Development Of Tourist Support Web Project Within The Framework Of A Smart City Ecosystem.

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Abstract

A smart city is a sustainable, efficient and innovative urban model that aims to increase livability and meet the needs of citizens, served by the use of technology. These cities designed to improve environmental and social sustainability, improve public services and make life easier for citizens through internet-connected sensors, devices and data analysis.

Smart cities offer innovative solutions in many areas. For example, smart buildings increase environmental sustainability while at the same time reducing costs by optimizing energy consumption. Intelligent transport systems optimize traffic flow, reduce traffic and shorten travel times, enabling citizens to use public transport more comfortably and safely. Through smart city apps, citizens can get important information such as air quality and noise levels in the city, monitor environmental issues and interact with municipalities. Smart cities offer many advantages for municipalities and citizens. Such as a more sustainable environment, safer lives, better quality of service, more job opportunities and higher living standards. However, the development of smart cities can face many challenges in terms of financial, technical, legal and governance.

Key words: Smart cities, framework, sustainable environment, prediction.

The development of smart cities brings with it many advantages as well as many challenges. They may face many financial, technical, legal and managerial challenges. There may be serious problems, especially in terms of finances. Smart cities need high-value technological infrastructure and expert personnel.

The development of the smart city is progressing rapidly and is expected to become even more important in the future. Factors such as the rapid development of technological development and urbanization trends brought about by the growing population are effective in this area. Some of the projected trends and predictions for smart city development are:

1. Internet of Things (iot) technologies will be used more: iot technologies play a key role in the development of smart cities. Thanks to these technologies, it is possible to make cities more efficient and sustainable by using data collected through sensors. The future use of iot technologies will be a great opportunity for the development of smart cities.
2. The use of artificial intelligence (AI) will increase: Smart cities will be able to process and analyze data collected from sensors more effectively by using artificial intelligence algorithms. Thus, many benefits will provided, such as more efficient management of cities, improvement of traffic flow, reduction of energy consumption.
3. Smart transportation systems will become more widespread: Transportation systems, which are an important component of smart cities, will made smarter and more efficient. With this, traffic congestion will reduced, public transport systems will be more efficient and problems faced by citizens in transport will reduced.
4. The use of green technologies will increase: During the development of smart cities, the use of green technologies will increase to increase environmental sustainability. In this framework, many green technologies will used, such as renewable energy sources, energy efficiency solutions and waste management systems.
5. Citizen participation and interaction will increase: During the development of smart cities, citizen participation and interaction will increase. Thus, citizens will be able to meet their needs better, services will be more efficient and the quality of life of citizens will increase.

From a technical point of view, the design and implementation of smart cities is a complex process that combines many disciplines and technologies. This requires expertise in topics such as internet connectivity,

sensors, data analysis, artificial intelligence, cyber security. In addition, smart cities require constant monitoring and updating of new technologies and systems.

In recent years, thanks to rapidly developing technological infrastructure and data analysis, smart cities have become more common. These cities offer innovative solutions in many areas such as smart transportation, smart energy management, smart buildings, smart lighting, smart water management and smart waste management. In this way, they provide significant benefits in terms of livability, environmental sustainability, economic growth and citizen satisfaction.

Smart cities offer many innovative solutions to achieve environmental sustainability goals, such as reducing energy consumption and using renewable energy sources. For example, smart buildings designed to improve energy efficiency and reduce their carbon footprint. Smart lighting systems not only control lighting, but also aim to create an environmentally friendly city by measuring traffic density and air quality. Smart cities optimize traffic flow, reduce congestion, use roads more efficiently and thus save time and fuel thanks to intelligent transport systems. Intelligent public transport systems enable citizens to travel faster and safer. Thanks to smart city apps, citizens can monitor traffic flow, find out where public transportation is, and access information like travel time estimates.

Smart cities also aim to make everyday life easier for citizens. Intelligent water management systems have been developed to save water and control water consumption for citizens. Thanks to smart city applications, citizens can obtain important information such as air quality, noise level, monitor environmental issues and interact with municipalities. Smart cities aim to meet the needs and desires of citizens. Thanks to intelligent transport systems in these cities, traffic congestion reduced by optimizing traffic flow, roads used more efficiently, and time and fuel are saved. At the same time, smart public transport systems allow citizens to travel faster and safer. Another important benefit of smart cities is that they provide environmental sustainability. These cities use renewable energy sources, increase energy efficiency and reduce carbon footprint. Smart buildings designed to reduce energy consumption and protect the environment. In addition, smart water management systems developed to conserve water and protect environmental water resources.

Smart cities also provide economic benefits. In these cities, the use of innovative technologies is increasing, which contributes to job opportunities and economic growth. In addition, smart cities become more attractive as they improve the quality of life for citizens and provide growth in sectors such as tourism. As a result, smart cities are urban transformation projects that offer solutions to many problems and improve the quality of life of citizens through the application of innovative technologies. The development of these cities provides significant benefits for citizens, the environment and the economy. The Internet of Things is one of the main technological components of smart cities. Iot devices and sensors perform various tasks in smart cities and help cities become more efficient, safe and sustainable.

Thanks to iot devices, sensors and networks, real-time data collection, analysis and management are possible in smart cities. Thus, city administrators, citizens and companies can make better decisions in various areas of city life.

Some of the iot devices and sensors used in smart cities are: Smart Transport Systems: Public transport vehicles such as buses, metros and trains used in smart cities are tracked using GPS technology. Thus, city managers can analyze traffic flow and take action on congestion. Smart buildings: Smart buildings are equipped with sensors that are sensitive to environmental variables and user actions. These sensors monitor and manage energy consumption. In addition, smart buildings can use sensors to take preventive measures against fires, floods and other disasters.

Smart Parking Systems: Sensors in parking lots in smart cities monitor parking occupancy rates. With this, drivers can find free parking spaces more easily and traffic jams avoided. Smart cities have an approach that aims to provide increased efficiency and cost savings, as well as sustainability and human-centered approaches. This approach allows city governments to use resources more efficiently and improve the quality of services. Thanks to data collection and analysis systems in smart cities, city governments can

better plan their services and make better decisions. These systems can control traffic flow in the city, monitor energy consumption and optimize garbage collection services. In this way, city governments can use their resources more efficiently, making their services more efficient.

In addition, the technologies used in smart cities can save costs. For example, smart lighting systems save energy and reduce electricity costs by using LED lights that use less energy. In addition, smart building energy management systems control energy consumption and save money by preventing unnecessary costs. Smart transportation systems also save costs. These systems can monitor traffic flow and adjust traffic lights to avoid traffic jams. In addition, intelligent public transport systems can shorten travel times and save fuel. As a result, smart cities allow city governments to use their resources more efficiently, resulting in increased efficiency and cost savings. This approach enhances the resilience of cities and the quality of services, as well as sustainability and people-centred approaches.

Many smart city projects implemented around the world. Some examples are:

1. Songdo, South Korea: Songdo is a city located 40 kilometers west of Seoul, the capital of South Korea. Songdo built with an investment of about 10 billion dollars. Smart city technologies are equipped with many features that promote energy efficiency, sustainability and participation.
2. Barcelona, Spain: Barcelona is a Mediterranean city equipped with many smart city technologies. The city is home to innovative projects in many areas such as environmental sustainability, smart transportation, smart buildings, smart energy management and smart public services.
3. Amsterdam, Netherlands: Amsterdam is one of the most advanced smart cities in the world. The city is leading technological innovation in many areas, such as intelligent transportation systems, energy management, air quality monitoring, and participatory democracy.
4. Singapore: Singapore is home to many projects to increase city sustainability using smart city technologies. The city uses many innovative technologies such as air quality monitoring, smart building management, smart traffic management and waste management. These examples are just a few examples of smart city projects implemented in different regions of the world.

Conclusion

One of the main problems faced by tourists in the Smart City concept is finding suitable and affordable accommodation. Traditional hotels can be expensive and may not offer the same level of comfort as private homes. Therefore, a tourist support web application modeled after the private accommodation rental market can be an ideal solution to this problem.By providing a platform that includes short-term rentals for homeowners and renters, tourists will have a wider range of accommodation options, including private apartments and rooms. This can be a more affordable option for tourists as they can choose accommodation according to their budget, preferences and other criteria. In addition, the web application features a review system that allows tourists to both share their experiences and benefit from the experiences of others. Thanks to this, tourists can get more complete information about the places they want to stay. This can help build trust between guests and hosts and ensure that tourists have a pleasant and comfortable stay. Using smart city technology, the app also provides information about the local area, such as public transportation, nearby events, and more. Can provide real-time updates, which makes it easier for tourists to plan their trips.Additionally, the tourist support web application integrates with map and location services to make it easier for tourists to find and book accommodations based on their preferences. This can enhance the user experience and ensure that tourists can find the places that best meet their needs. Overall, a tourist support web application inspired by the private accommodation market can provide a convenient, affordable and personalized accommodation option for tourists visiting smart cities. A web application can offer a more authentic and pleasant experience for tourists by leveraging user-generated reviews, smart city technology and location-based services, while supporting local businesses and communities.

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