

## **The concept of local-smart-housing: towards socio-cultural sustainability of vernacular settlements**

### **ABSTRACT**

The recent decades have witnessed the widespread manifestation of intelligent building design development around the world. Meanwhile, the concept of smart housing as one of the main issues of intelligent building design development has stimulated various architects and designers to make use of it for the sake of sustainable housing. However, this study represents a gap in smart housing design owing to the lack of a deep consideration on cultural values of users for ensuring the socio-cultural sustainability as one of the objectives of sustainable smart housing designs. Accordingly, the study puts forward the concept of local-smart-housing through utilization of appropriate vernacular architectural features and cultural values of vernacular settlements in smart housing design in order to reinforce the sociocultural sustainability. Meanwhile, this study is limited to the Malay context in order to identify the vernacular features of Malay vernacular settlements' functional spaces for utilization in smart housing design to make them culturally responsive. Correspondingly, this study proposes the concept of local-smart-housing based on the incorporation of intelligent building design and utilization of vernacular features for enhancing the quality of life for users.

**Keyword:** Smart housing; Intelligent building designs; Socio-cultural sustainability; Vernacular settlements; Functional spaces