

Thesis Brief Description

Thesis Title	The implementation of the Smart Readiness Indicator for the Assessment of Buildings Intelligence
Programme of Studies	BSc in Mechanical Engineering, Frederick University
Course	ME 400 Senior Project
Area of Study	Computational Building Physics – Smart Buildings
Student's Name	Nikolaos Tsigkakos
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Supervisory Committee	Dr Michalis Menicou, Assoc. Professor, Mechanical Engineering Department Dr. George Karagiorgis, Professor, Mechanical Engineering Department
Semester	Spring Semester 2022
Short Description	This final year project delved into the incorporation and execution of smart technologies during planned renovations, as outlined in Directive (EU) 2018/844. This directive introduced the Smart Readiness Indicator (SRI), aimed at gauging buildings' adaptability to user and network demands. The SRI sought to elucidate the advantages of Information and Communication Technology (ICT) systems to a wider audience, fostering greater user engagement. By comprehending the utility of this transformation, occupants would be more inclined to invest time and resources. This tool was designed to communicate a building's capacity to connect with external energy networks and inhabitants, thus enhancing energy efficiency via ICT technology. The indicator's evaluation, based on current services, enabled potential investors to strategically allocate resources for potential upgrades. To better grasp its functioning, the project applied the SRI to an Athens, Greece building unit, revealing its readiness level, limitations, and challenges when applied within a constrained technological environment.