

Urban Data Business Modelling

Data Collection and Analysis for Urban Services and Design

KEYWORDS: Digital City, Urban Data, Business Model Tool, Agile Urban Development, Internet of Buildings

BACKGROUND: Data collected from mobile devices, sensor meshes, RFID systems e.g. provide a rich source for **product and service innovation**. In order to create innovations on that basis, not only hardware technology and software analytics is necessary but also knowledge how **business models** are developed, validated and implemented.

Derived from research in the fields of Innovation and Knowledge Management, the Knowledge Architecture Lab at TU Dresden has developed a methodology „**Urban Business Modeling**“ (UBM) to support the systematic development of new business models especially for urban management, urban development, and urban design (Fig. 1 UBM). UBM are further supplied with tools and methods for the collection and analysis of data from buildings and urban quarters (Fig. 2 „Building ID“).

PROJECT IDEA: Urban data have become a key factor for urban business models. We want to extend the above mentioned method of Urban Business Modelling (UBM) into „**Urban Data Business Modeling**“ (UDBM), in order to take data resources fully into account when creating innovative urban services and products. **The project idea is to create an innovation tool supporting the systematic generation of urban business models with special focus on digital services and products.** The tool is to support business creation and start-up activities whose products in turn help **urban managers, developers, and designers** to make our cities more livable, economic, safe and efficient. Within the funded project, we will design the tool, test and validate it and run pilot applications with practice partners in different European cities.

PILOT PROJECT / APPLICATION: As key services, urban development and design provide potential testbeds for data-based urban business models. Our previous research shows that UDBM enable substantially more agile and user-oriented urban development processes, as compared to the slow and ad-hoc nature of conventional approaches, which lack sufficient information on environment, usage, and users. To test the innovation tool and respective digital urban innovations, cities like Dresden or Hamburg may implement and apply UDBM, and use them for ongoing urban development projects.

PARTNERS/EXPERIENCES: **TU Dresden (TUD)** is one of Germany’s Excellence Universities. It’s Knowledge Architecture Lab has specialised in information and knowledge management for architectural and urban design. It currently leads H2020 project „Urban Collective Design Environment“ and InterReg Flagship Project „Travelling Innovation Labs and Services“. TUD’s European Project Center is specialised in operations/ finance management of EU-funded projects. **Hamburg Hafencity University (HCU)** focuses on metropolitan studies and urban design. HCU’s City Science Lab, a cooperation with the MIT Media Lab, investigates digital tools for urban analysis and design. It currently leads the project „Finding Places“, aiming at solving refugee accommodation in Hamburg. Further partners include ICT and engineering school **ISEN Toulon** with 4 branches in France, **Fraunhofer Institute IVI** specialised in Information and Infrastructure Systems, **TU Delft** as a leader in business modeling and technology innovation. The municipalities of **Hamburg** and **Dresden** may potentially join the consortia.



Fig. 1: Urban Data Business Model Sketch

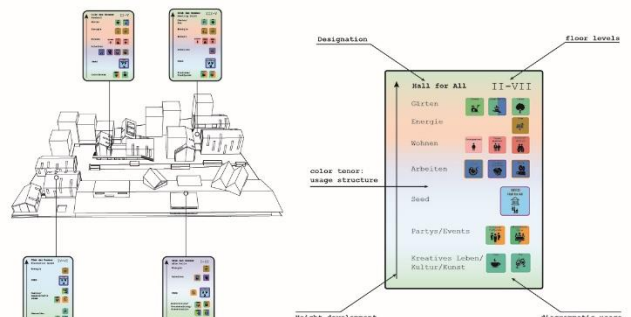


Fig. 2: Building Information ID