The Impact of Internet of Things (IoT) in Business

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Abstract
The Internet of Things (IoT) is a technology in which all method of devices and things are connected. It is facilitating digital revolution in several areas of life. It is also a precursor of the assurance that man will before long live in highly efficient and rewarding smart environment. The IoT is a perception that not simply has the ability to impact how we live our lives but as well, how we work and carry out our businesses. This paper, however, discusses Internet of Things (IoT) technology and it impact in businesses. It also made some recommendations such the need for business to be ready and adapt to modifications brought about by this technology and for businesses and industries to embed this technology in their business in order to improve business models, higher productivity, efficiency and reduced cost.

Keywords: Business, Network, Internet, Technology, Things

Introduction
The contemporary technology is fast transforming our everyday life and how we conduct our business is not an exception. Our businesses have been impacted greatly by modern technologies and Internet of Things (IoT) is one of them. The Internet of Things (IoT) is fast gaining ground as an everyday topic of discussion.

The Internet of Things (IoT) is a structure or system of interconnected computing devices and mechanical/digital machines or devices, things, animals or persons, which are given unique identifiers to the carrier and the ability to broadcast data over a network without human-to-human or human-to-computer interaction (Rouse, 2016).

Internet of things (IOT) is a network of visual or real things. The internet has grown into a network of device of all forms and sizes, vehicles, smart phones, home appliances, toys, cameras, medical and industrial devices, animals, people, buildings, all connected, interacting and sharing information based on established procedures (Ovidiu and Peter, 2013), (Ovidiu and Peter, 2014). The Internet of Things (IoT) is a theory and a model that considers pervasive

presence in the environment of a variety of things/objects that through wireless and wired connections and unique addressing schemes are able to interact with each other and cooperate with other things/objects to create new applications/services and reach common goals. In this context the research and development challenges to create a smart world are enormous. A world where the real, digital and the virtual are converging to create smart environments that make energy, transport, cities and many other areas more intelligent. (Ovidiu and Peter, 2013), (Ovidiu and Peter, 2014)

Broadly speaking, the term IoT comprise the whole lot that are linked to the internet. Though, it is increasingly employ to illustrate things that interact with each other (Matt, 2018). The Internet of Things, or IoT, is concerned with billions of substantial/physical devices in the world that are now connected to the internet, collects and share data. Internet of Things (IoT) is especially used for devices that would not usually be likely to have an internet connection, which is able to communicate with the network in parallel with human involvement and actions. A smartwatch or a fitness band can be deemed as an IoT device while a PC and a smartphone, are not normally seen as IoT devices due to reason given above normally regarded as IoT devices but a (Steve, 2018). The Internet of Things (IoT) is the connection of objects such as appliances, cars or homes, via Internet. Items we use every day can be integrated with sensors, connected to the internet and provide and share data.

All the interconnected devices work collectively and constantly interchange data and information. To a certain extent, the devices will be both the source of data and the transmitters of data. The 5G on implementation will be the backbone of Internet of Things (PICSMktg, 2016).

Fig 1: Diagram showing Internet of Things (IoT). Source: https://www.shutterstock.com/image-vector/internet-things-devices-connectivity-concepts-on-519384478?src=dCd69ggtDfcilZuEssv9VQ-1-2

Characteristics of Internet of Things (IoT)

According to Ovidiu and Peter (2014), the basic characteristics of the IoT include the following:

- ➢ **Interconnectivity:** With IoT, everything can be interconnected and connected to the internet.
- ➢ **Things-related services:** The IoT is able to offer thing-related services in the limitation of things, like privacy protection and semantic consistency amid tangible things and their related virtual things. To present thing-related services within the limitations of things, the technologies in physical world and information world will alter.
- ➢ **Heterogeneity:** The devices present in the IoT are varied based on diverse hardware networks and platforms. They can interrelate with other devices or service platforms via different networks.
- ➢ **Dynamic changes:** The devices change dynamically in state, examples include; sleeping and waking up, connected and/or disconnected in addition to the framework of devices which include location and speed. Besides, the number of devices can alter dynamically.
- ➢ **Enormous scale:** The number of devices that is required to be managed and that interact with each one other will be at least an order of scale larger than the devices connected to the existing Internet.
- ➢ **Safety:** Safety as a benefit of the IoT is also a feature of the IoT. Safety is very important. It includes the safety of the user's personal data and of physical well-being. Providing safety for the endpoints, the networks, and the data moving across all of it indicates creating a security pattern that will stand.
- ➢ **Connectivity**: Connectivity provides for network accessibility and compatibility. Getting on a network is accessibility while compatibility offers the common capability to utilize and generate data.

Internet of Things (IoT) and Business

Internet of Things (IoT) is greatly impacting on today's businesses and business models and activities. It is rapidly changing how we do our business. According to Jayson (2017), Anna (2017) and Munira (2017), the various impacts of Internet of Things (IoT) in business include:

- ✓ **Constant access to information:** Many organizations presently depend on the barcode tracking systems for use of inventory management. Once all the products, equipment, and devices are however, incorporated into the same network, then, inventory management and tracking becomes incredibly impulsive. Information and figures that are updated at every second will be at organization's disposal and also, the organizations will have the ability to use those information and figures at any given time.
- ✓ **More data at companies/organizations disposal:** Many companies and organizations are conscious of the fact that data, for which actions are to be taken, is their most valuable asset. Since all devices are to be interconnected when the Internet of Things eventually takes over, it will definitely unlock the gates to data such as detailed metrics and detailed business operations. Companies and organizations will have information about their customers and their conducts, their employees' attitude to work, and other basics elements that will aid them improve their general business processes. The IoT will also change how large business organizations and small startups work starting with making everything faster to increasing productivity.
- ✓ **Smarter products will be developed:** Consumers were initially happy when their cellphones could effectively make calls and enable them to interact with people far away from them. Presently, users anticipate a lot extra from the same device they hold

in their pocket. At first glance, it might seem odd to have a smart tennis racket or an internet-enabled oven, but these are simply the first expeditions into the world of the Internet of Things. Most of these products will become immediate booms while some others may not boom. However, business organizations will have the prospect to produce smarter and products that are more connected.

✓ **Everything will be faster:** With the Internet of Things in position, everything will become faster, as devices that interconnected can consist of everything from cookers, coffee maker, traffic lights and vehicles to public transportation. When these happen, the organization will have shorter travel times for both the organization and the employees. This means faster product deliveries and an imperative impact on the organization. This is actually a luxury on one aspect because the organization gets what they need faster and customers will anticipate and want more efficient and faster service.

✓ **Energy and production will be cheaper:** With respect to smart grid coordination and management, energy will be cheaper. Also, business organization's machines will able to discover new, smoother and more efficient ways to operate. The maintenance routines will also be easier. The business organization will simply spend less money for production of inventory, and cost of production will definitely reduce.

✓ **Management of devices could become terribly complex:** There are quite a few possible downsides to integration of IoT. The general device management is one of the hardest to adapt to. It could be difficult to keep all the integrated devices updated with the most recent software and also connected to the network. This will be both costly and intense with respect to information technology (IT) requirements. Nevertheless, the benefits of higher productivity and reduced cost of labour will balance this downside out.

✓ **Increase in Productivity:** As a common rule, the whole business will be capable to function more effectively, with lesser operating cost. The cost involved in devices upgrade may be abrupt initially, but in the end, there will be paying less for staff, production of more products. This is as a result of the solutions to the challenges the new technologies will provide.

✓ **Disappearance or radical changes of some industries:** A lot of industries may basically alter whilst IoT becomes conventional. Some business organizations or industries might even become outdated or may disappear completely. A typical example is that the delivery and logistics industry could imaginably become almost entirely automated. Some others will begin to be in top demand, while still others will become more efficient, allow for higher productivity and open the door for new entrepreneurs.

✓ **Tracking and Management of Inventory:** The Internet of Things (IoT) will possibly transform how companies and industries track and manage their inventory. The integration of IoT to business in the near future will enable smart devices to be able to keep tabs on inventory modifications entirely automatically. This will open the workers/staff for more essential and cognitively challenging tasks. This is really about the "smart office" and the "smart warehouse" and not just the "smart home" anymore.

✓ **Remote Work:** The Internet of Things (IoT) could usher in a world of new potentials for remote work if the business does not deal directly with any physical inventory. With several devices all linked into the same network, the employees working remotely will be better connected than has ever been, and also complete new types of tasks from remote locations by connecting to devices in the office or factory floor. Remote workers will likely to be happier and more efficient, thus, the array can also facilitate to better the end result.

- ✓ **Speed and Accessibility:** As consumers and clients will have access to novel kinds of making inquiries and purchasing, the trade sequence will expectedly reduce in duration. Consumers and clients will be able to locate and place order for precisely the product they are searching for and will demand the delivery of the product in less time. This can be done with some verbal phrases. This is achievable because all the technological development is inclined to stress immediate satisfaction. Consumers will be able to be served faster and more efficiently since they possess the similar improved technology.
- ✓ **Efficiency and Productivity:** Besides speed, more will be to be done in fewer time frames. As well as immediate satisfaction, technological growth as well is likely to support productivity and effectiveness. The business and its workers are likely to be allowed to complete large-scale tasks quicker and with higher accuracy, plus data analysis and management. This is achievable with the most up-to-date and greatest IoT advancements.
- ✓ **New Consumer Needs:** Consumers and end-users who get access to and knowledgeable with these latest types of devices will have new requirement and wants. This is with respect to business expansion. The consumers will want things they are aware they needed before and will anticipate more in every new purchase or acquisition. Smart devices will definitely become the latest standard for gadgets, appliances, and perhaps even objects such as furniture. With IoT, Consumers will also require further integration, extra efficient tools, and accessories that make the new "smart" office and home-enabled lives easier and highly efficient.
- ✓ **Need for new staff:** There is going to be the need to have some new set of staff. These new set of staff will be IoT technology experts who will make it successful in integrating the devices into the existing procedures. Data analysts will also be required in order to make the use of data.

Conclusion and Recommendation

The internet of things (IoT) has the ability to alter how we live and work. It depicts the subsequent development of the computing revolution. It will witness the integration of information and communication technologies (ICT) in machines at workplaces, offices, home and across a broad collection of industrial processes. The effect of this integration will be a thorough streamlining and reorganization of industries and business models enabled by enormous flows of data thus, offering new understanding into the way the artificial and natural worlds work. There will also be an essential slope in the eyes via which the world is viewed. The Internet of Things (IoT) and business investigates the business forms and models rising from the Internet of Things (IoT). It also looks at the challenges and the prospects it offers to businesses throughout the world. The Internet of Things (IoT) technology integration into businesses will greatly impact on the business world and its environment and the wider society. It is therefore recommended that:

- ➢ Businesses will have to be set to acclimatize to those modifications of IoT if they intend to stay ahead of their rivalry.
- ➢ Businesses and Industries should endeavour to embed IoT devices in their businesses, offices, and workplace. This will surely ensure a change for improved business module and procedure.
- ➢ In order to ensure higher productivity, efficiency, reduced production cost and consumer satisfaction, they must key into this technology. This will enable the creation of smart offices, smart businesses and smart workplaces.

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