

INTISARI

Perencanaan Smart Campus tidak lepas menjadi perhatian dan memiliki relasi dengan *Smart City* yang menjadi tren perencanaan kota-kota di dunia saat ini. Serupa dengan pengembangan Smart City, upaya konstruksi Smart Campus membutuhkan terobosan solusi cerdas dalam menyelesaikan masalah fisik dan keruangannya. Pada saat ini, arus utama solusi cerdas dikemas (*bundled*) dalam sistem *Internet of Things* (IoT) di mana pemanfaatan sensor (Sensor of Everything) ikut memiliki dalam menciptakan pengambilan keputusan yang responsif.

Penelitian terdahulu tentang Smart Campus masih didominasi oleh domain ilmu ICT. Sedangkan penelitian Smart Campus dari sudut pandang domain fisik dan keruangan Perencanaan Wilayah dan Kota masih rendah. Padahal, PWK merupakan bidang keilmuan yang terpapar langsung dengan isu-isu Smart City dan inovasinya. Oleh karena itu, penelitian bermaksud untuk menambahkan teori tentang praktik Smart Campus di bidang keilmuan ini.

Penelitian berusaha mengidentifikasi ragam hubungan masalah kampus dan pemanfaatan sensor untuk dikaitkan pada proses perencanaan. Ragam masalah kampus yang dikaji adalah masalah pada komponen fisik dan keruangan kampus. Penelitian dilakukan menggunakan studi kasus eksploratif dengan upaya pengumpulan data melalui sampling purposive konten digital open sourced internet bertahun 2000-2018. Penelitian memiliki dua tahapan analisis data, yaitu analisis tiap kasus dan analisis lintas kasus. Penelitian berhasil mengidentifikasi ragam kontribusi manfaat sensor untuk proses perencanaan Smart Campus, yaitu kontrol otomatis, monitoring real time, dan pengaturan user-interface, serta menciptakan perencanaan real time dan partisipatif. Penelitian juga memberikan saran-saran terkait topik Smart Campus kepada pihak-pihak terkait.

Kata Kunci: Smart Campus, Komponen Fisik dan Keruangan, Sensor

ABSTRACT

Smart Campus planning has a prominent relation with Smart City current in the world of planning cities. Equal with Smart City's components, Smart Campus planning needs the existance of smart solutions for its physical and spatial problems. The main stream of smart solution insofar is bundled within Internet of Things system which sensor usages is involved in creating responsive decision making.

Previous researches about Smart Campus are still dominated in ICT domain. While researches from physical and spatial domain of Urban and Regional Planning are still not sufficient. In point of fact, URP studies is the field that is directly exposed to the Smart City issues and innovations. Therefore, this research was purposed to contribute additional theories about Smart Campus planning by its point of view.

This research attempted to identified various relationship between campus problems (in term of physical and spatial problem) related to the use of sensors to solve it. It was conducted using explorative case studies and qualitative data collection methods. The cases selection was done by purposive sampling from digital contents in open sourced internet during the years of 2000-2019. The study had two stages of data analysis, namely analysis of individual case and cross-case analysis. By these processes, it succeeded to correlate sensor contribution into planning process. They are namely automatic control, real time monitoring, and user-interface settings, as well as creating real time and participatory planning. The research also provided several suggestions to related-stakeholders and URP studies itself.

Key words: Smart Campus, Physical dan Spatial Problems, Sensor