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MAINTAINING THE NEEDS OF CITIZENS IN SMART CITY

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Abstract

A smart city is a municipality that uses technology and data to improve the quality of life for its citizens. Sustaining the needs of citizens in a smart city includes identifying and addressing specific community needs and concerns such as transportation, energy, public safety, and environmental sustainability. This may include the introduction of smart infrastructure and services such as smart traffic lights and air quality sensors, as well as citizen engagement through digital platforms and citizen engagement initiatives. In this article, we will look at what defines a smart city and what infrastructure services must be provided in order to comply with the principles of a smart city.

Key words: Smart City, Smart city, innovative breakthrough, digital economy, IT solutions, services.

SMART CITY ТҰРҒЫНДАРЫНЫҢ ҚАЖЕТТІЛІКТЕРІН ҚАМТАМАСЫЗ ЕТУ

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Аңдатпа

Ақылды қала - бұл өз азаматтарының өмір сапасын жақсарту үшін технологиялар мен деректерді пайдаланатын муниципалитет. Ақылды қаладағы азаматтардың қажеттіліктерін қамтамасыз ету көлік, энергия, қоғамдық қауіпсіздік және экологиялық тұрақтылық сияқты қоғамдастықтың нақты қажеттіліктері мен мәселелерін анықтауды және шешуді қамтиды. Бұған смарт бағдаршамдар мен ауа сапасының сенсорлары сияқты смарт инфрақұрылым мен қызметтерді енгізу, сондай-ақ цифрлық платформалар арқылы азаматтарды тарту және азаматтарды тарту бастамалары кіруі мүмкін. Бұл мақалада ақылды қаланы нені анықтайтынын және ақылды қала қағидаттарына сәйкес болу үшін қандай инфрақұрылымдық қызметтерді көрсету керектігі қаралыстыратын болады.

Түйін сөздер: Smart City, Smart city, инновациялық серпіліс, цифрлық экономика, IT шешімдер, қызметтер.

ОБЕСПЕЧЕНИЕ ПОТРЕБНОСТЕЙ ГОРОЖАН В SMART CITY

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Аннотация

Умный город — это муниципалитет, который использует технологии и данные для улучшения качества жизни своих граждан. Поддержание потребностей граждан в умном городе включает в себя выявление и удовлетворение конкретных потребностей и проблем сообщества, таких как транспорт, энергетика, общественная безопасность и экологическая устойчивость. Это может включать внедрение интеллектуальной инфраструктуры и услуг, таких как интеллектуальные светофоры и датчики качества воздуха, а также взаимодействие с гражданами через цифровые платформы и инициативы по вовлечению граждан. В данной статье мы расмотрим что определяет умный город и какие инфраструктурные услуги должны быть предоставлены что бы соответствовать принципам умного города.

Ключевые слова: Умный город, Умный город, инновационный прорыв, цифровая экономика, ИТ-решения, услуги.

Introduction

A smart city is a municipality that leverages technology and data to improve the quality of life for its citizens. Smart cities aim to address the challenges of urbanization, such as traffic congestion, air pollution, and inadequate public services, by using data and technology to optimize the performance of the city's infrastructure and services.

One key aspect of smart cities is the use of smart infrastructure, such as smart traffic lights, which can adjust their timing based on real-time traffic data, and air quality sensors, which can provide detailed information about the air quality in different parts of the city. This type of infrastructure allows cities to gather data in real-time, which can be used to improve the performance of the city's services, such as public transportation, traffic management, and waste management.

Another key aspect of smart cities is the use of digital platforms and citizen engagement initiatives. These tools allow cities to engage with citizens and gather their input on a variety of issues, such as transportation planning, public services, and environmental sustainability. This type of engagement allows cities to better understand the needs and concerns of their citizens, which can inform decision-making and improve the performance of the city's services.

In addition, smart cities also focus on sustainability, by implementing measures such as energy-efficient buildings, renewable energy sources, and reducing carbon emissions. Smart cities also aim to provide access to green spaces and promote healthy lifestyles for citizens.

The success of smart city projects is also highly dependent on human activity. No matter how much data is generated by IoT technologies, solving urban problems depends on good governance, long-term investment and human participation. The resulting data is of no value on its own if it is not processed efficiently. If smart solutions reveal a pothole in the road, then in any case, the participation of people is required to repair the pothole.

Smart city projects should help solve the transport problems of large cities. Digitization, new technologies and big data have the potential to change the way traffic and parking in cities are organized and managed, while creating new business opportunities.

The UN estimates that 60% of the world's population will live in cities by 2030, making it critical to address the issue of sustainable transport systems. City authorities and city planners face the difficult task of managing a growing urban population and implementing efficient

transport systems while reducing air and noise pollution. Future social welfare depends on balancing the needs of growth, development, mobility and well-being with a sustainable future for the planet [1].

Creating a smart city requires a collaborative effort between government, private sector, and citizens. Governments play a crucial role in creating the necessary infrastructure and providing the necessary funding for smart city initiatives. The private sector is responsible for developing and implementing the technology and services needed to make cities smart. And citizens play an important role by providing feedback and input, and adopting smart city technologies and services.

To successfully implement smart city initiatives, it is important to have a clear vision and strategy for the city's development, and to involve all stakeholders in the planning and implementation process. It is also important to consider the specific needs and characteristics of the city and its citizens, as well as the available resources and technology.

Overall, smart cities have the potential to improve the quality of life for citizens, by addressing the challenges of urbanization and promoting sustainable development. By leveraging technology and data, smart cities can optimize the performance of their infrastructure and services, engage citizens in decision-making, and promote sustainability. However, successfully creating and maintaining a smart city requires a collaborative effort between government, private sector, and citizens, and a clear vision and strategy.

Material and methods

The goal of the research "Maintaining the needs of citizens in Smart City" is to identify and address the specific needs and concerns of the community in order to improve the quality of life for citizens in a smart city. This may involve implementing smart infrastructure and services, such as smart traffic lights and air quality sensors, as well as engaging with citizens through digital platforms and citizen engagement initiatives. The research may also aim to evaluate the effectiveness of different strategies and approaches for maintaining the needs of citizens in a smart city, and identify best practices for future implementation. Ultimately, the goal is to improve the performance of the city's services and infrastructure, to make the city more livable and sustainable for its citizens.

Result and discussion

The volume of the global smart city market in 2020 will be $124 billion, which is 18.9% more than in 2019. Such data indicates the readiness of many governments to invest in smart city technologies.

Many cities around the world are already collecting large amounts of data using IoT sensors placed in urban environments to monitor traffic, noise levels, air pollution and various emissions. The data obtained are actively used by the city authorities to improve the quality of life of urban residents.

The field of smart cities includes artificial intelligence (AI), self-driving cars, smart street lighting and smart parking infrastructure. Smart city projects are primarily aimed at solving fundamental problems for cities: reducing costs, ensuring economic growth and sustainability, while improving the quality of services and the life of citizens [2].

The results and discussion of a research about "Maintaining the needs of citizens in Smart City" would depend on the specific research methods and data collected. However, some possible results and discussions that may be included are:

Identifying the key needs and concerns of citizens in the smart city: The research may have collected data through surveys, interviews, or focus groups to understand the specific needs and concerns of citizens in the smart city. For example, the research may have found that

citizens are particularly concerned about traffic congestion and air pollution, and that they would like to see more green spaces and bike lanes in the city.

Evaluating the effectiveness of different smart infrastructure and services: The research may have analyzed data from smart traffic lights, air quality sensors, and other smart infrastructure and services to evaluate their effectiveness in addressing the needs of citizens. For example, the research may have found that smart traffic lights have reduced traffic congestion, and that air quality sensors have provided valuable information about the air quality in different parts of the city.

Assessing the impact of citizen engagement initiatives: The research may have analyzed data from digital platforms and citizen engagement initiatives to assess their impact on addressing the needs of citizens. For example, the research may have found that citizen engagement initiatives have improved the quality of transportation planning, and that digital platforms have allowed for more effective communication between citizens and the city government.

Identifying best practices and recommendations: Based on the results and analysis, the research may have identified best practices and recommendations for maintaining the needs of citizens in a smart city. For example, the research may have recommended that the city government should continue to invest in smart infrastructure and services, and that digital platforms and citizen engagement initiatives should be used more extensively to improve communication and engagement with citizens [3].

A Smart City is an urban area that uses technology and data to improve the quality of life for its citizens. One of the key aspects of a Smart City is ensuring that the needs of citizens are met. This includes providing access to essential services such as healthcare, education, and transportation, as well as addressing issues related to safety, the environment, and social inclusion.

Research has shown that the implementation of Smart City initiatives can have a positive impact on meeting the needs of citizens. For example, the use of smart transportation systems can improve the efficiency and accessibility of public transportation, making it easier for citizens to get to work, school, and other essential services. Smart healthcare systems can also improve access to healthcare by connecting citizens with medical professionals and providing remote monitoring and diagnostic services.

Additionally, Smart City initiatives can help to improve the environment by reducing air pollution, conserving energy, and promoting sustainable practices. For example, the use of smart lighting systems can reduce energy consumption, while the use of electric vehicles can help to reduce emissions. Smart City initiatives can also promote social inclusion by providing access to information and services for disadvantaged communities and addressing issues related to poverty and inequality.

Smart Population System. It is characterized by active use of the Internet, constant access to information about the labor market. Possibility of using electronic cards.

Smart city and environment concept. Includes a system check for eco-security. Elimination of problems of illegal waste disposal by the population and administration.

Smart technologies. They differ in access to free Wi-Fi, including connection in public transport. Established networks with broadband access.

An innovative and unique system is located in the settlement of Masdar, in the United Arab Emirates. The final launch of the project is scheduled for 2030, however, the first new buildings and important urban infrastructure appeared in 2018. The number of inhabitants that first populated the city was about 7 thousand [4].

However, it is important to note that the success of Smart City initiatives depends on a number of factors, including the availability of funding, the quality of infrastructure, and the willingness of citizens to adopt new technologies. Additionally, there are concerns about privacy and security, as well as the potential for technology to exacerbate existing social and economic inequalities.

In order to ensure that the needs of citizens are met in a Smart City, it is important to involve citizens in the planning and implementation of initiatives. This can be done through public consultations and community engagement, as well as through the use of citizen-generated data and feedback. Additionally, it is important to ensure that Smart City initiatives are inclusive and equitable, and that they take into account the needs and concerns of disadvantaged and marginalized communities [5].

Conclusion

In conclusion, research has shown that Smart City initiatives can have a positive impact on meeting the needs of citizens. However, it is important to ensure that these initiatives are inclusive and equitable, and that they take into account the needs and concerns of all citizens. Additionally, involving citizens in the planning and implementation of Smart City initiatives can help to ensure that the needs of citizens are met in a sustainable and effective manner.

To date, the "smart home" is one of the cutting-edge achievements in technology. Such a house performs not only functional tasks of management, control, security and energy saving, but also emotional and psychological ones, bringing a person and his home closer together. A smart home ensures the adaptability of an individual dwelling to the changing needs of the inhabitants, as well as to the cyclical rhythms of seasonal fluctuations, to climate change. The residential building is increasingly acquiring the properties of dynamic adaptation.

There is no single system for data collection and analysis in the world. Information is collected by too heterogeneous devices - navigators, smartphones, search engines. And more often than not, a huge layer of data simply lies dead weight - because it is not clear how to apply it and synchronize it within the framework of working with one platform.

The next reason is the lack of necessary capacities. The development of "smart cities" requires considerable costs and the use of modern equipment, and the latest servers are needed to store big data. However, all these issues are solvable. In the near future, smart cities will become commonplace.

Where a sustainable habit of using digitized services is formed, citizens learn to allocate their time more productively, set more conscious priorities; they have increased responsibility for their daily choices in favor of smart solutions. That is, they become smart residents of a “smart city” [6].

Implementing digital solutions at the metropolitan level requires strategic vision and consistency on the part of municipalities. However, all stakeholders are responsible for the success of the process: from mayors, experts and IT developers to the citizens themselves.

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