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Management via Mobile is an Effective Indicator for Developing Sustainable Development Goals (SDGs): Iraq as a Case Study

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***Abstract*—** The invention of the mobile phone was a long time ago and in the 1970s and has gone through many stages and developments to become as it is now in our hands and it have the ability to manage all business works. Now we are talking about the fourth generation mobile, which is the smart mobile phone that have the Internet access of data. These devices including cellular devices, laptops tablets, small computers, these devices have the ability to access, operate, process, exchange of data anytime and anywhere. This research aims to study the objectives of sustainable development and the effectiveness of electronic management by mobile in achieving these objectives in the best way. The objectives of sustainable development were reviewed, targeted, programmed and achieved in 2030. This research concentrated on both Internet and mobile subscribers and how to achieve both benefits for electronic management. The mobile usage are increased at last two years to reach about 8.5 Billions subscribers. In addition the mobile usage in Iraq reach its population to be about 37 Millions. The integration of business organizations that have big data with ICT technologies has led to positive and effective results in business. The mobile, now a leader in technology, has evolved significantly to make its applications impact significantly on all areas of business, including management.

Index Terms— SDGs, Management via Mobile, Sustainable Development, Future Management.

I. FUNDAMENTAL CONCEPTS

There must be a number of concepts and terms that have a fundamental role in the entry into this subject.

International Telecommunication Union (ITU): An intergovernmental organization through which public and private organizations develop telecommunications [1]. The International Telecommunication Union was established in 1865 and became a United Nations agency in 1947 [2]. It is responsible for the adoption of international treaties, regulations and standards governing communications [3]. The standard functions were standardized by totals within the ITU called ITU-T [1].

Information and Communications Technology (ICT): There are many clarifications to this term and there is no uniform definition of the term and refers to technologies that provide access to information through telecommunications [4]. In general includes all that includes the infrastructure of the components of software and material and related matters in support of modern computing [5].

It encompasses all devices, network components, applications and systems that bring together people and organizations to work and interact in the digital world [6,7].

Sustainable Development: The United Nations goals of sustainable development and associated goals will drive action until 2030 in areas of critical importance to humanity and the planet [8,9]. These goals were adopted by world leaders on September 1, 2015 and include all that would protect humanity and planet Land for future generations [10,11].

Big Data: A set of data sets that are so large and complex that it is difficult to process with only one database management tool or traditional data processing applications [12]. Challenges include capture, duration, storage, research, participation, transport, analysis and visualization [13]. The trend to large data sets is due to the additional information derived from the analysis of one large set of relevant data, compared to smaller separate groups with the same total data volume, allowing links to reveal pivotal trade trends, quality of search, linking of legal citations, Anti-crime and determine the conditions of real-time data flow [14,15].

Mobile Computing Device (MCD): is any device that is created using mobile components, such as mobile hardware and software [19]. Mobile computing devices are portable devices capable of operating, executing and providing services and applications like a typical computing device [20,21].

II. MOBILE SUBSCRIBERS

There is no device in the world spread widely mobile spread, where there are two dimensions of the number of subscribers: The first depends on the actual number of subscribers and the second represents the number of subscribers per hundred people in the community and the second measurement is more accurate because it gives the density of subscribers relative to the population [22,23].

Figure 1 represents the total number of Internet subscribers in 2017 distributed over continents, in Africa, in Asia 388 Millions, in Europe 1938 Millions, in Latina America 659 Millions, in Middle East 147 Millions, in North America 320 Millions and the total world 3,885 Millions [24].

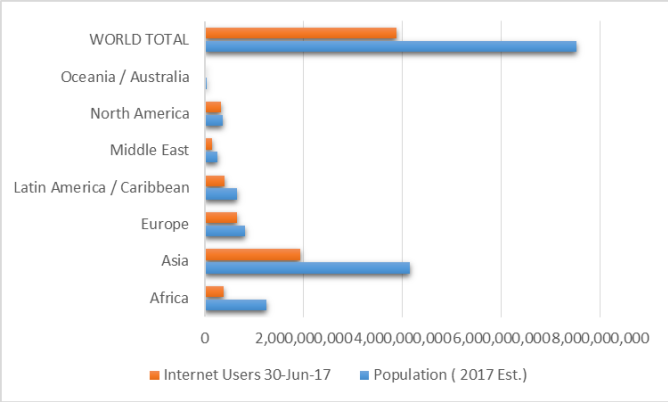

Figure 1 Internet Subscription 2017

Figure 2 represents the total number of mobile subscribers in 2017 distributed over continents, plus China and India represented separately, as the two countries represent a large population [24]. From this figure it is clear that number of subscribers are so high in Africa, Asia Pacific, India and China. These continents have about 380, 700, 520, 685, 425, 1,01, 1,56, 1,39 and 1,18 Millions of mobile subscribers. In total there are about 8.5 Billions of mobile subscribers over the world and this number means that there are more than the world population. In addition trillions of dollars are

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spend on mobile (hardware and software), so it attracts investment and continuous development [25].

Comparing mobile subscribers and Internet subscribers, it is clear that number of mobile subscribers is more than number of Internet subscribers and this increment in mobile subscribers reflects the continue increasing of mobile use [26].

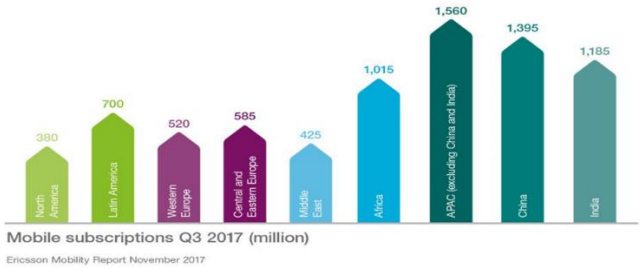

Figure 2 Mobile Subscription 2017

Figure 3 represents the total number of mobile subscribers in 2017 distributed in Iraq compared with the population [27]. The mobile structure started in Iraq in 2003 and number of mobile subscribers started to appear at 2004 with small value. The mobile subscribers increasing rapidly up to near equality of population in 2013 and at 2017 the mobile subscribers are 35 Millions [27]. This means there a big acceptance of using mobile and applied different types of mobile applications [27].

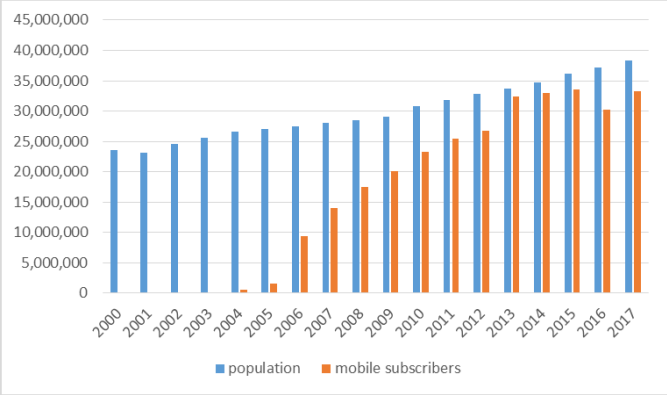

Figure 3 Mobile Subscribers in Iraq

As a simple survey we found that the young and middle class in the age most often carry two phones or subscriptions and all these phones are the phones of the generation of developed, whether the third or the fourth generations. That means at these advanced mobile technology you can do you process in a good and efficient way.

III. Sustainable Development Goals (SDGs)

On fist of January 2016, the 17 sustainable development goals of the 2030 Sustainable Development Plan, adopted by world leaders in September 2015, officially enter into a historic international summit [28]. Over the next 15 years, bearing in mind these new universally applicable goals, countries will work to mobilize efforts to eradicate poverty in all its forms, combat inequality and address climate change, while ensuring that all are included [29].

Although sustainable development objectives are not legally binding, governments are expected to take ownership and develop national frameworks to achieve them [30]. It is therefore States that

bear the primary responsibility for following and reviewing progress, which requires the collection of timely, quality and timely data so that follow-up and review at the regional level are based on analyzes at the national level, contributing to global follow-up and review [31].

Globally, the 17 sustainable development objectives and 169 targets will be monitored through the use of a set of global indicators adopted by the Statistical Commission, and there is Arabic language interface of these goals [32,33]. These sustainable development goals are shown in figure 4:

- Goal 1 (Poverty): Eradicate poverty in all its forms everywhere.
- Goal 2 (Hunger and Food Security): eradicate hunger, provide improved food security and nutrition, and promote sustainable agriculture.
- Goal 3 (Health): Ensure that all people enjoy health and well-being for all ages.
- Goal 4 (Education): To ensure a fair and inclusive education for all and to promote lifelong learning opportunities for all.
- Goal 5 (Gender equality): Achieving gender equality and the empowerment of all women and girls.
- Goal 6 (Water and Sanitation): Ensuring the availability of water and sanitation services for all.
- Goal 7 (Modern Energy): Ensuring affordable access by all to modern, reliable and sustainable energy services.
- Goal 8 (Economic Growth): promoting sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.
- Goal 9 (Resilient Infrastructure): Stable infrastructure, stimulating inclusive and sustainable industrialization, and encouraging innovation.
- Goal 10 (Reduce Inequality): reduce inequality within and between countries.
- Goal 11 (Cities): Cities and human settlements are inclusive, safe, resilient and sustainable.
- Goal 12 (Sustainable Consumption and Production Patterns): Ensure sustainable consumption and production patterns.
- Goal 13 (Climate Change): Take urgent action to address climate change and its impacts.
- Goal 14 (Oceans): Conservation, sustainable use of oceans, seas and marine resources for sustainable development.
- Goal 15 (Biodiversity and Desertification): protection, restoration and sustainable use of terrestrial ecosystems, sustainable forest management, combating desertification, stopping land degradation and reversing, and halting the loss of biodiversity.
- Goal 16 (Peace and Justice): Building societies of justice and democracy in order to achieve sustainable development.
- Goal 17 (Partnerships): Enhance means of implementation and revitalize the Global Partnership for Sustainable Development.

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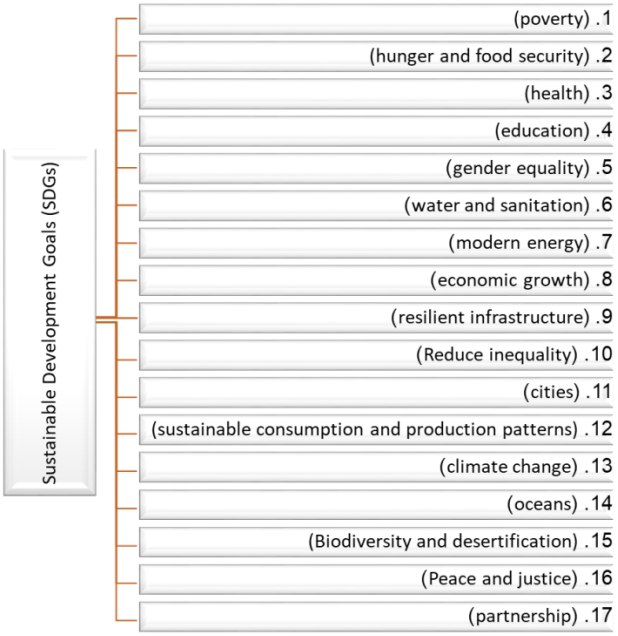

Figure 4 sustainable development goals

IV. METHODOLOGY

A. Powerful Management

The compatibility of the above objectives and their sustainability in an easy flow and the possibility of applying them in the correct and efficient manner requires the following (figure 5):

- To promote and access regional and international cooperation among all countries of the world and triangular cooperation on science, technology and innovation and to promote knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, particularly at the United Nations level, and through a global mechanism for technology facilitation. This requires efficient and effective management.
- Promote the development, transfer, diffusion and diffusion of environmentally sound technologies in developing countries on favorable terms, including concessional and preferential terms, as agreed. This requires efficient and effective management.
- Fully activate the Technology Bank and the Science, Technology and Innovation Capacity Building Mechanism for the Least Developed Countries by 2017 and promote the use of enabling technologies, particularly information and communication technologies. This requires efficient and effective management.

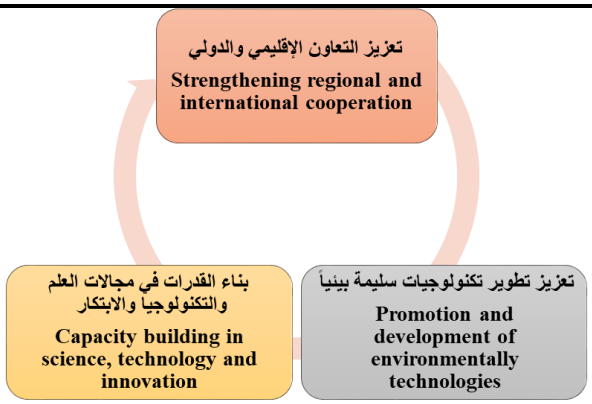

Figure 5 correct and efficient manner to achieve goals

Here we have developed a common factor to achieve all goals efficiently and effectively and this factor is efficient and effective management. This management comes through combining innovation and advanced technology to achieve a high powerful management. The administration that we mean now is not the traditional administration, but the management through which it is possible to obtain any information from anywhere and anytime, and this is achieved by smart mobile (figure 6).

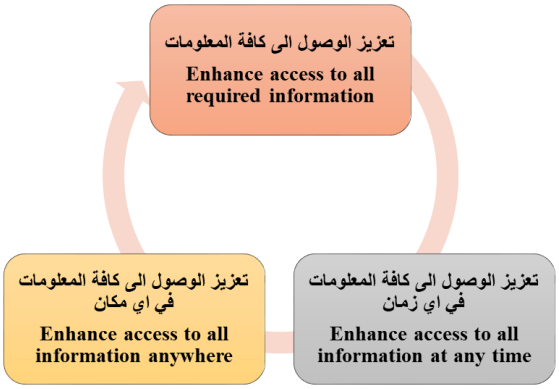

Figure 6 smart mobile aspects

B. Functions via Mobile Management

The tasks achieved by mobile include the following (figure 7):

- Mobile Device Management (MDM) is like adding an additional layer of security and providing a way to monitor device activity. MDM provides specific features of the device platform, such as device encryption, platform-specific policies and SD card encryption. Geolocation, connectivity profiles (VPN, Wi-Fi, and Bluetooth) and many other features are part of MDM Suite.
- Mobile Application Management (MAM) is achieved by encapsulating the application, that is, the injection of arbitrary encryption code in the source of the mobile application. This is necessary for commercial applications or applications developed internally for commercial use. In addition, the white list / blacklist of the application can be made. Features such as the application catalog allow the administrator to send applications remotely to the devices for instantaneous installation, send remote updates and remove applications remotely.
- Mobile Content Management (MCM) is a solution that allows enterprise administrators to securely transfer business content to mobile devices used by employees for commercial use. It allows employees to store data securely on their mobile devices by using authentication and access

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to protected files and documents using copy and paste restriction policies. MCM provides options to distribute, replace and delete push-based files.

- Mobile Email Management (MEM) ensures containerization of your business email using advanced free / proprietary encryption algorithms. MEM guarantees that all emails remain inside the secure container, so hackers get encrypted data even if they try to compromise device data by using a USB cable in a system. Important restrictions can be applied to the clipboard, attachments, and trusted domains. Nothing can leave the secure container when the clipboard is deactivated. Even attachments are loaded and saved in the secure container. To see the attachments, there is a secure document reader and a secure document editor available in MDM solutions. Adding trusted domains ensures that the company's email data is not spread to malicious / suspicious domains.

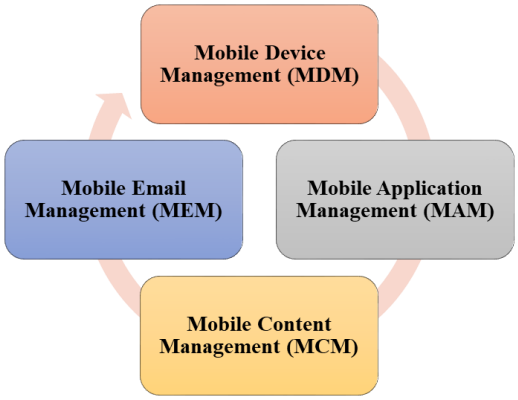

Figure 7 functions via mobile management

C. Enterprise Mobility Management

Enterprise mobility management (EMM) is software that allows organizations to securely enable employee use of mobile devices and applications. In addition to addressing security concerns, EMM software also helps employees be more productive, because IT departments can provide them with the applications and data they need to perform work-related tasks on mobile devices.

EMM typically involves some combination of MDM, mobile application management (MAM), mobile content management (MCM) and identity and access management. These four technologies started off as individual products, but they are increasingly available through larger EMM software suites.

MDM is the foundation of any enterprise mobility suite as shown in figure (8). It relies on the combination of an agent app, which is installed on an endpoint device, and server software running in the corporate data center or in the cloud. Administrators use the MDM server's management console to set policies and configure settings, and the agent enforces these policies and configures these settings by integrating with application program interface (API) built into mobile operating systems that allows two software programs to communicate with each other.

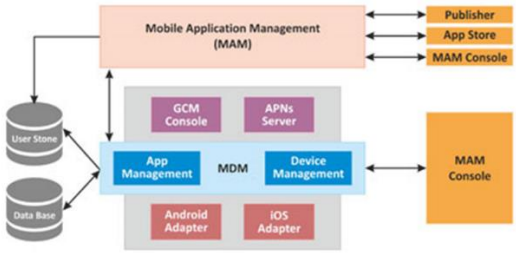

Figure (8) Mobile device management

D. Electronic Management

Electronic management is a management strategy in the information age aimed at the best recruitment of information resources and in a modern electronic framework under the considerations of proper operation of human resources, material and electronic, to achieve efficiency in efforts and spending funds to achieve the goals targeted by the organization concerned.

The idea of electronic management dates back to the 1970s. The emergence and circulation of the concept of electronic management coincided with the expansion of the Internet, which allowed those interested to manage certain activities and perform certain practices through and through the World Wide Web. The success and evolution of electronic management across the world has varied. The best experiences in electronic management began in the United States, then in the European countries, while the Arab countries have been the share of practice and success is still on the thresholds first compared to Western countries. A distinctive feature of electronic management is the following:

- The decline of paper archiving systems and their replacement with electronic archiving.
- Facilitate the extension of management control and follow-up to the work on the units and administrative departments.
- Accelerate the operations of the industry and make administrative and financial decisions, marketing, productivity and research.

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- Dealing with a larger segment of the public at the same time.

E. Electronic Management

What is the human feeling if the internet stops or the phone is disrupted? In that case, he is upset and cannot complete his work correctly. Management via mobile can be characterized by the following:

- Smartphone has achieved very important features and applications for the management.
- Smartphone has achieved continuity of business regardless of time and place (anything, anytime and anywhere) (figure 9).
- Mobile management achieving creativity and innovation significantly in the business.
- Reduce the waste that occurs as a result of a large increase in official holidays that reach the limit affects the economy, so the management by mobile helps to continue business even during the holidays.
- Reduces the time needed to complete business and transactions in a very large and efficient manner.
- Lead the business to be a leader in its business and carry a sustainable competitive advantage.

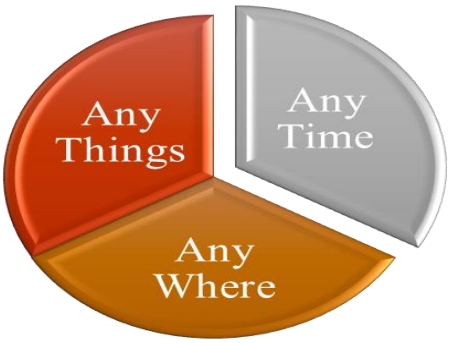

Figure 9 Access of data via mobile

V. CONCLUSIONS

It can be said here that we must believe that every time have his tools, techniques and managers. Today's tools and techniques are no longer the tools and techniques of yesterday. As for the managers, traditional management is no longer useful in the era of modern knowledge and technology, and the age of abundant information and its multiple uses. In order for the management to achieve efficiency and success and to ensure its survival and continuity, it is required to keep abreast of scientific and technological development. The process of transition to the electronic environment is a process that began decades ago, and since the start of companies and banks electronic documentation and electronic archiving. All of this began to grow slowly and gradually until the spread of Internet usage, and developed communications systems to cover the world. As it became necessary for these companies to race with time to keep pace with development, which achieved significant advantages for organizations in general, including companies and institutions of different types.

These technologies have not stopped developing. The whole society looks at the mobile and the applications carried by the smart generation as it is expected to innovate massively in the future.

You can do everything from anywhere, anytime, so it is now driving investments and looking forward and very quickly. Mobile management has a large share of this technology. You can perform all your duties as a manager, take the train to travel somewhere else, manage your meetings and discuss your ideas from anywhere in the world. This development has been introduced in many applications of international institutions, but in Arab world, including Iraq remained in the beginnings, although the number of mobile users has become in very large numbers close to the number of population.

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