*culture*) and organising (*structure*). The second main conclusion is that a transitioning approach, in which the transitioning framework can be applied as a key instrument, can support the transformation of ongoing innovation projects into transition experiments. However, follow-up research should elaborate on what type of concrete actions can follow from a transitioning approach and how and under what conditions these actions can contribute to sustainability transitions. The third main conclusion is that the mechanisms *deepening, broadening* and *scaling-up* provide valuable

1. Chapter 8 also includes a reflection on the research methodology and approach (section 8.3), which is excluded from this summary.

concepts for understanding and trying to influence the potential contribution of transition experiments to sustainability transitions. Theoretically, these concepts are valuable because they provide an integrated perspective on how transition experiments could contribute to the development of niches, niche-regimes and regime-shifts. However, in follow-up research other theoretical concepts and perspectives could be added and historical empirical research needs to be conducted on transition experiments that have indeed contributed to sustainability transitions. The fourth main conclusion elaborates on how transition experiments can be managed, including selecting, providing different types of space, facilitating social learning and monitoring transition experiments. This research has also contributed to several practice-oriented concepts, including selection criteria, the transitioning framework and a monitoring framework, which could support the management of transition experiments. Furthermore, the case study of ACT-Youth brought forward 10 building blocks for developing an *integrated management model* for transition experiments. All case studies in this thesis suggested that in the management of transition experiments, the mechanisms *deepening, broadening and scaling-up* can be used as central 'guiding dimensions'. The case studies also suggested that the personality and competences of the people involved in transition experiments are a key success factor. However, follow-up research should test and elaborate on the specific competences that were identified in this research.

Despite the need for follow-up theoretical and empirical research, the research results can already be used to support future activities of different types of TM practitioners, including programme managers, project managers or process managers, TM consultants and advisors. In general, this research has provided TM researchers and practitioners with a *language* to better communicate about and understand transition experiments and their potential contribution to sustainability transitions. Furthermore, this research has provided them with a *perspective to act*, which enables taking actions[2] to facilitate and stimulate transition experiments better and use them as instruments in realising sustainable development. To give a direction for follow-up research, three main research themes can be identified: (I) Generating more examples of transition experiments in practice, by conducting both *descriptive research* with an international focus and *action research* in which different management approaches can be applied and compared. (II) Understanding and influencing processes of scaling-up, by conducting *historical case studies* to study transition experiments that have successfully scaled up and have thus contributed to fundamental changes in societal structure, culture and practices; and conducting *practice-oriented research* to translate the mechanisms deepening, broadening and scaling-up into concrete management strategies and guidelines. (III) Further

2. These actions include: assessing (potential) transition experiments, selecting, reflecting, reframing, monitoring, facilitating learning and interaction, prioritising and structuring management activities.

translating the *theoretical knowledge* about influencing sustainability transitions in general and managing transition experiments in particular, into *practical knowledge* (and vice versa). This is part of an ambition of developing TM, including the management of transition experiments, into both an established field of research and an established 'profession' aimed at furthering sustainable development. Realising this ambition will take at least another five to ten years of dedicated work by transition researchers and professionals who try to influence sustainability transitions in different sectors and policy domains. This book has resulted in several steps forward in realising this ambition, by developing practice-oriented concepts and examples of how transition experiments could be used as instruments to further sustainable development.

About the author

Suzanne van den Bosch (1980) was born in Leiden, the Netherlands. She studied Industrial Design Engineering at the Delft University of Technology. In 2004 she completed her Masters Degree in Innovation Management, with a specialisation in "research" and a further specialisation in "Technology in Sustainable Development". To stimulate sustainable innovation in practice she worked as an independent advisor at SUSI Sustainable Innovation and as a consultant Sustainable Product Innovation and Corporate Social Responsibility at BECO. In 2005 she started a PhD research on "transition experiments" at the Dutch Research Institute for Transitions (DRIFT), which is situated at the faculty of Social Sciences of the Erasmus University Rotterdam. This PhD research was supported by the Knowledge Network for System Innovation and Transitions (KSI). She also worked together with the Knowledge Centre for Sustainable System Innovation and Transitions (KCT) and the Competence Centre for Transitions (CCT), which resulted in several practice-oriented publications about transition experiments. Suzanne currently works as an advisor in processes of societal change at Viatore, focusing on the transition to sustainable health care.

Publications

International peer reviewed journals

Raven, R., Van den Bosch, S. and Weterings, R. (2010). Transitions and strategic niche management: towards a competence kit for practitioners. *International Journal of Technology Management 51*(1), 57-74.

Van den Bosch, S.J.M., Brezet, J.C. and Vergragt, Ph.J. (2005). How to kick off system innovation: a Rotterdam case study of the transition to a fuel cell transport system. *Journal of Cleaner Production 13*, 1027-1035.

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Raven, R., Van den Bosch, S. and Weterings, R. (2007). Strategic Niche Management and Transition Experiments. From analytical tool to a competence kit for practitioners. Paper for the 4th Dubrovnic Conference on Sustainable Development of Energy Water and Environment Systems, June 4-8, 2007, Dubrovnic, Croatia.

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Van Felius, P., Van Raak, R., Taanman, M. and Van den Bosch, S. (2007). Handboek transitiemonitoring. Inzicht & samenhang in monitoring, bijsturing en acties voor het Transitieprogramma in de langdurende zorg. Rotterdam: DRIFT.

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This book presents the outcome of exploratory research on how transition experiments can be used as instruments to further sustainable development. A transition experiment is a specific type of innovation project that is aimed at exploring radically new ways to meet societal needs, such as the need for energy, mobility and health care. Transition experiments are a key instrument of the governance approach Transition Management (TM), which has recently been developed and applied to influence and direct transitions towards sustainability. This book presents a conceptual framework for analysing and managing transition experiments and their potential contribution to sustainability transitions. The framework was developed in interaction with practitioners in three Dutch sustainability programmes: Learning for Sustainable Development, Transumo (TRANsition to SUstainable MObility) and the Transition Programme in Long-term Care.

These case studies include examples of several transition experiments as alternatives for classical innovation projects that are aimed at realising short-term solutions. A transition experiment takes a societal challenge as a starting point for learning aimed at contributing to a long-term transition process. The case study of the Transumo programme shows how ongoing innovation projects can be transformed into transition experiments. The case study of the Transition Programme in Long-term Care specifically shows how a portfolio of transition experiments can be managed successfully; focusing on the transition experiment "ACT-Youth Rotterdam" that provides integrated mental health care to youngsters in a fundamentally different way. All these case studies demonstrate that the mechanisms *deepening* (learning in a specific context), *broadening* (linking and repeating in different contexts) and *scaling-up* (embedding in established ways of thinking, doing and organising) can be applied as key 'guiding dimensions' to influence the contribution of transition experiments to sustainability transitions.

The practice-oriented concepts and examples that are described in this book could provide researchers, policy makers, programme managers and project leaders with a new way of looking at the role of innovation projects in transitions to sustainable development.

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