Urbanization and demographic change are impacting on the local and direct ways of supplying people with goods in future. Since the mobility of the elderly generation is sometimes limited, there will be more demand for shopping facilities located close to the customers. Consumers also expect ordering via smartphone or the internet to improve and to be offered flexible deliveries until late in the evening. Innovative retail concepts have to correspond to these increasingly individual customer requirements. In this scenario, maintaining current logistics concepts would lead to an increase in traffic volume as we see delivery quantities becoming smaller while the frequency of deliveries rises. At the same time, the increasing number of traffic jams and traffic restrictions means efficient deliveries are becoming more difficult. The Urban Retail Logistics project investigates the topic of Urban Supply with a focus on the constant spread of urbanization and its complex living environments which call for more intelligent supply and waste-management systems.

Project Sheet

Urban Retail Logistics – smart and collaborative approaches for Urban Supply

Project Goals

The central target is the continuing development of local distribution in order to face the challenges in urban areas and to meet changing customer requirements. This is realized, for example, by the conception of an Urban Hub as a consolidation point enabling the logistic handling of highly individualized flows of goods. The Urban Hub will also become a “hotspot” for the supply processes of other possible urban supply partners. Besides the retail sector, these could include anything from courier services to pizza deliveries or the local dry cleaners. To ensure the coordination of all these individual processes in the Urban Hub, a considerable level of intelligence is necessary. This is possible by using auto-ID- and smart IT-technology. Another focus is on reducing urban delivery and services traffic in order to reduce carbon emissions and noise pollution.

Key Issue: Urban Supply

Urban Supply is one of the seven main topics within the scope of EffizienzCluster LogistikRuhr and combines five associated research projects. Besides the Urban Retail Logistics project, Urban Supply consolidates research areas e.g. designing infrastructures for electric vehicle charging points or developing navigation systems especially for delivery and services vehicles.
Concrete Innovations
New supply structures for urban centres are being designed within the framework of these research and development activities. Deliveries and the local distribution of goods will be handled via the Urban Hub. The Urban Hub is a carbon neutral logistics centre with an optimized infrastructure which consolidates the supply of different ranges of goods and services from different companies within an urban centre. This crosslinking of the flow of goods and services will be ensured by the Urban Information System which can quickly bundle the necessary flow of information. The “Corner shop 2.0” project picks up on a new generation of innovative retail concepts to develop suitable delivery services. As part of a local supply concept this can lead to optimal logistics services for commercial enterprises which normally provide a small range of goods on the spot but who wish to add a wider “virtual” assortment to their range.

Contribution to the EffizienzCluster's Overall Strategy
Urban Retail Logistics provides an essential contribution to the sustainable protection of urban supply by creating concepts for consolidating the flow of goods and services to avoid inefficient logistics traffic in urban areas. The developments comprise both technical solutions and innovative business models.

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EffizienzCluster LogistikRuhr
The EffizienzCluster LogistikRuhr is a consortium of over 120 companies and 11 educational and research institutions. Through participation from so many institutions, the cluster is capable of carrying out Germany’s largest research cluster in the logistics sector. All partners adhere to the ambitious goals of protecting our resources and environment, ensuring the individuality of tomorrow, and ensuring urban supply. The 30 projects that have already been completed serve to make the logistics of tomorrow greener and more modern. The Metropolis Ruhr is thus becoming a new epicenter for innovative logistics systems and coordinated competencies.