

Master Thesis Brief Description

Thesis Title	The intelligence of buildings versus their dependence on fossil fuels: the case of the Smart Readiness Indicator of buildings
Programme of Studies	MSc in Sustainable Energy Systems
Course	MES 580 Master Thesis
Area of Study	Computational Building Physics – Smart Buildings
Student's Name	Andri Panayidou
Students Reg. Number	16794
Supervisor	Dr.-Ing. Paris A. Fokaides, Ass. Professor, Mechanical Engineering Department
Supervisory Committee	Dr Byron Ioannou, Ass. Professor, Architectural Department Dr. George Karagiorgis, Assoc. Professor, Mechanical Engineering Department
Semester	Fall Semester 2020
Short Description	<p>This final year project critically examines the balance between the intelligence of buildings and their reliance on fossil fuels, with a specific focus on the Smart Readiness Indicator (SRI) of buildings. As societies strive to achieve greater sustainability and energy efficiency, intelligent building technologies have gained significant attention. However, there remains a challenge in ensuring these smart solutions do not inadvertently perpetuate dependence on fossil fuels.</p> <p>Through an extensive literature review and empirical analysis, this research assesses the effectiveness and implications of the SRI in promoting energy-efficient and low-carbon buildings while minimizing fossil fuel consumption. The project explores the SRI's ability to accurately gauge a building's intelligence in relation to its energy sources and consumption patterns. Moreover, it investigates the potential trade-offs between intelligence and fossil fuel reliance, shedding light on the path towards achieving truly sustainable and eco-friendly buildings. The findings contribute to enhancing the design and implementation of intelligent building solutions that align with global efforts towards a greener and more sustainable future.</p>