

INDUSTRIAL 4.0 (PAST, PRESENT, FUTURE)

INTRODUCTION

On 24th November 2020, a program called Industrial Talk 4.0 entitled Past, Present, Future was held. It happened through online meet at Cisco Webex from 10a.m to 12p.m. The talk given by Mr. Redzuan Shah Bin Yussoff, Director of Southern Strategic Economic Region, Telekom Malaysia. The Fourth Industrial Revolution also known as 4IR is the ongoing automation of traditional manufacturing and industrial practices using artificial intelligence. There are nine key components. In the talk only five were focused which are Autonomous Robots, Cloud Computing, Internet of Things (IOT), Augmented Reality and Big Data Analytics. The talk also includes the evolution of shopping and education through commerce 4.0 and education 4.0. Not only that, the speaker too share the past, present and future job scopes based on revolution of industry. Finally, the speaker shared Telekom Malaysia services infrastructure and also the contribution of Telekom Malaysia services in the development of digital Malaysia.

CONTENT OF THE TALK

4IR (past, present and future)

- It is the era of artificial intelligence.(autonomous robots, simulation, system integration, industrial internet of things, cybersecurity, cloud, additive manufacturing, augmented reality, big data analytics.

Autonomous robots

- Intelligent machines capable performing tasks in the human world without human control
- Reduce error and improve cycle times
- Sense their environment through variety of technologies.
- Household maintenance.

Cloud computing

- Storage
- Server
- Mobile
- Application
- Database

Internet of things

- Smart devices (smartwatch, smart speakers, CCTV)
- Set of sensors that are connected to the internet
- Enables us to monitor, control the internet wirelessly.

Augmented reality (AR)

- Used for education, tourism etc.
- Used by BMW group to train their engineers more efficiently

5G

- Accelerate IR 4.0
 - smart tourism in Langkawi
- which transforms the life of people in Langkawi using smart technologies.

Future of work

- from research, more technologies companies are focusing and developing IR 4.0 technology, product and solution in Malaysia which opens up higher job opportunities on these emerging industries.

ENABLING IR 4.0

- Provide analytics to organizations to make impactful decisions
- Provide data centers nationwide including 2 tier 3 data centers that provides ultra-low latency network
- Implimenting 5g networks
- Collaborated with developers to create smart homes

Examples of IR4.0

TESLA

- connected to the cloud
- allows it to be fully automated.

Smart homes

- connected to the internet
- allow user to control home appliances remotely

RELEVANT IT CAREERS

Control Systems Engineer

Manage constantly changing systems to achieve the desired outcome.

Automation Engineer

Offers implementations of automatic solutions for software processes.

Validation Engineer

Ensure that all processes work properly and reliably to deliver high-quality goods.

Equipment Systems Engineer

Develop manufacturing equipment and assembly lines in factories.

Data Scientist

Use scientific methods, processes, algorithms and programs to derive information .

Robotics Engineer

Build software or autonomous devices that mimic human behavior for industrial use.

IT Solution Architect

responsible in leading the practice and introducing the overall technical vision for a particular solution.

SUMMARY

The fourth industrial revolution(4IR) is a revolutionary approach to manufacturing techniques. 4IR concept is known worldwide and it has developed other fields too such as Commerce 4.0 and Education 4.0. Fourth Industrial Revolution have resulted to some prominent advantages such as increased productivity and enhanced decision making with data-based tools. Over the years, there are more companies focusing and developing 4IR technology worldwide. This have changed the job scopes which some have higher job opportunities and some jobs will face reduction in the future which contributes to increase in unemployment rate. In a nutshell, 4IR have brought an evolution not only to the industry but also to human lifestyles. It is our responsibility to improve and implement technologies in our life so that the upcoming industry revolutions can be achieved in a very short span.

REFLECTIONS

From this talk, I have gained a lot of information about innovations in the fourth revolution that helps ease and develop human life. There are five key components of 4IR presented by the speaker and two of them I found interesting and very helpful for human which are autonomous robot technology are intelligent machines capable of performing tasks by themselves without human control such as household maintenance robots. Secondly, augmented reality is a simple application that provides beneficial information such as there is no need for car showrooms to exhibit a car physically to people instead they can just have a smart device and people can gain all information about the car. Not only that, I think 4IR is the birth of artificial intelligence where the world is being digitalized and more innovations will be invented to contribute in the ease of humans life. We should give our full cooperation in this revolution 4IR.(SHUGENTRAN A/LVARATHAN)

I am very interested in the research being done to develop Internet of Things. I am also excited with the rising capabilities of using 3D printing in invention of new things. As such, in the future, I would love to work in a place where I could combine both of these fields together (IRSYAD ROS BIN HISYAM ROS)

From the industrial talk, It has given me an insight towards how the future will be regarding IT and also how it will help human lives. It also talks about the efforts that has been done by the government towards reaching IR 4.0. All of the efforts and investments that has been done by them has motivated me greatly to continue pursuing this career since it gave me assurance that the IT sector will keep on developing and give me opportunity to contribute to it. (FAIZUL HAZWAN BIN ZULKEPLE)

By what I acknowledge about this talk, it gives me deeper understanding of benefits of IT in our life which consists of education and lifestyle. Also, this gives me motivation to work harder and gain more experience attending IT Talk so that I can know about my chances of getting job in thissector. (MUQRISYA BT MAT NOOR)