Logistics Solutions in the Cities

In 2050, 85 per cent of the European population will live in urban areas. But the existing structures will not be able to guarantee a sustainable supply of goods and services to the people in such highly complex and concentrated living environments. Retail companies, suppliers, courier, express and parcel delivery companies (CEP) as well as service providers will therefore require efficient logistics solutions specifically designed for urban areas.

Urban areas are driving forces and centers of productivity that are full of life. But in towns and conurbations you can also observe how demographic change, individualization and environment protection are influencing life. Presently, the way people procure goods for themselves is undergoing a fundamental change: E-commerce encourages orders for very small quantities, more and more single shipments leave the warehouses and the demand for flexible deliveries around the clock is increasing. There is also a trend in retail. With the growing number of elderly people in society the requirement for completely new supply concepts will also arise. They will have to be integrated into the entire system of urban supply.

Projects in the key topic:
- Dynamics in Navigation
- eBase4Mobility
- ePOD@Home
- Homecare Services
- Urban Business Navigation
- Urban Retail Logistics

Key Topic
Urban Supply

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Key topics as central innovation corridors

Within seven key topics of EffizienzCluster LogistikRuhr, the biggest research and innovation cluster of logistics, innovations are created that will change the face of logistics. The key topics are:
- Changeable Logistics Systems
- Logistics-as-a-Service
- Urban Supply
- Goods Transport Management
- Environment in Focus
- Logistics Design Competence
- Activation of Cluster Potentials

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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 increasing number of deliveries in towns, however, is becoming a problem in itself: Infrastructures that are already limited will be put under even more strain. Environmental pollution is increasing. Restrictions for inner-city delivery vehicles can lead to delivery delays and thus to supply bottlenecks for the towns.

This key topic intends to unite these controversial tendencies, to resolve the contradictions: by means of efficient resources handling while simultaneously preserving individuality – with respect to the supply of goods and information, while also maintaining individual mobility. Conurbations in particular need robust and secure logistics.

Levels of Innovation

This key topic places a particular focus on cooperation, by including all participating partners in the urban supply chain, and on an efficient exchange of information using new technologies. These are the conditions for:

- Concepts and solutions for bundling logistic and non-logistic services (e.g. trade, CEPs, nursing care) with regard to demographic changes and for bundling various material and goods flows in order to reduce logistics traffic in urban areas.
- Taking solutions for navigation systems, access restrictions or requirements for innovative transport systems into consideration.
- Concepts that allow the integration of electro-mobility in urban supply structures.
- Innovative goods transfer systems for the last mile to round off the concepts for urban supply.

Potentials of the Key Topic

In order to ensure urban distribution is upheld, the logistics services provided by the different partners have to be bundled optimally: one approach is the development of a “Smart Grid for Urban Supply” which can be compared to an intelligent electric power grid. Such a Smart Grid as a supply network for urban areas has to be in a position to cover all supply cases flexibly and at short notice. Wide-spread structures for supply have to be developed and implemented for that.