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**MODERN SMART CITIES AND
PROSPECTS OF INTRODUCING
THE CONCEPT OF A SMART CITY
IN THE REPUBLIC OF KAZAKHSTAN**

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Abstract. Smart city concept envisages the implementation in major cities of a range of innovation activities and software solutions aimed at sustainable, safe socio-economic development of cities. Smart City projects are primarily focused on the man and his needs, the provision of more comfortable and safe living environment in cities. The article considers the features of the concept and the examples of Smart city projects in Kazakhstan.

Keywords: city, Smart city, intelligent city, innovations.

The idea of a "smart city" today is becoming more relevant all over the world, to solve social and economic problems, given the limitations of all resources, it becomes important to use the idea of a smart city.

Every year, the processes of changing urban infrastructure planning to a more developed intellectual status are increasing and needed, this requires financial resources, efforts and scientific solutions. The development of modern cities should be viewed on a global scale, as they are engaged in a huge competition for talents, industry and jobs in the world arena.

Studying these factors it is necessary to understand what methods and technologies are needed for the city. From this follows the need for digitalization of all infrastructure and mobile communications, the need for cloud information data, for storing large information of the city. Here the essence of Smart City is manifested - these are the inhabitants of the city and their needs, the main concept is the most important thing - convenience for residents, a safe solution economically and environmentally for all subjects of the urban environment [1].

By 2050, the number of people living in megacities will reach about 70% of the population of the whole planet and this congestion will lead to great stress in many big cities. The main solution to such problems is associated with the introduction of especially highly ecological and innovative technologies, this is necessary to open new opportunities for megacities, to function effectively for the needs of all subjects of the city. Exploring the characteristics and functions of a smart city, you can consider the main properties and functional areas of a smart city in the following scheme (Drawing 1,2):

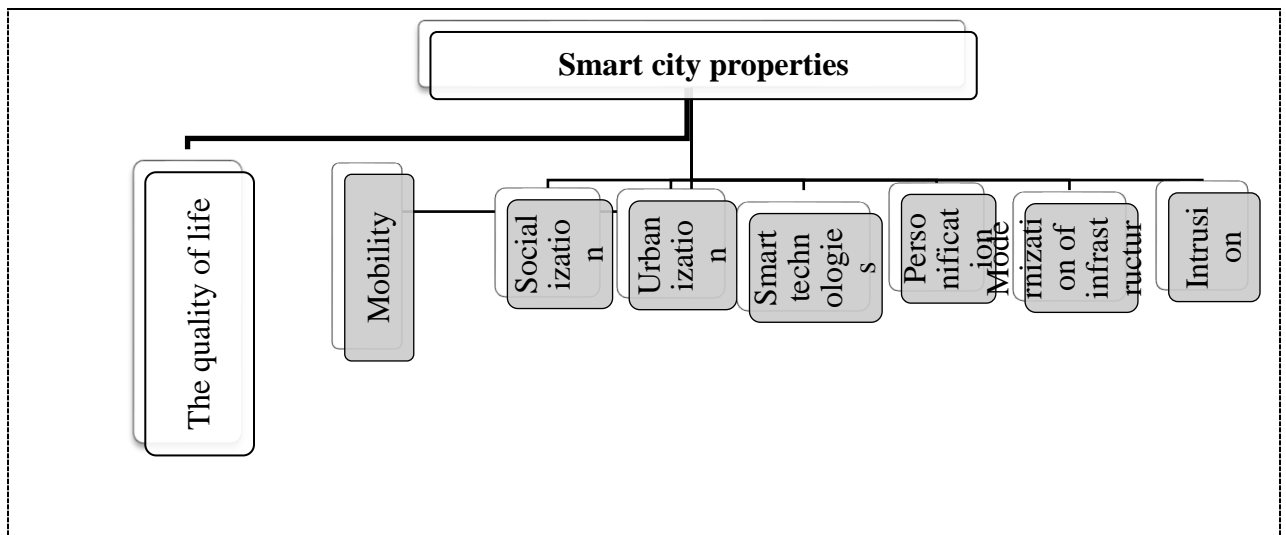


Figure 1 - Basic properties and functional areas of a smart city

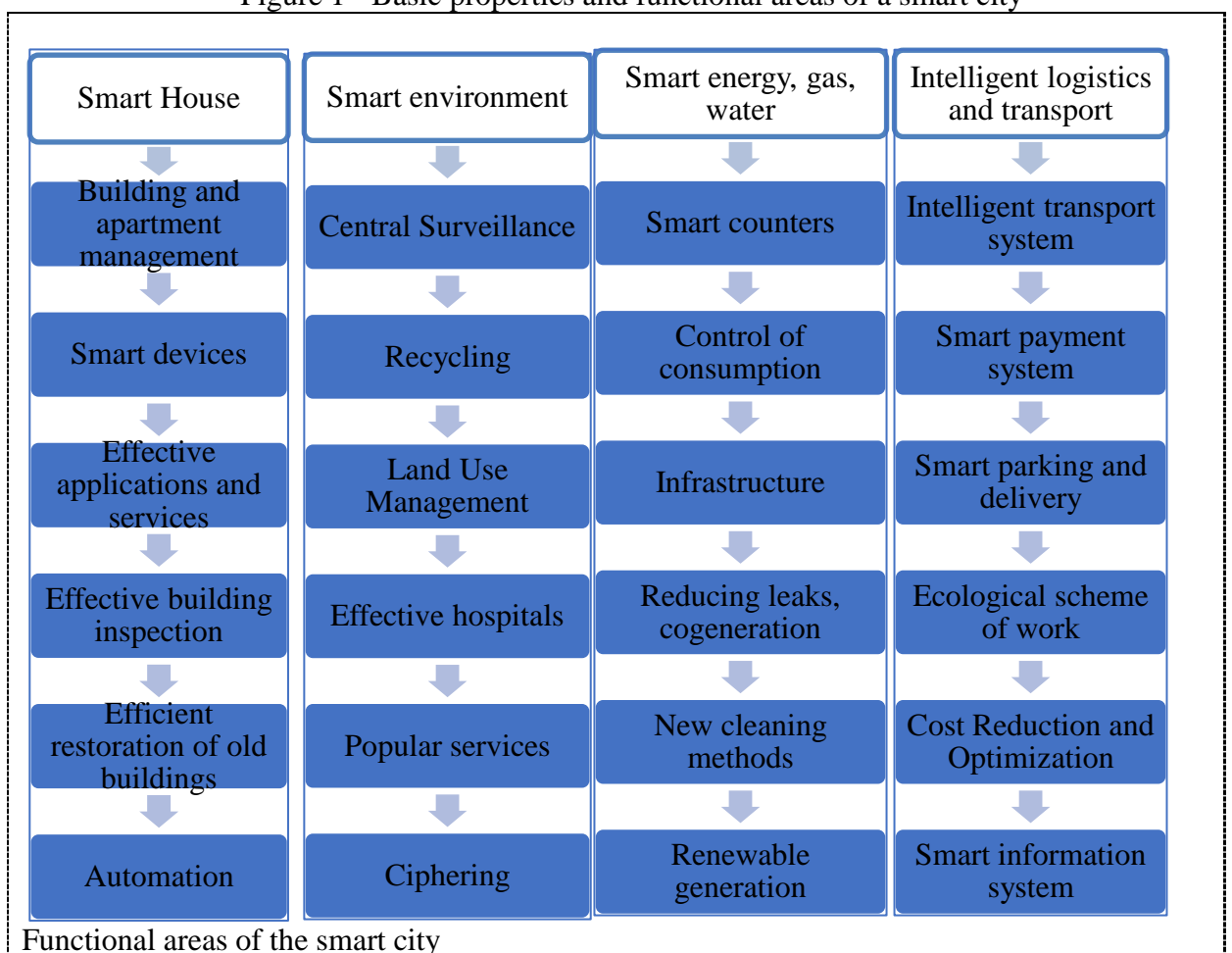


Figure 2 - Basic properties and functional areas of a smart city

In many cities around the world for the convenience of residents learn the basic principles for the development of "smart cities" and to comply to the image of the "smart city" need effective architectural and technological projects. Many cities in the initial stage of planning the idea of "smart cities", such as Korean Sanday, the facility was originally planned in an innovative, artificial island, where it was selected most recent achievements in the field of urban planning, architecture, construction, ecology, transport and communications. In many cities in the planning focuses on the technological and environmental safety, and it focused even algorithm of traffic and traffic lights [2].

Digitalization and digital technologies are gradually penetrating into all spheres of life among Kazakhs. And these are true signs that the tasks set by the President of the country in the message are very timely. According to the program until 2020, for effective development and for a highly urban environment, special conditions are also considered for business entities, which is important when planning strategists for a "smart city" [3].

With the beginning of effective smart city ideas in different megacities, there can be definitely different conceptual tasks and the main principles of smart city technology is: to solve the problems of mega cities, introduce highly effective methods of functioning, improve the quality of household services, create an effective climate for business and tourist routes.

With the implementation of EXPO 2017, various process options were observed. As a result, of all the projects, 40 technological ideas proposed at EXPO 2017 were considered, and 4 of them were planned to be put into production in 2018. These are the main ones for energy saving, water purification system, innovative networks, for energy sources in enterprises.

One of the projects selected at the international specialized EXPO 2017 is already being implemented in the North-Kazakhstan region. He plans to introduce in China in 2018 a Chinese technology for free charging for mobile phones, this will reduce the cost of consumed electricity and the system of electricity [4].

Under the state program "Digital Kazakhstan" it is planned to introduce "smart city" technology in the following cities of the country: Smart Astana, Smart Karaganda, Smart Ontustik, Smart Almaty, Smart Aktobe. The main indicators for the development of these regions are: raising living standards, increasing the volume of public services in electronic format, developing intellectual projects and architectures, realizing the ideas of "smart cities" [5].

There are plans for the development of smart cities, identified the main priority ideas, the main functional responsibilities of subjects, innovative technologies Smart City, there are studied global opiates in the development of smart technologies.

Work is underway to control the leakage of water and heat resources in homes, mobile applications for utilities are planned. In order to improve the services and track the financial resources, a pilot project of an electronic KSK is being considered.

The housing department has developed new rules for approving and planning the budget of the KSK for general house expenses, a mechanism for approving tariffs involving tenants and uniform requirements for electronic services, a portal is functioning that publishes plans of the city administration for repair of roads, heating systems, yard areas, 200 algorithms for solving life situations, which do not provide for standards of public services [6].

The idea of Smart City is focused on effective complex events, which differ with a high level of architectural planning, advanced Internet technology capabilities, service applications, mobile integration and infrastructure. This infrastructure, designed to recognize, measure, analyze and disseminate key data from control systems and control the functioning of cities, will provide an adequate response to government requests, the needs of commercial structures and people's livelihoods.

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ҚАЗІРГІ АҚЫЛДЫ ҚАЛАЛАР ЖӘНЕ ҚАЗАҚСТАН РЕСПУБЛИКАСЫНДАҒЫ ОНЫ ЕНГІЗУДІҢ КОНЦЕПЦИЯСЫ, ҚАЗІРГІ ЖАҒДАЙЛАРЫ МЕН БОЛАШАҒЫ

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Аңдатпа. Smart city – бұл жаңа концепция, инновациялық шаралар кешені мен бағдарламалық шешімдердің тұрақтылығына, қауіпсіз, әлеуметтік-экономикалық жағынан қаланың дамуына бағытталады, жоғары технологиялық нарықтық экономиканың дамуын, ресурстардың барлық түрлерінің тиімді қолданылуын және қалаларда қолайлы жүру үшін жағдайлар жасау, тиімді өмір сүру мен бизнесті жүргізуді қарастырады.

Түйінді сөздер: қала, ақылды қала, интеллектуалды қала, қалалық орта, инновация.

СОВРЕМЕННЫЕ УМНЫЕ ГОРОДА И ПЕРСПЕКТИВЫ ВНЕДРЕНИЯ КОНЦЕПЦИИ УМНОГО ГОРОДА В РЕСПУБЛИКЕ КАЗАХСТАН

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Аннотация. Smart city – это современная концепция, подразумевающая комплекс инновационных мероприятий и программных решений, направленных на устойчивое, безопасное, социально-экономическое развитие города, создание высокотехнологичной рыночной экономики, эффективное использование всех видов ресурсов и создающих условия для удобного пребывания в городе, эффективного проживания и ведения бизнеса.

Ключевые слова: город, умный город, интеллектуальный город, городская среда, инновация.

