

# RETHINKING VALUE: A VALUE-CENTRIC MODEL OF PRODUCT, SERVICE AND BUSINESS DEVELOPMENT

Merili Randmaa<sup>a</sup>, Krestine Mougaard<sup>b</sup>, Thomas Howard<sup>b</sup>, Tim C. McAlloone<sup>b</sup>

<sup>a</sup> Tallinn University of Technology; <sup>b</sup> Technical University of Denmark

## ABSTRACT

Globalization and information technologies have made the economical landscape more transparent, customers smarter, more demanding and networked. Companies can interpret these changes as a threat to their business or as an opportunity to differentiate in the market and become a Prime Mover, by re-thinking customer value within the value system. The authors revisit the challenge of defining the value of a product/service offering through a specific focus on the customer's and companies activity lifecycles. The authors argue through a literature review and example cases that seeing value from a multi-disciplinary viewpoint opens up some unexploited opportunities for the companies to create competitive advantages by overcome barriers within a value system, design integrated products and services, work more effectively, co-create value with customers and achieve long-term relationships with customers. This article shows how the term "value" is understood in different academic fields, to investigate if these definitions and their relations can be integrated in a way to create a shared understanding of the term "value". A new approach for re-thinking the *value system* is proposed, by describing a prescriptive model, and its main potentials to enhance a firms' performance.

*Keywords: Value system, value- centric model, customer activity cycle, business model re-configuration, product and service development*

## 1 INTRODUCTION

In economic development, long-run structural changes among the four main sectors of an economy (primary, secondary, tertiary and quaternary) are based on the changes in demands [1]. A hierarchy of needs is associated with different saturation levels of the goods of the four sectors. In the course of increasing income, the demand for goods from the primary sector (raw materials) is first saturated (the demand is met by offers), further increases of income lead to a saturation of the demand for goods of the secondary sector (finished products). According to French futurist Fourastiè (1949) [2], only the demand for goods in the tertiary and quaternary sectors (service and information) will never be saturated (demand is greater than offers). People want more and better services (experience) when they can afford them, in order to save time which could be better spent on other activities and to obtain unique experiences [1], [2].

According to Hospers [2], the human tragedy is that people always want more: once their material needs have been met, they long for immaterial things such as culture, recreation and services to extend their free time and harmonize with their values and lifestyles [3]. The work required to create such services places severe demands on intellectual, social and communicative skills. In this way, paradoxically enough, technological development leads to mankind playing a steadily more central role: "The machine obliges man to specialise in the human" [1]. Technological progresses may free mankind from material worries but they do not necessarily make people any happier [2]. Thus in order to move with this trend, there is now a need for companies to shift from a product- and firm-centric view to one which personalises consumer experiences [4]. As there are very many actors in the economy and there is demand for ever improving solutions and experiences (customer values change), the economy and market are dynamic. In modern industry there are some strong directions of changes, such as globalization and expansion of information technologies, that affect the way the economy and markets function. Economy has become more transparent (the integration of national economies into the international economy through trade, foreign direct investment, capital flows, migration, the spread of technology etc.) and customers smarter, more demanding and networked. The definition of customers' value has been changing greatly since the formation of the current economic system and it keeps on changing [4]. This, however, brings companies new challenges as well as opportunities to

differentiate in the market, creating new, innovative values (new benefits and experiences) for the customers that in turn may give them advantage over the competition. Recent business literature has shown how some of the world's leading firms have been changing their strategic focus to compete by providing "solutions" rather than individual products and services [5], [6], [8]. This trend has particularly affected the high value, engineering and software-intensive, capital goods sectors, where firms design, integrate and deliver complex products and systems on a project basis in small batches or as one-offs for business users, operators, service providers, and/or government agencies [7]. This is also the point of departure for product/service-system engineering, where the need for whole product life cycle services is seen as an opportunity to increase profit and achieve long-term customer relationships [8], [22]. The focus for this research has been on industries within the technical complex product and service domain. However, the findings reported in this paper are based on literature studies in the fields of psychology, business, marketing, economy, engineering design, relationship management and product and service development. The authors have tried to combine the understandings and models of value creation and perception from different academic fields as well as to support them with real-world case stories. As technical industries mostly think from a product- and firm-centric view, a shift to personalized consumer experience creation can be a major potential to improve performance, form long-term customer relationships and be competitive in globalized market [8], [4], [18]. It is recognized that the firm-centric approach of creating value by Porter [9] is not sufficient in today's economical system as it does not encompass the creation of intangible products or the possibility of customer co-creation [4].

Following the literature review, the different dimensions and levels of value are identified and are seen to be a core concept for integrated product, service and business development. This papers aim is to create a broadened understanding of customer and company value and how to augment the shared value. The authors present a new value-centric model to understand and re-think the 'value system' to be able to discover new potentials within it to overcome barriers and raise efficiency of the system. The model will help to illuminate the key aspects of the case's innovative business strategy in terms of the value associated activities and potentials in its value system. Through a value analyzing matrix the company are provided with key questions that will enable the firm to enhance their value strategy. In order to show how our concept can be used and prove its ability to discover new potentials within the system, we have utilised the new descriptive model for analysing some well-known business cases, where rethinking value has made companies market Prime Movers.

## 2 LITERATURE REVIEW: THE NATURE OF VALUE

The following section reports the results and reflections of a literature review first dealing with the definitions of the term value within different academic fields, before exploring the dimensions of value perception and value as a process considering value exchange and transaction.

### 2.1 Value in different academic fields

As the meaning of customer value has naturally evolved concurrently with economical changes (business strategies, marketing, engineering design etc), it is important to look at value both in an economical and a psychological context. To get a better understanding of how differently "value" is understood in different contexts, we have drawn an illustrative table of terms linked and brought some examples of contexts where these are used.

*Table 1. Value in different academic fields and their interconnection*

Term	Ref.	Academic fields	Description
<b>LEVEL 1: VALUE STRATEGY</b>			
PSS	[8]	Product/Service-Systems	PSS approaches – as service – oriented business strategies that coordinate PSS development – PSS can be seen as a strategy to create a firms value constellation
Value-based business strategy	[10]	Business strategy	Value-based strategies, are ways which companies can try to capture value
<b>LEVEL 2: VALUE PERCEPTION</b>			
Value created	[10]	Business strategy	Value created = willingness-to-pay – opportunity cost
Value added	[11]	Environmental Sustainability	"the extra value created when the overall level of environmental and social impacts is kept constant"
Value	[13]	Identity styles and	Value as a trans-situational goal varying in importance as a guiding

		value orientations	principle in life; transcend personal, social, or institutional interests; informing people what is good, beneficial, important, beautiful, desirable, constructive etc.
Product value	[3]	Business leadership	Product value consists of answers to questions: <ul style="list-style-type: none"> <li>• <i>What the product does</i> (technical function).</li> <li>• <i>What the product is</i> (configuration/structure)</li> <li>• <i>Whom the product serves</i> (the customers).</li> </ul> <i>What the product means to customers.</i>
Value	[8]	Product/Service-System	A guiding system that determines which objects can act as satisfiers to needs. Perceived trade-off between multiple benefits and sacrifices gained through a relationship between a customer and company.
Emotional value	[14]	Business and organization	“part of willingness to accept unexplained by the financial value of the ownership stake and the private financial benefits of control accruing to the owner”.
<b>LEVEL 3: VALUE PROPOSITION/OFFERING</b>			
Value system	[17]	Virtual organisations	“each product/service requires a set of value creating activities to be performed by a number of actors, forming a “value creating system” through a virtual organization”.
Value constellation	[5]	Business strategy	Value as an infrastructure for value creation. Non-monetary currencies available for co-productive economic transactions can be seen as a value (education, healthcare systems...)
Value proposition	[12]	Marketing management	Value can be conceptualized as the relationship between the consumer's perceived benefits in relation to the perceived costs of receiving these benefits. Value = Benefits / Cost
<b>LEVEL 4: VALUE CREATION</b>			
Value for customer	[15]	Relationship marketing	Value for customers is created throughout the relationship by the customer, partly in interactions between the customer and the supplier or service provider.
Value	[16]	Value network analysis	Value consists of tangible and intangible. Success of a company depends on how efficiently it can convert one form of value into another.
Value creation	[24]	Product/Service-Systems	The value creation is in the resulting activity where both the physical product, supporting services and the customer all play a vital role

From table 1 we can see that the term value is one of the central terms in many related research fields to engineering design and product development. Though it is shown that the term has many different contexts and applications, it can be seen as a common ground on which the actors of the multiple disciplines of product development may communicate. We, the authors, see value to be the core concept of integrated product, service and business development and thus propose that a value-centric model of these processes will be beneficial and is much needed. First, in order to interpret such a model it is important to appreciate how value is received or perceived, how value is created and how it may be transacted or exchanged. These considerations are discussed in the following sub-sections.

## 2.2 Perceiving the value

Value can be described as a mental concept. In the field of psychology, value is seen as a trans-situational goal varying in importance as a guiding principle in life; transcend personal, social, or institutional interests [13]. How people value different offerings, means that they perceive what is good, beneficial, important, useful, beautiful, desirable, constructive etc. They answer the question of why people do what they do and how they perceive values offered in market.

Companies create value by their offerings and customers judge the value of products and services [8]. However, no two people can have the same experience- each experience derives from the interaction between the staged event and the individual's prior state of mind and being [18]. Therefore perceiving the value is individual and context dependent. Consumers expect new products to harmonize with their values and lifestyles, and industrial customers expect products to mesh with existing components in a work system or a production process [16]. Value for customers is created throughout the relationship with the company, partly in interactions between the customer and the supplier or service provider [15].

## 2.3 Creating the value

The most widely known concept of value creation is Porter's value chain [9], where value is created by multiple actors within a chain and then offered to the market. However, this concept has proved not

to be suitable in the context of intangible products (services, knowledge, financial products) [4]. New approaches in science and economy show that the “value” can also be shared or co-created (open innovation, open source software, strategic alliances etc.) by combining different assets and resources into a value in the same process (value star) or in interlinked activities (value network) (Figure 1 and 2).

Value propositions are borne by objects which can be products (physical goods), services, experiences, events, persons, places, properties, organizations, information or even ideas that describe quantifiable benefits that individual organizations making an offer promise to deliver [12]. Therefore propositions include many interlinked activities and actors that are not creating value in sequential pattern. Success of a company depends on how efficiently it can convert one form of value into another [16]. This is particularly relevant to the descriptive model proposed in section 3.

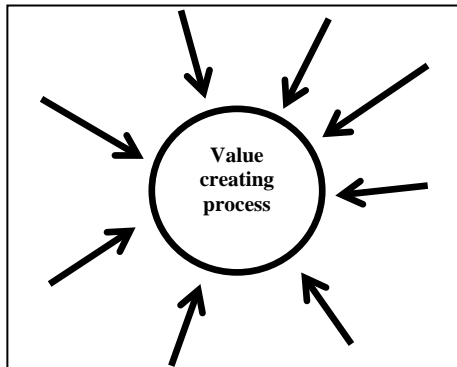


Figure 1. Value star by Normann 2001 [4]



Figure 2. Value network by Allee 2008 [13]

## 2.4 Value exchange and transaction

In a business context, value is usually understood in monetary terms or trade-off; ‘Value created’ is equal to the ‘willingness-to-pay’ minus the ‘opportunity cost’ [10]. If we perceive the whole economy as a set of pieces, it is possible to observe a wealth of different values (ideas, competences, relationships, raw materials etc.). Almost every value has a number of possessors and a number of actors within a system who have a need or desire for some of those values (potential receivers).

Actors can transact and exchange their values as they want, but the common way today is to offer financial currencies for a value. In a case where actors create value together in a chain (suppliers, sub suppliers), the key to a supplier to achieve a positive value is the existence of asymmetries [10] between the supplier and sub-suppliers. For a company to have positive added value (potential receivers willingness-to-pay is higher) it must be different from its competitors in a beneficial way. Created value must be worth less to the possessor of the value than a receiver is willing to pay for it [10]. However, this does not always have to be the case in quaternary industries where information can be replicated at little-to-no cost to the possessor. Relationship marketing approaches takes upon the perspective that it does not make sense to determine whether customers buy products or services, what they actually buy is the benefits that products and services provide them with. From this perspective all companies basically offer services, even manufacturing firms. It is essential to consider as many potential values within a system when designing an offering in order to customise the value for a particular customer, create value effectively and give the customer benefits and the experiences demanded.

In Porter’s concept [9], the stream of values is one-way, company-centric and the market is separated from the value creating process (Figure 3). We see that understanding “value creation” in a wider, more interlinked context can unlock some potentially undiscovered market spaces for co-created values and therefore be an essential step for re-configuring businesses for better fit in global knowledge economy where customers, suppliers, partners, employees and relationships are seen as potential co-creators of value and experience. The value creating process can be seen as a value star , as seen on figure 1, by linking many value stars into one value system, value network is formed (figure 2). Within a value network besides tangible goods, also intangible values can be exchanged and shared (information, customer base, relationships, experience etc.), without being converted into tangible values. American Express uses “barter currencies” for longer-term relationships with hotels, shops, restaurants etc. It gets distribution outlets of their partners services (hotels, shops, restaurants) in

exchange for bringing their strong customer base to the same places. Customer base has been exchanged with other forms of values (service discounts).

In a business environment, where there are many actors within a value creating process, there needs to be someone orchestrating this process by creating a collaborative environment and managing the

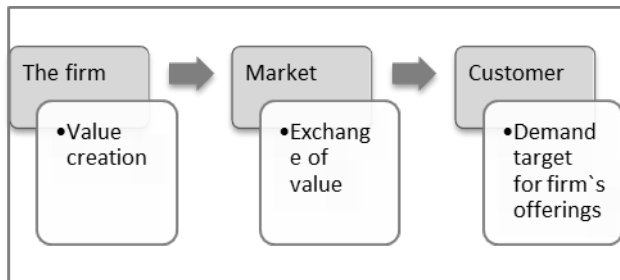


Figure 3. The traditional concept of a market by Prahalad and Ramaswamy 2004 [4]

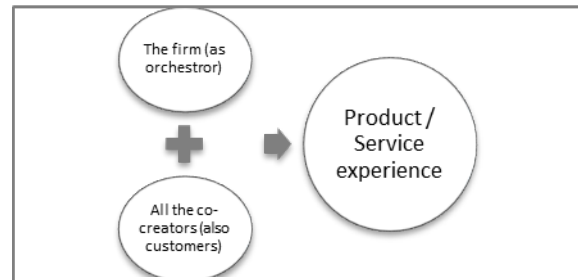


Figure 4. Cross-border market co-creation by Pitelis and Teec 2010 [19]

whole process. From this point of view we can see a company as an environment and as a set of relationships combining different values consisting of services, products and knowledge about the contexts into customer benefits and experiences. This concept of co-creating value has been termed Cross-border Market Co-creation [19] (Figure 4).

### 3 THE VALUE SYSTEM

"Many different interpretations of value co-exist. Sometimes it is the (re)-interpretations of value that reveal new value" [6]. The meaning of value and the process of value creation are shifting rapidly in economical environment from a product- and firm-centric view to personalized consumer experiences [4]. Companies, who discover changes and possibilities within the value system first and make use of these are considered to be Prime Movers and often are more successful than the late adapters [5].

This section builds on the insights in section 2 to create specific descriptive models of value systems base on a general method and layout considering customer-company activity cycles. The aim for these descriptive models is to describe the important activities in a company's value system. In order to do this the authors began to construct the models around several cases of innovative value system reconfiguration. These cases are outlined in the following subsection. As the method form producing such models was should to help describe the core aspects of the innovative cases (example shown in section 3.2), it is likely that this method will help produce models with utility for identifying new opportunities in the reconfiguration of value systems. It is thought by the authors that the models may also be used to foresee risks associated with a company's current value system (section 3.3).

In section 3.4 the authors suggest a prescriptive approach by which companies may use the descriptive models created using the method in order to explore opportunities and enhance their position in their value system.

#### 3.1 Value distribution strategies- case analysis

The follow cases were chosen as innovative examples of value system reconfiguration:

- IKEA's strategy is 'value co-production' with its customers (Figure 5). Customers check, choose and pick up their furniture and transport it home by themselves. IKEA only provides design and development of products, packaging and storage. Together with the customer they save money. The place of assembly has moved from the factory to the customer's living room, the time of assembly has moved and are now a part of the customers use phase, the assembly has moved from a factory worker as an economic actor to the customer and the customer very likely designs a value-creating constellation consisting of friends or family members to help with the assembly (potential expansion of customer base for the company). IKEA has realised previously unknown potential of customer value (will to cooperate, co-create in order to save money) and barriers keeping them from using their potentials (unsuitable size of packaged traditional furniture, complicity in assembling, need for special tools when assembling). Furthermore, by excluding activities not valuable for IKEA (organizing transportation, assembly) and including activities that increase customer experience (free time spending environment- cafeteria, children corner), IKEA is offering an effective furniture co-creation system. By re-configuring the value system and

changes in product and service propositions, IKEA became a Prime Mover. Together with the customer they save money.

- Merrild Coffee Systems are offering coffee solutions for the professional market (B2B). Their mission statement is as follows: *Together we secure that you will serve the best cup of coffee.* They offer their value through a classical Product/Service-System, where the ownership of the product is moved from the end-user to the supplying company, they are renting out coffee vending machines, install it, and maintain it through supplying all the substitute products (coffee, cups and filters). They take care of all maintenance (preventive maintenance, hygiene inspections etc.). They even offer different packages/levels of service they call this: *Service á la Carte*. Merrild saw an opportunity within their existing product portfolio to create a product for the professional market, which would strengthen the quality of the coffee (by a high-end coffee brewing machine, regular and correct maintenance and by supplying quality coffee in different variations), reduce the activities/resources needed from the customer-site to support coffee making at their working environment. Merrild created a new business through Merrild Coffee Systems by creating a new value constellation that took into account the new value perception of the professional market compared to the home.
- American Express uses intangible “barter currencies” for achieving longer-term relationships with partners within service industry and customers. It gets distribution outlets of their partners` services (hotels, shops, restaurants) in exchange for bringing their strong customer base to the same places. By sharing values (customer base and distribution outlets) all the players within the system (American Express, partners from service industries and customers) have some benefits from long-term relationships created.
- Amazon.com- is not the same as a simply bookstore. It has embodied use of technology, use of people, linkages to customers, relationships with suppliers and is structured as a “portal” rather than a bookstore. Customers value the forum-environment and that they can customize their own value (order) by clicking and combining different value perceptions, depending on their context of need. Amazon has managed to combine different potentials (forum environment, value co-creation) in a way that gives customer unique experience.

Although in most of the business strategies customer values and firm values overlap, there are some extreme cases where customers want just the opposite benefits and experience than the company is willing to offer (or vice versa). Private hospitals/the healthcare industry and medical industry underlines this unbalance greatly. Private hospitals are depended on patients with some kind of diseases and gets value through income from customers with health problems. This can in worse case result in the companies having disinterest in the patients getting cured, and thereby being independent of the hospital.

These above mentioned companies know how to distribute or “unbundle” the total set of activities and values and combine them in a way that converts them to higher value (benefit, experience) or lower cost. As there are some potentials in value network to interconnect customers, companies and other actors within the system to create together more value, this is an opportunity that companies should look for in order to engage customers for long-term relationships, achieve positive word to mouth promotion and make value creating process more effective. As value shifts to experiences, the market is becoming a forum for conversation and interactions between consumers, consumer communities, and firms [4]. Understanding and using this understanding is what makes these companies innovative.

### **3.2 Describing a value system using activity-cycles**

In order to understand value seen from a customer’s point of view (value in customer context), it is vital to get insight into the activities of the customer needed to possess the value, which is where the customer values are perceived [8]. This can be seen as the frame for the total customer experience, as it brings in a time dimension of the value. Vandermerwe [21] has developed a graphical information model to get insight into the Customer-Activity Cycle (CAC). The CAC focuses on the activities that the customers go through to get the benefits of the offered products and services. It consists of three stages containing activities in relation to the utilization of the company’s offerings: *pre* – before use; *during* – in use; *post* – after use. The activities are placed on a cycle, to illustrate how they are affecting the customer, the central stakeholder in the middle. [20], [21], [22].

Further development of the CAC has been created, resulting in the Activity Modeling Cycle [23], as a tool to conceptualise Product-Service/Systems, focusing on the supplying network around the customer and the possibility to reconfigure this and to support the customer continuously in the activity cycle. What is interesting to explore within this cycle, besides the supplying network, are the inherent and the maybe unused recourses of the customer as these are adding value to the total value system [5]. Vandermerwe's focuses on how the company can *add value*, by looking at the *critical points* which are representing value gaps, that hold opportunities for the company to fill. What are also important to elaborate from this customer cycle are the *recourses of the customer* which can add value on the same level as the company. When looking at the experience of the customer there is no need to differentiate between pre, during and post, as these are fluid due to the experience is crossing each phase. Donald Normann [5] and his work with emotional design, describes that long-lasting emotional feelings (memories) take time to develop, and they come by sustained interactions [18], [23], which are important to see as a process of co-creation between customer and company [4]. The value creating activities are not only a process within the company; co-creation experiences are a new paradigm of value creation. It is possible to see some interlinks and opportunities between the customer and the company if we also un-bundle the company's activities needed to configure and offer value propositions.

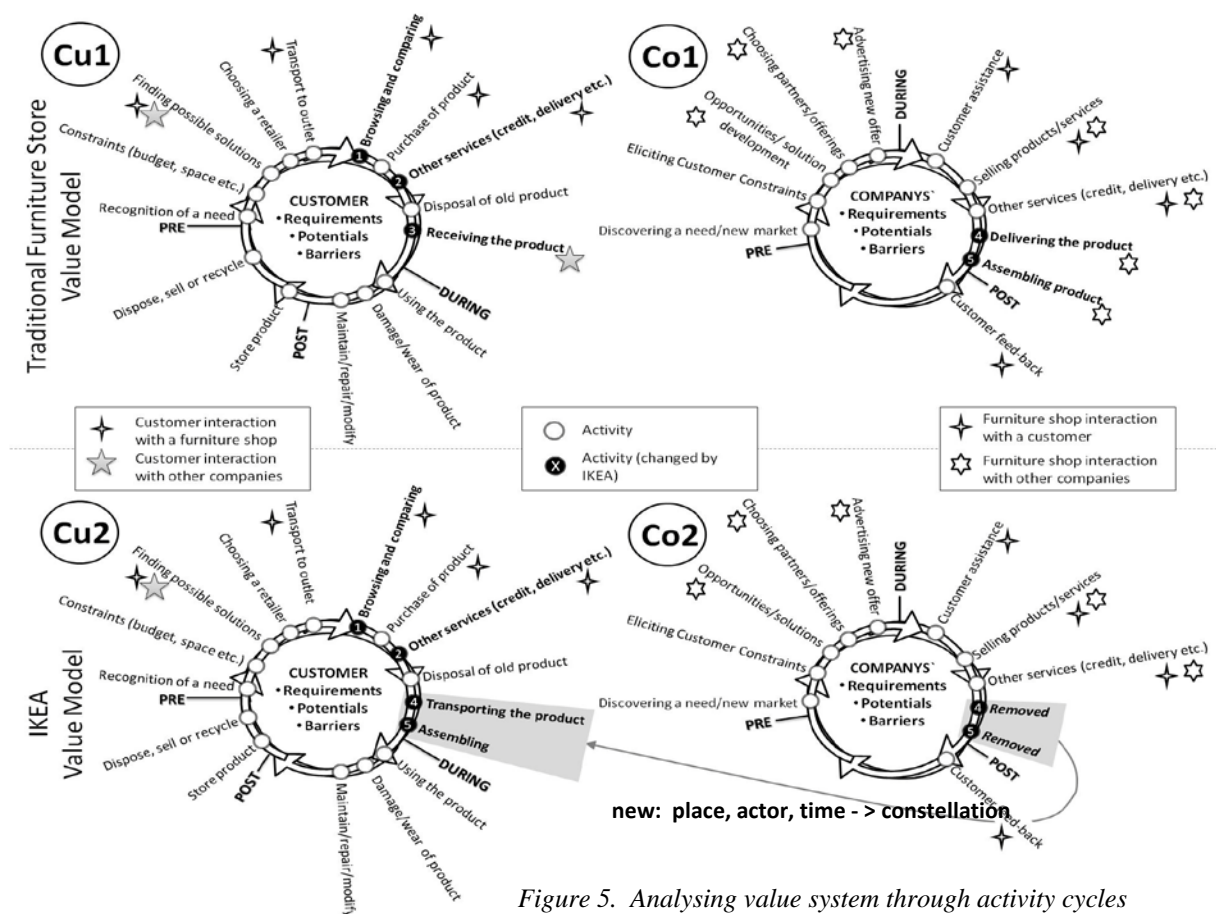


Figure 5. Analysing value system through activity cycles

In figure 5 it is illustrated what are the customer activities needed to purchase a product ( traditional furniture shop Cu1 compared against IKEA furniture shop Cu2) and how these activities are complemented by companies' activities or delegated to other actors within the system (traditional furniture shop Co1 compared against IKEA furniture shop Co2). Different stars in the models show interactions between different actors within a system. By connecting the actors, value creating system transforms from being a value star into a value network. From the figure it is clear that IKEAs innovative business model is based around the migration of the transportation and assembly activities from the company and its associated actors, to the customer. This is not to say this is the sole reason for IKEA's success, as this strategy is heavily supported by the great product design and development work that enabled the users to feasibly undertake these activities. Thus the descriptive model shown

in figure 5 helps to layout the value associated activities in a supply chain. It is though that the model can be used to identify and explore a number of different opportunities in terms or reconfiguring the company's value system.

### 3.3 Foreseeing risks

One of the major problems associated with forming complex value systems and alliances with other actors in order to create value, is the possibility that the other actors may reconfigure their values systems in such a way that your companies offerings no longer hold value. Let us consider the case in figure 5. Many of the associated actors providing assembly and delivery of furniture items in a tradition furniture supply model will have been put out of business by the new value systems instigated by IKEA. Such companies could have used a descriptive model (like that proposed in section 3.2) to change their strategy to collection, disassembly and disposal of old furniture.

Thus it is fair to assume that the greater the number of opportunities available within a value system the more fragile the system is, meaning it consists of many reconfiguration possibilities for the companies to be aware off, this is by Richard Normann described as the value space, and the fragility is the density of the system, that determines to which degree it can be reconfigured [5]. The model helps to determine the risks associated with being tied to particular actors/resources etc. within a particular value system.

### 3.4 Method for enhancing value distribution strategies

In this subsection the authors prescribe a method which companies may use as the descriptive model of their value system. The method suggested here stems from ideas formed during the literature review. It's testing, refinement and validation form the next phase of the larger research program.

In order to make potential interlinks within a system more clear, it is beneficial to analyse actors' activities within activity cycles in 3 perspectives-

- Why the actors are acting like that? (their needs and wants),
- Can they act differently? (their potentials, resources) and
- Why don't/cant they act differently? (their barriers, restrictions).

For doing this, we propose value analyzing matrix from activity perspective (Table 2). This matrix shall be filled in for every activity within the value system. In order to illustrate this, we have analysed 3 activities from previous examples in section 3.2 from traditional furniture shop point of view (activities number 4 and 5 from the activity cycles, marked with black bullets).

*Table 2. Value analyzing matrix from activity perspective*

<b>4) Product transportation</b>	Customer	Furniture shop	Transport company
Needs, wants	Wants transportation service to be precise, in time. Service provider should to be polite, have clean shoes. Service needs to be at low price and fast.	Service can enhance customer experience and therefore potentially form long-term customer relationship/ base.	Wants more customers and higher prices. Wants to save money by optimising transportation routes.
Potentials, resources	Has a car, could transport the product himself. Man power/resources through friends to carry and drive.	We can start our own transportation service business.	We can start working only for furniture shop, if we make a contract for long enough period and good enough fixed prices.
Barriers, restrictions	Does not have a car or the car are too small to contain and thereby transport the product.	This business is not as profitable as our core business- selling goods.	Sometimes we can not deliver goods fast enough, because we try to optimise our routes, or the addresses given by furniture shop are not valid.
<b>5) Product assembly</b>	Customer	Furniture shop	Assembly company
Needs, wants	Wants product to be assembled correctly and not damage apartment when carried inside.	In order to reduce storage ground, products must be stored before assembled.	Wants to assemble the furniture at the manufacturing factory- it is easier like that, no need to carry tools.
Potentials, resources	Could find some time to assemble the product. Would like to improve home environment by himself. Has friends, who can help if needed.	Couldan assemble the products at shop right after purchase. Couldan start our own assembly service business.	Could start working only for furniture shop, if we make a contract for long enough period and good enough fixed prices.
Barriers,	It is difficult to assemble products by	This business is not as	-



restrictions	himself because instructions are complicated, assembling requires special tools.	profitable as our core business- selling goods.	
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When the company has discovered all these 3 perspectives for all the activities and actors within a system, it is more likely able to see the big picture about the situations the customers, itself and other actors within a system are in. It is now possible to see potential interlinks for value co-creation, sharing, transaction and find ways to overcome barriers within a system.

IKEA has discovered some major potentials and barriers within its value system and converted into a successful business model. In order to make activity 4, transporting products more effective within a system and reduce risk of exacerbating customer experience rather than enhancing it (transportation service provider does not meet customer wishes), IKEA has decided to remove the barriers from restricting customers transporting their products (the size of products) and externalised customer potentials for transporting their own products. For activity 5, assembling products more effectively within a system and reducing risk of exacerbating customer experience rather than enhancing it (products do not fit through doors), IKEA has designed easy-to-assemble products with suitable instructions as well as tools for assembling products. IKEA reduces storage ground, customers can improve home environment by themselves and there is no need for extra actors, increasing the price and complexity of the system.

#### 4 CONCLUSION

The literature review conducted has help to show that the term value is one of the central terms in many research fields related to engineering design and product development. Though the term value has many different contexts and applications, we, the authors, see value to be the core concept of integrated product, service and business development and thus propose that a value-centric model of these processes will be beneficial and is needed. Business strategy and marketing literature on rethinking customer value and the value system prove the relevance of the topic and need for a model that would help companies to understand their value system (big picture) and aid them in discovering new potentials within the system. As customer demands are changing towards requiring solutions rather than products and services, there is potential to improve industrial companies' performance and competitiveness by rethinking customer value [18]. Building on the literature review and by constructing the models around several cases of innovative value system reconfiguration, we offer a new value-centric model of integrated activities within product, service and business between different actors of the value system for understanding and re-thinking the 'value system' and discovering new potentials within it to overcome barriers and raise efficiency of the system. It consists of customer activity cycle and a company activity cycle and makes it possible to see some interlinks, opportunities and barriers between the customer and the company. Analysing this model with the help of value analyzing matrix from activity perspective helps companies to see the big picture about the situations the customers, itself and other actors within a system as well as foresee risks associated with a company's current value system.

The proposed value-centric model can be utilized through analyzing some cases of value re-configurations as well as describing a company's situation. It is hypothesised that the model accompanied with a method for analyzing activities within the system will help to see the big picture by describing it from 3 perspectives- why the actors are acting in such a way (their needs and wants), can they act differently (potentials, resources) and why don't they act differently (barriers, restrictions). By describing the big picture about the situations the customers, the company itself and other actors within a system, it is possible to see potential interlinks for value co-creation, sharing, transaction and find ways to overcome barriers within a system. The descriptive value-centric models and prescriptive matrix for analysing activities within the system have been utilised in this paper to explain implemented value system re-configurations. Although authors are optimistic about the models' and methods' ability to help discover new ways to re-configure the system, it has not yet been proved. The further work to be conducted will outline the success criteria by which we may evaluate the utility of the descriptive models and the accompanying method proposed. It is envisage that several companies from within the product development sector will be chosen and the models will be created and methods tested during a series of value based workshops.

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