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Transactional Lean: Preparing for the Digitalization Era

A Systematic Approach to Industrialize Office Processes

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Sapientia per actum bonum

Foreword

There is hardly a company in high-salary countries that is not being forced to optimize its production in order to reduce cost, meet delivery times and reach quality. Therefore, many of these have applied the Toyota Production System in production. Some renamed it or developed similar ones to reach acceptance within their companies. Lean Management, as it is called by Womack and Jones, also influenced other branches such as IT and Health.

As production contributes less and less to the total cost of a product, other parts of the value chain to be optimized come into focus. This can be seen in the appearance of new terms such as Lean development, Lean procurement or Lean accounting. These processes have an administrative character and take place in offices, so Lean Administration or Lean Office might be used as the overall concept.

The application of Lean principles to the office environment is still in its early stages—but it faces difficulties and has not led to similar success as in production so far. Most of the effort to lean out offices are currently only being focused on 5S activities such as workplace and file readiness. Clean and orderly workplaces, cleansed data and common folder names are valuable outcomes, but Lean Management offers more.

When looking at literature and research, no serious effort was made to transfer the Toyota Production System to the administrative processes, except for some hands-on "how to do" books. Based on his in-depth work "Lean Compendium" Bruno Rüttimann develops a consistent theory of Lean for the administrative processes that go beyond pin pointing some aspects. This book is the first of its kind. His profound mathematical knowledge enables Rüttimann to formalize the Lean principles and to make them applicable for further research. His long experience as a practitioner makes the book a valuable source for practice.

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Prologue

The Toyota Production System (TPS) has changed the way that products are manufactured. The TPS has been a revolutionary production system not only for the automotive industry. Today hardly a single industry is not implementing Muda-free, or better, a Kaizen-based JIT production. The benefit of Lean to reduce waste in office processes has conquered also transactional service companies, however with contingent success. Indeed, the TPS has been described in several books and has become better known in the Western world with the word Lean reducing Muda. Although it is true that by applying the TPS techniques Muda will be eliminated, it has to be pinpointed, that by applying some Muda-reducing techniques, such as e.g. 5S, Lean value-add based process analysis, one is not implementing forcedly the TPS Lean system, although often believed so. In fact, the TPS is a comprehensive production system going beyond the application of some tools. Nevertheless, through the high potential of cost savings and the aim to becoming more competitive, Lean has conquered the taste of executive management leading to the introduction of so-called operational excellence initiatives (OPEX) in many industries. Therefore, Lean has also been introduced in transactions-based service companies, such as credit institutes, insurance companies, telecom, or hospitals and many other institutions. Under the label of Lean management, the ideas of the TPS have found their applications also in the office environment and business transformation in general.

Whereas I can live in the context of an office environment with the widespread notion of Lean as waste reduction based on "discovering Muda by Gemba walk", I prefer to talk within an industrial environment about a "Kaizen-based JIT production"—identifying the TPS only with Muda (waste) reduction is really by far too restrictive. Indeed, the TPS embodies a new production theory based on cellular manufacturing with demand-pull single piece flow (SPF) allowing nearly stockless just-in-time (JIT) manufacturing. This way to produce is very different from classic Western batch & queue (B&Q) push-production philosophy and is also applicable "beyond large scale production" of Ford's assembly lines as Taiichi Ohno told. The superiority of the Toyota paradigm based production system is incontestable.

Although several basic Lean tools have been introduced to the office world, such as value stream mapping (VSM), 5S workplace organization, value-add and non-value add concept, zero error culture of first time right, different than in the manufacturing industries, generally, the OPEX initiative had only limited success. The reasons are multiple, as we will see. At this point, the question arises: is it even possible to apply a TPS-derived Lean to transactions based service industries? Frankly speaking, according to my modest experience in 20 years of management background and then afterwards as consultant as well as lecturer, rarely I have seen a consequent implementation of the TPS in an office environment. Different reasons stay at the base, but are mostly linked to the wrong techniques applied to the service industry or the office world, having a different intrinsic way of transforming input into output. I believe that the limited concept of interpreting Lean as waste reduction is the main cause of failures. Interpreting Lean as a new way to work beyond Muda and Kaizen will open an additional potential in gaining competitiveness also in the office.

However, an additional challenge is turning up: the era of new digitalization, which will change the way we work. Deploying today OPEX is absolutely mandatory; not yet being lean might compromise the future of the company. Indeed, the final aim is not OPEX but BEX (business excellence). Ongoing digitalization and progress of artificial intelligence (AI) will change today's business models. For this challenge, Lean is only the foreword. In that sense, we have to interpret the words of UBS CEO Sergio Ermotti "we have to industrialize the bank system". Therefore, in this book, we will present a new industry-paradigmatic TPS approach to the office world to exploit the whole potential of Lean and preparing processes as well as the way of value-generation to master the new digitalization challenge.

Going beyond Muda and Kaizen in the office means to apply an industry-derived approach to the transformation of how to work in transactions-based offices. The success will be based on adopting the whole TPS derived toolset; indeed the TPS tools are neither a toolbox from which to choose just some tools nor, even less, a mindset as often improperly divulged by consultants—however, they are a comprehensive synergic tool system as we will see. This book will not replace existing books, where many TPS tools are presented for the office world; this book complements existing Lean Office literature with the remaining additional toolset opening a new perspective on transforming efficiently and effectively inputs into outputs. However, we will not enter in basics, so this book is rather destined to a knowledgeable readership. Each section of the central tools chapter will present the original idea behind each TPS tool applied in the industry context; indeed, one has to have understood the tools in the original context for which they have been developed. Then, the single tool is transposed and adapted to the special characteristic of the transactional context. Each tool section of this vademecum will have an easy to remember implementation principle, which summarizes the guideline to follow for a successful Lean office transformation.

In the following, we will generally talk about Lean Office, comprising also the topic of Lean Administration. Indeed, with Lean Office is usually understood the application within service industries whereas with Lean Administration is usually intended the administration processes of a manufacturing industry. The here presented concepts are universally valid in transaction-based environment.

Realizing the envisaged profound changes to the actually applied Lean office waste-reduction approaches, the title of this book could also have been "Beyond Waste Reduction in Office Processes" stressing the industry-paradigmatic approach of Taiichi Ohno's book; nevertheless, I preferred to stay with a more sober title giving a clear message of content. Indeed, the content of this book has a revolutionary character for office application and reveals a new approach to boost productivity for transaction-based processes preparing for the digitalization era. However, the challenge will not be the application of the adapted tools, but to overcome the potential resistance of employees to change their present rather comfortable office working habits. In any case, be confident in your actions and enjoy first reading the book by gaining new insights regarding Lean applied to office.

Zürich, Switzerland Dr.-Ing. Bruno G. Rüttimann

Contents

About the Author

Dr.-Ing. Bruno G. Rüttimann, MBA studied electronic engineering at the Polytechnic Institute of Milan and business administration at the Bocconi University. During 20 years of an international management career in multinational companies, he was appointed for different positions such as managing director, director of business development, strategic planning, or continuous improvement, gaining deep insight in management, M&A, industry logics, globalization, as well as operational excellence. He is a well-known speaker at international industry and academic congresses having published several academic papers and articles with topics of globalization and lean manufacturing. His main contribution consists of having developed new global trade and FDI models as well as formalizing Lean into a consistent manufacturing theory. Now, he is Lecturer at ETH Zurich as well as consultant at inspire AG, a technology transfer institute of ETHZ.