

## LEAN SIX SIGMA IN MANAGEMENT OF SALES PROCESS – WORKING PAPER

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### **Abstract:**

This paper presents an LSS (Lean Six Sigma) based action plan to improve direct sales processes in banking. The aim is to verify whether and how LSS methodology can enhance the direct sales process at a bank. LSS is commonly applied in managing manufacturing processes, the fact that processes which are improved by LSS method should be repetitive, large scale and conform to the law of a stochastic process. Therefore LSS methodology is used for revamping production processes, administration processes and others. LSS methodology comprises 5 steps: Define, Measure, Analyse, Improve and Control (DMAIC). Retailing banking products often relies on influencing the customer and as such it is a mental process. This paper presents the plan and tools for conducting quantitative and qualitative research. The quantitative aspect focuses on measuring the time required to complete each action in the sales process i.e. small talk, rapport building, countering objections and selling the product. The qualitative aspect is measured by means of a Voice of Process survey on the difficulty of the sales process. The result we aim at is to identify the variables on which the time and amount of sales depend. The majority of the research is based on real-life case studies and therefore it is one of the first attempts at connecting LSS methodology with the direct (face-to-face) sales process.

*Keywords: Lean Six Sigma, LSS, DMAIC, optimization, direct selling*

## **1. INTRODUCTION – WHAT IS LEAN SIX SIGMA**

The goal of this paper is to present the Lean Six Sigma (LSS) Methodology in direct sales at a branch of a bank. The covered issue is external and personality traits of clients which influence the level of sales, as well as traits of the employee carrying out sales at the bank.

Lean Six Sigma (LSS) is a combination of Japanese Lean Management and the American methodology of Six Sigma. Six Sigma was developed at the Motorola company. Initially it was used in manufacturing process optimization, which resulted in high savings (Ćwiklicki, 2008). LSS was quickly implemented in services, as well as sales.

The discussed methodology consists of 5 phases: Define, Measure, Analyze, Improve and Control – DMAIC. Each of those phases has a key part in the success of the optimization project, implementation of a change and maintenance of a process at the highest quality level (Basu, 2011).

LSS projects usually last 2 - 3 months. This article presents the basic tools for each of the phases, which will be used in executing the project. In the first phase – Define, the Project team defines the scope of the project; this incorporates the Frame tool, whose purpose is to determine what lies within the scope of interest – what the Project Team will deal with – In Frame. It is also important to determine what will be excluded – Out of Frame. It may seem, that the Out of Frame aspect is not particularly significant, however, it turns out to be a resounding issue in the (frequent) occurrence of the Project Team's tendencies to gather and analyze all data. Lack of parametrization of out of frame elements may cause a risk of drawing the project out, increasing its cost, or failure to collect and analyze important information, as well as a decrease of the likelihood of solving the problem (alpha and beta type error), or result in pointing out an issue where it is not the most significant. This is associated in later efforts being put into improving the process, which gives little or no results, because the source of the problem was not correctly identified.

In this phase it is also important to define elements Critical to Quality (CTQ), which are key requirements for a project, often dictated by the Client's requirements (e.g. traits which determine, whether a given product will be accepted – bought or well received). For that purpose the Project Team determines who is the client of a process (Basu, 2011). Often, especially in service processes, this role may be fulfilled by an entity other than a client in the traditional meaning of the word.

The purpose of the Measure phase is to collect data regarding the process – study the current state – As is. The project team, striving towards gathering quantitative and qualitative data on the process implements a data collection plan which includes information regarding the type of data, their measurable characteristics, source, person collecting the data, the date of collection, information on what the data represents, as well as prepares detailed operating definitions, specifically defining what is to be measured. Such definitions are verified by persons from within the process, so as to verify the correctness and unambiguous nature of definitions. Subsequently, actual data collection is carried out.

The Analyze phase—in this phase the collected data is analyzed and the existence of losses enumerated and defined in the preceding phases is either confirmed or denied. The Improve phase serves to upgrade the process, eliminate losses, within it ideas for improvements are generated. The final phase is Control, which determines how process monitoring is to take place, as well as provides the tools for it.

## **2. PROJECT IN THE BANK**

Selection of investigation units:

The studies will be conducted in several branches in the Mazowsze region, in one of the leading Polish banks in terms of size. Aim is to do 500 surveys.

It should be noted, that in accordance with the LSS method, the actions below are specified with the project team and shall be reviewed at the time of its appointment.

The first step is to determine the process elements, input and output products, as well as suppliers and clients of the process.

**Table 1:** A map of the SIPOC process (Supplier, Input, Process, Output, Client).

SIPOC				
Supplier	Input	Process	Output	Customer
Client of the bank	Verbal order, identification	Client verification	Client verified	Branch employee
Branch employee	Question regarding order details	Giving an answer	Information on the sum and account	Client of the bank
Branch employee	Information on the sum and account	Performance of the Client's order	Funds withdrawn from account, confirmation of performed	Branch employee
Branch employee				Backoffice
Branch employee	Question about the needs associated with the bank's	Lead-in	Client is lead-in	Client of the bank
Client of the bank	Client answer	Sales talk	Client positive or native decision	Branch employee
				Backoffice
Branch employee	Documentation to sign	Conclusion of the agreement	Signed documents	Client of the bank
				Backoffice

Source: made by authors

It shows the primary steps of the process, in this case it is Client Verification, Giving an answer, Execution of a Client's order, Lead-in and Sales talk and conclusion of an Agreement.

The key elements are the banks Client and branch employee – their voice shall be gathered during the project's course – VoC, as well as the voice of the process (VoP). The reduction of the sales time to 20% while not lowering its level will be CTQ.

The Measure phase shall incorporate a plan for gathering data and tools such as the Ishikawa Diagram for collecting information on the needs and existing losses in the process.

Three types of surveys will be taken in the course of the project, one built on the basis of the Ishikawa tool – Fish bone, and another one filled out by the employees while performing measurements, regarding the Client himself. Each of the employees shall also be subjected to questions regarding their method of communication. Types of surveys are:

1. The survey regards losses which occur in the process – the TIMWOOD, it is an acronym of the words Transport, Inventory, Move, Overproduction, Overoperationand Defects. The Survey shall be sent out to people carrying out the project in the investigated region.
2. A survey relating to elements which can have an influence on sales; the Ishikawa diagram shall be used – categories: Manpower: Client and other people, Methods: Procedures, regulations, Materials, Machinery, Mother Nature (in this case there will be other elements). The survey is presented in table:

**Table 2:** Ishikawa diagram

Manpower: Client and other people
The Clients outward personality characteristics which positively and negatively influence the sales process.
Employee characteristics–introvert, extravert and the sales level.
What other behaviors interfere or help in the sales process?
Methods: Procedures and regulations
What procedure elements are ineffective, unnecessary, harmful to the sales process?
What other regulations at the Bank negatively influence the sales process?
Materials
Whether or not and how materials hinder the sales process of the Cash Loan product
Machinery
Equipment which hinders, interferes with work.
Management
Mother Nature (other environment elements)

Source: made by authors.

3. A Client’s outward personality characteristics – does the Client have a positive attitude towards the consultant, is their posture open, are they smiling, what is their mood (positive, negative, calm, irritated)? Additionally – is the Client an introvert or extravert – what is their temperament; determined through studying the determination, boldness, patience traits. The Client’s appearance, including clothing (price, fashion), their education, manners. This survey is show on the table no. 3 - Survey carried our directly after customer service.

Analyses: the model related to factors influencing the sales level will be built based on input data. Input data shall be expressed in a six-grade scale, which will make it possible to build a model of tendency towards signing agreements at the branch.

1. The purpose of the Client’s visit at the branch: to carry out a transaction, to gain information, to report a problem / hindrance in a certain matters shall be determined based on the gathered measurements.
2. The studies shall be conducted using a time recording application. When launching the tool, the employee shall select the performed action (step) of the process from a list. At the time of its commencement, they will click to START the measurement and click on STOP at the time of completion. Information regarding when to start and stop measurement is included in the operating definitions. Such behavior will make it possible to identify the individual steps / stages of the process. After completing each measurement, the employee shall enter a previously copied case (Client) identifier – as a result, in the Analyze phase it will be possible to combine data regarding the step time with information related to it (survey) which will enable correlation of data regarding service time and the outer and personality features.

Based on data from the measure phase, the following null hypothesis was formulated:

1. H0 = There is no difference between introvert and extrovert client in sales process.
2. H0 = There is no difference between client consumable propensity and no consumable propensity in sales process.

Limitation is about cays: for the sale process in a banks in over countries could be have influence different factors.

### 3. CONCLUSION

The research is significant from the perspective of future actions taken in relation to the personal development of consultants in terms of increasing the sales level.

A profile of a Client who is “the most difficult” in the sales process, as well as a Client with the highest sales potential shall be created. After determining those critical points, it will be possible to move on to verification of the features such Clients are characterized by, as well as how to reduce their reluctance and encourage a given Client type to purchase a product.

Upon completion of the project it is planned to create scripts of conversations with different Client types, after which consultants shall be trained in the area of those scenarios. After learning and practicing the new scenarios, it will be possible to carry out the measurements again.

**Table 3:** Questions

Character trait studied	Question
Disposition (introversion / neutrality / extraversion)	Was the customer open during the conversation?
	Was the customer confident during the conversation?
	Was the customer withdrawn?
	Did the customer keep his/her distance from you?
	Was the customer taciturn?
	Did the customer speak carefully? the advisor felt that he/she had to extract information from the customer)
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	Was the customer impatient?
	Was the customer talkative (communicated with you easily?)
	Was the customer patient when you approached?
	Was the customer smiling when you approached?
	Was the customer's attitude pessimistic during the conversation?
	Was the customer's attitude optimistic during the conversation?
	Was the customer making jokes?
	Was the customer self-controlled?
	Did the customer keep his/her distance when you approached?
	Does the customer's attitude show that he/she knows what he/she wants, he/she knows what he/she came for?
	Was the customer in a hurry?
	Was the customer upset during the conversation?
	Does the customer make decisions without hesitation (in the heat of the moment)?
Does the customer need to consult a close friend or relative?	
Was the customer open to co-operation?	
Propensity to consume	Did the customer look wealthy?
	Did the customer look modest?
	Were the customer's hands neat?
	Was the customer talking about his/her interests (e.g. travels, hobbies, passions)?
	Did the customer have expensive gadgets: a watch, a belt, a tie or cufflinks, and in the case of female customers - a handbag?
	Did the customer wear items of clothing or other that were not necessary for ordinary existence?
	Did the customer wear fashionable items of clothing
	Did the customer look like someone who liked to flaunt, like someone spendthrift?
	Did the customer put his/her car keys and phone on the table?
	Does the customer live in a house?
Does the customer drive an expensive car?	
Does the customer live in a flat?	
Sophistication	Did the customer speak politely?
	Was the customer harsh/rude?
Other	Did the customer appear with a companion (a wife, daughter, son) and was it the person who decided about the sale or lack thereof?

Source: Survey carried out directly after customer service, made by authors

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