



SMART
BUILDING
AUTOMATION
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How is project designing in traditional construction projects different from involving Building Automation methods to make the buildings more efficient and sustainable?

As opposed to the traditional design and construction methods, Integrated Design Process recognizes the importance of the continuous and active participation of all building stakeholders in a web-like interaction. It similarly treats a building as a myriad of systems that inevitably interact and affect each other, and, as a result, depend on each other for optimum performance. This is why the integration of building systems needs to be considered at the early stages of design. Building Automation Systems establish the necessary communication between the building and its different systems as well as between the building and its users and surroundings. Without this communication, the design and targeted building performance fail.

Traditional design and construction methods fail to accomplish this view of considering the building, its systems, and its surroundings a cohesive system that collectively affects the users and the environment.

How has Building Energy Modelling changes over the years especially with green building codes being implemented to the UAE real estate sector?

Due to the code requirements, energy modeling has advanced through the last 10 years and due to its widespread availability, significance, and proven benefits to lowering a building's energy consumption, it has become an essential part of buildings standards and rating systems.

However, in today's market, energy modeling is mainly used for compliance with rating systems. In general developers and buildings owners do not require energy modeling as a project design deliverable unless required by a sought-after building rating or an urban authority. And in most cases, once the approving or certifying authority accepts the modeling results, the energy model perishes.

That said, some developers nowadays are looking into the benefits of energy modelling for life cycle costs analysis, predicting running costs and budgeting.

As per your interaction with the developers and construction companies, how has implementation of Building Automation Systems helped achieve the desired results of efficiency amongst the Dubai buildings?

In the past building automation systems was an additional garment that was not always a necessity to have. Today, any new commercial building will have some kind of a building automation system. Hotels, office buildings, malls hospitals, rely heavily on the facility building automation systems to monitor and run the systems in the building.

That said, building automation systems require rigorous maintenance regimes to periodically check the sensors readings, the actuators, the controllers, etc., to make sure they are still functioning properly. Well maintained building automation systems have helped many buildings in Dubai to optimize building systems efficiencies, indoor air quality and occupant comfort.

How important is retrofitting as per you for controlling the demand of energy?

The growing energy demand puts a strain on the utility companies to provide more power plants to cope with that demand. The UAE has strategies in place to reduce the demand by retrofitting existing buildings. For instance, the Dubai goal of reducing demand to 30% by 2030 is heavily reliant on retrofit programs. Energy retrofits are a must to establish a sustainable future. Building Automation can play a great part in this as we typically see a possibility for up to 15% of energy reduction achievable via no-to low-cost measures that can be realized via proper and intelligent building controls.

What are your expectations from the summit and how do you rate the topics of the discussion at the summit?

It is a great opportunity to emphasize on the use of good technology to achieve building systems integration, optimizing buildings systems efficiencies. It is also important to hear about the hurdles that building owners face with the building automation systems and the best practices to mitigate them.