4IR
Past, Present, Future

Industrial Revolution Stage

1.0: The first industrial revolution began around 1760 by using mechanical production and steam power.

2.0: The second industrial revolution began with birth of electricity and mass production which was introduced by Henry Ford

3.0: In the twentieth century, the third industrial revolution began with the digital era of IT and electronics. With technologies that can work without human assistance, such as a computers.

4.0: The fourth industrial revolution is what we are implementing right now. This revolution uses a cyber-physical system that includes physical, digital, and biological systems.
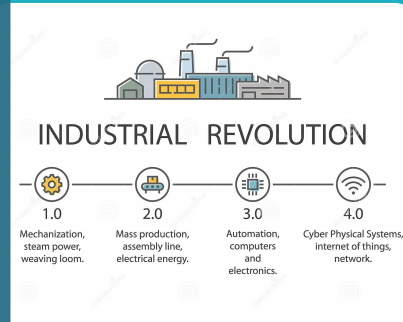
In this era of digital transformation, Industry 4.0 is the main focus that can contribute to a huge change for the whole world to create a much more better invention and idea. New Industry 4.0 technologies have undergone a very fast development in the last decade and now ready to be used in our daily lives. Before the emerging of Industry 4.0, we know that there are another stages which are Industrial Revolution 1.0, 2.0 and 3.0. All of this stages have brought a great impact not for a country but to the entire world.

INDUSTRIAL REVOLUTION

1.0 Mechanization, steam power, weaving loom.
2.0 Mass production, assembly line, electrical energy.
3.0 Automation, computers and electronics.
4.0 Cyber Physical Systems, internet of things, network.

Image from dreamstime.com

Industry 4.0
Autonomous Robots, Simulation, System Integration, Internet of Things, Cybersecurity, Cloud Computing, Additive Manufacturing, Augmented Reality, Big Data

Image from medium.com

IR 4.0 Trend
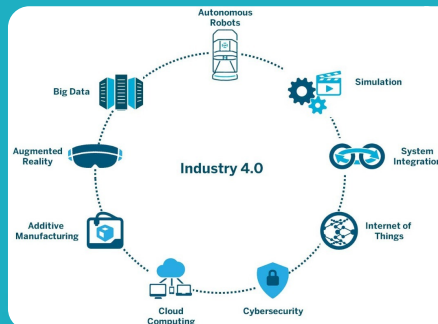
1. Lowering Energy Use
Most countries are trying their best to avoid from using coal and fossil fuels and start to use sustainable energy sources. There will be less impact on the environment and will save cost.

2. 3D Printing
No need for a big space for a warehouse. 3D printers help to lower cost of making prototypes receive better testing before manufacturing process.

3. Artificial Intelligence (AI) Improvements
Quality of a product can be improved and a new project can be created at lower cost. Project will be able to finish faster using a large scale of AI

Way Forward

1. Improving product consistency (to make it easier to use)
2. Increasing the productivity of technology (to keep cope up with time)
3. Getting facilities repairs (making sure of maintenance of infrastructure)
4. Technologies that lasts longer (Better manufacturing process, to use longer time and will not spoil easily)
5. Consumers information privacy (to protect from personal info leakage)

Image from futurithmic.com

Our Reflection

This talk has inspired us to be more creative and innovative especially to improve the quality of our lives. Currently, there are still many works that require human force and hardwork. By gaining more knowledge, great invention can be found to ease human works in every aspect. All things will be done with lesser cost, time, and energy and that will make the world a better place.

Done by Group 6