Recent Developments in Engineering and Technology

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Abstract

Advancement of Science and Technology has affected the world in the most positive manner and is still changing as time passes on. We have got a simple Engineering Device called "Fitness Band" that looks like a Digital Smart Watch which keeps track of how many steps we have taken in this context.

Keywords: Fitness, Technology

Introduction

As we all have seen and witnessed how the advancement of Science and Technology has affected the world in the most positive manner and is still changing with the passage of time. For the purpose of check up of Blood, Sugar, Calories even heart health, we have got a simple Engineering Device Called "Fitness Band" that looks like a Digital Smart Watch that keeps track of how many steps we have taken, how much calories we possess, what's the rate of our Heart beat per second and we have also Diabetes Checkup Devices that give us result on our diabetic level within seconds with just a pinch of blood. Compared to large 50 feet computer devices using up lot of space and emitting heat in the first generation, we have now Computers at home to use it at ease. Further, with more up gradation by modern technology, we have got Portable Computers called Laptops which we can carry everywhere for our work, education and entertainment purposes. Moreover, with the latest Advancement of Engineering and Technology nowadays 80% of the population has Smart Phones that they can carry in their pockets or pouch and use it on the palm of their hands and just a click will provide access to anything on the World Wide Web.

Literary Review

We have seen how the Development in Engineering and Technology has revolutionized our entire life. Let us now discuss about the impact on us.

Security

If we talk about security with regards to safekeeping of public and private funds and belongings including even home security, we can say that both Engineering and Technology has played a big part by making Security Appliances like Password Protected lockers, Biometric Safe boxes and lockers even Retinal Scan Display used for identification of major authority persons like the

President on controlling the Nuclear Missiles and also for Big businessmen to keep their wealth in their own safe hands as both Biometric scan and Retinal Scan need the physical embodiment of the actual person. The Security advancement has also helped overseas bank and domestic banks on keeping the public funds and gold in a secure position where no one can put a finger to misplace it.
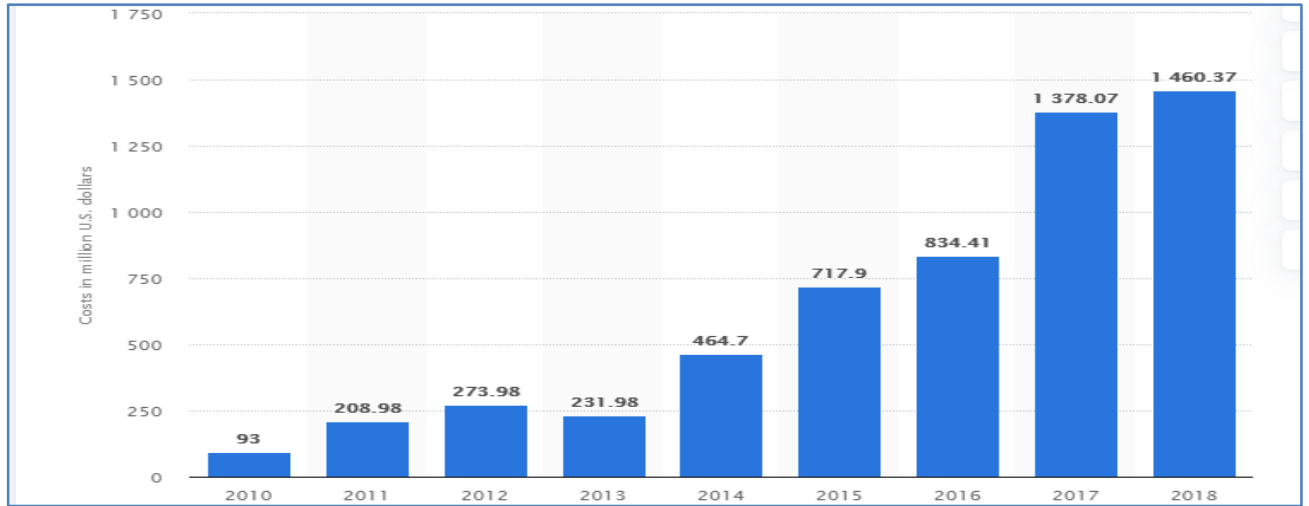
Transportation

As the economy rises from Under-developed to Developed, the demand for cars as a means of going to work and for long distance travel just keeps rising as we have seen that 79 million automotive has been produced on 2019 on an average **[I.Wagner Statistica, Dec 19, 2019]** as a result of what the Engineering and Technology field has to develop a measure to implement the necessary addition to provide more amenities. By introducing Bullet trains as we have seen in Japan and China, the use of Vehicle has been lowered and as a result the Pollution level in Japan has gone down. The Introduction of Solar Powered Cars that run solely on Solar Energy and Electrical Buses in Brazil and India have proved far more effective compared fuel driven vehicles.
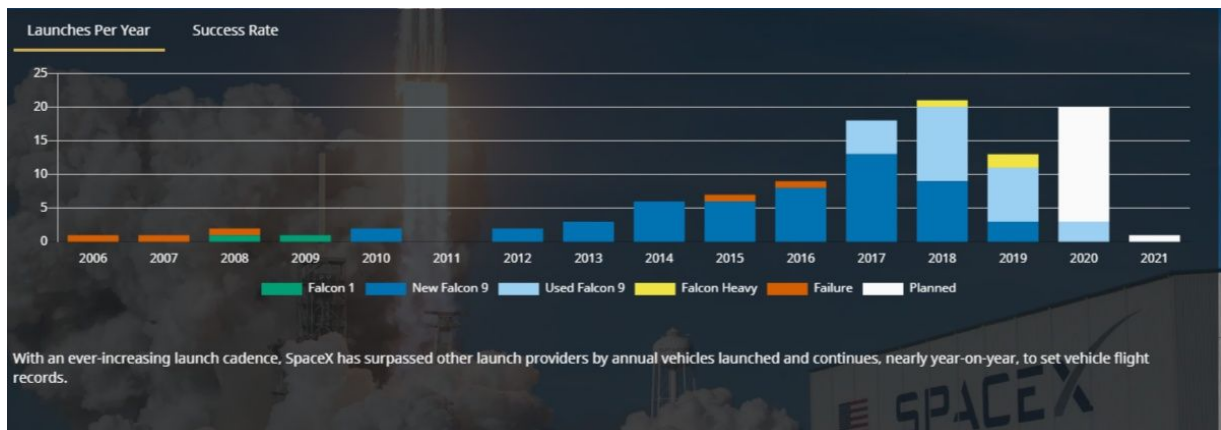
Space Age Generation

We all know how most of the Engineering and Technology is used in creating vast amount of Satellites and Drones for Space Travel and Planet Exploration. Use of those Highly Advanced models needs a high advanced Technological Devices which are operated on a large area as per the directions of 'Control Tower' comprising scientists and engineers. On 4th October 1957, Russia launched its very first Satellite Sputnik 1 and ever since that, Russia has more than 1500 Satellites in Space orbiting around Earth and different planets whereas USA has 2034, India has 98, Japan has 182 and China has 392 Satellites in Space **[World Economic Forum, March 9,2019]**. As a result of this Development in Engineering and Technology we as well as the Scientists can study more about the space, the stars, the planets as well as the entire Cosmos. This has provided access to the GPS through our phone and it also helps the Traffic Control Room to monitor the Traffic Management with the help of Satellites.

Data

[*Success of <u>Tesla</u> in the past 8 years of their Research & Development Field on Engineering]*
- [I. Wagner Statistica, 23 Jan, 2020]

[Success of <u>SpaceX</u> in the field of Technological and Engineering of Rockets and Satellites]
- [Official SpaceX Data Structure, Jan 28, 2020]

From the Above Data Set we can clearly observe that due to the recent development of Engineering and Technology, Tesla with their release of Model S, Model X and Model 5 of tesla solar Powered cars, their sale went to $1460.37 million on 2018 as compared to $93million on 2010 when Engineering and Technology was not much developed. From the second data set, we can also observe the recent enrichment of Engineering and Technology, The Scientist and Engineers have successfully launched more than 20 satellites in 2018 whereas they launched only 13 in 2019 due to Economic Stagnation but recovered by launching 20 satellites due to the recent development on Nanites and Rocket Fuel from JPL (Jet Propulsion Laboratory).

Results with Sample

Communication

Since the early age in the Renaissance, the development of communication has played a big part in today's world as most of the processes in Education and Transport requires Modern Day Communication. By the Development of Online Education, people have been getting the right to education for the ones who are in a distant land. If anyone desires a Luxury Comfortable travel around the world to avoid Jetlag, Modern Day Engineering combined with Architect has made 'First Class' seating accommodation where we can feel like we are at home while we are flying at a high Altitude.

[Qatar Airways First Class, Source: Qatar Airlines, Hamad International Airport]

Defense

With the Bombing of Hiroshima and Nagasaki where Airway attacks had nothing to counter with, it was a problem for the military to track down bombs dropping down from the sky. With the Development of 'Anti-Tank Missiles', the Military on the ground can use the mechanism to automatically destroy the bombs dropping from the skies using RADAR and Tracker. With the latest Development in Military Technology like 'Augmented Reality Headsets' the military has improved their Combat Ability and their Surrounding Presence.

With the Latest Development of Drones, Spy Cams, Automatic Chain gun, Unmanned Tanks in the field of Engineering and Technology, the military can easily locate their enemies and mark their accurate position to the position they want to go and even do a front line attack without losing any lives.

[Augmented Reality Headset, <u>Source:</u> Gen. Robert B, Neller, Commandment of Marine Corps, USA on April 4th, 2019 on Pacific Innovation lab on the island of Japan].

[Un-Manned Tank, <u>Source:</u> DARPA Squad X Incorporates robots to infantry squads which was introduced in 19th July, 2019]

Multimedia, Gaming and Film Making

We enjoy watching Movie or playing games, but do we ever wonder how the graphics of the game are made and how the effects in Movie are made.. It is simply with the use of Modern Technology like <u>CGI tracers, Green, Red Screen, Voice Module, Sound board, and Advanced Use of Cameras</u>, we can clearly see the representation of characters like Iron man, Hulk, Batman how their suits are made, how the explosions are taking place and how they are flying in the sky. Those look so real only with the possibility of CGI devices and Cameras.

The amazing picture quality of Game, the Cinematics and real time Multiplayer games are maintained by the Device called <u>'Graphics Card'</u> and advanced <u>'WIFI'</u> connectivity to play with others around the world at any time in real time play. With the Use of Virtual Reality we can use

the movements in our body to control our character in the game which is the result of latest development in Engineering and Technology.

[Autonomous Drones used in capturing Different angles in Direction of Movie, <u>Source:</u> MIT Developers, Massachusetts, July 6, 2018]

[Augmented Reality Headset with Gesture Control Feature, <u>Source:</u> VRVISIONINC, developers of VR technology, NVIDIA, Canada, Jan 20, 2020]

Conclusion

From the overall view, we can conclude that Engineering and Technology has improved a lot. Accordingly, there will be positive changes in the future with respect to <u>Agriculture, Health, Sanitation, Digital Marketing, Transfer etc.</u>

In the healthcare Sector, we observe change on advanced Medicine, technology like <u>MRI, CT scan even Radiation Devices</u> to keep us protected. Use of MRI and CT scan lead to identification of the anomaly happening to us in our Brain.

In the Agriculture Sector, the last development of Engineering has helped farmers yield more

crops resulting in increase of their sales of several crops like Wheat, Rice, Maize, Jowar and many others which are demanded more in the Current Economy.

In the Sanitation Sector, though some countries like Brazil, India, and Eastern Africa are lacking in sanitation, the last development of Architecture, Engineering and Technology has led to recent development of the number of Sanitation. In Japan there are Smart Toilets where there are Voice Control Mechanism to use the toilets with relative ease and the wastes are collected in Pouch Bags are used up as fertilizer in the soil to ensure that wastage is avoided. This kind of Process is also practiced in Space by the Astronauts.

In short, technology with the help of advancement of Engineering might be hard for someone who are unaware of technology but once used, the lives of various people can be easy and time efficient. Even with disabled people, the use of technology like Prosthesis helps them to stand for themselves. But relying too much on technology should be avoided from the point of view of health since we need to be physically fit for the operation of such technology.

Reference

Augmented Reality Headset with Gesture Control Feature, Source: VRVISIONINC, developers of VR technology, NVIDIA, Canada, Jan 20, 2020

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Qatar Airways First Class, Source: Qatar Airlines, Hamad International Airport

Un-Manned Tank, Source: DARPA Squad X Incorporates robots to infantry squads which was introduced in 19th July, 2019

Wagner Statistica, 23 Jan, 2020