Logistics as a Problem Solver

The demand for goods transport has been increasing steadily over the last few years. Transports exceed the capacity of the present traffic infrastructures. However, by using intelligent goods transport management, logistics can make a decisive contribution towards a sustainable improvement of the overall traffic situation.

In the course of globalization, as manufacturing bases became disconnected from the consumer markets they serve, intensive freight transportation between the continents has arisen. In the meantime, the possibilities of conventional transport optimization such as using larger and larger trucks, minimizing driving times or optimizing idle times have more or less been fully exploited. The capacities for handling and storage are limited.

The consequences: the reliability of transport chains is on the decrease while the susceptibility of logistics systems to fail is on the increase. Today, this causes more and more bottlenecks in supply and failures in industrial production. This key topic therefore focuses on intelligent goods transport management with innovative transport concepts. In particular it is about utilizing existing infrastructures more efficiently – in both transport routes and logistic facilities. The focus is on the development of supporting software systems.

Projects in this key topic:
- Dynamic Consolidation
- Efficiency for Logistic Facilities
- Integrated Air Cargo Hub
- Minimally Invasive Construction Projects
- Multimodal Promotion
- Organisational Innovations with Good Governance in Logistics Networks
- Reliable Networks for Logistics
- E-Route (associated)

Solutions for tomorrow’s logistics:

In the EffizienzCluster LogistikRuhr, more than 180 partners from research and economy are working together on logistic challenges in about 40 research and associated projects. It is a requirement and target to facilitate tomorrow’s individuality - in terms of the individual supply of goods, mobility and production - with just 75 per cent of today’s resources.
The solutions and products developed in this key topic are intended to put logistics - the people in logistics - in a position to make the right decisions in practice to achieve an acceptable use of resources.

Levels of Innovation

This key topic is an effective problem solver giving new impetus to freight traffic to achieve secure and high-performance goods transportation. Among the essential fields of research are:

- Secure transport chains by using multimodal networks, increasing the system stability of procurement and distribution network.
- More flow capacity and quality in logistics facilities, efficient planning and operation of logistics facilities.
- Increase the strengths of transport carriers, reducing the complexity and increasing the flexibility of multimodal transport.
- Better information links using IT to establish transparency for offers and to improve communication to keep information up to date and dynamic.

Potentials of this Key Topic

Today, logistics still frequently plays a subordinate role as far as manufacturing companies are concerned. Production (for example, the reduction of manufacturing costs) and marketing (for example, the extension of product lines) are still seen to be more important than logistics. Companies still underestimate the possibilities logistics has to deliver more efficiency throughout the company by using an integrated view.

// Head of Key Topic

Prof. Dr. Alex Vastag
Fraunhofer Institute for Material Flow and Logistics IML
Phone: +49 (0) 231 - 9743 382  
alex.vastag@iml.fraunhofer.de

// Clustermanagement

EffizienzCluster Management GmbH
Kölner Straße 80 - 82
45481 Mülheim an der Ruhr
Phone: +49 (0) 208 - 9925 255  
Fax: +49 (0) 208 - 9925 222  
info@effizienzcluster.de  
www.effizienzcluster.de/en