

# LEAN MANAGEMENT IN PROJECT SALES PROCESS

Fire System Business

LAHTI UNIVERSITY OF APPLIED  
SCIENCES

Masters Degree programme in  
International Business

Management

Master's Thesis

Autumn 2018

Pasi Posti

Lahti University of Applied Sciences

Degree Programme in International Business Management

POSTI, PASI:                      Lean Management in Project Sales Process  
Fire System Business

Master's Thesis                      69 pages, 7 pages of appendices

Case: Fire System Business

Autumn 2018

## ABSTRACT

Companies are forced to adapt into rapid change in order to sustain their competitive advantage in the market. Therefore their business processes must be as efficient as possible. One of the process development models is Lean Management which was used in this Thesis. The goal of the Lean Management is to create one unified flowing process from customer needs to the final product or service by examining and excluding anything but the factors improving every aspect of the process.

The research was carried out in a technical building service company. The aim of the Thesis was to have more efficient and more simple Project Sales process than before. This new process was to sustain quality in high level and was aiming at maximising customer value and its benefits to the company. The theoretical part of the study was based on domestic and international professional literature and internet articles in Process and Lean management as well as Kaizen with Six Sigma principles.

The empirical part of the research was carried out by documenting the Case company's Project Sales process from Prospect to the Sales Order. This documentation showed what the customers valued most in Project Sales process. Furthermore, interviews were made to the company's eight biggest customers. From those interviews valuable information was derived for developing the Project Sales process and ultimately adding to Customer Experience.

As a result, the company's Project Sales process was made more efficient. This was presented by a Fishbone model where the Project Sales process was described, with no waste anymore. Faster and more efficient process saved time and money for the company and its customers and kept them more satisfied than before. Also, for the last three years, the company's turnover in projects was increased by 15 % per year in topline, and 20% better in overall result yearly.

Key words: Lean Management, Project Sales, Sales Process, Six Sigma, Customer value:

Lahden ammattikorkeakoulu

Degree Programme in International Business Management

POSTI, PASI: Lean Management in Project Sales Process  
Fire System Business

Master's Thesis, 69 sivua, 7 liitesivua

Syksy 2018

## TIIVISTELMÄ

Yrityksen on pystyttävä reagoimaan muutoksiin nopeasti ja tämän vuoksi yrityksen prosessien on oltava mahdollisimman tehokkaita. Tällöin yritys voi saavuttaa kilpailuetua alan muihin toimijoihin. Tässä kehittämisprojektissa on käytetty prosessin kehittämiseen lean management -mallia. Se on prosessin kehittämismalli, jonka tavoitteena on luoda mahdollisimman häiriötön, sulavasti virtaava prosessi asiakastarpeesta lähtien tuotteen tai palvelun valmistumiseen asti. Leanin pääidea on maksimoida asiakkaan kokema arvo, mihin pyritään eliminoimalla asiakasarvoa tuottamattomia tekijöitä.

Tutkimuksessa kehitettiin talotekniikka-alalla toimivan yrityksen projektimyyntin prosessia. Tässä käytettiin apuna Lean Management mallia. Tutkimuksen tavoitteena oli saada yrityksen projektimyyntin prosessi tehokkaammaksi ja yksinkertaisemmaksi kuin aikaisemmin. Tutkimusongelmaksi määriteltiin projektimyyntiprosessin tehostaminen laadusta tingimättä ja maksimoimalla asiakasarvon ja sen tuomat hyödyt yritykselle. Tutkimuksen teoriaosuus pohjautuu Lean Managementin ja Kaizen sekä Sig Sigman periaatteisiin.

Opinnäytetyön empiirinen tutkimusosuus toteutettiin dokumentoimalla projektimyyntiprosessi alusta loppuun. Siitä saatiin suoraan tietoa, jota asiakkaat arvostavat myyntiprosessissa. Kahdeksan isointa asiakasta haastateltiin, mistä saatiin arvokasta lisäinfoa siitä, mitä he haluavat yritykseltä myyntiprosessin kehittämisessä ja asiakaskokemuksen parantamisessa.

Tutkimustulokset näyttävät tehokkaamman ja yksinkertaisemman myyntiprosessin. Tehokkaampi projektimyynti prosessi säästää aikaa ja rahaa asiakkaille, mikä vaikuttaa positiivisesti heidän ja myös yrityksen tulokseen. Todisteena tästä muutoksen jälkeen yrityksen projektimyyntin liikevaihto on noussut 15% per vuosi ja tulos 20 % vuosittain kolmen vuoden ajan. Tulos osoittaa lean-projektin implementoinnin olleen kokonaisuutena onnistunut.

Asiasanat: Lean Management, Projektimyynti, Six Sigma, Asiakkuusarvo, Myyntiprosessi

## Contents

1	INTRODUCTION	1
1.1	Background	1
1.2	Research strategy	1
1.3	Research questions and the aim of the Thesis	2
1.4	The structure of the Thesis and methods	4
2	LEAN MANAGEMENT	6
2.1	Lean Management model	6
2.2	Business Process Management (BPM)	6
2.3	Short history of Lean	8
2.4	What is Lean?	8
2.5	Lean Management today	10
2.6	Lean Thinking and implementing Lean	11
2.7	Three P of Lean Management are Purpose, Process and People	12
2.8	Transformation of Lean Management	14
2.8	Lean Management in our Project Sales process	14
2.10	Value stream and process development	16
2.11	Master Plan of the company and A 3 report	19
3	KAIZEN AND SIX SIGMA	22
3.1	Kaizen with Six Sigma ensures continuous improvement	22
3.2	The Continuous Cycle of Kaizen activity	22
3.3	Implementing Kaizen	23
3.4	Using Kaizen with Six Sigma	24
3.4.1	Selecting the Right Project Focus Area	25
3.4.2	Sales Force Efficiency and Effectiveness Projects	26
3.4.3	Voice of the Customer Projects	27
3.5	Using Data Analysis to Identify Six Sigma Sales Projects	28
3.6	Putting Six Sigma to work in Business to Business Sales	32
3.6.1	Focus What Customers value in the Buying Process	33
3.7	The Loyalty Baseline	34
4	PROCESS AND PROJECT MANAGEMENT	37

4.1 Process and Project Management are keys for success in business projects	37
4.2 Business process management (BPM) projects	41
4.3 Follow these actions in your operations	42
5 PROJECT SALES PROCESS	43
5.1 Example Process from Prospect to Sales Order	43
5.2 Phase card	46
5.3 Evaluation Form	48
5.4 Key processes in Fire System Business	50
5.5 Poor Sales Project	51
5.6 Effective Project Sales Process	53
6 CUSTOMER RESEARCH	56
6.1 Case company's customer research	56
6.2 Customership and Projects Sales	57
6.2.1 Handling of the processes	58
6.2.2 Handling of the customerships?	60
6.2.3 Case company's position in the market and market share in customers projects	61
6.2.4 Company's customer share improvement	62
7 CONCLUSIONS	65
7.1 Results of the survey and actions for more efficient projects	65
REFERENCES	70
APPENDICES	75

# 1 INTRODUCTION

## 1.1 Background

In late 2014, Honeywell decided to change its business model into Distribution Business model. This change took place in Finland where the Case company of this Thesis continued Honeywell's Life Safety Business in Fire Systems. At the same time the Case company needed to figure out how this new company could do business more efficiently than Honeywell had done before. Most of the company's business was Project Sales from Prospect to Sales Order.

The Thesis writer's experience from the field of business covers over 25 years from leading both international and domestic companies. During that time I have specialised to develop different kinds of sales projects. Simultaneously, I have grown an interest in Project Sales. My Thesis topic is Lean Management in Project Sales Process. The Aim of this Thesis is to make more simple and more efficient Project Sales process than what the company had during its Honeywells time. I believed that would lead to a faster Project Sales Process and in that way better customer satisfaction and business result.

## 1.2 Research strategy

The goal of the Thesis is to find out how the Project Sales Process can be made more efficient and more simple than it has been before. For this to take place, the costs and benefits of customer value and profit needed to be measured. To show all of this I will use process card where I handle process from Prospect to Sales Order and look into each phase of the process from point of view whether there is something in the phases of the process that is not needed or can be done more efficiently than it has been done.

To achieved a better functioning process, I need to develop strategies for measuring outcomes or progress toward goals. After this I must identify data that I can use or I need to gather. After this I must analyze my data and report my results. Finally, I have to make most out of my findings and propose a model as the company's new Project Sales process as a part of the company's business model in expanding.

I will use Lean Management as a strategy when I am changing our Project Sales Process. As a small organisation we need to think how we can create more value to our customers with fewer resources. The main idea of the Lean is to maximize customer value and at the same time minimize the amount of waste. A lean organization understands customer value and focuses it's key processes to all the time increasing the value. Beneath lies the very main understanding of the customer paying our salaries. Our company goal is to provide perfect value to the customer through effective value creation process that has no waste.

### 1.3 Research questions and the aim of the Thesis

The main research question in this Thesis is:

How can our company make our Project Sales process more efficient and more simple than it is today?

Now our company uses lot of time in different phases of our Project Sales process. As a reader, you can see these time consuming issues and phases in Poor Sales Process Fishbone in page 46. By solving these issues, I think I will find answers to our main question. In order to find the answers to our main question, I have to look into Business Process Management theory and also our Customer Experience presented in our customer survey. Lean and Kaizen theories help me to find the essential issues in our Project Sales Process, as well as they will help to cut waste from the process. In page 48, an effective Sales Process Fishbone is

presented. In it, when waste has been taken away from the process, as in the Lean and Kaizen theories, the result is an increase in Sales process, also presented in a Fishbone.

Second question is:

What are the benefits from more efficient and simple process to our customers and us?

Answering to this question justifies also the main question because finding answers to this our company will know why our Project Sales Process will need to be leaner and more effective.

Third question is:

How can our company keep the same quality in the new leaner Project Sales Process?

For answering this I need Lean and Kaizen theories. With the help of Lean and Kaizen models, I will cut not needed phases in our Project Sales Process. This can be seen in pages 41 – 46 from Prospect to Sales order process. This can be seen especially in page 46, where the evaluation of the process is made.

The research was carried out to our company's 8 partners/biggest customers and we agreed not to publish their names in this Thesis. Companies are the biggest players in the Finnish construction industry. If the companies are mentioned, their names will not show in any public releases. Appendices of this thesis research will not be published in the Internet because of data protection of the research companies.



#### 1.4 The structure of the Thesis and methods

First in the background part the change from a multinational fortune 500 company to small local distribution company business is presented. The difference in Project Sales process is huge in these companies. This Thesis aims to develop an efficient and more simple way to do Project Sales from how it is done in big companies. My strategy is Lean Management with which I can show how Project Sales process can be run smoothly and how the process can be made simple, and this all still creates value to the customers, as well better results for our company. In the beginning of the Thesis, Lean model and its principals are introduced. After this, there's a look on the Lean model and how it fits to the Sales Project Process. In the theoretical part of the Thesis Lean Management is used as theory of relevance to solve my problem. The three P's, the three fundamental issues of Lean Managements are Purpose, Process and People, and they will be in key role in my Thesis. Value Stream, Masterplan of the company and Six Sigmas are also covered in the theory part.

In the empirical part of the Thesis the Project Sales Process is documented from Prospect to the Sales Order. In that way, the reader also gets to see what customers value in Sales Process. Customer interviews shed light to what customers value. Customer loyalty is shown with Six Sigma tools. The focus is in customer value and how can we add it.

In the result part, I will analyse if I managed to make our Project Sales process more efficient with Lean. The results should show more efficient and simple Project Sales process. This is obtained by following the principles of Lean and by removing phases which are the so called waste in Lean Management theory. Faster and more efficient Project Sales process saves time and money for the customers and keeps them more satisfied than before. This new Projects Sales Process should also be a

competitive advantage for the company because with it we can have faster project processes than our competitors and save costs as well.

## 2 LEAN MANAGEMENT

### 2.1 Lean Management model

Lean management is from Car production industry especially from Toyota who create the Lean Management process and they are using this Process Development and Management model which has become common model to the many industries nowadays. The purpose of Lean model is to create process which does not have errors or breaks. This process is from voice of customer to the ready end product. The main idea of the lean is to maximize customer value and at the same time minimizing amount of waste.

A lean organization understands customer's value and focuses its key processes to all the time increase it. The main understanding is that customer is paying our salaries. Organisations goal is to provide perfect value to the customer through effective value creation process that has no waste. Important factor in lean is so called Kaizen which means continuous improving. These principles make sure that lean work continue also after lean implementation project.

Lean projects change process is divided following phases: analysing, developing, implementing and following. In this process employees are actively involved. In this way company can find sources of change in all the levels of organisation and changes can implement fast when needed. Lean has become heavily to the service industry as well especially when more efficient processes are needed.

### 2.2 Business Process Management (BPM)

For understanding the Lean model and its purpose. At first we have to understand what are the processes of the company and what is the goal of BPM? Companies functions are consisting from core operations and

support operations. Core processes are consisting from the series of these operations which Kiiskinen, Linkoaho and Santala are defining as operations inside organisation which are producing value to the customers. (Kiiskinen & Linkoaho & Santala 2002, 197). The outcome of these operations is value creating products or services to the end customer. Meaning of BPM is to renovate the core processes which creates extra value to the customer and gives them competitive advantage. (Hannus 1995, 4,19.)

BPM is focused for these core processes and mostly functions which create value to the customer. In this way BPM is looking for new innovative solutions and questioning the existing ways of doing processes. (Kiiskinen ym. 2002, 11, 30–38). This is also the base of lean thinking which focus to better customer value by focusing value creating relevant issues and minimizing waste.

Developing processes is always tight to companys vision, which strategic decisions are based on and what influences the selected BPM. Companies goal is to get competitive advantage in relation to other players of the industry. I chose Lean Management for BPM because I believe that it will make our Project Sales process faster and it creates more customer satisfaction and more business to case company.

That company could reach this goal, management focus should change from optimizing separate technologies, assets, and vertical departments to optimizing the flow of products and services through entire value streams that flow horizontally across technologies, assets, and departments to customers. By eliminating waste along entire value streams, instead of at isolated points, creates processes that need less human effort and space. Less capital and time to make products and services are needed and far less costs and with much fewer defects, compared with traditional business systems. In this way companies can respond to changing

customer needs and desires with high variety, high quality, low cost, and with very fast throughput times. Also, information management becomes more simple and more accurate than before.

(Lean Enterprise institute, TMac Focus of Lean)

### 2.3 Short history of Lean

Lean methodology has borned from need of change. When nations ideas for industrial development were light there need to be new actions to get more efficient ways against Henry Fords massproduction. (Womack & Jones & Roos 2007.) Toyotas production model TPS (Thinking Production System) was basis for lean and with that model Toyota got competitive advantage compared to its competitors who were also producing cars. The success key factor of Toyota was that they could produce different kind of cars in same production line. In that way their production was more efficient than their competitors and Toyota's customers were also more satisfied. At last Toyota developed a system where all the waste in the production process was minimized and process was flexible. (Liker 2006, 7-8, (Erllich 2002,) After developing TPS Toyota was in good situation, they could planned and produced cars in standardised process and quality. (Liker 2006, 3).

Lean thinking is from TPS- production started model which has been developed further and it has several variations. (Liker 2006, 7; Koskela 2004; Womack ym. 2007, 10) Womack and his colleagues presented lean to the Western countries.

### 2.4 What is Lean?

Basic idea of lean is minimizing functions which does not create added value to customers in company's processes. (Womack, 2007)

One of the most important part of lean is continuos improving which is possible when organisation has culture where mistakes are correcting

immediately after they have been noticed. This system is good for employee as well because they can affect themselves to solutions. Some other definitions for lean are for example from Liker who defines lean as habit where Toyotas TPS-system is used in every level of organisation focusing continuous oneway flow and meaning to improve process all the time. (Liker 2004, 7).

As above there are many definitions about lean. All of them agree from principles of lean. Lean is focusing for operations which create added value to the customer such as quality, price, flexibility etc. and result of these is optimal efficiency. The basis of this behaviour are customer needs which control processes to maximise customer value all the time. (Kajaste & Liukko 1994, 14-18; Hannus 1995, 213; Liker 2004; Wang & Chen 2010; Schipper & Sweets 2010.)

## 5 Principles of Lean

Basic principle of Lean is idea from process which does not have errors and it is transparency as well. This process flows from customer need to ready end product with no breaks or errors. Continuous improving of process and minimizing errors make this possible. Most important factors in these operations are factors which create more customer's value such as quality, price, continuous improvement, flexibility and faster reaction to the errors. (Hannus 1995, 215-217.) A five-step thought process proposed by Womack and Jones in 1996 guide managers through a lean transformation. The important five principles are: first you have to specify customer value. Then identify the value stream for product or service. After this make the value-creating steps flow so the product or service will move as smoothly as possible toward the customer. Then you must create JIT controlled flow. Finally after value is specified, value streams are identified, wasted steps are removed, and flow and pull are introduced aim for perfect flow and continuous improvement.

(Womack and Jones 1996, Koskela 2004; Womack & Jones 2003; Liker 2006.)

## 2.5 Lean Management today

Lean management is more common nowadays because companies have noticed its benefits in better quality, costs and delivery times. These issues have affected that lean has become popular also among service industry and administration. (Hämäläinen 2011; Mann 2010).

Lean model is quite easy to implement to different businesses because its key factors are customer values growth, standards, flow and continuous improvement. These factors are important for every decisionmaker. (Mann 2010, 9; South African Journal of Industrial Engineering November 2016 Vol 27(3) Special Edition, pp 79-91)

Today lean applies in every business and every process. It is not a tactic or a cost reduction program, but it is a way of thinking and acting for an entire organization. Businesses in all industries and services, including public sector and governments, are using lean principles as the way they think and do. Many organizations don't use word lean, instead they use words how company operates. Transformation or lean transformation describes better companies moving from old way of thinking to lean thinking. This confirms that lean is not a program or short-term cost reduction program, but it is the way the company operates. It requires a complete transformation on how a company conducts business. This takes a long-term perspective and perseverance. According to Jim Womack Ph.D. the term "lean" was coined to describe Toyota's business during the late 1980s when Toyota makes success story from its effective business operations. (Lean Thinking, James P Womack and Daniel T Jones)

## 2.6 Lean Thinking and implementing Lean

Implementing lean model to daily business requires always change in organisation culture and way of leadership because it affects employee daily routines. The aim of the lean is to be transparent and it grows employee knowledge about their own works tasks such as efficiency and knowhow and that old issues don't have to invent again. (Schipper & Sweets 2010, 4-7.)

Transparency and following key ratios give managers tools for better managing and following work. In this way goals are easier to follow as well. For creating these goals and following them personels involving is crucial because it makes easier to understand the change and commitment to the common goals which should focus to create added value to the customers. (Schipper & Sweets 2010, 83-85.) This also reduce counteractions to change.

Lean model goals are estimated by measuring and comparing immaterial and material products and services real results to expected ones where key ratios are based on the speed of the productivity, mistakes and lead time. (Mann 2010, 31). Even if mentioned key ratio are very concrete lean is not only for production industry. It is used for example to managing customer relationships which requires defining valuechains and continuos improvement. (Hannus 1995, 217) So lean.model fits both industrial and service industries whose processes are complicated but they also have repeatability which makes measuring and processes possible.

Lean model can not be separated from organisations functions. It must start from organisations need for change and it has to serve processes which create customer's value. According Tuominen lean model should support companys daily operations and be in line with future strategy. Company has to know mission, vision, values, strategy and goals which are wanted and which create basis for developing lean. (Tuominen 2010c,



4.) Successful lean implementation is based on strong values and devided company culture which is based on continuos improvement of effiency and tools such as motivation, entrepreneurship and sharing responsibilities.

(Hannus 1995, 218; South African Journal of Industrial Engineering November 2016 Vol 27(3) Special Edition, pp 79-91)

## 2.7 Three P of Lean Management are Purpose, Process and People

Lean Gurus Womack and Jones recommend that managers and executives of the companies should focus three fundamental business issues in lean transformations. These 3 lean transformations should guide the transformation of the hole organisation. These fundamentals are:

**Purpose:** What are those customer problems that company should solve to achieve its own purpose of prospering? Main purpose of every organization and first step in lean thought process is: Company have to correctly specify the value that the customer seeks. In that way company can cost-effectively solve the customer's problems and the organization can prosper. ( 2007, Womack and Jones)

**Process:** How will the organization assess each major value stream to make sure each step is valuable, capable, available, adequate, flexible, and that all the steps are linked by flow, pull, and leveling?

After purpose is clarified, company need to focus on the process (value stream) used to achieve this objective. This is the combined result of three processes: First product and process development, second fulfillment from order to delivery, and third support of the product and the customer through the product's useful life. These primary processes are made possible by doing many secondary support processes inside the organization. (In 2007, Womack and Jones)

The ideal process is one in which every step is valuable and customer is willing to pay step because it creates value. Process is producing a good result always and it is available all the time. Process is also adequate and it is running smoothly. Process has products in product family which moves flexible through process. In addition, the ideal process consists of 3 steps which are flow, pull and levelling. In flow product or service proceeds immediately from one step to the next without delays. Pull obtains what is needed from next upstream step when continuous flow is not possible. Levelling is smoothing operation of the process while the needs of customer are addressing. (2013, Principles of Lean; 2007 Womack, Jones)

People: After identifying the primary and support processes needed to create value for the customer, company has to make someone responsible for each value stream. This value-stream person must engage and align the efforts of everyone. Getting each value stream to move it toward and closer the customer while elevating performance from its current state to an ever-better future state. Doing this requires 2 things: Strategy deployment/A master plan for the company and frequent improvement cycles for each process. Which are often performed with A3 analysis embodying value-stream maps. Standard work with standard management for every step in each process is also needed. (In 2007, Womack and Jones simplified the five steps to these—Purpose, Process, people ; [providermagazine.com/columns/Pages/The-Principles-of-Lean.](http://providermagazine.com/columns/Pages/The-Principles-of-Lean.))

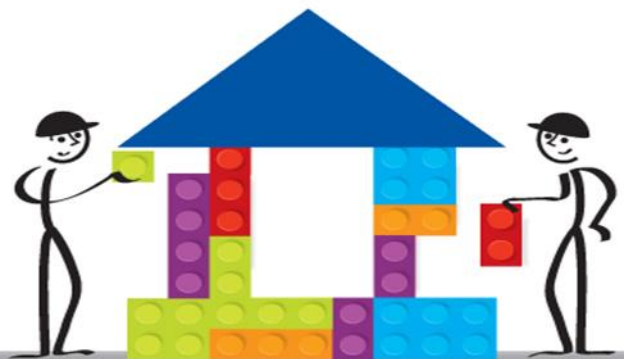
## 2.8 Transformation of Lean Management

# Lean Requires Total Transformation

TO ALIGN:

- *Process*
- *People*
- *Purpose*

TO CREATE VALUE



THE BUILDING BLOCKS FOR CONTINUOUS INNOVATION

FIGURE 1. Total Transformation.

According James Womack Lean thinkers need a hole vision and picture of the company before they can pick up right lean tools. 3 p:s are in the key role when doing this. Focusing deeply in purpose, process and people lean thinkers can use right lean tools in spesific company.

(Lean Enterprise Institute, James Womack)

## 2.8 Lean Management in our Project Sales process

When I am developing our Project Sales process more efficient I need to think deeply how 3 p are in case company today. I need to find out what are those customer's problems what I need to solve that case company could succeed better than it's competitors. By solving these customer's problems case company should change it's Project Sales process more

simple and towards customer needs. Case company need also to make sure that every step in it's Project Sales process value stream are valuable, available and useful and that they are linked by flow, pull and leveling. For case company's organisation this means that it's Project Sales process should have responsible person who evaluates the value stream in terms of business purpose and lean process. Case company should involve it's hole personel into the lean process in a right way. Purpose should also be continuos improving the process. Case company should also always try to simplifie complex issues. One way to do it is ask following questions when it is developing it's new process.

Most important question is what problem are company is trying to solve? Then it must ask how is it improving the actual work of people and how is it building capability? After this company must find out what leadership behaviors and management systems are required to support this new way of working? Last is company ready driving this transformation and what basic thinking, mindset, or assumptions comprise the existing culture?



FIGURE 2. Lean Transformation model.

(Lean Trasformation model, Shook)

## 2.10 Value stream and process development

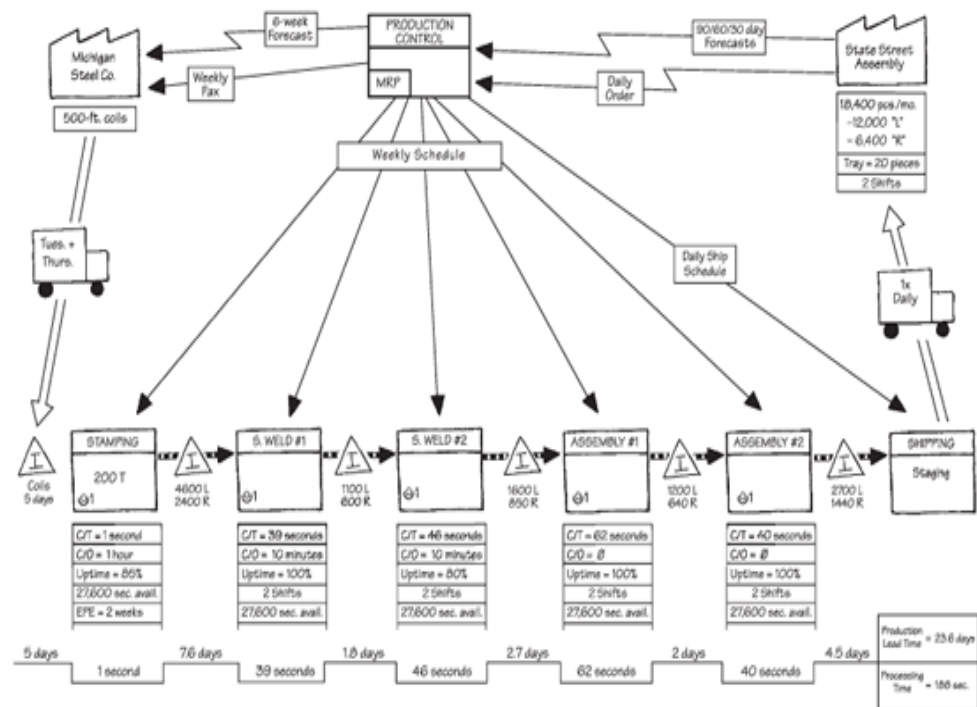
All of the actions, that create or not to create value are required to bring first a product from concept to launch (also known as the development value stream) and second from order to delivery (also known as the operational value stream). These include actions to process information from the customer and actions to transform the product on its way to the customer. For case company's Project Sales process value stream starts from customers quotation and ends invoicing the project. In the Middle there are several different phases:

Quotation to offer, from offer to order, from order to order confirmation, project work to delivery of goods, installation and end project work to invoicing and aftersales such as maintaining the system. In each phase of this selling process company needs to take consideration customers needs and how can it do this as efficient as possible and valuecreating to the customer. One good way to describe this project selling process is Value-Stream Mapping.

Value-Stream Mapping is a simple diagram of every step involved in the material and information flows needed to bring a product from order to delivery. Value-Stream Maps can be drawn a current-state map that follows process state today and futurestate map that shows the opportunities for improvement identified in the current-state map to achieve a higher level of performance at some future point.

See examples of Value-Stream Mapping below:

## Current-State Value-Stream Map



## Future-State Value-Stream Map

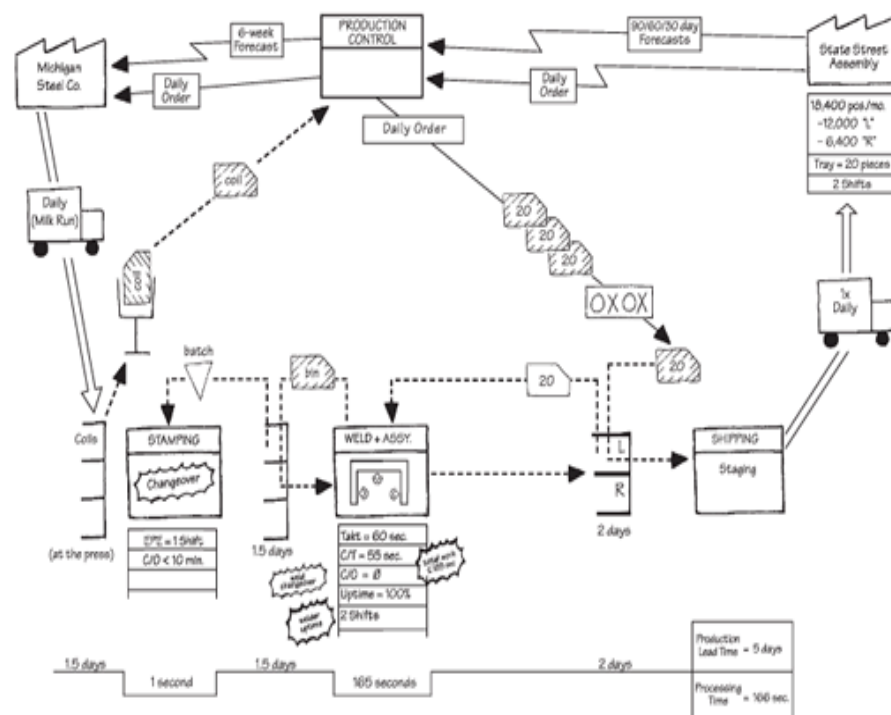


FIGURE 3. Value-Stream Mapping.

(Kaizen Institute, [uk.kaizen.com/knowledge-center/value-stream-mapping.html](http://uk.kaizen.com/knowledge-center/value-stream-mapping.html))

Lean product and Process development consists from four following core concepts: At first company must grow teams of responsible experts. These persons organize around product and process technologies that are central to the organization's competitive advantage. These units develop useable knowledge about their respective areas of expertise. They generate new knowledge and communicate that knowledge effectively to other team members. Then company need to support entrepreneur system designers. Give leadership of development projects to technically skilled and visionary people. They provide integrative knowledge to leverage the knowledge of the expert teams in innovating new products and production processes. After this company has to follow set-based concurrent engineering practices. Avoid the pitfalls of locking onto design solutions too early by exploring multiple alternatives simultaneously or aggressively evaluating the alternatives to eliminate weak ideas and improve the weak aspects of otherwise strong ideas. The last concept is that company must establish cadence, flow, and pull. Apply principles from lean production to level the introduction of new projects into the development organization, eliminate waste in information flows, and trigger development activities according to the needs of specific projects. (Adapted from Ward 2007;Lean Lexicon 5th Edition)



FIGURE 4. Lean product and process development.

In case company's Project Sales process it should get rid of all the waste that company could get maximum result in efficiency and customer value. At the beginning company should value what is its competitive advantage comparing to its competitors in company's Project Sales process. Then company should develop that advantage and tell it all its team members. At second phase company need to concentrate develop its process and give people power to their own thoughts and develop ideas. After this company should follow set-based concurrent engineering practises and avoid too early stage solutions. At the end company must establish cadence, flow and pull. The process should go from this step to another smoothly in Process continuously flowing.

#### 2.11 Master Plan of the company and A 3 report

Master plan of the company is a management process that aligns organization's functions and activities with its strategic objectives. It is a specific plan, which is made every year and it has exact goals, actions, timelines, responsibilities, and measures. Other name for Master plan of the company is Strategy deployment. Strategy deployment may start as a



top-down process when an organization launches a lean conversion. However, after the major goals are set, it should become a top-down and bottom-up process involving a dialogue between senior managers and project teams. Dialogue should be about the resources and time both available and needed to achieve the targets. Name of this dialogue is catchball (or nemawashi) because ideas are tossed back and forth like a ball.

The goal is to match available resources with desirable projects so that only projects that are desirable, important, and achievable are authorized. In this way company can avoid projects which they don't have resources or are otherwise hard to make ready. When company progresses its lean transformation and experience with policy deployment, the process should develop much more bottom-top-bottom, where each part of the organization proposes actions to management how to improve performance. Lean organization may call this process strategy alignment or policy management. See below example of the Master plan of the company. (Managing to learn, John Shook 2008)

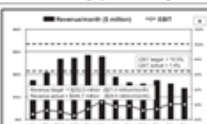
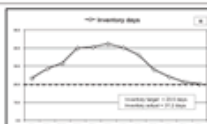
Focus: Profitability		Get Rid of the Waste		Dept: Finance																																																																																																										
<b>Performance, gaps, and targets</b> <div style="display: flex; justify-content: space-around;">   </div> <p> <b>Last year:</b> Revenue target = \$250 million            Actual revenue = \$246.7 million            EBIT target = 10%            Actual EBIT = 1.4%  <b>This year:</b> Revenue target = \$252 million            EBIT target = 5%            Cash-flow increase = \$10 million         </p> <p> <b>Last year:</b> Inventory target = 20 days            Actual inventory = 31.2 days  <b>This year:</b> Inventory target = 20 days            (\$6.3 million reduction)         </p>																																																																																																														
<b>Reflection on last year's activities</b> <table border="1"> <thead> <tr> <th>Activity</th> <th>Rating</th> <th>Key results / Issues</th> </tr> </thead> <tbody> <tr> <td>Improve new product development process</td> <td>R</td> <td>           Targets: Lead time &lt; 6 months            Actual &gt; 8 months            Too many engineering changes            Overseas price pressure intensifying            Are we in touch with the customer?         </td> </tr> <tr> <td>Cost reduction (focus: inventory, scrap)</td> <td>R</td> <td>No real progress; firefighting hindered effort</td> </tr> <tr> <td>Sales to wholesalers to offset OEM price pressure</td> <td>R</td> <td>Did not win any substantial programs</td> </tr> </tbody> </table>						Activity	Rating	Key results / Issues	Improve new product development process	R	Targets: Lead time < 6 months Actual > 8 months Too many engineering changes Overseas price pressure intensifying Are we in touch with the customer?	Cost reduction (focus: inventory, scrap)	R	No real progress; firefighting hindered effort	Sales to wholesalers to offset OEM price pressure	R	Did not win any substantial programs																																																																																													
Activity	Rating	Key results / Issues																																																																																																												
Improve new product development process	R	Targets: Lead time < 6 months Actual > 8 months Too many engineering changes Overseas price pressure intensifying Are we in touch with the customer?																																																																																																												
Cost reduction (focus: inventory, scrap)	R	No real progress; firefighting hindered effort																																																																																																												
Sales to wholesalers to offset OEM price pressure	R	Did not win any substantial programs																																																																																																												
<b>Analysis / Justification to this year's activities</b> <p>           Profit = Revenue - Cost; we have major problems in both areas.            Revenue: New products miss industry need of customer design (wholesalers) and air quality.            Cost: Inventory, cost of quality, and material waste have not been reduced.            To meet profitability targets we must:            1) Improve NPD process and give customers what they want.            2) Reduce waste.            3) Engage team members in waste reduction.         </p>																																																																																																														
<b>Signatures:</b> _____																																																																																																														
<b>This year's action plan</b> <table border="1"> <thead> <tr> <th>Goals</th> <th>Activities</th> <th>J</th> <th>F</th> <th>M</th> <th>A</th> <th>M</th> <th>J</th> <th>J</th> <th>A</th> <th>S</th> <th>O</th> <th>N</th> <th>D</th> </tr> </thead> <tbody> <tr> <td> <b>A. Better products to market quicker</b>  <b>Target:</b>            Lean time/launch &lt; 6 months            Eng. changes/new launch &lt; 5         </td> <td>           1. Connect manufacturing, NPD and sales (task force and review committee)            2. Learn new technologies (focus on custom geometries, air quality)            3. Reduce waste in NPD process            4. Implement visual management in NPD            5. Develop standards for throughput, work in process, and engineer utilization         </td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> <b>B. Reduce Waste — Find the "Hidden Bank Accounts"</b>  <b>Waste Reduction Targets</b>            Total = \$16.4 million         </td> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> <b>Inventory:</b>            11 days (\$6.3 million)         </td> <td>           1. Reduce machine instability (per Delivery strategy)            2. Focus kaizen events on inventory hot spots         </td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> <b>Cost of quality:</b>            20% (\$4.5 million)         </td> <td>           Focused kaizen events per Customer Satisfaction strategy         </td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> <b>Operating expense:</b>            5% (\$2.3 million)         </td> <td>           1. Implement departmental waste reduction plans            2. Renew waste "Catch of the Month"         </td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> <b>Material Cost:</b>            2% (\$2.1 million)         </td> <td>           1. Negotiate cost reductions with suppliers            2. Seek price indexing on steel, aluminum, and copper         </td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> <b>Overtime:</b>            20% (\$1.2 million)         </td> <td>           Reduce instability in 4Ms (man/woman, machine, method, and material) through targeted kaizen events         </td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>						Goals	Activities	J	F	M	A	M	J	J	A	S	O	N	D	<b>A. Better products to market quicker</b> <b>Target:</b> Lean time/launch < 6 months Eng. changes/new launch < 5	1. Connect manufacturing, NPD and sales (task force and review committee) 2. Learn new technologies (focus on custom geometries, air quality) 3. Reduce waste in NPD process 4. Implement visual management in NPD 5. Develop standards for throughput, work in process, and engineer utilization												<b>B. Reduce Waste — Find the "Hidden Bank Accounts"</b> <b>Waste Reduction Targets</b> Total = \$16.4 million													<b>Inventory:</b> 11 days (\$6.3 million)	1. Reduce machine instability (per Delivery strategy) 2. Focus kaizen events on inventory hot spots												<b>Cost of quality:</b> 20% (\$4.5 million)	Focused kaizen events per Customer Satisfaction strategy												<b>Operating expense:</b> 5% (\$2.3 million)	1. Implement departmental waste reduction plans 2. Renew waste "Catch of the Month"												<b>Material Cost:</b> 2% (\$2.1 million)	1. Negotiate cost reductions with suppliers 2. Seek price indexing on steel, aluminum, and copper												<b>Overtime:</b> 20% (\$1.2 million)	Reduce instability in 4Ms (man/woman, machine, method, and material) through targeted kaizen events											
Goals	Activities	J	F	M	A	M	J	J	A	S	O	N	D																																																																																																	
<b>A. Better products to market quicker</b> <b>Target:</b> Lean time/launch < 6 months Eng. changes/new launch < 5	1. Connect manufacturing, NPD and sales (task force and review committee) 2. Learn new technologies (focus on custom geometries, air quality) 3. Reduce waste in NPD process 4. Implement visual management in NPD 5. Develop standards for throughput, work in process, and engineer utilization																																																																																																													
<b>B. Reduce Waste — Find the "Hidden Bank Accounts"</b> <b>Waste Reduction Targets</b> Total = \$16.4 million																																																																																																														
<b>Inventory:</b> 11 days (\$6.3 million)	1. Reduce machine instability (per Delivery strategy) 2. Focus kaizen events on inventory hot spots																																																																																																													
<b>Cost of quality:</b> 20% (\$4.5 million)	Focused kaizen events per Customer Satisfaction strategy																																																																																																													
<b>Operating expense:</b> 5% (\$2.3 million)	1. Implement departmental waste reduction plans 2. Renew waste "Catch of the Month"																																																																																																													
<b>Material Cost:</b> 2% (\$2.1 million)	1. Negotiate cost reductions with suppliers 2. Seek price indexing on steel, aluminum, and copper																																																																																																													
<b>Overtime:</b> 20% (\$1.2 million)	Reduce instability in 4Ms (man/woman, machine, method, and material) through targeted kaizen events																																																																																																													
<b>Followup / Unresolved issues</b> <ol style="list-style-type: none"> <li>To achieve these aggressive goals we have to free up time. Main time wasters are meetings and e-mail.              — Eliminate unnecessary meetings and e-mail. Set corresponding standards to keep time clear.</li> <li>We are going to depend heavily on Manufacturing's Kaizen Office. Is it adequately staffed?              — Review and staff up as required.</li> <li>We have to involve our team members around waste reduction.              — Confirm plan with HR and manufacturing.</li> </ol>																																																																																																														
Author: Ed Wolf Version and date: V6																																																																																																														

FIGURE 5. Master plan of the company.

A3 report has got its name from Toyota. Toyota has created this report model which consists of the following: The problem, the analysis and corrective actions also the action plan are in the same A3 paper. The paper has many times graphics. This A3 report has become as a standard method in many businesses for summarizing problems solving exercises, status reports, and planning exercises for example like value-stream mapping. In most cases the value is created by lean product development processes. This is because almost all defective project results don't have the right knowledge at the right place at the right time. Usually lean companies spend more development time by creating and capturing knowledge than creating hardware. Knowledge is captured and then translated into specific applications where it can be reused to other projects. (Managing to learn, John Shook 2008)

### 3 KAIZEN AND SIX SIGMA

#### 3.1 Kaizen with Six Sigma ensures continuous improvement

What is Kaizen? Kaizen is a Japanese philosophy that focuses on continual improvement throughout of life. When thinking Kaizen in workplace, It's activities can improve every function of a business. Kaizens goal is to eliminate waste in all systems of an organization by improving standardized activities and processes. When you understand the basics of Kaizen, you can integrate with Six Sigma efforts. The purpose of Kaizen goes beyond simple productivity improvement. When Kaizen is done correctly, the process eliminates overly hard work, and teaches people how to highlight and take the not needed issues away from business processes. ([Leanproduction.com/kaizen](http://Leanproduction.com/kaizen))

#### 3.2 The Continuous Cycle of Kaizen activity

The continuous cycle of Kaizen activity has seven different phases. At first you must recognize an opportunity and analyze the process. After analyzing you have to find an optimal solution and implement it. When implementation is done study the results and standardize the solution. Finally create plan for the future. Kaizen generates small improvements as a result of coordinated continuous efforts by all employees. Here are some basic tips for doing Kaizen wisely. Company must replace old fixed ideas with new ones. It starts by questioning current practices and standards and seek the advice of many associates before starting a Kaizen activity. Then company need to think of how can it do something, not why it cannot do it. This is also important to remember that excuses are not allowed. Company has to make execution happen. Goal is to go right direction with the new solution and company need to correct something at once if a mistake is made. ([isixsigma.com/methodology/kaizen](http://isixsigma.com/methodology/kaizen))

Kaizen activities cover improvements in quality, cost and delivery areas. In quality point of view it means better products, service, work environment practise and processes. In cost wise meaning is reduced expenses and manpower also less use of material, energy and resources. Delivery is meaning faster delivery time. For management Kaizen means improvements in their daily actions such as reporting and planning for instance. In safety wise this means less hazardous situations and unsafe working conditions also less damages to the environment.

([isixsigma.com/methodology/kaizen](http://isixsigma.com/methodology/kaizen))

### 3.3 Implementing Kaizen

When implementing Kaizen to new organisation, everyone must begin to think about their work in a new way for following way which have three diferent stages now, next and new. Now means present condition, next means wanted state and new means how to reach wanted state.

This new way of thinking demands a lot from all employees especially from the managers because they should arrange and control following activities in the organisation when Kaizen is implementing to the company:

1. Encourage participation: Awareness training sessions for all employees are necessary. To further encourage employee involvement, promote specific Kaizen activities, and consider distributing monetary or tangible benefits after solutions from Kaizen activities are implemented.
2. Training and education: Focused training of associates is required for understanding what is the meaning of Kaizen. Managers should be trained to understand Kaizen in an organizational vision context, which needs to be followed thoroughly in order to achieve wanted business objectives. They also must be taught about the necessity of impartial evaluation and strategy for improving participation.

3. Quality level improvement: After the training stage is completed, practitioners should continue to focus on long-term implication, widespread application, alignment with organizational objectives and planning objectives. Management should form a core department to carry out Kaizen evaluation and implementation.

For a Kaizen strategy to work in case company, company's employees must be satisfied with their jobs and be interested in working to continuously improve their performance in the company. A Kaizen strategy can look like a common-sense approach to job development, but its effectiveness is in the ability of company's employees and managers to stay dedicated to it. Developing the proper attitude toward a Kaizen strategy and getting case company to understand its benefits will make it easier to implement. ([isixsigma.com/methodology/kaizen](http://isixsigma.com/methodology/kaizen))

### 3.4 Using Kaizen with Six Sigma

What is Six Sigma? According Jack Welch " Six Sigma is a quality program that improves your customer's experience, lowers your costs, and builds better leaders " (Hesselschwerdt,2001) Six Sigma is basically a common sense approach to solving problems within a disciplined and structured way. With the help of Six Sigma, companies can make improvements in their existing processes. Cost savings from Six Sigma projects can not always see in the bottom line, however. The reason for this is the absence of small improvements, establishing standard operating procedures and ensuring that everyone follows them. Processes can degrade if there is not systemic monitoring and improvement. Below you can see example from Six Sigma project.



primarily on the improvement of sub-processes that are related to field sales. For companies it is easier to start with a Category 1 project because processes involved in category 1 projects are relatively easy to identify, visualize and map also data and metrics on process performance are relatively easy to collect and define. Then processes involved are usually repeatable and solutions and improvements are easier to identify and put into action than in category 2 projects.

Category 1 projects, however, do not directly increased sales. Primarily these projects create improvements in the efficiency of internal processes. For example, generating better qualified leads and speeding the flow of proposals to customers will get more revenue. Also improved reliability of sales forecasts will impact the availability of products, which will have positive impact to revenue as well. How ever the category 2 project areas such as sales force efficiency and effectiveness and also voice of the customer are the factors that make the major results of the companies. These projects are more complex and challenging if we think about identifying consistent processes, collecting reliable quantitative data and finding and implementing solutions. How can category 2 projects impact the field sales force and selling processes directly, by creating solutions and improvements that drive significant and sustainable revenue and margin growth to the companies. (Guidelines for Making Lean Six Sigma Work in Sales, Paul Hesselschwerdt Article)

### 3.4.2 Sales Force Efficiency and Effectiveness Projects

Companies with a salesman who calls on many customers and represent standard products and services are the best candidates for sales force efficiency and effectiveness projects. Often these companies are from following industries: medical devices or financial services, and information technology. Even if sales representatives who are working in these companies have more or less the same market and customer opportunities in terms of local territories, products to sell, competition, etc.

typically there is big differences in the performance and results of salesmen. In Six Sigma terminology, a significant amount of process variation exists which, need to be taken off that improveents to output can happen in other words revenue growth in this case.

In Salesforce Efficiency projects, standard Six Sigma tools such as fishbone diagrams and the 5 whys are used to identify the root causes of variation in performance and results of different sales. Soft factors, for example selling behaviors and skills, are frequently more significant root causes than hard factors such as job experience. Nevertheless, even soft factors can be addressed effectively. For example, best practice selling behaviors and tactics can be identified and replicated across the sales force. This must be done by sales managers who can teach best practices and best selling behaviors. Often, simply measuring and communicating the performance of different sales represantatives results lead to sales growth. (Guidelines for Making Lean Six Sigma Work in Sales, Paul Hesselschwerdt Article)

### 3.4.3 Voice of the Customer Projects

Voice of the customer (VOC) projects are most attractive for companies who are operating in a concentrated market and customer segment. Companies like these are for example automotive and household appliances selling companies. Normally these companies have smaller, highly consultative sales force, typically a few key accounts.

In VOC projects first need is to identifiye every customer´s individual basic requirements. Basic requirements are those measurable standards of product, service and relationship quality that a supplier must meet in order to remain a supplier to customer. How ever fulfilling the basic requirements is no sure platform for growing sales and customers share as well because competitors are also fulfilling the basic requirements. In order to achieve competitive differentiation, companies must learn what really makes the customer happy and beyond customers own exceptions.



In a normal VOC project, Six Sigma tools are applied to identify basic requirements, what pleases customers and what is likely to delight them. Root causes or opportunities can then be identified that, when addressed, will enable the supplier to not only meet the customer's basic requirements 100 percent of the time, but also will lead to the discovery of delight factors. This will generate implementing improvements and solutions that address successful and more revenue of course.

As a conclusion keys to success are following:

The selection of the best project or projects to implement in order to bring Lean Six Sigma to sales depends on a number of factors, which are different for every company. Lean Six Sigma in sales projects must focus on increasing profitability by driving the top line of the business, more than just driving down expenses. Involving sales force directly in projects is crucial, but it should not require pulling people out of the field for time consuming training sessions and project team meetings. After all most important is keep it simple. ([sixsigma.com/operations/marketing-and-sales](http://sixsigma.com/operations/marketing-and-sales);

Apply Six Sigma to Sales and Marketing, Pestorius 2007)

### 3.5 Using Data Analysis to Identify Six Sigma Sales Projects

Six Sigma is a useful methodology for identifying sales improvement opportunities. The data-driven approach facilitates correlation of the factors involved in the sales process and helps isolate specific inputs to expand the potential for increasing sales. Analysis of existing sales practices and various statistical sales results provides a good source of project ideas. The analysis begins with the formula  $Y = f(x_1, x_2, x_3, \dots, x_n)$ , where  $Y$  is the output and  $f$  is the function of all inputs ( $x$ 's). In this particular case,  $Y$  (sales) =  $f$  (marketing campaigns, salesperson skills, information source, word-of-mouth, etc.)

At beginning the project team have to determine all possible reasons for a sale. The cause and effect diagram (Figure 1) is a useful tool in this effort. The reasons identified include marketing campaigns, skills of the salesperson, lot of information about the product. Then resellers, delivery options and long term relationship criteria are important as well. Loyalty programs of the customers create more sale in long run. Cost of the product and cost of service are crucial factors for sales volume. Competitive advantage knowledge and customization and value-added features create sales and especially more profitable sales than normal sales. ([sixsigma.com/operations/marketing-and-sales](http://sixsigma.com/operations/marketing-and-sales); Apply Six Sigma to Sales and Marketing, Pestorius 2007)

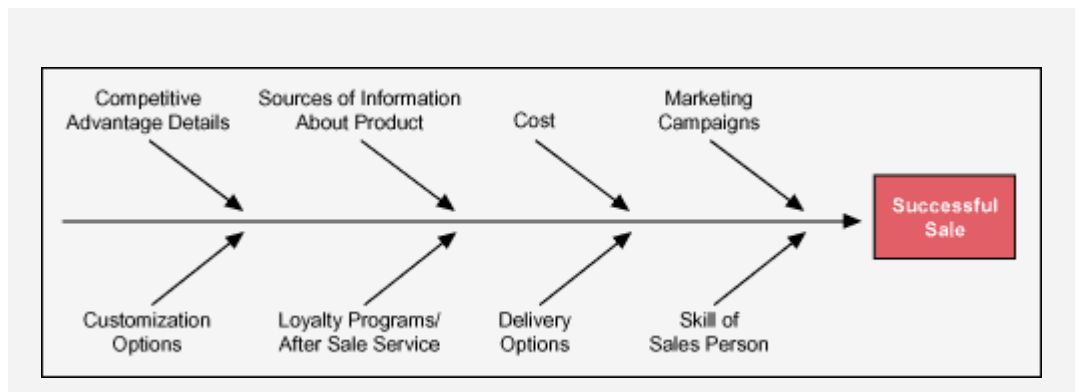


FIGURE 7. Cause and Effect diagram-Fishbone.

Once the inputs are identified, they are correlated with the outputs in a cause-and-effect matrix (Figure 2). The matrix reflects the key process input variables (KPIV) and key process output variables (KPOV), which are subsequently analyzed in pareto charts (Figures 3 and 4).

Inputs \ Outputs	Inputs								TOTAL
	Customer Rating (1-10)	Marketing Campaigns	Salesman Skills	Different Sources of Information	Delivery Methods	Personalised Services	Follow-up on Usage	Competition Knowledge	
Delivered on Time	8	4	4	8	9	8	2	9	288
After Sale Service	9	8	8	9	3	9	10	9	594
Cost	7	8	9	9	1	1	1	9	266
Loyalty Benefits	7	9	9	9	1	10	10	10	406
Information on Product Features	9	10	10	10	1	1	1	10	468
Customization Options	9	10	10	9	9	9	9	9	504
<b>TOTAL</b>		<b>403</b>	<b>410</b>	<b>451</b>	<b>201</b>	<b>310</b>	<b>273</b>	<b>457</b>	

FIGURE 8.Cause and effect matrix,

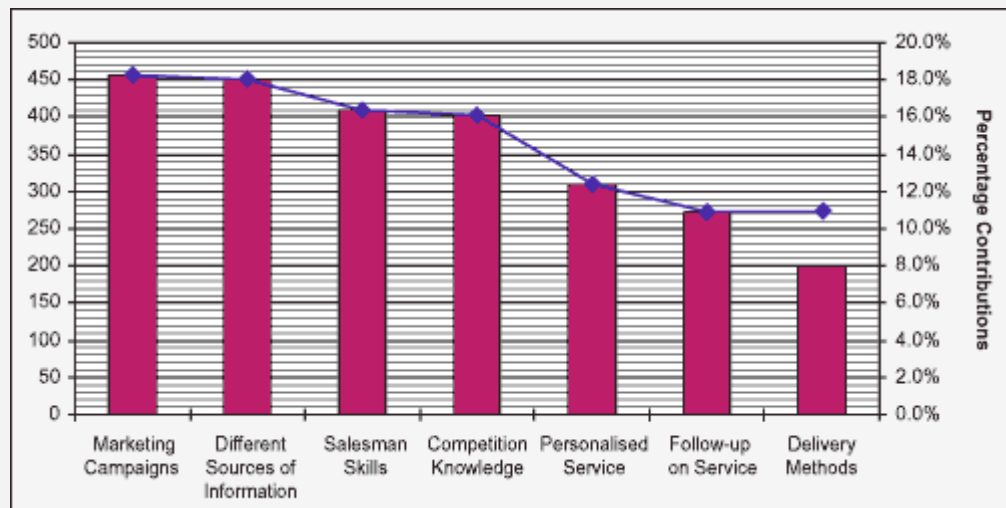


FIGURE 9. KPIV Pareto chart.

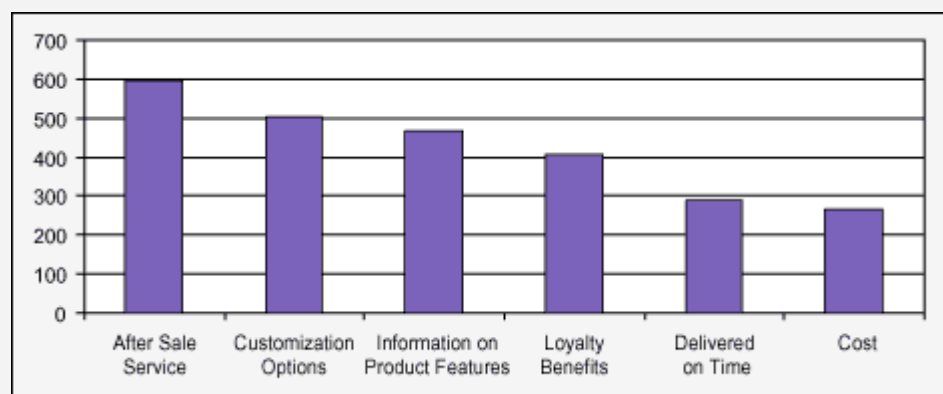


FIGURE 10.KPOV Pareto chart.

Once the KPIVs and KOPVs are identified, a detailed analysis is conducted for each variable to determine the best project opportunities for increasing sales. ([sixsigma.com/operations/marketing-and-sales](https://sixsigma.com/operations/marketing-and-sales); Apply Six Sigma to Sales and Marketing, Pestorius 2007)

The steps taken to complete this analysis is following six inputs At first Marketing Campaigns (First Design Input):

The project team collects data to identify the areas which has the highest potential for achieving a successful marketing campaign. Then Second design input different sources of information. Start by gathering data on all available sources of detailed information for customers to learn about products and then determine them. Next input is salesperson skills. Here you need to collect data from the best selling techniques and performance data according and identify the best combination of the above qualities that would increase sales. After these inputs we have to knowledge of competition. Collect data based on the performance of competitors offering similar products and ask following questions:

- Which competitor products have a better market share than ours?
- What critical to quality characteristics of the product are instrumental in giving the competition an edge?

Fifth input is personalized service where you must collect data based on 2 issues the number of existing customers who have received value-added service. Of course also the efficiency with which customers' future needs are anticipated. Last input is follow-up on usage. This inputs data you must collect based on the methods employed to assure customers of a long-term relationship. Then very important information is the number of customers who have gone to the competition after their first purchase. The number of customers who have upgraded to a higher cost or quality product is also beneficial info. Last the level of impact (positive or negative) of the follow-up process on customer satisfaction.

Once all the design input information is obtained, it is used to create a quadratic or polynomial equation to uncover correlations between the sales data.

$$Y = A_0 + ax_1 + ax_2 + ax_3 \dots + ax_N$$

Where Y = sale, A = constant from a regression analysis, a = a numerical value which, if high equates to the x being considered more important, and x = input variables.

#### Conclusion: Attaining a High Sigma Value

Analysis from each of the above design input categories can form the basis for a Six Sigma project. The objective is to identify the best combination of design inputs that work together in a cohesive manner to attain a high sigma value

[isixsigma.com/operations/marketing-and-sales](http://isixsigma.com/operations/marketing-and-sales)

#### 3.6 Putting Six Sigma to work in Business to Business Sales

When company needs Six Sigma to improve their sales. Focus is normally in weak points and sales team together need to define the problem and solution for it. This approach will help transform the sales process, but it may not improve sales results. That is because the starting point for increasing sales is not the sales people. It is the customers of course. In sales, Six Sigma can be used to uncover the best ways to build, maintain and grow relationships with key customers. Great relationships are the key to increasing sales in every company.

When companies invest in sales force effectiveness, first invests are normally CRM or sales automations. The time between analyzing the current state, defining requirements and improving the process can be very long. Sales people with daily, weekly and monthly targets quickly lose interest here is simple reason why? Because they do not see the connection between process maps and winning customers. They should

always remember that Sales starts from the customer. One of the biggest challenges for companies is that they lose sight of the customer when they are thinking processes and goals. They really should focus how customers want to buy and what customers want from our salesmen.

Today Sales reps need to have strong business competence and a commitment to the customer that extends beyond closing the deal. As said it takes a lot more than lunch and a great personality. One important issue is also that salespeople today work with multiple buyers with complex needs. Six Sigma can provide a framework for improving the quality of relationships between salesreps and customers. Relationship building has three points. A starting point is introduction. After introduction is mid-point which means getting to know each other, learning what the client values and delivering that value to the client. Last one is an end point which means ongoing strong relationship, where the client recognizes and wants the value the salesperson brings to the relationship. All of a sudden there is a defined process that matters to the sales department because in every industry great relationship win business. Salesman need to think globally and act locally.

(Putting Six Sigma to Work in Business-to-Business Sales Marian R Powell Article;Lean Inn, 2013, Sheryl Sandberg)

### 3.6.1 Focus What Customers value in the Buiyng Process

Six Sigma can have a direct impact on sales results if a company is disciplined in keeping the focus on what customers value in the buying process. What needs of buyers when making a major purchase decision. Here is how the standard Six Sigma roadmap can be used to strengthen the relationships between salespeople and customers.

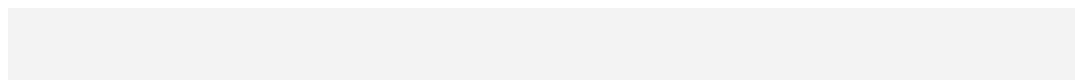
Define what Sales people expect to gain?

The challenge in the define phase is to convince the sales organization that this is a way for them to improve their relationships with key customers and prospects by collecting unique insights into how buying decisions are made. At the beginning you must engage key persons and content experts to work on the project. Then you need to be clear when defining the focus of the project. A problem statement which includes the size of the problem, and hypothesis and a scope diagram will help the salesteam to focus on a specific area. The company could for example focus its initial project on a certain region or product line. Don't start with too big.

### 3.7 The Loyalty Baseline

Measure the Loyalty Baseline. Gathering data in a way that allows the team to draw conclusions and act on them is critical. Conducting short interviews with buyers and prospects is a good way to understand their critical to quality attributes (CTQs) relative to the buying process.

Customer loyalty directly impacts business results. As simple as that is the thing the customer who values the product or service will continue to buy and will promote it to others.



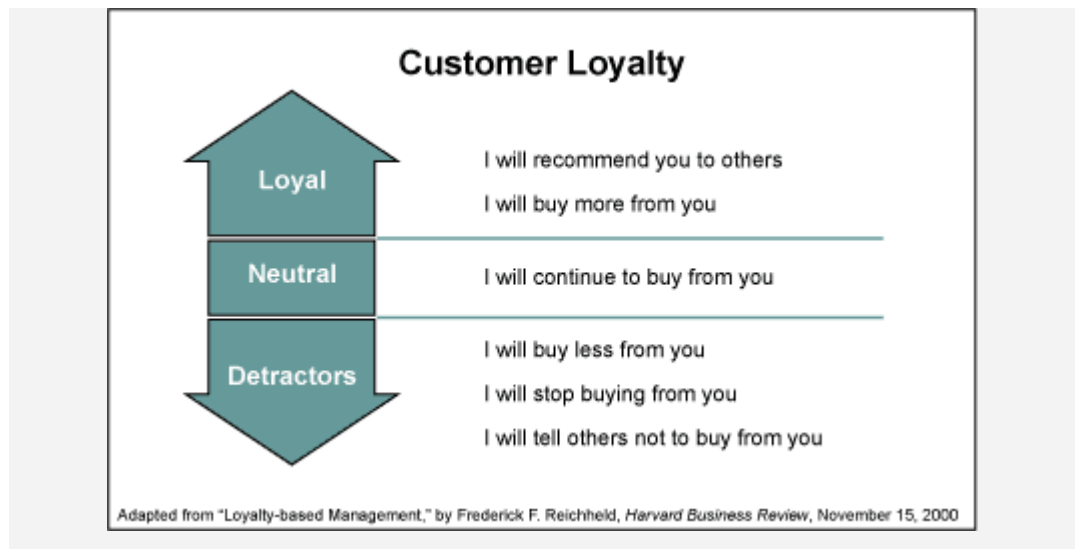


FIGURE 11. Outside in approach starts with customer loyalty.

There are three steps for data gathering:

At first company have to identify a set of customers and after that segment them based on recent behavior. Many companies are able to leverage data from CRM or other sales applications to create four customer types which are following:

- Loyal Customers: Existing customers who are buying more from the company.
- Disloyal Customers: Existing customers who are buying less or have stopped buying.
- Wins: New customers.
- Losses: Prospects that the sales force did not win.

In second phase company must Interview customers and use skilled interviewers to ask representative customers how they make buying decisions. Company has to create an interview guide to go through the hole buying process, ask questions about how the client perceives the company's selling efforts. For example asking following questions

- What was your first impression of our salesperson? What value did they bring to your purchase process?



- Were the right people from our organization available and were they helpful to you during your buying process?
- What did our salesrep do that encouraged you to ask us for a proposal?
- What did our salesrep do for you during the product/service delivery phase?
- What could we do differently to make the buying process easier for you?

The project team want interviewers to probe for an accurate understanding of the company's value proposition, services offered or other key differentiators of the products and services.

Finally company must interview the sales force. Ask the company's salesreps the same questions. Investigate to see how aware the company's sales force is of the wants and needs of customers.

By interviewing a variety of customers, the project team quickly learns what the company's salespeople are doing (or not doing) to build great relationships. By interviewing the sales force, the team learns how much the sales force knows about what the customer values in the selling process.

(Putting Six Sigma to Work in Business-to-Business Sales Marian R Powell Article,)

## 4 PROCESS AND PROJECT MANAGEMENT

### 4.1 Process and Project Management are keys for success in business projects

Effective processes and projects are keys for companies' success in every business area. I use strategies see below straight to my work running a technological company in heavy competition.

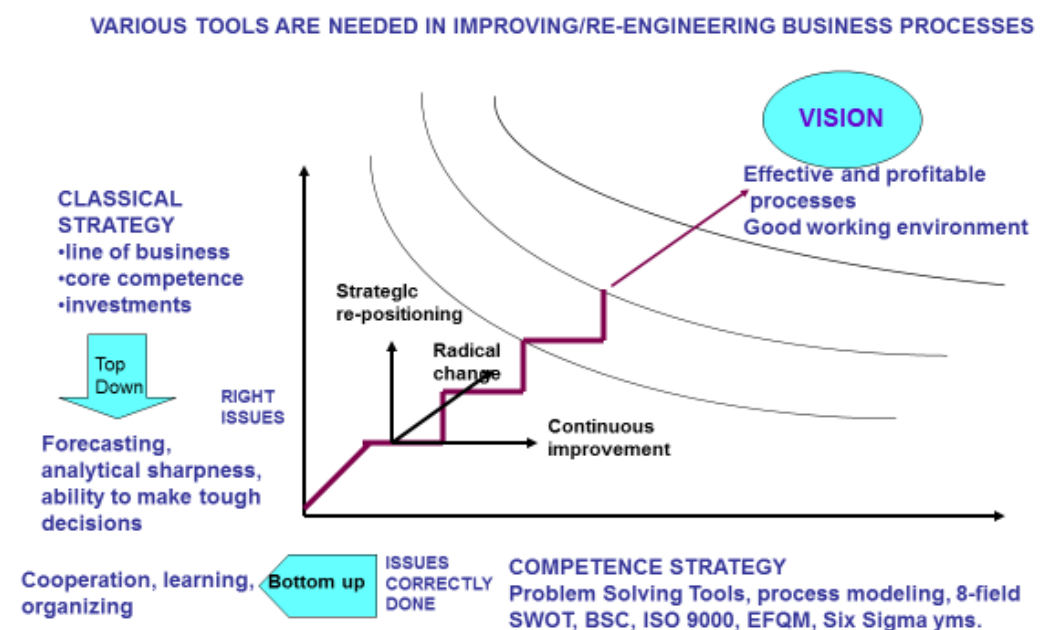
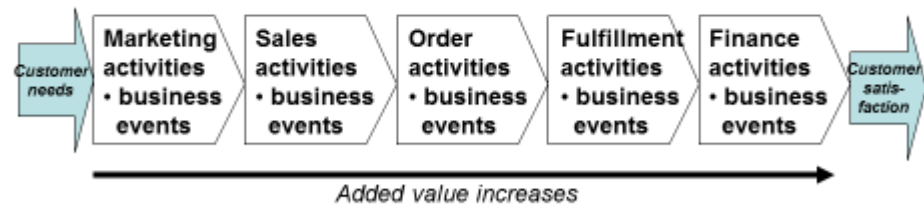


FIGURE 12. Improving business processes.

I use these strategies for reaching case company's vision to be effective and profitable company. Basis for this vision is continuous improvement. For improving case company's business process I use Value chain thinking see below:



***A business process is a collection of business activities that are comprised of a set of business tasks, that create business events, that are performed on a routine basis for a defined purpose and result***



## BUSINESS PROCESS – WHAT IS IT?

8

FIGURE 13. Value-chain thinking.

Case company's business process focus is on how it can produce added value to its customers. Case company sells products and services to its customers and for this output company supports for technical assistance and customer service. Case company's main goal is customer satisfaction which creates turnover and profit to company. Company support its workers actions in all technical and effective ways that they can focus to produce maximum satisfaction to company's customers.

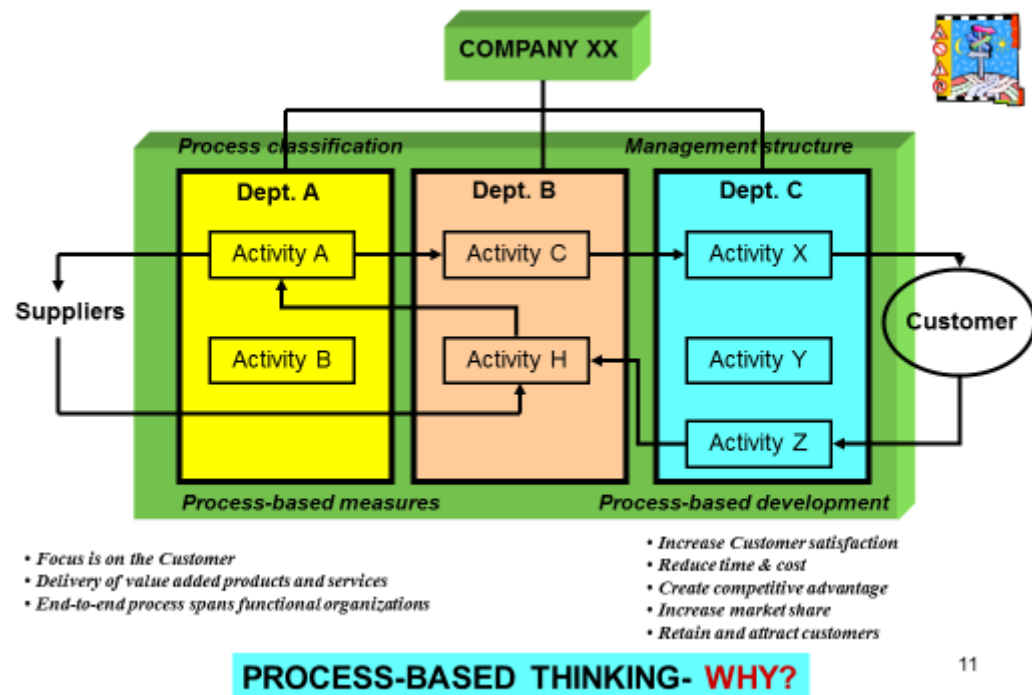
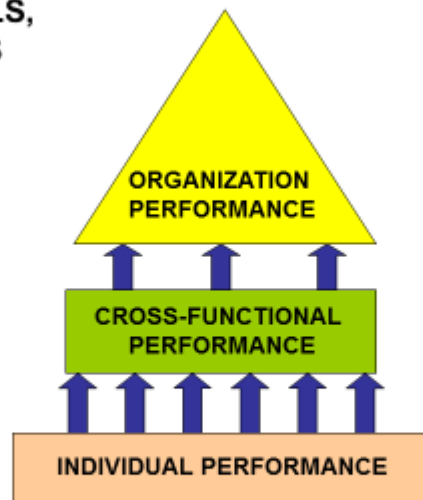


FIGURE 14. Process-based thinking.

In this picture you can see why case company uses Process-based thinking in it's work. It increases customer satisfaction for example by reducing time and costs. It also makes continuos improvement possible in company's business process. The performance management of processes enables company to understand and optimize it's business processes effectively. It also helps company's employees to do their work as responsible as possible by monitoring their actions. In this way employees cut their operational costs and try to maximize their revenue. See measurement model picture below:

**STRATEGY, GOALS,  
AND OBJECTIVES**



**STRATEGIC**

**OPERATIONAL**

**TACTICAL**

**PERFORMANCE MEASUREMENT MODEL**

39

*Ref: APQC, 2003*

FIGURE 15. Performance measurement model.

Today companies must get some quick improvements in order to quickly move out of their recession mode of operating. Companies don't have the time to engage in expensive and long training. They must see improvements within a few weeks and months at most. Business Process Management combines the best of effective quality tools with the principles of Lean Management to create a quick analysis of key business processes in order to increase their effectiveness and efficiency. This helps organizations to remain competitive, innovative, and profitable by identifying a reduction in their cost and cycle-time while increasing customer satisfaction levels and delivering standardized high quality. (Increase Productivity through Business Process Management, Michael Stainlegh)

## 4.2 Business process management (BPM) projects

Business Process Management (BPM) consists of tools to generate work process improvement. Company's goal need to be clear to have a better process than before. Project need project manager and project team. Here are Business Process Management elements in brief: At first company needs to identify it's key business processes. These processes have a direct impact on the organization and its customers. After this company must identify the Voice of the Customer. Company need to collect this data through it's internal and external feedback mechanisms. Also surveys and interviews. are included this. Then it must develop the Current Value Stream Map by using experts to ensure that company is able to identify everything that is included in completing each portion of the key business process. Company has to create a detailed flowchart of this information. This will identify what is being done and why.

Then company needs to measure the process and costs. It must identify the direct and indirect costs which are associated with this business process. After this company must complete a Root Cause Analysis of the key business process and identify all barriers preventing the business process from reaching its defined improvement requirements. Company develops the ideal value stream. At first company must put aside what it know to be true of the current process and identify barriers to reaching it's defined success measures. Company creates the ideal process map that will address the root causes of all identified issues, problems and challenges in the current process. When this is done company must start to develop solutions and generate a list of possible options and solutions that can be implemented. Then it has to select the best possible options and solutions, ensuring that these will overcome the root causes. Finally company develops a detailed implementation strategy to ensure that the solutions are successfully realized. It includes who needs to do what, when and what resources are needed. (Increase Productivity through Business

Process Management, Michael Stainlegh, Projektilla Tulokseen, Tapio Rissanen p.72 -78)

#### 4.3 Follow these actions in your operations

It is very important that companies start to analyze their key business processes, using Business Process Management, to ensure that performance and employee morale is increased. Today it is obvious that personnel are feeling stressful because of weak economy and recession in many industries. So then effective processes make profitable business possible and also when times get better through these processes profits grow automatically. Focusing to key business processes company makes its operations as effective and smooth as possible.

## 5 PROJECT SALES PROCESS

### 5.1 Example Process from Prospect to Sales Order

Name of the process: From prospect to order (fire system business)

Project Sales process is consisting from these phases what can be seen in process card below.

#### PROCESS CARD

Name of the process: From prospect to order (Fire system business)

1. Process mission: To get an order from prospect
2. Process objectives: Get order with high margin and minimum cost.
3. Process owner: Salesman
4. Customers: Salesman, installation company and database keeper
5. Essential input information: Prospect information and contact information especially installation company information.
6. Process outputs: Offer, quotation, order and database information updates.
7. Essential participants: Salesman, Installation company, database keeper, building owner
8. First step: Building owner make decision to build new building.
9. Last step: Order from installation company to the salesman.
10. Process critical success factors: Getting order, competitive price and products
11. Process units of measurement: Hit rate of offers
12. Process assessment procedures: Monitoring and contacting offer stock customers actively.
13. Process connections to other processes: After order starts fire project.



In this process I have streamlined that salesman do most phases of projects. After he has got an order from customer starts fire project which is project people's task. All the costs are in minimum level and salesman don't need any special IT programs. Ms office is enough at the moment and Crm in the future. Database where company gets new project information has been optimized to it's needs and it includes areas and business building types which covers over 90 % of the Finlands business building markets.

In the future case company will implement CRM program to it's project database. This will help project work and it's Finance functions for example invoicing and necessary reporting. Also functions that makes offer to order are in company's plan table. Hit rate function would be also add on for it's own reports. Then case company knows how many of it's offers lead to the order. Closing deals needs improvements all the time. Company should think automatic function which reminds Salesman for open offers in regular phases. This way salesman can contact to the customer as a routine task to close the deal.

## FORM FOR GATHERING BASIC INFORMATION ABOUT THE PROJECT SALES PROCESS

Table 1

1. Name of Process	From prospect to order (fire system business)
2. Process Owner The person who has got the power to plan, control and improve the process (and to set up objectives, give resources, check results etc.)	Salesman
	Need to know prospect and contact information.

3. Input information that is needed to start first step of the process	
4. Resources needed to run the process  <ul style="list-style-type: none"> <li>• Personnel</li> <li>• Equipment</li> <li>• Machinery</li> <li>• IT-systems</li> <li>• Rooms/ Premises</li> <li>• Electricity</li> <li>• Water</li> <li>• Materials etc.</li> </ul>	Personel: Salesman, Equipment: computer, mobile phone, IT-Systems: e-mail, MS Office, prospect database, internet, other it programs, Rooms: furnished office, Electricity: In the office Machinery: coffee maker, Materials: papers, pens, calculator
5. Customers of the process Everybody who has got some work to do in the process  <ul style="list-style-type: none"> <li>• Internal</li> <li>• External</li> <li>• Interest Groups</li> <li>• Authorities etc.</li> </ul>	Internal: Salesman  External: Prospect database keeper, Installation company  Interest Groups; Building owner, Architect, planners, bulding user  Authorities: Fire Authorities
6. Where/when does the process start? What happens? <ul style="list-style-type: none"> <li>• The first step/activity?</li> </ul>	The process starts when building owner decides to start new building. Then this information goes to prospect database where salesman see it and contact the installation company who has got the job We ask the quotation from the Installation company. We offer Fire system to the installation company.
7. When does the process end? What happens?	This process ends when Installation company makes order from us and we send Order confirmation to the installation company. Then starts next process

<ul style="list-style-type: none"> <li>• The last step/activity?</li> </ul>	called Fire project.
<p>8.</p> <p>Outputs of the process for internal and external customers?</p> <ul style="list-style-type: none"> <li>• Product</li> <li>• Services</li> <li>• Documents</li> <li>• Data, etc.</li> </ul>	<p>Internal: Salesman gets Quotation and order</p> <p>External: Installation company gets offer and order confirmation, Database keeper gets new information who has got the job.</p>
<p>9.</p> <p>The overall objectives of the process and units of measurement from</p> <ul style="list-style-type: none"> <li>• Customers'</li> <li>• Personnel's</li> <li>• Process performance's and</li> <li>• Finance's</li> </ul> <p>point of view</p>	<p>Customers: Getting Fast and professional service from salesman and of course good price for their order.</p> <p>Personnel: Salesman gets good order with high margin. Better hit rate because of the order. Good contacts for further businesses.</p> <p>Process performance: Effective action from the salesman.</p> <p>Finance: Maximum profit with minimum cost.</p>
<p>10.</p> <p>Assessment procedures of the process (who, what, how, improvement?)</p>	<p>Salesman find out the installation company from the database and contacts them to make an offer.</p> <p>Database keeper keeps database information up to date. Installation company sends a Quotation to the salesman and makes an order after comparing the offers. Salesman could get automatically information about new prospects and new information from them to salesman own e-mail.</p>

## 5.2 Phase card

Table 2 PHASE CARD (=explanation page)

<b>Responsibility</b> - here you write who is doing and what	<b>Critical factors</b> –what can go wrong in the process step	<b>Methods, instructions and models.</b> For example the names of work instructions that are needed in each process step/phase	<b>Out coming traceable information/documents</b>  – various outputs and documents from each process step/phase	<b>ICT - systems</b>	<b>Problems in the process step/phase and improvement plans</b>
Salesman finds a prospect from database	Prospect information are wrong.	Salesman finds new prospects information from database with computer.	New prospect information, installation company contact information.	<b>Computer, e-mail, telephone, IT programs.</b>	<b>Slowly to find information from big database. Improvement straight e-mail to the salesman from database when new prospect has got installation company information.</b>
Installation Company	Right kind of	Quotation with all the	Quotation from fire project. System	Computer, e-	Sending quotation

sends quotation to the salesman.	products according specification.	enclosed documents send by computer.	specifications and connections to other systems in the building.	mail, IT programs	to all players who can offer right kind of system.
Salesman sends offer to the installation company.	Price and system specification.	Sending offer via e-mail with all necessary documents enclosed.	Offer from asked fire system.	Computer, e-mail, IT Programs	Right kind of system and offer in time.
Installations company compares the offers.	Price	Comparing all offers which fulfill the requirements.	Comparing document and winning offer.	Computer, MS office, e-mail	To get all offers in the same line.
Installations company sends the order to salesman.	Clear order according to offer.	Order must be made via e-mail or letter.	Order, order confirmation and timetable for deliveries.	Computer, e-mail.	To get ordered goods as promised to the customer.

(according to the instructions of IMS-Process oriented quality system)

### 5.3 Evaluation Form

Table 3 Evaluation form

1. The name and the owner of the process	From prospect to order, Salesman
2. Evaluate process objectives Have the following issues been taken into account in the process:	Strategy has taken into account when getting prospects and making offers to the customers. Also official requirements need

<ul style="list-style-type: none"> <li>- Strategy requirements?</li> <li>- Official requirements?</li> <li>- Customer needs?</li> </ul>	<p>to fulfil in every offer. Customer needs are determined in quotation and they are also fulfilled.</p>
<p>3. Evaluate process description (process card, process flowchart, process phase card)</p> <ul style="list-style-type: none"> <li>- Does the activity match the description, have the critical points been correctly defined?</li> <li>- Are there enough instructions for each process step?</li> <li>- Do IT-systems support the realization of each process step?</li> </ul>	<p>The activity goes with the description and critical points have been defined. There could be more instructions for new salesman but experienced salesman should manage with these instructions. It systems could work more automated than today but needs investments that could be too expensive comparing to benefits.</p>
<p>4. Evaluate process indicator metrics</p> <ul style="list-style-type: none"> <li>- Are correct issues measured?</li> <li>- Are the process metrics integrated with the process objectives and success factors?</li> <li>- Do the selected indicators give information whether there has been success from the point of view of the customer, own personnel, process performance or economy?</li> </ul>	<p>In this process most important is to get order and it is measured with hit rate from offer stock. Indicators from won orders give important information from success of how this process has gone. It also tell results from the point of economy and salesman. From customers side we could measure better this process by making quetionary yearly from our actions.</p>
<p>5. Evaluate the process resource requirements:</p> <ul style="list-style-type: none"> <li>- Personnel</li> <li>- Equipment and machinery</li> <li>- Systems, software</li> </ul>	<p>For this process salesman is needed resource from own personel. Computer and phone needed machinery and e-mail and MS Office needed software.</p>
<p>6. Evaluate process ownership and other actors?</p> <ul style="list-style-type: none"> <li>- Are they correctly identified?</li> <li>- Are authority and responsibility definitions clear?</li> <li>- Are authority and responsibility definitions documented?</li> </ul>	<p>Salesman owns the process and it is correctly identified. Also authority and definitions are cleared but not documented.</p>

7. Evaluate process output information, documents and their utilization	Orders are necessary for running business and related documents such as offers and orders are used every day in our business.
8. Evaluate process steering, evaluation and improvement procedures	We do process steering all the time trying to develop offer and order process more efficient and faster.

Table 5 Summary

Strengths Simple and routine process	Weaknesses This process can not be used in special offer cases what need consultancy etc.
Opportunities More sales	Threats Some part of the process customers changes totally.

#### 5.4 Key processes in Fire System Business

Case company validates the most important key processes in it's business following processes: Sales to the customer from prospect to the order confirmation. Logistics from company's warehouse to customers invoice. So very basic processes in daily business. These should go as smoothly as possible that company's customers don't get any negative service or experience in these processes. The key issue in everyone of these processes is keep it simple!

Some good examples from real life I had when I was leading Honeywells security business in Finland. Because of the multinational organization company had heavy Erp systems (Enterprise resource planning) and Sales systems as well. Sap (Enterprise resource planning software) for example was implemented to every country and every business despite is it right tool or not. At the end of the day Sap caused huge troubles for example in shipments, invoicing and other business issues. Because of that we lost many customers and our business was very weak position in process perspective.

Case company's solution was that it created a distribution model to Honeywell where case company continued Honeywell's Security business in Finland. After this decision case company has changed all the processes as simple as possible. The most important issue was that customer must get fast and excellent service from company. Simple processes make this possible. No worldwide systems which need a lot of efforts and people to run them and they are very slow. After 3 years of this change case company has got most of its old customers back and they have been much more satisfied than before. So company heard the voice from its customers and made heavy decision and changes to its business model and processes. One of the processes what company streamlined was Project Sales process from Prospect to Order. Company is planned to send yearly voice of customers inquiry to its top 50 customers because in that way company can develop its products and services in a needed direction also in the future.

### 5.5 Poor Sales Project

In the Fishbone below I describe reasons which lead to poor Sales Project and bad result. Points are picked up from several people's answers to which issues lead to the poor Sales project. My own long experience from project business is also used as a source in this Fishbone. As a sum of several issues we can see in Fishbone result which leads to decreasing Sales.



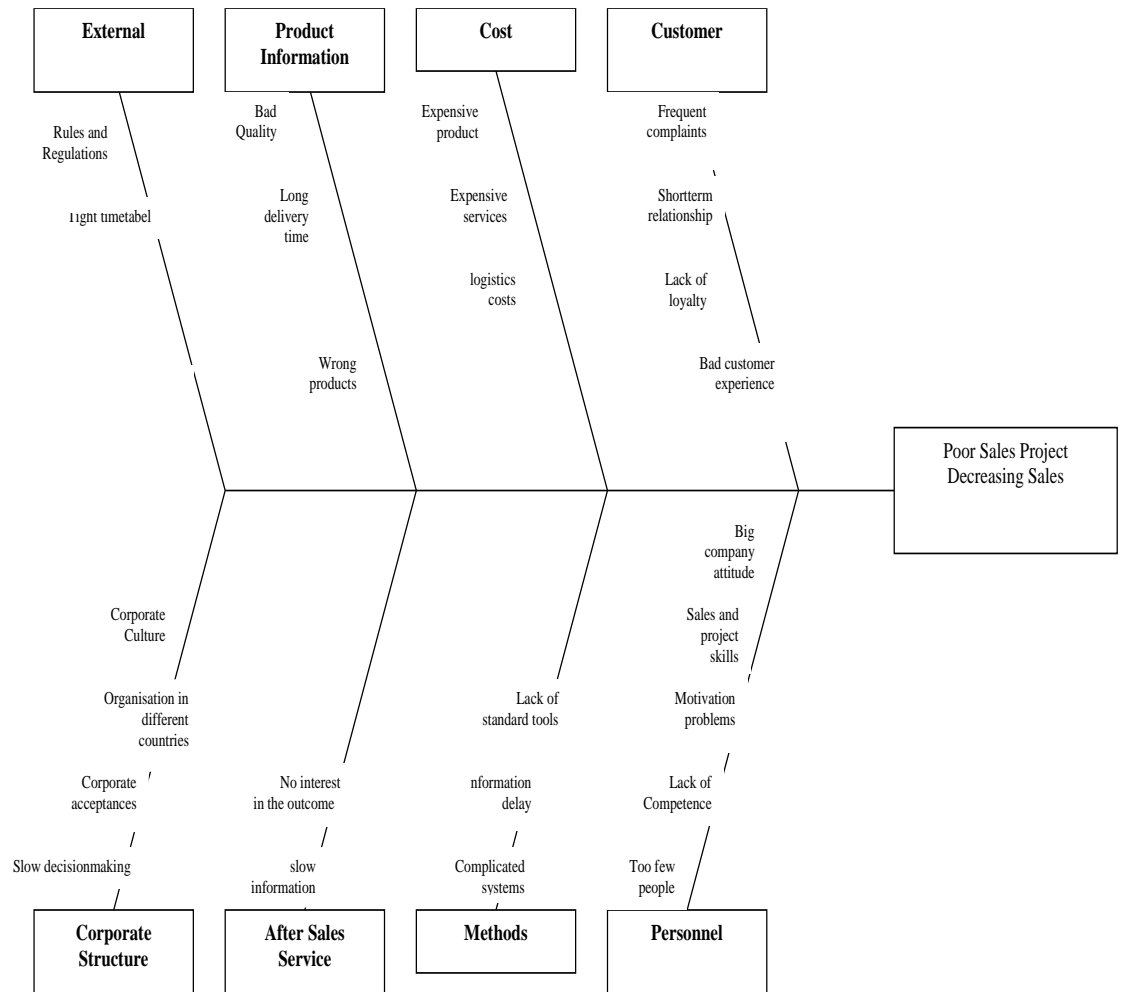


FIGURE 16. Potential reasons for poor Sales Project Process.

(1-9 hengen mikroyritykset Suomen kasvun vetureina, Antti Leijala 2015 S76-77, Lean kohti täydellisyyttä, Kari Tuominen 2010 s27-38, Potkua palvelubusinekseen asiakaskokemus luodaan yhdessä, Merja Fischer, 2014)

Most of the reasons in Decreasing Sales Fishbone are linked in slow action, lack of competence or other negative issues which together cause decrease of Sales. If we start most important factor of the Fishbone, customer, if customer experience is negative it affects straight to the project output in negative way in this Fishbone decreasing Sales. Reasons for customers negative can be several such as linked to the products or

expensive costs. Product can be wrong for this project or bad quality of the product or it could have too long delivery time. Reason can also come outside of the company as an external factor. These factors are tight schedule of the project or rules and regulations. Big organisations hierarchy and slow decisionmaking and different working cultures in different parts of the world are also factors which affects negatively to the projects by taking too much time. This creates unhappiness of the customer and has negative impact to the customer experience.

Big companies after sales departments usually are suffering from slow information flow and complicated systems which they need to report what are they doing. This take a lot of time away from customer and leads bad customer experience as well. Personnel factors which lead to bad customer experience are usually following: Too few people who can run the project smoothly. Lack of competence mainly in sales and project handling skills. Big company attitude and lack of motivation are also reasons which lead to negative customer experience.

## 5.6 Effective Project Sales Process

In the Fishbone below I describe reasons which lead to effective Sales Project and good result. Points are picked up from several people's answers to which issues lead to the excellent sales project. My own long experience from project business is used as a source in this Fishbone. As a sum of several issues we can see in Fishbone result which leads to positive customer experience and increasing Sales.

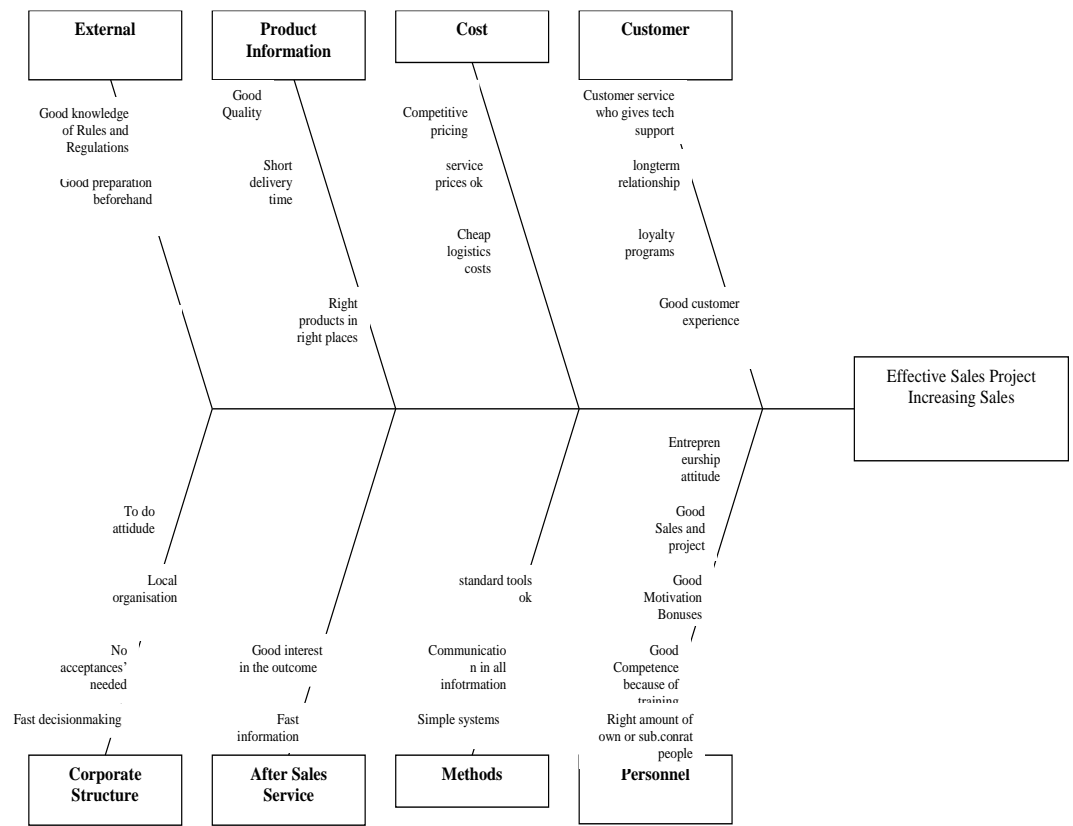


FIGURE 17. Potential reasons for effective Project Sales Process

(1-9 hengen mikroyritykset Suomen kasvun vetureina, Antti Leijala 2015 S76-77, Lean kohti täydellisyyttä, Kari Tuominen 2010 s27-38, Potkua palvelubusinekseen asiakaskokemus luodaan yhdessä, Merja Fischer, 2014)

For the basis increasing Project Sales is effective Sales Project process. This kind of positive Sales process create customer satisfaction and great customer experience. What issues make customer happy in the Sales Project? The great customer experience consists in many potential reasons. First company need to have right kind of products at the

competitive price in this project. Products quality need to be good and short delivery times are crucial. Sales and project personnel should have good competence and skills. Good knowledge from rules and regulations is also essential as well as good preparation to project beforehand.

Company should have local organisation where decisionmaking is fast and people have to do attitude. No acceptances from higher level needed for the decisions this helps a lot for project timetable. For after sales service fast information and simple systems are best tools for effective work with customers. From personnel good motivation, for example by helping of bonuses, is key factor for good customer service. Good competence of sales and project people because of continuous training programs creates also part of the positive customer experience. Right amount of people in project either own or subcontractors is must to have for project getting done in time. Most of all I think entrepreneur attitude is needed for great results in Sales and Project process in all the phases.

According case company's customer survey customers value most in project good skilled and amount technical support. Customers loyalty and longterm customer relationships are basis for increasing sales and good sales results. These positive factors lead to positive customer experience which will increase sales. At the end of the day we should always remember that customers are paying our salaries.

## 6 CUSTOMER RESEARCH

### 6.1 Case company's customer research

I made customer research for our 8 main clients or partners. Customers who answered to this research were biggest players in The Finnish construction industry. We agreed with them that their names are not published in the thesis research. They can be called company A,B C etc. The research method was personal interview and I asked following questions (see below) from our customers. I met our customers 3 times and each interview took from 45 minutes to 1 hour. I chose interviews as a method of research because people answer better hit rate and more honest in face to face interviews than in paper questionnaires. Interview has more possibilities to decode questions. It is also flexible method and allows qualifications. Interview is also excellent way to get examples from real life. (Sandford 1966, Hirsjärvi, Hurme 1995)

The aim of the research was to find out how important case company is for its customers. Often the purpose of interview is to have some specific information about issues which demands thinking from the person who is answering the interview questions. (Ronkainen, 2008) In this case company needed specific information about its operations and processes from its customers. In brief customer experiences from it and its operations with them. How good company is in its Project Sales? Qualitative questions were handling following areas: Customership with company and value of the customership and projects? How company handle its customership and meet its customers? How company handled its Project Sales process? What can company do to improve in its Sales process? Company's position in the market. Company's share of the customers buys or business in projects.

Data collection of the research was made with personal interviews and via-e-mail. Case company's biggest customers and partners were used as

a research group. Questionnaires were sent to 8 companies contact persons beforehand. Research group was limited to these 8 companies because 80 % of case company's turnover comes from these companies. Researcher wanted to focus these 8 companies because they all have good overview from co-operation with case company and especially experience from company's Project Sales process. Interviews were individual interviews because I think that individually people share information better than in group interview. Individual interviews should give me critical information about case company and that is what company needed that it could develop its process. As Paul Rabinow (1977) says when interview includes issues which are not normally discussed outcome is interesting material. Contact persons had 3-4 weeks time to make answers and prepare their answers to interview. This was good way to go because I got deeper and more specific answers from them than in straight cold interview. I tried to do phenomenological interview with company's customers because it is open and natural conversational way of interview. In this way I tried to give as much space for the answerer than possible. ( Aaltola, Valli, 2007) In second and third interviews company went deeper to each question and it start to think better solutions to its Project Sales process and specific action points. In next chapters we see specific questions and and company's customers answers. (Laadullinen tutkimus, 1999 Alasuutari Pertti s.142-156; Ikkunoita tutkimusmetodeihin, 2007 Aaltola Juhani, Valli Raine s. 8-39)

## 6.2 Customership and Projects Sales

In this chapter I find out how company's customers see company's customership and Project Sales. Answers from customership consists in many different parts. Most of the answers were considering company's sales persons or its technical support. In projects logistics and product related issues came up as important factors. Sometimes company is competing with same projects with its partners and it got feedback from that also.

Observations and comments:

“ Sales contact persons are helpful and get things done. Reaching tech support in projects is challenging...”

“ Logistics in projects is excellent, but partners should have better benefits.in other project terms for example in pricing and discounts...”

“ Help from tech support in project takes too long time and it causes problems and delays and of course extra costs...”

“Partnership has gone worse than before. We used to offer same projects but nowadays we are competing with same projects...”

“ Product deliveries to the projects are ok and especially e-mail confirmations are very good...”

“ Important Partner for us but somehow more distance than before Honeywell time...”

Case company's customers said that it's Salesmen are helpful and effective. Salesmen get their issues done in short time period and with high quality. Company's technical support is in heavy pressure all the time and they are hard to reach in projects. These leads long answer times especially in difficult technical issues and delays projects. This causes problems to company's customers and gets extra costs for them.

Company's product deliveries in the projects are in time and e-mail order confirmations are good. The costs of the deliveries get critics from two of company's partners. They think that they should get product deliveries to the project for free or included as a partner benefit.

### 6.2.1 Handling of the processes

In this chapter company's customers told company how it handle it's projects. Especially it got interesting and beneficial comments what company must improve in it's projects. Company's products and services got mostly positive feedback but in it's technical support and logistics of it's customers told what company has to improve. Company got also

feedback that it should be more active in its co-operation with company's customers.

Observations and comments:

" Company's products and services in projects are good. Technical support is critical in projects and that they should improve..."

" From their logistics we know that products come from Norway and it takes 3 days to Finland but still logistics is critical part of success in Projects. Do they know this?"

" They have to keep their promises also product deliveries and accuracy of products are critical in Projects. Quality has to be good!"

"It does not show that we are big and important customer for them in projects. Their Deliveries and Logistics is worse than their competitors."

" Compared to other players in the market their deliveries and products in the projects are as good as others."

" In projects we hope that they would contact us more often than they do today."

" They are important Partner to us in Fire Projects. They could be bigger also in Emergency lights if they have better products."

" Their products are best in the market! They could contact us more often."

According to our customers our products and service in projects are in good level. Technical support is critical success factor in technical industries and our partners get good quality service but sometimes it take too much time and that causes negative experience. Even though our logistics is in good level in projects where we know products beforehand our weak point is add hoc deliveries. These deliveries are in every project, so you need to get some products fast or the hole project could stop! During Honeywell time we had our warehouse in different country and it took 3 days to come to Finland so add hoc deliveries take too much time



and because of company policy we could not keep our own warehouse in Finland.

Most of company's partners like to do more business with it than they do today. Many of them do co-operation with company in Fire projects but in emergency lights and voicealarm products they are doing more business with company's competitors. They would like to grow with the company. According to them company needs better products to its Emergency light sortiment and more knowledge about its voicealarm systems. Straight feedback from customers is also that company's employees need to communicate with them much more than they do today. For instance monthly newsletters which included new products and services etc. In this way customers feel that company's value to them would increase significantly. More regular trainings to company's products is also one key to better customer experience according partners. From company's products its detectors are best in the market but its panel is little bit oldfashioned. This is notice especially in very big projects where company's panel capacity is in limit.

#### 6.2.2 Handling of the customerships?

In this chapter case company got information from customers how company handle its customerships and what can it do to develop them. Common point in their answers was that company could do more many things than it do today. For example more customer visits, more information about products and more co-operation in projects. These are very important information to company how it should improve its customerships in its own resources. See below straight comments from research.

Observations and comments:

"Salesmen contact us regularly but not too often in projects."

“Partner Days has not been arranged in 2 or 3 years. “

“ We do Exhibition and customer visits In Project with them together and that is great!”

“They could send more often information about their products. “

“ We should meet their Salesmen more often than we today at least 3 times per year.”

“ We meet once a year and that is too rarely.”

“ Yearly Development conversations are only in talk level.”

“ We could meet them twice a year instead of one visit. Feedback and future development co.operation conversations would be nice.”

According customers company takes good care of them by meeting and communicating with them regularly. Any way according feedback from them company’s employees should meet them more often than they do today. They also would like to have regular Partner days and trainings.

One very important issue pointed out from survey development discussions with partners. They saw that company should analyse what is status of our customership at the moment. Where company would like to grow it and what are action points to do it in practise. After the development actions company should follow the development of it’s customerships in quarter basis.

### 6.2.3 Case company’s position in the market and market share in customers projects

In this chapter we got information which is our position in the market. What competitors do better than us. Are our products competitive or not? What is our market share in our customers projects and what are key factors if we want to grow our project business?

Observations and comments:

“ It is up to them how their market share develops in our projects in the future.”

“They don’t differentiate from competitors.”

“ Their competitors are better in contacting and keeping relationships.”

“ In complicated projects they have best products and good prices.”

“ Their competitors have better R&D and updates in their software.”

“ They have both best products and concept in the market.”

“ Their market share is growing.”

“ Their Salesmen are better than competitors one.”

“ Competitors have better Marketing information about their products.”

“ More open pricing in projects and more contacting to us than today.”

“ They have best products and project knowledge in the market ”

According customer survey case company is one of the top 5 brand in Fire market. It has good possibilities to grow it’s market share. According company’s customers company needs to improve following issues:

At first it has best detector range in the market and in difficult installations and challenging premises detectors of company are best solution in the market. Companys sortiment’s weak point is old panel, especially in large installations its features limit company’s chances to win big installations. Slow R&D in new products has gave negative feedback to company from customers. Company should develop marketing communications like marketing news from new products and services. According customers company need more activity with contacts and Sales work. For example Partner Days should arranged yearly. In those Partner Days company can see all it’s best customers and give all kind of new information about products and services what company has. We need to make customer plans with each of it’s best customers. In those plans it can agree how it can develop it’s co-operation in projects. These customer plans need to follow up at least 2 times a year.

#### 6.2.4 Company’s customer share improvement

In this chapter company got information from it’s growth plans and which issues are affecting it. Company got also good advices how can it improve

and grow it's market share. Do company need to take more products to sortiment and is it's business model right?

Observations and comments:

" They can grow with us if their products have good technical features and their prices in projects are in right level."

" They are welcome to grow with us in controlled way."

" Projects are growing which gets more pressure to the Logistics."

" We could sell also other their products in projects besides Fire and Emergency Lights."

" Changing contact person could be crucial for our co-operation."

" Special Project deals are welcome! "

" Developing of their customer share needs more service buys from us so buy services and sell products! "

" More Activity and co-operation from their side helps they grow."

" They don't grow with us if they are continuening with existing business model."

" Personal contacts are essential for growing business with us."

Company can improve it's market share by improving it's customer share in each of key customer and partner. According partners company has to have excellent products in projects and technical support also in the future that it can succeed in the competition. Competitive pricing in projects is also crucial for business growth. Company's flexible and highquality service is now and in the future it's guarantee for success. Large projects and special projects are in partners wishlist because in this way both company and they can grow business in good way. Partners also would like that company should buy more services from them locally to projects in the areas where it don't have own personel. They liked to work with company's salesmen today and it would be big risk for company if it loses salesmen to competitors. After all Project Sales is done between 2 people and their personal relationship is in important role when Project cases either win or lose. Company's employees need to be more active for

customer contacts than before. This is straight feedback from the survey. That is why company needs to keep own personel happy with good salaries and trainings and of course with good team spirit. (Customer research)

## 7 CONCLUSIONS

### 7.1 Results of the survey and actions for more efficient projects

As a summary of my thesis. My Thesis topic is Lean Management in Project Sales process. The Aim of this Thesis was to make more simple and more efficient Project Sales process what or team have during Honeywells time. Three research questions of the Thesis were:

How can our company make our Project Sales process more efficient and more simple than it is today?

What are the benefits from more efficient and simple process to our customers and us?

How can our company keep the same quality in the new leaner Project Sales Process?

In order to find the answers to these questions, I had to look into Business Process Management theory and also our Customer Experience presented in our customer survey. Lean and Kaizen theories helped me to find the essential issues in our Project Sales Process, as well as they helped to cut waste from the process. In page 48, an effective Sales Process Fishbone is presented. In it, when waste has been taken away from the process, as in the Lean and Kaizen theories, the result is an increase in Sales process, also presented in a Fishbone.

Answering to this second question I found answers to our company why our Project Sales Process will need to be leaner and more effective. With the help of Lean and Kaizen models, I cut not needed phases in our Project Sales Process. This can be seen in pages 41 – 46 from Prospect

to Sales order process. This can be seen especially in page 46, where the evaluation of the process is made.

The research was carried out to our company's 8 partners/biggest customers and we agreed not to publish their names in this Thesis. Companies are the biggest players in the Finnish construction industry. If the companies are mentioned, their names will not show in any public releases. Appendices of this thesis research will not be published in the Internet because of data protection of the research companies.

Did we succeed to make our Sales Project Process more efficient with Lean? I think we did because you can see improvement in Fishbone where our good Sales project is described and there is no waste anymore. The results show more efficient and simple Project Sales process. From the process are taken away phases which are so called waste in Lean Management theory. Faster and more efficient Project Sales process saves time and money from customers and keep them more satisfied than before. Customers interviews feedback gave straight action points to case company what company must change and improve in its daily operations. This new Projects Sales process is also Competitive Advantage for case company because it can do projects faster than its competitors and save costs as well. Company's more efficient Project Sales process saves its customers time and money. That is straight result and benefit for company's customers from lean process. Focus of the process is that co-operation is fast and smooth. If company notices some problems it will fix it asap with its customers and communicate that actively for all the participants of project.

From 3 P:s my purpose was having more efficient Project Sales process than before. I got positive result from this by taking the waste out of company's sales process. After changing process to new one company train its people to work accordingly that new process is possible also in

practise. For example company's salesmen get more power to make their own decisions in sales cases and they don't have to ask acceptances for higher like before. Nowadays case company has own warehouse in Finland and it's customers get their products for next day instead of 3 days to their working sites. I think I succeed to make more efficient Project Sales process in help of Lean model because last 3 years case company's turnover in projects has increased by 15 % per year both topline and result.

From customer research company got straight feedback what it do ok in projects and what it need to improve. Mostly they are satisfied to company's products and service. Company's action points from survey were following:

Company need to have own warehouse in Finland that it can answer the fast demand in projects. Company need to also hire more people to technical support that it can help it's customers faster in projects than today. Company's salesmen need to visit more to customers and communicate with them about new products and services of the company. Company need to do customer plans with each of it's best customers. In those plans company can agree how it can develop co-operation in projects. These customer plans need to follow up at least two times a year.

For the basis increasing Project Sales is effective Sales Project process. This kind of positive Sales process create customer satisfaction and great customer experience. What issues make customer happy in the Sales Project? The great customer experience consists in many potential reasons. First company need to have right kind of products at the competitive price in projects. Products quality need to be good and short delivery times are crucial. Sales and project personnel should have good competence and skills. Good knowledge from rules and regulations is also essential as well as good preparation to project beforehand.



Company should have local organisation where decisionmaking is fast and people have to do attitude. No acceptances from higher level needed for the decisions this helps a lot for project timetable. For After Sales service fast information and simple systems are best tools for effective work with customers. From personnel good motivation, for example by helping of bonuses, is key factor for good customer service. Good competence of sales and project people because of continuous training programs creates also part of the positive customer experience. Right amount of people in project either own or subcontractors is must to have for project getting done in time. Most of all I think entrepreneur attitude is needed for great results in Sales and Project process in all the phases.

According customer survey company's customers value most in projects good skilled and amount technical support. Customers loyalty and longterm customer relationships are basis for increasing Sales and good Sales results. These positive factors lead to positive customer experience which will increase Sales. At the end of the day company and it's employees should always remember that customers are paying their salaries.

Company's more efficient Project Sales process saves customers time and money. That is straight result and benefit for company's customers from lean process. Focus of the process is that co-operation is fast and smooth. If company notices some problems it fix problem asap with company's customers and communicate that actively for all the participants of project. Company has got bigger projects and it has grown together with it's customers very well. Company's quality in projects has also improved because it has made fewer mistakes and logistics has been almost 100 % in projects nowadays. Fast local decisions have make it possible that projects have been ready before deadline. I think I succeed to make more efficient Project Sales process in help of lean model

because last 3 years company's turnover in projects has increased by 15 % per year and result by 20%.

I think next research from lean model could be how it works in getting better customer experience with help of lean.

## REFERENCES

Aaltola Juhani, Valli Raine, 2007. Ikkunoita tutkimusmetodeihin 2.PS-kustannus, Juva.

Alasuutari Pertti, 1999.Laadullinen tutkimus. Vastapaino, Tampere.

Ehrlich Betsi Harris, 2002. Transactional Six Sigma and Lean Servicing: leveraging manufacturing concepts to achieve world class service. St. Lucie Press.

Eskola Jari, Suoranta Juha, 2014.Johdatus laadulliseen tutkimukseen Vastapaino, Tampere.

Fischer Merja, 2014, Potkua palvelubusinekseen asiakaskokemus luodaan yhdessä. Talentum, Suomi.

Hannus, Jouko 1995. Prosessijohtaminen. 4. painos. Gummerus, Jyväskylä.

Heikkilä, Tarja 2008. Tilastollinen tutkimus. 7., uudistettu painos. Edita, Helsinki.

Hesselschwerdt Paul 2001, Article Guidelines for Making Lean Six Sigma Work in Sales.

Hirsjärvi Sirkka, Hurme Helena 1995. Teema haastattelu. Yliopistopaino, Helsinki.

Hämäläinen, Mika 2011. Lean astuu palvelukseen. Metallitekniikka 8.12.2011, 31.

Kajaste, Veikko & Liukko, Timo 1994. Lean-toiminta: Suomalaisten yritysten kokemuksia. Metalliteollisuuden kustannus Oy.

Kalliopuska, Mirja 2005. Psykologian sanasto. Otava, Helsinki.

Kiiskinen, Satu & Linkoaho, Anssi & Santala, Riku 2002. Prosessien johtaminen ja ulkoistaminen. Wsoy Bookwell Oy, Porvoo.

Koskela, Lauri 2004. Moving on – beyond lean thinking. Lean Construction Journal 1(1):24-37.

Saatavilla [http://usir.salford.ac.uk/9385/1/2004\\_Moving\\_On\\_Beyond\\_Lean\\_Thinking.pdf](http://usir.salford.ac.uk/9385/1/2004_Moving_On_Beyond_Lean_Thinking.pdf).

LAMK, 2017 Opinnäytetyönohje YAMK

Lean Enterprise institute

Leijala, Antti 2015, 1-9 hengen mikroyritykset Suomen kasvun vetureina.

Liker, Jeffrey 2006. Toyotan tapaan. Readme.fi, Helsinki. Suomennettu Marko Niemi.

Mann, David 2010. Creating lean culture: tools to sustain lean conversations. 2. painos. Productivity Press, New York.

Metsämuuronen Jari, 2008. Laadullisen tutkimuksen perusteet metodologia-sarja 4. Gummerus kirjapaino Oy, Jyväskylä

Pestorius Michael S 2007. Apply Six Sigma to Sales and Marketing. Six Sigma outside manufacturing, ASK Quality Press

Powell Maria R Article, Putting Six Sigma to Work in Business-to-Business Sales.

Rissanen Tapio, 2002 Projektilla tulokseen. Pohjantähti

Ronkainen Suvi, 2008.Sähköä kyselyyn! Web-kysely tutkimuksessa ja tiedonkeruussa. Lapin yliopistopaino, Rovaniemi.

Sandberg Sheryl, 2013 Lean Inn Naiset ja menestymisen tahto. Wsoy, EU

Schipper, Timothy & Sweets Mark 2010. Innovative Lean Development; how to create, implement and maintain a learning culture using fast learning cycles. Productivity Press, New York.

Shook, John Lean Transformation model, Lean Lexicon, a graphical glossary for Lean thinkers.

South African Journal of Industrial Engineering November 2016 Vol 27(3) Special Edition, pp 79-91

Stainlegh Michael, Increase Productivity through Business Process Management.

Taylor, Frederick Winslow 2004. The principles of scientific management. Uusi painos. Kessinger Publishing, Montana. Julk. alunperin: New York: Harper & Row, 1911. Tuominen, Kari 2010a. Lean käytännössä. Readme.fi, Juva.

Tuominen, Kari 2010b. Lean – kohti täydellisyyttä. Readme.fi, Juva.

Tuominen, Kari 2010c. Lean tehoa ja laatua strategiseen johtamiseen. Readme.fi.

Wang, Fu-Kwun & Chen, Kao-Shan 2010. Applying Lean Six Sigma and TRIZ methodology in banking services. Total Quality Management & Business Excellence 21 (3), 301-315.

Womack, James P. & Jones, Daniel T. & Roos, Daniel 2007. The machine that changed the world. Paperback edition. Free Press, New York.

Womack, James P & Jones, Daniel T 2003. Lean thinking. Free Press, New York.

Web sources

[https://www.collin.edu/cwed/tmac/TMAC\\_Focus\\_of\\_Lean.pdf](https://www.collin.edu/cwed/tmac/TMAC_Focus_of_Lean.pdf)

read 09/18

(Kaizen Institute, <https://uk.kaizen.com/knowledge-center/value-stream-mapping.html>)

read 01/17

(Leanproduction.com/kaizen) read 01/17

(<https://www.isixsigma.com/methodology/kaizen/kaizen-six-sigma-ensures-continuous-improvement/>) read 02/17

(<https://www.isixsigma.com/operations/marketing-and-sales/guidelines-making-lean-six-sigma-work-sales/>) read 02/17

(<https://www.isixsigma.com/operations/marketing-and-sales/using-data-analysis-identify-six-sigma-sales-projects/>) read 02/17

[www.providermagazine.com/columns/Pages/The-Principles-of-Lean.aspx](http://www.providermagazine.com/columns/Pages/The-Principles-of-Lean.aspx) 2013

read 03/18

Customer Research 2014

## APPENDICES