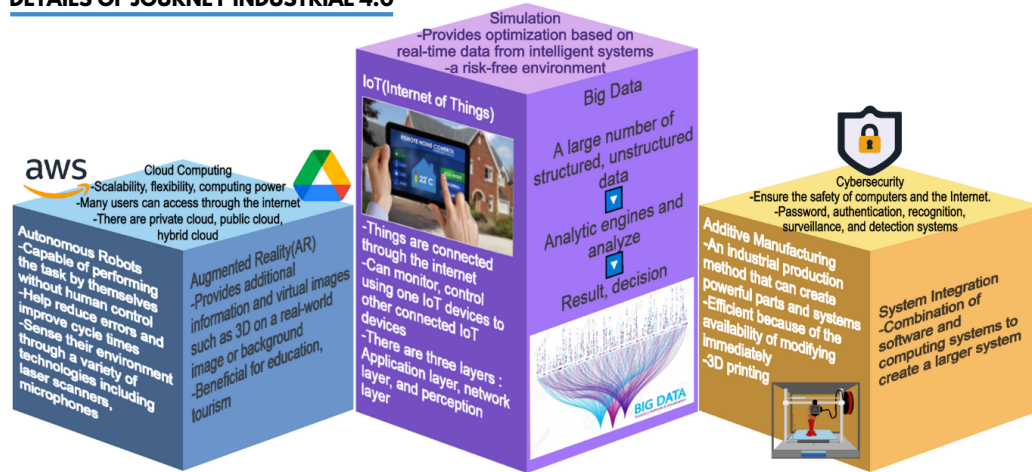


# INDUSTRIAL 4.0 : PAST, PRESENT, FUTURE

## DETAILS OF JOURNEY INDUSTRIAL 4.0



## INTRODUCTION

This is a poster report of the industrial talk of "Industrial 4.0: Past, Present, Future" spoken by REDZUAH SHAH BIN YUSSOFF, Director of Southern Strategic Economic Region, Telekom Malaysia. Many industrial revolutions have changed and passed as times have changed and evolved. There are 4 industrial revolutions:

1 <sup>st</sup> industrial revolution	Mechanical Production <i>steam, water</i>
2 <sup>nd</sup> industrial revolution	Mass Production <i>electricity</i>
3 <sup>rd</sup> industrial revolution	Digital <i>IT, Electronics</i>
4 <sup>th</sup> industrial revolution	AI cyber physical system (physical, digital, biological)

1st, 2nd, 3rd IR (industrial revolution) are the Past, and now we are living in 4IR which is Present and Future. In this report, we have included details of the journey of 4IR, example uses of technology, trends of future, and future 5G plan of Malaysia.

## EXAMPLE USE OF TECHNOLOGY

### EDUCATION 4.0

- Utilise technology in teaching process (robotics, AI, etc.)
- Self-paced and personalised learning
- Discussion and project-based



### COMMERCE 4.0

- To provide more efficient shopping experience
- Study customers' shopping behaviours
- Product visualization with Augmented Reality (AR)



### E-HAILING

- Convenient and quick
- Available everywhere
- Affordable fare
- Cashless payment
- Better safety features



### FOOD DELIVERY

- More payment options
- Big data improves delivery service (road traffics, thousands of orders etc.)
- Food delivery robots



### INVISIBLE ANALYTICS

- Filter data and get insight of the existing data
- Delivering the right information to the right people at the right time

### SMART HOME

- Everything is connected to the internet
- Monitor using our devices (eg. smartphones)
- Helps in doing house chores
- Better security



### ARTIFICIAL INTELLIGENCE

- Helps to perform tasks better, faster and efficiently
- Data collection
- Improves in decision making
- Creates new jobs (eg. AI trainer)

### VIRTUAL REALITY

- Virtual training
- Enhance skills more easily
- Learn effectively
- Able to take risks to try out new ideas



### VIDEO CONSUMPTION

- Video marketing
- Entertainment
- Provides a variety of information

## Trends of Future

### CONNECTED CAR

- Less carbon dioxide emission
- Checking condition of the car using smartphones
- Higher speed
- Self-driving

### DRONES

- Decreases workload
- Shipping
- Security and law enforcement
- Photography

### 3D PRINTING

- Low-cost prototyping and manufacturing
- Easy scalability
- Speed efficiency
- 3D printed building



## 5G PLANNING AND IMPLEMENTATION

### way forward—TM Group 5G Smart city solution

- The installation of 5G will accelerate industry 4.0 progress.
- The installation of 5G will transform people's life.
- It is expected to finish in 2022.

5G is installed in two quarantine hospitals  
it can reduce people's stress  
internet is now a psychological needs of people

### Showcase in Langkawi

- Smart agriculture  
Automated farming solution to monitor crop
- Smart Parking  
access through phone app
- Smart water system  
use to monitor usage and bills



Smart tourism  
Trip planner, Parking, search via app.

Smart traffic light  
efficient traffic congestions and management using IoT and analytics

Smart safety and security  
Real-time monitoring for safety and crime prevention

## SUMMARY

### The journey of industrial 4.0.

- Internet of Things
- Big data
- could computing
- AI
- Cyber security



\*In industrial 4.0 talk, we have talked about 4 parts.

### Example use of Technology

- Education 4.0
- Commerce 4.0
- E-hailing
- Food delivery



### Trends of future

- Smart home
- connected car
- 3D printer
- drones
- visible analytics
- Virtual reality



lead to a more sustainable, convenient life



### way forward - 5G installation

- example of 5G showcase in Langkawi
- 5G is installed in two hospitals



## REFLECTION

### LAI TING YING:

It is truly exciting to know 4IR will be changing every aspects in our lives, such as education, business, lifestyles and so on. As a student, it is also good to know that the education system will be improved in the future, where students can enhance their skills better by learning practically, thinking out of the box rather than to learn theoretically. By which, students are more prepared for the real world as well as to contribute to the society.

### SONG JI YUON:

I have known some technologies of industrial 4.0 were been in our lives but didn't know specifically where do these technologies were used. After the industrial talk, I have learned some examples such as big data used in food delivery services (Foodpanda), AR used in e-commerce (IKEA), cloud computing used in e-hailing like (Grab). The innovation of industrial 4.0 helps our lives easier and safe even in a particular situation such as COVID-19. Since my future is related to these technologies, I would like to experience and study more of these technologies to make life easier and safer by developing undeveloped areas of life with technology.

### CHEN YIQU:

In industrial 4.0 talk I have learnt a lot. There are mainly three parts I have obtained from this talk. Firstly, detail of industrial 4.0. There are Internet of things, big data, clouds, AI, and etc. And secondly, how the future is going to look like. We will have, smart home, that everything will be connected to the internet, and we can monitor through phone. Also we will have connected car, it will emission less carbon dioxide. We can also free our hands when we need to drive, because it can drive on its own. Thirdly, we can see the 5G future is coming. There are already existing usage of 5G during MCO. After listening to industrial 4.0, I am really anticipating the future life and looking forward to see how technology can bring us.