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PROCESS SHEET AS A PROCESS MANAGEMENT TOOL IN COMPANY LOGISTICS ACTIVITIES

Introduction

In the face of the growing pressure to increase operational efficiency, standardization and optimization of logistics processes are essential elements of process management in modern enterprises. An important area that requires standardization is the warehousing process, which connects order acceptance with its physical fulfillment. Appropriate standardization of this process not only improves the quality of customer service but also the internal efficiency of process management.

The purpose of this study is to design a warehouse process sheet for the trading company Offroad Express and analyze its role in standardizing and optimizing operational activities. The study focuses on presenting the process sheet as a tool for organizing warehouse activities and supporting their evaluation, improvement, and management decision-making.

The theoretical section of the article presents the assumptions of process management in logistics and the concept of process sheets as a tool supporting work organization. In the empirical part, a warehouse process sheet for the Offroad Express company is presented, based on direct observation and with an analysis of its functioning. The article ends with a summary and an indication of the possibilities for further development of the process in the context of process management.

1. Process management in logistics

In modern organizations, process management is one of the key challenges faced by managers and operational managers. It involves the orderly execution of activities within a defined timeframe, leading to a clearly defined outcome. To be effective, a process must meet three fundamental characteristics¹:

¹ A. Bitkowska, *Zarządzanie procesowe we współczesnych organizacjach*, Difin, Warszawa 2013, pp. 27-31.

- Purposefulness – the process must be consistent with the company's mission and bring added value. Its outcomes should be measurable, for example, through processing time, quality of execution, or costs incurred.
- Customer orientation – customer needs should be the starting point when designing processes. Only a customer-focused company has a chance to achieve customer satisfaction.
- Standardization – unification of processes in relation to the adopted pattern allows to reduce errors and ensure compliance with standards, regulations, and organizational resources.

These three elements constitute the foundation of effective process management and influence the quality of the entire organization's functioning.

Logistics process management is an example of applying a process approach in an enterprise. Its essence is planning, organizing, and controlling the flow of materials, products, and information throughout the supply chain—from raw material acquisition to delivery of the finished product to the end customer. Effective management of logistics processes requires eliminating time and space barriers, optimizing the flow of goods and information, and ensuring that these activities are in line with customer expectations. The primary goal of logistics management is to ensure the delivery of the right product to the right place, to the right customer, at the right time, in the right quantity, with the right quality, and at the lowest possible cost. This set of principles is known as the "7Ws" framework. In practice, this requires coherent logistics management at every level—strategic, tactical, and operational².

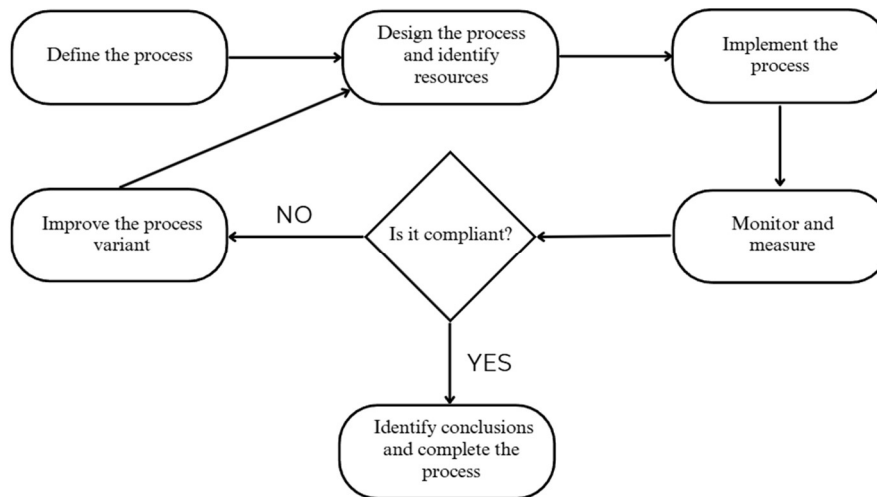
Organizational processes should precisely define the necessary activities and enable their systematic implementation, leading to the effective completion of a given task. Awareness of the subsequent stages of a process facilitates effective pursuit of the intended goal. Figure 1 presents the main stages of a process.

The first stage of a process involves identifying needs and defining the goal, which should align with the company's mission and values. This stage defines the actions necessary to initiate the process and the expected results, enabling subsequent progress monitoring. The

² *Koncepcja zarządzania procesami logistycznymi w przedsiębiorstwie*, <https://wszop.edu.pl/wp-content/uploads/2021/01/Koncepcjazarzadzaniaprocessamilogistycznymiwprzedsiębiorstwie.pdf> (accessed: 22 May 2025).

involvement of a team of specialists is crucial here, as they create a process map containing the most important information needed for its effective implementation³.

Figure 1. Basic stages of a process



Source: Author's research based on: A. Bitkowska, *Od klasycznego do zintegrowanego zarządzania procesowego w organizacjach*, Wydawnictwo C.H. Beck, Warszawa 2019, pp. 32-33.

The next step is to design the process and determine the necessary resources. Designing involves defining the activities that comprise the process, sequencing them logically, estimating implementation time and costs, and establishing measurable end results. The next step is to design the process and determine the necessary resources. It is crucial to begin by defining the expected outcome, which allows the process to be directed toward a specific value. At the same time, the resources that will be used must be determined; these include human, infrastructure, and financial resources. After designing the process and determining resources, the implementation of planned activities begins. The next step is monitoring and measurement, which involves systematically supervising the process and assessing its efficiency and quality with the use of previously established indicators. A compliance check is then conducted, which analyzes the process for any deviations from the adopted assumptions. If discrepancies are identified, corrections are made, and existing solutions are improved. If everything is proceeding according to plan, final conclusions are drawn and the results achieved are documented⁴.

³ A. Bitkowska, *Od klasycznego do zintegrowanego zarządzania procesowego w organizacjach*, Wydawnictwo C.H. Beck, Warszawa 2019, p. 34.

⁴ P. Grajewski, *Procesowe zarządzanie organizacją*, Polskie Wydawnictwo Ekonomiczne, Warszawa 2012, pp. 35-36.

A key element of process management in logistics is efficiency, defined as the ability to manipulate goods in such a way as to minimize service costs, execution time and maximize the use of existing resources. Process efficiency is achieved through continuous learning and improvement. Efficiency can be achieved by paying attention to both external and internal factors within the enterprise. External factors concern elements that do not directly influence the processes taking place in the organization but only influence the decision-making of management⁵.

The effectiveness of modern warehouse management is significantly influenced by a Warehouse Management System (WMS), which supports inventory control and manages all warehouse flows. Thanks to precise information flow, WMS ensures access to data for the right people at every stage of the process, which results in better work organization and higher operational efficiency⁶.

A WMS system provides several improvements to logistics companies. The system allows them to optimize inventory levels and reduce losses resulting from expired or overdue goods. It also facilitates inventory identification and control. Additionally, it shortens order picking time by designating optimal routes for warehouse workers and improves service quality by minimizing the risk of shipping errors⁷.

Process management in logistics allows for effective planning and implementation of activities in line with company goals, customer needs, and established standards. Operational efficiency, understood as minimizing costs and time while maximizing resource utilization, is crucial here. The WMS system provides significant support, automating warehouse processes, streamlining inventory control, and improving service quality.

2. The structure and importance of the process sheet

A process sheet is a very practical tool for presenting the course of activities conducted within a process approach. Thanks to the format of the process sheet, it is possible to present key information regarding a given process, which makes it widely used when implementing a quality management system. In the context of documentation, a process sheet serves as a

⁵ P. Blaik, *Efektywność logistyki, Aspekt systemowy i zarządczy*, Polskie Wydawnictwo Ekonomiczne, Warszawa 2015, p. 22.

⁶ A. Szymoniak, I. Nowak, *Współczesna logistyka*, Difin, Warszawa 2018, p. 201.

⁷ M. Matulewski, S. Konecka, P. Fajfer, A. Wojciechowski, *Systemy logistyczne, Podręcznik do kształcenia w zawodzie technik logistyk*, Instytut Logistyki i Magazynowania, Poznań 2007, p. 321.

collective description of the process and facilitates its understanding. The structure of the process sheet must be clear and unambiguous, and include basic information: process description, purpose, process owner, scope of inputs and outputs, tasks, resources, indicators, and monitoring methods⁸.

One of the basic steps when developing a process sheet is its identification, i.e., giving the process a unique name that will allow it to be easily identified in the system documentation. Another essential element is identifying the process owner, i.e. the person responsible for its effective functioning, monitoring and possible improvement. The process owner should have appropriate competencies to make decisions and implement improvements. The process description is complemented by a goal, which serves as the foundation determining the direction of action. It also allows for the selection of appropriate performance metrics that help assess whether activities are progressing as expected. An important element of the process sheet is the indication of the events that implement the process, i.e. the moments that start and end the process⁹.

In every process sheet, it is crucial to identify links with the environment, including input and output data, as well as the identification of process suppliers and recipients. Input refers to materials, information, or data that are used and processed during the execution of a given process. Output, on the other hand, refers to the final results of the process, such as finished products, documentation, reports, or other results of activities. A crucial element of the process sheet is also the description of the monitoring system – i.e., the way in which the organization supervises the course of individual stages and evaluates their efficiency. For this purpose, the performance metrics used should be considered and the frequency of their measurement should be determined¹⁰.

To effectively respond to customer needs and maintain a competitive advantage, retail companies should systematically monitor the level of customer service they provide. Regular measurement of this aspect enables a quick response to market changes and the identification of areas requiring improvement. Developing appropriate metrics requires precise definitions and clearly defined methods for measuring and verifying results. Customer service metrics serve several important functions, including¹¹:

⁸ P. Miller, *Systemowe zarządzanie jakością*, Difin, Warszawa 2011, pp. 63-64.

⁹ Ibidem, p. 64.

¹⁰ Ibidem, pp. 65-66.

¹¹ *Logistyczna obsługa klienta na przykładzie firmy produkcyjnej X*, https://dbc.wroc.pl/Content/127289/Knapik_Logistyczna_obsługa_klienta_na_przykladzie_firmy.pdf (accessed: 22 June 2025).

- identifying processes that require optimization,
- providing data necessary for the source of problem analysis,
- supporting the monitoring of the achieved operational goals,
- facilitating communication between departments and stakeholders.

In practice, many different indicators are used, which can be grouped into three fundamental areas: process readiness, operational efficiency, and accuracy and reliability of order fulfillment.

3. Methodological assumptions of the study

The aim of the study is to design a warehousing process sheet for the Offroad Express trading company and to analyze its role in the standardization and optimization of operational activities.

The study was based on the customer order fulfillment process at the Offroad Express trading company. The main goal was to create clear process documentation that could serve as a starting point for the process organization, evaluation, and improvement.

Research questions:

- How can a process sheet support optimization and standardization of logistics operations in a trading company?
- What elements should a process sheet contain to effectively present the course and structure of the customer order fulfillment process?

To achieve the adopted aim of the study and to answer the research questions, the method of own direct observation of the order fulfillment process in the warehouse of the Offroad Express company was used. The observation enabled the author to capture in detail the actual course of logistics activities, identify the roles, resources as well as functional dependencies within the studied process.

Based on the collected information, a process sheet was developed, which serves as a tool for organizing and formalizing the analyzed process.

The approach used was not aimed at assessing the effects of implementing the solution in practice but was focused on the design approach of the tool and its potential to support process management in the operational activities of enterprises.

4. Offroad Express warehouse process sheet – analysis and proposals for standardization and optimization

As part of the project, a customer order fulfillment process at Offroad Express was observed. Based on the data obtained, a process sheet was developed, providing a systematic description of the logistics activities conducted from order acceptance to its delivery to the courier. Figure 2 presents the developed process sheet for a customer order fulfillment process at Offroad Express. The analysis showed that, despite the existence of a flowchart of activities and division of responsibilities, this process had not been formally documented. The lack of the sheet limited the ability of the process assessment, standardization, and a clear assignment of roles.

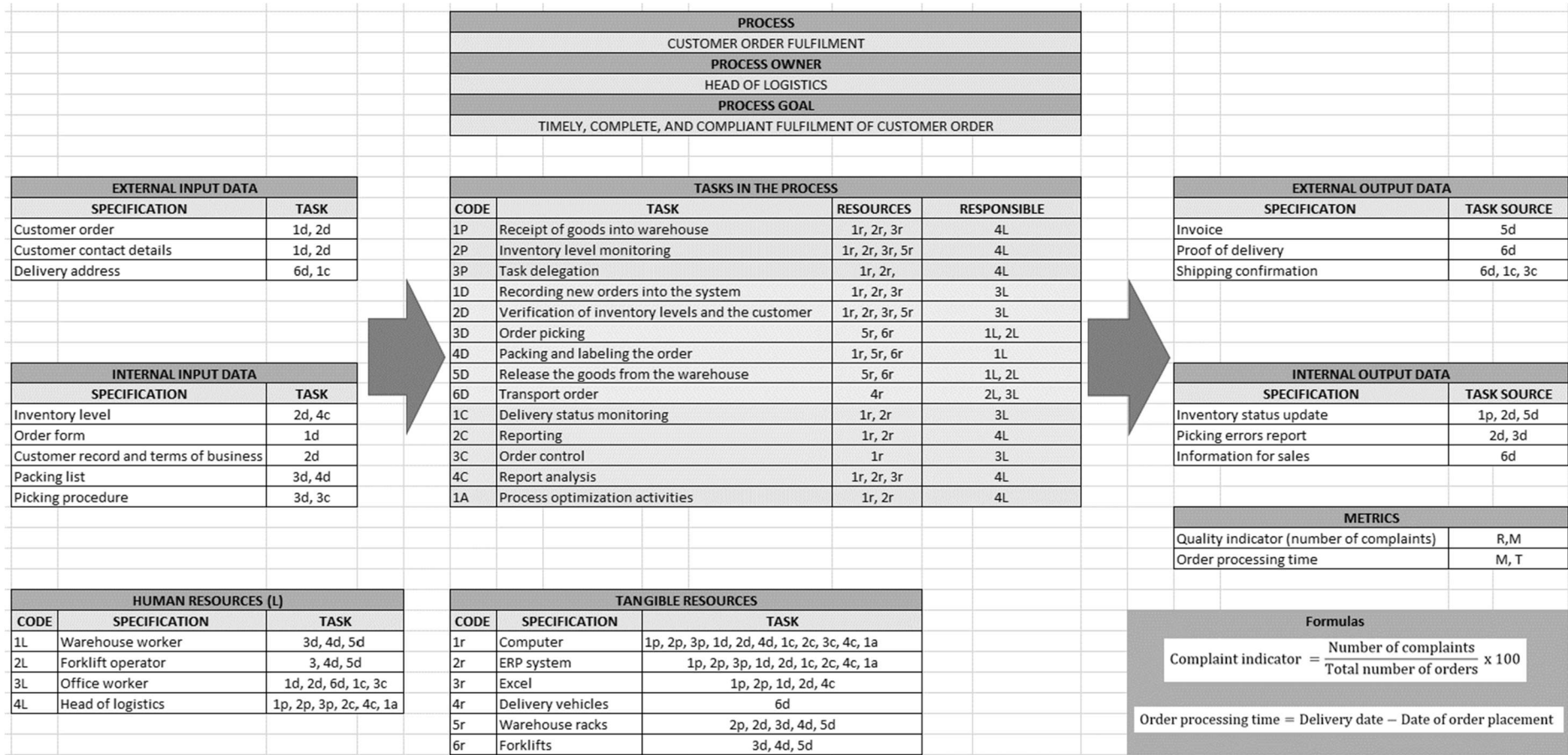
The tasks in the process sheet are arranged according to the PDCA (Plan-Do-Check-Act) cycle. The planning stage includes receiving goods into the warehouse, monitoring inventory levels, and delegating responsibilities. This stage is supervised by the head of logistics. The execution stage includes new order registration, inventory verification, picking, and packaging. The control stage covers delivery monitoring, reporting, and order verification, while the final phase focuses on improvement activities. Each task is assigned specific resources – human and material – to ensure its effective execution. There are four roles involved in the process: a warehouse worker, forklift operator, office worker and logistics manager. The sheet specifies input and output data, both external (e.g., order, address data) and internal (warehouse stock, documentation, logistics data). External outputs include invoices, delivery and shipping confirmations, and internal outputs include error reports, information for the sales department, and system updates.

When developing the process sheet, the author used a customer service quality metric – the complaints indicator – that was already in use in the company. It determines the ratio of the number of complaints submitted in a given period to the total number of orders fulfilled and it allows for the identification of problems resulting from errors in picking, packing or issuing documents.

Additionally, due to its importance for assessing the effectiveness of the process, it was recommended to introduce another metric – order fulfillment time. It will allow for monitoring and analysis of the time elapsed from the moment an order is accepted to its delivery to the customer, which can contribute to further improvement of service quality and increase customer satisfaction.

Figure 2. Customer order fulfilment sheets in the Offroad Express company

Its implementation formally establishes a uniform procedure for implementing individual stages of the process – from goods receipt, through picking, to order issuance.



Source: Author's research based on observations of warehouse processes in the Offroad Express company.

The warehouse process sheet developed at Offroad Express plays a key role in ensuring consistency and standardization of operational activities in warehouse management. Its implementation formally establishes a uniform procedure for implementing individual stages of the process – from goods receipt, through picking, to order issuance.

Detailed task breakdowns, resource allocation, and clear definition of responsibilities contribute to error elimination, increased transparency, streamlined workflow, and reduced order fulfillment times. This standardization of the process directly improves operational efficiency and the quality of customer service.

The process sheet serves not only as documentation but also as a tool for systematic efficiency analysis and identifying areas requiring optimization. Its structure allows for monitoring the areas that generate time, quality, cost losses, as well as linking specific performance indicators to process stages. This provides the basis for making decisions to improve and implement solutions aimed at increasing operational efficiency and compliance with established standards.

An important element of the discussed solution is the use of the PDCA cycle, which allows the process to be treated as a dynamic model, adapted to changing market, technological and organizational conditions. The process charter thus supports both operational and management activities, enabling the improvement of internal logistics, the development of quality systems, and the building of a competitive advantage. In this approach, it is one of the key tools of modern process management in commercial enterprises.

Conclusions

Contemporary market realities require commercial enterprises to effectively manage logistics processes, particularly the warehousing process, which links order acceptance with its fulfillment. The analysis confirmed that the use of a process sheet can significantly support the standardization and optimization of operational activities. Based on the observations of the warehouse process at Offroad Express, a process sheet was developed that organizes order fulfillment, assigns responsibilities, defines required resources, and indicates quality assessment metrics. In answer to the first research question, it was confirmed that a process sheet supports optimization by systematizing operations and identifying areas for improvement. With regard to the second question, it was determined that an effective sheet should include processing stages, input and output data, a responsibility structure, resources and appropriate metrics. In the analyzed case, the existing complaint indicator was used, and it was

recommended to implement an order processing time metric as a tool supporting the assessment of service quality. The developed process sheet not only serves as documentation but also supports management decision-making and aligns with a process approach focused on efficiency and continuous improvement of logistics operations.

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Abstract

The article presents the importance of process sheets as a tool supporting process management in logistics, with particular emphasis on warehousing operations. The theoretical section discusses the essence of process management, the principles of standardization, the PDCA cycle, and the role of a process sheet in quality systems. Based on observations at the Offroad Express company, a warehouse process sheet was developed that organizes operational activities, facilitates effectiveness assessment, and supports management decision-making.

Key words

Process management, warehousing logistics, process sheet, standardization of activities, process optimization.