Possibilities of Using Lean and Efficiency Improvement Methodologies in Service Area

Svetlana Kocerova, Henrijs Kalkis, and Zenija Roja

University of Latvia, Raina Blvd. 19, Riga, Latvia

ABSTRACT

According to one of the leading scientific literature about Lean - The Toyota Way (Liker, 2004), Lean is a philosophy that was initiated by Henry Ford and further developed later by company Toyota in Japan in the 50s and 60s years. Methodology helps organizations to gain a competitive advantage, reduce production costs resulting into lower product/service price, deliver high quality products/services to the customers, and ensure profitability in long run for the company. This has proven itself with many examples of different size companies all over the world. Lean and related efficiency improvement methodologies (Lean) first were used in the industrial manufacturing companies, there isn't much research work regarding use of Lean in the service industry, especially in Baltics. By studying the service industry companies in Latvia and the use of Lean in these companies, there shall be defined prerequisites and specifics for success of implementation and development of Lean. The aim of the research is to understand the possibilities of using Lean and efficiency improvement methodologies in service area, based on theoretical aspects and practical analysis in Latvian business environment. The findings of this research can help other companies to define how they could benefit from and successfully implement Lean.

Keywords: Lean, Techniques, Effectiveness, Service industry, Operations, Strategy, Learning

INTRODUCTION

Lean started from manufacturing industry and has proven to be base to drive both financial and qualitative results for the customers and stakeholders (Liker, 2003). With time methodology emerged into flexible and reach toolbox and company culture element, that helps to drive not only factories, but also other industries to desired targets. As service industry is also process based to deliver services that did prove the need for Lean, there is a need to investigate impact on service delivery and banking as many companies do not choose to invest time and effort into implementation of Lean culture and lean tools due to the fact that they see it as a complicated and long process that requires resources.

The need of transformation in the traditional banking is high. Digital transformation and importance of fintech industry is highlighted by governments of countries and on the general world initiative level (Arner and Buckley and Zetzsche, 2018). This leads to clear understanding that this is the future and old-fashioned ways of banking will evolve into digital customer experience starting from private customer and moving to business customers.

Traditional banks need to have a strong attention to FinTech. FinTech companies started to appear in 2000, when the customers lost trust to traditional banks right after crises. The interesting thing is that founders of the fintech companies are businesspeople and not IT, they know banking and what customers cannot get from traditional banks (Brandl and Hornuf, 2017). Non-fintech companies cannot fully compete with banks as they do not have license to operate, but this might change in the future on a larger scale (Brandl and Hornuf, 2017).

Along with banking, other service industries face same competition changes and customer demand changes. Delivery of services require different approach that producing a product, nevertheless some high-level basic process management and improvement can be compared. This proves that Lean methodology can be also successfully implemented with some adjustment in any service company, both on large and small scale.

Development and implementation of Lean requires adjustment and clear targets from the company, commitment from management and good follow up in order to keep good balance of efforts and benefits from implementation (Kalkis et al., 2018).

Many service companies basically are running daily operations and doing the fire fighting following ad-hoc priorities that might be short-term and lowfocus on development and improvement. This requires a big change to start investing and reallocation time from these activities into improvement and lean to actually free up the time and work more efficient. This kind of decision that should be taken by management is crucial to start Lean transformation.

Also, one of the aspects is to split Targets of the company, define what needs to be prioritized and solved first and choose the right scale for Lean transformation.

Hence, the aim of the research is to understand the possibilities of using Lean and efficiency improvement methodologies in service area, based on theoretical aspects and practical analysis in Latvian business environment.

DEVELOPING AND IMPROVING LEAN IN SERVICE INDUSTRIES

According to Womack and Jones (2003) it takes 60 month or 5 years to implement Lean concept fully in any organization. This is standard estimate by implementing the full scope Lean, what is especially exciting about working with service industry that it is different from manufacturing. Here you may choose so called agile approach and "good enough is good enough" way of thinking. As services industry comparing to manufacturing is more flexible to level of what is good process and Targets. In manufacturing you must reach high sigma levels in order to reduce customer unsatisfaction and return (re-work) and ensure safe environment and production. Services are much more flexible. Company could set ambitious or more realistic target and increase it within certain periods like quarters. Also, work safety requirements in the office are much more friendly than in production with special equipment. Not all service organizations have faith in results or knowledge to start lean transformation independently and sometimes in case of hiring consultants it becomes rather costly. In order to start or improve way of work many companies train own resources and start the process from inside of the company. This approach may be slower, but less costly and creates higher feeling of ownership in employees, especially those who receive this role as a driver for Lean and continuous improvement. Crucial part is to choose right people to start and delegate / approve / assign the mandate for transformation in organization.

In addition to implementation of Lean, there are many different methodologies and tools that are available for companies who want to improve the performance and reach cost excellence in a long-term perspective. Large companies chose one or use several methods simultaneously (Andersen, 2007). There are lot of trainings and books describing each method and tool, but how do the managers of the company choose from such variety? This is one more challenge for any company to choose one from many or to create a perfect mix. If service company has no experience with lean, often it is hard to make a decision on how to start and what to choose.

There are many methodologies that come mainly after Lean. Business process management (BPM), Total Quality Management (TQM), DMAIC process, Six Sigma methodology, Model-Based Integrated Process Improvement Methodology (MIPI) (Generic Model) Adesola and Baines (2005), Super Methodology (Grossu-Leibovica and Kalkis, 2022; Lee and Chuah, 2001) and others. The fact is that all of them are interrelated or are a part of big consolidated Lean methodology concept.

According to investigation made by Chiarini (2012), all well-known frameworks and tools did emerge into some other frameworks and tools over time. Lean framework developed by Toyota needs to be improved with some elements or processes to ensure better visible results for service industry company.

There is a shift from focus only on delivery of services and service catalogues in 90-ies to automation and innovation now, the same shift is happening in the frameworks which drive and support that innovation (Dasig, 2018).

Crucial success factors for implementing Lean in service industry in comparison to factory manufacturing where Lean practices are "must" standards, are the ambassadors and people that show example. Managers have an extremely important role, this is one of the key elements in implementation (Burgelam and Dos, 2001). The decision needs to come from top management to be implemented in organization. Lean role and authority that shall come with this role is different from large company authority. Many organizations failed to implement agile and lean on the large scale due to the middle and general management resistance, ignorance or lack of support and role models (Burgelam and Dos, 2001).

Other factor that pushes service industry companies towards Lean and especially standardization is a huge shift in technology that recently took place. This is relevant to all organizations, but especially to banking sector (Zunzunegui, 2018). Companies are implementing new technologies, such as robotics process automation (RPA), Artificial intelligence (AI) and other ways of running the business without or minimum human touch.

Many companies started to work on the digital strategy. Sometimes it is a primary focus of the company. According to research findings of Bharadwaj, El Sawy, Pavlou and Venkatraman (2013) there are four main parts in digital business strategy that company needs to decide: (1) the scope of digital business strategy, (2) the scale of digital business strategy, (3) the speed of digital business strategy, and (4) the sources of business value creation and capture in digital business strategy. Success factor that is pushing companies to start Lean transformation is a need to define processes, describe and remove all "waste" and variation, visualize processes and streamline. Clearly defined and visualized processes are base for faster automation and less costly digitalization.

A common situation in service industry companies is that there are many methodologies which are in use or are in pilot stages in different units of the company. Different units act as a separate island with own priorities – silos. The scale of the improvement was fragmented, number of large projects was low, and it was difficult to ensure visible results of the improvements.

Framework for Implementing Lean

On a high-level Lean has two parts: culture and tools. If tools only are used, without building up and maintaining a culture, Lean will not last long. It is important to involve employees, because employee knows best what does not work and needs to be changed as he/she works with the specific processes daily (Liker, 2003). People or employees are the base in the Lean system and need to be involved from the start with a clear and good communication, training and support from management.

Visualization (adopted from Leanuk, 2020) that shows all detentions of the approach, including the importance of leaders and employees.

As it was mentioned previously, it is important to start small and decide on the Target of why company wants to implement Lean and thereafter move to other elements of the visualization of methodology. Regardless of the scale it is important to "touch" several elements that will support each other and test it out in the real life. After adoption of several elements, there might be a need to adjust them or to move forward to next elements to enlarge scale and benefits from Lean.

It is very important to work internationally, considering cultural aspects and nevertheless company culture before implement Lean methodology. Some companies are more mature to take the larger scale of implementation, but some are not. Culture of the country also has an impact on the scale and how the methodology should be addressed first, in order to implement not only tools, but also influence on mind set of the employees. This process needs to be benchmarked and evaluated and sometimes several adjustments are needed to be done during the process. Lean has also high impact on the service industry with rather more complicated visualizations of gain, but it is proven to bring good results both in financial and organizational aspects of the companies.



Figure 1: Domains of lean system implementation and development (Adapted from Leanuk, 2020).

CONCLUSION

The entry threshold for implementing Lean is lower than many organizations originally think it is. There are many examples showing that the initially wrong choice of the methodology application strategy makes companies tend to fail and drop the use of Lean. There are several major factors that need to be in place to start Lean transformation in service industry and adopt both culture part and tools to succeed. As a pre-requisite for implementation is a top management support and good communication about the transformation and expected results and what is expected from each and everyone in the company. Explaining that this will be a new way of work that also needs to be incorporated into other company processes to support the transformation.

ACKNOWLEDGEMENT

This research has been supported by the project "Ergonomic stress indicators in contemporary technological work environment and possibilities of its improvement in social-technical system "Human-Machine-Environment"", Agreement No. Nr.1.1.1.2/VIAA/3/19/546

REFERENCES

Adesola, S., Baines, T. (2005). Developing and evaluating a methodology for business process improvement. Business Process Management Journal, 11(1), 37–46.

Andersen, B. (2007). Business process improvement toolbox. ASQ Quality Press.
Arner, D. W., Buckley, R. P., Zetzsche, D. A. (2018). Fintech for Financial Inclusion: A Framework for Digital Financial Transformation. UNSW Law Research Paper No. 18-87; University of Hong Kong Faculty of Law Research Paper No. 2019/001; University of Luxembourg Law Working Paper No. 004–2019. Available at SSRN: https://ssrn.com/abstract=3245287 or http://dx.doi.org/10.2139/ssrn.3245287

- Bharadwaj, A., El Sawy, Omar A., Pavlou, P. A., Venkatraman, N. V. (2013). Digital Business Strategy: Toward a Next Generation of Insights. MIS Quarterly (2013), 37 (2), 471–482.
- Brandl, B., Hornuf, L. (2017). Where Did Fintechs Come from, and Where Do They Go? The Transformation of the Financial Industry in Germany after Digitalization Available at SSRN: https://ssrn.com/abstract=3036555 or http://dx.doi.org /10.2139/ssrn.3036555
- Chiarini, A. (2012). Business process reengineering. In From Total Quality Control to Lean Six Sigma, Springer Milan, pp. 25–27).
- Crowther S., Ford H. (2014). My life and work, CreateSpace Independent Publishing Platform, 96 p.
- Dasig, D. Jr. (2018). Six Sigma Methodologies and Kaizen Project Deployment: A Strategic Development for Operational Excellence Through Process Innovation. Available at SSRN: https://ssrn.com/abstract=3123593 or http://dx.doi.org /10.2139/ssrn.3123593
- Grossu-Leibovica, D., Kalkis, H. (2022). Total quality management tools and techniques for improving service quality and client satisfaction in the healthcare environment: A qualitative systematic review. SHS Web Conf., 131, 02009.
- Holweg, M., Staats, B. R., Upton, M. (2018). Making Process Improvements Stick. Kenan Institute of Private Enterprise Research Paper No. 18–22. Available at SSRN: https://ssrn.com/abstract=3240097 or http://dx.doi.org/10.2139/ss rn.3240097
- Kalkis, H., Roja Z., Babris, S. (2018). Human Factor and LEAN Analysis at Industrial Manufacturing Plants. Advances in Human Factors, Business Management and Society. J. I. Kantola et al. (Eds.), pp. 274–281.
- Lee, K. T., Chuah, K. B. (2001). A SUPER Methodology for Business Process Improvement-An industrial case study in Hong Kong/China. International Journal of Operations & Production Management, 21(5/6), 687–706.
- Liker, J. K. (2003) The Toyota Way: 14 Management Principles from the World's Greatest Manufacturer, McGraw-Hill, New York, 330 p.
- Majchrzak, A., Wang, Q. (1996). Breaking the Functional Mind-Set in Process Organizations. Harvard Business Review, Available at SSRN: https://ssrn.com/abstrac t=2537034
- Ndedi, A. A., Ekeme, A. (2017). Implementation of Lean Banking and Continuous Improvement in an African Global Bank: The United Bank for Africa. Humanistic Management Association, Research Paper Series No. 17-6. Available at SSRN: https://ssrn.com/abstract=2914454 or http://dx.doi.org/10.2139/ssrn.2914454
- Womack, J. P., Jones D.T. (2003). Lean Thinking Banish Waste and Create Wealth in Your Corporation, New York, NY: Free Press, Simon & Schuster, Inc., 1996, Second Edition.
- Zunzunegui, F. (2018). Digitalisation of Payment Services. Ibero-American Institute for Law and Finance Working Paper No. 5/2018.