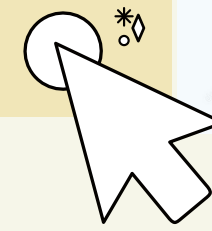




INDUSTRIAL 4.0

Executive summary

The 4IR is the digitalization era from the digitalise services for the user to advancements in smart cities, as well as bring in 5G.



Introduction

The Industrial 4.0 is a way of describing the blurring of boundaries between the physical, digital, and biological worlds as well using new technology. 4IR transform manufacturing and production processes into a cyber-physical system

DIGITAL/CLOUD



Providing the services or distributing the information, including data and content, across many platforms and devices, such as the web or mobile. Market force are pushing the digitalization of service in many areas. The example area that have been digitalized are infrastructure, enterprise television, telco, payment and taxi services. Even in the field of entertainment such as gaming and education have come across digital transformation.

SMART CITY



A smart city is a high-tech urban area that collects data using various electronic technologies.

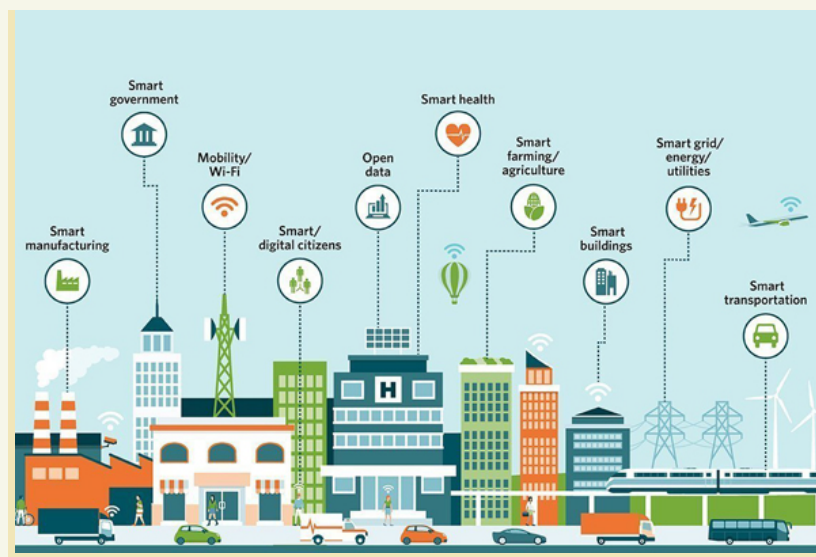


photo from <https://www.constrofacilitator.com/smart-city-elements-features-technology-and-govt-approach/>

4IR DIGITAL SOLUTION IN SMART CITY

- Smart Fleet which is a fuel management application increase the performance of logistics by giving real time tracking.
- Using a smart manufacturing system, you may increase production output, accelerate sales transactions, and manage overall manufacturing performance by giving the insight of the product and sales.
- Smart water help in gathering useful and actionable data about a city's water flow, pressure, and distribution.

5G

5G is the next phase in the growth of mobile networks. 5G wireless technology promises multi-gigabit per second peak data speeds, ultra-low latency, more reliability and vast network capacity. 5G also offer massive machine type communication

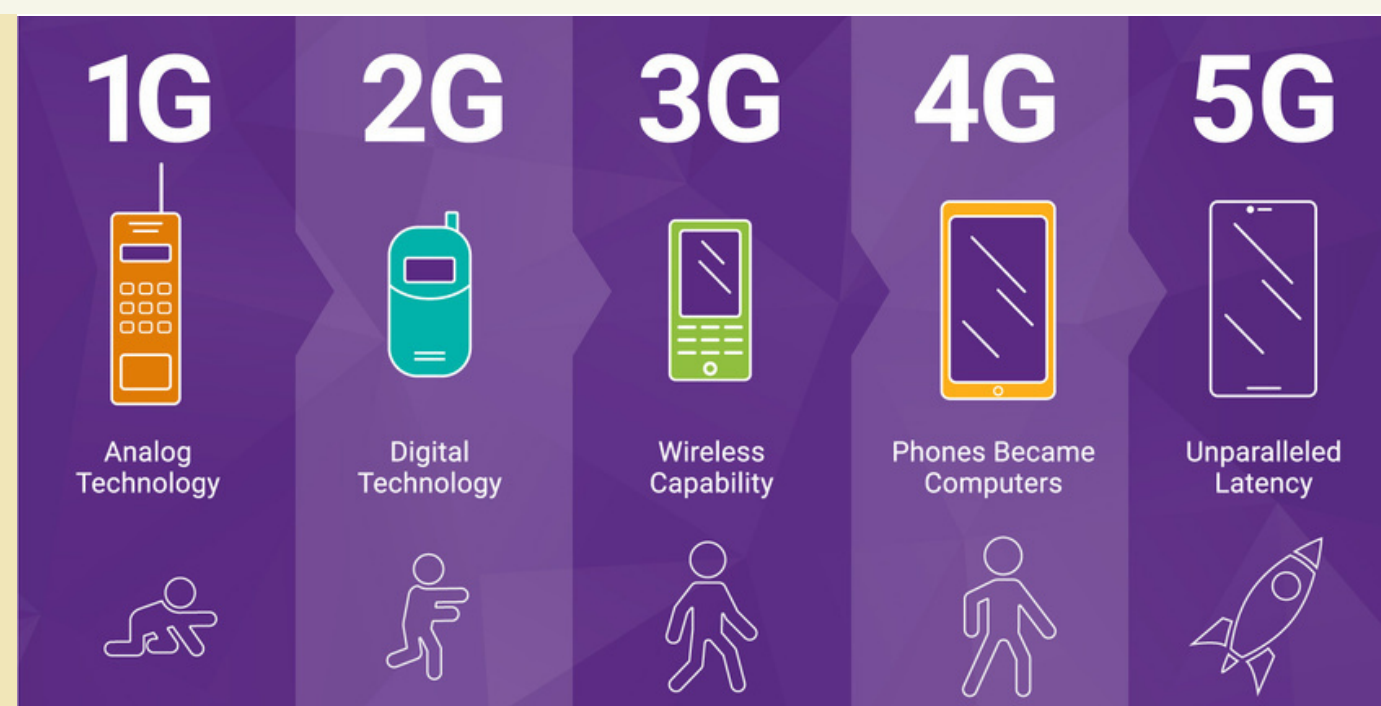


photo from <https://www.synopsys.com/5g/5g-vs-4g.html>



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REFLECTION

From this talk, I get to view the world changing from physical to digital as a result of the technology. I've learned about IR4 and how beneficial it is. Industrial 4.0 have make a big change on our life. It makes life easier because many tasks may be completed from home. Thanks to the digitalized services, we get to save a lot of time. We can obtain all of this information simply by using a phone, eliminating the requirement to go out and do survey. IR4 has improved the quality of our lives from every aspect. The launch of 5G allows us to enjoy a speedy Internet without having to wait for the Internet to load or deal with a poor connection. I consider myself very lucky to have been born in this digital age. Technology is a divine gift.





INDUSTRIAL REVOLUTION 4.0

BASED ON INDUSTRIAL TALK 2
BY DR SARAH KHADIJAH TAYLOR (CYBERSECURITY)

EXECUTIVE SUMMARY

The talk mainly discusses the what, how and why IR 4.0 is happening and the impact it brings to us as a Malaysia citizen. It explains the role and path the government is taking to better our lives and what we can do to better prepare ourselves for this transition.

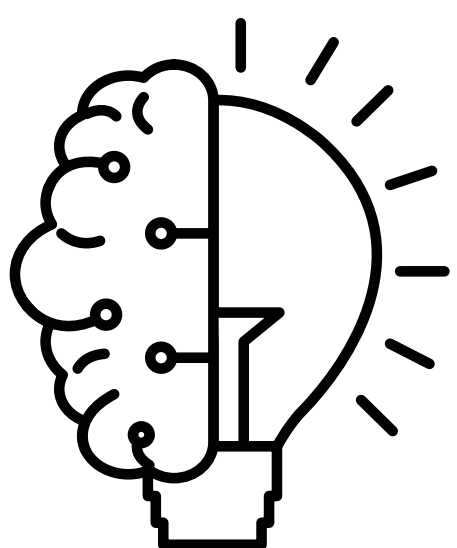
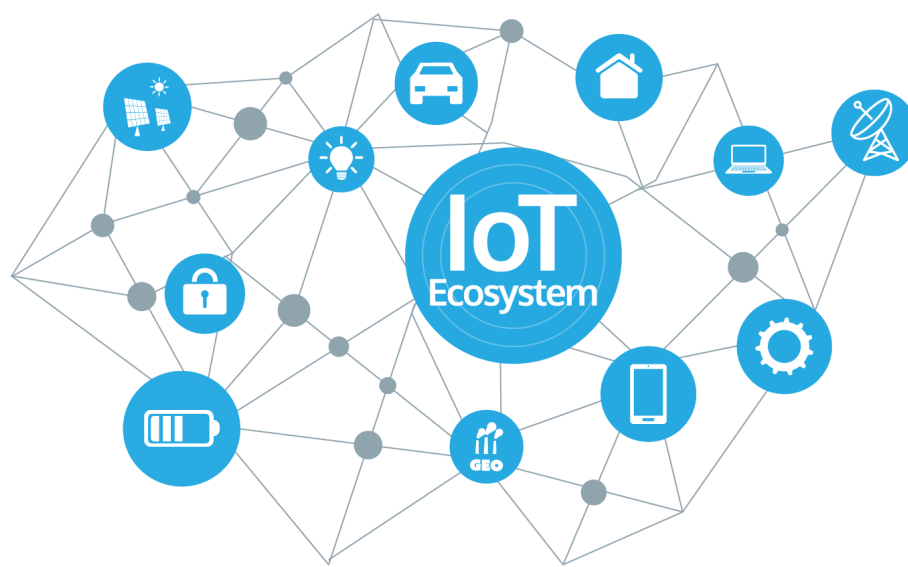


INTRODUCTION

Industry 4.0 refers to the current trends of process automation and data exchange using advanced manufacturing technologies. The revolution of Industry 4.0 is developing faster than ever due to the rapid evolution of the manufacturing sector and the infusion of automation.

EMBRACING IR 4.0

By implementing automation and new technologies in Malaysia supply and production chain, it opens up new doors for investment and business. The human resource sector will increase its productivity drastically by shifting labour towards more high-skilled jobs.



OVERCOMING CHALLENGES

The beginning of a new frontier naturally comes with its set of challenges. Malaysia has laid out a framework to address these issues in the foreseeable future. For instance, attracting stakeholders and investments by implementing new policies, producing the perfect ecosystem, accelerating the technological industry and so much more.

REFLECTION

We've all have seen how fast the world is developing and in a blink of an eye, we are already in the 4th industrial revolution, we can see how it made everything in life easier and quicker. However, let's not get ahead of ourselves, we're now living in an era where information and privacy might be used against us despite the multitude of benefits it brings. Of course, this transition is for the better and it definitely brings more good than harm but that doesn't mean we can be oblivious about the damage it may bring if misused. That's where cybersecurity steps in. As a matter of fact, all of us are more than excited to see what comes next in this few years and we absolutely want to be part of it.

4.0

4th revolution

Cyber physical systems



3.0

3rd revolution

Electronic and IT systems, automation



2.0

2nd revolution

Mass production and electricity



1.0

1st revolution

Mechanization, steam and water power



Internet of Things



Introduction

Internet of Things or IoT is one of the Industrial Revolution 4.0 technologies. IoT is a bridge that connects our physical world to the digital world through the use of the internet. Advancements in innovation are resulting in IoT being utilised more than ever.



What is IoT?

IoT is connecting regular objects or appliances to the internet to allow them to receive or send data through the internet. By doing so, these objects can be controlled by other devices such as smartphones or computers.



Watch a surveillance camera feed in real-time through an application on your phone

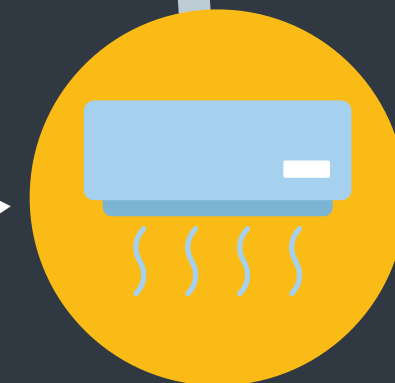
Send documents to a printer wirelessly



A camera inside a refrigerator to see the inside using your phone



Control the temperature of an air conditioner using an application instead of a remote



Toggle a light switch while outside the house

Reflection

The main benefit of IoT for the average consumer is automation and ease of use. Many routine tasks that require manual input are now able to be done fully digitally. Moreover, devices that previously require a physical connection or wire can now be used wirelessly through the internet. As a result, the quality of life improvements IoT is able to provide for humans are limitless.