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Why integrating sustainability into construction management will benefit the building industry

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one of the largest global industries, significantly impacts our environment. It generates high volumes of waste and consumes large amounts of energy and material resources. These are only a few of the main concerns of sustainable design and construction. Sustainability as it applies to the building industry requires more than just waste and resource management. It also includes mitigation and management of many concerns in regards to indoor environmental quality, water resources, and environmental justice.

Sustainability has come a long way since it was first introduced to the building industry many years ago. It has since developed into a structured set of guidelines, and even rules and regulations by many different public and non-profit agencies. The challenge has shifted in the recent years from defining what sustainability is, to how it can be practiced in the real world when it comes to designing, constructing, operating, and disposing a built environment. Today, many building professionals and owners aim to get their buildings certified while getting individual professional accreditations from Leadership in Energy and Environmental Design (LEED) Certification System by the United States Green Building Council (USGBC). LEED was introduced to the building industry in 1998 in order to be utilized as a set of guidelines and a pointing system towards certifying buildings as "green/sustainable buildings". Since then, it has been steadily growing with an increased number of projects that are LEED certified and individuals who are LEED accredited. This brings many challenges to those who have been used to designing, building, and operating buildings in a certain way with definite but not necessarily sustainable criteria. The increasing demand from building occupants for healthier and more comfortable living/working environment(s), in addition to the public image concerns of many building owners, have shifted the perspective of traditional design and construction companies' attention to generating better, greener, and more sustainable buildings. Consequently, many companies in the building industry have started to expect their employees to be up to speed in knowledge of sustainable design and/or construction. Becoming a LEED Accredited Professional (LEED-AP) has been one of the ways for prospective employees to identify themselves as knowledgeable in sustainable buildings. USGBC also promotes becoming LEED accredited by offering an additional point towards certification of the building for projects that employ a LEED-AP as a part of the team.

The Master of Science in Construction Management (MSCM) program at Roger Williams University (RWU) is addressing the issue of sustainability as a part of a major effort to provide students the ability to optimize the value of change in a global construction marketplace and the skill to command multiple interdisciplinary teams, in various stages of a project. The MSCM program offers an advanced graduate course in "Sustainable Construction". The course is developed in a sense to explore the idea of applying environmental, social, and economic benefits of sustainability into the

built environment. As one of the first courses offered during the initial semester of the program, objectives of this course is to address resource efficiency, waste management, human health, and environmental ethics as they relate to the actions taken during and due to construction of the built environment. This course also trains and encourages students to receive their LEED Green Associate (LEED-GA) and LEED-AP degrees as one of the supplementary benefits of the MSCM program.

As building sustainable structures require collaborative work by the architects, engineers, and contractors, it is important to provide an interdisciplinary educational environment to the students from all and more of these disciplines for increased understanding of a bigger sustainability picture. As a part of this effort, the construction management program at RWU has launched one of the few interdisciplinary green building student organizations in the country, RWU USGBC Student Group. This new student group along with a number of professors from different disciplines with an interest in sustainability is committed to promoting sustainable development throughout the campus and the local community. The group has already launched its first activity for the university community, which is a LEED-GA workshop to train students from various disciplines for the LEED accreditation exam. It is crucial to understand how this diverse academic approach to sustainability is now becoming one of the strongest methods in achieving the educational objectives of an innovative and leading construction management program.

Building green or sustainable buildings is the future of construction industry. Architects, engineers, and constructors need to be well aware of the healthy, efficient, high quality, and environmentally sensitive means and methods of creating a built environment.

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