



PROJECT MANAGEMENT ON THE EXAMPLE OF IMPLEMENTATION OF CONTINUOUS IMPROVEMENT IN THE ENTERPRISE OF THE TFL SECTOR – ENABLERS AND INHIBITORS

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Abstract

In recent times, interest in the implementation of the idea of continuous improvement (CI) has been growing in enterprises. It is connected with the systematic and consistent improvement of the company's functioning as a result of carrying out a series of small improvements in a "bottom-up" manner, in order to gain a competitive advantage. The basis of these activities is the PDCA cycle and the implementation of management concepts based on the idea of continuous improvement, i.e., Lean Management, TQM, Six Sigma. The idea of continuous improvement has its origins in the sectors of the economy mainly related to the manufacturing industry. Currently, the interest in implementing this idea is also growing in the services sector - including the transport, freight forwarding, and logistics (TFL) area, where the optimization of service delivery processes revolves around such criteria as customer satisfaction, processing time and timely completion, process quality, and costs. Bearing in mind the specificity of this sector the following research problem arises: how to successfully implement CI management concepts in an enterprise that provides TFL services?

The article aims to identify enablers (and inhibitors) for continuous improvement on the example of implementing CI project in the enterprise from TFL sector. The following research methods are used to achieve the objectives: literature studies, diagnostic methods, case studies, interviews, and direct observation. Main results and findings of are as follows:

- Social factors, i.e., organizational culture, leadership, employee engagement, efficient communication are playing an essential role in the successful implementation of CI idea.
- In managing the CI implementation project, it is crucial to shape the organization's ability to improve continuously.
- Robotics of service processes can become an important enabler for continuous improvement in services. However, it is essential to cover social issues in this area.

Keywords: *Project Management, continuous improvement, enablers, inhibitors.*

JEL code: L20, M14, M10, O22, O30

Introduction

In recent times, interest in the implementation of the idea of continuous improvement (CI) has been growing in enterprises. It is connected with the systematic and consistent improvement of the company's functioning as a result of carrying out a series of small improvements in a "bottom-up" manner. These improvements do not take place in a radical way, but rather incrementally. These activities must be part of the day to day routine of the organisation and should be voluntary and not mandatory (Garcia-Sabater & Marin-Garcia, 2011). The objective of continuous improvement is to obtain improvements in costs, quality, flexibility and in productivity (Bessant et al., 1993; Choi et al., 1997; Garcia-Sabater & Marin-Garcia, 2011) in order to gain a competitive advantage. A characteristic feature of continuous improvement is its achievement of these aforementioned improvements at little cost (Choi et al.,



1997). The basis of these activities is the PDCA cycle and the implementation of management concepts based on the idea of continuous improvement, i.e., Lean Management, TQM, Six Sigma.

There is ample documentation about the success of the implementation of tools of continuous improvement in companies and of their effect on the improvement of various indicators, both productive and non-productive (Garcia-Sabater & Marin-Garcia, 2011; Jorgensen et al., 2003; Jung & Wang, 2006; Marin-Garcia et al., 2009). However, it is believed that continuous improvement, although now widely accepted by managers in all types of organizations, is a challenging task in terms of management (Pullin, 2005). According to J. Bessant & S. Caffyn (1997), the difficulty is not due to the idea itself but to the mistakes made during its implementation. J. Bessant et al. (2001) believe that the mechanisms by which a steady (continuous) increase in improvements can be achieved are not clearly defined. The research shows that continuous improvement is an evolutionary process in which five different levels of maturity can be identified (Bessant et al. 2001). The challenge for each organization is to learn at every level and move to a new level, integrating the existing solutions with new ones. The results of some studies show that not always initiatives of continuous improvement bring the expected results (Pay, 2008; Mendelbaum, 2006). The question arises, therefore, what is the reason for this? Some tried to explain it (Bessant & Caffyn, 1997; Formento et al., 2013; Loadgard et al., 2016; Schroeder & Robinson, 1991), but little in those attempts reveals how failed implementations of CI initiatives can be "rescued".

Although CI is widely practised, organisations have experienced difficulty with sustaining the momentum of their activities (Mauri et al., 2010). This difficulty has been attributed to a poor understanding of the process of change management within CI initiatives (Rapp & Eklund, 2002). A commonly adopted approach to CI has been to implement ad hoc process improvement projects by simply applying established CI tools and techniques. Implementing such an approach is most likely to fail if the infrastructure needed to sustain a momentum of improvement has not been put in place (Anand et al., 2009; Galeazzo et al., 2017). Previously reported failures to do this might be attributable to the abstract nature of published guidelines on CI capability development (Garcia-Sabater et al., 2012) and the lack of detail on the elements of a process for CI programme management. In the literature, attempts are being made to identify key factors – enablers and inhibitors of the CI process (Bessant & Caffyn, 1997; Formento et al., 2013; Garcia-Sabater & Marin-Garcia, 2011; Garcia-Sabater et al., 2012).

The interest in implementing continuous improvement idea is growing in the services sector – including the transport, freight forwarding, and logistics (TFL) area, where the optimization of service delivery processes revolves around such criteria as customer satisfaction, processing time and timely completion, quality, and costs. Bearing in mind the specificity of this sector the following research problem arises: how to successfully implement CI management concepts in an enterprise that provides TFL services?

The article aims to identify enablers (and inhibitors) for continuous improvement on the example of implementing continuous improvement project in the enterprise from TFL sector.

The following research methods will be used to achieve the objectives: literature studies, diagnostic methods, case study, interviews, and direct observation.



Implementation of a continuous improvement process: models, enablers and inhibitors

According to J. Bessant & S. Caffyn (1997, p. 11) CI is not a single event, nor is it a single technique or tool; it is a long-term learning process. Authors characterize five discrete “stages” or levels of development in CI (Maturity Model of CI):

1. “Natural”/ (background CI): problem solving happens at random, no formal efforts or structure, occasional burst punctuated by inactivity and non-participation, the dominant mode of problem solving is by specialists, short-term benefits, no strategic impact.
2. Structured CI: formal attempts to create and sustain CI, use of formal a problem-solving process, use of participation, training in basic CI tools, structured idea management system, recognition system, often parallel system to operations.
3. Goal oriented CI: all of the above plus formal deployment of strategic goals, monitoring and measurement of CI against these goals, in-line system.
4. Proactive (empowered CI): all of the above plus responsibility for mechanisms, timing, etc., devolved to the problem-solving unit, high levels of experimentation.
5. Full CI capability – the learning organization: CI as a dominant way of life, automatic capture and sharing of learning, everyone actively involved in the innovation process, incremental and radical innovation.

The progression from one level to the next is realized within an organization in accordance with the specific abilities acquired. These abilities are arranged in the following order:

1. “Getting the CI habit” – the ability to generate sustained involvement in CI,
2. “Focusing CI” – the ability to link CI activities to strategic goals of the company
3. “Spreading the word” – the ability to move CI activity across organizational boundaries
4. “Walking the talk” – the ability to articulate and demonstrate CI values
5. “Continuous improvement of continuous improvement” – the ability to strategically manage the development of CI
6. “The learning organization” – the ability to learn through CI activity (Bessant & Caffyn, 1997, pp. 13-15).

The evolutionary model has been confirmed by quantitative studies confirming this hierarchy of stages and the growing impact of continuous improvement on business performance indicators, along with the transition to subsequent stages (Jorgensen et al., 2006).

However, researchers pointed out several weaknesses in this approach. According to M. Butler et al. (2018), the weakness of the J. Bessant et al. (2001) model is that the development of employee behaviour required to support and sustain a CI initiative is depicted as a predefined sequence of behavioural changes that ultimately result in the development of a learning organisation. No recognition is given to the possibility of the loss of the ‘discretionary effort’ to be made by shop floor employees in order to sustain a momentum of improvement (Butler et al. 2018). C.W. Wu and C.L. Chen (2006) described three other limitations: 1) stable frameworks are required to sustain action, 2) model does not explain what skills are required as necessary to achieve the wanted solution, and 3) it does not take into account that any activity manifests the cycle of entry, growth, maturity, and decline.

Ability acquisition is manifested through characteristic behaviour patterns, which are widely and accurately presented by J. Bessant et al. (2001, p. 72). Case studies (Rijnders, 2002; Savolaine, 1999; Jorgensen, 2003) suggest that companies implement the CI behaviours in a much less linear fashion than proposed in the CI Maturity Model. Furthermore, these studies suggest that various issues, for example, those related to culture and leadership (Jorgensen,



2003) must be managed before embarking on CI development. Finally, these empirical studies suggest that specific characteristics of an organization may render some of the behaviours more critical than others in terms of improving performance (Jorgensen et al., 2006, pp. 331-336). Authors suggest that CI maturity need not necessarily follow a linear progression in order to impact performance positively and that the development of certain capabilities may lead to improvement of specific measures of performance. According to the analysis, the appropriate strategy for any given organization may depend on factors not included in their study. Future research should be targeted at identifying additional factors that may have an influence on which behaviours should be prioritized (Jorgensen et al., 2006, p. 336).

Critical management task in developing CI is putting behavioural routines in place and reinforcing them (Bessant & Caffyn, 1997, p.16). This development can be enabled by the use of a variety of structural and procedural devices – “enablers” and “inhibitors” (“blockage”) – which can be deployed strategically. According to J.J. Garcia-Sabater & J. A. Marin-Garcia (2011, p. 30) “enablers and inhibitors are elements or characteristics in an organisation, that due to their existence or absence in the company, act as catalysts causing the development of continuous improvement or on the contrary restrain or even cause limitation of continuous improvement within the company”.

Many authors have developed models and identified enablers and inhibitors for continuous improvement (Bateman & Rich, 2003; Bessant & Caffyn, 1997; Garcia-Sabater & Marin-Garcia, 2011; Garcia-Sabater et al., 2012; Formento et al., 2013; Butler et al., 2018). For example, table 1 presents a set of enablers and inhibitors proposed by J. Bessant and S. Caffyn (1997, p. 11).

Table 1

Enablers and blockage for continuous improvement

Ability	Enablers	Blockages
Getting the CI habit	PDCA or similar structural model plus training Simple idea management system, based on rapid response Recognition system Simple vehicles, based on groups Facilitator training	No formal process for finding and solving problems Lack of skills in problem-solving Lack of motivation No structure for CI Lack of group process skills
Focusing CI	Focus problem-solving on strategic targets/policy development	No strategic impact of CI
Spreading the word	Cross-functional CI teams Process modelling tools and trainings	Lack of co-operation across divisions Lack of process orientation
Walking the talk	Articulation and review	Conflict between espoused and practised values
The learning organization	Post-project reviews Story-board techniques Encapsulation in procedures	No capture of learning
Continuous improvement of continuous improvement	Formal CI steering group and strategic framework Regular CI review and relaunch	Lack of direction Running out of steam



Source: Bessant J., Caffyn S., *High involvement innovation through continuous improvement, "International Journal of Technology Management" 1997, Vol. 14, No. 1, s. 11.*

H.R. Formento et al. (2013) in a review of the literature identified nine key factors and seventeen components aiming to evaluate implementations of a continuous improvement process (table 2) and evaluated those factors against a group of thirty large companies that had various level of success in CI their implementations.

Table 2

Key Factors and Components of a Continuous Improvement process

Key Factor	Component
Formalization & Structure	Existence of formal program Existence of continuous improvement teams
Continuity/Duration	Never was discontinued It evolved over time Age of the program (average)
Deployment/Scope of Program	Projects also apply to support areas Percentage of employees involved (average)
Training	Training program on continuous improvement Training for all staff
Management Commitment	Managers identify topics for improvements Managers approve topics for improvement Managers open and close projects Senior management participate in internal events
Program Coordination	Middle managers facilitate teams Different roles to coordinate teams
Methodology & Tools	There is an official method for teamwork Interdisciplinary teams Use of basic tools
Performance Measurement	Measurement of avoided cost Measurement of participation
Communication of Results, Recognition & Incentives	Existence of recognition program Teams presentation in internal events

Source: Formento H.R., Chiodi F.J., Cusolito F.J., Altube L.A. & Gatti S.P., 2013. *Key factors for continuous improvement, Independent Journal of Management & Production, v. 4, n. 2., p. 408*

The research confirmed that among companies with successful CI processes they had almost all of those components present and well developed. The companies struggling with their CI implementations were lacking in several areas. H.R. Formento et al. (2013) recommend establishing ways of working taking into account all of the factors listed in table 2, as they seem to differentiate between successful and unsuccessful CI programme. Authors recognize that each company needs to create its continuous improvement strategy; a specific plan, fitting to the company situation, increases the success possibilities.

The research by J.J. Garcia-Sabater et al. (2012, based on the studies of literature on the subject), identified the following enablers and inhibitors and examined their occurrence in companies at different levels of the CI maturity model of Bessant et al. (2001):

1. Management involvement and strategy,
2. Setting objectives and the need for metrics,
3. Leadership management – the continuous improvement (lean) manager,



4. Worker involvement,
5. Resources,
6. Clarification and creation of new structures,
7. Methods for expanding continuous improvement,
8. Selection of continuous improvement projects,
9. Cultural aspects,
10. Training in abilities.

The companies interviewed in the study considered these elements as necessary, thus confirming the proposals presented by literature. The relationship between enablers, inhibitors and various stages of the model proposed by J. Bessant et al. (2001) was established. Therefore, another sequence of factors enabling the implementation of continuous improvement was developed. It shows how the introduction of these factors can contribute to the development of behaviours related to different abilities.

The multitude of lists of enablers and inhibitors presented in the literature encourages their practical verification. It is an important field of research, as they have a noticeable impact on the effectiveness of the CI process implementation.

Analysis and evaluation of project management CI implementation – case study

The study aimed to analyze and evaluate the implementation of the continuous improvement process, with particular emphasis on enablers and inhibitors of CI, and the effects of the continuous improvement implementation. The subject of the research was the process of implementing the idea of continuous improvement. The author employed an idiographic approach and a research method – a case study. Thanks to the case study, the researcher can confront his reasoning with the behaviour of real participants of events and processes. According to R.K. Yina (1994, p. 23) case study, on the one hand, is empirical, because it is based on analysis and evaluation of phenomena occurring in reality, on the other hand, is reliable in relation to data collection and processing because it opens access to many information sources and allows comparison between them. The analysis used the following research techniques: documentation analysis (company website, reports), participant observation and interview. The interview was conducted with Process Improvement Manager, Lean Program Manager, and HR Manager.

The surveyed company is a medium-sized company of the TFL sector employing over 200 employees. It organizes transport for all types of vehicles for its customers throughout Europe. It also offers export sales to its customers. Thanks to the appropriate management of the fleet of vehicles and freight as well as an extensive network of partner companies, the company can collect any express delivery within 60 minutes within the European Union. Another service offered by the company is air transport ("door to door"), sea transport and storage of goods.

There were two approaches to implementing the idea of continuous improvement in the company under study. The first approach took place in 2013. At that time, the need to implement improvement measures was considered as a way to eliminate the problems that existed at the time: cost growth disproportionate to profits achieved, not cascaded goals, lack of project management, insufficient resources and competencies in management, no specific goal of action. However, in July 2013, after a long-delayed transport, a critical complaint from the most significant customer came to the company. Without the implementation of radical remedies, there was a risk of termination of cooperation in that company. After many hours of senior management talks, the decision was made to reorganize the core department – forwarding



– with the use of Lean Management. The CI implementation project involved: General Manager, Operational Manager and Head of the Shipping Department. To a lesser extent, other managers and employees were involved – their role was mainly to attend numerous meetings. The primary process – forwarding was divided into three parts (functioning like the sockets).

This task separation resulted in a 28% savings in the costs of order processing, significantly shortened the time of introduction of new employees and improved the quality of supervision. The process-oriented organization, with only minor changes in the framework of continuous improvement, exists to this day. At that time, a standard monitoring system was created containing several basic protocols assuming separate activities, depending on the urgency of transport. Also, standardized job descriptions and competence matrices were created. Neither of these tools has been successfully implemented and has become obsolete over time. An attempt was made, also ineffective, to implement the matrix of indicators that were to cover the key processes in the company. In 2014, intensive work was also carried out on the company's first strategic plan in the company's history, which in its assumptions was to prepare the company for even more dynamic growth, including the creation of process maps, employee recognition system and elimination of waste. Unfortunately, without the support of the management board, most of the activities were not implemented, and the departure of the General Manager in 2016 made it difficult for the inexperienced team to achieve the set goals.

In retrospect, in 2013, the organization was not ready to implement continuous improvement using the lean approach. Despite the willingness and commitment of several managers, limited confidence in this type of solutions from the owner of the company and the lack of a sense of need for changes among employees led to the ineffective implementation of CI. The task put before the General Manager was to increase turnover by acquiring new clients. The way he chose to achieve the goal was, however, incompatible with the vision of the owner of the company. The General Manager believed that solid foundations should be prepared for growth: define, standardize and slim down processes, prepare products that would defend themselves with their quality – this road required time and commitment of many resources. In the owner's opinion, however, it was necessary to act quickly, intensifying sales activities.

Not without significance was the fact that neither employees nor the team involved in the CI implementation had any experience in this matter. Each meeting turned into many hours of discussions on many side topics. The inability to concentrate on the purpose of the meeting led to the fact that they often ended without any conclusions. The problem was also the excessive ambition of the team, which imposed on itself unrealistic (with the resources at hand) amount of projects. As a result, many of them were never completed and those that were implemented, and passed on to the owner of the process, eventually died or became out of date.

In 2018, the company made a second attempt to implement continuous. An employee with many years of experience and extensive knowledge about the Lean concept joined the team. In February, initial training for the management in the field of *kaizen* and Lean and the selection of a pilot area for implementation – the aforementioned forwarding process. In March, leaders and coordinators of the CI program - "leaders of change" - were trained. Team prepared designs of tables to be used during daily meetings and a system of regular meetings for managing team results was implemented. Selected people from the forwarding department underwent training for problem-solving capabilities. The CI team started to create a new set of competence matrices.

In order to increase the effectiveness of introduced changes, the following CI methods and techniques were used:



- problems based on visualization: "hour by hour" tables, process maps, one-point lessons,
- related to control: job description sheets, competence matrices,
- showing cause-and-effect relationships (problem-solving): Ishikawa diagram, 5 Why,
- related to the strengthening of strategy implementation: cascading objectives, goals created using the SMART method, key process measures (KPIs).

At the turn of July and August, a week-long *kaizen* workshop took place, where participants representing different levels and stages of the process worked to identify and eliminate waste by analysing the key customer service process. As a result, a list of dozens of mini improvement projects was born, the implementation of which lasted until the end of the year. The company created a new department – Lean and Robotics (LiR), whose role is "Building *kaizen* culture and managing activities leading to increase of the company's competitiveness (by improving efficiency, reducing costs, improving quality)". On the initiative of the employees of the LiR department, work on a "Road Map", which was meant to be an indication of the areas in which LiR can support the implementation of the strategic goals of the company, had been started. During its preparation, however, it turned out that these goals are not consistent and sometimes even mutually exclusive. After the presentation of these results the definition of "Road map" has been changed, and the management board was involved in the work in that area. In effect, the "Road map" goal is now to define the company's strategic goals and allow, with the participation of managers, to cascade them down into individual departments. What is important, this time the managers were to determine how – and how much – they can contribute to the implementation of strategic goals and the overall result was subject to negotiations. Through a cycle of workshop meetings, indicators for all revenue departments were developed. During the annual Christmas Eve meeting, strategic objectives and detailed operational objectives of individual departments were presented.

Based on the CI maturity model proposed by J. Bessant and F. Caffyn (1997), it can be stated that the company under study passed (to some extent) through the first three levels of the model. At each of these levels, the occurrence of some typical characteristic was identified, i.e.:

- 1st stage – "Natural"/(background CI): problem solving happens at random, no formal efforts or structure, occasional burst punctuated by inactivity and non-participation, dominant mode of problem-solving is by specialists, short-term benefits, no strategic impact.
- 2nd stage – "Structured CI": formal attempts to create and sustain CI, use of a formal problem-solving process, training in basic CI tools, often parallel system to operations.
- 3rd stage – "Goal-oriented CI": formal deployment of strategic goals, monitoring and measurement of CI.

The evolution of continuous improvement in the company under study seems to progress according to the model as mentioned above, however, only certain activities have been undertaken at individual stages. At the "structured CI" level there was no significant employee participation in CI, neither structured idea management system nor recognition system. At the "goal-oriented CI" level, there was no in-line CI system nor any cross-boundary problem-solving activities.

As has already been said, the progression from one level to the next is realized within an organization in accordance with the specific abilities acquired (Bessant, Caffyn 1997; Bessant et al. 2001). While studying the abilities of the enterprise for continuous improvement, little behaviour that supports the maintenance and development of them have been identified. In the cross-section of individual abilities, the following behaviours were observed:



1. “Getting the CI habit” (the ability to generate sustained involvement in CI): people make use of some formal problem-solving and solving cycle, people use appropriate simple tools and techniques to support CI, groups and individuals begin to use simple measurement to shape the improvement process, groups and individuals initiate and carry through CI activities
2. “Focusing CI” (the ability to link CI activities to strategic goals of the company): individuals and groups assess their proposed changes against departmental or company objectives to ensure they are consistent with them.
3. “Spreading the word” (the ability to move CI activity across organizational boundaries): people co-operate in cross-functional groups/across internal.
4. ”Walking the talk” (the ability to articulate and demonstrate CI values): lack of suitable behaviours.
5. “Continuous improvement of continuous improvement” (the ability to strategically manage the development of CI): the CI system is continually monitored and developed by a designated individual, the individual responsible for designing the CI system design it to fit within the current structure and infrastructure.
6. “The learning organization” (the ability to learn through CI activity): lack suitable behaviours.

The result of this diagnosis raises some concern. For if the company does not develop proper (pro-CI) attitudes and behaviours, the organization will not have the ability to continually improve and thus to enter the next levels of CI evolution. As has been already mentioned, the success of continuous improvement depends very much on people (their attitudes, behaviours, actions).

Another issue under consideration was the determinants of CI implementation in the enterprise. The following enablers and blockages have been identified based on J. Bessant, F. Caffyn (1997) (table 3).

Table 3

Enablers and blockages of CI based on J. Bessant, F. Caffyn (1997) classification

Ability	Enablers	Blockage
Getting the CI habit	PDCA or similar structural model Training in problem-solving Facilitator training Simple vehicles, based on groups	Lack of motivation Lack of simple idea management system, based on rapid response No recognition system
Focusing CI	Focus problem-solving on strategic targets/policy development	
Spreading the word		Lack of co-operation across divisions Lack of process orientation
Walking the talk		Conflict between espoused and practiced values
The learning organization	Post-project reviews	
Continuous improvement of continuous improvement	Formal CI steering group and strategic framework Regular CI review and relaunch	

Source: own research based on the results of the case study and J. Bessant, F. Caffyn (1997)



As can be seen from the above list, there are only some of the enablers of CI identified within the company. In addition, several blockages/inhibitors of CI have are present. That might mean that the implementation of continuous improvement is at risk, and precautionary measures should be taken.

Using the classification of enablers and inhibitors of CI provided by H.R. Formento et al. (2013), which can be treated as an extension of the previous model, the following activities have been identified (or not) in the scope of continuous improvement (table 4).

When it comes to cultural determinants of CI implementation in the surveyed enterprise, it can be said that there is still a lot to do. Although the values characteristic of continuous improvement are included in the company's vision and mission, the activities related to their promotion are poorly advanced. The result is the occurrence of a few organizational behaviours that serve to shape the organization's ability to improve continuously. Respondents admit that the leaders and managers of the lowest level of leadership who have a direct influence on operational employees have a significant role to play in this respect, so this group should be particularly supported in the acquisition of the ability to carry out cultural change. The company is aware of shortcomings in this area and is successively trying to undertake further activities that build a culture of continuous improvement. At the same time, it realizes that without a strong culture of continuous improvement, it will be difficult to succeed in the area of CI. Currently, the culture of continuous improvement is the most popular at the level of behavioural and physical artefacts, i.e. presentation of the use of problem-solving tools (fish diagram, 5 Why), visualizations of CI results, meetings at boards (review of results), problem-solving sessions, improvement tables (visualizations of problems and their statuses).

By examining the perception of the work of the project team for the implementation of CI by its members, it can be concluded that all members of the team highly appreciated the team's orientation to problem-solving and focus on achieving results. In turn, mutual trust, openness to constructive criticism and involvement in design work were highly rated by Process Improvement Manager but on a medium level by Lean Program Manager. Responsibility and attention to results as well as effective communication in the team have been evaluated highly by Process Improvement Manager and as poor by the Lean Program Manager. These discrepancies in the assessment of the work of the team by their members indicate that it is still necessary to work on the team's cooperation and find reasons for the lower grades of the team's work from Lean Program Manager. The project manager (Process Improvement Manager) has been assessed relatively high. The manager received slightly lower ratings in terms of having authority among project team members as well as technical (specialist) and administrative (management) reliability. Asked about motives to work in the CI implementation team, team members jointly agreed on: the opportunity to demonstrate their initiative and independence, the possibility of personal development within the framework of the project and personal identification with the idea of continuous improvement.

Regular meetings of the project team (every two weeks) on which you can present your ideas and submit proposals for changes, were pointed as an important factor increasing the effectiveness of the project. The team members indicated that the meetings of the project team are also an opportunity to increase the team's integration. Sometimes the president of the company participates in these meetings, which underlines the importance of the project.

Table 4



Key Components of a Continuous improvement process

Key Component	Case-study situation
Formalization & Structure	<ul style="list-style-type: none"> • There is no formalized CI program • CI teams have been established and functioning (they include operational employees and a moderator) • There is no formal employee suggestion system (ideas are collected as part of a solving session or brainstorming session or <i>kaizen</i> workshop).
Continuity/Duration	<ul style="list-style-type: none"> • There is daily visual management of results (short meetings) • Problems are solved on a regular basis • There is a CI table for reporting and monitoring problems • New CI tools are used • CI activities are transferred to new areas
Deployment/ Scope of Program	<ul style="list-style-type: none"> • CI projects also appear in the areas supporting the main activity • The number of employees involved in CI and the number of improvement requests reported are not measured
Training	<ul style="list-style-type: none"> • There is a CI training program • Conducted trainings: introduction to Lean and <i>kaizen</i>, problem-solving, visual results management • All employees were covered by training • The training is carried out by LiR and external companies
Management Commitment	<ul style="list-style-type: none"> • Managers identify areas for improvement • Managers are included to approve ideas for improvements • There is no gemba walking • The role of CI management is mainly about checking results (effectiveness and savings reports)
Program Coordination	<ul style="list-style-type: none"> • Mid-level managers of management rather do not support the work of teams and units in the implementation of CI activities. They are focused more on current operations.
Methodology & Tools	<ul style="list-style-type: none"> • The company does not yet have its own methodology to implement the CI and the official method of team work • Interdisciplinary CI teams are organized only during solving problem sessions • The following CI tools are used: Daily management, solving problem, Visual management, Hoshin Kanri, <i>kaizen</i> workshop, One-Point Lessons, competence matrix • The automatization of 80% of the financial settlement process based on robotization of the process (RPA) was introduced
Performance Measurement	<ul style="list-style-type: none"> • Measurements of employee participation in CI activities are not yet made • The results of (effectiveness) CI activities are measured • Continuous improvement of operations was included in the KPI
Communication of Results,	<ul style="list-style-type: none"> • There is no reward program for activities (achievements) in the field of CI



Recognition & Incentives	<ul style="list-style-type: none"> • Closed events are organized, during which the results of activities of CI units and teams take place • The employees' achievements in improving the results are formally reported to all employees in the company
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Source: own research based on the results of the case study

Conclusions

The most important effect of the continuous improvement implementation in the surveyed company, in the opinion of respondents, is the development of common goals, a change in the method of their determination and implementation (application of Hoshin Kanri). The company has clearly defined strategic goals until 2025. The consistently adopted assumptions (goals) in the scope of stabilizing the level of costs in relation to the profits achieved, more effective use of tools related to setting and achieving goals and supervision over ongoing projects are implemented. There is no doubt that the direction of activities adopted in 2018 is correct and the reorganization of the entire CI implementation process has a positive impact on the functioning of the entire organization. It is also worth emphasizing that CI projects also appear in the areas supporting the main activity of the company. Therefore, it is necessary to minimize diagnosed problems in order to transfer good practices and not to repeat previous mistakes.

In the first approach to the implementation of continuous improvement, the leading enablers were the determination of the General Manager and the first training and organizational solutions in the field of CI. However, they were not enough to overcome the problems (inhibitors) that appeared then, i.e.:

- incorrectly defined goals (inadequate to the possibilities) and divergent ways of reaching the goal,
- inexperienced and mentally unprepared for a change of staff (lack of awareness of CI),
- low level of knowledge of CI issues,
- lack of involvement of a larger group of people (including managers) in CI activities,
- lack of strong support from the board,
- inadequate – to conditions prevailing in the organization – selection of tools, i.e., competence matrices, which have not been used,
- the multiplicity of projects (no priorities) and as a result partial or complete lack of implementation,
- lack of continuous improvement of organizational culture,
- lack of prepared leaders (leaders).

The problems mentioned above meant that the entire CI implementation process did not go through a book. The company could not build a new culture based on solid foundations of *kaizen*. As a result, financial and non-financial costs related to a multitude of initiatives that could not be implemented were incurred. Resources have been involved in projects that have never been implemented. The entire transformation process was essentially interrupted. It was only after joining the next Lean experts in the organization in 2018 that the company reorganization process was resumed. Currently, the factors (enablers) that encourage the implementation of continuous improvement are:

- greater awareness of managers and leaders of pilot areas in the scope of CI,
- common (known to all) organization goals related to continuous improvement,
- regular meetings to verify the implemented improvements and their results (CI



effectiveness measurement),

- involvement of the management board in analysing the results of improvements and providing feedback,
- ensuring adequate resources (i.e., assuring enough time for CI projects and training),
- consistency in the implementation of continuous improvement,
- Well-motivated and committed CI project team.

At the current stage of the transformation of the company, one also notices some disturbing symptoms (inhibitors) that may in the future result in a fiasco of the entire undertaking:

- less and less time devoted by CI leaders and coordinators to improvement activities,
- too many operational tasks,
- sudden changes in priorities, deposition (suspension) of CI activity,
- too low awareness of employees about the introduced changes,
- the resistance of employees to changes taking place,
- low employee involvement in CI activities,
- lack of openness among employees for modern technical innovations,
- low awareness of managers of the potential benefits resulting from robotization of processes (especially at the beginning of the implementation of change), lack of ideas from managers as to how to manage the time released, employees' worries about losing their job,
- poorly advanced activities in shaping the culture of continuous improvement.

The above signals may indicate that the organization described has not yet fully matured in the tasks it set for itself in the area of CI. The successful introduction of continuous improvement requires constant engagement of the employees. The recommendation is to enable bottom-up initiatives in the field of improvements via i.e., the "ideas box" or "hour for development", giving the opportunity to engage all employees in the problem solving process. Employees' resistance to ongoing changes and lack of awareness of the benefits that will result from the implemented changes may also be disturbing. In this case, the recommended action is to strengthen the role of change leaders.

The HR department has a significant role to play in this implementation of CI, which through proper creation of training policy, personal development plans, linking the employee evaluation system with the company's goals and remuneration can affect the effectiveness of the implemented changes. HR employees through cyclical activities such as webcasts, webinars or stationary meetings can broaden the employees' awareness related to the direction indicated by the company's management and reduce their resistance to the ongoing changes.

The interviews show that the specificity of the industry in which enterprise operates might lead to significant challenges in the continuous improvement application area. The problematic issues are, for example: a considerable variation in the number of orders during the week (usually large at the beginning and end, smaller in midweek – occurrence of the *mura*), changing the profile of services depending on the client's needs (problem with standardization of the service), and the difficulty in measuring the lead time of the orders (when the forwarder deals with several orders at the same time). These situations give rise to additional difficulties related to the implementation of continuous improvement, and they are a big challenge for the company.



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