

## **Taking advantage of smart architecture to find standards for interior design**

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### **Abstract**

Smart cities and environments are defined as “a public-private ecosystem that provides services to citizens and their organizations with strong support from technology, and looks at the social and economic impact on society.” Life by adapting the existing ecosystems as well as linking them with the information network to reuse where smart cities represent information to create a creative environment that contributes to the development of sustainable and smart environments. The connecting factor between multiple disciplines, constantly shaped by advances in technology and urban development. Smart cities have also been defined as social entities that focus on human interaction and support their activities through technology.

We conclude from this that practical solutions that allow us to easily connect smart devices and data and connect them through the Internet of Things, contribute effectively to creating smart environments and cities that support human development in all its fields and contribute to shaping its newly developed smart environments that contribute, maintain and support the principles of sustainability through Supporting renewable energy systems as well as the ability to monitor and control their consumption and provide their resources.

### **Keywords:**

Smart architecture, smart buildings, smart materials, technology, smart systems

### **Introduction**

In recent years, the world has witnessed a clear integration between the various branches of science, and in light of the scientific developments that we are witnessing in the modern era in all directions, it has become necessary for architecture to interact with these changes and for the architectural product system to contain all possible technological systems. Applying them for the success of the building's work mechanisms, this appears in achieving the functional aspects clearly in addition to employing the latest science findings of modern technologies, including the use of all available technological tools and techniques and their employment in buildings

These factors and influences produced what is called "smart architecture", which is considered one of the most prominent manifestations of the new millennium, and it relies on the use of technological methods, modern technologies and information technology that work in an integrated manner, so that the building performs its function in a manner appropriate to the

times. Since the late twentieth century, expectations have increased. And aspirations to produce a more modern, flexible and comfortable lifestyle. At the same time, advanced technologies, artificial intelligence, robotics, and Internet of Things technologies have witnessed great leaps in progress. Technology has advanced in its practicality and economics, because of industry standards, increased market demand, and significant cost reductions that have made technology available to more people.

### **Statement of the problem**

The research problem is as follows:

- Scarcity of relying on smart systems to operate and rationalize the unregulated consumption of energy resources in the internal spaces.
- Lack of use of smart systems in cities, which led to high levels of pollution in cities and exacerbated environmental problems.

### **research importance**

It deals with the study of the concept of smart architecture, its characteristics and design requirements, and the mechanisms of applying smart architecture to it.

The research is concerned with smart buildings as they are vital buildings and a mirror of the reality of the technological development of society.

- Identify the obstacles to the application of smart architecture in buildings.

How to treat buildings to become more technological and responsive to internal and external conditions through the application of smart architecture.

### **Objective**

This research aims to find special standards for interior design derived from the thought of smart architecture with the adaptation of the systems developed in buildings and linking them to the design processes, which thus help in creating sustainable interior spaces.

Research methodology

- 1- The inductive approach through previous studies and scientific references.
- 2- The critical analytical approach through analytical studies of smart architecture, its characteristics and requirements.

### **Results**

1- Modern technology has a clear impact on the consolidation and activation of sustainable interior architecture applications.

2- The digital technological revolution brought about a major shift in the applications of sustainable thinking through the use of smart technological applications in the field of energy use.

### **Recommendations**

1- The different disciplines must be linked to reach a sustainable interior design based on sound foundations to integrate with the environment and keep pace with the continuous

technical development to implement leading environmental trends such as green architecture, zero-energy buildings and smart architecture.

2- The smart ecosystems of cities must be linked with the Internet of Things technology to create internal environments characterized by the balanced use of resources, as well as linking them with the city's information network.

3- Orientation to establish smart cities as modern urban communities characterized by sustainability in thought and various functions.

4- The state must go to finance experimental projects in this field, to benefit from it in saving energy and monitoring consumption.

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