

WHAT WE OFFER YOU

The project brings together the economic and analytical expertise of the Center for Applied Research on Supply Chain Services and the technological expertise of the Positioning and Networks business unit at Fraunhofer IIS. Together, we are preparing production and logistics processes for a digital future. For this, our applications are tested under realistic conditions at our Test and Application Center L.I.N.K. in Nuremberg.

We provide the following services to academia and industry:

- Research, development, and implementation of specific, practice-oriented technologies and applications
- Prototype development
- Demonstration and development environment

Find out more at www.digitalisierte-wertschoepfung.de.

INDUSTRY 4.0 IN PRACTICE

EFFICIENT PROCESSES IN PRODUCTION
AND LOGISTICS

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FIT FOR THE FUTURE

However much people talk about digitization, it can be difficult for small and medium-sized enterprises in particular to embark upon the process of digital transformation and to convince themselves that the effort is worthwhile. In reality, therefore, Industry 4.0 remains something of a theoretical construct at many companies. Nevertheless, more efficient processes can quickly deliver real added value for staff and businesses alike, provided that they are easy to implement. Fraunhofer IIS is therefore developing specific technology-based solutions for production and logistics that build on the internal processes at small and medium-sized enterprises, offering straightforward integration and thereby equipping businesses for the digital future.

DIGITALIZATION AS A COMPETITIVE FACTOR

Less theory, more practice: as part of the research project »Technologies and Solutions for Digitized Value Creation«, we can help your company to adopt Industry 4.0 solutions. By examining your existing intralogistics and industrial processes, we will identify specific starting points and contexts for promising applications. Building on your production and logistics processes, expertise, and resources, we will work with you to implement clearly defined digitization solutions.

FIELDS OF APPLICATION

Fraunhofer IIS is currently exploring five examples of practical applications that involve interaction between humans and technology:



Smart container management

Used to protect, transport, and store products, containers are a key element of industrial processes. Smart container management for smooth material flows enhances their potential even further. We are therefore implementing a flexible and low-infrastructure system for the identification, monitoring, and positioning of containers.



Digitalized in-house transport

At most companies, efficiency assessment of in-house transport using industrial trucks is performed manually, with sub-optimal results. We are tapping into this potential for optimization by developing »intelligence« for industrial trucks that enables analysis of individual intralogistics transport processes.



Intelligent tools

In many cases, screwing processes have an impact on assembly quality – but they have been difficult to monitor until now. Our solution for quality control and assistance to fitters is a wireless tool-tracking system that records and analyzes the movements and position of screwdrivers in real time.



Flexible information system

Each wrong handle in the picking causes additional expenses. However, assistance systems that relieve the order picker can be very installation-intensive. That is why we are developing a flexible, wireless information system for order pickers.



Error-free order picking

Every false move in manual order picking leads to extra work, but assistance systems that reduce the burden on pickers can be very complex to install. We are therefore developing a versatile wireless information system for order pickers as well as technology for the integrated validation of picking processes.