CommunityHub
Potential analyses of community-based multi-use hubs in urban areas by “CommunityHubs”

Ein Projekt finanziert im Rahmen der 7. Ausschreibung des Programms **Mobilität der Zukunft**
[**Gütermobilität**]
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Problems and aims

Ongoing urbanization and the increasing traffic density in cities demand new concepts for supply in urban areas. Due to the growing population and changing consumer requirements in terms of e-commerce and online trade such as parcel delivery and returns (e.g. first- and last mile problem) an urgent need for acceptable resource allocation is given.

The “CommunityHub” idea shows how mentioned disparities can be reduced and optimal space allocation among the urban population can be achieved. A “CommunityHub” is defined as micro-logistics hub allowing equal utilization of logistical services to all stakeholders and users (e.g. consumers, customers, diverse parcel services, and companies) involved. It provides areas for multiple logistical usages like storage or parcel delivery and additionally offers value added services (e.g. disposal, insurance, fitting rooms for online orders such as clothing, parcel lockers for returns, lending of tools between DIY enthusiasts) in urban zones, particularly in vacant zones on the ground level.

The different components (1) community-orientated organization, (2) supply of goods and services and (3) multi-use of space (e.g. parcel pick-up and drop-off in a coffee shop, fitness-center or club) exist as single elements but have not been combined to an innovative open source concept with further attributes like the unique drop-off and pickup box yet.

Methodical approach

The base of the project consists of an extensive and sustained analysis of existing and potential multi-use concepts. Concepts will be adapted to the research area Vienna considering best-practice examples and existing state-of-the-art solutions. Furthermore, demands of the research area concerning spatial and transportation planning will be analyzed.

Based on the potential analyzes, Strategies for technical and organizational implementation will be developed to achieve a sustainable use of ground level spaces.

Impact and success factor

The project supports sustainability on an economic, social and ecologic level in a proactive way. (Transport-) resources (e.g. space, time personnel) in the CEP-sector can be planned on time and concentrated with the CommunityHub. Due to the consolidation (of e.g. parcels) there is a possibility to combine distributions with return logistics, generate combined transports and reduce distances. The integration of time and personnel independent box-systems makes it possible to reduce or avoid unsuccessful delivery attempts. This is how the project
helps to find a solution for the first- and last-mile problem. Distances can be combined or even reduced as well as CO2 emissions, if environmentally aware logistic and transport technologies (e.g. alternative means of transport, like cargo bikes) were used or shared rides were organized via the CommunityHub.

The conversion of empty spaces or the multi-use of existing infrastructure as a micro-logistic hub holds potential for reductions of costs and works as a key to improve efficiency. It can contribute to an economically successful performance of services.

At the social level, communication and interaction in the neighborhood are supported besides an assurance of supply structures in line with demand.

Key to success is a player or operator, which is mainly responsible and coordinates common areas, allocates work space or guarantees compatibility of uses under premise of heterogeneity. Within a suitable framework for a business and financing model (e.g. advertising, (volunteer) workers), services (e.g. longer opening hours) can be provided, which fit to the needs of the community. Cooperation between companies are very important for successful operation. The break up of existing structures and cooperation plays an important role as well as a change of awareness of population, local economy and municipal government. The existing network should be extended and services with a high level of transparency, simplicity and flexibility should be developed continuously.

**Additional research**

Within the CommunityHub project, different solutions with different thematic focuses (e.g. cargo bike, SharingBox, independent White-Label-Box) for a micro-logistic hub were developed. It became apparent, that independent lockers for parcels have a high potential and guarantee a high level of safety and convenience for the user (recipients and CEP-services). It is up to the submitted R&D follow-up project white:box to develop, pilot and evaluate those facilities with focusing on the investigation of acceptance.