

# ***THE CHALLENGES OF BEING TWO FOR INNOVATION***<sup>\*</sup>

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Paper prepared for the 22<sup>nd</sup> Innovation & Product Development Management Conference  
Copenhagen, June 14-16 2015

*Track I*

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<sup>\*</sup> This paper has been conducted as part of the activities of the innovation network “Transportens Innovations Netværk – TINV”, The Transport Innovation Network, in Denmark ([www.TINV.dk](http://www.TINV.dk)).

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## **Abstract**

Collaborative innovation projects featuring two or even multiple partners are established to yield positive benefits, but the reality is that the collaborative venture often is challenged by differing intentions that collide, expectations about contributions that cannot be realised to the full expectation, and priorities that are not well-aligned. Prior literature has focused extensively on the benefits of collaborating for innovation, whereas the challenges related to inter-organizational innovation projects are rarely investigated, and then primarily from the perspective of the owner of the innovation project.

The aim of this study is to investigate challenges related to both partner in an inter-organizational innovation project and therefore we pose the following research question:

*What challenges are experienced by a) the receiver firm (the owner of the innovation project), b) the provider firm(s) (the partner involved in the innovation project), and are c) associated with the partnership outcome?*

This paper contributes theoretically to the innovation management literature by identifying the gaps between the receiver and the innovation partner in terms of relationship challenges and to practice by analysing the importance of the gaps for the outcomes of specific innovation projects.

The theoretical framework on challenges is divided into internal and external challenges, and challenges related to the relationship. The internal challenges are lack of resources and restrictive mind set. The external challenges are on the meso-level (customers and competitors) or caused by changes in the macro-environment. The challenges related to the relationship are e.g. conflicting goals, the type of the relationship (commitment and trust), and learning race. Furthermore, we add challenges related specific to the project owner as the Not-Invented-Here syndrome, and coordination cost. Last, the challenges related to the partner firm are presented e.g. the Not-Sold-Here syndrome.

The paper is based on qualitative analysis studying two specific innovation projects focusing on collaborative innovation between a supplier and a customer. The two development projects are undertaken collaboratively between transport buyers and transport and logistic suppliers. Each project is characterised by a transport and logistic supplier and one customer and several other partners (although these partners have not been tracked with interviews). The innovation projects were identified based on a survey that was carried out in 2013. Data for this study was drawn from a study on the Danish transportation industry that collected data from both transport and logistic suppliers and buyers of transportation services by using two separate survey instruments.

Since the unit of analysis is the innovation project, we collected several types of data about the project; semi-structured interviews with the logistic or supply chain managers from both the receiver and provider firms for each of the development projects, quantitative scales for the relationship quality and the degree of collaboration, and a measure of the result of the innovation project. These data constitute two case studies. The transport buyers are producers from the offshore wind sector.

Two interviews with the logistic and supply chain managers from the provider firms (transport buyers) and two interviews with logistic and supply chain managers from the receiver firms (the developer of the innovation and the transport supplier) were undertaken, each lasting between 60 and 90 minutes.

In the two innovation projects we identified that the transport and logistic supplier (the receiver) and the transport buyer (provider) have experienced different types of challenges. We identified that the transport supplier (the receiver) and the transport buyer (provider) have contradicting perception of the level of innovation in their joint project, which lead to challenges as conflicting goals, and coordination problems in the innovation project.

Furthermore, we identified lack of commitment as a challenge related to the relationship between the two partners. First, the nature of the innovation and the timeline are influencing the willingness of the transport buyer to commit. Secondly, we identified the transport buyer are less willing to commit resources to the innovation project in terms of investment (money) and involvement. We also identified challenges related to no alignment on priorities, power-distance and restrictive mindset. The last types of challenges identified are related to knowledge sharing. The transport supplier is not motivated to share knowledge (NSH-syndrome). Furthermore, the transport buyer claim that the transport supplier are 'not knowledge-intensive enough', indicating that the transport supplier lack resources and maybe even the ability to transfer and absorb knowledge.

## Introduction

Collaborative innovation projects featuring two or even multiple partners are established to yield positive benefits, but the reality is that the collaborative venture often is challenged by differing intentions that collide, expectations about contributions that cannot be realised to the full expectation, and priorities that are not well-aligned. Prior literature has focused extensively on the benefits of collaborating for innovation (Knudsen, 2007; Un et al, 2010), whereas the challenges related to inter-organizational innovation projects are rarely investigated, and then primarily from the perspective of the owner of the innovation project (Madrid-Guijarro et al., 2009).

Some of the identified challenges that are related to the relationship are e.g. conflicting goals in the innovation project across the partners e.g. Easterby-Smith, Lyles, & Tsang (2008) and Tranekjer & Knudsen (2012). The scattered evidence of the challenges of collaborating for innovation further needs to adopt a broader view by analysing the challenges as well from the receiver, the provider as the partnership itself, separately to devise recommendations for managers of innovation partnerships. This paper further argues that the analyses should be linked to the effects of specific challenges on the innovation outcomes; are some challenges more detrimental than others and therefore deserve special managerial attention. Therefore, such challenges are by nature related to both the receiver and the provider firms, and to their mutual relationship (a dyadic perspective).

We therefore pose the research questions:

*What challenges are experienced by a) the receiver firm (the owner of the innovation project), b) the provider firm(s) (the partner involved in the innovation project), and are c) associated with the partnership outcome?*

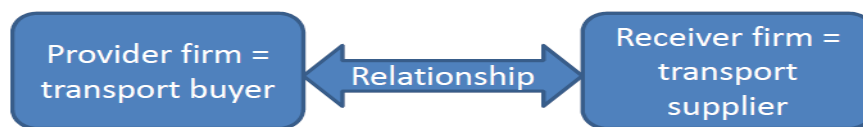
Accordingly, challenges are investigated from both an internal and external perspective as suggested by Piatier (Piatier, 1984), and then we add a dimension; challenges related to the partnership. These challenges can be related to dependency, different goals and opinions, and the type of relationship between the receiver and the provider firm.

This paper contributes theoretically to the innovation management literature by identifying the gaps between the receiver and the innovation partner in terms of relationship challenges and to practice by analysing the importance of the gaps for the outcomes of specific innovation projects.

## Theoretical framework

Collaborative innovation projects are a well explored area in the literature on inter-organizational innovation and have later developed to fertilize the open innovation literature. The motivation for inviting external partners can be many-fold e.g. access to resources (Powell et al., 1996), the possibility to reduce time and cost (Knudsen, 2007), reduction of risk, and the possibility to respond more rapidly to changes e.g. in the market (Faems et al., 2005, Harryson et al., 2008). Furthermore, the positive effects as increased (innovative) performance (Un et al., 2010, Lau et al., 2010), but also the negative effects from inviting one or multiple partners to join the innovation projects are identified (Knudsen and Mortensen, 2011, Tranekjer and Søndergaard, 2013). However, collaborative innovation projects features two or even multiple partners with differing intentions that may collide or experience other types of challenges. Prior literature on inter-organizational innovation has presented some challenges related to inter-organizational innovation projects, though mainly from the perspective of the owner of the innovation project, as e.g. the Not Invented here syndrome (Katz and Allen, 1982) or challenges related to e.g. coordination of partners in the innovation project (Nieto and Santamaría, 2007). A successful partnership for innovation requires that the partners overcome both internal idiosyncrasies and external relationship-specific challenges. This paper operates with two

types of actors engaged in the innovation project; a receiver and a provider. The project owner is named the receiver, the firm who receive knowledge, input etc. from an external partner. The external partner is the provider of knowledge and input to the receiver firm's innovation projects, and is invited by the receiver to make specific contributions. Pisano and Verganti (2008) classifies this type of collaboration as an Elite Circle; it is the firm (either the receiver or provider firm) who invite and decide on who are going to participate in the innovation project. The terms provider and receiver firm are presented in Tranekjer and Knudsen (2012) see figure 1.



*Figure 1: Overview over the two partners; the provider and the receiver firm.*

The structure of the theoretical framework is as following, first general challenges related to both partners (the receiver and the provider) in innovation projects are identified, secondly challenges related to respectively the receiver and the provider are presented. Furthermore, challenges are divided into internal and external challenges as suggested by Piatier (1984) and Sandberg and Aarikka-Stenroos (2014). We add the challenges related to the relationship or partnership directly. The incentive for this additional dimension of challenges is some of the challenges experienced by the provider and the receiver is due to the dependency, different goals and opinions and the type of relationship between the partners.

#### *Collaborative challenges related to partners in general*

Challenges are in the literature defined as barriers or obstacles that hamper or complicate the innovation projects, and may lead the firm to fail see Sandberg and Aarikka-Steenroos, (2014). Furthermore, challenges are not static, they change over time, and due to this dynamic the requirements facing the single partner in the innovation project change and often increase resulting in direct effects on the partnership and indirectly on the outcome.

Internal challenges emerge due to aspects within the firm, which may be consequences due to lack of specific competences and resources in the firm. This lack of competence is often mentioned as the ignition for the partnership, i.e. the main motive to seek partnerships for innovation. Once engaged in the partnership, the exchange of knowledge may be hampered by lack of ability to transfer and receive knowledge (Easterby-Smith et al., 2008) and lack of absorptive capacity (Volberda et al., 2010). If the provider and/or the receiver firm are restricted in their abilities to transfer and absorb knowledge, it will likely challenge the collaboration between the partners. The effects may lead to communication problems or even detrimental misunderstandings, which may influence the outcome of the innovation project and future innovation projects. Especially, the longer term effects of lacking knowledge exchange capabilities may result in new projects that could have high potential will not be initiated, simply because the present project does not result in sufficient good innovation projects. Furthermore, lack of financial resources or constraints (Mohnen et al., 2008) and lack of skilled personnel (Galia and Legros, 2004) are also listed in the literature as internal challenges of relevance for innovation projects.

Furthermore, a restrictive mind-set both at the individual and the firm level, which is experienced as resistance towards change (Cozijnsen et al., 2000) or a restrictive organizational culture (Boschma,

2005, van de Vrande et al., 2009) hampers the participants' motivation and maybe even their ability to transfer knowledge as norms against knowledge exchange are expressed.

External challenges are challenges created in the environment that are difficult to control for the partners in the innovation projects. The external challenges may both refer to the meso and macro level. On the meso level, challenges can be caused by the characteristics and development of the customers or the competitors. The customers may present resistance as e.g. not willing to pay for the outcome of the innovation project or their needs may be changing (Adner, 2013). Furthermore, the overall rivalry from and between competitors and how the competitors behave may also leads to challenges in the innovation project (Sandberg and Aarikka-Stenroos, 2014).

External challenges at the macro level may be due to changes made by authorities as e.g. new or changes in legislation, and improved requirements regards sustainability and environment friendly activities. Furthermore changes in technology as requirements for new standards or e.g. certification as may also influence the innovation projects.

Overall both at the meso and the macro level a wide range of different stakeholders may provide challenges for the collaboration.

Relational challenges are defined as the challenges created based on the direct interaction between the partner like mutual or single-sided dependency, the relationship itself between the two partners, and the type of relationship.

The relationship between the two partners may also create challenges for the innovation project. Particularly, imbalanced relationships caused by different dependencies, size, primary interest, commitment, conflicting opinions, and lack of flexibility and adaptability (Faems et al., 2005) are conditions that may challenge the collaboration. Other challenges are related to knowledge needs and competencies like learning races between partners and potential problems caused by double jeopardy (Knudsen, 2007) are serious and potentially detrimental challenges. Ultimately, these challenges may result in undesirable relationships driven by competition rather than collaboration. Furthermore, cooperation failure is also listed as a challenge in innovation projects across firm boundaries. Cooperation failure is defined as "difficulties encountered in their management of inter-firm partnerships" (Lhuillery and Pfister, 2009).

The type and intimacy of the relationship based on trust, embeddedness, and positive attitudes are also expected to influence the collaboration. Trust is repeatedly pointed to in the literature as an important and necessary condition for a successful partnership and multi-partner innovation project (Das and Teng, 2001, Zahra et al., 2006). Besides trust, the degree of embeddedness (Rindfleisch and Moorman, 2001), commitment (Morgan and Shelby, 1994), power (distribution of power), strong-weak ties (Granovetter, 1973), and structural holes (Burt, 1992) are likewise of relevance for the possibility to transfer knowledge and influence the outcome of the innovation projects (Easterby-Smith et al., 2008).

### ***Collaborative Challenges seen from the Receiver***

Coordinating, managing, and controlling the different partners in the project (Nieto and Santamaría, 2007) may create challenges related to inter-organizational innovation projects, which may result in lack of adaption and unwillingness from the partners. These coordination costs may be the consequences of unclear goals or gains from the innovation projects and lack of internal communication.

Another challenges for the receiver firm is employees with a restrictive mind-set as the Not Invented Here (NIH) syndrome presented by Katz and Allen (1982).

### ***Collaborative Challenges seen from the Provider***

Tranekjer and Knudsen (2012) present benefits from providing. We argue, due to the lack of literature on the provider perspective that the benefits of providing may equally well be seen as challenges in cases where they are difficult or impossible to grow. The benefits for the provider emerge when the relationship is mutual and not an one way exchange relationship, and the relationship should be embedded (Tranekjer and Knudsen, 2012). In short, the provider benefits from providing when there is an increased involvement, hence if both partners in the innovation projects are not committed the benefits cannot be retrieved. Another challenge related to the provider firm is The Not Shared Here (NSH) syndrome (Burcharth et al., 2014), which states that if employees in the provider firm are not willing to share e.g. knowledge with the other partners in the innovation project it will complicate the joint innovation project.

In sum we claim that understanding these three different types of challenges will decrease the possibility that the innovation project will fail or preventing the firms for doing joint innovation in the future.

An overview of the different types of challenges is presented in Table 1.

<b>CHALLENGES RELATED TO BOTH TYPES OF FIRMS</b>	<b>INTERNAL CHALLENGES</b> Lack of resources as: <ul style="list-style-type: none"> <li>• The ability to transfer and absorbing knowledge</li> <li>• Financial resources</li> <li>• Skilled employees</li> </ul> Restrictive mindset: <ul style="list-style-type: none"> <li>• Employees resistance towards change</li> <li>• Resistance organizational culture</li> <li>• Not supportive organization</li> </ul>
	<b>EXTERNAL CHALLENGES</b> Meso: <ul style="list-style-type: none"> <li>• Customer – e.g. change in behaviour</li> <li>• Competitors - rivalry</li> </ul> Macro: <ul style="list-style-type: none"> <li>• Changes in legislation</li> <li>• Changes in technology</li> <li>• New requirements regarding sustainability and environmental friendly activities</li> </ul>
	<b>RELATIONSHIP/PARTNERSHIP</b> <ul style="list-style-type: none"> <li>• Learning race</li> <li>• Conflicting goals</li> <li>• The type of relationship as e.g. trust</li> <li>• The responsibility – joint or?</li> </ul>
<b>CHALLENGES RELATED TO THE RECEIVER FIRM</b>	<ul style="list-style-type: none"> <li>• Challenges related to coordination, management and control of the different partners e.g. unclear goals or missing communication</li> <li>• NIH</li> </ul>
<b>CHALLENGES RELATED TO THE PROVIDER FIRM</b>	<ul style="list-style-type: none"> <li>• Mutual relationship and not an one way exchange</li> <li>• NSH</li> </ul>

**Table 1: Collaborative challenges**

## Research design and methodology

The paper is based on qualitative analysis studying two specific innovation projects focusing on collaborative innovation between a supplier and a customer. The two development projects are undertaken collaboratively between transport buyers and transport and logistic suppliers. Each project is characterised by a transport and logistic supplier and one customer and several other partners (although these partners have not been tracked with interviews).

The transport and logistic supplier is the receiver following the theoretical framework, and the customer is the provider of need and knowledge for the innovation project. The innovation project therefore constitutes the unit of analysis.

The innovation projects were identified based on a survey that was carried out in 2013. Data for this study was drawn from a study on the Danish transportation industry that collected data from both transport and logistic suppliers and buyers of transportation services by using two separate survey instruments. 893 transport and logistics suppliers were contacted to participate in the second survey, 127 participated (14.2%). The companies in road transport are the most frequent (74.8%), but also shipping/haulage (26.8) and plant operation (11.8%) are frequent (since the companies are in some cases multi-businesses, the total is larger than 100%). The survey responses show that only 31.2% of the transportation companies have introduced new products or services in the period from 2010-2012, and this share is lowest for the road transport companies. The two main innovative motives are related to cost (average 3.91 on scale from 1 to 5) and market development (average 3.88). When the companies innovative they also involve partners, typically customers (49% collaborate with customers) and suppliers (46%) but much less frequent with e.g. universities (8%). These results also support the focus that has been applied to customer-assisted collaborative innovation projects.

For the customers, we contacted in total 1,461 producers and received 221 useful answers (15.1%). The sample of firms contains mainly smaller companies, as 66.8% of the producer firms employ fewer than 50 employees. The participating firms in the survey mostly produce metals and fabricated metal products (14%), machinery and equipment (12.4%), and food (10.5%). The participating firms produce products with average complexity (42.3%), simple products (30.1%) and complex products (26%). 35 of the transport customers have participated with their transport and logistics providers on innovation (15.8%). These customers are in general very satisfied with the collaboration, 48.5% of those that have participated in concrete projects give the outcome of the project a grade 9 or 10 on a 10-point scale, and no one gave the projects less than value 4. Hence, in general the customers that have collaborated with a transport and logistics provider on innovation are quite satisfied. The 35 customers therefore constitute our population for the second step in the data collection. We contacted these companies and identified in total 4 innovation projects where both the transport provider and the customers were interested in participating in the next step.

This set of customers, who stated to have been involved in transportation and logistics supplier companies innovation activities, are seen as information-rich provider firms, and were subsequently included in the qualitative research. In other words, an exploratory multiple case study was employed, which is a powerful way to elaborate on theory because "they permit replication and extension between individual cases" (Eisenhardt, 1989).

Since the unit of analysis is the innovation project, we collected several types of data about the project; semi-structured interviews with the logistic or supply chain managers from both the receiver and provider companies for each of the development projects, quantitative scales for the relationship quality and the degree of collaboration, and a measure of the result of the innovation project. These



data constitute two case studies. The aim is to advance our understanding about challenges experienced in the specific projects primarily related to the collaborative partnership.

The transport buyers are producers from the offshore wind sector. Due to confidentiality agreements, the names of the companies are replaced by letters. Two interviews with the logistic and supply chain managers from the provider companies (transport buyers) and two interviews with logistic and supply chain managers from the receiver companies (the developer of the innovation and the transport supplier) were undertaken, each lasting between 60 and 90 minutes.

The research protocol guiding our interviews included questions on the informants' view on challenges in collaborative innovation projects, and also requested data on the outcome and results from their collaboration. We recorded electronically each interview using a digital recorder and the interviews were subsequently transcribed. The text documents were subsequently checked by a second researcher to verify the precision of the transcriptions. The transcriptions and checks were done soon after the interviews to maximize recall and facilitate follow-up and filling of gaps in the data (Voss et al., 2002).

Semi-structured interviews with the identified logistic or supply chain managers of provider companies as key components were undertaken to advance the understanding about challenges for provider firms to engage in other firms' innovation processes. The goal of a multiple case study is to investigate patterns that have been gathered and examine how the case relates to theory (Eisenhardt, 1989). The case companies selected for the qualitative interviews are listed in the following table 2.

### **The innovation projects**

Two development projects (Case RF and Case FM) were selected in the case study for this paper (see table 2). The projects are executed in two different small-medium-sized transport and logistic suppliers. Both projects are, by each transport supplier, considered to be the most important development project during the last three years. In other words, the development project that required the most resources measured in terms of working hours and investment. The objective of both projects was to develop a safe and economical transport solution. Both development projects are targeted and developed for transport buyer firms, which are market leaders in the given industry. Both development projects are also potential and beneficial solutions for other similar transport buyers.

The first innovation project (Case RF) is a solution for the handling of very heavy equipment. The solution was initiated by the transport buyer (provider RF2) due to new requirements for transport and logistic solutions for their new development products. The project began in the summer of 2013 and implemented in September 2014. The transport and logistic supplier (receiver RF1) developed the project together with their supplier, but the transport buyer has been involved during the entire development process. A similar system was already operating in North America. However, this system was not approved for the handling of the transport buyer's components. So a new system, named the RF, needed to be developed. In other words, the system needed to be recalculated and adapted. The project was a huge investment for the transport and logistic (RF1) supplier. Not only in terms of working hours but also in terms of investments. The project costs the transport supplier more than 1 million euro. The end-results of the project are considered successful as it is very useful and has a great market potential. Both the transport supplier and transport buyer agrees. Their assessment is identical. The system builds on existing principles so the novelty is limited, both the usefulness and market potential get maximum rated by both parties.

Project	Companies	Business Area	Year established	Employees	Project outcome*:
Case RF	<b>Receiver (RF1):</b> Transport and logistic supplier	Transportation of specialities e.g. big, heavy and complicated transports	1966	100	Usefulness (100%) Novelty (25%) Market potential (100%)
	<b>Provider (RF2):</b> Transport and logistic buyer	Manufacturer of wind power solutions for onshore and offshore projects	2004	7000	Usefulness (99,9%) Novelty (25%) Market potential (100%)
Case FM	<b>Receiver (FM1):</b> Transport and logistic supplier	Full-service offshore provider	1973	30	Usefulness (75%) Novelty (60%) Market potential (50%)
	<b>Provider (FM2):</b> Transport and logistic buyer	Manufacturer of wind power solutions for onshore and offshore projects	2004	7000	Usefulness (? %) Novelty (? %) Market potential (?%)

**Table 2: Presentation of the case companies**

**Usefulness:** 0 = the solution does not meet the target groups' wants and needs; 100 = the solution is fully in line with the target groups' wants and needs. **Novelty:** 0 = There is nothing new or original with the solution; 100 = The solution is completely new and original. **Market Potential:** 0 = the solution will not be sold or be sufficiently profitable to bring to the market; 100 = the solution will be sold and be profitable to bring to the market

The second innovation project (Case FM) is a solution for a new and more efficient handling of components. It is an example of how an existing concept can be used in a new way. In other words, the transport supplier took an old concept and used it in a new way in a new industry. The solution is flexible, very fast, simple, and the handling process only involves one employee. It was initiated and developed by the transport supplier (receiver FM1). The transport buyer was mainly involved during the early stages of the project. The project occurred between November 2011 and May 2013. The FM project plays a large role and has required a lot of man-hours. In sum the FM project has accounted for 40% of the total capex cost. The transport and logistic supplier considers the project a huge success. The transport supplier managed to deliver and handle a satisfactory solution for the transport buyer, which from the transport and logistic provider is very useful for the transport buyer. But from a more strategic point of view the project made it possible to enter the industry and build a reputation, therefore the transport supplier consider that the solution has a fair market potential. Finally, the project is perceived as having a great novelty value since it makes it possible to handle shipments in a new way. All in all, the development project has market potential and is considered very useful for both national and international transport buyers.

### **The challenges of being two for innovation – in innovative transportation projects**

First, this section identifies the challenges already realized in the beginning or in the early phases of the development projects (FM and RF).

The providers are the transport buyers and the receivers are the transport suppliers, see figure 1 and table 2.

#### **Challenges between the receiver and providers perspective**

Already in the beginning of the development project FM it becomes clear that the receiver FM1 and the provider FM2 basically disagree. The results clearly show that the receiver FM1 and the provider

FM2 do not agree on the innovation level of their "joint" development project. There is a clear contradictory perception of the same innovation project. The receiver states:

*"Our services have become more innovative with the FM"(FM1)*

Whereas the provider argues:

*"Maybe, I consider the FM less of a development project than the transport supplier"  
and "For me it is just another tool" (FM 2).*

The involvement and the commitment of the provider in the receiver's development project seem to depend on the nature of the development project. If the technology is already known the development process is considered less of an issue. As stated from by the project manager at the provider:

*"The solution they (FM1) came up with had been suggested before - by some colleagues" but  
"At that time, we could not accept this way of handling our components"(FM2).*

The reluctance for the provider to engage and commit himself is related to the presumption that the service or product is not particular complicated and demanding. The results also show that the provider only was involved very limited in the beginning of the project:

*"After FM1 had presented the solution, I asked our engineering department whether they  
could approve this approach and they accepted it" (FM2).*

The statements from the receiver show that he considers the solution as very innovative, as the system represent a completely new and different way of handling the components. The receiver would therefore have liked to conduct some pilot-tests before purchasing the equipment:

*I would have preferred to test the system" but "We had not been allowed" (FM1)*

In other words, the results indicate that the manager from the provider compared to the manager from the receiver, perceives the FM project as less innovative and is therefore less committed to the project.

## **Product Development Without Commitment**

Our results show that the provider (transport buyer) does not consider their transport and logistic skills as a core competence. They know that they will need a new transport solution for the transportation of the new developed components that have new requirements:

*"The RF was created because we began developing new components for our new  
product" (RF2).*

But they (the provider) lack commitment to invest and involve themselves in the development process:

*"Many times we need to persuade the transport supplier to invest" and "...it is a  
relatively large investment" (RF2).*

From the interviews we learn that the providers (transport buyers) are not provided with the financial resources for developing and investing in innovative solutions for transport and logistics. They also lack skills and the necessary time to engage themselves in the development process. The provider admits:

*"They (their transport suppliers) live in a total different world... and of course, we also needed to get to know it" (RF1).*

The receivers are perceived as having the knowledge and the expertise, thus the provider would prefer that the responsibility and the financial investment is placed by the receiver (transport supplier). But the receiver finds himself in a situation with a lot of uncertainties:

*"According to the customer's forecast, we can only predict one year ahead. The customer is not obliged to a specific quantity" (FM1).*

This lack of commitment from the provider has a negative consequence for the receiver, as the risks of innovation activities are increased greatly. It makes it difficult for the receiver to concentrate only on developing new and different transport solutions. The receiver needs to focus on daily business and points to the possibility to reduce risks and uncertainty by offering the service to other customers:

*"We would like a better utilization" and "We have discussed the possibility to export our system and idea to other markets and customers" (FM1).*

The receiver needs to be able balance risk and probability versus business needs and potential rewards.

### **The openness and willingness of the transport buyers**

Both receivers have past experience with similar development projects and in both cases the receiver companies knew the specifications. One of the receivers describes the development process as being predictable and repeatable as it is an existing product, which needs modifications (RF1).

The provider (transport buyer) does not consider himself very open in regard to the sharing of knowledge.

*"We are far advanced in the project before we begin to share factual knowledge with them,"*

This also becomes a challenge for the provider themselves:

*"Sometimes it is also a problem for us"... "The challenge is when we start developing our components, we do not know where it ends" (RF2).*

The receiver (transport supplier FM1) highlights several times the lack opportunity to test the product:

*"We were not allowed to try things out" (FM1).*

This was a clear source of frustration, causing sleepless nights:

*"During the first days when we started up to handle the components, I assure you, I did not sleep very well" (FM1).*

The receiver (transport supplier) was forced to invest a lot of money even though the outcome of the project still contains significant uncertainty and risk.

Competitors questioned the solution and FM felt a lack of confidence from the provider:

*"Some competitors tried to influence the transport buyer by claiming that the solution would not work" (FM1).*

The receiver (transport supplier) is a new supplier and the provider (transport buyer) knows the competitors. In this case the negative information came from a credible source that made it difficult for the provider to ignore. As the receiver states:

*"Unfortunately, the transport buyer was affected by this" (FMI).*

This put further pressure on the supplier and required some extra work:

*"...so we had to document even more and conduct some test to show that it worked" (FMI).*

### **The correct expertise and management set-up**

The provider argues that the technical knowledge but also the management approach of the receiver is important for implementation of a development product. However, during the implementation phase of the RF, the provider realized that the parties do not have the same perception and understanding of the challenges that emerges:

*"We do not speak the same language" (RF1).*

Findings show that the provider points to a knowledge power-imbalance between them and the receiver. The provider raises serious concerns about the knowledge capacity and argues that:

*"They (RF1) are not knowledge-intensive enough" (RF2).*

In this case, the provider also states that:

*"They (the transport supplier) do not have the right attitude when things go wrong. Then you need to investigate and figure out what went wrong" and "Not the right management set-up for situation situations where it really goes wrong" (RF1).*

The provider has doubts whether the receiver has realized the seriousness. The receiver does not do everything possible to solve the problem:

*"They put some requirements and can we not meet these then it does not have their interest" (RF1).*

The provider points to the fact that most of their receivers:

*"are built by skilled and energetic men"...but they are geared to all the requirement that we have" (RF1).*

Considerations regarding the receiver's level of contribution (lack of correct expertise, management set-up etc.) are addressed several times, particular when things do not go according to plan. In hindsight, the provider (RF1) states, that the development projects need to be properly resourced for all situations.

### **New procedures next time**

One of the outcomes from the RF1 development project was a change in provider's company policies:

*"We have been instructed by management to develop a working procedure that ensures that nothing will go wrong in the future" (RF2).*

The provider would like to be able to justify for the authorities that they have thought about everything:

*“Dear authorities. Look here we have done everything human possible to avoid this”.*

The provider needs to be able to trust the receiver. The provider admits it was impossible for the receiver to foresee all the things that could go wrong for future projects, but argue that:

*“We should both try to look further ahead” (RF2).*

In other words, shift in thinking at the receiver is necessary. Focus need to move away from day-to-day business and operations in order to look further ahead.

The receiver explains that an engineer from the provider has asked them:

*“...to be sure that it won't happen again” (RF2).*

But at the same time he points out that it was the sub-supplier of receiver who constructed the RF and he states:

*“I really hope that our supplier has learned something”.*

Furthermore, the receiver admits:

*“I should have asked our supplier whether they were sure that everything was okay”.*

Before the implementation the idea was to invest in a similar development project. But these ideas are put on hold:

*“We could still manage to invest in a new project” but “Now, we want to take a deep breath” (RF2).*

However, the receiver argues that this project was similar to other development projects. There have not been any changes in the organisation of the transport supplier.

The provider (FM1) argues that in the case of accidents and unforeseen happenings then a large transport supplier is more attractive than a small transport supplier:

*“We would need to support the smaller suppliers in another way than a larger supplier”.*

The provider firm learned the importance of the receiver based on the experiences from this innovation project, and in case of unforeseen situation a larger receiver (transport supplier) are more attractive due to their competences. Furthermore, the innovation process is not only depending on the provider and the receiver, but in this case also on the deliveries from sub-suppliers and therefore communication with the sub-supplier is important for the outcome of the innovation project.

### **Discussion and conclusions**

In this study, we found different challenges experienced by the receiver firms (the transport suppliers) and the provider firms (the transport buyers), and challenges related to the relationship between the two partners. These different types of challenges are identified in two case studies – two innovation projects.

We identified that the receiver and the provider have contradicting perception of the level of innovation in their joint project, this may be due to the fact that the innovation project (transport solution) is not the core activity of the provider, or additional caused by lack of skilled personnel in the receiver firm (Galia and Legros, 2004). This contradicting perception may lead to challenges as conflicting goals, and coordination problems in the innovation project (Nieto and Santamaria, 2007).

Furthermore, we identified lack of commitment as a challenges related to the relationship between the two partners. First, we identified the provider's degree of commitment to the innovation project is depending on the nature and complexity of the innovation e.g. if the provider is familiar with the technology they are less willing to commit. Secondly, the provider is not committed in the beginning of the project. The nature of the innovation is of relevance for understanding the provider's willingness to commit, however we need further research on the topic. Finally, we identified the provider are less willing to commit resources to the innovation project in terms of investment and involvement, this may be explained by lack of resources as finances or skilled personal (Mohnen et al., 2008; Galia and Legros, 2004) or because innovation of transport solutions is not the core competence of the transport buyer. This lack of commitment from the provider may lead to that the provider is less motivated to join future joint innovations projects, because they can't see all the gains from providing (Tranekjer and Knudsen, 2012). Moreover, the provider's lack of commitment will challenge the relationship between the receiver and the provider and the possibility to transfer knowledge between the two partners (Easterby-Smith et al., 2008), the knowledge transfer process will be less efficient.

We also identified, the receiver has the technical knowledge on transport solutions and therefore the provider wants the receiver to invest in innovation. The challenges arise because the provider needs to persuade and put pressure on the receiver to invest in development of the transport solution, moreover, as presented above the provider are not committed. A possible explanation may be a restrictive mindset in the receiver firm as resistances towards change (Cozinjensen et al. 2000) or a restrictive organizational culture (van de Vrande et al. 2009) however we need future research to fully comprehend. Another explanation may be due to differences in firm size between the relatively smaller receiver compared to the provider – see table 2. Overall, the relationship and the innovation project between the receiver and the provider are challenged by no alignment on priorities, power-distance and restrictive mindset.

Another type of challenges identified in the two innovation projects are openness and willingness in regard to sharing knowledge. The provider is less willing to share and transfer knowledge to the receiver (NSH-syndrome), this lack of motivation to share knowledge will challenges the innovation project and the potential outcome (Easterby-Smith et al. 2008). Furthermore, the provider claims that the receiver is not 'knowledge-intensive enough', indicating that the receiver lacks resources and maybe even the ability to transfer and absorb knowledge (Easterby-Smith et al. 2008; Volberda et al., 2010).

For future innovation projects we identified, due to challenges experienced in the two innovation projects, the provider learned the lesson that trust and commitment is a necessary condition for a successful partnership (Das and Teng, 2001, Zahra et al. 2006).

### **Managerial implications**

The provider firms lack of commitment need to be addressed. The transport buyers (the provider firms) need to see the benefits from providing, furthermore, the transport supplier (the receiver firm) need to understand that the transport buyer firm are less committed due to different reasons. So, the receiver may try to motivate the provider, however it is not an easy task. Secondly, the receiver needs to recognise that the provider is less committed, and operate accordingly. Finally, it is important for both partners to understand if their priorities are not aligned it will complicate the joint innovation project.

The limitation of this study is that the data for this paper is entirely from two innovation projects between transport suppliers and transport buyer, and therefore it is not possible to generalize the findings to other industries or other national settings without further analysis.



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