



DROPS
Digitale Standards für
Gebäude und Quartiere

DROPS - Data Standards for Resource-Optimized Production and Service Processes in Buildings and quarters

Motivation Construction and use of real estate and neighborhoods contribute significantly to resource use and waste generation. Resource use and functionality depend significantly on the continuity of data information and the communication capability of the active components, both in the planning and manufacturing process and especially in operation.

Goal DROPS is developing a generally applicable Internet of Things (IoT) data standard that simplifies interfaces between the respective elements and components and ensures the continuity and consistency of data streams across the lifecycle phases of a property or the neighborhood. A separate focus is placed on the recyclability of the elements and components concerned, while data on the materiality of the elements and components is integrated into the standards; so-called "Data of Material".

Intended outcomes 1) Development of an open, combined Data of Material and IoT standard, which makes it possible to control different materials and products uniformly. 2) Documentation, description and delimitation of all defined attributes for a standardized implementation (interface definition). 3) Provision of the attributes via an application programming interface and in a cloud-based database.

Expected impact Simplifying the use of digital IoT technology in the planning, production and operation of real estate contributes significantly to resource optimization, reduced susceptibility to errors, increased operational safety and easier market accessibility. In this work, digitalization will also be used as a tool to enable closed and continuous material loops. In this way, the construction and real estate industry will meet the demand for environmental sustainability while remaining competitive with technological innovations. Further-more, digital product developments and business models are made possible in the interaction of different manufacturers and software, which also promotes the ability to innovate in terms of platform mechanisms and thus contributes to securing the location and international competitiveness.

Tags IoT, edge, FOG, BIM, smart building, cognitive building, smart city, smart home, resource optimization, cradle-to-cradle, building lifecycle, sustainability/sustainable building.

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4 PARTNERS



Drees & Sommer GmbH;
Hafencity University;
STRABAG SE;
REOS Ltd

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