The Collaboration between
People in Innovation Networks

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In this chapter, we will focus on the collaboration between people from the different organisations. To develop today's complex product (or service) innovations, people from different organisations go through an innovation process collaboratively (Blizzard & Klotz, 2012, Charnley, Lemon & Evans, 2011). They all have different knowledge that is needed in the joint project. The activity in which people from different organisations work together in order to innovate is what we call networked innovation. Several studies have been done into the factors that influence the collaboration in monoand multidisciplinary teams within an organisation, but less is known about the factors that influence networked innovation. Based on a case study on the Senseo project in which Philips and Douwe Egberts jointly developed the Senseo coffee machine, we will explain what factors can influence the collaboration in innovation networks.

Content

| 1. | Networked innovation | |
|----|--|---|
| 2. | The factors that can influence networked innovation | 2 |
| 3. | Factors from the literature review and the case study | 4 |
| | 3.1. The people that work in a networked innovation project | 5 |
| | 3.2. The team in the networked innovation project | 5 |
| | 3.3. The project content in a networked innovation project | 6 |
| | 3.4. Project knowledge & communication in networked innovation | 6 |
| | 3.5. Project management in a networked innovation project | 7 |
| | 3.6. The organisations in networked innovation | 8 |

4. Conclusion

1. Networked innovation

During the innovation project, the different members in the team share their knowledge on the innovation content and the innovation process and create new knowledge. The team integrates the knowledge into an aligned orientation for the content and the process. In the Senseo project, the people from Philips were knowledgeable about coffee machines and the people from Douwe Egberts were knowledgeable about professional coffee machines and coffee quality. In the development of the Senseo, Philips and Douwe Egberts needed each other to develop the Senseo; they both had knowledge that was crucial for the success of the coffee machine. They jointly developed the new machine and matching coffee pods.

During the development of the Senseo, the teams from the different organisations alternated between phases of 'individual' internal work in the different organisations and collaborative work in a joint team with members from both organisations. Philips made the machine technically functional and ready for mass production while Douwe Egberts developed the coffee pods. Teams from both organisations did this individually but had collaborative phases to make the interface between the coffee machine and the coffee pods work (see figure 1). As we are interested in the collaboration. we focus on the collaborative phases in which the people from the different organisations actually work together.



Figure 1: Design collaboration with individual work and shared phases (Based on Kvan, 2000)

2. The factors that can influence networked innovation

For successful networked innovation, we need to know what factors can influence networked innovation, even on top of the factors that influence mono- and multidisciplinary innovation within one organisation. Based on the literature into mono- and multi disciplinary teams and the case study on the collaboration in the Senseo project, we will explain how networked innovation can be even more complex than the collaboration within one organisation. We selected the Senseo project because, although the Senseo has proven successful in the market, the joint innovation process had its hurdles. As part of the research program on networked innovation, we interviewed different team members who were involved in the Senseo project from Philips and Douwe Egberts. The interviewees had different functions in the organisations and were involved in different stages in the innovation process.

The literature review and the case study provided a broad overview of the factors that can influence the success of networked innovation. These factors were found in six different clusters (building on the work from Badke-Schaub & Frankenberger, 1999 and Kleinsmann, 2006)

- People, related to the abilities & experience of the individual people in the team.
- Team, related to the social relation between the different people in the project.
- Project content, related to the content of the task.
- Project knowledge & communication, related to the availability and

exchange of knowledge between the different people in the team.

- Project management, related to the organisation of the project.
- Organisation, to the organisations in which the project takes place.

We will discuss which additional factors can influence the collaboration on the six clusters we found for innovation networks in addition to the collaboration in monoand multidisciplinary teams. Before this discussion, we will first introduce the Senseo project.

The Senseo project

When the Senseo project started, the coffee appliance market was under pressure. Philips made several redesigns of their appliances to lower the cost price, which affected the quality of the machines. For this reason, they searched for new ways of innovation to move into another direction. They searched for new paradigms around drinking coffee to change the competitive landscape.

At Douwe Egberts, the coffee market was also under pressure. Younger consumers were drinking less coffee and switching to soft drinks. The buying behaviour of existing consumers was routine-based and consumers routinely loaded the 'red bricks', the red packets of coffee, into their supermarket shopping carts. At the same time the coffee's quality slowly reduced, as they switched from Arabica beans to a more Robusta blend. Arabica is a higher quality bean than Robusta. This reduced quality bothered the coffee connoisseurs at Douwe Egberts and they also wanted to control the amount of coffee per cup to guarantee a certain quality for a constant cost price. This could only be accomplished through a solution with a fixed amount of coffee, for example, with a coffee pod.

Another change in the coffee drinking behaviour of consumers was the moment they chose to drink coffee, which moved from a family moment to a more individual moment in which people wanted to enjoy a cup of good coffee, each with their own flavour. All these trends lead to the search for new solutions to attract new consumers and find new solutions with higher margins.

Both organisations, Philips and Douwe Egberts struggled to find these new solutions. However, Douwe Egberts could not come up with a new solution without an appliance, Philips not without matching coffee pods. There was the general idea that in order to turn the market around, the initiative should be broader than just one coffee developer and one appliance developer. At one point, Philips, Nestle/Nespresso and Douwe Egberts teamed up to come to a new standard collaboratively, but this did not work out and Philips continued with Nestle/Nespresso.

Douwe Egberts had continued on their own and had hired an engineering agency which had come up with a good conceptual and aesthetical design. Unfortunately, this design had technical problems and was not ready for mass production. When the collaboration between Philips and Nestle/Nespresso got bogged down, Philips was asked to enter the project at Douwe Egberts and to help with the development of the machine for mass production. Figure 2 gives the process line of the different organisations involved.

In the collaboration between the people from Philips and Douwe Egberts, they kept 95% of the appearance of the design, while they further developed the technical interior and the electronic system to make it ready for mass production.

Initially, a single model of the Senseo was developed and launched in three different colours. This was followed by a second model Senseo, a metal Senseo, a cubical Senseo, a Marcel Wanders Senseo and a customised design. At the coffee side, it started with three flavours, mild, regular and dark roast, and here too several varieties were added to the portfolio. This resulted in a whole platform of different machines and different coffees.

With the introduction of the first Senseo in the Netherlands in 2001, the product became very popular and eventually became a hype. Since then, the Senseo was introduced in another eleven European countries (Philips.com, (c)). In 2004, the Senseo was introduced in the United States and in 2005 in Australia. Four years after the first introduction, ten million coffee machines and four billion coffee pods have been sold (Philips.com, (b)). Seven years after the introduction, in 2008, twenty million coffee machines have been sold and Douwe Egberts offered over fifteen Senseo coffee varieties (Philips.com, (a)). In 2011, 60% of the Dutch households owned a Senseo coffee machine (Philips.com, (c)).



Figure 2: A few of the different organisations involved in the development of the Senseo

3. Factors from the literature review and the case study

Based on this case study in the Senseo we will discuss what factors can influence networked innovation and are new to the collaboration in mono- and multidisciplinary within an organisation. We will do this for the six clusters as mentioned before.

3.1. The people that work in a networked innovation project

An important influencing ingredient of networked innovation is the people that actually do the project, more precisely, the abilities and experience of the individual team members. This cluster includes factors related to the background and position of the person, for example, their cultural background and the organisational level the person works on. Research into mono- and multidisciplinary teams suggests skills, for example, the (in)ability of a person to articulate the knowledge others need (Hoopes & Postrel, 1999). New factors found in the Senseo study are project leadership skills and entrepreneurial skills.

Entrepreneurial skills

The entrepreneurial skills are the skills an entrepreneur has in which he places the project above his personal interests and is driven to make the project a success. In doing so, he is not afraid to burn himself out. The project started at Douwe Egberts and people in the core team were very motivated. At the Philips side, it was a bit harder to get people interested in the project. The entrepreneurial project leader used this disinterest and freedom to make decision and to gain results in the project to regain people's enthusiasm and motivate them to make the project a success.

Project leadership skills

The success of networked innovation teams is also influenced by the quality of the project leader. First of all, the project leader needs the skills to make a good project planning and stick to this planning. Secondly, the project leader needs softer skills to create a collaborative team. In this collaborative team, the members build on each other's knowledge and give 200% for the project. The project leader has to create the right balance for his team members between their activities for their functional leader and their activities in the project, avoid double agendas in finding this balance to make sure the people in the team can do their work within the team as well as across the organisations.

Although both these skills are probably also useful for the collaboration in a team within an organisation, they are more explicitly needed in networked innovation because of the complexity of the project.

3.2. The team in the networked innovation project

Another influencing category is the social relations between the team members, for example trust and team climate. The literature relates trust to the reliability of knowledge and the appropriate use of knowledge (Bertoni & Larsson, 2010). The case study provided additional factors related to trust that the partner does not cheat you and does not leave the project. Both the literature and the case study described the importance of a good team climate (e.g., Charnley et al., 2011, Badke-Schaub & Frankenberger, 1999). The click between team members can heavily influence the collaboration and was of great importance in the Senseo project.

The personal click between different people In the project two persons at the top level had a very good personal click. They originally came from the same city, were both willing to make the project a success, trusted each other completely, and lived in the same neighbourhood. The moment any issue surfaced during the project, they would meet within 48 hours to solve the issues. Interviewees said that this personal click was crucial for the success of the project.

The willingness to help each other The case study also provided another factor that was not found in the literature; the team member's willingness to help each other out. Although the collaboration was not always easy, with the introduction of the Senseo in the Netherlands, sales were higher than expected, which led to a high demand for machines and coffee pods. First Philips had some difficulty to produce enough machines and when that was solved, Douwe Egberts could not supply sufficient coffee pods. Philips sent people from their shaving accessories factory to help Douwe Egberts out and to teach how to set up day and night shifts. They did everything to help each other and to make the project a success.

Although team climate and trust were also found in the literature on mono- and multidisciplinary teams, they may become even more important in networked innovation. In networked innovation, the team members will face lots of difficult and challenging moments and the projects are often not the core business of the organisations. The factors in the team cluster can be important enablers for the continuation of the joint project.

3.3. The project content in a networked innovation project

The next category is on the content of the task. The literature described factors related to the quality of the content: insufficient status of documents and poor quality of documents (Kleinsmann, Valkenburg & Buijs, 2007).

Disappointing quality of results The case suggests that disappointing quality of project results is an additional barrier to share knowledge. Although the collaboration had a quite open atmosphere, at a certain point in the collaboration, people were hesitant to share certain knowledge. Some knowledge in the project was not shared because the quality of test results was disappointing and might cause panic in the partner organisation. In these situations, they redid the tests and if the results did not improve, they had to share it, but information was filtered before shared with the people from the partner organisations. In this case not all knowledge was shared with the partner.

The level of integration

Another new factor is the level of integration. Collaboration was easier with a low level of integration. Both partners had their own knowledge and expertise that was used to solve separated sub problems in the innovation project. With a high level of integration both partners had expertise that had to be integrated in one solution. This caused more difficulty in the collaboration. An example of a topic that required a high level of integration is the marketing of the Senseo. Both organisations were knowledgeable about marketing and each had their own brand that needed to be represented in the joint project.

Although the case study provided some new factors in the project content cluster, there does not seem to be a big difference between the collaboration in mono- and multidisciplinary teams and in networked innovation.

3.4. Project knowledge & communication in networked innovation

At the project knowledge & communication level, the literature provided several different factors, while the case study provided a few new factors. The literature offers several factors with regards to understanding the project context, where team members realise how their work and decisions relate to the work of others (Charnley et al., 2011, Chiu, 2002, Kleinsmann et al., 2007). The interviewees in the case study did not mention this as a problem in the Senseo project.

Understanding of the project context The interviewees mentioned how important it was to understand other people, the value of their knowledge, their way of working, and the organisation they work in. When Philips entered the project, the people from Douwe Egberts presented the prototype of the Senseo including the issues with the design. They saw the people from Philips as the specialists who could solve all these issues. Philips had an extensive development process with different steps to go through. The people from Douwe Egberts deemed these steps unnecessary because there already was a design, there were just some technical issues. Later in the process when people from Philips made an extensive analysis according to their process, the people from Douwe Egberts saw the value of this process and the team could make an integrated plan on how to continue.

Distance to the project

The case study also provided factors that describe the value of being distant from the content in taking decisions. This can be a hierarchical distance, where the team members do not interact daily with the project, or a cognitive distance, where they take a higher abstraction level to approach the problem at hand. For

example, Philips provided guidelines on how their brands should be presented in relation with other brands, in this case, Douwe Egberts. These guidelines said that the brand logos could not be placed at the same surface and this was actually what they planned to do with the logos of Philips and Douwe Egberts. On a higher abstraction level, this meant that the brand logos had to be separated as much that it did not affect the individual value of the brands. Based on this realisation they decided to place the brand logos on different spare parts of the machine that had different colours whereby the brand logos were sufficiently separated.

Shared view on consumer needs Another enabler the case study provided was the shared view on consumer needs for the project. In the Senseo project, 'variation' was a consumer need that directed several decisions in the process, for example, the kind of machine, the range in coffee flavours, the number of coffee flavours, but also the premium positioning of the Senseo. The consumer insights reached up to the board level which made clear that with "Senseo Milk", variation was more important than the best cappuccino. The ability to vary would increase the cost price of the machine, which was undesirable for Douwe Egberts: their interest was to sell as many machines as possible in a short time to increase the demand for coffee pods. The understanding of consumer needs was seen crucial in this discussion.

The case study added a few new factors to the literature, but there does not seem to be a large difference between the collaboration in monoand multidisciplinary teams within an organisation and networked innovation between different organisations related to the factors in this cluster.

3.5. Project management in a networked innovation project

Project management is, unsurprisingly, an important influencing theme. A lot is already known about different factors related to the authority in the project (e.g., Dougherty, 1992), the formation of the team (e.g., Swan & Scarbrough, 2005), the management of the collaboration (e.g., Charnley et al., 2011, Kleinsmann et al., 2007) and of the task (e.g. Sonnewald, 1996). Networked innovation in the Senseo study provided even more factors related to the project structure and the management of content.

A project structure in networked innovation In the Senseo project, both organisations had to get used to the different worlds of the two organisations. This was a process of learning by doing driven by the situations that appeared. Several things went wrong during this process and when this happened, the issue moved up a level in the organisation and got solved at that level. When that level could not solve the issue, it again moved upwards a level and got solved there. This structure was created during the process, where each level had a counterpart in the partner organisation. With this structure, higher levels could solve problems when needed which enabled the collaboration. Without this structure lots of thing could have remained unsolved during the process, making it impossible to integrate the knowledge. An example of a topic that got to the highest levels were cost-price related issues. Douwe Egberts and Philips had agreed that the design and the appearance of the machine would not change. Some technical solutions necessitated change to the (technical) appearance of the machine or an increase of the cost price. These decisions were taken at higher levels in the newly created structure. Another example is the marketing and the commercials, where both brands had to be presented is a shared way, without harming the individual brands. The people lower in the organisation could not make these decisions. These people could not betray their own teams and they would be evaluated on their responsibilities within their own organisations. They were given, for instance, the specification for the costs of the machines and had to meet these specifications. They could not decide to raise the cost price in order to increase the quality of a cup of coffee; this had to be done at a higher organisational level.

The formulation and use of formal agreements

Regarding content management, the formulation and use of formal agreements and lawyers are new factors from the case study, not present in mono- and multidisciplinary teams. During the collaboration, formal agreements were formulated between the organisations. The formulation and the use of these agreements were seen as a barrier for the collaboration. It decelerated the process and was experienced as frustrating when they were too strictly followed. The developers were excluded from the do's and don'ts from the agreements and did not feel boundaries in sharing their knowledge. When the lawyers entered the project, the whole process decelerated. At some points, the lawyers were dismissed in order to clarify what both partners wanted in the joint project without thinking about each detail. As soon as the team members had decided on this, the lawyers were invited to come back and write down what they decided upon. Some of the agreements were even signed after the product was introduced.

The project expectations

The discrepancy between the expectations of the project and its complexity were also not described in the literature and influenced networked innovation in the case study. When Philips entered the project with Douwe Egberts, it took nearly two months before Philips realised the status of the project and its complexity. They had entered the project with different expectations and expected it to be much further developed and less complex. This discrepancy between their expectations and the reality hampered the collaboration. When Philips realised the project required more effort they assigned a quality team to the project to come up with a quality review resulting in a document that listed the issues with the machine. For Philips this document clarified what the status of the project was and what the partners could expect related to the status of the content of the project. Had Philips done this earlier in the process, they would have dealt differently

with the project by putting in more effort, assigning more budget and assigning a different team to the project.

The equality of input and outcomes of the project

At last, the case study provided factors regarding the equality of the win-win situation in the collaboration for the partners. Not only the outcome can be unequal, also the investment can be different which affects the stake partners want in the project which in turn influences networked innovation. An interviewee in the case study mentioned the equality of a win-win situation as an important factor that influences networked innovation. As soon as one of the organisations appears to make a larger profit or other benefits these projects will get stuck. Several concessions will have to be made during the process and the organisations are only willing to do this when the benefits are large enough and balanced.

The study on the Senseo project provided several new factors especially related to the governance of the project in creating a project structure and related to the content management in which expectations are set, as well as formal agreements formulated and a win-win situation is created. These are all factors that are new in networked innovation and that might not be relevant in projects within an organisation.

3.6. The organisations in networked innovation

The factors in the organisational cluster relate to the organisations in which the project takes place. The literature provided a few factors for the organisational cluster (e.g., Grant, 1996, McDonough, 2000), where the case study supplemented this with several new factors. These factors relate to the identity of the parent organisation, the current businesses of the parent organisations, the parent organisations support to the project, and the autonomy in the parent organisations. Identity alignment of the parent organisations

The identity of the parent organisations defines the way of working, the routines and the strategic goals of the organisations. Variation in ways of working, routines and strategic goals were found to influence networked innovation. For example, the organisations in the Senseo project differed in their ways of working. Philips was a centralised organisation with an engineering mentality, with in an in-depth and systematic way of working. Douwe Egberts was a decentralised marketing-driven organisation, broader in their approach. After a few months of collaboration it became clear that conflicts between persons did not originate from a personal level but came from their different ways of thinking and working as originated in their organisations. Explaining, negotiating, and integrating these ways of working was a continuous process. The differences could be subtle and are untraceable at the surface. An example for different goals in the project is described in the first chapter of this book.

The current business context of the parent organisations

The current business context of the parent organisations defines whether the organisations are competitors and the connectedness of their existing positionings on the market. The content generated in the project has to fit the portfolio of both organisations while, at the same time, being an independent project. In the Senseo project, the organisation joined each other, but their existing business continued. When an organisation is taken over or two organisations merge it is a challenge to integrate these organisations. The Senseo project was seen as even more challenging, because the business of both organisations continued alongside to the joint project. Earlier in this chapter, the marketing concept was mentioned as an example. The brands of the two organisations had to be integrated in their approach to the market in a way that the individual brands kept their value in their existing and continuing business. Both

brands were positioned differently in the market and integrating these into one marketing concept was not easy. Douwe Egberts played it save with their aim to design a coffee moment for the family and was positioned as a cosy brand. Philips, on the other hand was more daring and came up with a less conventional advertisement.

The support from the parent organisations The support from the parent organisation includes the importance of the project for both organisation and their commitment to the project, but also factors like the approval at all levels and the guidance from the top. In the beginning the Senseo project was not supported well through the whole organisation and Philips invested less time and money in the project. Douwe Egberts however, was already working on the project for a few years and the project got the full support and lots of man hours. At this stage in the collaboration it became clear that the development of the Senseo was more complex than expected. Some people at Douwe Egberts were unhappy when Philips, though not even fully committed as a partner in the project, had some remarks on the design and their suggestions for the necessary improvements would postpone the introduction. When Philips and Douwe Egberts eventually communicated at board level, this increase in commitment created the potential for negotiation.

The freedom got from the parent organisations

With regards to the autonomy in the parent organisation, networked innovation can be influenced by the acceptance of passing organisational hierarchies, the freedom got from the parent organisations, and the distance to the board. Both organisations in the Senseo project had to give and take during this collaboration to integrate the knowledge of both. If both organisations had stuck to their own processes, interests, etc., it would probably not have resulted in a final product. The freedom both organisations gave enabled collaboration in the Senseo project. At some point, Philips' employees no longer wanted this "hot potato" project and lost their interest and attention in the Senseo project. With this the project gained the freedom and flexibility it needed to be rebuilt. This freedom and flexibility were very important for the continuation of the project. If Philips had insisted the project had to conform to their processes, it would not have succeeded.

The case study on the Senseo provided several new factors that influence the success of the collaboration in networked innovation in comparison to monoand multidisciplinary teams within an organisation. When team members come from different organisations, these organisations might also influence the project from an organisational level. Previously, the team members worked in one organisation and in these projects, they probably also had to deal with the organisation in the project. However, in networked innovation, the team members have to deal with more than one organisation, which can differ in many ways. Due to these differences, the factors may become more apparent and may have a larger influence on the collaboration in the team.

4. Conclusion

The literature and the case study provided a broad overview of factors that can influence networked innovation. Figure 3 presents all the different factors we found both in the literature and in the case study on the Senseo. For some clusters, the case study added much more new factors than for other clusters. Especially at the organisational cluster, the case study offered several new factors. In networked innovation people from different organisations collaborate with the aim of innovation. This difference may be due to the focus in this study on the collaboration between people coming from different organisations, where previous studies looked at collaboration between people within one organisation. The people have to deal with the differences between the organisations and create a joint project that is valuable for both organisations. This can be a challenging and tough process that requires a lot from the team and its individual members.

How innovation managers deal with these factors is something we explore in a follow-up study. Earlier studies offer some hints on how to do this, for example, on what the team members have to pay attention to and what questions the team members can ask to illuminate the differences between organisations (e.g., Douma, 2000, Bell, 2013). At a few points, the authors suggest that these differences have to be managed effectively. What is mostly missing in these articles, however, is how this should be done and what one should actually do in order to deal with these difficulties as soon as they surface. In addition, the approaches described in the literature can be conflicting. For example, both Bell (2013) and Vangen (2003) describe the importance of elucidating the different interests of the partners. Although this can be of help to find a solution to deal with these differences, it can also lead to endless discussions that can harm the collaboration (Vangen, 2003). In future research, we would like to investigate how to deal with these factors in certain situations. For now, the awareness of the factors that can influence the collaboration is a first step in the right direction.

Factors that can influence the success of networked innovation in six different clusters

| (L) Factors from the interative review, (L) Factors from the case study | | | | |
|---|--|--|--|--|
| People cluster | Team cluster | Project content cluster | | |
| Background & position | Trust | Quality | | |
| The national culture of actors (C) | The trust in the team (L) (C) | Quality of the content (L) (C) | | |
| The organisational level the actor works in (C) | the state of the second states | chand or an examination of the | | |
| the organisational level the actor works in (c) | Climate | Reads. | | |
| Annual II | | Novelty | | |
| Expertise | The team climate (L) (C) | The novelty of the task (L) | | |
| The skills of an actor (L) (C) | The team's willingness to help each other (C) | | | |
| An actor's expertise in design (L) | Actors respecting each other (C) | Interlacement | | |
| | | The level of integration (L) (C) | | |
| Dispositional traits | | | | |
| An actor's consideration of his knowledge (L) | | | | |
| An actor's demand for quality (L) | | | | |
| The feeling of ownership [L] | | | | |
| An actor's fear of being part of a cross-functional effort (L) | | | | |
| The opportunity to 'judge' and to 'be judged' (L) | | | | |
| The commitment of the actor (L) (C) | | | | |
| the communities of the actor (C) (C) | | | | |
| | | | | |
| | | | | |
| Project knowledge & communication cluster | Project management cluster | Organisational cluster | | |
| Knowledge-context | Governance | Identity alignment of the parent organisations | | |
| The understanding of the project context (L) | Responsibilities in the project (L) (C) | The ways of working of the parent organisations (C) | | |
| The understanding about other actors (C) | The presence of a project leader (1) | The routines of the parent organisations (L) (C) | | |
| The common knowledge of the actors (L) (C) | Decision making structure (C) | Strategic goals of the parent organisations (L) (L) | | |
| | Decision making structure (c) | searcher Arrait ou sue braueur outhauismoous (r) (c) | | |
| The shared view on consumer needs for the project (C) | Research and the | dimensional and the second states are set of the second states are second states are set of the second states are set of the second states are second states are set of the second states are set of the second states are second states are set of the second states are s | | |
| Clarity about the task (L) | Team formation | Current business context of the parent organisations | | |
| The distance to decisions (C) | The variation in team composition (L) (C) | The competitiveness of the parent organisations (C) | | |
| | The balance between specific & trans-disciplinary skills (L) | The existing positioning of the parent organisations (C) | | |
| Knowledge accessibility | The selection of team members (L) (C) | | | |
| The availability of knowledge (L) | The number of actors involved (L) | Project support from the parent organisations | | |
| The timing of knowledge sharing (L) | | Commitment from the parent organisations (C) | | |
| (Mislunderstanding of knowledge (L) | Collaboration management | Importance of the project for the parent organisations (C) | | |
| The active search for knowledge in other sub-teams (L) | The involvement of others (L) | The 'sunk-cost fallacy' (C) | | |
| | The formal notification of actors (L) | Approval at all levels (C) | | |
| Communication process | The intensity of collaboration (L) (C) | Guidance from the top (C) | | |
| The frequency of communication (L) | the matched or construction (F107) | Empowerment to the project (L) (C) | | |
| The level of abstraction in the communication [] | Task management | Resources from the parent organisations (L) (C) | | |
| | Task alocation (L) (C) | resources form the parent organisations (L) (C) | | |
| The shared language of the actors (L) (C) | | A second and a second second set of the | | |
| The communicability of the knowledge (L) | Time constraints (L) | Autonomy in the parent organisations | | |
| | | Organisational hierarchies (L) (C) | | |
| Communication means | Content management | The freedom got from the parent organisation (C) | | |
| The used medium for communication (L) (C) | The formulation and use of formal agreements & the | Distance to board of directors (C) | | |
| The use of integration practices (L) | presence of lawyers (C) | | | |
| The accessibility of knowledge management systems (L) | The project expectations (C) | | | |
| The use of artefacts (L) | The equality of input to and outcomes of the project (C) | | | |
| The use of minutes of meetings (L) | and the second s | | | |
| The presence of a facilitator (L) | | | | |
| | | | | |

Figure 3: The factors that can influence the success of networked innovation

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About the authors

Ir. Katinka Bergema



After graduating from High School in The Hague Katinka Bergema moved on to Industrial Design Engineering in Delft where she finished her master Strategic Product Design in April 2009. Currently Katinka is finishing her PhD research at the Product Innovation Management department at the Delft University of Technology. Within her research Katinka Bergema focuses on the collaboration in a networked innovation team developing a product and/ or service. In an earlier study on the development of the Senseo coffeemaker she found several factors that influence the collabo-

ration between people from different organisations. These are factors like different ways of working, different organisational goals and different processes. In her last study she wanted to learn how the project managers deal with these factors in practice. In order to do so, she interviewed 35 project managers that are experienced in these projects. This study gave an interesting overview of possible approaches to the earlier found challenges. Besides her research activities, she runs her own company Zwaluw with which she advises innovation managers and gives workshops on the collaboration in innovation networks.

Dr.ir. Rianne Valkenburg



Dr. ir. Rianne C. Valkenburg is professor Designerly Innovation at The Hague University of Applied Sciences. The designerly innovation approach involves 3 research theme's. (1) The Future Telling research approach helps to shape future visions through context related future scenario's as 'food for thought'. (2) Research into Design Thinking explores the value and impact of a 'designerly way of thinking' for innovation and organisations. (3) Participatory innovation engages people to work together to make the difference. We develop tools and expertise to reframe understandings and

colearn in teams, organisations and ecosystems.

Next to her scientific position, Rianne is partner and value producer of LightHouse/ experts in smart lighting and smart cities @TU/e. LightHouse is founded to disclose the knowledge of the TU/e through knowledge-intensive projects for clients in the field of innovative smart lighting and smart city solutions.

In the combination Rianne unifies contemporary theoretical insights with ample practical experience in networked innovation.

Prof.dr. Cees de Bont



Cees de Bont is Dean of the School of Design at Hong Kong Polytechnic University (PolyU) and Swire Chair Professor of Industrial and Product Design. Prior to his appointment at PolyU, he held global responsibility for marketing intelligence and strategy in Philips (10 years) and he was Dean of Delft University of Technology's Faculty of Industrial Design Engineering (7 years). Both the design schools in Delft and Hong Kong contribute stronly to the academic development of the discipline and they are consistently ranked among the best design schools in the world (Business

Week, Business Insider). Professor de Bont founded the Creative Industry Scientific Program (CRISP) on product-service systems in the Netherlands, which is the largest ever research program in the sector, connecting top design schools, design firms, multi-national corporations, etc. He chaired the Dutch Innovation Centre for Electric Road Transport for many years. Currently, he is Chairman of the Jockey Club Design Institute for Social Innovation, the first of its kind in an Asian design school. He is also in the board of directors of the Hong Kong Design Centre and of Police Married Quarters, which is a new hub for the creative industries in Hong Kong.



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