

ROTTERDAM SCHOOL OF MANAGEMENT, ERASMUS UNIVERSITY

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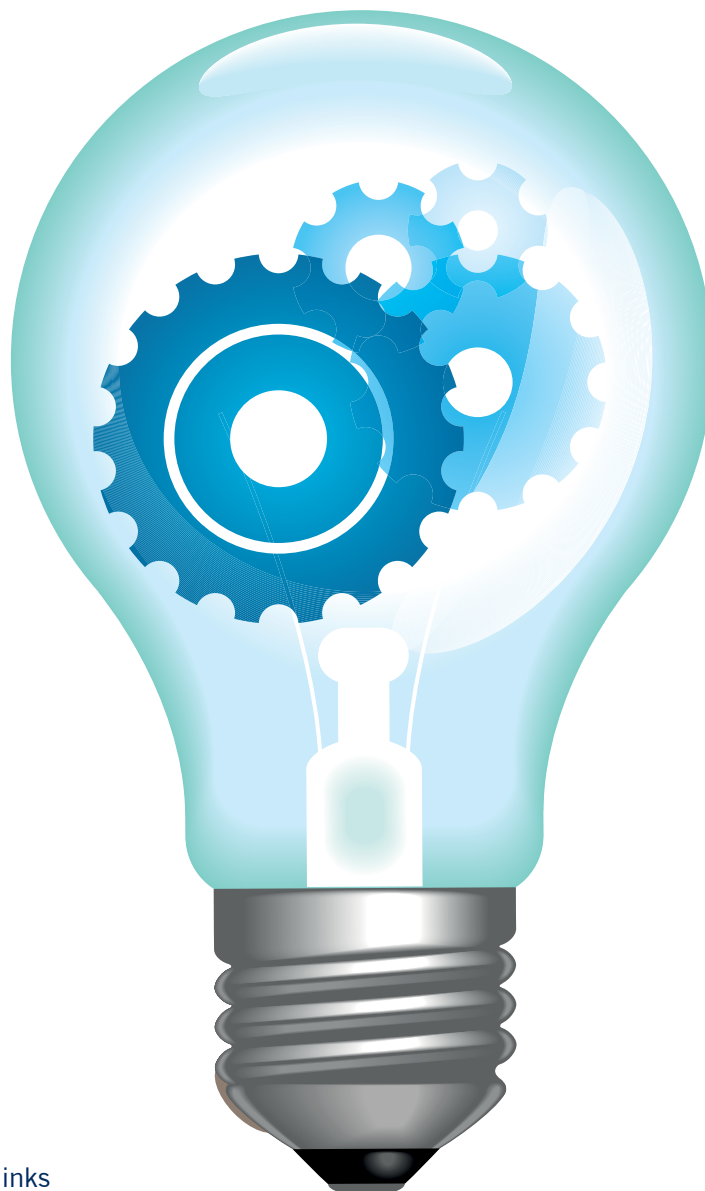
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The business school that thinks
and lives in the future

Making business sense of cross-industry innovation

by Ferdinand Jaspers and Jan van den Ende

Schumpeter, the renowned economist, defined innovation as ‘new combinations’ of existing elements. Today’s business environment provides valuable opportunities for such innovation, in which existing technologies, products and services from various industries are creatively adapted and then launched successfully into new, unconnected business areas. But there are rules to be followed.

With television broadcasters streaming their programmes on their own websites, consumers are increasingly using their tablets to view their favourite shows while on the move. Not long ago, this would have been an activity reserved for the television set in the living room, and certainly not for an information and communications technology device on the train. This is just one example of how barriers are coming down as technologies, products and services innovatively shift between industries.

And there is a lot more happening in mobile communications. The ubiquitous mobile phone – especially the smart variety – is a prime target for entrepreneurs looking for new applications and markets to exploit popular technologies in order to widen their business and increase sales. Of course, Apple started this particular trend in mobile communications when it positioned its iPhone as a

communications and entertainment device by allowing users to also purchase (from Apple’s online iTunes Music Store), download and play music – also a great example of cross-industry innovation.

Not surprisingly, developers continue to look for new applications for the nifty smart phone and other mobile devices. Most notably, they have adapted banking and payment services to allow them to be accessed by consumers from a smart phone, taking into account the unique features of the new host platform. These unique platform characteristics can affect how and where these devices are used, and determine the type of value added consumer services to be provided (and paid for). This can create whole new markets instead of just extending current ones.

Crucially, these cross-industry innovations do not require complete changes in technology. They, in

fact, leave existing technologies and components from the different industries essentially untouched. However, such innovations do need a deep understanding of how these technologies can best be linked.

To help us identify the challenges and pitfalls in developing and deploying these cross-industry innovations and to subsequently offer solutions and recommendations, we made a study of three such projects (see box for details) in the mobile communication industry: a mobile payment application involving a start-up and its suppliers; a mobile banking application involving an alliance between a mobile network operator and a retail bank; and a mobile television application involving an alliance between an information technology firm, a television producer and a communications equipment supplier.

How to succeed

Our research shows that there are three critical success factors in cross-industry innovation, and all have to do with the right composition of the development team and its proper interaction.

First of all, the project team needs to include specialists from the respective industries. A high degree of differentiation means that the project benefits from high-quality components



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and deep component-level expertise. In the mobile television and the mobile banking projects, this was achieved through temporary new product development alliances between leading firms from the different industries. In contrast, the start-up company failed to develop a high-quality application on its own, since it lacked a detailed technical understanding of the two industries that it tried to address.

Second, there should be frequent and rich information exchanges between these specialists. This will help to facilitate the generation of detailed knowledge on how to

successfully integrate the different component technologies. In the case of the mobile television project, this intense co-ordination was the direct result of the appointment (by the two project partners) of dedicated solution architects, who had frequent and personal contact with the co-ordinating IT company. This allowed project members to monitor and align the operational activities at the respective partners. In the mobile-banking alliance, an attempt was made to facilitate co-ordination by renting for the project team members a central office location in an attractive mid-size city. ▶

▶ Project cases

The following cases were part of our study:

- An independent start-up developed a mobile payment application, which made use of the mobile phone to transfer funds between users. It could also be used to purchase products and services from online web stores that adopted this payment method. The start-up company collaborated with suppliers, but not with incumbents, such as banks or mobile operators.
- A mobile banking application (integrated in preconfigured mobile phones) enabled users to pay bills, transfer funds, check account balances, and top-up prepaid airtime. This project involved a contractual alliance between a mobile network operator and a retail bank,
- A mobile television application made it possible to broadcast mobile video calls live on television, thereby turning mobile users into cameramen. This application was developed in an informal alliance between an information technology firm, a television producer and a communications equipment supplier.

Making business sense of cross-industry innovation (continued)

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And finally, timely decision-making between the specialists is necessary to prevent and resolve conflicts between the intensely collaborating specialists. As can be expected, it is difficult for partners with different industry backgrounds and with no prior ties to reach consensus about complex architectural decisions and trade-offs.

For instance, the attractive office location mentioned was not sufficient enough to create the conditions for decision-making between the partner firms. One of them (the bank) tightly controlled its team members. Office space was available, but decision space was not forthcoming. This resulted in long project delays, cost overruns and quality issues.

There are important lessons to be learnt. In the case of buyer–supplier relationships or asymmetric joint ventures, it is quite obvious where the decision-making authority lies. However, this is not always clear in alliances of equals, which means that a mechanism is needed to help prevent and resolve conflicts when consensus cannot be reached. Establishing clear conflict-resolution rules could be one such mechanism; another could be formally appointing one of the players to take the leading role.

For instance, in the mobile television alliance, decision making was based upon consensus, where possible.

However, in the event that this did not work, the telecom partner was given the final say. Coupled with top management support from all partner firms, this approach ensured timely decision-making and clear conflict-resolution.

In short, our study shows that cross-industry innovations pose several opposing challenges: combining very different specialist expertise from different industries, while at the same time creating decision procedures and good co-ordination between first-time partners.

Although we know from researching the literature that company characteristics, such as an innovative culture and a firm's ability to learn from external developments, are important for innovation success, our study provides strong evidence that proper management of innovation projects is essential as well.

Looking to the future

While some of the points we raised and recommendations we made are specific to the industries involved in the three projects we investigated, most could easily be extrapolated to projects in other business areas.

And that is important because what is happening with cross-industry innovations in the mobile communications industry is of course

being replicated in other industries – such as medicine and health care – and with other technologies, products and services. Drug development is another area to watch out for, especially development projects at the intersection of traditional pharmaceuticals and biotechnology, as well as, nano-biotechnology. ■

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