

Lean Management is an organization management concept aimed at meeting customer expectations while eliminating all non-value-added activities. It is one of the most frequently used by enterprises both in Poland and around the world. The implementation of the principles and tools as part of Lean Management influences the organization of the way of managing the enterprise, achieving high economic efficiency without losing quality and flexibility, which are focused on the client's requirements and needs. The literature describes and analyzes the process of implementing only selected tools, while there are no publications on the implementation of Lean Management.

An important element of the implementation of these tools is the verification of the effectiveness of their implementation in organizations. As part of this dissertation, the possibility of using auditing as a tool to measure the effectiveness of implementation was verified. Auditing is mainly used to verify compliance with the requirements of standardized management systems. Due to the fact that Lean Management is one of the most frequently implemented concepts, the possibility of applying an audit in this area will complement the knowledge in the field of quality management.

When implementing Lean Management, it is important to define goals to be achieved. Key performance indicators are one of the tools used by companies to visualize the process being implemented and make it easier for employees to understand. In Polish literature, there are generally no publications on the analysis of the impact of Lean Management implementation on KPI, as well as studies on the mutual relations between the quality management system compliant with ISO 9001 and Lean Management.

The main purpose of the work was to develop a model for the implementation of Lean Management, including tools and comprehensive measurement of the implementation level. In the model, due to the need to ensure compatibility with the ISO 9001 system, the research method was audit, and the measures of the level of implementation of the tools - selected KPIs. The project was carried out on the example of the plastics processing industry.

In order to achieve the main goal, specific goals were set:

1. Analysis of the relationship between the level of implementation of Lean Management tools and key performance indicators, based on the example of companies from the plastics processing industry.
2. Development of the audit questionnaire, taking into account questions about employee satisfaction.
3. Assessment of the implementation of Lean Management tools, as well as indication of the possibility of their improvement in Lean Management by the analyzed companies on the basis of the conducted audits.
4. Developing a map of the implementation of Lean Management tools in the surveyed organizations.
5. Development of a comprehensive method of measuring the level of implementation of Lean Management tools.
6. Development of criteria for the division of Lean Management tools.
7. Verification of the suitability of the audit as a tool supporting the process of analyzing the implementation of Lean Management tools.

Based on the research, the formulated research hypotheses were verified. Two of them have been confirmed and one has been rejected.