

# In een rechthoekig cakeblik bakt men geen ronde taarten.

IV

Drie paradigmaverschuivingen die leiden tot  
een innovatieve bedrijfscontext; een Smart CDP.



# ▪ Summary

## 1 Introduction, research question and purpose

Nowadays, innovation is an important factor for companies in facing increasing competition as a result of economic globalisation and increasingly transparent markets, particularly due to internet. This is because innovation offers the opportunity to respond adequately to rapidly changing circumstances. Although B2B companies with no R&D but with highly-educated professionals acknowledge the need to innovate rapidly, in practice it appears to be difficult to pursue innovation. This is the key research problem of the study described and discussed in this thesis.

The literature review put forward a number of reasons for innovation being difficult to implement. From the results of the annual *BCG Innovation Survey*, conducted among executives from a number of larger companies in 63 countries, it appears that both in 2009 (Andrew, James. P; Haanaes, Knut; Michael, David C; Sirkin, Harold L; Taylor, Andrew, 2009) and in 2010 (Andrew, Manget, Michael, Taylor, & Zablitz, 2010) 55% of the respondents are unsatisfied with the financial returns on their company's investments. The main reasons most commonly cited were corporate culture, the overly lengthy development times and a lack of coordination of innovation processes within the company. According to the *Wirtschaftswoche* this is due to the fact that organisations have limited knowledge of their clients and have risk-averse corporate cultures (Wirtschaftswoche, 2006, p. 81). The term culture/corporate culture, however, can be interpreted in several ways (compare, for example Deal & Kennedy, 1982; Peters & Waterman, 1982; Kanter, 1983; Schein, 1985; Handy, 1989; Jermier, Slocum, Fry, & Gaines, 1991; Sackmann, 1992; Bloor & Dawson, 1994; Baba, 1995; Hofstede G. , 1991; Finegan, 2000). Others tried to describe how culture works rather than looking at cultural expressions (compare, for example, (Sanders & Neuijen, 1987) (Chatman & Jehn, 1994) (O'Reilly III, Chatman, & Caldwell, 1991)).

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The diversity of perspectives and definitions attributed to the term culture made it clear that we would have to relinquish the term culture.

Based on these studies, we assumed that the context within which people find themselves affects their behaviour. We wanted to determine the mechanism by which, as Hofstede calls it, collective mental programming takes place, creating an entity that differentiates itself from others (Hofstede & Hofstede, 2008, p. 19), but also, in particular, generates innovative behaviour in professionals.

This led us to formulate the research question:

*How can a B2B organisation with no R&D create a corporate context in which highly-educated professionals act innovatively?*

In the process of creating an environment within which highly-educated professionals act innovatively, we wanted to ascertain the social mechanisms that play a role in creating this environment.

We wanted to find these mechanisms and then use them once we had created a corporate context within which highly-educated professionals acted innovatively within a B2B company with no R&D.

This resulted in the following goals:

- *Creating a corporate context within which highly-educated professionals act innovatively.*
- *Obtaining knowledge on the social mechanisms that play a role in creating a context within which highly-educated professionals act innovatively.*

## 2 Methodology

### 2.1 Research perspective: the research question and the methodology

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The research question “*How can a B2B company with no R&D create a context within which highly-educated professionals act innovatively?*” is broad. Perhaps too broad to be able to make universal observations that would be applicable to all knowledge-intensive B2B companies. Companies, after all, differ greatly and are also in constant development.

By using *action research*, the terms *context* and *acting innovatively* were assigned a meaning during the research by studying and describing social mechanisms (Hedström & Swedberg, 1998, pp. 3-4) that play a role in creating a context within which highly-educated professionals act innovatively. From a social interpretive paradigm (Boonstra & de Caluwé, 2006, p. 23), we focused on giving an accurate description of what was observed in the empirical world (Maso, 1987, p. 15). The findings were then compared with the literature in order to *verstehen* (understand) (Mortelmans, 2011, pp. 437-440) these mechanisms. This method is also called action science (Kemmis & McTaggart, 2005, p. 561).

This study was designed to gain a thorough understanding of the social mechanisms within the corporate context of B2B companies. A *single case study* was aimed at obtaining a better understanding and developing a theory (Yin, 2009, pp. 5-24) and was therefore an extremely appropriate method for this study.

## 2.2 Research method

This study was divided into five main interacting method groups:

- Four years of action research within a company where the majority of the employees are highly educated
- Focus and reflection groups
- Literature study
- Informal discussions with specialists from other companies
- Focus group of experts

A practical study was conducted using action research to enable us to use this practical perspective to gain an understanding of the mechanism enabling collective mental programming to take place and so generating innovative behaviour among professionals. The knowledge obtained was continually compared to the literature and fed back to the professional practice. Interventions were used to determine whether solutions could be found for the research problem. At the same time, these interventions were a source of new perspectives. In addition, we were able to reflect through focus and reflection groups and informal discussions with specialists from other companies. The ensuing results were then once more compared with the literature and the outcomes of our action research. The end results of the study were finally presented to the company and a focus group of specialists (see figure 8.1).

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## 2.3 The company

We formulated five selection criteria for the company to be studied, namely:

- The majority of employees were to be highly-educated, creative professionals. The definition of highly educated for this study means a University degree or a degree from a University of Applied Sciences. Creative means that the tasks of the professional consist, to a large extent, of creative processes.
- The company must have a distinct structure with different hierarchical layers.
- The company must have the ambition to innovate.
- The company must maintain high professional standards, be project-based and have multiple projects running simultaneously so that any possible effect of this on innovation can be determined.
- The company must be willing to participate in a multi-year action research programme.

The company chosen for this case study was dBOD, a creative organisation with highly-educated professionals but with no R&D. As to be expected from such companies, there was no lack of ideas within the company but rather a lack of strategic and organisational

implementation of ideas that result in strategic innovation (Andrew, Haanaes, Michael, Sirkin, & Taylor, 2009).

### 3 Results and conclusions

The results of this study led to three paradigm shifts. We drew a number of conclusions based on these three shifts.

#### 3.1 First paradigm shift: from a Performance Engine to a corporate FASS with sub-FASS.

A *Performance Engine* is that part of a company that is responsible for supplying products and/or services. This division cannot innovate as this requires new knowledge and skills. Moreover, the *Performance Engine* needs to break free from its past in order to pursue innovation, which is not compatible with supplying products and services (Govindarajan & Trimble, 2010). The *Performance Engine* therefore opposes innovation. This is easier to understand when a company is described in terms of a functional autopoietic social system (FASS).

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As a result of the theory developed in this study, we consider a company to be a corporate FASS consisting of several sub-FASSs. A FASS is not made up of people but of *communications*. This concurs with the theory of social systems put forward by Luhmann, in which Luhmann argues that social systems consist of *communications* and not people (see Luhmann, 1984). The term *communications* includes all interactions between people. We could say that the human being entity could be seen as being less relevant and should specifically focus on the *communications* of the social system, in our case, the FASS. This is a rather odd remark considering that it is people who generate these *communications*. But despite this fact, people tend to adapt these *communications* to the social system so as to be part of this social system. You could therefore say that the social system calls for 'native' or 'system specific' *communications* that are subsequently used by people. This makes FASS a self-referential system in which it is not humans that play a role but the *communications* generated by humans.

In order to be able to perform within a FASS it is necessary to recognise, understand and reproduce the *communications* of this FASS. The *communications* created at that point in time form the FASS. In cases in which the *communications* of one person are not consistent with the FASS, this person does not perform within this FASS and is not considered by the FASS to be part of the FASS. This brings us to the conclusion that acting is determined by the *communications* of the FASS within which one wishes to act.

Understanding the *communications* of a FASS is easier if we look at the function, ambition, values and standards of a FASS. The *function, ambition, values and standards* could be regarded as the genes of a FASS. We call these genes the *FASS code*. The function of the FASS code indicates what the FASS wants to generate. The *ambition* or development ambition indicates the development preferences. Together, ambition and function determine the direction and contents of the FASS, with ambition being the driving force for development to take shape. The *values* of the FASS indicate what is considered important and, finally, the standards indicate how the *function, ambition* and *values* are implemented.

The *communications* are the means with which the FASS allows the FASS code to be formed. It follows that if one complies with the *communications* of a FASS in order to be able to perform in that FASS, one consequently also complies with the FASS code of the FASS.

The following conclusion can then be made: if a FASS has no innovation in its FASS code, innovation will not be supported by the *communications* of that FASS and therefore little or no innovation will be able to take place. Innovation may even be considered as a threat to the system by the FASS code of the FASS, resulting in a correspondingly large resistance to innovation. The opposite can also be the case. If innovation enhances the development of the FASS code of a FASS, innovation will be embraced by the FASS.

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As a FASS does not consist of people but *communications*, it is possible that within a certain FASS a person is unable to innovate while that person would be able to do so in another FASS. This is because a condition for innovation is that a FASS actually has innovation in its FASS code.

Thinking in a paradigm that sees a company as a corporate FASS with several sub-FASSs, also affects the way in which we look at the management. Our first conclusion is that a manager is not part of the FASS that he/she is in charge of. He/she merely represents a FASS. The FASS he/she represents depends on the perspective from which one looks at the manager. From the point of view of the FASS which he/she is in charge of, the manager represents the corporate FASS. In a management team, however, other managers see him as the representative of the FASS he is in charge of.

The highest ranking managers in the hierarchy only represent the corporate FASS and are therefore the representatives of the corporate FASS. Their *communications* determine the FASS code of the corporate FASS.

We have seen that *communications* exert power to adapt *communications*, and therefore also the acting, to the FASS. We presume that the age and the size of the FASS affect the strength of this power.

### 3.2 Second paradigm shift: from the paradigm that allows management to focus on stability and tries to mitigate instability to a paradigm in which instability is utilised for development and innovation.

Traditionally, companies tended to strive for stability (Heller, 2003, pp. 144-163), as instability inhibits the performance of the *Performance Engine*. Stability, however, actually slows down development and innovation (Volberda, 2004) and is therefore not appropriate in a complex environment that calls for a company to continually adjust to ever-changing situations. A system must, therefore, have a certain degree of instability (Kruse, 2004, pp. 92-130) and the potential to recognise strategically important elements of the complex environment.

In addition to stability being a functional requirement of the *Performance Engine*, we found two further mechanisms that support the need for stability and slow down development and innovation: *Inattentional blindness* and limited perception as a result of lack of knowledge and awareness. This refers to the phenomenon in which one only perceives things that are part of the knowledge and experience one is familiar with, and within this, only things to which one pays attention (Dijksterhuis, 2007, pp. 74-75).

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As knowledge is very broad and the amount of knowledge individuals possess is relatively limited, individuals only perceive part of the knowledge and complexity present within a company. If this individual has a management position and sees his perception as the standard, this manager can be considered to be a bottleneck for development and innovation. He/she cannot, after all, focus on development and innovation if it is not perceived.

In order to bypass the focus on stability and *inattentional blindness* of the *Performance Engine* and to circumvent the possible development and innovation bottleneck by the management, a sub-FASS consisting of highly-educated professionals must be created in addition to the *Performance Engine*. The purpose and ambition of this sub-FASS will be to signal new developments using the broad, high-quality knowledge present. The sub-FASS will be used to create the necessary instability for development and innovation, outside the *Performance Engine*, enabling this sub-FASS to better perceive the complexity of the external developments and the speed with which these developments take place. This instability can be brought about by phrasing or re-phrasing the purpose and ambition of the corporate FASS to such an extent that development and innovation become essential. The information generated by this sub-FASS will serve as strategic input for further development and innovation.

### 3.3 Third paradigm shift: from Performance Engine to Smart Connector, Developer and Performer (Smart CDP).

The third paradigm shift makes it possible to separate development and innovation from the *Performance Engine* as well as to integrate it at a later stage. Using the second paradigm shift allows us to knowingly develop instability, enabling development and innovation. In addition, as much diverse knowledge as possible will be used to perceive the complexity and development better. In the third paradigm shift we have taken it even further by looking at the company as part of the external complexity, thereby crosslinking it. A company with this structure is called *Connector, Developer and Performer (Smart CDP)*.

We have applied knowledge from the second paradigm shift by first setting up a new sub-FASS, called *Innolab* in this study. This *Innolab* consisted of three development types that concurred with the participating professionals' own character and/or preferences; *the perceivers/pioneers group, the concept developers and the implementation developers*. The role and ambition of this sub-FASS was focused on development and innovation. The first group of the *Innolab* was made up of the perceivers/pioneers who were expected to perceive developments, opportunities, chances and threats in the environment from as broad a knowledge perspective as possible. As these highly-educated professionals only perceive that which is part of their knowledge and experience (see second paradigm shift) and these professionals are employed by the company as a result of part of their knowledge, it was relatively straightforward to discover links between the perceptions and the opportunities for the company. It was a bigger challenge to envisage new roles for the company from the perceptions. People were rigid in their view of the current role of the company. This problem was reduced by redefining the position of the corporate FASS into what the company "generates" rather than what the company produces. This meant that the company could take on different roles but stay true to the core of what was generated.

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The results of this group were immediately presented to the general manager and served as input for making strategic decisions. These decisions were adapted into concepts by a second team, the concept developers. These concepts were then presented to the strategist, who was responsible for deciding which concepts could be developed further, which developed concepts could possibly be implemented by the third team, the implementation developers, and which concepts did not qualify or needed further development.

If the development ambition was so great that the available knowledge, skills and innovation were inadequate to achieve this ambition, a mechanism emerged that ensured that the development teams searched for external knowledge, skills and innovation. If the development

team was successful in finding this external knowledge, skills and innovation, a link was formed with this source. These links were not formed for the sake of the links but for the functional dynamics that these links supposedly generate. This enables the company to build up a sort of intelligent network that is considered to be a condition for long term success in a complex environment (Kruse, 2004, p. 145).

Not only can external knowledge, skills and innovation promote development and innovation but it is also conceivable that one tries to find external *Performance Engines*. The *Performance Engine* then becomes a *Smart Connector, Developer and Performer (a Smart CDP)* (see figure 4.11).

