Propositions

to the PhD thesis

Playing with Complexity
Management and organisation of large infrastructure projects

Marcel Hertogh

1 Since large infrastructure projects experience a ‘non-linear’ implementation process in which goals, scope, finance and schedule change considerably; management needs to adapt continuously to changes and to new developments.

2 Social complexity is the dominant cause for delay and cost overrun; legal complexity, in contrast, seems to be manageable.

3 Although systems management is often regarded a hygiene factor, its application in practice is challenging and time consuming; Dutch projects can learn from the Swiss system management approach that pays sufficient attention to it from the beginning.

4 Stakeholders with a cooperative attitude have a greater chance for successful promotion of their interests than stakeholders applying a strategy of opposition.

5 Successful management of large projects will not be achieved by using the remote control. Effective implementation calls for extraordinary solutions: new and creative actions have to be developed during implementation so as to maintain progress and to overcome major dead-locks.

6 The Swiss decisions to build both the Gotthard and Lötschberg tunnel, even though one would provide sufficient transport capacity, reflects the realpolitik of the Swiss constitutional situation; a majority of the cantons has to be kept supportive through the plebiscite process.

7 Contrary to expectations, international knowledge exchange will not be hampered by differences in culture and rules. Professionals will be inspired by solutions and lessons of another context.

8 The evolution of mankind’s social capacities seems to have difficulties keeping up with the evolving complexity of society.

9 The cost ratio between a functional (like Ikea) and a design solution (like Leolux) is a factor 10.

10 The real marathon runner will be found at the marathon of Klazienaveen.

11 If everything seems under control, you’re not driving fast enough.

Rotterdam, January 7th, 2010
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Eddy Westerveld

1 In the implementation of large infrastructure projects change is driven by the dissatisfaction of one of the involved key players.
2 Large infrastructure projects cannot be controlled; they can at best be restrained.
3 Large infrastructure projects are suffering from a learning paradox: while the added value of learning from other projects is enormous, each project tends to reinvent the wheel.
4 The traditional aspects of project management – time, cost, quality, information and organisation – are not only confusing; they also do not meet the most crucial challenges with respect to management of large infrastructure projects.
5 Eventually, the central criterion to evaluate the success of a large infrastructure project is the added value of the infrastructural facility which was built. The pain of cost and schedule overruns experienced during the implementation process is only temporary.
6 Knowledge dissemination and development at large infrastructure projects are performed much more efficiently by private organisations than by government agencies.
7 Within organisational theory, there are no prescriptive rules that are applicable without exceptions.
8 The fact that research shows that expensively bought strikers do not score goals, is unlikely to result in a noteworthy change in transfer market behaviour of professional football clubs.
9 Real passionate cyclists always take the elevator
10 A winners’ mentality is nothing different than really hating to lose.
11 Structure is something to hold on to for the less gifted amongst us.

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