Result-oriented cleaning taking into account sustainability, social impact and tenant satisfaction

1. Reason/Starting situation: Short description of the problem and the solution max. 450 characters (with spaces)

Sustainability and social impact are the focus of the project. The cleaning service is characterized by strong time and cost pressure that can have a negative impact on the persons carrying out the work and on the cleaning result. The status of the cleaning service should be recorded in order to optimize service and operations. New technologies, especially sensor technology and IoT applications offer benefits that are to be reaped in this project.

2. Subject of the research project: Description of the work steps and the solution max. 4,300 characters (including spaces)

In the research work the basis is prepared for a generally valid model for strategic planning and execution of result-oriented cleaning of buildings. In addition to sustainability, this smart model of the cleaning service also takes into account the social compatibility of the work for the skilled worker, the degree of utilization of the buildings and the satisfaction of the tenants.

An aspect of the research to be carried out is the cleaning expenditure of apartment buildings, which is characterized and analysed in the light of climatic conditions (temperature and humidity) and use of the buildings. The data material is collected by means of sensors in buildings and from the regional weather office. The sensors are installed in selected buildings of FORTUNA Wohnungsunternehmen eG and they count the number of people entering and leaving the buildings.

Another aspect of the project deals with the problems of time and cost faced by the cleaning service providers. This is done through interviews conducted on the contractor side (service companies) as well as on the client side (housing companies or property owners). The aim is to interview the cleaning staff as well as the management personnel in the company. The matter of performance-related payment

under socially acceptable conditions is discussed and optimized. The satisfaction of the tenants involved in the process is surveyed empirically using questionnaires.

3. Conclusion: Description of the planned objectives and the results achieved, max. 700 characters (including spaces)

The research project has created a database to facilitate further research. The combination of the discussed parameters results in a predictive model of the optimal cleaning process. The system creates transparency and optimizes the scheduling of the building service providers. It is based on data from the environmental survey on the condition of the buildings. This minimizes costs and cleaning effort while maintaining a defined quality standard, guarantees the sustainable preservation of the value of the building and takes into account the efficient use of resources. In this way, economic requirements are combined with environmental concerns and social effects.

4. Key data

Short title: Result-oriented cleaning

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Total cost: €31,980

Federal subsidy: €15,990

Project duration: 12 months

5. Images

Image 1: eoR_Billdatei 1.jpg

Image 2: eoR_Billdatei 1.jpg

Image 3: eoR_Billdatei 1.jpg