The implementation of smart government of Iraq and its impact on the transportation

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Abstract

This study target the understanding of what does mean the smart government and how we can use this system to improve better service in the transportation environment which lead the country to be one of the developing countries in the middle east, going same time to classify the problems in the transportation and how can put and develop strategies help and support the government to go forward and lead the country to the success in that area, all that will prove and develop the economy, education and other fields in Iraq. The road system in Iraq is in dire need of the smart transportation system, which has been applied in many countries for years, but in Iraq the government has been late in applying this type of technology, and it is a technology that needs a system similar to mobile technology in its creation and use in terms of infrastructure in addition to specialized units. The increase in the number of vehicles around the world prompted the developed countries to find scientific mechanisms to solve the congestion called the smart management of transport because the construction of new roads is excluded because it is very expensive.

Keywords: smart Government, smart cities, transportation. Intelligent transportation system.

1. Introduction

New concepts for urban planning have emerged that have become necessary for many countries in line with the needs and continuous changes in those cities. These concepts have been adopted by many governments, including in European, American and Asian countries. These concepts depend on the introduction of communication and information technology in the planning process through the formation of a database that includes all sectors of the city, where this data is relied upon to keep pace and control the continuous changes. This type of thinking emerged to overcome the old and traditional system in many countries, which requires long-term planning and does not respond to the rapid changes in our time. Working on the development of transportation and bringing it to the level of development in developed countries requires those countries to have an electronic government, which in turn leads to smart governments. There are many researchers who explained the concept of smart government and what its advantages are and basic elements that lead to success and efficiency in the application of the service to the final beneficiary, accepting and analyzing the feedback and working on studying it and benefiting from it in improving performance.The growing role of technologies in the functioning of urban systems is making governments rethink the role they must have in a knowledge-based society. This role has been referred to as "Smart governance" in prior research (1). The purpose of this paper to explain how we can clarify the impact on the transportation as last step of smart government steps to classify this country as one of the developing countries in the world.

1. Smart Government:

There are big different between the smart government and the electronic government, It is the natural development of the e-government model that we have experienced during the past decade, and at a time when e-government was generally seeking to endorse government public services on the Internet through web applications and electronic portals and formulate them in a way that usually reflected the life events of the citizen and the basket of business services (Life Events & Business Episodes) The smart government comes in order to complete what has been built and invest in it by getting closer to the citizen on the one hand and direct and simultaneous interaction with (data) spread in society and its economic, social and security components on the other hand.(2)

1.1. The benefits of smart government

The smart government has many benefits which is much known in the countries which they have this kind of government (3).

1. Increasing the productivity of employees in the country by working twenty-four hours.

2. Raising the efficiency of work in government sectors.

3. Reducing administrative errors as much as possible, which are often caused by the human element.

4. Strengthening cooperation between mixed government institutions and the private sector

Contribute to supporting the economy and development

5. Raising competitive capabilities in various fields of work.

6. Economic integration between the public and private sectors

7. Reducing operating expenses by saving time and effort on all parties dealing with the smart government

8. When facilities are shared between information and communication technology (smart government) and other facilities, this technology can be used to support facilities at a low cost instead of using a separate infrastructure, and this is what happens when using smart transportation(4).

9. Achieving citizens' satisfaction with the least effort and cost

1.2. Challenges to smart government in Iraq

1. The extent to which government agencies have completed electronic transformation processes, as many government organizations still do not have websites on the Internet.

2. Competencies: The extent of human resources' ability and willingness to manage the various activities of the smart government.

3. Supporting the political leadership for the transformation process, as most of the first-line leaders are still not aware of the role that the smart government plays in supporting the economy and development.

4. Infrastructure: (networks, servers, applications, contracts, automated methods, satellites) and the extent of its spread constitutes an obstacle to completing the establishment of the smart government.

5. Societal culture and the extent of the citizen's ability to deal and use smart technologies that the percentage of users of this technology is still weak.

6. The inability of the Ministry of Communications (telecom companies) to meet customers' requests for mobile phone delivery, which is the most important channel for communication via the Internet.

7. Electronic financial transactions are still in their infancy, as they are still stumbling, due to the many errors caused by the electronic device and the great delay in the work of electronic banks, as it does not exceed the use of the smart card.

8. The challenges of regulations, legislation and information security, which can be called legal and administrative challenges such as taxes and methods of protecting them and border crossings (5).

2. Methodology

2.1. Concepts

There are many steps (elements) to reach the final results in this government to be a Smart Government. Smart governance includes e-services and social media in order to enhance citizens' empowerment and involvement in public management and transparent decision-making processes leading to smart governance(6), before

all that should present these steps to help us to imagine the vision to any country want to implementation this strategy or we can call it a plan, these steps are:

A. Electronic government.
B. Cultured society.
C. Smart economic.
D. Smart environment.
E. Smart transportation.

Figure (1): present the elements of the smart government.
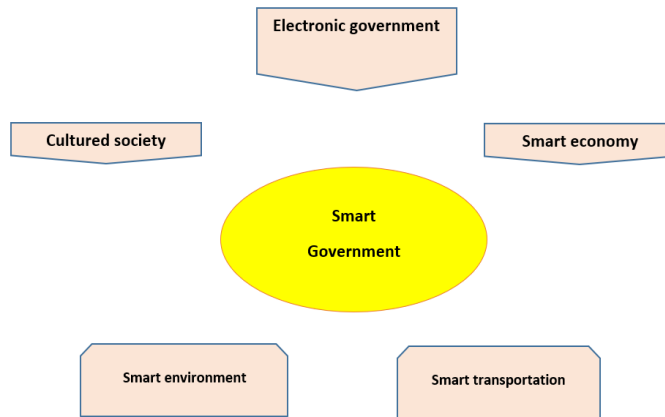
This figure (1) explain the elements of smart government, the following are include all of these concepts:

A.E-Government is the use of information and communication technologies (ICTs) to improve the activities of public sector organization (7), that means the government should connect through network system between the government itself and the sectors such as business, transport, education sectors in this country and figure (2) present the e-Government
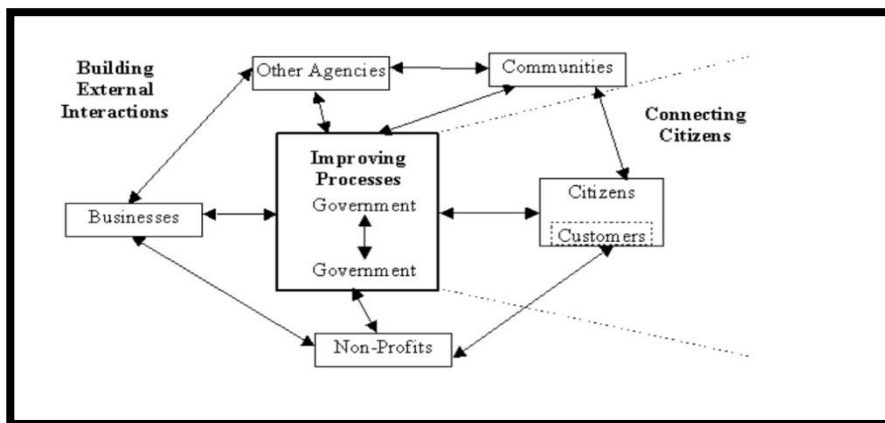

Fig. 2. present the e-Government
Source: https://driveschool.ro/chestionare-auto/chestionare-auto/categoria-b

Iraq needs to prepare development programmers to advance its socio-economic and environmental potential. Despite the large-scale technological development in countries around the world today and the benefit of such development programmers, Iraq's cities have much to do to achieve sustainable development (8). The other steps required in this government to be classify as smart government is a culture society

B. culture society: this mean the country should has very good educational environment provide high education system which help and support the people to develop themselves by study or work in these organizations because they will present as a feedback to educational system, The first is to note that our very models of cultural shape will have to alter, as configurations of people, place, and heritage lose all semblance of isomorphism. Recent work in anthropology has done much to free us of the shackles of highly localized, boundary-oriented, holistic, primordia list images of cultural form and substance (9). Societal culture is part of the accumulated culture inside the country and its only place is the behaviors and thoughts of individuals belonging to this country, nation or civilization, and it carries within it a lot of knowledge accumulation and solid maturity through generations and their continuous inheritance from parents to children and includes in its nature all negative and positive behaviors. However, there are ways on which the state can establish a coherent culture capable of facing many foreign or perverse interventions, and these methods are educational schools, social centers and cohabitation within mixed institutions of all types of society and it's resulted by factors(10):

1. Social experiences bring together and pass them on between generations.
2. Direct state intervention in building a specific culture.
3. The country works to consolidate a specific culture by setting and implementing a general policy towards this culture.
4. There are other means that build societal culture that vary from one state to another and from one society to another according to the social and legal nature of societies.

C. Smart Economy

Economic growth can only be qualitative or focused on issues of income, health and education (basic needs), in situations that relate to wellbeing or environmental compatibility. In these conditions, the development of the concept of eco-sustainable efficient distribution becomes crucial because the accomplishment of needs involves the production of goods, production interferes, inevitably with the marginal allocation and distribution generated by the market and / or the price dynamics, covered by the concept of "smart economy". The concept of "smart economy" brings together a number of features of the new economy in an innovative sustainable and eco-economic approach: high productivity economy, global economy growth, competition, economic progress, economic prosperity, innovation, sustainable jobs, and digital economy (11).

"Smart economy remains one of the key drivers of the smart city and one of the smart city indicators, because the city, characterized by high economic

competitiveness, is assigned to smart cities" (12), and there are other concept consider the Smart economy is a growing and sustainable economy (13).

D. Smart environment

Smart Environmental Solutions aims to build an integrated system of sensors that measure various environmental readings, such as pollution rates from carbon and toxic gases, levels of harmful radiation and water pollution.

Intelligent environmental solutions are able to measure and monitor the height of torrential rains, and sensors to monitor building infrastructure such as tunnels and bridges and the effect of vibrations on them. Measuring noise rates in addition to climate monitoring stations, environmental warnings and early warning stations. A number of projects target elderly and physically disabled people, for example with electronic "memory aids," reading aids, and navigation systems (14)

The benefits:

• Monitoring the environmental situation of the city.
• Provides alerts about the weather situation and generates automatic reports for each geographical location
• Increase the level of health of the population
• Providing information to be used in urban development plans

E. Smart (intelligent) transportation

Intelligent transport is one of the most important pillars of the smart government. Intelligent transport systems are defined by using modern technologies for communication and information technologies to confront many challenges in various fields of transport such as improving safety, utilization, and productivity, mobilization, and media levels.

It also employs intelligent transportation systems to obtain information on the performance of transportation facilities, transportation demand, weather and environmental conditions, and provide that information and disseminate it for circulation between institutions and travelers.

Intelligent transport systems contribute to rationalizing the use of infrastructure and providing more capacity and higher efficiency without resorting to the establishment of new facilities.

The main goals of intelligent transportation systems:

• Improving the current and future economic productivity of individuals, institutions and the economy in general.
• Energy saving and environmental protection.
• improving the level of traffic safety.
• Improving travel standards and the well-being of travelers.
• Increasing the operational efficiency of the transmission system and increasing its capacity.

The main objectives of intelligent transportation:

Each country has objectives when they decide to make this kind of system these objectives are (15):

1. Increasing the operational efficiency of the transmission system and increasing its capacity.
2. Increase speeds and reduce stops.
3. Reducing delays at transfer points between means of transportation.
4. Increasing occupancy for private vehicles and increasing the use of public transport.
5. Raising the level of road network management by adopting the effectiveness of the road network's absorptive capacity.
6. Improving the level of movement and comfort for commuters.
7. Reduce the trip, increase its reliability and reduce the cost.
8. Increasing the level of personal safety and security.
9. Improving the level of traffic safety.
10. Reducing the number, severity and cost of accidents. Reducing vehicle theft.
11. Reducing energy consumption and reducing environmental impacts, as emissions and consumption of wastes are reduced.
12. Reducing noise pollution.
13. Coordination and integration of network operations, management and investments.
14. Improving adaptation to changes in system performance requirements and technologies.
15. Intelligent transportation systems help to provide greater capacity and efficiency without total dependence on the establishment of new transportation facilities, and studies indicate that the combination of smart systems and new constructions is able to accommodate future traffic growth by providing a capacity of 35% of what needs to be equipped to meet the same traffic demand through New construction road only (16).

3. Conclusions

The rapid and radical changes in the world and changes in transportation systems are noticeable. In the coming years, it is expected that the country's problems will increase rapidly when looking at the increase in population and economic activities, and the lack of transportation in our country differs from what it is in Western countries. Therefore, the needs and problems must be identified and possible solutions identified. Systems for measuring, collecting data, and determining statistics should be established. A smart system must be established in various sectors, especially in the transportation sector, to urge the country to move to the smart transportation system, which is an integral part of the smart government systems. Advanced programs should be created and employees trained on them. Dynamic solutions should be offered according to the changing conditions. Institutional cooperation should be established. Applications in other cities should be examined, data should be exchanged and their experience and mistakes made use of. We should not forget that the priority is the safety of people, so policies must be

determined accordingly, and work to benefit from the experience of developed countries in this system, and these applications must be open to development and modernization, in order to provide them and the required services more efficiently, there is a need for serious planning and applicable standards.

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