Partnering for sustainable business development

An investigation of how furnX can initiate new collaborative partnerships in the supply chain to achieve sustainable business development

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Master Thesis

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ABSTRACT

The current linear economy is based on unsustainable production- and consumption patterns and is not a viable option in a long-term perspective. This linear set-up is challenged by the concept of circular economy. Circular economy is about rethinking product design, manufacturing processes and business models, and about collaborating to do this. Transforming the linear economy to a circular economy will require efforts from governments, companies, supply chains and citizens. The focus of this master thesis is on this transformation on a company and supply chain level, and consequently how companies can achieve sustainable business development by initiating new partnerships in the supply chain.

The supply chain often presents challenges for sustainable business development, due to low levels of trust, lack of information sharing etc. A company can do everything possible to improve their sustainability, but their total result will always depend upon the other members of the supply chain. As future competition will take place between supply chains and not individual companies, the importance of supply chains in relation to sustainable business development is emphasized.

This master thesis entails an investigation of how the furniture company, furnX, can initiate new collaborative partnerships in the supply chain to achieve sustainable business development. For a company to pursue sustainable business development through partnerships in the supply chain, three aspects are important to consider. Firstly, an *internal transformation* of mindsets and processes is needed, where sustainability becomes embedded in strategic goals as well as everyday practices in the company. Secondly, a partnership can only begin if the right partners are chosen – *partner selection* is thus the second aspect. This entails clarification of the purpose of the partnership and choosing the right partners with the right resources for the partnership. Lastly, *management of the partnership process* is key to a successful partnership, as the relationship between partners need to develop based on trust and mutual understanding.

This study concludes that establishing partnerships to implement sustainable business models can support sustainable business development at furnX. However, awareness to the difference between short-term feasibility and long-term feasibility is essential to achieve sustainable business development. Efforts towards more sustainable practices provide benefits in a long-term perspective, while often representing an additional investment in a short-term perspective. When partners in the supply chain of furnX are aware of this condition, there is great potentials for initiating new partnerships that can support sustainable business development for all actors involved.

RESUMÉ

Den nuværende lineære økonomi, baseret på uholdbare produktions- og forbrugsmønstre, er ikke en holdbar retning i et langsigtet perspektiv. Cirkulær økonomi gør derfor op med den lineære tankegang, og søger at nytænke produktdesign, produktionsprocesser og forretningsmodeller. Præmissen for at implementere disse nye tilgange er samarbejde og partnerskaber. At omstille den lineære økonomi til en cirkulær økonomi vil kræve indsatser fra regeringer, virksomheder, forsyningskæder og borgere. Dette speciale fokuserer på denne omstilling i et virksomheds- og forsyningskædeperspektiv, hvormed det undersøges hvordan virksomheder kan opnå bæredygtig forretningsudvikling ved at etablere partnerskaber i forsyningskæden.

I forhold til bæredygtig forretningsudvikling indebærer forsyningskæden ofte udfordringer, blandt andet grundet manglende tillid og informationsdeling. En virksomhed kan gøre alt i deres magt for at forbedre deres bæredygtighed, men det samlede resultat vil altid afhænge af andre medlemmer af forsyningskæden. Da konkurrence i fremtiden vil foregå mellem forskellige forsyningskæder og ikke individuelle virksomheder, understreges betydningen af forsyningskæder i forhold til bæredygtighed forretningsudvikling.

Dette speciale indebærer en undersøgelse af, hvordan møbelvirksomheden furnX kan igangsætte nye partnerskaber i forsyningskæden at opnå bæredygtig forretningsudvikling. For at opnå dette gennem partnerskaber, er tre elementer vigtige at overveje. For det første skal en *intern transformation* af virksomhedens tankesæt, kultur og processer igangsættes, hvormed bæredygtighed kan blive indlejret i virksomhedens strategiske mål og hverdagspraksis. For det andet skal de rigtige partnere vælges før et partnerskab påbegyndes – *partner udvælgelse* udgør dermed det andet element. Dette indebærer at afklare formålet med partnerskabet, således de rigtige partnere med de rette ressourcer vælges. Det tredje element indebærer *styring af partnerskabsprocessen*, hvor gensidig forståelse og tillid er centralt for at kunne udvikle et forhold mellem partnerne.

I dette speciale konkluderes det, at etableringen af partnerskaber i forbindelse med implementeringen af bæredygtige forretningsmodeller kan understøtte bæredygtighed forretningsudvikling hos furnX. Det er dog vigtigt at være bevidst om forskellen mellem kortsigtede og langsigtede perspektiver i forbindelse med bæredygtig forretningsudvikling. Bæredygtighedsindsatser medfører de største gevinster i et langsigtet perspektiv, men indebærer ofte ekstra investeringer i et kortsigtet perspektiv. Hvis partnere i forsyningskæden for furnX accepterer denne præmis, er der store potentialer for at indlede nye partnerskaber, der kan understøtte bæredygtig forretningsudvikling hos alle involverede aktører.

PREFACE

This master thesis was conducted in the period 01.02.2016-02.06.2016 and represents 30 ECTS. This master thesis is the final report of Heidi Simone Kristensen as part of the Master of Science program of Environmental Management and Sustainability Science at Aalborg University. The thesis is inspired by an internship at the furniture company, furnX, in the fall of 2015, and serves as a continuation of the collaboration with furnX.

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- Michael Hansen, Nytech A/S
- Lenco Verheuvel, G.Desmet
- Diana Seijs, Royal Ahrend
- Mariska Kemerink, BMA Ergonomics

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1 BACKGROUND FOR STUDY

The continuing growth of global resource demand and consumption challenge the current linear economy. This growing demand combined with the limited amount of resources available puts business as usual under pressure (Formentini and Taticchi, 2016). As a response to this pressure, companies and organizations are beginning to transform the linear economy to a circular economy, where resources are kept in circulation (Ellen MacArthur Foundation, 2013). This entails a transition from unsustainable production and consumption patterns towards more sustainable practices. However, the circular economy is about more than rethinking product design, manufacturing processes and business models – it is about collaboration (Kraaijenhagen et al., 2016). A company can do everything possible to improve their sustainability, but their total result will always depend upon the other members of the supply chain (Network for Business Sustainability, 2013a). Complex supply chains, low levels of trust, lack of information sharing and understanding are just a few of the reasons for difficult or non-existing collaboration in the supply chain (Chopra and Meindl, 2006; van Renswoude et al., 2015).

This study takes point of departure in an internship conducted at the furniture company furnX in the fall of 2015. The purpose of the internship was to analyze a new circular business model based on leasing, and the opportunities and barriers for this model. Concluding the internship, several opportunities and barriers appeared, which sparked an interest to continue investigation of what is required for furnX to pursue sustainable business development. This study is consequently aimed at broadening the scope and on a more general level support the company's transition towards a more sustainable business. This transition entails higher quality products, services and solutions, and encompass the network of furnX. To support this transition, the focus of this study is to investigate how furnX can initiate new collaborative partnerships in their supply chain to achieve sustainable business development.

The research question for this master thesis is:

> How can furnX initiate collaborative partnerships for sustainable business development?

1.1 TRANSITIONING FROM A LINEAR ECONOMY TO A CIRCULAR ECONOMY

The continuing population growth and resource consumption challenge the current resource-intensive linear economy. The current economy is based on unsustainable activities such as short product life cycles, high sales margins, high resource consumption and high customer demand (Ellen MacArthur Foundation, 2014). These unsustainable patterns can be subscribed to the industrialization that ensured economic growth in the 20th century (Ellen MacArthur Foundation, 2013). Products are primarily produced with the purpose of being used and disposed; creating a 'take-make-waste' society, where companies rely on cheap and available raw materials to ensure economic growth (Ellen MacArthur Foundation, 2014). However, an expected decrease in the amount and availability of raw materials will cause the prices to increase. At the same time, UN estimates a population growth from 7,3 billion in 2015 to 9,7 billion in 2050 (United Nations, 2015). This will create a growing middle class, which puts further pressure on the availability and price of raw materials. By 2050, the resource demand is estimated to have doubled (Cullen, 2016). This development is not viable in the long run, and calls for a shift towards using renewable energy, increasing recycling, reuse, creating more from less and sustainable product design (Ellen MacArthur Foundation, 2013; Haas et al., 2015).

For many years, it has seemed that industrial development and economic growth are at odds with nature and environment – one cannot be improved unless the other is damaged (Ovaska et al., 2016). To change the current economy, the ability to decouple economic growth from resource consumption and environmental and social impacts is crucial (Network for Business Sustainability, 2013a; Ovaska et al., 2016). A new economy that does not rely on the 'take-make-waste' culture is consequently required.

The idea of a new economy working against this 'take-make-waste' culture and the linearity of the existing economy is not new. In the 1960s, the British economist Kenneth Boulding proposed a new "spaceman" economy, in which the earth is viewed as a single spaceship with no fresh supplies and nowhere to store waste (Boulding, 1966). This idea was the starting point of a development towards circularity through reducing the amount of resources used and recycling or reusing resources at end-of-life (Sempels and Hoffmann, 2013). Since the 1970s, the concept of circular economy has slowly gained momentum, but during the last decade or two, the concept gained substantial attention as the Ellen MacArthur Foundation sat out to accelerate the transition to a circular economy (Ellen MacArthur Foundation, 2013).

Circular economy is based on the idea of a system that is restorative and regenerative by nature and no resources are wasted (ibid.), and is defined as:

> *"an economy in which stakeholders collaborate in order to maximize the value of products and materials, and as such contribute to minimizing the depletion of natural resources and create positive societal and environmental impact."*
>
> (Kraaijenhagen et al., 2016, p. 15)

Products and materials are consequently meant to be kept in circulation through different activities such as repair, reuse, refurbishment and recycling (Ellen MacArthur Foundation, 2013). However, few products and systems are made to be able to recover materials at end-of-life and is therefore not ready for the circular economy (RSA, 2016). Of all new products, 80-90 % is estimated to be disposed within the first six months (RSA, 2013). When the materials are recovered, the value often decrease. After first use cycle, materials such as steel, PET and paper lose 30-75 percent of their material value (Ellen MacArthur Foundation, 2015). Furthermore, only 40 percent of municipal solid waste in the EU is recycled, while 25 percent is incinerated with energy recovery, which leads the Ellen MacArthur Foundation to determine that: "*For all practical purposes, Europe still uses resources once and then discards them.*" (Ellen MacArthur Foundation, 2015, p. 18).

While the circular economy presents a new path for society, the concepts within the circular economy need to be adopted by companies to achieve a transformation towards more sustainable practices. The focus of this master thesis is consequently on companies in this context.

1.2 BUSINESS AS USUAL HAS COME TO AN END

The circular economy calls for new ways of doing business, as business as usual no longer is a viable option (Ovaska et al., 2016). As resources such as oil and metals run out, the chance of replacing products with new ones run out as well. This challenge the current 'take-make-waste' culture and the linear economy. The transition towards circular economy depends on a change in businesses and societies towards a more sustainable direction. This shift will therefore require new ways of doing things for both consumers and companies (Kraaijenhagen et al., 2016). Circular economy requires both consumers and companies to rethink the way they go about everyday life and business. Consumers have to change unsustainable consumption patterns and change their self-perception from consumers to users, which moves focus from specific products to fulfilling needs (Bocken et al., 2014). Companies have to rethink the way they do business, which entails activities within the companies as well as activities in the supply chain (Formentini and Taticchi, 2016).

The current sustainability agenda is primarily defined by eco-efficiency, eco-innovation and CSR (Bocken et al., 2014). Even though these initiatives are important for sustainable business development, the current challenges calls for a broader and more integrative perspective and new ways of doing business (ibid.). This is practically impossible for individual companies to achieve, which leads to the need for partnerships and collaboration between different entities in the supply chain (Remmen et al., 2007). This is especially the case for smaller companies, as the knowledge and skills required for this transformation of business rarely resides within each company. However, for companies to work more closely together, radical changes in business models, strategies and mindsets are required (Bocken et al., 2014; Network for Business Sustainability, 2012a). As future competition will take place between different supply chains, and not individual companies, companies need to work more closely together with their supply chain to ensure a competitive advantage (Andreasen and Krøijer-Jensen, 2016; Christopher and Jüttner, 2000). Through collaboration between the different entities in a supply chain, companies can experiment with new products, services and business models (RSA, 2013).

Companies have a unique opportunity and a responsibility to lead the transformation towards the circular economy through sustainable business development (Hart, 2010). Industries are facing different tasks in relation to the circular economy, as the resources used differ greatly. Regarding energy, the shift from fossil fuels to renewable energy is a clear prerequisite for the circular economy (Haas et al., 2015). However, for manufacturing companies, the prerequisites are not as clear. As business as usual no longer is a viable option, new ways of doing business is consequently needed. But for companies in different industries, these new ways of doing business will differ. Depending on the resources used, e.g. steel, oil and wood, the strategies for keeping the resources in the loop differ.

In that way, the transition towards a circular economy on a company level has two important sides: a material side and a collaborative side. The focus of this master thesis is on the collaborative side, while appreciating the material context. To investigate the collaborative side and the prerequisites for partnerships to support sustainable business development, a case company within the Danish furniture industry is used.

1.3 INTRODUCTION TO THE DANISH FURNITURE INDUSTRY

The Danish furniture industry is one of Denmark's creative industries, which represents about 6-7 per cent of the total revenue and employment in Danish industries (The Danish Government, 2013). It is an industry characterized by outsourcing, widespread supply chains and diverse production- and consumptions patterns. The Danish furniture industry took a hard hit during the financial crisis in 2007-2009, and has not yet been able to fully recover from this loss of business and revenue (Tænketanken Møbler og Interiør, 2014; The Danish Government, 2013). Prior to the financial crisis, the Danish wood-

and furniture industry employed approx. 24.000 people, but decreased to approx. 15.000 after the financial crisis and has remained steady since (TMI, 2016). From a peak of approx. 25 billion DKR in yearly turnover in 2006, the furniture industry experienced a decrease in turnover of nearly 40% in the years that followed the financial crisis (ibid.). Though both employment and turnover has settled on steady levels, they are still lower than before the financial crisis. For the furniture industry to recover, several challenges consequently have to be overcome: excessive and somewhat outdated regulation, public procurement practices, taxes and energy policies (Tænketanken Møbler og Interiør, 2014).

Furthermore, the focus on green transition in the world has also reached the creative industries which is echoed in an increasing interest in developing environmentally friendly and sustainable designs and solutions (The Danish Government, 2013). However, for the furniture industry to support this green transition towards circular economy, a lot of re-design is needed (RSA, 2016). This entails redesigning products, services, processes and business models, but more importantly; this has to be achieved through collaboration (Kraaijenhagen et al., 2016).

The Danish furniture industry is consequently a good example of an industry that is on the verge of coming back from a turbulent period, but also an industry that is aware that in order to sustain future growth and stability, things need to change (Paarsman, 2014; Tænketanken Møbler og Interiør, 2014).

1.3.1 INTRODUCTION TO CASE COMPANY: FURNX

To investigate how supply chains can improve sustainability through collaborative partnerships, a case company is used to analyze this. For this study, the case company is a furniture company in Northern Jutland, furnX. furnX is a small company with more than 20 years of experience in designing, developing, producing and selling furniture to educational institutions in Denmark, Sweden, Germany and France (furnX, n.d.). The company prioritizes high quality, classic and timeless design, and employs around 30 people. Ten years ago, furnX outsourced the production, but kept the process of assembling components in-house. furnX also sell finished goods from other suppliers (Petersen, 2016). The primary materials used in products from furnX is plywood, laminate and steel. Other materials used by furnX include textiles, upholstery, plastic, bamboo and artificial leather.

The current set-up for furnX is linear and predominantly determined by public procurement practices (Lundsgaard, 2016). This means that the majority of products sold by furnX are tables and chairs, as the public procurement offices in municipalities have a reactive approach to procurement. When making a tender for furniture to educational institutions, public procurement offices often look at the last tender and replicate that (Petersen, 2016). There is therefore no room for new innovative products or services from suppliers. In that way, the current market structure upholds the linear flow of products.

During recent years, the company has begun a transformation towards becoming a more sustainable company as well as changing the rules of the game, when it comes to furniture for educational institutions. To become a more sustainable company, furnX is working actively to reduce the environmental impacts, and have recently received their ISO 14001, ISO 9001, OHSAS 18001 and FSC Chain of Custody certificates (Petersen, 2016). Additionally, products are designed with sustainability in mind: modular design, design for long life and recyclability etc. (furnX, n.d.). To change the rules of the game for school furniture, they work with product-service system (PSS) solutions that aim to rethink the way educational institutions choose and use furniture. furnX strives to develop innovative learning environments that cater to the individual learning style of each student and invite to a more active and student-involved tuition (Petersen, 2016). Additionally, the company has shifted from traditional product sales towards value creating concept sales (furnX, 2015). However, as the company works on a contract market, a challenge is to change this market from a focus on investment price towards total cost of ownership (TCO) (Herning Kommune and Rethink Business, 2014).

Strategies and practices within a small company is often based on a short-term perspective, as the main focus is day-to-day tasks and making sure the company is still afloat next month or year. Small companies thus rarely plan for a long-term perspective. The possibility to change strategies and visions within a small company is thus greater than within a large company, as the existing strategies are short-term. For furnX to pursue sustainable business development, the changes required may be easier to implement, as the company is more flexible and adaptable.

2 METHODOLOGY

To investigate the field of sustainable business development for furnX, an iterative inductive approach was utilized. In this research, there is no hypothesis to be tested, but the research is guided by an initial interest established during an internship at furnX in 2015. The purpose of the internship was to analyze a new circular business model based on leasing, and the opportunities and barriers for this new model. Concluding the internship, several opportunities and barriers appeared, which sparked an interest to continue investigation of what is required for furnX to increase their sustainability. This led to the focus of a broader perspective on how furnX can ensure sustainable business development, with a focus on collaborative partnerships in the supply chain. This is investigated through interviews and literature studies, which is framed by a theoretical framework of sustainable business development.

To delimit the scope of this study, the entire supply network of furnX is not included. As the majority of the material content in the furniture from furnX consists of plywood, laminate and steel, only suppliers of these materials will be included for interviews.

2.1 THEORETICAL FRAMEWORK – SUSTAINABLE BUSINESS DEVELOPMENT

To enable the investigation of how furnX can initiate partnerships for sustainable business development, a theoretical framework of sustainable business development is utilized. This theoretical framework consists of four key aspects to sustainable business development at furnX. Firstly, a conceptual framework for understanding and working with business sustainability provides the foundation for conceptualizing three perceptions of business sustainability. Secondly, a network analysis serves the purpose of identifying the relevant actors to include in partnerships for furnX. A company is part of at least three different networks: business, knowledge and regulatory (Søndergård et al., 1997). The point of departure is the business network, as the purpose of this master thesis is to investigate how furnX can initiate partnerships for sustainable business development. Thirdly, the theoretical framework entails six sustainable business models for the circular economy, which can be used to support sustainable business development at furnX. Lastly, the theoretical framework highlights the key to successful sustainable business development: partnerships. This last aspect in the framework include essential elements for selecting partners and managing the partnership process. This framework is presented in depth in chapter 3.

The theoretical framework serves the purpose of framing the research, which means that the field of study is seen through a specific set of lenses, which affects the analytical process. Theories are

expressive by nature, and therefore tools to understand and express specific elements in the world (Hastrup, 2010). For this master thesis, the specific lenses of sustainable business development support and frame the investigation of how to initiate partnerships. Theories of network analysis, sustainable business models and partnerships jointly support the concept of sustainable business development. In combination, these perspectives provide a basis for analyzing the case of furnX and how the company can achieve sustainable business development through partnerships.

2.2 DATA COLLECTION AND ANALYSIS

To enable the investigation of how furnX can initiate partnerships for sustainable business development, interviews is used as the primary method for collecting empirical data. Interviews is an effective method to investigate the articulated perceptions, opinions and experiences of an informant (Brinkmann and Tanggaard, 2010). The premise for all interviews, is that the knowledge obtained from the interviews is constructed in the specific interview setting, and depends on the relation between the informant and the interviewer (Brinkmann and Tanggaard, 2010). For this master thesis, interviews are used to obtain knowledge of the current situation upstream in the supply chain, internal management of suppliers at furnX and inspiration for future development.

Interviews within existing network

The existing business network for furnX thus served as a point of departure for identifying relevant participants for interviews. The purpose of the interviews within the business network is to investigate the status of the relationships between suppliers and furnX. To fulfill this purpose, three suppliers are chosen for interviews:

- Nytech A/S (Denmark): Michael Hansen, managing director
- PM Træ & Interiør A/S (Denmark): Peter Møller, managing director
- G.Desmet (Belgium): Lenco Verheuvel, sales and development manager

To investigate the current status and future opportunities within the existing supply base for furnX, two suppliers in Denmark and one supplier in Belgium are interviewed. Nytech is the main supplier of steel, while PM and G.Desmet are the two main suppliers of wood-based components. PM produce tabletops, cupboards, storage systems etc., which is made from mostly plywood and laminate. G.Desmet is specialized in plywood shaping, where layers of rotary cut veneers are glued together and placed in a mould, where the combination of heat and pressure shapes the plywood into a given product (Verheuvel, 2016).

All interviews are conducted at the suppliers to ensure a comfortable setting for the informants and to provide insight into the production processes at each supplier. Besides interviews with suppliers,

meetings with relevant employees at furnX supported the process of understanding the current situation and future possibilities for partnerships.

Interviews outside existing network

Outside the existing network of furnX, two companies are visited in the Netherlands. The purpose of these visits is to gain inspiration from other furniture companies working with sustainable business development. The companies in question are:

- BMA Ergonomics (Netherlands): Mariska Kemerink, marketing and communication manager
- Royal Ahrend (Netherlands): Diana Seijs, coordinator for CSR and sustainability

These visits supported a general understanding of how companies can work with sustainable business development and some of the challenges related to this in the furniture industry.

Analysis of data

The recorded interviews were semi-transcribed and for interviews not recorded, field notes were written. Both the semi-transcriptions and the field notes were written as soon as possible after the interview was conducted to ensure a clear memory of the setting, interaction and experience. These semi-transcriptions and notes were then coded based on a data-driven approach where the categories arise from the empirical data. In this case these categories include supply chain management/supply corporation, downstream perspectives, internal transformation, financial aspects etc. The coded data is available at kortlink.dk/mcpk along with the recordings and the notes from all interviews.

3 SUSTAINABLE BUSINESS DEVELOPMENT

Within this chapter, the theoretical framework for this master thesis is presented. Firstly, a conceptual framework for understanding business sustainability is presented. Secondly, a network analysis for identifying relevant actors to partner with is described. Then, a framework for sustainable business models is presented to provide an understanding of six different business model strategies for the circular economy. Lastly, the concept of partnerships is introduced to provide an understanding of central elements for establishing partnerships.

3.1 CONCEPTUAL FRAMEWORK - BUSINESS SUSTAINABILITY

As a conceptual framework, the concept of business sustainability is applied. Business sustainability implies a long-term view where strong relationships with stakeholders are forged. Business sustainability is defined as: *"[...] business models and managerial decisions grounded in financial, environmental and social concerns."* (Network for Business Sustainability, 2012a, p. 4). Companies can therefore work with business sustainability on different levels, through different activities and with different intensity (Baumgartner and Ebner, 2010). To identify and explain these different sustainability activities and strategies, Huulgaard (2015) summarized four different frameworks into one conceptual model. This model is illustrated in figure 3.1.

	Ad hoc	**Operational optimisation**	**Organisational transformation**	**Systems building**
Sustainability concept	Jobs, profile and taxes	Environmental protection	Triple bottom line	Change the game
Strategic intent	Legal compliance	License to operate	Business case	Market creation
Structure	Staff driven	Functional ownership	Cross-functional coordination	Business driven
Span of influence	On case by case basis	Enterprise	Value chain	Society
Stakeholder relations	Unilateral	Interactive	Partnership	Multi-organisation
Transparency	Reporting as 'flank protection'	Public reporting	Assurance	Full disclosure

Figure 3.1: Conceptual framework for characterizing a company's sustainability efforts (Huulgaard, 2015, p.162)

This model functions as a tool to analyze business sustainability, where companies can apply four levels of business sustainability: ad hoc, operational optimization, organizational transformation and systems building. Within each exist six parameters for characterizing a company's sustainability strategies (Huulgaard, 2015). The first parameter deals with how companies define and perceive their responsibility within sustainability, while the second parameter assess the purpose of companies' sustainability efforts. These parameters shape the remaining parameters of structure, span of influence, stakeholder relations and transparency. This model represents a tool to analyze and understand a company's sustainability efforts. Taking point of departure in this model, an adaption of this lead to a framework of three conceptual understandings of business sustainability. The first level of business sustainability in figure 3.1, ad hoc, represents a company strategy of fulfilling only the legal requirements. This level is not perceived as a deliberate strategy for sustainable business development, and consequently not included in the conceptual framework.

For companies to achieve sustainable business development, a clear understanding of business sustainability is essential. Figure 3.2 illustrates three different conceptualizations of business sustainability, defined as factory-, product- and system-oriented sustainability.

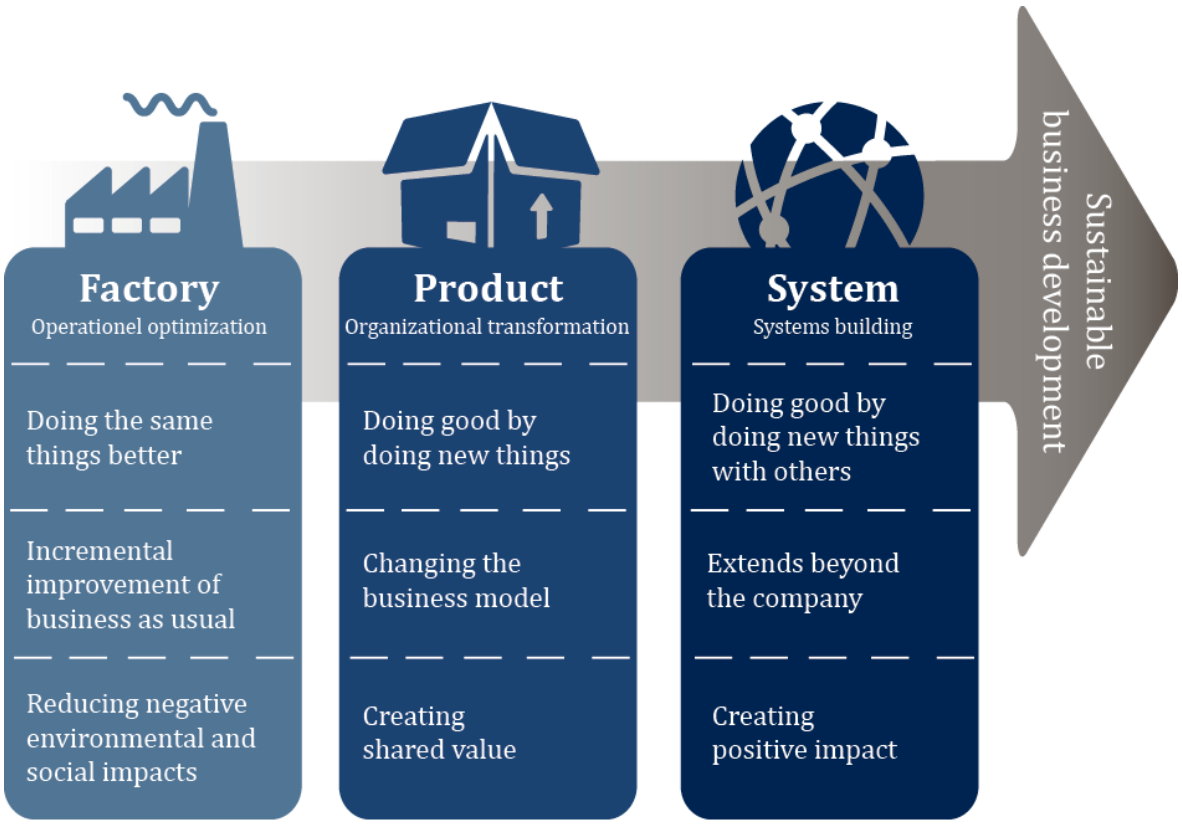

Figure 3.2: Three conceptualizations of business sustainability, simplified and based on Network for Business Sustainability (2012) and Huulgaard (2015)

This framework illustrates both three different conceptual understandings of business sustainability, but also a three-step development. For industries and societies, this framework provides a development process for sustainable development. On a company level, this framework provides a conceptualization of three different ways of perceiving, understanding and working with business sustainability. Only the company level will be described further.

The first perception of sustainability, **factory-oriented sustainability**, entails a view of sustainability as optimization of current operations within companies. These optimizations are incremental and meant to reduce negative environmental and social impacts, but does not fundamentally change the way companies do business (Network for Business Sustainability, 2012a). This perception entails a traditional view of compliance as the main tool for achieving sustainable business development, and is focused on own factory-site and in-house activities (Network for Business Sustainability, 2012a).

The second perception, **product-oriented sustainability**, takes point of departure in the product and the supply chain related to the product. This means that focus change from compliance towards business development. Focus include more of the supply chain, which entails the usage of tools such as supply chain management, environmental management systems and voluntary labelling (Arler et al., 2015; Network for Business Sustainability, 2012a). Another important aspect in product-oriented sustainability is corporate social responsibility (CSR) as the scope of the company is expanded to cover more of the supply chain. As the majority of Danish companies have outsourced production, CSR becomes an important tool to improve environmental and social performance along the supply chain (Arler et al., 2015).

The third perception, **system-oriented sustainability**, represents an even broader view on sustainability. This perception entails an understanding of sustainability as a business opportunity that companies cannot achieve on their own. Companies need to expand their scope of collaboration to include the entire supply chain and surrounding society (Remmen et al., 2007). The prerequisite for working with system-oriented sustainability is therefore partnerships and new collaborative ways of doing business (Network for Business Sustainability, 2012a). When viewing sustainability in a systems perspective, focus expands to cover more relations and other stakeholders, increasing the interdependence amongst these actors, and *"with this interdependency has come a realization that co-operation and partnership are essential prerequisites for the achievement of longterm mutual benefit."* (Christopher and Jüttner, 2000, p. 117).

In 2012, the Canadian Network for Business Sustainability (NBS) concluded that 70% of companies apply practices based on factory-oriented sustainability, 28% on product-oriented, 2% applied a mix of the two, while no companies were working with sustainability in a systems perspective (Network for Business Sustainability, 2012a). System-oriented sustainability is thus described as "*an ideal or aspirational state*" where the goal is not to be less unsustainable but to become increasingly sustainable (Network for Business Sustainability, 2012b, p. 9). Figure 3.3 illustrates how these three perceptions are embedded in one another and how sustainability actions change in their nature from insular to systemic, from stand alone to integrated and from technical to socio-technical.

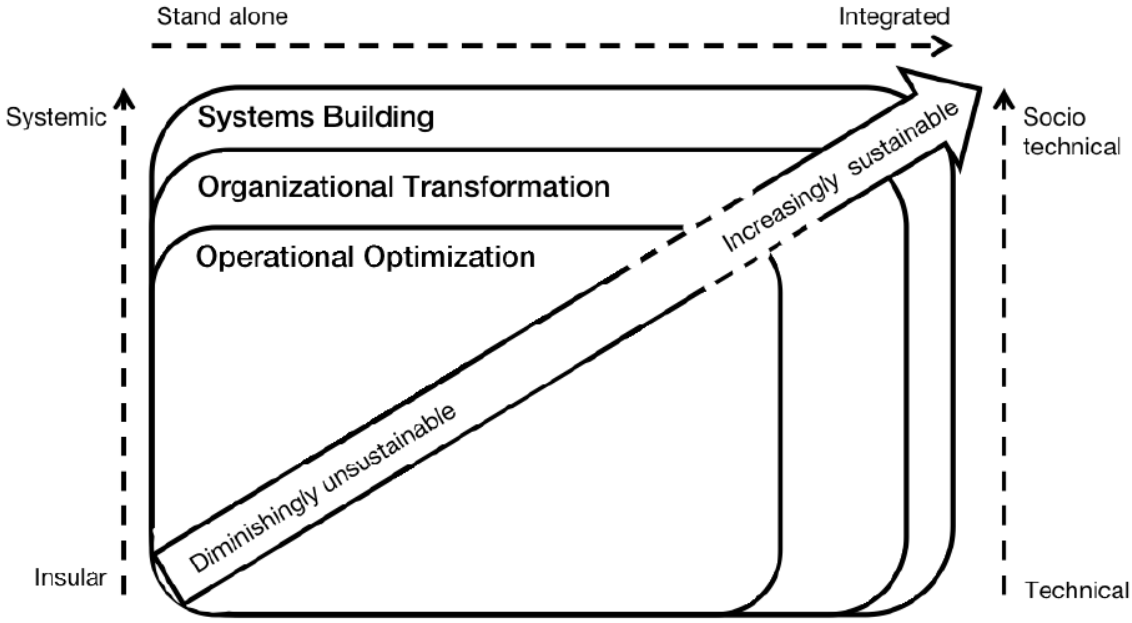

Figure 3.3: Three interrelated perceptions of business sustainability (Network for Business Sustainability, 2012b, p. 9)

Companies can work with sustainable activities on more levels than one, depending on their business strategies and areas of interest. This means that some activities in a company can take point of departure in factory-oriented sustainability (operational optimization), while others may arise from product-oriented sustainability (organizational transformation).

For companies to become truly sustainable, a great transformation is needed: *"Transforming the system involves working collaboratively [...] to change the "rules of the game" in order to advance a broader sustainability agenda [...]"* (Network for Business Sustainability, 2012b, p. 55). Moving from a focus on diminishing unsustainable practices towards a focus on creating increasingly sustainable practices, involvement of more stakeholders is required. This transition will challenge companies and their adaptive capacity, as companies need to adapt to new business models, markets and regulation.

Figure 3.4 illustrates the transition path towards circular economy for companies, in relation to the conceptual framework.

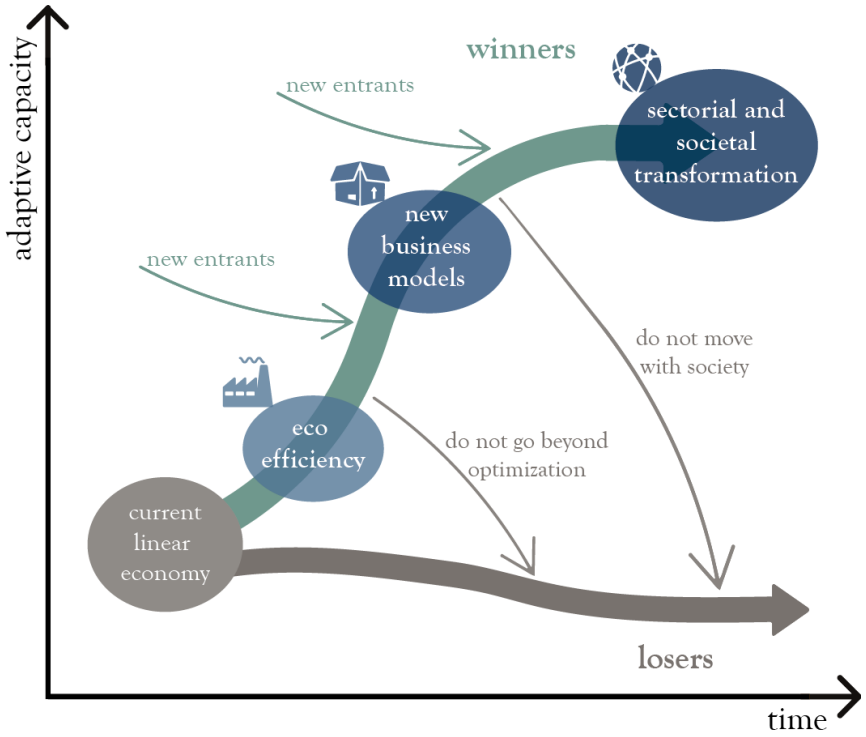

Figure 3.4: Transition path towards circular economy, inspired by (Network for Business Sustainability, 2012a; OPAi and MVO Nederland, 2014; van Renswoude et al., 2015)

Companies' adaptive capacity over time thus determines their ability to transition towards circular economy. As business sustainability implies a long-term perspective, efforts taken towards system-oriented sustainability are not within reach in a short-term perspective. In contrast to that, companies working with activities focused on factory-oriented sustainability (depicted as eco-efficiency in figure 3.4) are able to realize the benefits in at short-term perspective, e.g. saved financial costs from production optimization. However, in a long-term perspective, these factory-oriented activities are not enough for a company to maintain their market position. They need to transform their business. The same applies to companies working with product-oriented sustainability (depicted as new business models in figure 3.4).

As figure 3.4 illustrates, new entrants can enter the market at different levels, thus meaning that a company can be based on the premise of system-oriented sustainability. An example of this kind of company is Better World Fashion, who produce quality leather jackets from reworked leather (BusinessAalborg, 2016). Their business model is based on producing sustainable jackets from used materials, buying back the jackets and providing the jackets in a leasing scheme. The company works to contribute to a better world without wasting resources and creating unnecessary environmental impact (Better World Fashion, n.d.).

3.2 NETWORK ANALYSIS

To understand a company, the context in which the company operates and functions is crucial. This entails different networks and relations, consisting of both technical and human resources, which are connected in different ways and through different relations (Håkansson and Ford, 2002). *"No business is an island"*, and no company or interactions exist in isolation (Håkansson and Snehota, 1989, p. 187). However, a company is part of limited networks, as substantial insight into a large amount of relations is not possible to obtain and master for any one company (Holmen and Pedersen, 2003).

The relations that make up these networks can be described by four properties: reciprocity, interdependence, loose connections and power relations (Søndergård et al., 1997). Firstly, reciprocity and trust are prerequisites for the relations, as any transaction or activity is made from and generates mutual expectations (Ring and van de Ven, 1994; Søndergård et al., 1997). Secondly, all relations in a network creates interdependence between the involved actors. This interdependence is constructed over time and entails knowledge of the other actors, joint activities, common language etc. These are all aspects that strengthens over time and stabilize the relation (Håkansson and Ford, 2002) . Thirdly, the relations are characterized as loose connections, since all actors in the network are autonomous and not necessarily in the same position all the time (Søndergård et al., 1997). Lastly, the network is comprised of different power relations. These power relations are based on control of resources, i.e. products, knowledge, equipment etc. and represent the need for actors to engage in the network. The difference between actors in a network is constituted by the power relations (Callon and Latour, 1981). In this case, power is linked to the resourcefulness of the actor: the more resources an actor has access to, the greater power (Søndergård et al., 1997).

A network encompassing a company is thus based on functional interdependence, power relations, knowledge and history. The existing network provides a strong platform but also a predefined working space for the activities performed by the actors (Søndergård et al., 1997). A company is part of at least three different networks, as displayed in figure 3.5.

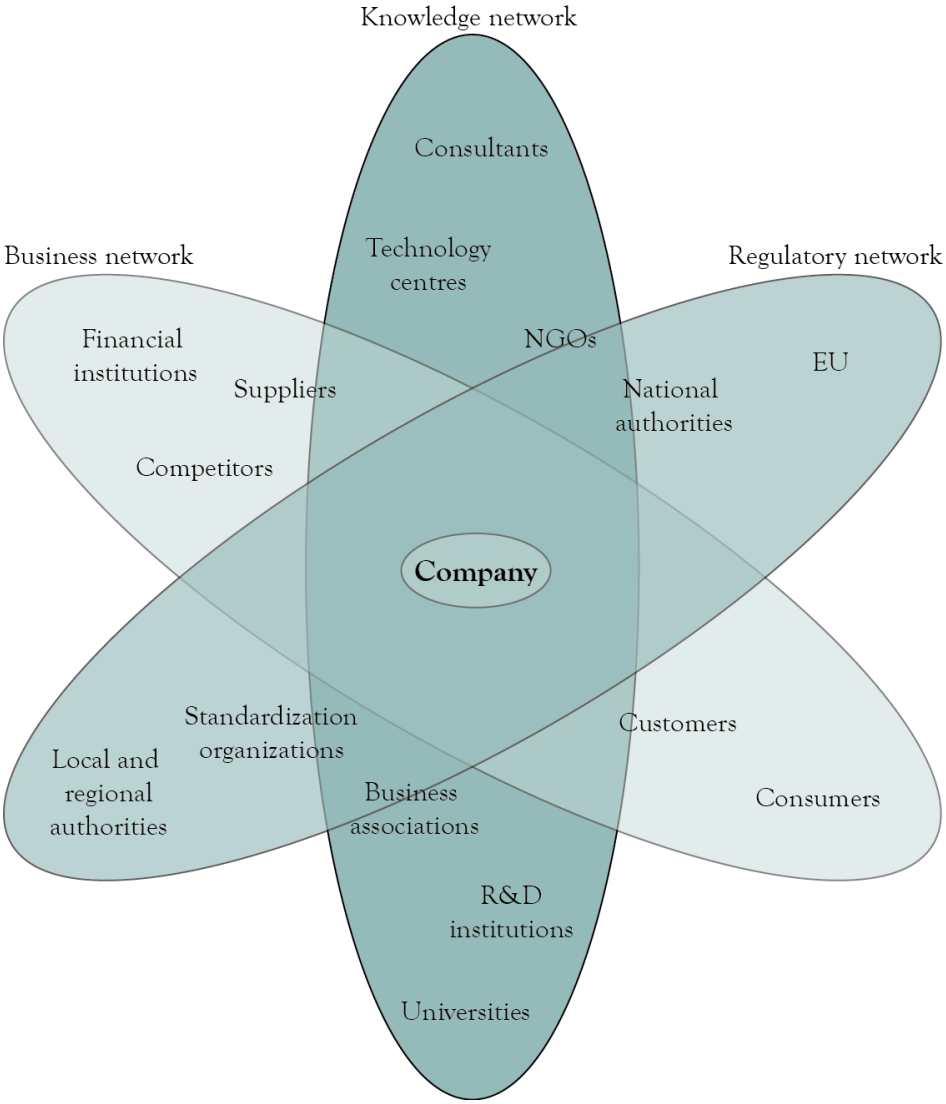

Figure 3.5: Three networks surrounding a company, modified from (Remmen, n.d) and (Søndergård et al., 1997)

The **business network** is comprised of actors that are connected to the focal company through exchanges of money and materials. This network thus consists of the supply chain of the company along with financial institutions and competitors. As the relations entail transfer of money and materials, there is a mutual expectation to the involved actors to fulfill these transfers in the right way, which illustrates the reciprocity between actors. The interdependence between actors is represented by the supplier-buyer relationships, where knowledge of each other's processes and activities increases this interdependence. At the same time, these relationships are based on loose connections, and there is always a possibility of replacing a supplier. This also supports the power relations, as the suppliers are dependent on customers to buy their products.

Different relations comprise the **knowledge network**, where sharing is a key word. This network, entails universities, business associations etc. Within this network, the reciprocity and interdependence stems from the mutuality of the relations, as knowledge sharing is key to these relations.

The relations in the **regulatory network** is based on authoritative powers, through which the surrounding actors influence or control the focal company and its actions. In this network, the power relations are the key attribute for understanding and describing the relations.

A company influences and is influenced by the different actors in the networks. Depending on the size and strategy of a company, the importance of these networks differ. Smaller companies focus the majority of efforts in the business network, while larger companies have the resources and strategic capacity to be actively involved in the other networks as well. This is because smaller companies generally are working in a shorter timeframe with the main priority to achieve black numbers on the bottom line, and larger companies have the capacity to include a long-term perspective in strategies and planning. In relation to sustainability efforts, the short-term perspective is insufficient, cf. figure 3.4. The utilization of and corporation with all networks are therefore essential to enable practical application of sustainability in a long-term perspective (van Leeuwen, 2015).

3.3 SUSTAINABLE BUSINESS MODELS IN THE CIRCULAR ECONOMY

When viewing sustainability from a systems perspective, companies need to do something else than what they usually do – they need to change their business model (Bocken et al., 2016; Sempels and Hoffmann, 2013). The general business model of the linear 'take-make-waste' economy is described as a 'transactional business model' (van Renswoude et al., 2015). Within the circular economy, that general model is going to change fundamentally. Many different definitions of business models exists, and in this study a business model is understood as a conceptual tool to understand how a company does business and how value is provided to the customers (Ostewalder et al., 2005). This is supported by four key elements comprising a business model:

1. **Value proposition:** the value embedded in the products or services provided by the company.
2. **Supply chain:** structuring and managing upstream relationships with suppliers.
3. **Customer interface:** structuring and managing downstream relationships with customers.
4. **Financial model:** cost and benefits from the other three elements.

(Boons and Lüdeke-Freund, 2013)

For companies to pursue sustainable business development and change their business model and strategy, these four elements need to change accordingly. The more radical the change of products or services, the more changes to the business model is required (Bocken et al., 2016).

3.3.1 SUSTAINABLE BUSINESS MODEL FRAMEWORK

Sustainable business models in the circular economy entails new business models that ensure a circular flow of materials instead of a linear (Bocken et al., 2016; Lewandowski, 2016). Many investigate the concept of sustainable business models, and different frameworks exists. Three streams of sustainable business models were identified by Boons and Lüdeke-Freund (2013): technological, organizational and social innovation. The technological stream entails the ability to fit technology and commercialization approaches. The organizational stream entails changing the neoclassical economic model towards more sustainable paradigms. Lastly, the social stream entails business models that create social value. These three streams provide the foundation for grouping eight sustainable business model archetypes into technical, social or organizational models (Bocken et al., 2014).

Green business models were investigated in relation to resources and the ability to create an effective resource transformation system, in which added value is the key to success (Roos, 2014). Added value is also of importance to the Ellen MacArthur Foundation, who presents the ReSOLVE framework: regenerate, share, optimize, loop, virtualize and exchange (Ellen MacArthur Foundation, 2015). Regarding furniture, virtualization and exchange are not relevant, while the remaining aspects are of interest (ibid.). The focus in the ReSOLVE framework is on business actions in relation to resources. Expanding this notion, sustainable business models for the circular economy can be categorized in models, that either slow resource loops, close resource loops or narrow resource loops (Bocken et al., 2016). This categorization provides a basis for determining the overall goal of a sustainable business model, which then supports a clarification of purpose and vision for the model. This distinction provides as a starting point for analyzing different sustainable business models.

Within these three categories, e.g. slowing, closing or narrowing resource loops, seven business model strategies are defined (Kraaijenhagen et al., 2016). The last category of narrowing resource loops deals with resource-efficiency and does not address the cycles of products and resources. The transition to circular economy require more than resource-efficiency, which is why this category is omitted from the following sustainable business model framework. The two categories of slowing resource loops and closing resource loops thus provide a framework for sustainable business models. This framework consists of six different business models strategies, which are listed in table 3.2. These six business models provide a framework for analyzing the network of furnX and determine which business model strategies are suitable for the company right now.

Table 3.1: Business model strategies for slowing and closing resource loops, adapted from (Bocken et al., 2016)

Business model strategy	**Definition**
Business model strategies for slowing loops	
Access and performance model	Satisfying user need through services without users needing to own physical products, i.e. product-service systems (PSS)
Extending product value	Exploiting residual value of products either from different actors in same supply chain or between actors from different chains, i.e. through take-back systems
Classic long-life model	By implementing design for durability, repair etc. companies can deliver long-life products
Encourage sufficiency	Companies actively seek to reduce consumption by end-users through design, services and a non-consumerist approach to marketing and sales
Business model strategies for closing loops	
Extending resource value	Exploiting the residual value of resources by collecting otherwise "wasted" materials or resources to turn these into new kinds of value
Industrial symbiosis	A process- orientated solution, concerned with using residual outputs from one process as feedstock for another process, which benefits from geographical proximity of businesses

This business model framework provides an overview of different strategies for the circular economy. These business model strategies can function individually, but synergies can be achieved by combining different models. If, for example, a company implements an *access and performance model* through a leasing scheme, *extending product value* and *classic long-life model* are also relevant models, as repair and refurbishment of products used in the leasing scheme is important. Additionally, designing and producing products for long-life ensures a longer lifespan of products in the leasing scheme, thus supporting the business model and revenue stream for the company. In the same way, *classic long-life model* and *extending resource value* complement each other, since design for repair often implies modular design of cleaner fractions, which then increase the possibility to exploit the residual value of the resources at end-of-life.

Circularity is impossible for a company to achieve completely alone, as it is dependent on a network of suppliers, customers, organizations and authorities (Roos, 2014). New sustainable business models will therefore require companies to consider their entire network (ibid.). For these sustainable business models, new partnerships are necessary for the models to succeed in practice.

3.4 PARTNERSHIPS

The premise for sustainable business development is partnerships, as partnerships enable companies and organizations to solve complex problems, such as the sustainability challenges, that cannot be solved by individual companies. Partnerships come in different shapes and sizes, but in order to create win-win situations through partnerships, collaboration is the key (Network for Business Sustainability, 2013b; Ring and van de Ven, 1994). Figure 3.6 displays different outcomes of a partnership depending on the balance between own goals and goals of the partner.

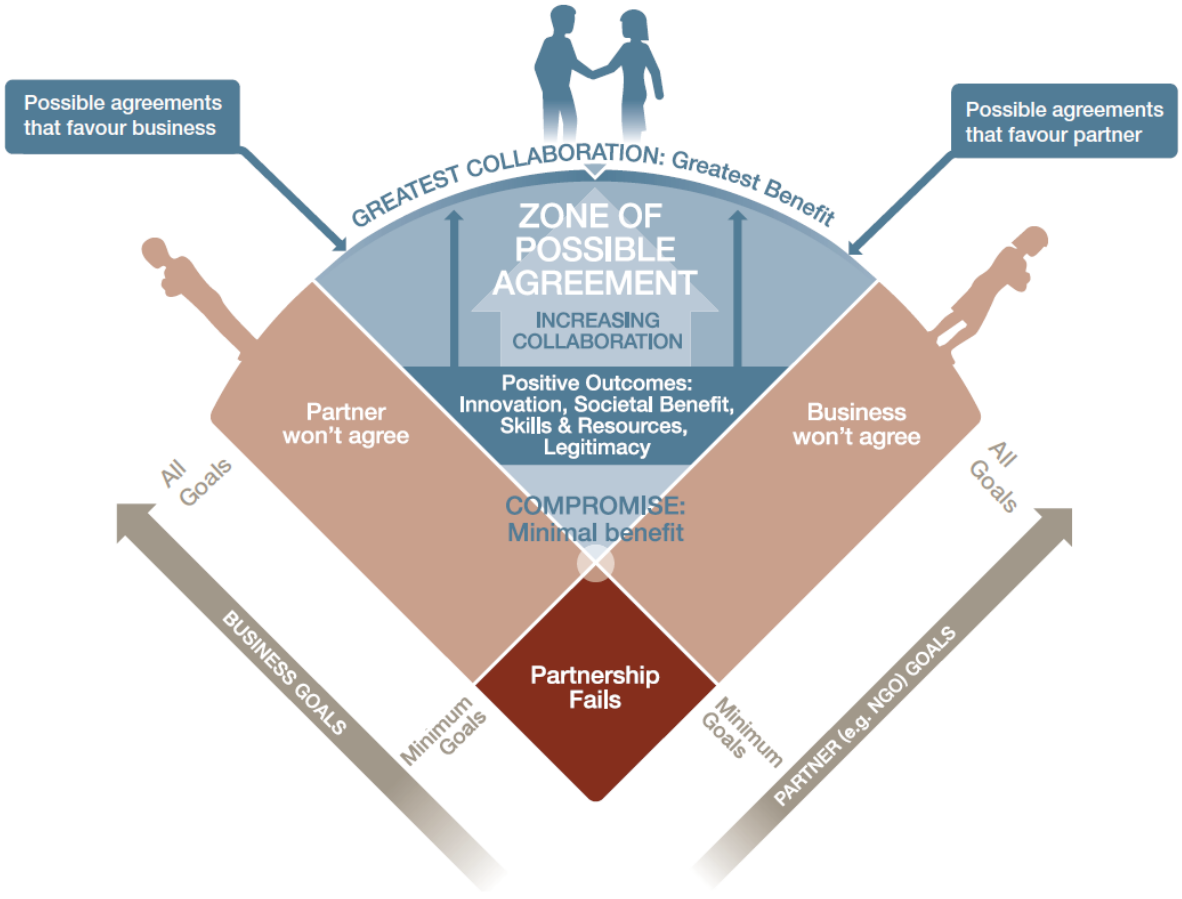

Figure 3.6: Partnership outcomes with increasing collaboration (Network for Business Sustainability, 2013b, p. 10)

Any company or organization has its own goals, and if the basic goals of both partners are not met, the partnership will fail. If only the basic goals of both partners are met, the partnership will be a compromise with minimal benefit. If collaboration increase, the partnership moves from being a compromise towards the *zone of possible agreement*, in which the greatest benefit for both partners exists. These benefits include innovation, reaching sustainability goals, creating positive impact in society, gaining access to skills and resources, increase legitimacy, and protect license to operate (Network for Business Sustainability, 2013b). Two elements are key to a successful partnership: *partner selection* and *manage the process of the partnership* (Network for Business Sustainability, 2013b).

3.4.1 PARTNER SELECTION

To achieve the greatest benefits from partnerships, selecting the right partners is key. There are three important aspects to consider when selecting a partner for a partnership: partner relevance, partner resources and partner outlook (Network for Business Sustainability, 2013b).

Partner relevance: by placing the problem, issue or opportunity at the center of the partner search, the identification of who creates it or is affected by it becomes possible. This provides a point of departure for identifying possible partners for the chosen objective, thus ensuring the relevant stakeholders are involved (Network for Business Sustainability, 2013b).

Partner resources: when the objective is decided, understanding which resources are necessary for meeting the objective and which resources partners can bring to the table is important. In that regard, the power relation between the different partners is sought to be equal to ensure fair contribution and distribution of resources. Additionally, partners' credibility and image can either empower the relation (partners with good images) or harm it (partners with bad images) (Network for Business Sustainability, 2013b).

Partner outlook: lastly, a common frame of reference is needed, which entails a cultural fit and preferably partnership experience. The culture of a company or organization differ, and even though partners do not need similar cultures, awareness of the differences is important to enable a shared vision (Christopher and Jüttner, 2000; Network for Business Sustainability, 2013b). This process enables a sense making and bonding process between the partners, where partners *"by projecting itself onto its environment, […] develops a self-referential appreciation of its own identity, which, in turn, permits the organization to act in relation to its environment."* (Ring and van de Ven, 1994, p. 100).

3.4.2 MANAGEMENT OF PARTNERSHIP PROCESS

Once the right partners are chosen, the next step is management of the partnership process. For a partnership to function, four elements must be considered when managing the process: be inclusive, set expectations, build understanding and develop relationships (Network for Business Sustainability, 2013b).

Be inclusive: to manage a partnership, partners need to be inclusive by sharing power between stakeholders and ensure consensus. Consensus is achieved by considering concerns from all partners, which enable the possibility to make the best decision for the group while still addressing individual partners' concerns (Network for Business Sustainability, 2013b).

Set expectations: to establish a practical playground for the partnership, clear rules and expectations are essential. Rules for communication and handling conflicts are necessary to ensure a smooth process (Network for Business Sustainability, 2013b). Regarding expectations, partners need to set clear expectations to the partnership and clarify motivations, investment and perceived uncertainties (Ring and van de Ven, 1994). This process also support partners in assessing each other's trustworthiness.

Build understanding: understanding the different values, perspectives and competencies of partners is key to a successful partnership, as this supports the creation of a shared vision. If partners are able to find a common goal, they have a reason to work together (Network for Business Sustainability, 2013b). Communication and internal transparency between partners is essential to motivate this understanding, build trust and enable a congruent partnership (Ring and van de Ven, 1994).

Develop relationships: to develop the relationship between partners, trust is a key element (Network for Business Sustainability, 2013b; Rohrbeck et al., 2013). As a partnership is entered by people on behalf of companies, the partnership will depend on the relationship between these individuals. Interpersonal trust is consequently a requirement in the beginning of the relationship, while the inter-organizational trust is built over time, as the trustworthiness of an individual person cannot be entirely transferred to the trustworthiness of the represented company (Ring and van de Ven, 1994).

3.5 SUMMARY OF THEORETICAL FRAMEWORK

As presented in this chapter, sustainable business development provides a framework for this master thesis. A combined understanding of perceptions of business sustainability, network of companies, sustainable business model strategies and how to establish partnerships was provided in this chapter. This combination creates the theoretical framework, which support the investigation of how furnX can initiate partnerships to achieve sustainable business development.

4 SUSTAINABLE DEVELOPMENT IN SUPPLY CHAINS

This chapter introduces the concept of supply chain management and describes the development of sustainability within supply chains. This serves the purpose of creating an understanding of the current practices within sustainable supply chain management and further development potentials. An understanding hereof provides a basis for analyzing and understanding the current practices and future opportunities in the supply network of furnX.

4.1 TOWARDS SUSTAINABLE SUPPLY CHAIN MANAGEMENT

The supply chain covers all steps from raw material extraction till the customer, and entails different flows: materials, money and information (Monczka et al., 2016). These flows link suppliers, focal companies and customers (Seuring and Müller, 2008). Supply chains are therefore a good starting point for developing and integrating sustainability, as the supply chain considers all steps in the products life-cycle (Linton et al., 2007). From these steps, working with an extended supply chain becomes possible, where additional considerations are made to improve the overall sustainability, e.g. through product design and utilization of by-products (ibid.).

As sustainability is an interdisciplinary and complex concept, it can be difficult to operationalize for companies (Linton et al., 2007; van Leeuwen, 2015). Sustainability is therefore often disconnected from strategy (Carter and Rogers, 2008). Attempts to integrate sustainability in strategies and operations often result in superficial solutions, where a company's good intentions are not translated into actions and results (Brockhaus et al., 2013). Many efforts on sustainability in supply chains are therefore leaning towards a mandating tactic, in which the dominant company in a supply chain (often the focal company) forces these efforts onto weaker members in the upstream supply chain (Brockhaus et al., 2013). This mandating tactic is often represented by traditional supply chain management (SCM), which is a well-established and effective tool to manage the flows and activities within and across a supply chain (Monczka et al., 2016).

The traditional view of SCM is based on price competition and keeping suppliers at arms-length, which is enforced through a contractual manner with control and monitoring at the core (Chopra and Meindl, 2006; Monczka et al., 2016). However, as competition went global, companies struggled to maintain their competitive advantage and needed a more coordinated way to manage flows in the supply chain (Seuring and Müller, 2008). This globalization and awareness of unsustainable practices has thus led to a new understanding of supply chain management, which is based on CSR and building relationships

with suppliers (Carter and Rogers, 2008; Seuring and Gold, 2013). The buyer-supplier relationship has shifted from mainly being adversarial to a more cooperative relationship based on activities such as joint product development, supplier development and supplier relationship management (Monczka et al., 2016). Due to the intensive global competition, the importance of suppliers has increased during the last decades. The relationship between buyer and supplier is thus changing, and it becomes more difficult and complicated to replace suppliers.

As a systemic change towards circular economy cannot be achieved by a single company, this transformation has to be achieved along the entire supply chain (Govindan et al., 2016). This represents a necessary transition from traditional SCM towards sustainable supply chain management.

4.1.1 THE CONCEPT OF SUSTAINABLE SUPPLY CHAIN MANAGEMENT (SSCM)

When extending the supply chain to include sustainability issues, the complexity of the supply chain increases, which also requires a different understanding of SCM (Linton et al., 2007). Sustainable supply chain management (SSCM) is defined as

> *"the strategic, transparent integration and achievement of an organization's social, environmental, and economic goals in the systemic coordination of key interorganizational business processes for improving the long-term economic performance of the individual company and its supply chains."*
>
> (Carter and Rogers, 2008, p. 368)

SSCM therefore calls for a re-design of business, both on a company level, but also at the supply chain level (Formentini and Taticchi, 2016). External stakeholders, customers and legislation, as shown in figure 4.1, triggers any change towards SSCM in a focal company.

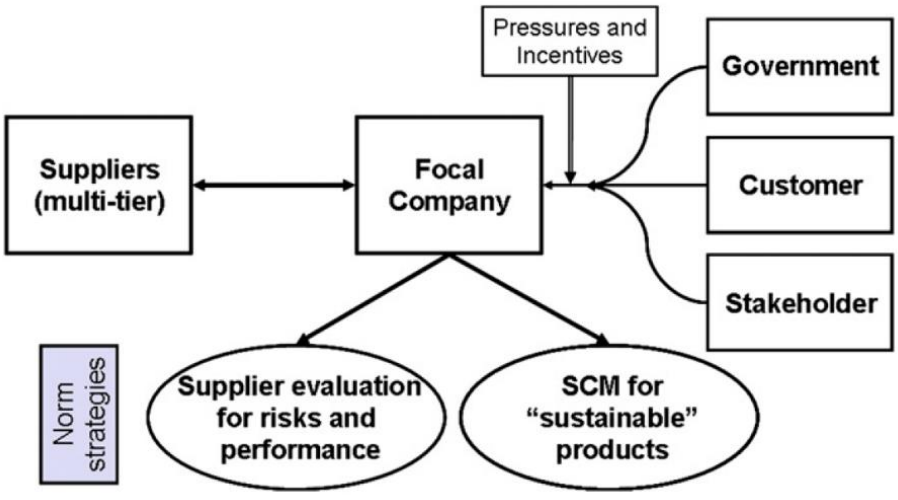

Figure 4.1: Triggers for sustainable supply chain management (Seuring and Müller, 2008, p. 1703)

Within traditional SCM, when a focal company feels pressured by stakeholders, customers or legislation, it passes this pressure on to its suppliers (Seuring and Müller, 2008). However, if the focal company is working with SSCM, the pressure is sought distributes between more actors. This means that the supply chain as a whole meets the pressure instead of the focal company passing the pressure on to suppliers. For this to happen, the supply chain needs to collaborate. As illustrated in figure 4.1, the focal company can apply two strategies for this collaboration in SSCM: *supplier evaluation for risks and performance* or *SCM for sustainable products* (Seuring and Müller, 2008). Supplier evaluation deals with general environmental improvement of the supply chain through management systems, minimum requirements, improved communication etc. to minimize supply chain risk[1]. SCM for sustainable products entail life cycle assessments, life cycle management and closer collaboration in the supply chain to ensure sustainable product and process development (Seuring and Müller, 2008).

To implement these strategies, the focal company applies supply chain governance. A non-collaborative approach to governance represents traditional SCM, where the focal company relies on contractual power to implement decisions. While a non-collaborative approach is an effective tool to implement traditional SCM, a collaborative approach to governance is an effective tool to implement sustainable initiatives in the supply chain. SSCM therefore *"calls for balancing the traditional power-based approach with new collaborative ways of implementing governance."* (Formentini and Taticchi, 2016, p. 1922).

4.2 MATURING THE BUYER-SUPPLIER RELATIONSHIP

Close collaboration in supply chains regarding sustainability issues can potentially strengthen the chain, as it will become more difficult to replicate or imitate the specific chain (Carter and Rogers, 2008). However, there is always a risk of members of a supply chain to pursue opportunistic behavior, which often results in cumbersome contracts and low levels of trust (ibid.). This complicates close collaboration in supply chains. For SSCM and new collaborative ways to implement supply chain governance to succeed, maturing the buyer-supplier relationship is required.

To enable the transition from traditional SCM towards SSCM, companies need to understand the different values of the two systems. The major different between these two systems is found in the governance approach and the perspective on time. While traditional SCM relies on contractual power, SSCM relies on collaboration and shared power. Additionally, traditional SCM takes a small range of issues into account, which leads to a short-term perspective on time. On the other hand, SSCM applies a long-term perspective, as collaboration require time and investments from the involved actors. For companies pursuing sustainable business development, this means that implementing and succeeding

[1] Supply chain risk is defined as *"the potential occurrence of an inbound supply accident which lead to the inability to meet customer demand."* (Carter and Rogers, 2008, p. 366)

with SSCM takes longer time than traditional SCM, but the benefits from going the sustainable way will be greater in the long-term, e.g. stronger supply chains, improved planning, reduced costs, shared vision and goals etc.

This transition will require time, investments and efforts from all members in the supply chain. Furthermore, it also requires new relationships between members of the supply chain – especially new buyer-supplier relations. As the Confederation of Danish Industry (DI) (2016) presents, there are four steps of supplier maturity, as illustrated in figure 4.2.

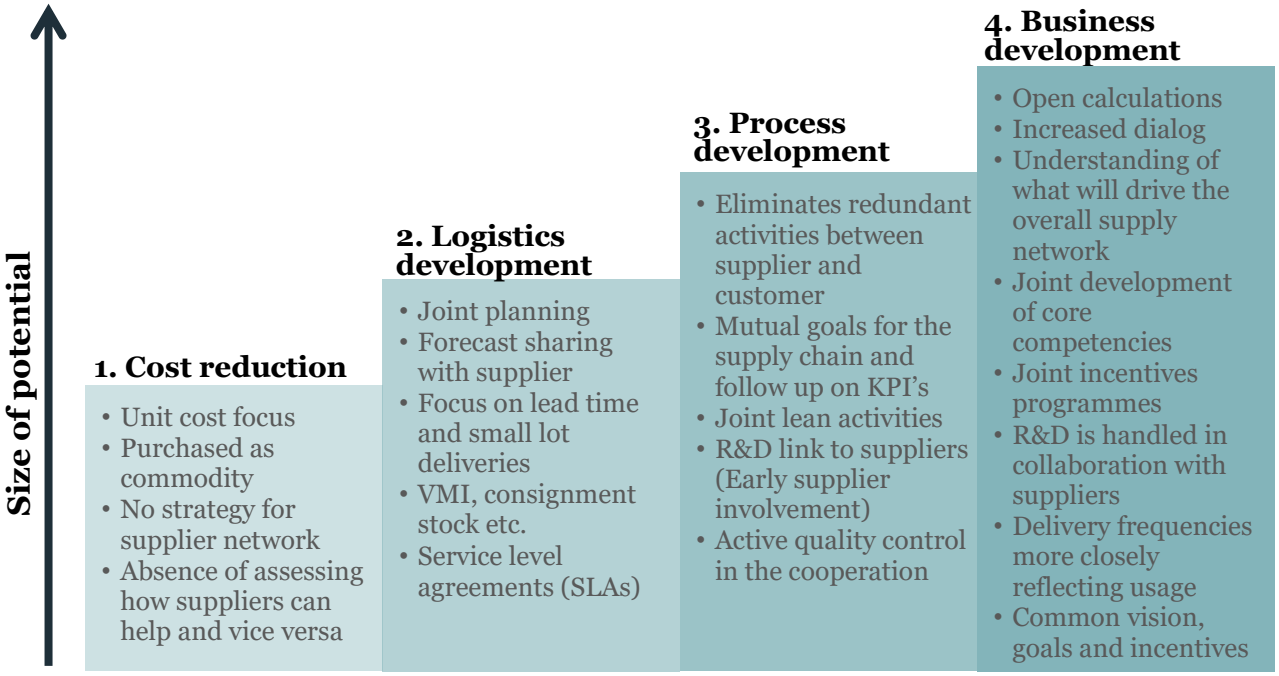

Figure 4.2: Four steps of supplier relations maturity, modified from (DI, 2016)

This four-step framework for supplier relations maturity illustrates four different perceptions of the buyer-supplier relationship. The potential of collaboration and beneficial output increase when moving from a focus on cost reduction towards business development (Andreasen and Krøijer-Jensen, 2016). In order to progress through these four steps, companies need to realize the potentials and benefits related to closer collaboration in the supply chain (ibid.).

For companies trying to mature the supplier relationship and achieving sustainable business development, collaboration is key: "*Partnership rather than coercion becomes a central issue when trying to meet social and environmental demand.*" (Frostenson and Prenkert, 2015, p. 86). This becomes especially apparent when moving towards *business development* in the four-step maturity model. The development of supplier relation maturity is connected to the development of business sustainability, presented in figure 3.2 (p. 13) in the conceptual framework. While the supplier relations maturity model

includes four steps, the connection to the three step conceptual framework is apparent. Figure 4.3 illustrates the connection between the conceptual framework (illustrated as factory, product or system-oriented sustainability) and the supplier relations maturity model.

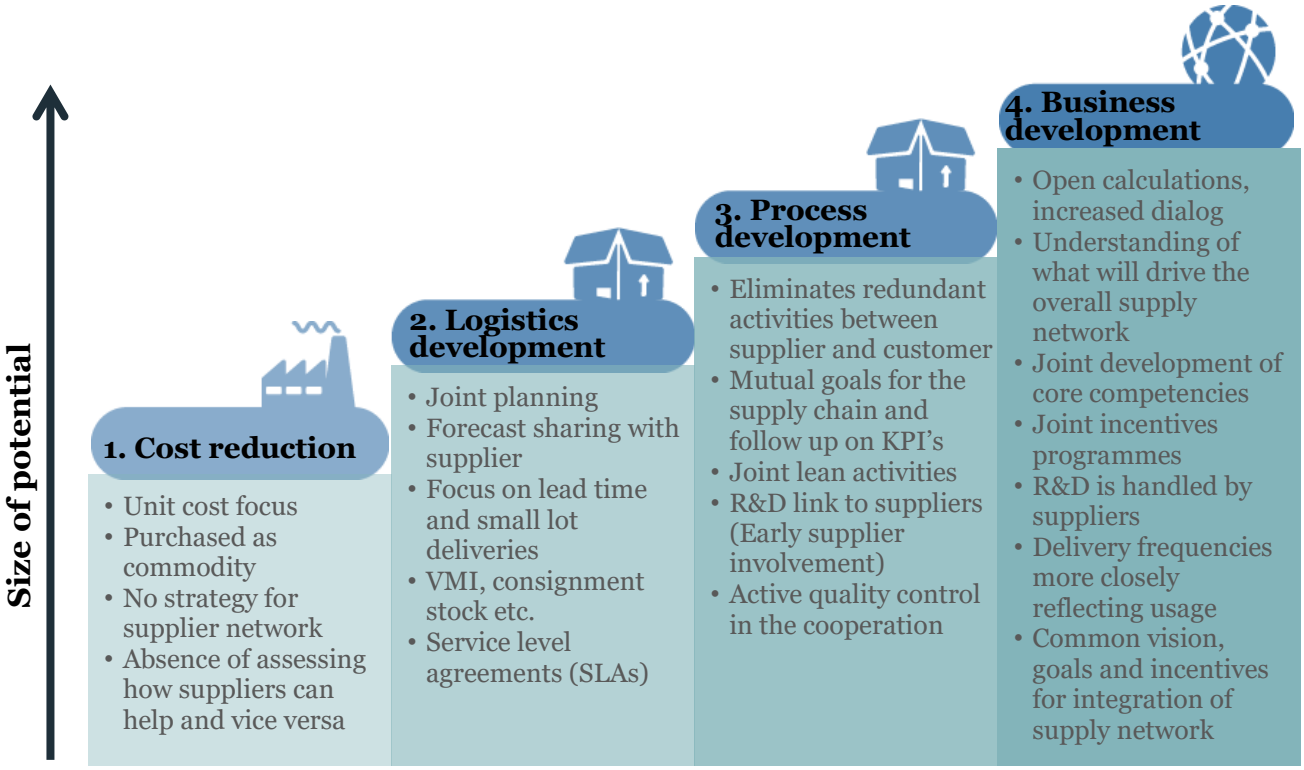

Figure 4.3: Application of conceptual framework on the supplier relations maturity model

where no additional efforts towards supplier collaboration is involved. The second and third step, *logistics development* and *process development* both represents product-oriented sustainability, as the scope is broadened to include suppliers, but only in relation to improved product development and processes in the supply chain. The last step, *business development*, represents system-oriented sustainability, as the focus shifts from supply chains to supply networks, joint development and common goals for the supply network.

A shift from looking at the relations as a chain to looking at the relations in a network perspective is essential to system-oriented sustainability. This network perspective enables companies to understand the relational nature of sustainable supply management (Frostenson and Prenkert, 2015).

5 NETWORK ANALYSIS OF FURNX

Transitioning towards sustainable business development require furnX to work more closely with their suppliers. As previously described, a perception of supply networks instead of supply chains is essential to system-oriented sustainability. furnX is currently applying product-oriented efforts, but working towards the perception of sustainability in a systems perspective. This transformation changes the perception and understanding of the relations with suppliers, customers and other actors in the networks. For furnX, this transformation is related to two distinct topics: designing and producing high quality sustainable products and providing better solutions to educational institutions through consulting and services. Even though furnX is trying to change the market towards more integrative and differentiated solutions of learning environments instead of specific products, the majority of products sold are table and chairs (Petersen, 2016). To succeed with these changes, closer collaboration in the supply network is required.

To understand the current network of furnX, point of departure is taken in the network analysis, presented in chapter 3. As furnX is an SME based in Denmark working on a contract-market for furniture to educational institutions, the networks will reflect this context. This means that these networks represent the context of furnX, where public procurement practices predominately influence the company. Figure 5.1 displays the three different networks: business, knowledge and regulatory (Søndergård et al., 1997). The different relations in the network reflects the complex nature of the network and the is also a reflection of the history between the actors (Håkansson and Ford, 2002).

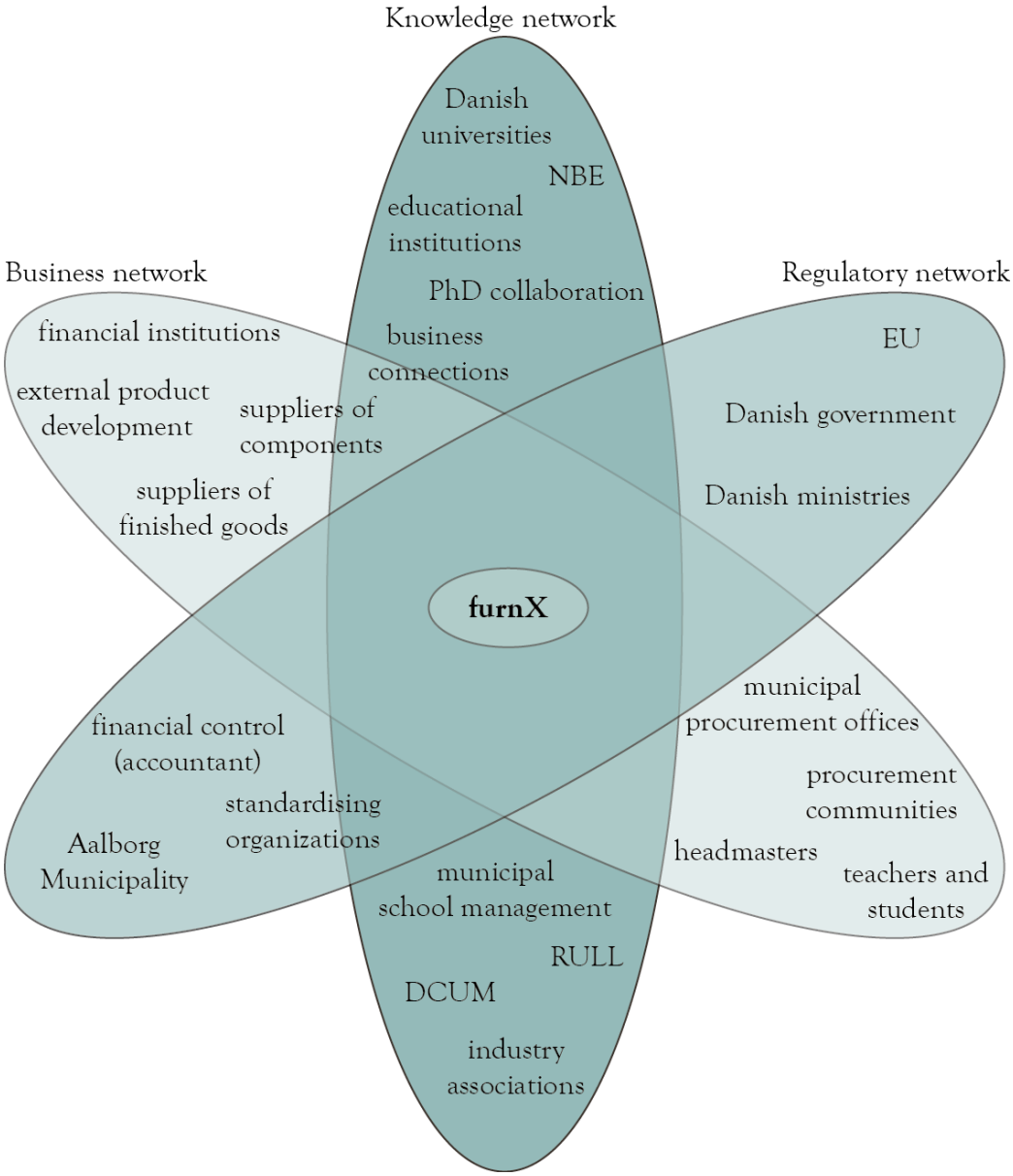

Figure 5.1: Network relations of furnX, based on interviews with employees at furnX and the company's own interpretation of their network relations

The **business network** covers the supply chain of furnX and other actors that are financially connected to furnX, either directly or indirectly. Direct connections are seen with financial institutions, external product development through consultants, suppliers of both finished goods and components, municipal procurement offices, procurement communities and headmasters. The indirect connection is to the end consumers, which in this case are teachers and students at the educational institutions.

The **knowledge network** covers actors, who contribute with different knowledge. The majority of this network is focused on learning and learning environments as that is the core business of furnX. Additional actors include organizations or companies with knowledge of materials, sustainability, business development etc. Within the knowledge network, several other networks exist, some of which

work closely with actors in other networks. An example of this is the Network for Sustainable Business Development in Northern Denmark (NBE), which is a public-private-professional partnership (4P) aiming to strengthen the participating companies through mainly environmental sustainability efforts (NBE, n.d.).

The **regulatory network** covers regulatory bodies such as EU, the Danish government and ministries and Aalborg Municipality, as they legislate and regulate the framework in which furnX operates as a company. This network also entails standardizing organizations such as FORCE and NEPCon, who are responsible for certifying furnX with respectively ISO 14001, ISO 9001, OHSAS 18001 and FSC Chain of Custody (Petersen, 2016). These standardizing organizations are also part of the knowledge network, as they support furnX with knowledge on how to implement and improve the management system in place.

5.1.1 UNDERSTANDING THE CONTEXT OF THE NETWORK

Understanding the dynamic nature of the relations in furnX' network also means to understand the internal network of furnX. As the surrounding networks are complex, is can also be assumed that the internal structure of furnX is a complex network (Frostenson and Prenkert, 2015). furnX thus operates in complex structures internally and externally. Understanding that every actor in the networks are complex structures on their own, understanding the complex nature of the network becomes possible. By understanding the complex nature, it becomes possible to understand the different perspectives and contexts of the other actors in the network: *"a company that only sees the network from its own perspective will fail to understand its dynamics and the interface between the well-being of others and itself."* (Håkansson and Ford, 2002, p. 138). If a company then tries to change without considering the network, in which the company is embedded, the change is likely to fail. When wanting to develop or change a company, the interactions to other companies change as well, and when changing interactions, the companies change too (Håkansson and Ford, 2002). This is especially the case for sustainable business development, as "*no circular economy initiative can succeed without inter- and intra-organizational collaboration."* (Kraaijenhagen et al., 2016, p. 28).

The existing structure of a network, built over time, presents a constraint for companies wanting to change (Håkansson and Ford, 2002). At the same time, the best way for companies to achieve change is through the network. This creates a paradox that can be difficult to master for a company. The current hierarchy and structure of the supply chain and the opportunity to utilize resources within the supply chain represent this duality of constraints and opportunities (Frostenson and Prenkert, 2015).

Within the business network, the focus is on suppliers and how new partnerships can be established with relevant suppliers. This does not mean that the remaining actors in the business network and the

other networks are not relevant to include in partnerships for sustainable development. Other potential partnerships in the remaining network are thus discussed in chapter 8.

5.2 SUPPLY NETWORK OF FURNX

Looking more closely at the business network, several actors are involved in the network for furnX. As this study is focused on establishing collaboration with suppliers in the existing network, the complexity of a supply network is important to understand. The supply base for furnX can be separated into two different kinds of suppliers: suppliers of finished goods and suppliers of components. These two categories of suppliers are distinguished by the current nature of the relationship between the suppliers and furnX. The relation to suppliers of components is based on a more collaborative approach, while the relation to suppliers of finished goods is based on a more traditional approach to supply chain management. When looking at these two categories of suppliers in relation to potential partnerships, the greatest potential is expected in the category of suppliers of components, as there is a potential for co-developing products and processes with this category, thus narrowing the focus to suppliers of components.

As part of their recent ISO 9001 certification, furnX has categorized suppliers according to strategic importance. To support the ISO 14001 certification as well, the critical environmental impacts of each suppliers were also assessed. This resulted in a distinction between primary and secondary suppliers. Primary suppliers are both of strategic importance but also costly to replace. Secondary suppliers are easier to replace and are not of the same strategic importance. This distinction was made based on the history of the supplier, previous collaboration and relevance to the business (Petersen, 2016).

Figure 5.2 displays the primary supply network of components for furnX without secondary suppliers, transport, energy, subsuppliers and office supplies. The network is organized in five different categories according to the material in question: wood (green), textiles (orange), plastic (pink), metal (blue) and a combination of plastic and metal (pink and blue). Within each of these five categories, multiple suppliers are possible. The network is created in collaboration with project manager Mette Lund Petersen at furnX.

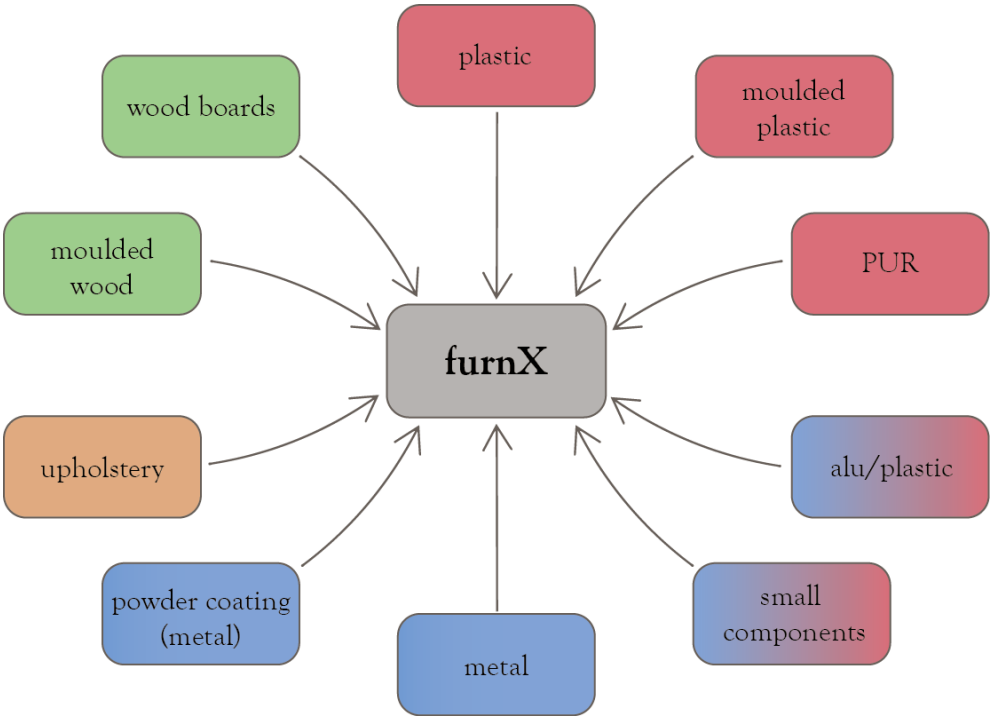

Figure 5.2: Supply network of components to furnX, organized according to material category

These different categories supply the main materials used at furnX: plywood, laminate, steel, plastic and upholstery. The majority of products sold by furnX are tables and chairs, but during recent years, orders on special learning products have increased (Møller, 2016a).

The supply network provides a basis for understanding which partners could be relevant to include in partnerships, since material and product knowledge is essential to the implementation of new sustainable business models.

6 COLLABORATIVE SUSTAINABLE BUSINESS MODELS

As companies need to work together to achieve sustainable business development, this chapter entails an analysis of the sustainable business model framework, introduced in chapter 3, in relation to furnX. Each business model is analyzed in relation to partner required and relevance to furnX.

6.1 ANALYSIS OF SUSTAINABLE BUSINESS MODELS

Companies need to change their business towards more circular and collaborative ways of doing business by changing the business model. Kraaijenhagen et al. (2016) argues that collaboration is the key enabler in creating a change towards circular business models. Several investigations have been performed on sustainable business models or business models for the circular economy (Bocken et al., 2016, 2014; Boons and Lüdeke-Freund, 2013; Ellen MacArthur Foundation, 2015; Roos, 2014; van Renswoude et al., 2015). Although these studies investiagte different persepctives on sustainable business models, the common thread is an agreement that companies can transform the current linear set-up, but that several challenges has to be overcome. Sustainable business models all depend on synergies between the different actors of a supply chain or network (Ovaska et al., 2016).

An essential consideration when venturing into new business models is the consideration of the current business, products, materials and networks (Håkansson and Ford, 2002; Verheuvel, 2016).

Taking point of departure in the six business model strategies introduced in chapter 3, relevant business models for furnX is determined by analyzing which actors in the supply chain are involved in each model and the relevance of each model for the company. Table 6.1 displays the six business models, a definition of each, which actors needed for each model and the relevance for furnX. The relevance is depicted in either green, yellow or red, which represents that the business model is either relevant to investigate and integrate (green), already integrated in the company (yellow) or not relevant right now (red).

Table 6.1: Overview of sustainable business models for furnX

Business model strategy	Definition	Main actors	Relevance
Business model strategies for slowing loops			
Access and performance model	Satisfying user need through services without users needing to own physical products, i.e. product-service systems (PSS)	furnX, suppliers, customers	
Extending product value	Exploiting residual value of products either from different actors in same supply chain or between actors from different chains, i.e. through take-back systems	furnX, suppliers, customers, other companies	
Classic long-life model	By implementing design for durability, repair etc. companies can deliver long-life products	furnX, suppliers	
Encourage sufficiency	Companies actively seek to reduce consumption by end-users through design, services and a non-consumerist approach to marketing and sales	furnX, customers	
Business model strategies for closing loops			
Extending resource value	Exploiting the residual value of resources by collecting otherwise "wasted" materials or resources to turn these into new kinds of value	furnX, suppliers, other companies	
Industrial symbiosis	A process- orientated solution, concerned with using residual outputs from one process as feedstock for another process, which benefits from geographical proximity of businesses	furnX, other companies nearby	

These different business models are relevant to transforming the current linear economy. Nonetheless, *"the take up of these new business models is, however nowhere near the level needed to fuel the required sea change."* (RSA, 2016, p. 5). As illustrated in table 6.1, several business models are relevant for furnX. The following sections entails an analysis of each of these models in relation to furnX.

6.1.1 ACCESS AND PERFORMANCE MODEL

This business model strategy entails satisfying user's need without owning physical products (Bocken et al., 2016). This is also known as product service systems (PSS), which consists of *"tangible products and intangible services designed and combined so that they jointly are capable of fulfilling specific customer needs"* (Tukker, 2004, p. 246). PSS holds the potential to reduce resource consumption, prolong the lifespan and durability of products, slow resource loops and change the rules of the game for the linear economy (Bocken et al., 2014). For furnX, this entails a shift from providing customers with *products* to providing customers with *functionality*, thus shifting from ownership to usership (Kraaijenhagen et al., 2016).

For furnX, this kind of model is already on the drawing board and thus interesting and relevant for the company. *Lej et Læringsrum* (eng: lease a learning room) is a new concept under development at furnX and entails a new way for municipalities and educational institutions to acquire furniture to learning rooms. This business model is based on a new leasing scheme of furniture to learning environments in Denmark, where the furniture is developed and produced with easy maintenance and repair in mind (Petersen, 2016). As investigated by Kristensen (2016), this new business model entails several potentials and challenges. This study builds on the work of Kristensen (2016), and elaborates on central points from both the potentials and the challenges for this new leasing model. To further develop the leasing model of learning environments, the essential partners to include are both suppliers, internal actors at furnX and the customers. The challenges for furnX regarding this model covers the internal implementation of a new business model, contracts, public procurement, transitioning from ownership to usership and new ways of perceiving furniture at educational institutions (Kristensen, 2016). To meet these challenges and progress the business model, a company has to work both internal and external. This is elaborated in chapter 7, which presents the essential aspects for establishing new partnerships in relation to this business model.

6.1.2 EXTENDING PRODUCT VALUE

Focusing on exploiting the residual value of products, this business model entails remanufacturing, repair etc. of products to enable a return of the products to the economy (Bocken et al., 2016). Companies need to work together with other actors in or outside the supply chain to create take-back systems, where the products are returned from customers to a manufacturer.

This model represents a new area for furnX, which is touched upon in the access and performance model, as part of the new business model for acquisition of learning environments, *Lej et Læringsrum* (Kristensen, 2016). However, this is also a relevant business model on its own. For furnX, the model relevant as many educational institutions have large stocks of unused furniture. By implementing a

business model for extending product value of these stocks, these products may reenter the market, and thus avoid production of new products. However, this can be challenging as people like the safety and security of having extra furniture at hand (Seijs, 2016). This serves the purpose of being able to replace or repair broken products immediately and provides a sense of independence. This security presents a challenge for the return of products. Additionally, it can be difficult to ensure a consistent return rate since as the location of products at their end-of-life and at what point in time they reach end-of-life is difficult to know (Verheuvel, 2016). The question of location can however be solved by using smart technology for tracking products whereabouts. The two office furniture companies, BMA Ergonomics and Ahrend, are both using smart technology to track the usage of products (Kemerink, 2016; Seijs, 2016). This also provides them with information of the location of their products, which eases the possibility of returns. Additionally, when offering to buy back used furniture from customers, the incentive to return products increases. However, this can also present a challenge as the costs related to buying back products may exceed the resell price (Petersen, 2016).

Another important aspect to consider in relation to this business model is the element of time and vision at furnX. As the products have an expected lifespan of 20-30 years, a lot can happen during this time: educational institutions close, products are moved, systems and visions change etc. The furniture that currently could be returned and refurbished stems mainly from traditional classrooms. These products are not too desirable for furnX to resell, as they are working towards more integrative and differentiated learning environments instead. Ensure that the return rate of products does not exceed the demand is important.

Additionally, this transition from traditional classrooms to learning environments generates a different range of products that is vastly more diverse than that of traditional classrooms. This may complicate the set-up for this business model, as new partners could be needed to enable extension of product value. With a diverse range of products provided by different suppliers, the requirements to partnerships with current suppliers increase. Thus, new partners may be relevant to consider when wanting to extend product value for the products included in diverse learning environments.

The current possibilities for extending product value is limited in relation to some products at furnX. Analyzing this in relation to wood-based products, the two primary suppliers G.Desmet and PM offer different solutions for taking back products. If the purpose is to bring back furniture to the supplier, the transport needed to bring products to G.Desmet is likely to outweigh the potential benefits. In relation to that, the possibility to reuse or refurbish shells for chairs is difficult, as it cannot be restored to the same condition and size (Verheuvel, 2016). A smaller size or an upholstered version of the same size is possible, but the efforts needed to do this will most likely result in a too high price for the refurbished product in the end, which is not feasible. The best solution at G.Desmet right now is therefore to

incinerate returned products, as the heat is used for in-house processes (Verheuvel, 2016). On the other hand, if the furniture is brought back to PM, less transport is needed. The potential to reach a reasonable price for the refurbished product is thus greater. The production facility at PM is flexible and adaptable, which increases the possibility to be able to refurbish used products (Møller, 2016a). However, if the returned furniture cannot be refurbished, PM presses the waste wood into briquettes, which are incinerated at the local incineration plant.

6.1.3 CLASSIC LONG-LIFE MODEL

Prolonging the lifespan of products through design for durability, design for repair etc. is at the heart of this business model (Bocken et al., 2016). This slows product replacements cycles, and thus the resource loop (Bocken et al., 2014). The model is based on high quality products with a long lifespan and high levels of service or reparability.

This is a business model already implemented at furnX as high quality, long-lasting products is at the core of the company, making this model is an inherent part of the company. However, there is no need to become complacent, as improvement is always possible. As the range of products is changing from traditional classrooms towards more diverse and unique products, different approaches may be needed to ensure long-life for the products. Additionally, this business model is seen as part of the other business models for slowing the loop, e.g. long-life products is a prerequisite for a successful *access and performance model* (Bakker et al., 2014). However, this model will not be investigated further, as furnX is continuously working to improve lifespan and quality of their products.

6.1.4 ENCOURAGE SUFFICIENCY

This business model builds on the classic long-life model, but adds an element of non-consumerism in relation to marketing, where the priority is to sell fewer but better products (Bocken et al., 2016). Companies are thus taking a different approach to marketing and sales, where customers are encouraged to use products longer and repair or reuse products, thus supporting a transition towards more sustainable consumption as well as working with sustainable production themselves (Bocken et al., 2014). However, when encouraging sufficiency, the company needs to find other ways to create profit, e.g. through repair and services.

For furnX, this is an interesting business model in combination with others (e.g. access and performance model). This is primarily related to the concept of sustainable consumption through long-lasting products, repair and reuse. A way to encourage sustainable consumption is through improved clarification of customers' needs, which may reduce wrong purchases. A daughter company of furnX, Højer Møbler, recently launched four different services for innovation in learning environments (Petersen, 2016). These services are meant to support and inspire educational institutions in finding

and choosing the best solutions for them and their learning targets. A more specific clarification of needs at the customer can target the real needs better and encourage customers to use products even longer. furnX is also working to encourage sustainable procurement, and through that sustainable consumption, at the customers, e.g. municipalities through their business network of NBE. This business model is thus to some extent implemented at furnX, but it could be relevant to increase efforts to encourage sufficiency.

6.1.5 EXTENDING RESOURCE VALUE

By creating value from waste, this business model supports closing of resource loops (Bocken et al., 2016). By extending resource value, less virgin resources are needed and the environmental impacts are reduced (Bocken et al., 2014). To enable this business models, companies need to work together to establish take-back or sourcing systems for materials – in contrast to the business model *extending product value*, this business model only focus on creating value from otherwise wasted materials (Bocken et al., 2016).

For furnX, this business model is interesting in regards to using waste material in new products. This is already an interesting topic for the product developers at furnX, and pilot project was conducted in 2014 as part of a symbiosis project. This pilot project was conducted in collaboration with the textile company Gabriel A/S in Aalborg. The project was aimed at investigating possibilities for utilizing textile waste from Gabriel as filling in new noise-cancelling tabletops (furnX, 2014). The pilot project concluded that although technically possible, the project was not economically feasible. However, the interest for using waste materials in new products is still strong at furnX, as long as the strength, quality and lifetime of the products are not impaired while also ensuring economic feasibility.

6.1.6 INDUSTRIAL SYMBIOSIS

Lastly, this business model entails another way of creating value from waste. Whereas *extending resource value* primarily operates on a product level and potentially broad geographical areas, *industrial symbiosis* operates on a process and manufacturing level at companies located within a limited geographical area (Bocken et al., 2016). This means that companies within an industrial symbiosis collaborate in order to reduce overall operation costs by sharing services or exchanging by-products (ibid.).

This business model is aimed at manufacturing companies, and is consequently not relevant to furnX right now. There may be possibilities to initiate symbiosis in the local area, as there are manufacturing companies within the neighborhood. Nonetheless, this may be difficult for furnX to initiate, as they are not a production company (Verheuvel, 2016). However, if perceiving industrial symbiosis on a product level instead of manufacturing level, the potentials change. The business model *extending resource value*

represents the idea of industrial symbiosis for products. An industrial symbiosis is traditionally characterized by a geographical closeness that enable manufacturing companies to utilize each other's waste products. If an industrial symbiosis is perceived on a product-level, this geographical closeness is no longer a prerequisite for the symbiosis (Netværk for Bæredygtig Erhvervsudvikling NordDanmark, n.d.).

7 PARTNERING FOR SUSTAINABLE BUSINESS DEVELOPMENT

From the six business models analyzed in the previous chapter, all but one was found to be relevant to investigate or already implemented at furnX. This chapter entails an analysis of general prerequisites for partnerships and an analysis of these prerequisites in relation to the two most relevant business models for furnX: Access and performance model and Extending product value.

7.1 PARTNERSHIPS IN THE SUPPLY CHAIN

For all business models, different partners and partnerships are needed. For these partnerships to succeed, both internal and external practices and processes need to change. A common barrier for circular economy and circular business models is found in the supply chain, where complex supply chains and low levels of trust and communication result in difficult or non-existing supply cooperation (Seuring and Müller, 2008; van Renswoude et al., 2015). To change the system and succeed in collaborating, the supply chain consequently provides a good starting point. However, as highlighted by Seijs (2016), alignment of partners in the supply chain is not easy:

> *"When you're thinking about circular models, you are always going outside your own boundaries and you'll always need partners. But how you get the right partners at the right time that are also willing to help you, that is difficult."*

This section entails an analysis of the prerequisites for partnerships, and is based on three elements. Firstly, internal transformation is an aspect that arose from the empirical investigation. Secondly, the two aspects for establishing partnerships, *partner selection* and *management of partnership process* will be analyzed as well.

7.2 INTERNAL TRANSFORMATION

The internal organization has to be prepared for a new business model, and readiness for dealing with a new model have to exist on all level of the company (Frostenson and Prenkert, 2015). Seijs (2016) highlight this aspect as a key enabler to change towards more sustainable practices. As this requires a change in the company, awareness of the mental barrier associated with change is important (Kraaijenhagen et al., 2016). For a small company, changing practices towards more sustainable ones can be challenging, as it requires the entire organization to rethink their everyday work and purpose (Møller, 2016b). This change takes time and depending on the personal attitude of employees; is more or less complicated. However, getting employees to understand the purpose and value of working more

sustainably represents a challenge for every company. It can especially be difficult for the "worker on the floor" to understand the value of new sustainability efforts , which complicates an embeddedness in the company (Møller, 2016b). It will require a change in mindsets and perception of sustainability as foreign, irrelevant or greenwashing to a perception and conviction that changing towards more sustainable practices really is necessary (Verheuvel, 2016). If successful, this change of mindsets and perceptions will lead to sustainability efforts being embedded in the core of the company and all employees.

Embeddedness is thus the first key aspect to consider, when looking internally (Kraaijenhagen et al., 2016; Møller, 2016b; Seijs, 2016). This embeddedness presents what might be one of the biggest challenges to the circular economy, as it represents a clash of existing (linear) values and new (circular) values. This is a clash between short-term, profit-oriented and control values in the linear economy and long-term, value-oriented and collaborative values in the circular economy. Something is bound to happen in this clash, but predicting what is difficult (Jöhncke et al., 2004). A challenge in this clash is for the affected stakeholders to embrace the new values. Within an organization, individuals are expected to work with themselves and their perceptions to achieve the goals of the organization (Villadsen, 2007). This represents an element of control, through which the goals and values of an organization is embedded in the individual employees. This can then be challenging for a company or organization to change. However, for this transformation in embedded values, dissociation form the hesitant thinking of individuals is important (Kraaijenhagen et al., 2016).

Secondly, **alignment** of expectations and efforts is key to ensure successful implementation of sustainability efforts. If the company is not internally aligned to work in a more collaborative manner, it will complicate this collaboration externally as well. However, as highlighted by Møller (2016), Hansen (2016) and Petersen (2016), sustainability efforts often drown in everyday work and practices. In the end, a company has to make money to survive, and there is often little or no room left to experiment with different working routines. If new efforts are not economically feasible, there is no incentive for a company to implement it. Even more so, alignment of efforts put into new collaborative ways of doing business to avoid miscommunication, failure etc. is important.

Lastly, top-management support in the company is important, when changing towards more sustainable and collaborative ways of doing business (Kraaijenhagen et al., 2016; Seijs, 2016). This is also represented by top-management taking **leadership** and setting an example. Kraaijenhagen et al. (2016) also highlight this as the first step to a circular business. Any circular business or project will need a leader that truly believes in the circular vision, and who can get commitment at all levels in the organization (Kraaijenhagen et al., 2016). If there is no top-management support and leadership, it

might lead to uncertainty and insecurity in the company, which can lead to the employees not embracing the new business model (Skov, 2013).

7.2.1 INTERNAL TRANSFORMATION FOR THE ACCESS AND PERFORMANCE MODEL

For the *access and performance model*, the internal organization has to be prepared and structured to meet customer demands in new ways (Vezzoli et al., 2015). This will require new internal procedures as value no longer will be delivered to customers through the traditional sales model. This transition is likely to encounter internal resistance, as a new business model entails new roles and responsibilities (Vezzoli et al., 2015). For furnX, this is challenging, as the new business model will not replace the traditional model. This means that the same employees will be working with both models. Ensuring that all employees understand and appreciate the values related to both models is thus important. Furthermore, they need to know how to operate in a more multifaceted way than before. As already presented, understanding sustainability efforts and values can be difficult for employees as these efforts are overpowered by everyday tasks and responsibilities.

7.2.2 INTERNAL TRANSFORMATION FOR THE EXTENDED PRODUCT VALUE MODEL

For the *extended product value* model, the internal organization has to be structured to support sales of refurbished products. This require a new demand on the market side, which is discussed in chapter 8. In relation to the internal transformation, the key aspect is the embeddedness, as selling refurbished or repaired furniture is different from traditional product sales. An internal understanding of the value of extending product value needs to be embedded in order for the business model to succeed. This is closely linked to the ability to create a market for these products.

7.3 PARTNER SELECTION

When placing the problem at the center, partners are evaluated based on their relevance to the specific problem (Network for Business Sustainability, 2013b). The issue for the *access and performance model* is how to transition from ownership to usership and how to change the processes to suit this new kind of value creation. The issue for *extending product value* is how to get the products back from the consumers and how to refurbish or repair the products thereafter. Common for both models is that furnX is going to change the relationship to both suppliers and customers by introducing either one of these new business models. The new relationship with customers will be discussed in chapter 8. The new relationship with suppliers will entail new partnerships, as the companies need to work closer together to enable both business models.

Taking point of departure in **partner outlook**, the question of which partners to include in these new business models depends on the vision and goal of furnX and whether potential partners share this

vision (Network for Business Sustainability, 2013b). A clear purpose, vision and goal that demonstrate a company's intentions can support a good image and help stakeholders and shareholders understand the company. Initiating any new partnership with a *why* supports the clarification of a vision, which then eases the process of selecting relevant partners (Kraaijenhagen et al., 2016). With a clear vision, figuring out if potential partners share the same vision becomes easier, and if the vision is not shared, the differences are easier to identify. For a partnership to succeed, the partnering companies need a shared vision, which goes hand in hand with sharing values. However, it can be difficult to ensure that suppliers work with the same values (Seijs, 2016). This is where the importance of *why* is clear: when companies or employees don't know *why* they do what they do, they just do it without truly understanding the value and purpose (Kraaijenhagen et al., 2016). For new partnerships to succeed, the initiating company needs a clear purpose, which can be translated to relevant partners who then embrace this purpose.

Both business models will entail closer collaboration with suppliers. This is not applicable for all suppliers, which leads to the next point of partner selection: **partner relevance**. By firstly clarifying the purpose and goal of the new business model, identification of the affected and relevant stakeholders becomes possible. This serves as a point of departure for choosing the relevant partners. This is thus a question of *who* to involve in the partnership. As Collins (2006) puts it, a successful partnerships comes down to the ability to *"have the right people on the bus, the wrong people off the bus, and the right people in the key seats"* (Collins, 2006, p. 4).

Regarding **partner resources**, choosing partners that can contribute to a partnership is essential. Find partners that strengthens everyone involved, and avoid including partners that do not contribute to the partnership is the key (Kraaijenhagen et al., 2016). This all comes down to the resources available at the partners – there has to be a complementarity between the partners in relation to the resources and competences the different partners bring to the table, in terms of knowledge, materials, equipment etc. (ibid.).

7.3.1 PARTNER SELECTION FOR THE ACCESS AND PERFORMANCE MODEL

For the *access and performance model*, the purpose is to fulfill customers' needs in a different way through services. Products need to be redesigned for easy maintenance and repair, which can complicate a partnership, as there will be an initial conflict of interests. This conflict is a result of a business model that shifts from product sales to leasing and maintenance and thus decreasing the amount of products needed (Vezzoli et al., 2015). This shift will require an agreement and understanding of the purpose and an appreciation of the different kind of value embedded in this business model. This puts the supply chain under pressure, and a redistribution of profits may be needed to continue supplier collaboration for this model (Andreasen and Krøijer-Jensen, 2016).

In *Lej et Læringsrum*, furnX selects predefined sets of learning environments with specific products, which makes it easier to identify relevant suppliers, thus identifying relevant partners. Closer collaboration with suppliers regarding product development is also relevant, as the knowledge they hold is vital in the development of sustainable, long-lasting products that are easy to maintain and repair. At the same time, the ability to assess which suppliers have the resources needed for a partnership is essential. As repair and maintenance are key elements to this business model, in-depth knowledge of products is necessary. Additionally, this knowledge is important to enable selection of sustainable, long-lasting products that are easy to maintain. In relation to this, the usage of standard components may increase reparability (Bakker et al., 2014).

7.3.2 PARTNER SELECTION FOR THE EXTENDED PRODUCT VALUE MODEL

For the *extended product value model*, the purpose is to exploit residual value of products by remanufacturing and refurbishing products, so they can return to the market (Bocken et al., 2016). Assessing which products and materials are relevant to include in this model is important (Verheuvel, 2016). This will entail an in-depth analysis of material (origin, quality, lifetime etc.), transport, market, remanufacturing possibilities etc. As presented in chapter 6, the possibilities for reusing products are challenged by the current lifespan, range of products and refurbishment options. It may then be beneficial to search for partners within and outside the existing supplier network.

Within the existing supplier network, PM is an interesting partner, as the company shares many of the same values and the perception that collaboration is essential for the entire supply chain to succeed. Regarding partner resources, great material knowledge resides at PM, which is an important resource for this business model. Additionally, there is a willingness to share this information at PM (Møller, 2016a).

Furthermore, design and product knowledge are also key elements, as decisions in the design and production phases affect the possibility to refurbish the product after usage. E.g., the usage of certain glues in production may lead to energy-intensive processing in order to reuse the products, which entails undesired environmental impacts. Additionally, looking for alternatives to bringing the products back to the original manufacturer is interesting, as different and perhaps shorter product cycles may be relevant. In combination with the *access and performance model*, short product cycles is interesting, and as market demands change, the possibility to reuse products for a different purpose may be relevant.

7.4 MANAGEMENT OF PARTNERSHIP PROCESS

Once the relevant partners are chosen, the process of the partnership begins, thus moving from *why, who* and *what* to *how.* To ensure a successful partnership, Network for Business Sustainability (2013b) highlights four key aspects: be inclusive, set expectations, build understanding and develop relationships. Underlying these four aspects is communication, as no partnership is going to succeed without communication. As most partnerships arise from existing network, it can be taken for granted that everyone understand each other and are able to communicate clearly. This presents a challenge, as this implicit knowledge and expectations towards one another's communication skills rarely is questioned. Balancing the interests of the different partners through clear communication is essential to create a congruent partnership:

> *"the party with the least commitment to a relationship is likely to control it negatively – that is to have the least interest in developing it, while the party with more commitment is likely to control it positively through seeking ways to develop it"*
>
> (Frostenson and Prenkert, 2015, p. 91)

The first element, **be inclusive**, clarifies the power relations in the partnership, which supports the ability to understand concerns from the different partners. In this regard, communication is truly the key to a successful partnership, as this will entail a more comprehensive understanding of each other. The power balance is important, as the desire to control the partnership is a key driving force and at the same time a constraint to the partnership, as too much control stagnates the partnership (Frostenson and Prenkert, 2015).

To **set expectations** to the partnership requires all partners to be transparent in motivation, investment, uncertainties etc. to ensure a clear playing field for everyone involved (Network for Business Sustainability, 2013b). The initiation of this will most likely have begun in the process of partner selection, as the motivation and investment are part of the identification of relevant partners and partners' resources. Identifying and understanding the benefits and tasks in a short-term and long-term perspective is part of setting expectations. The eagerness often experienced in the short-term is hard to transfer to the long-term. This requires the management to be able to make the project or partnership tangible for all employees by continuously monitoring progress and results (Kraaijenhagen et al., 2016).

The third aspect, **build understanding**, is a important part of any partnership. This is closely related to the selection criteria of partner outlook. The goal is to understand each other and from this understanding formulate a shared vision and goal that is desirable for all partners and achievable through the resources the different partners bring to the table. The process of building understanding

is also essential to build trust between partners, which is key to the last element: **develop relationships**. The trustworthiness of a company is connected to the individuals representing the company. By trusting another company or person, you believe that they will not pursue opportunistic behavior. However, the major challenge for developing relationships is blind trust: companies have a tendency to believe that if they trust a partner, this partner trusts them as well (Kumar, 1996). This often leads to uneven relationships. Trust is thus closely linked to the success of a partnership.

7.4.1 MANAGEMENT OF UPCOMING PARTNERSHIP PROCESSES

For both the *access and performance model* and the *extended product value* model, the process of the partnership has not yet begun. For the *access and performance model*, the concept is still undergoing clarification at furnX. For the *extended product* value, all relevant partners have not yet been found. Even so, there are some essential points to consider when managing the process later on. From the previous section, two points can be highlighted: communication and setting expectations. These two aspects are the key points for successfully establishing and managing a partnership.

Assuming that some of the strategic important suppliers are going to be partners in the business models, the following points for management of the future partnership process takes point of departure in the relationship between furnX and the supplier PM. The shift from the current set-up to more official partnerships will require a more controlled process. The communication is already quite good, but relying mostly on an expectancy that the other part understand ones processes and thoughts. In the past, this has led to misunderstandings, wrong pricing, unclear expectations etc. These issues are undesirable, as it takes time to sort them out and may result in mistrust and a stale relationship. Improved communication between furnX and PM is thus key to a successful partnership (Møller, 2016a). For the communication to work, a mutual understanding of each other's processes, products and goals is important. Furthermore, frequent meetings are necessary to ensure this understanding is up to date with new processes, products and goals.

7.5 SUMMARY OF KEY ASPECTS FOR SUPPLIER PARTNERSHIPS

As analyzed, there are three key aspects to consider when initiating a new partnership for sustainable business development: internal transformation, partner selection and management of partnership process. Table 7.1 summarizes these three aspects in relation to establishing partnerships on a general level.

Table 7.1: Key elements for establishing partnerships for sustainable business development

Key elements for establishing partnerships	
Internal transformation	
Embeddedness	Embedding sustainability in company's strategy and practices
Alignment	Internal alignment of strategy, vision, purpose and efforts
Leadership	Create security and conviction in employees Top-management support is key to ensuring continuously follow-up and evaluation of progress and goals
Partner selection	
Partner outlook	Ask *why* - create a clear vision and purpose to be shared with partners
Partner relevance	Ask *who* - identify who shares or could be able to share the vision and purpose - *"have the right people on the bus, the wrong people off the bus, and the right people in the key seats"*
Partner resources	Ask *what* - identify the resources (knowledge, processes etc.) available at partners - ensure complementarity of resources
Management of partnership process	
Be inclusive	Clarify power relations, and ensure common goals that are in everyone's interest
Set expectations	Create common ground of understanding
Build understanding	Understand each other to build trust, share the vision and collaborate
Develop relationships	Build and maintain mutual trust, commitment and communication

These general recommendations for establishing partnerships were analyzed in relation to the two relevant business models for furnX: *access and performance model* and *extended product value* model. The results of this analysis is presented in table 7.2. Some of the elements will entail the same considerations for the two business models and are consequently joined.

Table 7.2: Key elements to establishing partnerships for access and performance model and extending product value

	Access and performance	**Extending product value**
Internal transformation		
Embeddedness	Understanding the values of offering functionality instead of ownership Ensuring the right knowledge and skills are available to offer new services	Understanding and appreciating new values of working with refurbished products
Alignment	Different perception of sales from products to services Balancing traditional and new business model simultaneously	Different perception of sales that includes refurbished products Including reused products in traditional product sales
Leadership	Taking leadership of the new models and ensuring continuously follow-up and development	
Partner selection		
Partner outlook	Purpose: fulfill customers' needs in a different way through services	Purpose: exploit residual value of product by remanufacturing and refurbishing products, so that they can return to the market
Partner relevance	Depending on the products included in the business model, the relevant partners will differ (supplier of components or finished goods) Investigate existing and potentially new partners to ensure that the vision is shared between partners	
Partner resources	Sharing knowledge between partners to ensure optimal product design for repair and maintenance	Knowledge of materials and products is a key resource to ensure the best results
Management of partnership process		
Be inclusive	Making sure company size and intentions are aligned to avoid uneven power relations Clarify the purpose of the partnership and make sure the interest of every partner is included	
Set expectations	Clarify expectations to each other and to the result of the partnership – what is everyone expecting to gain from entering the partnership? How is that achieved through collaboration without uneven distribution of benefits?	
Build understanding	Understand each other's processes, strategies, goals etc. to enable collaboration aimed at a shared goal	
Develop relationships	Ensure continuous development of the relationship through short- and long-term goals and commitments for the business models	

8 POTENTIAL PARTNERSHIPS IN REMAINING NETWORK

Aside from partnerships with suppliers, other potential partnerships exist in the networks as well. This chapter entails an analysis of other potential partnerships and aspects to consider for furnX.

8.1 CHANGING THE MARKET

For furnX, there is a great potential to work more collaboratively with customers. As furnX is operating on a contract-market, the customers they need to collaborate with are mainly municipalities (Petersen, 2016). Municipalities are thus the gatekeepers who set the framework in which furnX operates. furnX is already actively working to change this framework in two ways. Firstly, they are trying to push perceptions and mindsets at educational institutions towards differentiated and inclusive learning environments instead of traditional classrooms. Secondly, they work to change public procurement practices towards more sustainable, long-lasting products and solution. The priority in tenders is often the most economically feasible offer, whereby total cost of ownership (TCO), sustainability and other values are not considered (Herning Kommune and Rethink Business, 2014).

Traditional supply chains work to fulfill the end-consumers' demands. The companies in the supply chain depend on the end-consumer to buy the products in order to maintain business. Consequently, this means that if the consumers are not demanding sustainable products, there is no market for these products. Verheuvel (2016) thus argues: *"The biggest help we can get is if the customers demand sustainable solutions. Then it is getting the best."*. However, the customers are rarely aware of how products are made and therefore not aware if they purchase and use sustainable or unsustainable products (Seijs, 2016; Verheuvel, 2016). Verheuvel (2016) argues: "*We are not confronted with the results of our behavior, we don't see that. […] and we are really in a consumer world."*. This leads to a perception at the end-consumer that is not in alignment with reality. This perception needs to change in order to progress the sustainable business development, and is beginning to change as awareness of unsustainable practices around the world is increasing (Brockhaus et al., 2013; Carter and Rogers, 2008). For companies, the main task downstream is thus to inform customers of how products are made, the environmental and social impacts from production and possibilities for return or recycling (Seijs, 2016; Verheuvel, 2016). Furthermore, certifying sustainable products can support this information sharing.

The underlying assumption for certifying sustainable products is that customers care and are concerned and thus willing to buy sustainable certified products (Toppinen et al., 2012). However, few customers

hold the knowledge needed to distinguish and understand the difference between certified and non-certified products. If all other product attributes are similar, certificates may be the attribute that tips the balance (Toppinen et al., 2012). This is reflected in the willingness-to-pay (WTP), and in a trend analysis, WorldPerfect determined that 75% of European citizens are willing to pay a little more for sustainable products (WorldPerfect, 2016). However, are they actually choosing the more expensive but sustainable product over the cheap unsustainable one?

8.2 PARTNERSHIPS WITH CUSTOMERS FOR ACCESS AND PERFORMANCE MODEL

Aalborg Municipality is beginning to work towards a different tender for school furniture in the future, which entails higher priority of sustainability related efforts. Through circular procurement of learning environments, Aalborg Municipality hopes to reduce environmental and social impact and at the same time ensure learning environments that match the needs of each school (Andersen, 2016). The expected requirements in the future tender entails requirements to ISO 14001 and OHSAS 18001 certificates, maintenance, proper recycling, establishment of socio-economic business and that the current total economy for the municipality is met (Aalborg Municipality, n.d.). If this project to rethink the future tender is successful, the possibility to implement the new business model *Lej et Læringsrum* increases. For the business model to succeed, furnX needs to work closely with customers as well as suppliers (Kristensen, 2016). One of the main benefits from closer collaboration with customers is the possibility to ensure the learning environments at the educational institution are aligned with the visions and goals of the educational institution. Additionally, a close collaboration can provide furnX with valuable insight into how the different products are used. This supports easy maintenance as it becomes possible to estimate the time for maintenance of different components. However, as highlighted by Kristensen (2016), it can be challenging to change the mindset at customers to consider leasing instead of ownership. For many, there is an inherent value of independence connected to ownership (Sempels and Hoffmann, 2013). To overcome this challenge, articulation of customers' concerns with a leasing model is essential. By understanding customers' concerns, it becomes possible to adjust the business model to support the mental transformation from ownership to usership.

To push for more sustainable solutions within public procurement practices, the Danish Ministry for the Environment established a new Partnership for Green Public Procurement in 2006 in collaboration with the three largest municipalities in Denmark (Miljøstyrelsen, n.d.). The purpose of the partnership is to promote green public procurement (GPP) and support municipalities and public institutions to procure sustainably. GPP is "*public procurement for a better environment*" (European Commission, 2016a, p. 4). One of the focal points for this partnership is to promote the usage of total cost of ownership (TCO) in public procurement (TCO temagruppen, n.d.). The Danish Government published a strategy for

intelligent public procurement in 2013, in which TCO also is highlighted as an intelligent strategy to use when evaluating bids for public tenders (Regeringen, 2013). If TCO considerations are included in public procurement, business models for access and performance are more likely to be included as the total cost of ownership is clear from the beginning. Working with organizations such as Partnership for Green Public Procurement may be an effective way to influence public procurement offices in municipalities to include TCO in their tenders. As part of the recent Circular Economy Package from EU, green public procurement (GPP) has also become a priority for public sectors in EU (European Commission, 2015). The public sector in EU represents approximately 14 % of EU GDP, and if this great purchasing power is used to choose sustainable and green products, the public sector holds immense power to support sustainable production and consumption (European Commission, 2016a). The possibilities for public sectors to purchase sustainable solutions increased with the adoption of a new EU Procurement Directive, which seeks to achieve "*environmental protection, social responsibility, innovation, combating climate change, employment, public health and other social and environmental considerations*." (European Commission, 2016b).

8.3 PARTNERSHIPS WITH CUSTOMERS FOR EXTENDING PRODUCT VALUE

For this business model to succeed, furnX needs to be able to get the used products back from the customers. Because of the linear economy, forward supply chains has been optimized to an effective one-way street for materials and products. Consequently, this challenge the desire to create take-back systems, in which the flow of materials and products reverse (Ellen MacArthur Foundation, 2013). Effective take-back systems thus require new relationships downstream as well as upstream. Firstly, a new relationship with customers is required, as they need to return the used products. For this to happen, a financial incentive, e.g. buy back of used products, can be an effective tool to ensure the return of products (Seijs, 2016). However, this will require a financial capacity to buy back the products, but also the ability to restore the quality of the products, while not increasing the final sales price. Another aspect to consider in the new relationship with customers is communication. To enable a successful take-back system, communication with customers is essential (Kemerink, 2016; Seijs, 2016). This entails communication of why customers should return used products and how to do it. Additionally, the more knowledge gained from customers regarding use of products, issues etc., the better starting point for remanufacturing the returned products.

Not only is good communication with customers essential to get the products back, but a market for these refurbished products is also needed. As the inclusion of reused products is not a requirement in tenders, it might be difficult to sell these products to educational institutions. However, it may be possible to establish a partnership with a domestic retailer with the purpose of selling the refurbished

products (Verheuvel, 2016). This can create a new market for refurbished products, but will also require new skills and knowledge to enter the domestic market for furnX. Partnerships with domestic retailers who are used to selling refurbished products can thus support the creation of a market for these products.

9 DISCUSSION OF RESULTS AND RESEARCH DESIGN

9.1 DISCUSSION OF PARTNERSHIPS

The goal for furnX is sustainable business development, and sustainable business models are means to that goal. For the company to achieve sustainable business development, different partnerships are necessary. As presented in chapter 7 and chapter 8, several partnerships can support a sustainable business development for furnX. However, not all actors in the networks of furnX are relevant for partnering for sustainable business development. There has to be a common frame of reference to create a shared vision, where no partners seek opportunistic behavior. For furnX, a selectivity of partners is important, as the company cannot collaborate with everyone for everything. Not all projects are suitable for partnerships, and not all suppliers have the interest or resources to enter a partnership.

For the two business models of relevance to furnX right now, both will require new partnerships, as furnX does not have the resources or capacity to do it alone. However, as both business models are strategies for slowing resource loops, ensuring a common vision with suppliers may be complicated, since the purpose for suppliers is to sell products. The shift towards slowing resource loops, and thus reducing the amount of new products produced, will require new incentives for suppliers to join partnerships for this purpose. Different distribution of profits may be an effective way to support joint partnerships for slowing resource loops. Otherwise, if no actors in the existing network share the same vision and goal, finding partners outside the network becomes a viable alternative. These partnerships will however require more time, as it takes time to build trust and understanding.

The three key aspects for establishing new partnerships are internal transformation, partner selection and management of partnership process. This does not mean that it is a three-step way to establishing partnerships. The internal transformation may begin because of external commitments to new partnerships. This creates a mutual influence and development between the internal transformation and the selection of partner and management of partnership process.

9.2 VALIDITY OF STUDY

The aim of this master thesis is to determine how furnX can initiate partnerships to support a sustainable business development. This is investigated through literature and interviews, mainly in the business network of furnX. As this investigation is based on interviews, the knowledge obtained is articulated knowledge, and therefore not necessarily a direct representation of reality (Brinkmann and Tanggaard, 2010). This does not mean that the knowledge is useless or not trustworthy, but that it can be difficult for the informants to articulate exactly what they actually think and do every day. For this study, this is especially applicable in relation to the interviews abroad, i.e. with G.Desmet, BMA Ergonomics and Royal Ahrend, as they were conducted in English and therefore not the native language of neither the interviewer nor the informants. Awareness of the context, in which the knowledge is constructed, is thus key to assessing the validity of the study. Through interviews, supporting literature and the theoretical framework of sustainable business development, the research question of this master thesis was answered. This leads to the assessment that the study investigated what was intended, thus ensuring the first part of the validity of the study (Selmer, 1998).

The second part of ensuring the validity of the study is methodological transparency. In this regard, the chosen theoretical framework and conducted interviews are described to support the reader in understanding the context, in which the empirical data was collected and the analysis thereof performed (Selmer, 1998). Supporting the transparency, the recorded interviews are available at kortlink.dk/mcpk. However, full transparency in this regard is not possible since not all interviews was recorded. Firstly, no interviews or meetings conducted internally in furnX were recorded, as it was assessed that recording these interviews would disturb the relation between the interviewer and the informants. This is due to the fact that there already is established a relation between the employees at furnX and the researcher. The benefits from already having a relation and some levels of trust built might be negatively affected by recording these interviews. Secondly, the first interview with PM and the only interview with Nytech were not recorded either. This was due to the expectation that a closer relation could evolve from a more informal first meeting. Nevertheless, notes written during these interviews and field notes written shortly after each interview helped to ensure that the key points were not forgotten (Hastrup, 2010). These notes are also available at kortlink.dk/mcpk to ensure transparency and reliability of thos study.

10 CONCLUSION

This master thesis analyzed how furnX can initiate collaborative partnerships in the supply chain to achieve sustainable business development. This was investigated through a literature study and interviews with furnX, suppliers and other companies working with sustainable business models. For furnX to initiate collaborative partnerships with suppliers, three aspects are important: *internal transformation*, *partner selection* and *management of partnership process*.

Internal transformation refers to changing the internal processes and culture towards a more sustainable direction. For the internal transformation to work employees need to understand the value of new sustainable business models and the value of partnerships, i.e. increased innovation, creating a positive impact in society, gaining access to skills and resources etc. For furnX, all employees need to understand the value of working with different business models simultaneously, and appreciate the benefits related to the different models.

Secondly, to succeed in a partnership, selecting the right partners is key. The company initiating the partnership needs to ask itself three questions: *why*, *who* and *what*. For furnX, the *why* differs depending on the business model in question. For the *access and performance model*, the purpose is to fulfill customers' needs differently through services, while the purpose of the *extended product value* model is to exploit residual value of products by remanufacturing in order for the products to return to the market. However, the overall *why* is answered with the purpose of ensuring sustainable business development. The purpose and vision for each model then needs to be shared with relevant partners, thus identifying *whom* to partner with. Asking *what* resources is needed for the partnership, complementarity between partner resources is ensured.

Lastly, the partnership needs to be managed. This builds upon the process of selecting the right partners, as managing the partnership require common goals and understanding. This process require hard work, as partners need to develop a congruent relationship through communication, trust and understanding.

Establishing partnerships to implement sustainable business models can support sustainable business development at furnX. However, awareness to the difference between short-term feasibility and long-term feasibility is essential to achieve sustainable business development. Efforts towards more sustainable practices provide benefits in a long-term perspective, while often representing an additional investment in a short-term perspective. When partners in the supply chain of furnX are aware of this condition, there is great potentials for initiating new partnerships that can support sustainable business development for all actors involved.

11 PERSPECTIVES

Several perspectives arose during this study, which can be subject to further research. Firstly, a continuation of this master thesis is relevant, as this study concludes that the supply chain of furnX holds great potential for new partnerships, but one of the main challenges is to ensure a common purpose and vision between partners. Continuing this study, further research of how to ensure a common purpose and goal is possible.

Additionally, it will be relevant to conduct and in-depth analysis of potential partnerships with other actors in the three networks with the intention to implement sustainable business models to ensure sustainable business development. By analyzing the two relevant business models for furnX right now, *access and performance model* and *extending product value*, it would be possible to progress the implementation of these models even further. This will also entail the construction of business cases for these models to ensure the feasibility of the models.

As this study was based on interviews with a limited number of suppliers, a broader inclusion of potentially relevant suppliers may be relevant. A broader investigation of potential partners may lead to deeper insight and understanding of each other processes, resources, goals and perceptions. This insight can support partner selection for new partnerships, but also support the current practices and supplier-furnX interaction.

Another relevant perspective to analyze relates to the internal transformation at furnX, which has begun, but may need additional investigation. Even though furnX is a small company, the internal constellation can be analyzed as a network on its own. A thorough understanding of how the internal network of furnX functions makes is possible to identify spots in the network that are not ready for new collaborative partnerships. These spots may require special attention during the internal transformation.

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