

# Impact of Theory of Constraints Based Value Proposition to Business Network Relationships<sup>1</sup>

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## Abstract

**Purpose of the paper and literature addressed** – The aim of this paper is to integrate the concept of value creation in the context of Theory of Constraints (TOC) and business networks. The focus is on the process of value creation through “unrefusable offer” concept and impact of “unrefusable offer” implementation on development and relationships of business network. Current paper is based on the literatures of Theory of Constraints and industrial business networks.

**Research method** – Additionally to the theoretical analysis, the value creation in the context of TOC and business networks, and the impact of value proposition on business network relationships is analyzed using a case study method. Estonian industrial supplier Alas-Kuul was chosen for in-depth case study as the company has six years experience on implementing TOC and “unrefusable offer”. Alas-Kuul CEO was interviewed six times over the period of 2000-2005. Competitors’ performance indicators in 2003-2004 and results of client satisfaction research among 50 major clients of Alas-Kuul conducted in 2003 were also used.

**Research findings** – From the implementation of TOC value proposal in analyzed case study occurred both substantial and cognitive type of value. In terms of value creation focus, Alas-Kuul started with focusing on its own performance indicators, which later enabled to focus on customers’ performance indicators. The latter has lead to focusing on the firm’s relationship portfolio performance and has had impact beyond traditional dyadic relationships.

From the view of development of business network the quality and quantity of relationships and the number of partners has changed. The content and trust in relationships with remained partners has increased. Also the horizon of the network has become wider compared with time before the implementation of the value proposition.

**Main contribution** – The main contribution of this paper is making connection between the TOC and industrial network theory in the view of value creation. Combination of different relationship levels and TOC focus of performance results and change maker criterions enable to understand and analyze value creation in the context of business network relationships. Current paper defines one TOC based possibility for value creation, which can lead to stronger competitive position and analyzes possible impact of TOC based value proposition to business relationships.

**Keywords:** value proposition, value creation, Theory of Constraints, business networks.

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## Introduction

Developments in global economy have shaped business-to-business markets and created conditions where survival of a company depends more than ever on strength and size of company's business network and value proposal to customers. Such changes have led to the growth of different theoretical and managerial concepts of business networks and value creation.

One of the recent relatively popular concepts of value proposal development has been Theory of Constraints. Developed by E. M. Goldratt in late 1970s Theory of Constraints has evolved from manufacturing production planning into many areas including value proposition development in late 1990s and over 100 successful implementations are documented in literature (Caspari and Caspari 2004; Goldratt 1990a; Goldratt 1990b; Kendall 1998; Noreen et al 1995; Mabin and Balderstone 2000). Yet the impact of Theory of Constraints based value proposal to business network relationships is not well covered in existing case studies.

Enterprises and their performance are through business and nonbusiness relationships influenced by other organizations with whom they interact. It can be said that organizations and their business relationships form value nets, where can be distinguished four types of organizations that affect a firm's ability to produce and deliver value to an intermediate or final customer. These are suppliers, customers, competitors and complementors (other firms whose outputs or functions increase the value of focal firm's outputs) (Ritter, Wilkinson, Johnston 2004, p. 177).

Both academics and also companies realize the importance of business partners and relationships with them. Håkansson and Snehota (1995) argue that the future development and performance of the company depends largely on its ability to manage relationships with other organizations. There can be distinguished between several levels of management and analysis of relationships (Ritter, Wilkinson, Johnston 2004): 1) individual actor viewed in isolation, 2) individual dyadic relationship between two firms, 3) firm's relationship portfolio, where the focus is on the focal firm's direct relationships with its partners, 4) connected relations in which are considered also indirect connections to focal firm's business partners' partners, and 5) network, which is formed by network actors and relationships between them, and in which is taken into consideration also connections between several focal firms' relationship portfolios. In this paper the analysis of the relationships in business network is focused mainly on the relationship portfolio of the focal firm, which in presented case study is Estonian industrial supplier Alas-Kuul Ltd.

Implementation of Theory of Constraints brings along many changes in the strategy and operational principles of the firm and also changes in the relationships of the focal firm in its business network. Havila and Salmi (2000) argue that the change in a business network begins from the dyadic level of network. So it is interesting to see how and in what level it brings along changes in the business network of the focal firm.

The concepts of Theory of Constraints and business networks have not been integrated in previous studies almost at all, although in business relationships the value creation and co-creation is very important for the existence and development of relationships. Ulaga (2001) has brought out the need for more research to investigate how to translate customer orientation and value-based management into marketing action plans, especially in the business-to-business marketing. In the context of Theory of Constraints has been developed a very interesting and auspicious possibility for value creation. Thereof in present paper the Theory of Constraints can be seen as the specific tool for value creation.

The aim of this paper is to integrate Theory of Constraints value creation process with aspects of business network development and identify how the implementation of Theory of Constraints based value proposition in a company affects its business network. The research questions are following:

- How and for whom the value proposition of the Theory of Constraints is creating value?
- What type of value can be considered in the case of value proposition in the context of Theory of Constraints?
- How is business network of the firm influenced by the implementation of value proposition in Theory of Constraints context?

Besides theoretical analyzes a case study of Estonian industrial supplier Alas-Kuul is used to illustrate the influence of successfully implemented value proposal.

## Value Proposition in Theory of Constraints Context

Based on the value creation and business relationship networks literature there is a need for systematic way of approaching value creation which could help analyzing company's practices and impact of value creation activities on relationship networks. One of systematic approaches to management and value creation is Theory of Constraints (TOC) developed by Dr. Goldratt in late '70s. One of the core ideas of TOC is a claim that every system in real world (like for profit organization) has at least one constraint hindering the system from achieving its goal on higher level (like higher profits). Such constraint determines the output of the system and therefore controlling the constraint allows to control the system. Often the system's constraint is not a bottleneck in a production, but commonly accepted rule, policy or measurement. TOC deals with finding and managing both physical and policy constraints. (Smith 2000: 31) Set of graphical tools (Thinking Processes) is developed for finding, communicating and implementing solutions to system constraints. The lighter version of constraint management rules most suitable for finding and managing physical constraints is called Five Focusing Steps. Based on TOC constraints accounting, constraints management tools and principles several managerial applications are developed into variety of areas: project management, change management, production management, distribution management, marketing management, and supply chain management. TOC has also been used for improving non-profit organizations like schools and hospitals.

In 1994 first TOC marketing approach (called "unrefusable offer") was introduced by E. M. Goldratt (Goldratt 1994). Since then several other TOC based value creation and relationship management concepts have been developed, but the basis of all later concepts is "unrefusable offer".

TOC makes two basic assumptions about customers. First, customers are buying solutions to their problems. Sometimes solutions are packed as products, sometimes as services or as a combination of both. Second assumption made is that customers do not value the product or service based on sellers' effort (costs, investment, time etc.), but on the benefits they expect to derive from acquiring it (Houle 1998). So the purpose of marketing is to increase customer's understanding of value over the value the producer sees in the product.

Dr. Goldratt believes that successful offers to market are based on two things (Goldratt 1999):

1. Identify market's core problem (undesirable effects they don't want, but are forced to accept).
2. Analyze market from supplier perspective – how suppliers create or support the existence of core problems for customers. If a supplier does not create/enhance problems, he/she is not able to solve them.

Usually suppliers offering same products or services create same types of problems. The problems come from supplier's policies, rules and measures. Therefore, the supplier changing its policies and erasing problems has a very unique offer to the market, which is hard to match by competitors. The main focus of TOC "unrefusable offer" is to increase customer's performance results as revenue and profits. Second best is to lower inventory levels and free up cash or lower operating costs.

Dr. Goldratt believes that customers know only the symptoms of their problems, do not understand the true causes of their problems and are not usually able to identify the causes themselves. The salesperson has to bring the prospect to agree on the magnitude of his/her problems or needs, and that they all stem from one source – the source which the seller knows can be addressed by his/her product or service. Value proposition solving customer's core problem and overcoming 9 layers of resistance (from objections about problem existence, solution plausibility to obstacles of implementation) is called "unrefusable offer" (or Mafia offer). If all layers are addressed, the selling shouldn't be a problem as customer understands and believes the solution. (Goldratt 2000; Scheinkopf 1999)

One key aspect of "unrefusable offer" is an answer to a question "who is doing the most changes". On the case of "unrefusable offer" the supplier does the most changes. Probably some changes are needed also from the customer side to make the offer truly a win-win solution, but as presentation starts with identifying customers problems, showing that supplier takes responsibility for changing them, at the end of the presentation the customer will want the product/service so much, that is willing to remove all obstacles from his/her side. (Houle 1998)

Despite the developments of TOC based value creation concepts there has been limited effort on connecting the concepts with business network relationships. In order to determine does TOC offer suitable approach to value creation in business networks aspects of the latter have to be taken into account.

### **Value Creation in Business Network Relationships Context**

Walter, Hölzle and Ritter (2000, p. 2) have argued that “the main reason for an organization to engage in business relationships is the aim to create value”. But there are different possibilities to look at the value and its creation. Forsström (2005) distinguishes three types of value and its analysis: 1) the value of an offering, 2) the value of a relationship, and 3) the value created in a relationship. The value of an offering can be defined as the benefits of products or services which can be measured in monetary units (Porter 1985; Anderson, Narus 1998). The value of the relationship is measured as the benefits of the relationship to the firm (Walter, Ritter, Gemünden 2001) or as the trade off between benefits and costs or burden or sacrifices of the relationship with a counterpart (Gadde, Snehota 2000; Walter, Hölzle, Ritter 2002). The value of the relationship is more subjective in its nature and in measuring of it there have to be taken into account also indirect effects of the value that is created in a dyadic relationship and are spreading to other relationships the firm has with its counterparts (Wilkinson, Young 2002). Gadde and Snehota (2000) argue that the relationship benefits contains from cost benefits and revenue benefits, and relationship costs include direct procurement costs, direct transaction costs, relationship handling costs and supply handling costs. The value of business relationships has an important motivational role, since that is why the participants get into the relationship (Mandjak, Simon 2004).

Value created in a relationship means that two or more companies are combining their resources in order to achieve something that the parties could not achieve acting independently (Forsström 2005). In the context of the value creation in a relationship can be talked about value co-production – the firms are actively co-creating and re-creating value with their business partners (Ramirez 1999; Baraldi, Strömsten 2006). Blankenburg Holm, Eriksson and Johanson (1999) have found in their research that relationship development has a strong effect on the relationship value creation. They have defined a causal chain from business network connection through mutual commitment to mutual dependence to relationship value creation.

There can be distinguished two categories of value (Forsström 2005, p. 51): 1) substantial value dealing with reduced costs, increased revenues, enhanced transaction efficiency, improved coordination, profit and production volume, and 2) cognitive type of value dealing with innovation, learning, knowledge, risk sharing, competence, market position, social rewards, creating new markets, new products and services. For example Walter, Ritter and Gemünden (2001) have distinguished two main sets of functions of a customer relationship in creating the supplier-perceived value: direct functions of a customer relationship (profit, volume and safeguard functions), and indirect functions of a customer relationship (innovation, market, scout and access functions).

One more possibility to discuss the different value creation is to distinguish three perspectives of customer value (Ulaga 2001, p. 317): the customer’s perspective (value creation through products and services), the supplier’s perspective (value creation through customer equity), and the customer-supplier perspective (value creation through networks).

### **Value Creation in the Context of Theory of Constraints and Business Network Relationships**

Common denominators of categorizations TOC approach to value creation are focus on performance results and the number of parties making changes in their processes. From the business network point of view it is important to distinguish levels of relationships which determine the nature of value. All these aspects are considered in the Table 1. Adding two TOC common denominators allows to distinguish better different relationships levels. From the standpoint of relationship management it is important to have clear criteria for distinguishing different relationship levels. Value creation in itself is not a good criterion as it is assumed that in every level all participants gain value. Distinguishing factors are the focus of the value creation and who is the change maker. Focus on the performance

results will lead to creation of substantial value defined in business relationships network value concept. In case of last relationship levels cognitive type of value is more applicable.

**Table 1.** Differences of relationship levels based on focus of value creation

Relationship level	Focus of value creation	Assumptions
On the level of focal firm	<ul style="list-style-type: none"> <li>• Focus on the performance results of the focal firm.</li> </ul>	<ul style="list-style-type: none"> <li>• Supplier's value proposition is valuable for customer,</li> <li>• Only supplier has to make changes for offering higher value.</li> </ul>
On the dyadic level	<ul style="list-style-type: none"> <li>• Focus on the performance results of the customer,</li> <li>• Cognitive type of value.</li> </ul>	<ul style="list-style-type: none"> <li>• Supplier's performance indicators improve,</li> <li>• Mainly supplier has to make changes for offering higher value: change processes, principles, etc.</li> </ul>
On the level of focal firm's relationship portfolio	<ul style="list-style-type: none"> <li>• Focus on the performance results of the direct partners of the focal firm,</li> <li>• Cognitive type of value.</li> </ul>	<ul style="list-style-type: none"> <li>• Performance results of whole supply chain or actors of network improve,</li> <li>• Several (all) actors of network have to make significant changes: change principles, change processes etc.</li> </ul>
On the level of connected relationships	<ul style="list-style-type: none"> <li>• Cognitive type of value.</li> </ul>	
On the level of business network	<ul style="list-style-type: none"> <li>• Cognitive type of value.</li> </ul>	

Source: compiled by the authors on the basis of Walter, Ritter, Gemünden 2001; Ulaga 2001; Gadde, Snehota 2000; Walter, Hölzle, Ritter 2002; Forsström 2005; Ramirez 1999; Baraldi, Strömsten 2006, Goldratt 1994.

There is important to realize that a change in one or more relationships can lead to wider outcomes also in other relationships in network or the network as a whole. For example recent developments of approaches of TOC emphasize the need to look for other partners outside the existing business relationship network in order to solve customer's chronic problems and create higher value. Also approaches for improving customer's clients performance results are promoted. These approaches have to be studied further in order to add them to the existing value creation categorization.

## Research Method

The impact of the value proposal to business network is analyzed using a case study method. Easton has identified the case study method as the most suitable method for analyzing business networks. Case research makes possible to study causal links and interdependencies between actors in business network. (Johnsen, Johnsen 1999) Using case study it is possible to analyze the actions which were taken for implementing value proposal and the influence of specific action or event to the business relationship with focal firm's partner. Using this kind of in-depth analyzes it is possible to understand and explain the connection between implementation of value proposal and development of business network.

In the case of this study, the rationale for using the single case study design is that the value creation using the value proposal in the Theory of Constraints and business network context has not been researched in this way before and therefore focusing on one case with an exploratory aim can give rise to many interesting topics for future research. According to Yin (1994) single case study may be conducted as a prelude to further study – a pilot case study – where the main selection criteria of the case can be convenience, access, and geographic proximity. Cases of TOC implementation in literature do not cover impact on business network relationships. Authors' good access to Estonian implementers of TOC lead to analysing the impact of TOC value proposition on business network relationships on the example of Estonian companies.

In order to increase the relevance of case study results following criteria were chosen for selecting case studies: company had fully implemented Theory of Constraints at least for three consecutive years, impact of Theory of Constraints based value proposal was verifiable, and company was active in business-to-business markets. Authors were able to identify 12 cases of Estonian companies who have implemented Theory of Constraints. Out of these twelve only one company filled all three criteria. Estonian industrial supplier Alas-Kuul servicing majority of Estonian manufacturing companies was chosen for in-depth case study. Alas-Kuul CEO was interviewed six times over the period of 2000-2005. Competitors performance indicators in 2003-2004 and results of client satisfaction research among 50 major clients of Alas-Kuul conducted in 2003 were also used.

## Case of Alas-Kuul Ltd: Value Proposition and Relationships in Business Network

Alas-Kuul is an Estonian company formed in 1993 and is selling machines and components to industries, and offering maintenance of machines. It competes in four areas: bearing, industrial gear units, compressors and welding. In 1998 market share in first three sectors was 40-45% and in the welding sector 15-20%. Competition summed up to different 40–50 major competitors. Market share of closes competitors was around 10-15% of specific market. Alas-Kuul has its offices and warehouses in four major cities in Estonia. Its customers are most of the major businesses of Estonian industrial sector.

In 1999 after Russian market crash and 36% decrease in operating profits Alas-Kuul used Theory of Constraints value creation concept for developing better value proposition. After interviewing their main customers following six problems were found the most common:

- Alas-Kuul and its competitors don't react fast enough to customer's requests and changes in needs;
- The customers must pay for components that are not used at the moment;
- Sometimes components will be delivered late;
- Sometimes gaps in stock create the stoppage of work, which causes loss of production/sales;
- The purchase function must make extra work and pay extra money in order to get needed components on time;
- Usually the stock of components is larger than needed.

Using TOC analysis techniques Alas-Kuul found four company policies which amplified the problems of their customers:

- **Sales policy** – belief that the best way to sell industrial products is to use product focused approach and salesmen specialized on some specific product group. Sales policy limited the communication with customers to a minimum and gave no opportunity to identify customer's needs outside specific product group. As most salespeople were competent only in one group of components, they could not answer customer's questions about other components availability, prices or quality.
- **Batch policy** – salespeople tried to sell as big batches as possible and were not motivated creating smooth stock flow by small and frequent orders. The batch policy motivated also the customers to order in big batches infrequently. This resulted in increasing inventory, and money was for a long time tied under the stock that was not needed at the time. Increasing debts to supplier, making extra orders from different suppliers for filling the gaps in stock were direct results of these policies.
- **Inventory policy** – belief that the best way to offer fast deliveries is to have full warehouses in all cities they operated in.
- **Service policy** – customer is solely responsible for improving their purchasing department's performance. The policy materialized in a belief that it is not Alas-Kuul problem if client's purchasing department can not forecast precisely how much items they need and run suddenly out of stock.

After understanding the source of the problems, Alas-Kuul decided to take responsibility for customer's purchasing department's results. In order to do that several changes were made:

- Central warehousing and replenishment based delivery,
- Discount based on yearly sales,
- Segmenting market based on needs and problems.
- Internet-based information system about products and stock in customer's and Alas-Kuul warehouse,
- Created roles of customer manager, product expert and salesperson,
- Salary and bonus schemes for Alas-Kuul employees were changed to profit sharing approach.

Results of Theory of Constraints implementation are given in table 2. One of the common problems of change management is reliance on achieved success and excessive self-confidence. This negative side-effect materialized also in Alas-Kuul. During 2001 Alas-Kuul started implementing new stock management software without paying any attention to potential effects to revenue, inventory and operating expenses and created several negative effects (see table 2). Only at the end of 2003 Alas-Kuul could solve all the problems of information system and get the main warehouse buffer stock to

pre-implementation level. In addition, it turned out that not all customers knew how to measure the benefits of replenishment based system (starting point level was not determined). Several customers' purchases of industrial supply were too small for replenishment based system to have any effect.

Even more, on the bearings market Alas-Kuul main products became commoditized by competitors starting importing high quality and low cost bearings. The initial effect of customers evaluating Alas-Kuul service higher than competitors low cost deteriorated rapidly. Competitors increased in size and revenue faster than Alas-Kuul.

**Table 2.** The value of Alas-Kuul “unrefusable offer” for different counterparts in business network

Time	Value for Alas-Kuul	Value for the customers of Alas-Kuul	Value for other actors in business network
2000 after the implementation of value proposition to the customers of Alas-Kuul	<p>Direct functions of customer relationship:</p> <ul style="list-style-type: none"> <li>• 36 long term contracts;</li> <li>• increased revenue 25% and operating profit 46%, main warehouse inventory turn over from 7 turns to 15 turns;</li> <li>• safeguard function;</li> <li>• decrease of inventory -11%, loss of gaps in stock, cash flow problems;</li> <li>• growth of operating expenses slowed down;</li> <li>• fluctuations in demand decreased.</li> </ul> <p>Indirect functions of customer relationship:</p> <ul style="list-style-type: none"> <li>• motivation of employees,</li> <li>• creation of new market based on the current successful experience in value proposition,</li> <li>• increase of customers' trust.</li> </ul>	<p>Direct functions of supplier relationship:</p> <ul style="list-style-type: none"> <li>• decreased risks for revenue losses due work stoppage,</li> <li>• decrease of inventory,</li> <li>• loss of gaps in stock,</li> <li>• decrease of depts,</li> <li>• (-) long term dependence on a new and uncertain system.</li> </ul> <p>Indirect functions of supplier relationship:</p> <ul style="list-style-type: none"> <li>• better service of customers,</li> <li>• increased trust toward supplier.</li> </ul>	<p>Suppliers:</p> <ul style="list-style-type: none"> <li>• less fluctuation in Alas-Kuul orders,</li> <li>• decrease of depts.</li> </ul>
2001 – 2003 the implementation of a new order management software	<ul style="list-style-type: none"> <li>• (-) increase of inventory, the gaps in inventory, operating expenses,</li> <li>• (-) decrease of the number of customers using internet based purchasing system,</li> <li>• 58% of top customers with “unrefusable offer” valued Alas-Kuul to be the best supplier compared to 21% of other customers,</li> <li>• dissolution of low value relationships (vehicle parts customers).</li> </ul>	<ul style="list-style-type: none"> <li>• (-) some customers did not know how to measure the benefits of replenishment based system,</li> <li>• (-) replenishment based system did not have any effect in the case of small purchasing volume.</li> </ul>	<p>Competitors:</p> <ul style="list-style-type: none"> <li>• took advantage from the self-confidence of Alas-Kuul based on their “unrefusable offer” and with lower prices increased their revenue, profit and customer base.</li> </ul>
2004 – 2005	<ul style="list-style-type: none"> <li>• high inventory turns as significant competitive edge (18-20 turns compared to 1,5-9 turns of competitors)</li> </ul>	<ul style="list-style-type: none"> <li>• for some customers benefits of replenishment based distribution are expanded to whole inventory (turns from 3-5 to 18-20)</li> </ul>	<ul style="list-style-type: none"> <li>• Logistics company has created long term interdependence with Alas-Kuul</li> <li>• Alas-Kuul starts offering inventory management service to its suppliers (turns from 2 to 18-20)</li> </ul>

Alas-Kuul took several steps of changing the principles they followed. The main changes influencing the revenues and profitability include selling off consumer branch of the company in 2003 (loss of sales about 3-4 millions), and decreasing about 20% the prices of bearings in 2004. The latter step is considered as an investment project with two year payoff.

Despite the changes in bearings market and problems with software implementation in 2005 Alas-Kuul was in position of becoming one of the most efficient stock management companies in industrial suppliers sector (table 2). For speeding up inventory management Alas-Kuul gave its main warehouse with its stock handling team to Alas-Kuul logistic service partner.

Low turn over of stock is also common for industrial companies. One of the actions taken by Alas-Kuul is taking over the store management of some companies. In their case the store management means whole store and not only some industrial supplies. Current inventory turns are 3-5 in most production

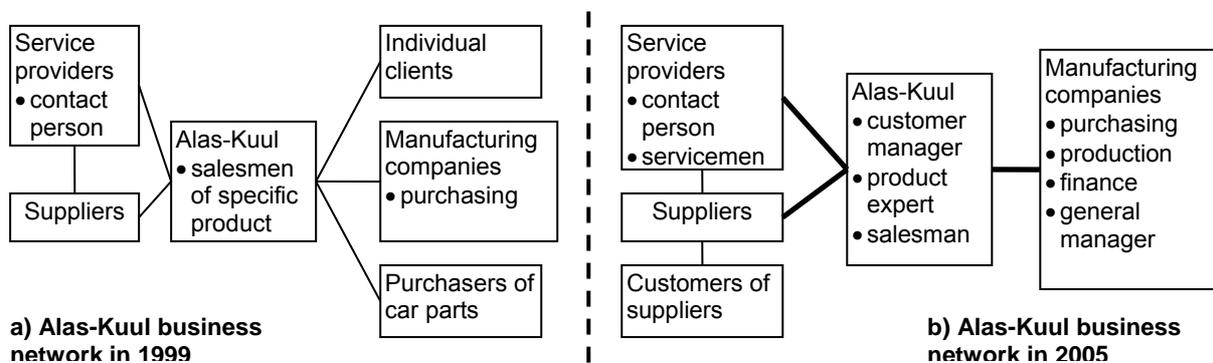
companies. In addition, Alas-Kuul owners are developing software and a team for offering replenishment based distribution management to their current suppliers who could benefit significantly from turns increase from 2 to 20.

## Research Findings

The value proposal developed by Alas-Kuul using principles and analysis techniques from Theory of Constraints consisted of new distribution solution where stocks of customers were replenished weekly based on previous weeks consumption. Replenishment-based distribution decreased dramatically stock of Alas-Kuul and customers. In addition, customers had to pay only for units replenished and discounts were based on yearly consumption not order size. Later preemptive maintenance service was added allowing manufacturing customers to determine state of critical parts inside main machinery without opening up the machine. Implementation of these changes required radical changes also inside Alas-Kuul: changes in salary system, changes in roles of employees, changes in planning and reporting, changes in managerial accounting, changes in logistics and stock management, changes in proposal making process to customers. The implementation of value proposition had some drawbacks during last five years but in general has strengthened performance results and business network relationships. In terms of value creation focus Alas-Kuul started with focusing on its own performance indicators, which later enabled to focus on customers' performance indicators. The latter has lead to focusing on the firm's relationship portfolio performance and has had impact beyond traditional dyadic relationships.

Additionally to the internal changes in company the use of concept of value proposition brought along quite many changes with partners of the firm: the number of suppliers was decreased, changes in the principles of supply with main suppliers, service concentration only to business customers, major changes in the relationships with business customers, significant increase in cooperation with one of the transportation service providers of Alas-Kuul. The level of trust and value from cooperation increased for all counterparts. This changed relationship with transportation service provider supported very much the increase of the value for the customers of Alas-Kuul and through it also value for Alas-Kuul itself.

The effects on network from development of new value proposition and changing internal process have been twofold. Firstly, the network horizon and the context of business network of Alas-Kuul has changed (see Figure 1). Secondly, the quality of relationships has increased. The relationships between different partners have become stronger – the increase of trust and communication (marked on the figure with bolder line). With more interaction Alas-Kuul has get to know better its suppliers and relationships with them have became stronger. Also customers with whom new value proposition has had an effect are willing to expand the cooperation even further (Alas-Kuul took over whole inventory management) which can lead to higher value generation for both parties. Thirdly, also the quantity of relationships on the firms' level has increased. Compared to the time before the implementation of the value proposition the number of persons through whom there is connection between partners is increased (the contacts in the firms are listed on the figure).



**Figure 1.** Changes of the business network of Alas-Kuul

Changes in company lead also to dissolution of some Alas-Kuul relationships. As the implementation of new value proposition forced the company thoroughly analyze the needs of the customers, its own abilities and also abilities and possibilities of its suppliers Alas-Kuul could focus on important

relationships which were crucial for future successful business. Focusing and initially decreasing counterparts it was possible to increase value for majority of customers and other business partners thereby also to the company. Alas-Kuul now reached the situation where they are looking new markets for growth which will probably mean enlargement of their business network.

The analysis indicates that the success of major changes in supply process and the use of new concept are related with previous good and close relations both with customers and suppliers of Alas-Kuul. Also the company management was willing to re-visit their assumptions about value proposition development and management several times and take management as a constant learning process.

After successful implementation of value proposition Alas-Kuul tries to strengthen its position in business network by increasing the role in their main suppliers and customers business. For current major suppliers Alas-Kuul is developing a value proposition based on a distribution management service. The current suppliers will become now also customers. For current major suppliers a new value proposal is developed for taking over the management of whole customer warehouse. In this way Alas-Kuul increases even more the interaction, trust, cooperation and also interdependence in the relationships with main customers and suppliers. The important issue for Alas-Kuul now and in the future is continuously determine and observe relationships which high interdependence could become ineffective and hinder further growth of the company.

### **Theoretical and Managerial Contribution**

The theoretical contribution of this paper is making connection between the Theory of Constraints and industrial network theory in the view of value creation. Combining relationship levels with TOC focus of performance and change maker criterions helps to understand and analyze value creation in the context of business network relationships.

The main managerial contribution of this paper is defining possibility for value creation which leads to stronger competitive position. The research offers also insight into process of developing value proposal using Theory of Constraints and insight into possible impact of value proposition to business relationships. These results help companies in analyzing their own possible or needed changes in their firm's business network and increase capabilities of value proposal development.

Results and conclusions of the paper are limited by the used case study method and single case approach. Further research and in-depth analysis of multiple cases is required.

### **Reference**

- Anderson, James C. and James A. Narus (1998), "Business Marketing: Understand What Customers Value," *Harvard Business Review*, 76 (6), 53-65.
- Baraldi, Enrico and Torkel Strömsten (2006), "Embedding, Producing and Using Low Weight: Value Creation and the Role of the Configuration of Resource Interfaces in the Networks Around IKEAS's Lack Table and Holmen's Newsprint," *The IMP Journal*, 1 (1), 52-97.
- BlankenburgHolm, Desiree; Eriksson, Kent and Jan Johanson (1999), "Creating Value Through Mutual Commitment to Business Network Relationships," *Strategic Management Journal*, 20, 467-486.
- Caspari, John A. and Caspari, Pamela. (2004), *Management Dynamics: Merging Constraints Accounting to Drive Improvement*. US: John Wiley & Sons.
- Forsström, Birgitta (2005), "Value Co-Creation in Industrial Buyer-Seller Partnerships – Creating and Exploiting Interdependencies. An Empirical Case Study," doctoral dissertation, Åbo Akademi.
- Gadde, Lars-Erik and Ivan Snehota (2000), "Making the Most of Supplier Relationships," *Industrial Marketing Management*, 29, 305-316.
- Goldratt, Eliyahu M. (1990a), *The Haystack Syndrom, Sifting Information Out of the Data Ocean*. US: North River Press.

- Goldratt, Eliyahu M. (1990b), *Theory of Constraints. What is this thing called Theory of Constraints and how should it be implemented*. US: North River Press Publishing Corporation.
- Goldratt, Eliyahu M. (1994). *It's Not Luck*. US: North River Press Publishing Corporation.
- Goldratt, Eliyahu M. (1999), *Marketing*. Satellite Proadcast.
- Goldratt, Rami (2000). *Nine Layers of Resistance*. TOC for Education conference. New-Mexico, 27. August 2000.
- Håkansson, Håkan and Ivan Snehota (1995), *Developing Relationships in Business Networks*. Routledge: London.
- Havila, Virpi and Asta Salmi (2000), „Spread of change in business networks: an empirical study of mergers and acquisitions in the graphic industr,“ *Journal of Strategic Marketing*, 8, 105-119.
- Houle, Dale. (1998) Persuading the Customers to Buy. Transcript of a presentation at the Jonah<sup>SM</sup> Upgrade Workshop/TOC Symposium in May 1998 in London, UK.
- Johnsen, Rhona E. and Thomas E. Johnsen (1999), „International market development through networks. The case of the Ayrshire knitwear sector,“ *International Journal of Entrepreneurial Behaviour & Research*, 5, 6, 297–312.
- Kendall, Gerald. I. (1998), *Securing the Future. Strategies for Exponential Growth Using the Theory of Constraints*. US: St. Lucie Press.
- Mabin, Victoria J. and Steve. J. Balderstone (2000), *The World of the Theory of Constraints: A Review of the International Literature*. Saint Lucie Press.
- Mandjak, Tibor and Judit Simon (2004), „An Integrated Concept on the Value of Business Relationships. How could it be useful?“ 20<sup>th</sup> Annual IMP Conference in Copenhagen, Denmark.
- Noreen, Eric W., Smith, Debra A. and James T. MacKey (1995), *Theory of Constraints and Its Implications for Management Accounting*. Great Barrington, MA: The North River Press.
- Porter, Michael E. (1985), *Competitive advantage: creating and sustaining superior performance*. New York: Free Press.
- Ramirez, Rafael (1999), „Value Co-Production: Intellectual Origins and Implications for Practice and Research,“ *Strategic Management Journal*, 20 (1), 49-65.
- Ritter, Thomas; Wilkinson, Ian F. and Wesley J. Johnston (2004), „Managing in complex business networks,“ *Industrial Marketing Management*, 33, 175-183.
- Ulaga, Wolfgang (2001), „Customer Value in Business Markets. An Agenda of Inquiry,“ *Industrial Marketing Management*, 30, 315-319.
- Walter, Achim; Hölzle, Katharina and Thomas Ritter (2002), „Relationship Functions and Customer Trust as Value Creators in Relationships: A Conceptual Model and Empirical Findings for the Creation of Customer Value,“ published at the 18<sup>th</sup> IMP-conference in Dijon, France.
- Walter, Achim; Ritter, Thomas and Hans Georg Gemünden (2001), „Value Creation in Buyer-Seller Relationships. Theoretical Considerations and Empirical Results from a Supplier's Perspective,“ *Industrial Marketing Management*, 30, 365-377.
- Wilkinson, Ian and Louise Young (2002), „On Cooperating: Firms, Relations and Networks,“ *Journal of Business Research*, 55 (2), 123-132.
- Yin, Robert K. (1994), *Case Study Research. Design and Methods*. Thousand Oaks:Sage, Second Edition.