



MALAYSIA PRODUCTIVITY CORPORATION

GOVERNMENT INITIATIVES TO PROMOTE ADOPTION OF IR4.0 TECHNOLOGIES IN MANUFACTURING

DRIVING PRODUCTIVITY OF THE NATION

What is Productivity?

Productivity = Competitiveness = Doing Better

What is Productivity?

Productivity = Competitiveness = Doing Better



Labour Productivity
(Dept. of Statistics Malaysia)



World Competitiveness Yearbook
(The Institute for Management Development)

Why Productivity?

PRODUCTIVITY



1. INCOME

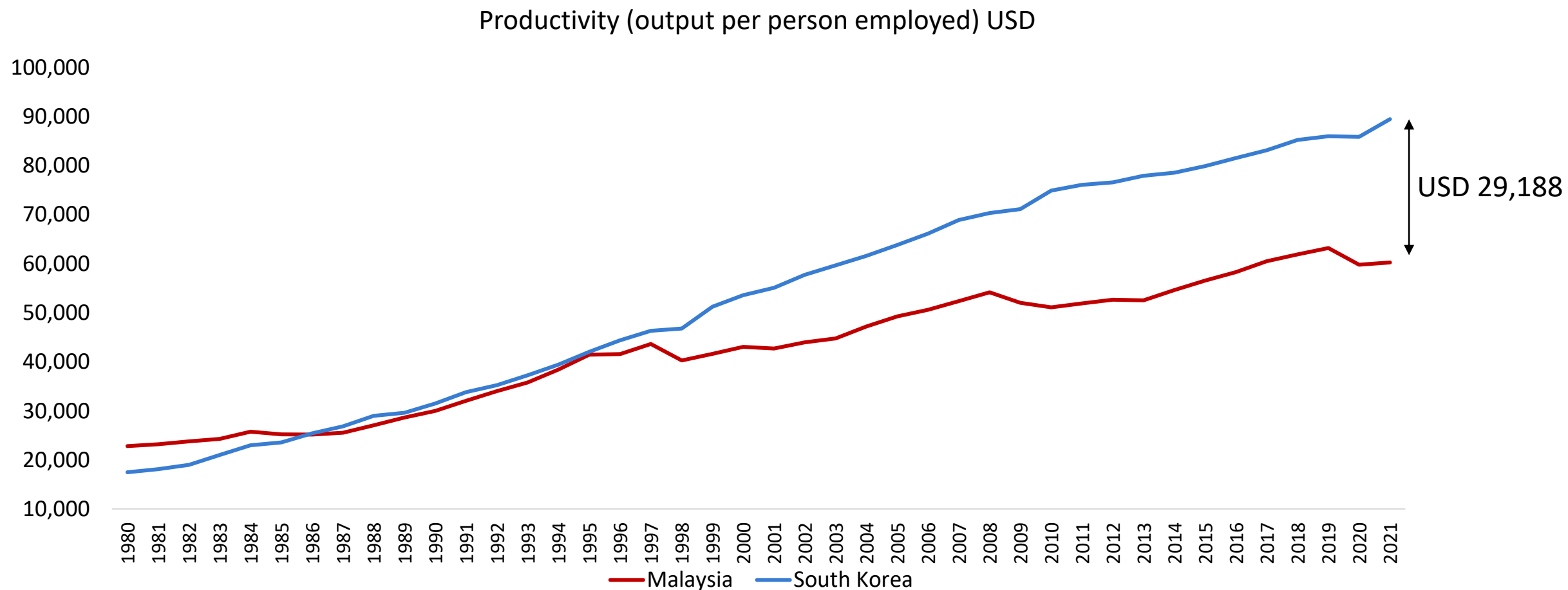
2. PURCHASING POWER

3. PROSPERITY

4. QUALITY OF LIFE

5. STANDARD OF LIVING

Malaysia Productivity Grow at Slow Rate



Labor productivity per person employed in 2021 international dollars, converted using Purchasing Power Parities
Source : The Conference Board, The Economy Database August 2021

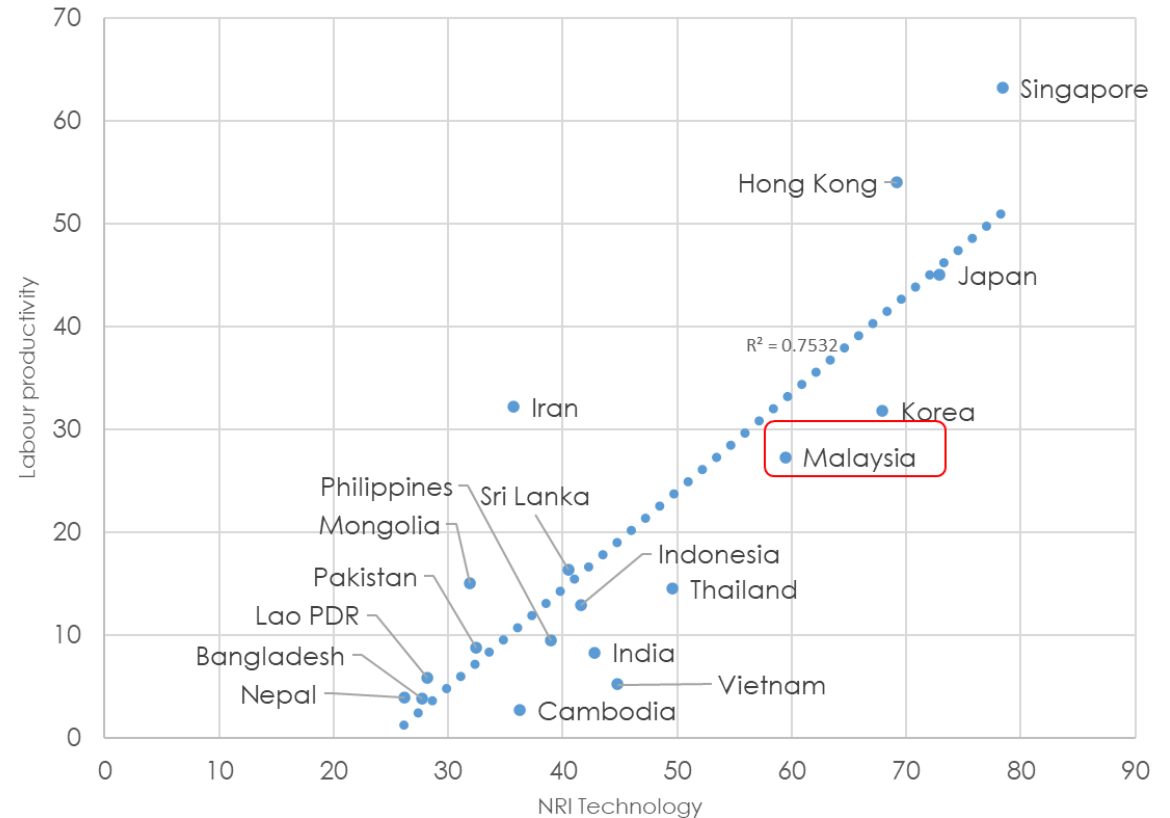
Holistic Approach in Driving Productivity of the Nation



Correlation Between Technology and Productivity

- Productivity is important to increase **competitiveness**, create **employment opportunities**, generate **high income**, and improve the **well-being of the people**;
- Malaysia aspires to drive **3.6% productivity growth**; and
- **Digital technologies** offer vast potential to enhance the **productivity of firms**.

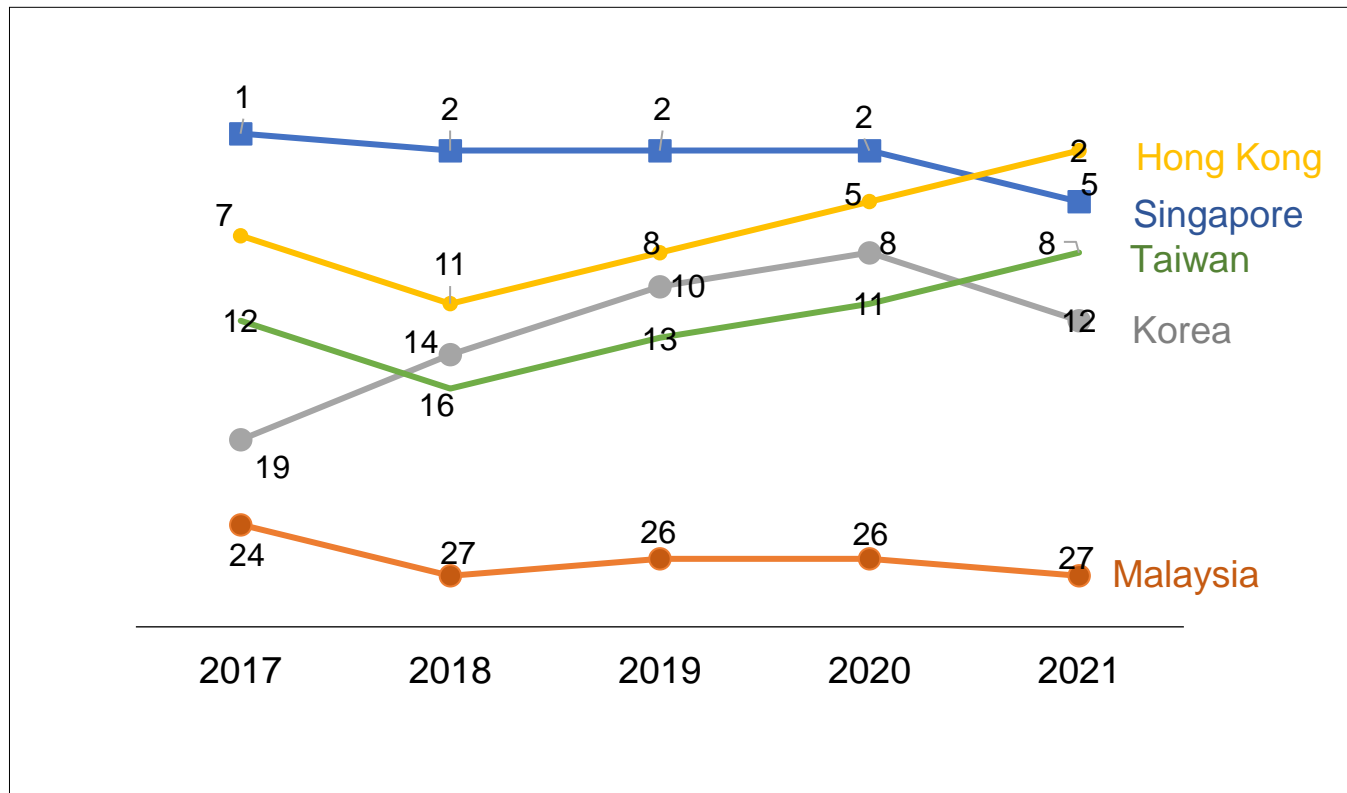
Technology and Productivity are highly correlated



Source : Malaysia Productivity Report Forum 2021, by Dean Parham

Malaysia can Achieve Top 10 Ranking by Accelerating MyDigital Blueprint Initiatives

Malaysia's Overall Performance Against Selected Economies in the IMD World Digital Competitiveness Ranking (n=64)

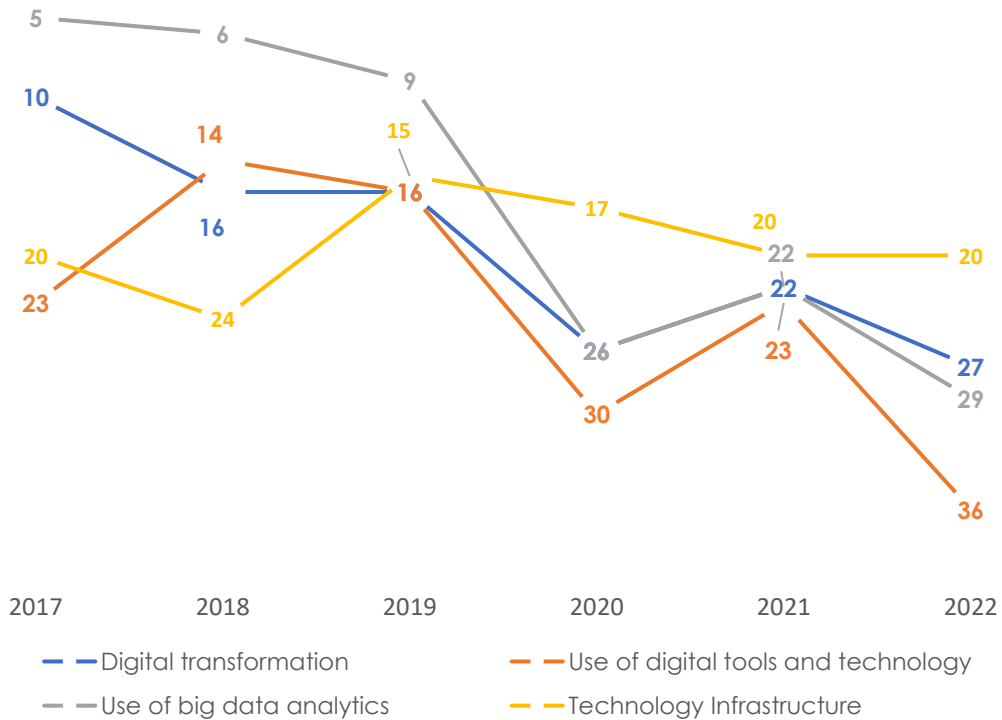


Source : IMD World Digital Competitiveness Ranking

Malaysia's Performance in 3 Factors of the World Digital Competitiveness Ranking (n=64)

Factors	Rank		Changes
	2017	2021	
Knowledge	17	22	-5
Technology	18	26	-8
Future Readiness	27	29	-2

Adoption of Technology: Where are we?



Source: IMD World Competitiveness Yearbook

83% of Malaysian companies has no or low technology adoption as in 2021

Source: MPC analysis based on Industry4wd Readiness Assessment & Productivity1010 database as of Dec 2021

There remains a huge room for improvement

Government Policies to Promote Technology Adoption



Business:

- 30% uplift in Productivity across all sectors by 2030
- 22.6% of digital economy to Malaysia GDP
- 875,000 MSMEs adopt ecommerce
- RM70 Billion investment in digitalization



Policy 2: Enabler Accelerating Technology Adoption and Innovation:

- 2.5% Gross Expenditure on R&D (GERD) to GDP
- 10.5% contribution of eCommerce to GDP
- 25.5% contribution of the digital economy to GDP.



Strategic Thrust 2 : Key Economic Growth Activities (KEGA)

- Increase contribution of high technology subsector to the following sectors:
 - Manufacturing: 50%
 - Services: 30%

Strategic Thrust 3 : Human Capital

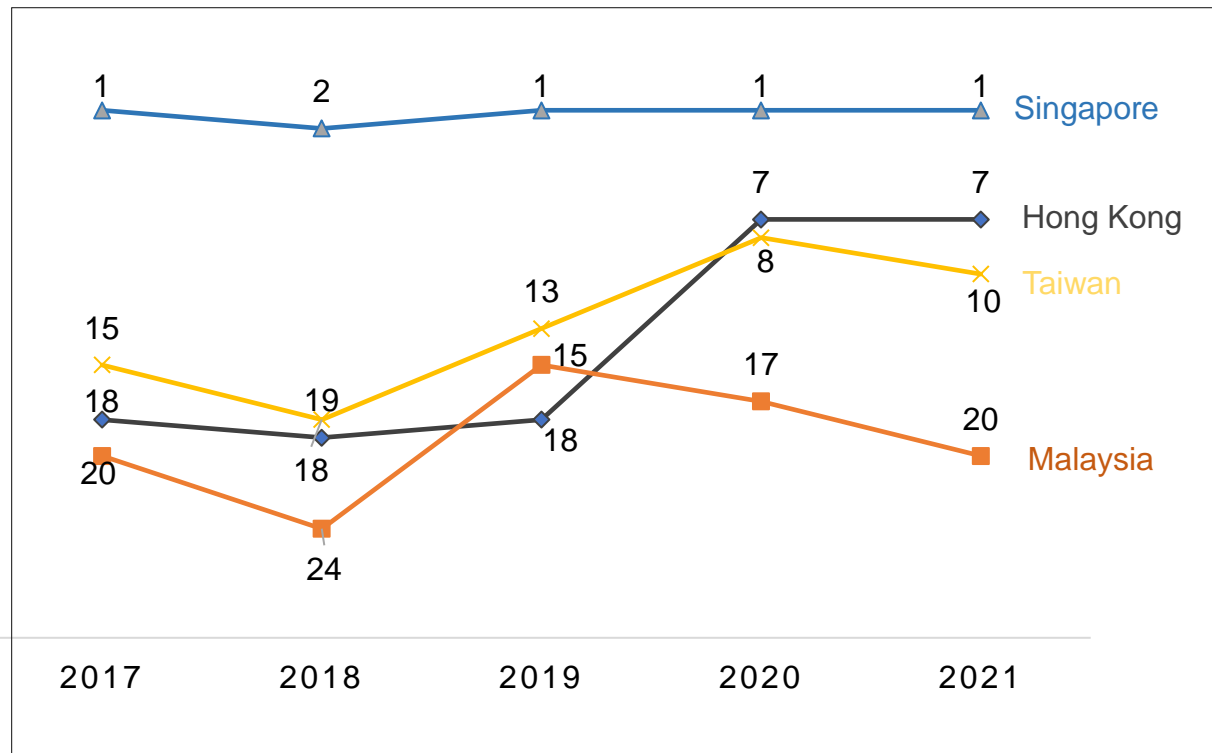
- 40% of HRDF training skills related 4IR

Strategic Thrust 4 : Labour Market & Compensation of Employee

- Increase labour Productivity growth in line with quality of technology in industry by sectors

Malaysia Aims to be in The Top 10 in Digital Infrastructure by 2025

Ranking of Malaysia and selected economies in the Digital Infrastructure, 2017-2021



Source : IMD World Digital Competitiveness Ranking, 2021

Number of economies : 64



Initiatives

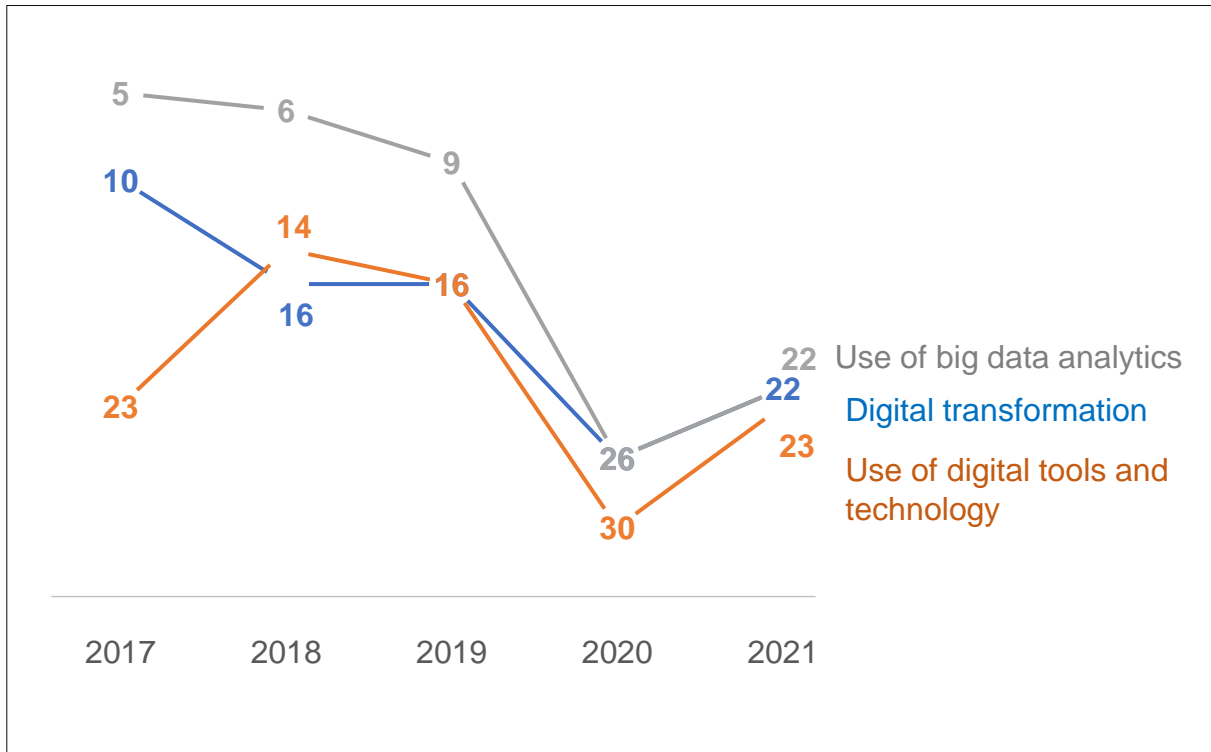
- Recommendations to **Mesyuarat Kluster Infrastruktur Digital dan Data** Majlis Ekonomi Digital dan 4IR Negara (Sep 2021)
- Received full support from **Ministry of Works** (4 Feb 2022)
- Recommendations to **Majlis Ekonomi Digital dan 4IR Negara** chaired by YAB PM (17 Feb) – full support by the Council Members
- Deep dive on weak digital indicators to identify relevant ministries and agencies involved.

Expected Outcomes

- Improve Malaysia's performance in digital infrastructure sub-factor in IMD WCY

Accelerate Digital Adoption Among Businesses

Malaysia's performance in selected indicators related to digital adoption



Source: IMD World Competitiveness Yearbook 2021

Number of economies = 64



Initiatives by MPC, Productivity Nexus, and Technology Centres

Continuously committed to develop programme that encourage digital adoption through experiential learning which provide easy access to business to adopt technology.

List of Programmes

- AI Module Development, MyReskill IoT, Artificial Intelligence for SMEs (AI4S), Digital Solution Directory, Productivity 1010, Smart Agro-Food Hackathon

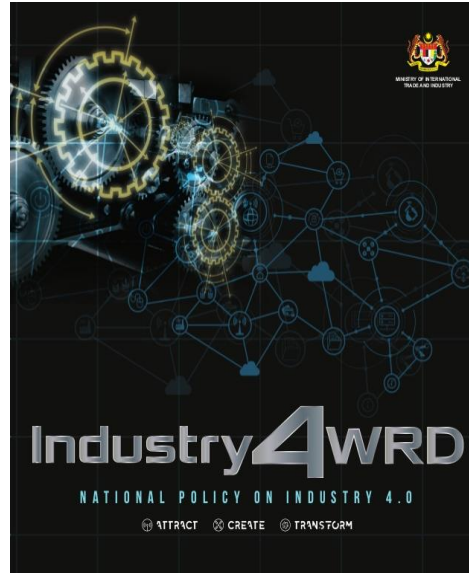
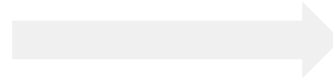
Expected Outcomes

- 50% Malaysian companies at the medium to advanced stage of technology adoption
- Achieve Top 10 in digital technology related indicators in competitiveness reports by 2025

Government Policy on Industry 4.0



- Launching by Minister in the Prime Minister's Department (Economy) YB Dato' Sri Mustapa Mohamed, and Minister of Science, Technology and Innovation (MOSTI) YB Khairy Jamaluddin.
- 1 July 2021



- Launching by Malaysia's Prime Minister, Tun Dr. Mahathir Mohamad
- 31 October 2018

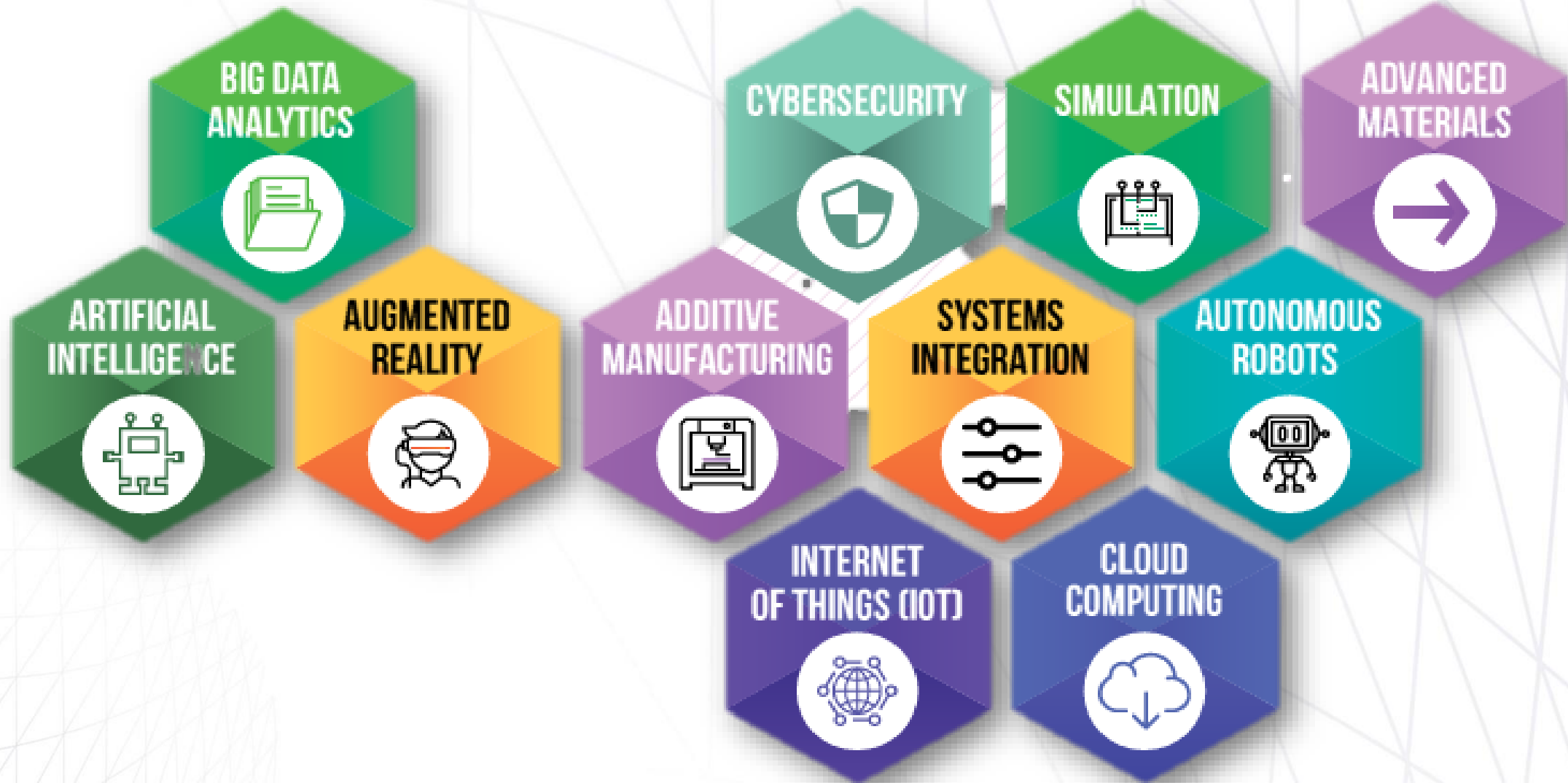
Local Capabilities:

- 30% Productivity Increase across all sectors, compared to 2020 levels.
- 3.5% GERD, including 4IR related R&D
- Top 20 in Global Innovation Index
- Top 20 in United Nations E-Government Development Index

Targets for 2025:

- Productivity of manufacturing industry per person from RM106,647 to increase by 30%
- Contribution in Ringgit Malaysia (RM) from the manufacturing sector to the national economy: from RM254 Billion to RM392 Billion
- Global Innovation Index Ranking :From 35 to Top 30 nations
- Numbers of high skilled employees in Manufacturing Sectors from 18% to 35%

Enabling Technologies to Support Industry 4.0



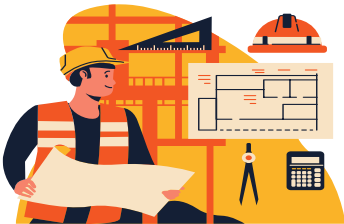
Challenges to IR4.0 Adoption



Uncertainty to modernise Infrastructure



Lack of skills in digitalisation



Reliance on low-cost labour



Lack of capabilities to improve operational efficiencies via technology

Initiatives to Encourage Adoption of Digital Technology

Assessment



Advisory Programme



Experiential Learning

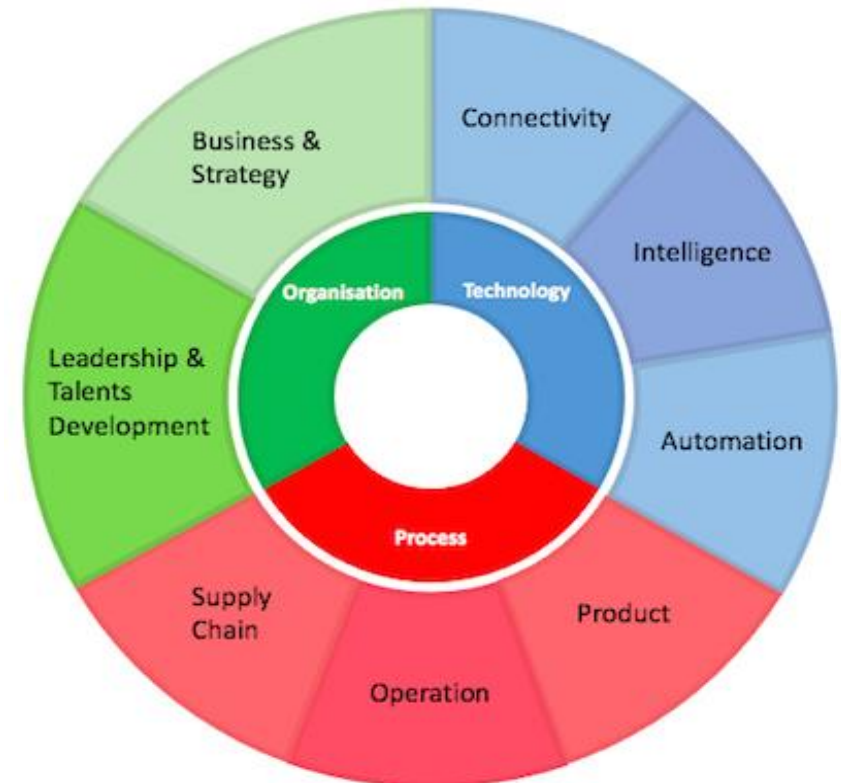


PRODUCTIVITY 1010

PRODUCTIVITY1010 is the initiative to assist businesses in the manufacturing sector and manufacturing related services to kick start their digitization journey.

- **Digitization Self-Diagnostics Tool** to assess company digitization readiness level
- **Productivity improvement Programme** in assisting company to digitize targeted processes based on proof-of-concept project via training and on-site engagement

The tool provides companies with a quick assessment of digitization readiness focuses on **eight areas from three main aspects of Organisation, Process and Technology.**



The Adoption of Internet of Things (IoT) Through MyReskill IoT Programme Leads to Better Monitoring System, Thus Improving Productivity

Objective

- To assist local companies in the adoption of Industry 4.0 (IoT) by training and handholding them to carry out IoT projects within their premises.



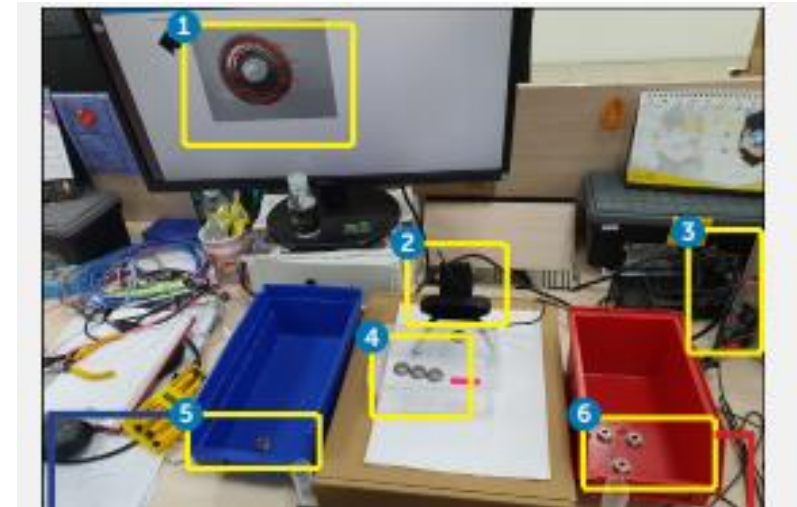
Case 1 : Reduce Rework to Zero at Casing Assembly Operation

Project Overview

Visual Inspection system to prevent mixing of different enclosure casings assembly at conveyor



Before	After
Manual groove count on each bearing by using ruler or pointy object	Automated identification of types of groove by AI-embedded instruments and software

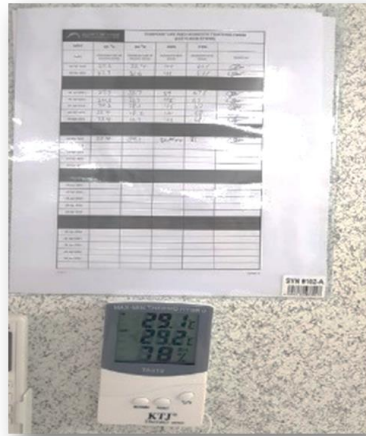


Case 2 : Eliminate Time to Record Temperature and Humidity Data in RF Test Lab

Project Overview

Real time data to ensure the test equipment is not overheat and well maintained

Before	After
Manual temperature and humidity control by using recording chart	Remote monitoring with real time data on dashboard through desktop and mobile device



Thank You



<https://www.facebook.com/MPCHQ>



@MPC_HQ



MALAYSIA PRODUCTIVITY CORPORATION



@mpc_hq