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Review

Application of IoT in Healthcare: Keys to Implementation of the Sustainable Development Goals

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Abstract: We live in complex times in the health, social, political, and energy spheres, and we must be aware of and implement new trends in intelligent social health systems powered by the Internet of Things (IoT). Sustainable development, energy efficiency, and public health are interrelated parameters that can transform a system or an environment for the benefit of people and the planet. The integration of sensors and smart devices should promote energy efficiency and ensure that sustainable development goals are met. This work is carried out according to a mixed approach, with a literature review and an analysis of the impact of the Sustainable Development Goals on the applications of the Internet of Things and smart systems. In the analysis of results, the following questions are answered about these systems and applications: (a) Are IoT applications key to the improvement of people's health and the environment? (b) Are there research and case studies implemented in cities or territories that demonstrate the effectiveness of IoT applications and their benefits to public health? (c) What sustainable development indicators and objectives can be assessed in the applications and projects analyzed?

Keywords: smart systems; smart grids; IoT; sensors; SDGs; accessibility; social healthcare systems; energy efficiency

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1. Introduction

Today, technological advances must be accompanied by their applications and implementation in human-inhabited environments, in which public health and energy efficiency play an important role [1,2]. The study of the impact of the Sustainable Development Goals (SDGs) on sensor and Internet of Things (IoT) applications in human environments should be considered essential for the future of our territories [3–5]. Energy efficiency and environmental sustainability are intimately linked to people's health, and the improvement of the quality of human life is today conditioned by technology, sensor networks, intelligent systems, and IoT applications [6].

Smart grids and smart cities should facilitate people's access to environments, facilitate healthcare services, and promote the safety and happiness in our society. Technologies such as the IoT, the Internet of Energy, artificial intelligence, and the installation of sensors in human environments are used to optimize infrastructures, services, and the strategic planning of communities.

We must design and implement advanced facilities, equipped with sensors and devices that promote the safety and health of people while maintaining a balance between energy use and efficiency. We must train professionals in the technological and engineering sectors, in universities, to keep humans and sustainability at the heart of their designs and projects.

It is essential that the incorporation of intelligent systems is efficient from a technical, safety, and economic point of view. Sensor devices, the Internet of Everything, together with reliable and safe electrical installations and comfortable human environments will