

Innovation Lab



What do you think is the benefit of humans and machines working in a team?

Michael ten Hompel



The future of logistics belongs to hybrid services. By linking humans, machines and objects the strengths of manual and mechanical work – for example flexibility and efficiency – can be used in a combined way.

Hartmut Hirsch-Kreinsen



We all generally agree that the potentials of a human-oriented design of work have to be exploited the best possible way.

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Which course has to be set for the success of Social Networked Industry?

Arkadius Schier



Both companies and employees have to get involved in the new form of cooperation. We are seeking to encourage this development, also by means of a wide societal discussion.

Prof. Dr. Michael ten Hompel, Chair of Materials Handling and Warehousing at TU Dortmund University, Managing Director at Fraunhofer IML and Director at Fraunhofer ISST. **Prof. Dr. Hartmut Hirsch-Kreinsen**, Economic and Industrial Sociology, TU Dortmund University. **Arkadius Schier**, Project Manager of the Innovation Lab Hybrid Services in Logistics.

04 CONTACT

Let us set the course for the Social Networked Industry – technologically, societally and organizationally.

The modern technology becomes more and more intelligent, manages more and more complex tasks and has partly human characteristics in doing so. The cooperation between humans and technology has to be re-evaluated and re-designed in this context. Our network is open for new partners that participate in the discussion.

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HUMANS AND TECHNOLOGY

BECOME A TEAM:

WELCOME TO THE

SOCIAL NETWORKED INDUSTRY





01 VISION

Humans and technology – from working next to each other to working with each other: The working world of the future is a Social Networked Industry. Intelligent devices like data glasses or tablets increasingly enable employees to interact with networked machines. That develops networks in the working world that connect humans and technology with each other in a novel way. The private social networks with their high degree of networking and the possibility to act respectively to interact will serve as models for this new cooperation and communication.

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How much responsibility can, should and may humans delegate to technology in a Social Networked Industry?

A Social Networked Industry needs humans and serves humans. In this context digital technologies will be developed in the Innovation Lab Hybrid Services in Logistics that support humans sensibly to increase productivity and contentment.

02 INNOVATION

The new networked working world increasingly enables companies to develop and offer hybrid services. This novel bundle of services consists of a connection between **Hardware** and **Software** that is taken up in an innovative **business model**.

Michael ten Hompel



Humans will always stay on top of the digital system: They can correlate humans and technology just as they like.

The Innovation Lab Hybrid Service in Logistics lays the foundation for that, for example with ...

... a **Social Network Platform** that links humans, smart devices and IT systems with each other.

... with **tracking systems** that enable a safe cooperation of employees with autonomous transport robots and drones.

... with **interactive working systems** that integrate human and technical components.

... with **ergonomically designed user interfaces** of autonomous technical components like lightweight robots and autonomous transport systems.

03 PROJECT

The Innovation Lab Hybrid Services in Logistics is an interdisciplinary research project that supports the development of technological innovations for a Social Networked Industry. There is a specific focus on the human-technology interaction.

Research and application centre. Innovations of hybrid services and human-technology interaction in completely digital testing grounds can be thoroughly investigated and evaluated during realistic industrial application in two highly modern halls. Companies have the possibility to use the experimental setups for their own developments.

Use cases. The design of innovations for hybrid services is guaranteed by so-called showcases in five areas: Trade, production logistics, transport, maintenance and virtual training. Companies can experience use cases live on site.

The Federal Ministry for Education and Research (BMBF) is funding the project over three years with 10 million Euros in total. The Innovation Lab intends to support Dortmund's digital pioneering role with respect to service and logistics on the one hand and to accelerate the acceptance and implementation of new technical solutions in the environment of Industry 4.0 on the other hand.

The Innovation Lab makes Logistics 4.0 possible: New methods and technologies, for example in the area of localisation and wireless communication, are investigated experimentally in the research centre. The application centre (right) focuses on real demonstrations of innovative solutions close to practice.

