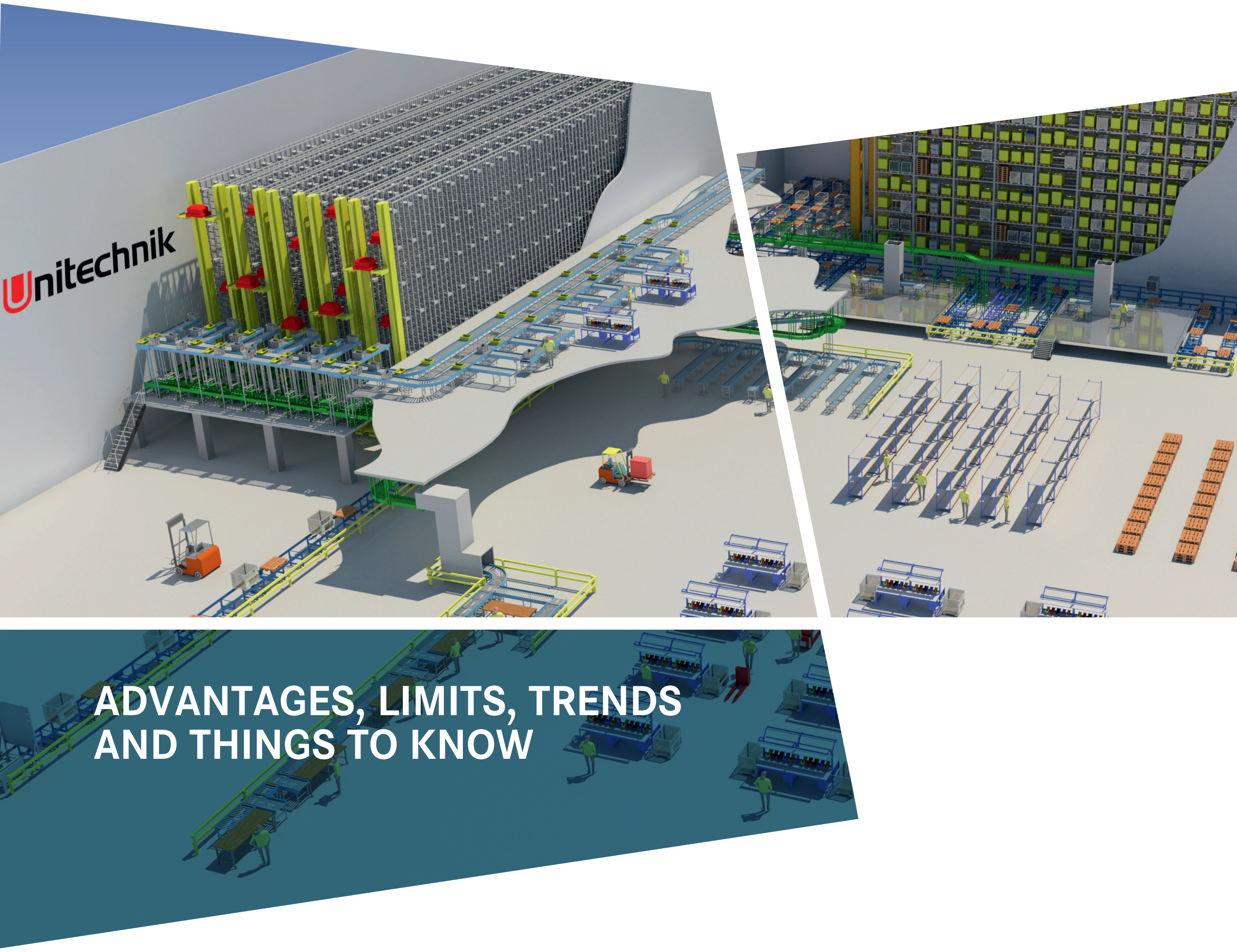
WHITE PAPER

Automation in intralogistics - guide to the individual solution



ADVANTAGES, LIMITS, TRENDS AND THINGS TO KNOW

Unitechnik

PERFECTION AUTOMATED.

Content

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1 Introduction

The demands on logistics are changing rapidly. Driven by e-commerce, globalization and relocalization, logistics structures are always on the move. Logistics is increasingly not just a means to an end, but a central component of the business model. In this environment, the question of the efficiency of internal logistics arises again and again. Automation is commonly seen as a panacea for increasing efficiency. But is the automated logistics system the right solution for every company?

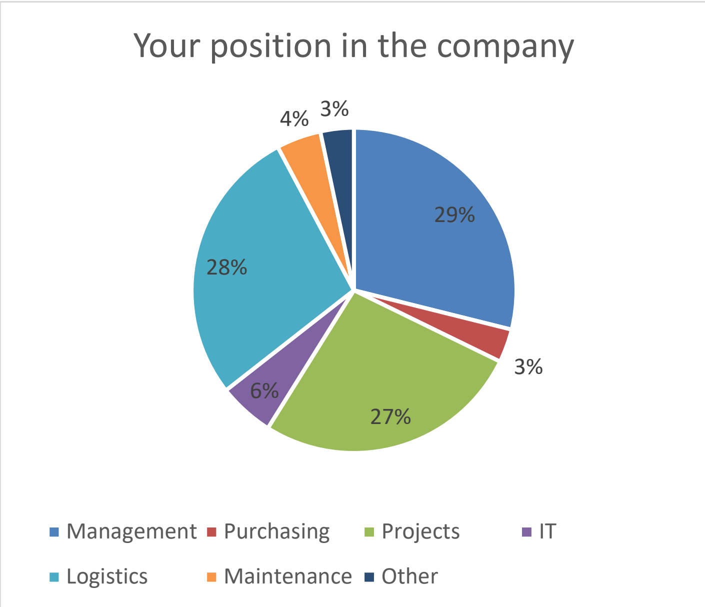
This white paper provides an overview of the trends surrounding automation in intralogistics and sheds light on the automation potential for various process steps. The model of different levels of automation shows that it does not always have to be full automation. Advantages, but also challenges of automated systems are presented. What role do logistics employees play in an automated system? Can an automated logistics system also be flexible and scalable? Can logistics be automated retroactively? These and other questions are answered. The planning process is of particular importance in automated solutions. A brief outline is given of how the planning phase might proceed and what needs to be considered. The white paper acts as a guide on the way to individual automation for medium-sized companies.

An automatic small parts warehouse offers a lot of storage space in a small area

2 Study: Trends and challenges in intralogistics

Automation can be a driver for accelerating logistics processes. But what is the status of automation in German companies? How pronounced is the awareness of the optimization potential and the willingness to invest in corresponding solutions? And what reasons speak for or against automation according to those directly responsible?

Unitechnik has asked: In the survey "Automation in intralogistics" among more than 100 participants from different industries in February 2021, trends and current market activities have emerged. In the next chapter, we report on the findings:



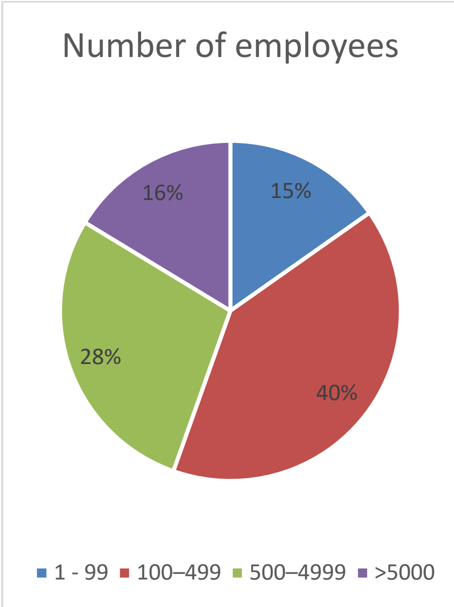


Fig. 1: Position of the people interviewed for the study and company size

2.1 Status quo: manual instead of automated

The various process areas are currently still mainly organized manually at the participating companies. This applies in particular to incoming goods and packaging. The last area in terms of automation is loading, which is carried out manually in 85 percent of the companies. The most automated area is currently warehousing, followed at a distance by transport and order picking. However, even in warehousing, the share of full automation is only around 35 percent; two-thirds of companies rely on partially automated or manual processes. The conclusion: There is a need to catch up.

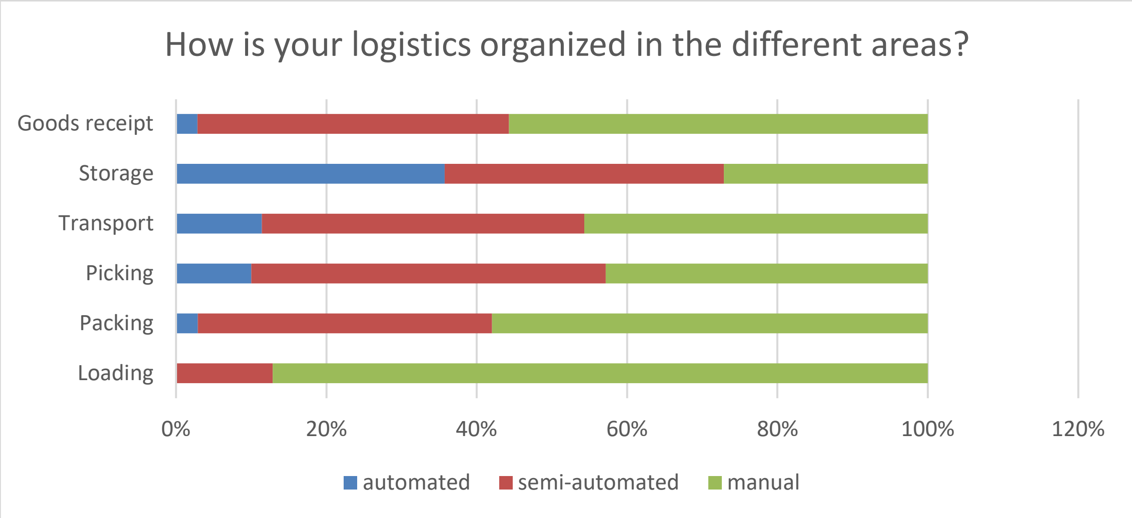


Fig. 2: Current level of automation by area in the logistics process

2.2 Decision: Pros and cons of automation

In which areas does an increase in the level of automation come into question for companies? The answer is: mainly in warehousing and order picking, and less so in transport, incoming goods, and packaging. Here, too, automation is least in demand in loading, which is currently the most manual area. The reasons for or against (partial) automation of process steps can be divided into costs and process efficiency. Most participants see it as a suitable measure for reducing operating costs, lowering error rates, and increasing storage capacities. On the other hand, high investment costs and lower flexibility speak against it.

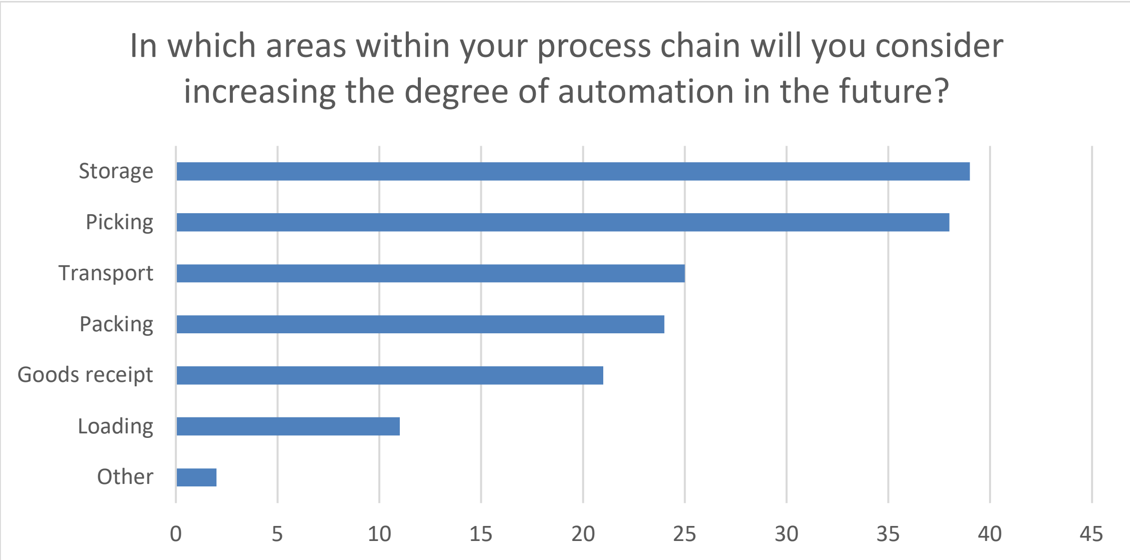


Fig. 3: Willingness to invest in increasing the level of automation by sector

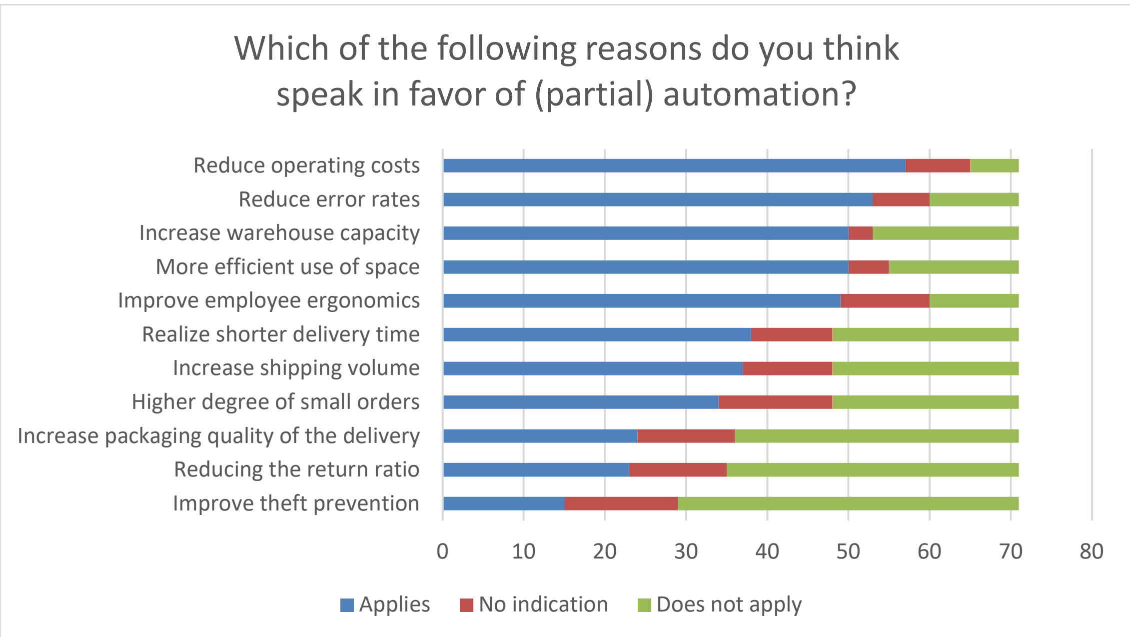


Fig. 4: Reasons for investing in further automation