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## A SCREENING LIFE CYCLE ANALYSIS OF A HOSPITAL BUILDING IN FLANDERS

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The predicted increase of population and life expectancy of people have resulted in a growing demand for healthcare facilities. Consequently, this need has led to a growing interest in the way hospital buildings are designed and operated. Current urge to decrease the negative impacts of the building stock around the world has also resulted in the encouragement of the healthcare construction industry to implement the sustainability principles in its practice. Nonetheless, as medical preconditions, such as hygiene or patient safety, often prevail over any other in hospitals, these facilities have been slower than other corporations in integrating sustainable technologies. Over the past two decades, efforts have been made to facilitate the sustainability assessment within hospital settings by using a quantitative approach, based on a life cycle thinking perspective. The analyses were often applied on the medical packaging, waste management or surgical equipment. However, a holistic sustainability evaluation on the scale of the hospital building, as well as an appropriate quantitative assessment method are still lacking to date. To overcome this gap, an attempt has been made to apply a screening life cycle assessment (LCA) and life cycle costing (LCC) on the new general hospital Sint-Maarten in Mechelen. This study allowed for gaining better insights into the environmental impacts and financial cost of a hospital building in Flanders. The outcomes of the study are seen as valuable inputs for the development of a hospital sustainability assessment method that would facilitate building practitioners' decision-making throughout the project phases.

### Biography

Milena Stevanovic works as a doctoral candidate at KU Leuven. Her research aims at providing architects and engineers with a quantitative sustainability assessment method for healthcare facilities. Throughout her research, she is collaborating with VK Architects & Engineers; a company specialized in healthcare projects where she contributes to a better decision-making throughout different project phases. Her expertise in evaluating the sustainability of healthcare facilities lies in focusing on an integrated assessment of economic, environmental and performance aspects, i.e. in combining the Life Cycle Assessment (LCA) and Life Cycle Costing (LCC) analysis.

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