4th IR >>>
Autonomous Robot

Intoduction

Industry 4.0 was first mentioned in Germany in 2011, at the "Hannover Fair." Klaus Schwab, Executive Chairman of the World Economic Forum (WEF), published the details of the concept in 2015. The Fourth Industrial Revolution is a term used to describe the blurring of boundaries between the physical, digital, and biological worlds. It is the result of advances in artificial intelligence (AI), autonomous robots, the Internet of Things (IoT), 3D printing, genetic engineering, quantum computing, and other technologies.

Description

An autonomous robot is a device designed and engineered to handle the environment on its own and operate for extended periods of time without human interference. They usually possess sophisticated features that help them to understand the physical world around them. It is common for autonomous robots to work without any human assistance, unless it is necessary for their tasks. These robots possess sensors and other equipment that helps them to see any obstacles in their way. The most advanced delivery robots can even be programmed to use elevators and move throughout a multi-story building independently. However, autonomous robots still need physical maintenance.

Reflection

We believe that autonomous robot is an essential asset for us as it can help reduce human labor as well as produce consistent results that are hard to achieve. Autonomous robots are beneficial to a number of industries. Their high levels of adaptability to different situations and environments enable them to be flexible and widely used. As the world keeps evolving, we believe that autonomous robot will make our life better in many aspects.
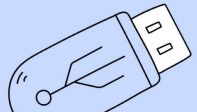
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Industrial Talk 1

TECHNOLOGY INFORMATION SYSTEM
&
4.0 INDUSTRIAL REVOLUTION

SUMMARY
This poster is about "TM humanizing technology" which includes the 4.0 Industrial Revolution (4IR), Adoption area within 4IR and the journey of 4IR

INTRODUCTION
TM has been serving this nation since 1946. Since then, TM have been support the evolution of 4IR in this country. TM was organised into three main business clusters which are TM Wholesale, Unifi and TM one. While most people think TM' service is about Fiber Optic, it actually cover a large range of service which include smart services (IOC, contact center, smart building, safety and security), service portfolio (application, mobility, ICT) and Infra Portfolio (fiber optic, utility tunnel, wifi, mobile).

INDUSTRIAL REVOLUTION

FIRST
Mechanization, Steam and Water Power
1784

SECOND
Mass Production and Electricity
1870

THIRD
Computer, Electronic and IT System
1969

FORTH
Cyber Physical System Manufacture

Cyber Security

Smartphone

TODAY

Cloud Computing

Platforms

Adobtion areas within 4IR

Cloud/Digital
- Advertise strengths are driving Digital Transformation (DX) in businesses over all vertical
- Digitalization of all service. For example, Whatsapp is the platform used to digitalize telco platform. By Doing this, its can enhances customer experience
- Increase the Performance with mobile and connected workforce

Smart Cities
- Overseeing logistic performance and efficiency with smart fleet by Centralize Fleet Data With Integrations
- Smart water integrated management system (SWIMS) which provide visibility of water industry
- Adopting Smart Service such as transportation, safety security

5G
- 5G is the next generation of mobile network evolution which unifying connectivity fabric for society
- Ultra-reliable and low latency communication
- Increse the efficiency of mobile broadband
- Focus on job creation, development of talent, safety and security

ENABLING THE 4IR JOURNEY
- TM has built world-class information centers to bolster improvement inside the locale
- The center operates 24 hours daily to ensure best performers of service to customer
- TM NOC (network operation center) main function is manitoring network, facilities, environment and cyber threat. It's also the command and and control in all TM services

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REFLECTION
BASED ON THE TALK, WE CAN SEE THAT THE WORLD IS KEEP INVOLVING. SO AS A HUMAN BEING, WE NEED TO CONTRIBUTE OUR ENERGY ON MAKING IT HAPPENING AS THE WORLD WOULD A LOT HARDER WITHOUT THE TECHNOLOGY WE HAVE TODAY. WE ALSO NEED TO BE CAREFUL ABOUT TECHNOLOGY TOO BECAUSE SOME TECHNOLOGY SUCH AS SMARTPHONE HAS CAUSE A LOT ADDICTION. THEREFORE, WE NEED TO ALWAYS IMPROVE THE TECHNOLOGY SO THAT IT GIVE MORE BENIFIT THAN THE DISADVANTAGES

IR4.0 : A MALAYSIA PERSPECTIVE

INTRODUCTION

Cyber Security Malaysia

An agency under the Ministry of Communications and Multimedia. They established with the aim of securing the nations cyber space.

CyberCSI

Digital Forensic Service assist enforcement to cease evidence to collect data from the crime scene

MyCERT

manage incoming malware cases and share information with other country

CyberGURU

provide professional training service and offered training supplication to Malaysia

CyberSAFE

provide awareness to student, SME, and private sector about internet security

EXECUTIVE SUMMARY

This poster is about the talk from Miss Sarah Khadijah Taylor about Malaysia perspective to 4.0 IR and how Malaysia treat to this revolution and respond to it.

IR 4.0

Many infusion of automation had been used in nowadays manufacturing sector

CAUSE

1. **economic reallignment**
   - other country need to catchup with China which is more further in technology
2. **customer behaviour**
   - they wanted very specific and detailed for their needs
3. **competitiveness**
   - each company will defend their marketic
4. **increase regulation**
   - demand from the market to see something quality

THE NEED TO EMBRACE IR 4.0

Future of manufacturing in Malaysia impact by 3 factor

Global value chain and geographics of production are continuing to shift

Quality of labour and higher productivity, but not low labour cost

New technology disrupting and fostering a technology-based model of production

DIGITAL FORENSICS

1. **IDENTIFICATION**
   - be clear about the investigation
   - identify type kind of resources

2. **PRESERVATION**
   - data obtained are secured, preserved, and isolated

3. **ANALYSIS**
   - process the data
   - interpret analysis result

4. **DOCUMENTATION**
   - documentation of the crime scene includes photographing, sketching and crime-scene mapping
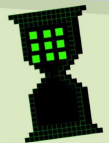
5. **COLLECTION**
   - summarize the result to gather facts

CASE 1
EVIDENCE

READINESS OF 4.0

✓ In a GOOD & STEADY track in IR 4.0

✗ A slight gap with leading countries eg. Japan, China & United Kingdom

ALL ABOUT MALAYSIA

MOVING FORWARD...

POINTS TO PONDER:

Upskill & Reskilling
must be in the heart of Malaysia's transformation

Inclusive Involvement of SMEs
holistic step up in labour productivity across economy

Significant Evolution in Innovation
collaborative platforms is essential

Focused Funding Support
link with private sector investments

Good Digital Infrastructure
reliable and secure IR 4.0 operations

DEMAND

Awareness
Create more awareness about IR 4.0 in terms of opportunities and business model

Innovation
Allow customers to customize their own items for better quality and satisfaction

Digital Readiness & Connectivity
NFT (Non-Fungible Tokens) help youngsters to expand their creativity and gain income by selling their products using blockchain

Skill Enhancement
Required more expertise to demonstrate the specific skills

High Cost of Investment
Need to invest on technology to have greater outcome

Best Practices
Lack of accessible information platform to understand best practice

SUPPLY

Governance
Each Ministry have their own programs, they need to be synchronize in one center also does not have national platform yet

Funding & Incentive
HRDF program underutilize need to use more fund to upskill Malaysian workers and more in STEM Education

Ecosystem Support
Limited collaborations for industry 4.0, shortage of experts and reasearch

Training Providers
STEM related subjects are not attractive and does not match with industry needs

Standards & Digital Integration
Lack of clear standards, limited digitalization and integration

Infrastructure
Gaps on development of high speed broadbands

ISSUES & CHALLENGES

REFLECTION

BASED ON THE TALK, WE ARE ABLE TO GAIN DEEPER UNDERSTANDING OF INDUSTRY 4.0 AROUND THE GLOBE AND KNOW ABOUT THE CURRENT STATUS IN OUR COUNTRY. THERE ARE A LOT MORE THINGS TO IMPROVE IN THE FUTURE. THEREFORE, YOUNGER GENERATIONS MUST HAVE THE COURAGE AND INTEREST TO GET INVOLVED IN THESE FIELD TO EXPAND THEIR KNOWLEDGE AS WELL AS ENHANCE THEIR SKILLS.

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