

## **Application of communication processes for managing processes occurring in a smart housing estate**

Inspiration for undertaking the considerations related to the proposed topic of doctoral dissertation is a dynamic development of research on techniques, technologies and communication systems applied to ever larger extent in the developing information society. The area of managing a smart housing estate seems to be particularly timely to make an attempt to determine the usefulness and possibility of utilising management of processes that occur in a smart housing estate. The author of the doctoral dissertation undertakes an attempt to identify the relationships among smart communication systems and persons, institutions and enterprises, which may occur in a smart housing estate.

A fundamental issue for the considerations conducted in the entire dissertation is that currently available communication systems and smart communication technologies will be operated by the Internet of Things or Internet of Everything. Therefore, a number of solutions, analyses and examples that pertain to management of processes occurring in a smart housing estate will be equated with the use of IoT and IoE. On the basis of available literature, preliminary research and own experiences the author has defined the objectives of the dissertation.

**The research objective** of the dissertation is to determine the influence of communication systems on processes occurring in a smart housing estate and present the demand for information communication systems that support utilised instrumentation, which a smart housing estate is equipped with.

**The main objective** of the dissertation is determining the possibilities that are provided to a user – consumer by a smart communication system, which is used in handling the communication activities that are present in management of processes that occur in smart housing estates. Identification of possibilities of applying smart technologies in communication systems will allow, based on the conducted studies, to manage information

properly, which will ensure better management of the market offer satisfying the preferences of customers.

The main goal may be strengthened thanks to the achievement of detailed research objectives in the theoretical and practical dimension, through:

- formulation of conclusions in the scope of utilising smart communication technologies by professional service enterprises,
- using competitive advantage by institutions that design smart housing estates.

Based on the formulated objectives the author has posed the research and main hypotheses.

**Research hypothesis** – smart communication systems utilised in operations of a smart housing estate may constitute a new source of competitive advantage while designing contemporary housing estates.

**Main hypothesis** – **utilisation of practical solutions of communication systems to manage the processes occurring while supporting information services of a smart housing estate should cause that the society will more willingly apply the solutions that allow for their implementation.**

The main hypothesis of the dissertation has been supported with the following partial hypotheses:

- smart communication systems influence the management of the process of selecting the system that supports functioning of a smart housing estate,
- proper management of promotion measures with the use of a smart communication system allows for reaching the potential target group more efficiently,
- application of smart communication systems translates into enrichment of the presentation of smart housing estates offer.

The present doctoral dissertation has been drawn up based on critical analysis of domestic and world literature on the subject, including scientific papers and documents. Moreover, the paper presents the results of empirical research both qualitative as well as quantitative, conducted with the use of selected research methods, among others:

- qualitative methods of collecting information through direct interviews and surveys conducted among users of the systems that support operations of smart housing estates,

- analysis of media communicates contents – press releases, TV programmes and data available on the internet.
- analysis of open sources, reports.

It has been assumed that obtaining information pertaining to appropriate manner of utilising the systems of digital network communication, which will facilitate everyday function of the users in smart housing estates. The goal of the conducted research is to demonstrate the principles of proper conduct while using a system responsible for the operations of a smart housing estate. A study of good practices will be applied to analyse the functioning of a smart housing estate.

*Ola Lygon'*