



MINISTRY OF INTERNATIONAL TRADE AND INDUSTRY



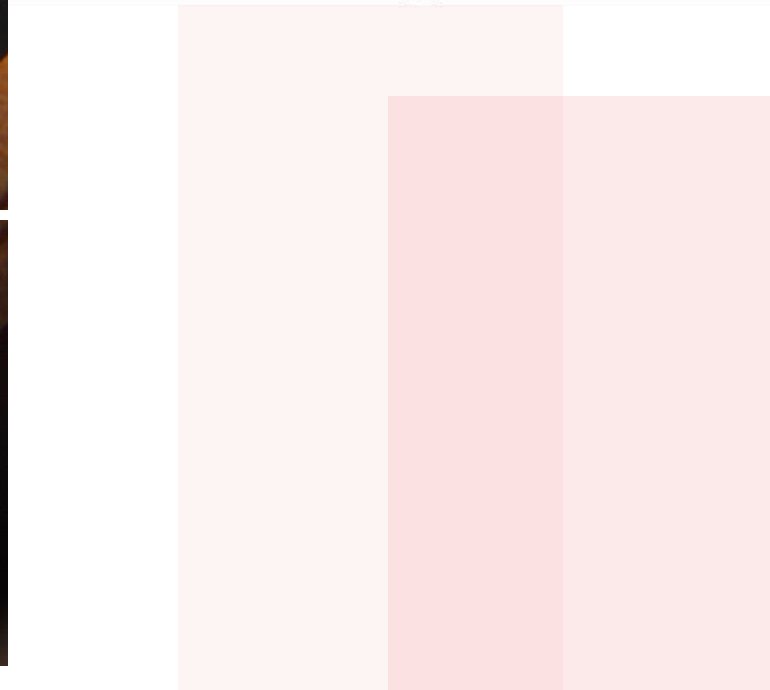
Malaysian Investment Development Authority

Industry4WRD : National Policy on Industry 4.0 and Readiness Assessment

**MALAYSIAN INDIAN NETWORK OF
ENTREPRENEURS ASSOCIATION(1MINE)
Perdana Hall, MIDA**

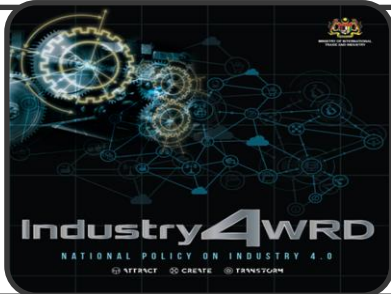
2 August 2019





NATIONAL POLICY ON INDUSTRY 4.0

National Policy on Industry 4.0 : Industry4WRD



Launching

- YAB Prime Minister, Tun Dr. Mahathir Mohamad launched the National Policy on Industry 4.0, known as Industry4WRD on 31 October 2018.



Industry4WRD Readiness Assessment

- One of the action plans under Regulatory Framework
- A platform and mechanism to help manufacturing and related services firms, especially SMEs, assess and develop their Industry 4.0 capabilities



National Goals & Targets for 2025

- Level of productivity per person from RM106,647 by 30%
- Elevate contribution of the manufacturing to the economy from RM254 billion to RM392 billion
- Improvement in Global Innovation Index ranking from 35 to top 30
- Increase the number of high-skilled workers in the manufacturing sector from 18% to 35%

National Policy on Industry 4.0 : Industry4WRD



Attract

Attract stakeholders to Industry 4.0 technologies & processes



Create

Create the right ecosystem for Industry 4.0 technologies to be adopted and to nurture innovations









Transform

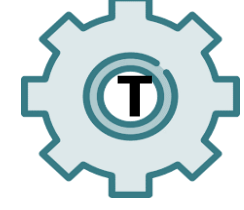
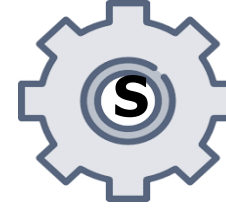
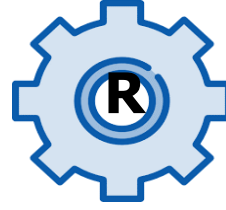
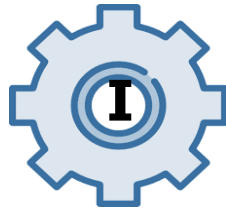
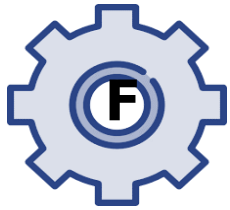
Transform capabilities of the manufacturing industry to be Industry 4.0-ready



Industry4WRD : Focus Sectors

Electrical & Electronics	Machinery & Equipment	Chemical	Medical Devices	Aerospace	Other Sectors
					
The Electrical & Electronics industry is the leading industry in Malaysia's manufacturing sector, contributing significantly to the country's exports and employment	The Machinery & Equipment industry is one of the key areas for growth and development, focusing on high value-added and high technology M&E	The Chemical industry is one of the catalytic industries in the country with rapid growth due to the availability of oil and gas as a feedstock	The Medical device industry spans an extremely wide range of industries from rubber and latex, plastics, machinery and engineering support and electronics	The Aerospace industry has been designated as a strategic sector with high growth potential in the country's industrialisation and technological development programs	
Subsectors:	Subsectors:	Subsectors:	Subsectors:	Subsectors:	
<ul style="list-style-type: none"> Electronic components Consumer electronics Industrial electronics Electrical products 	<ul style="list-style-type: none"> Specialised M&E for specific industries General industrial M&E, parts and components Power generating M&E Machine tools 	<ul style="list-style-type: none"> Petroleum products & petrochemicals Plastic products Rubber products Chemical & chemical products Oleochemicals 	<ul style="list-style-type: none"> Consumables Surgical instruments, clinical device & implants Healthcare equipment 	<ul style="list-style-type: none"> Engineering & design Aero-manufacturing System integration Maintenance, Repair and Operations (MRO) 	<ul style="list-style-type: none"> Automotive Transport Textiles Pharmaceutical Metal Food processing Services

Industry4WRD : The Strategic Enablers



Financing & Outcome-based Incentives

Strategy F1:

Provide outcome based incentives, including tax incentives to encourage investments in, and adoption of, industry 4.0 technologies & processes.

Strategy F2:

Introduce dynamic and innovative financial products to encourage adoption of Industry 4.0 technologies and processes.

Enabling Ecosystem & Efficient Digital Infrastructure

Strategy I1:

Strengthen the digital connectivity in and between industrial, education and training hubs to remove connectivity bottlenecks in adopting industry 4.0 technologies.

Strategy I2:

Enhance the digitalisation and integration of government processes and infrastructure along supply and manufacturing value chains.

Strategy I3:

Involve services providers for industry 4.0 and link them to manufacturing firms to help implement technologies, processes and skill development.

Regulatory Framework & Industry Adoption

Strategy R1:

Increase awareness of the need, benefits and opportunities of Industry 4.0 technologies and business processes among manufacturing firms

Strategy R2:

Create a platform and mechanism to help manufacturing firms, especially SMEs, assess and develop their Industry 4.0 capabilities

Strategy R3:

Improve data integrity, standards, sharing, and security to facilitate seamless integration of manufacturing value chains and to support intra-ministerial coordination for effective Industry 4.0 programs.

Upskilling Existing & Producing Future Talents

Strategy S1:

Enhance the capabilities of the existing workforce through national development programmes specially designed for specific manufacturing sectors and support re-skilling and upskilling.

Strategy S2:

Ensure the availability of future talent by equipping students with the necessary skillsets to work in the Industry 4.0 Environment.

Access to Smart Technologies & Standards

Strategy T1:

Establish digital/technology labs and collaborative platforms, especially public-private partnerships (PPP), to create awareness and understanding, foster the adoption of new technologies, and facilitate the transfer of knowledge

Strategy T2:

Establish and implement standards for interoperability, quality and safety for Smart manufacturing and Industry 4.0 technologies.

Strategy T3:

Intensify Research, Innovation, Commercialisation and Entrepreneurship (RICE) programmes and activities in specific Industry 4.0 technologies and processes that support and advance priority sectors.

A decorative network diagram in the top-left corner of the slide. It features a complex web of interconnected nodes and lines. The nodes are represented by circles of varying sizes and colors, including light gray, dark gray, and blue. Some nodes are highlighted with a blue outline. The lines connecting the nodes are thin and gray, creating a mesh-like structure.

Industry4WRD

Readiness Assessment and Online Application

A decorative network diagram in the bottom-right corner of the slide. It features a complex web of interconnected nodes and lines. The nodes are represented by circles of varying sizes and colors, including light gray, dark gray, and blue. Some nodes are highlighted with a blue outline. The lines connecting the nodes are thin and gray, creating a mesh-like structure.

Industry4WRD Readiness Assessment

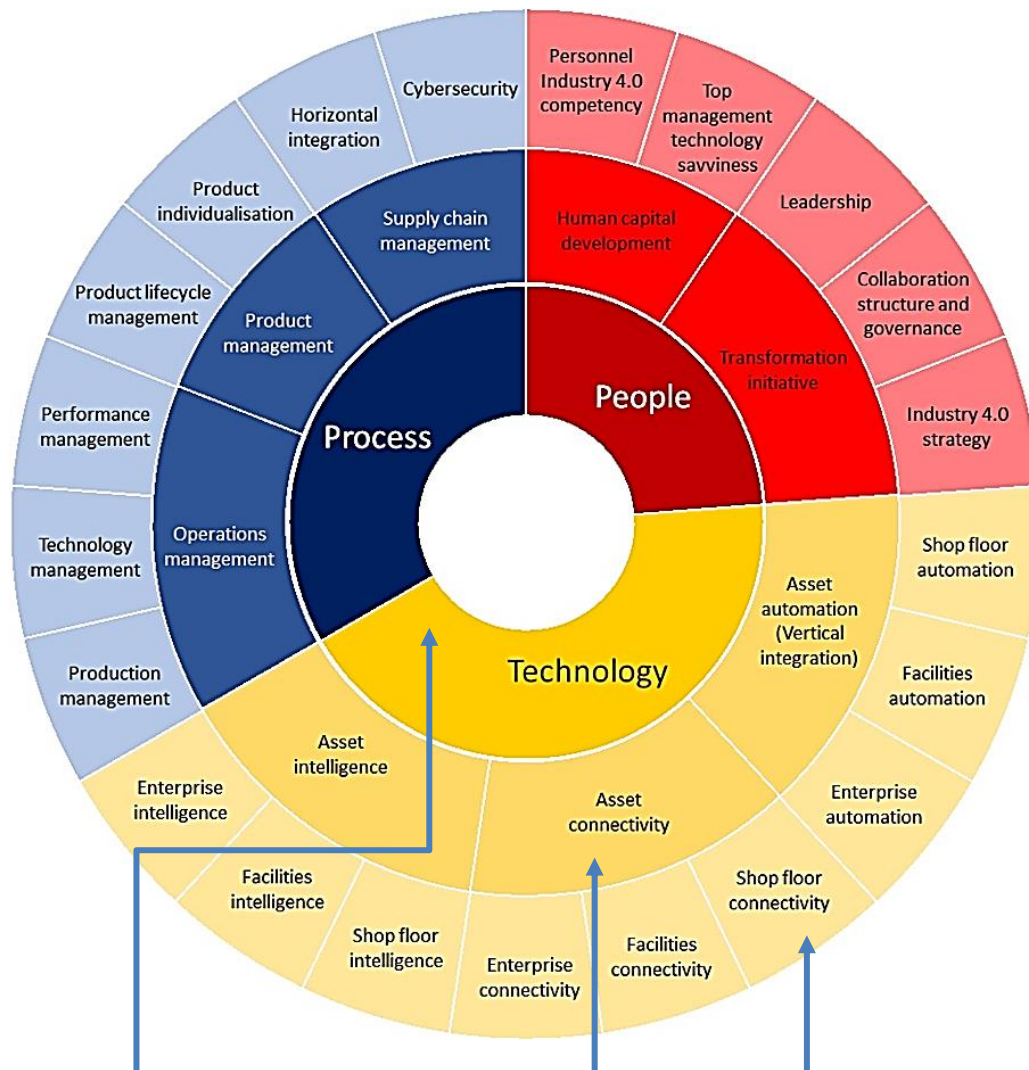


Industry4WRD is aimed to...

1 Assess	2 Gaps	3 Improve	4 National baseline	5 Pre-requisite
Provide indication on the level of readiness for an organization in the adoption of Industry 4.0 elements	To identify areas of improvements in each dimension	To recommend further actions to improve efficiency and productivity	To develop industries adoption baseline	Proposed as pre-requisite for future industry 4.0 incentive

*Register for online application : <http://www.miti.gov.my/industry4wrld>

Industry4WRD Readiness Assessment Criteria



3 Shifts Factors **8** Thrusts **21** Dimensions



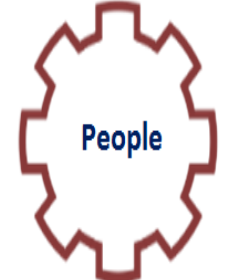
Focuses on the **application** of intelligent, connected and automated technologies at **3 different layers**

50%



Focuses on the **management system** involved in running business **operations, supply chain & product lifecycle**

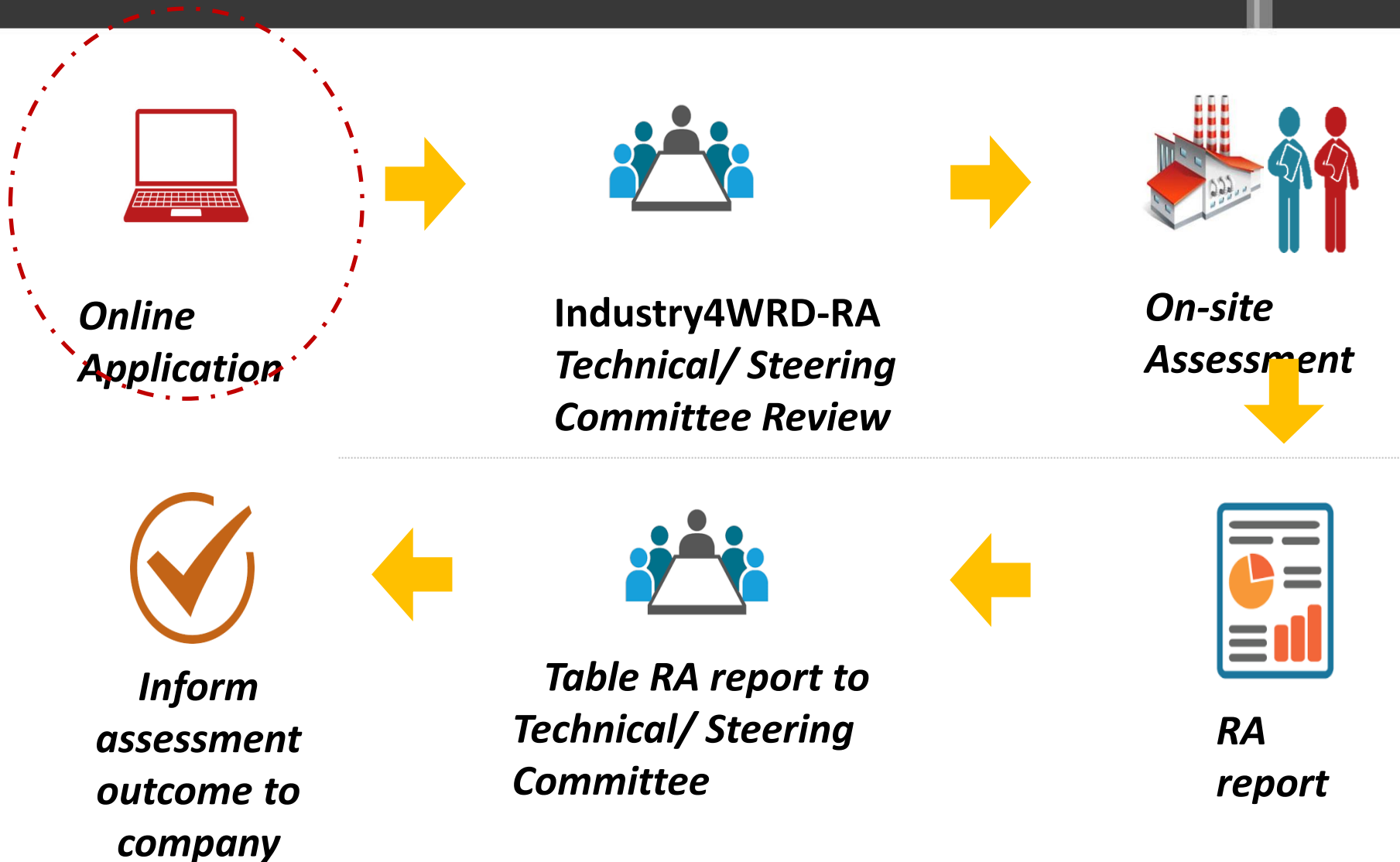
30%



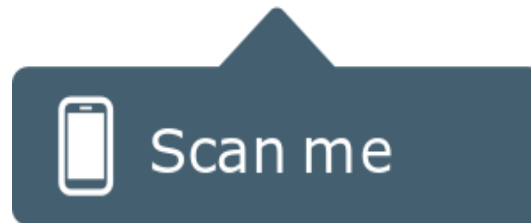
Focuses on the **people** and the entire organisation by emphasising on strategies towards having a **suitable** set of **workforce**

20%

Readiness Assessment Process



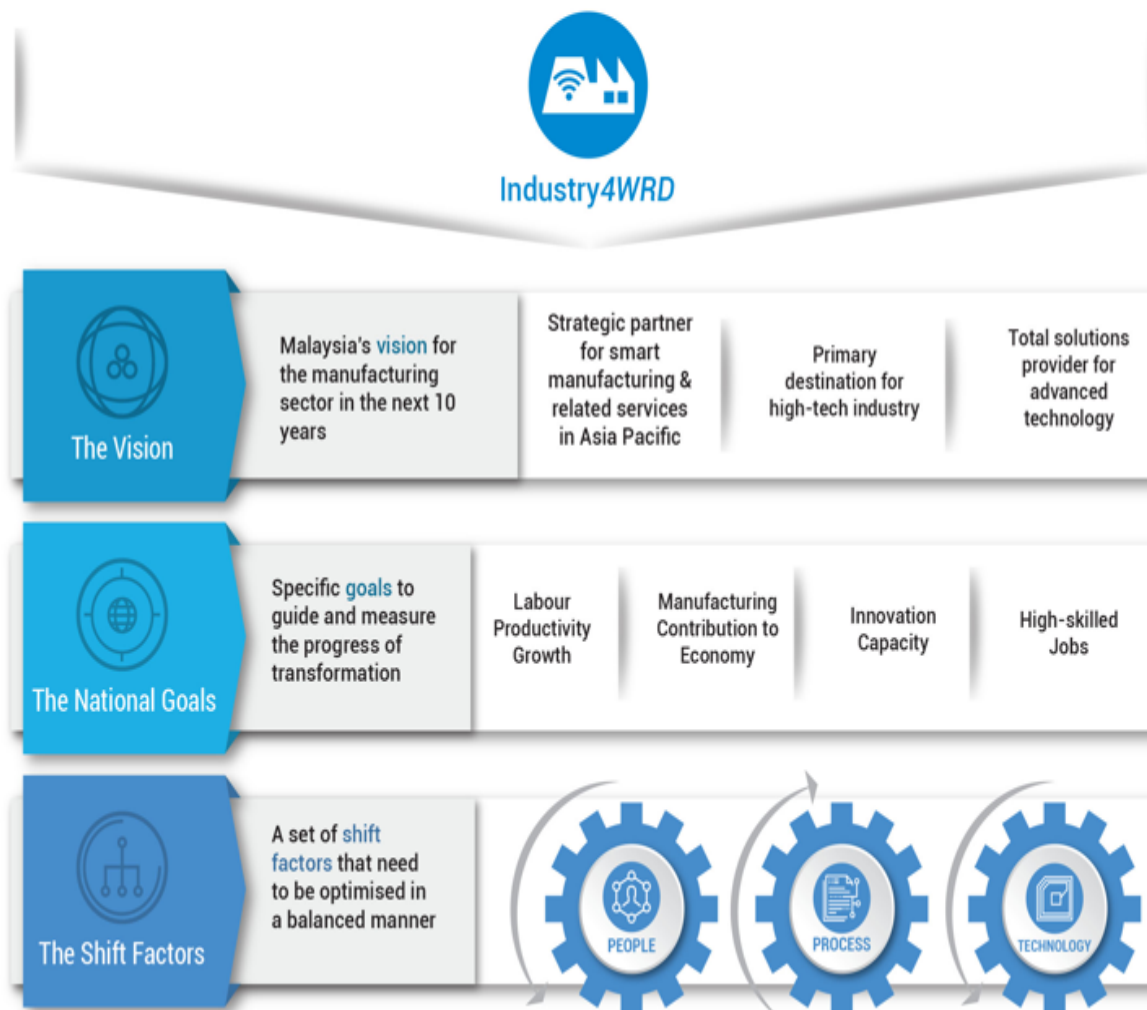
Readiness Assessment – Online Application



<http://www.miti.gov.my/industry4wrd>

Industry4WRD

In response to the Fourth Industrial Revolution (4IR), the Industry4WRD: National Policy on Industry 4.0 was launched on 31 October 2018 to drive digital transformation of the manufacturing and related services sectors in Malaysia. The Policy's framework is as follows:





MALAYSIA

CUSTOMS
(PROHIBITION OF
IMPORTS) ORDER
FOR SELECTED
CONSTRUCTION
MATERIALS

LISTS OF
PROMOTED
ACTIVITIES &
PRODUCTS

MALAYSIA AND THE
UNITED NATIONS
FRAMEWORK
CONVENTION ON
CLIMATE CHANGE
(UNFCCC)



The National Goals

Specific **goals** to
guide and measure
the progress of
transformation

Labour
Productivity
Growth

Manufacturing
Contribution to
Economy

Innovation
Capacity

High-skilled
Jobs



The Shift Factors

A set of **shift**
factors that need
to be optimised in
a balanced manner

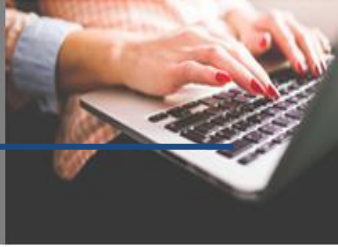
The
Enablers

Specific
enablers that
determine the
strategies,
policies and
action plans



[Click here to download the Policy](#)

[Readiness Assessment](#)[RA - Apply Here](#)[Launching Ceremony](#)[Related Events](#)[Media Gallery](#)[Contact Us](#)



- **Part 1 of 4 – Company Profile and Main activity**
- **Part 2 of 4 – Interest in Industry 4.0**
- **Part 3 of 4 – Technology Know How**
- **Part 4 of 4 – Term of Agreement**

Part 1 of 4 – Company Profile and Main Activity



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MEDIA
ENGAGEMENT

PUBLICATIONS

PROCUREMENT

Industry4WRD Readiness Assessment for Manufacturers



Industry4WRD Readiness Assessment for Manufacturers
Online Application

PART 1 OF 4

1. Company Name : *

2. Company Registration
Number : *

3. Date of
Incorporation : *

4. Company
Representative : *

Name as per IC

5. Designation : *

6. Email : *

yyyy-mm-dd
e.g.: 1996-02-27



7. Tel. No : *

8. Website : *

Please put "N/A" if your company does not have a website.

9. Manufacturing Division
based on 2-digit MSIC-
2008 *

- ☐ 10 - Food products
- ☐ 11 - Beverage
- ☐ 12 - Tobacco products
- ☐ 13 - Textiles
- ☐ 14 - Wearing apparels
- ☐ 15 - Leather and related products
- ☐ 16 - Wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
- ☐ 17 - Paper and paper products
- ☐ 18 - Printing and reproduction of recorded media
- ☐ 19 - Coke and refined petroleum products
- ☐ 20 - Chemicals and chemical products
- ☐ 21 - Basic pharmaceutical products and pharmaceutical preparations
- ☐ 22 - Rubber and plastics products
- ☐ 23 - Other non-metallic mineral products
- ☐ 24 - Basic metals
- ☐ 25 - Fabricated metal products, except machinery and equipment
- ☐ 26 - Computer, electronic and optical products
- ☐ 27 - Electrical equipment
- ☐ 28 - Machinery and equipment n.e.c.
- ☐ 29 - Motor vehicles, trailers and semi-trailers
- ☐ 30 - Other transport equipment
- ☐ 31 - Furniture
- ☐ 32 - Repair and installation of machinery and equipment
- ☐ Others (please specify) :

10. Location (State) : *

-- Please Select --

11. Location (District) : *

Write**N/A****if your company
does not have a
website.**

Part 2 of 4 – Interest in Industry 4.0

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PART 2 OF 4

1. Why does your company want to participate in the Industry4WRD Readiness Assessment (RA)?
(applicants may select more than one option*)*

- ☐ To understand our level of readiness for Industry 4.0 adoption/ digital transformation
- ☐ To use Industry4WRD RA report as reference to draft our plan for Industry 4.0 adoption/ digital transformation

2. Why does your company want to adopt Industry 4.0/ digital transformation?
(applicants may select more than one option*)*

- ☐ To be eligible for government incentives
- ☐ To follow the global trend of Fourth Industrial Revolution
- ☐ To increase level of automation in production
- ☐ To increase level of productivity and quality of products
- ☐ To transform and survive as a manufacturer
- ☐ Others (please specify) :

3. Where does your company stand in the journey of Industry 4.0 adoption/ digital transformation? *

- ☐ We are in the phase of understanding Industry 4.0 adoption/ digital transformation.
- ☐ We are trying to implement Industry 4.0 adoption/ digital transformation but do not have a proper plan yet.
- ☐ We are drafting a plan for Industry 4.0 adoption/ digital transformation.
- ☐ We have a plan for Industry 4.0 adoption/ digital transformation but do not have sufficient financial resources to commence its implementation.
- ☐ We are implementing Industry 4.0 adoption/ digital transformation based on our plan.

4. Does your company have an annual budget allocated for operational expenses and capital investment to undertake Industry 4.0 adoption/ digital transformation? *

- ☐ No, we do not have any.
- ☐ Yes, we have an annual budget allocation which is not specific to operational divisions.
- ☐ Yes, we have annual budget allocation for production personnel training.
- ☐ Yes, we have annual budget allocation for machinery upgrades.
- ☐ Yes, we have annual budget allocation for production personnel training and machinery upgrades.
- ☐ Yes, we have annual budget allocation planned specifically for Industry 4.0 adoption/ digital transformation.

PART 3 OF 4

Part 3 of 4 – Technology Know How

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PART 3 OF 4

1. Which of the following **technology** or **solution** is adopted by your company currently? (please check where applicable)

Production*

- ☐ Enterprise Resource Planning (ERP)
- ☐ Supply Chain Management (SCM)
- ☐ Manufacturing Execution Systems (MES)
- ☐ Supervisory Control and Data Acquisition (SCADA)
- ☐ Programmable Logic Controller (PLC)
- ☐ Distributed Control System (DCS)
- ☐ Computerized Numerical Control (CNC)
- ☐ Computer-Aided Manufacturing (CAM)
- ☐ Automation (robotics, conveyor belts, lifts, automated-guided vehicles (AGV), etc.)
- ☐ Quality Control (scanners, vision inspection, CCTV, etc.)
- ☐ Additive Manufacturing (3D Printing, rapid prototyping, etc)
- ☐ None
- ☐ Others (please specify) :

Inventory*

- ☐ Inventory Management
- ☐ Warehouse Management
- ☐ Automated Material Handling
- ☐ Barcode
- ☐ RFID
- ☐ None
- ☐ Others (please specify) :

Digital*

- ☐ Internet-of-Thing (IoT)
- ☐ Big Data Analytic
- ☐ Artificial Intelligence
- ☐ None
- ☐ Others (please specify) :

Part 4 of 4 – Term of Agreement

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PART 4 OF 4

1. Would you like to register for the Industry4WRD Readiness Assessment (RA)? *

☐ Yes☐ No

2. There are two types of incentives available for companies to undertake Industry4WRD RA:

- i. Government-funded Industry4WRD RA (only available for SMEs); and
- ii. Tax deduction on expenditure of Industry4WRD RA fees of up to RM27,000.

Would you like to apply for the Government-funded Industry4WRD Readiness Assessment? *

☐ Yes☐ No☐ Not applicable

I certify that the information contained in this application is correct to the best of my knowledge. I understand any falsification may render this application void and will be cause for rejection, whenever discovered. *

☐ Yes

I'm not a robot



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Readiness Assessment – Submission Ticket

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Industry4WRD Readiness Assessment for Manufacturers

Submission Ticket : #9221-90

Your application has been received. Thank you.

[Click here to print the form](#)[Back](#)

PUBLICATIONS

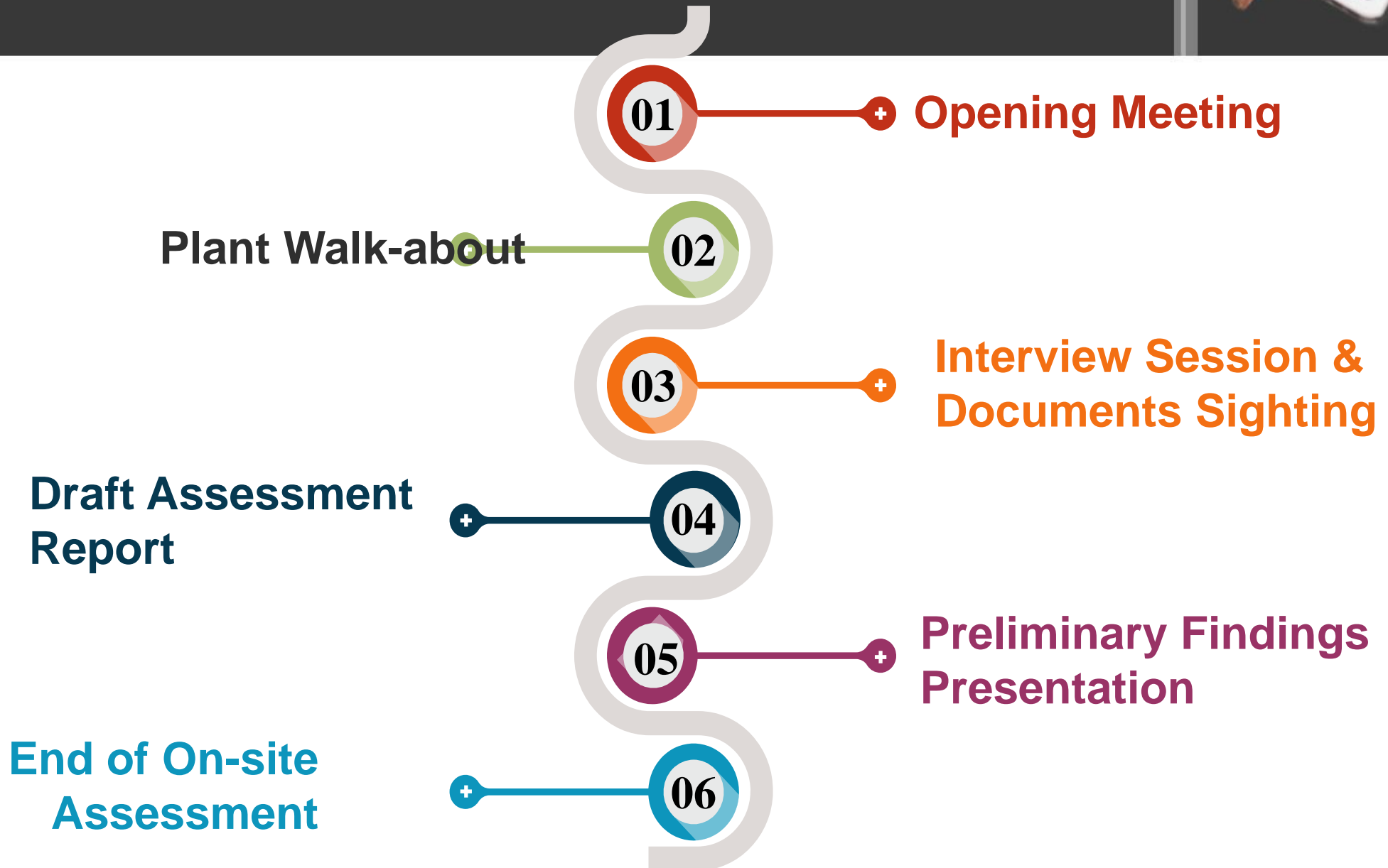
PROCUREMENT

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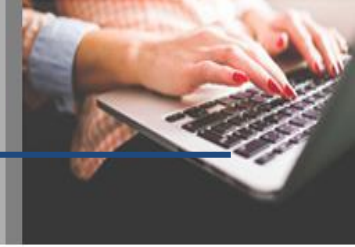
Contact Us

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50480 Kuala Lumpur, Malaysia. | Location
Tel : 603-8000 8000 | Fax : 03-6206 4693 |

On-site Assessment



Assessment bands for Shift Factor : Technology



Shop floor intelligence dimension

BAND

0

None

Shop floor assets are **not on any electronic or digital system**



1

Computerised

Shop floor assets apply **pre-programmed logic to perform tasks** on its equipment, machinery and computer-based system



2

Diagnostics

Shop floor assets are **connected with network sensors and devices** which allows the **integrated system to identify and notify critical problem** and inform **possible causes**



3

Predictive

Shop floor assets can **predict** and notify critical problem and inform possible cause



4

Adaptive

Shop floor assets can predict, notify critical problem, and **independently execute decision** to optimise performance and resource efficiency. Assets are able to undertake corrective measures



Assessment bands for Shift Factor : Process



Production management dimension

BAND

0

Unstructured

Production processes are done **manually**. No dedicated machine or equipment to run production process. **No operation management system** in place.



1

Dedicated but unstructured

Dedicated machine or equipment are allocated to run production process, but manufacturing/quality parameters are unstructured.



2

Dedicated

Dedicated machine or equipment are allocated to run production process and manufacturing/**quality** parameters are **controlled**.



3

Reconfigurable

Dedicated manufacturing cells with predetermined **reconfigurable** machines or equipment are allocated to run continuous production process.



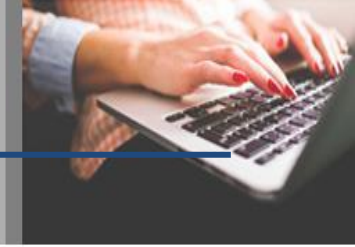
4

Flexible

Manufacturing cells are capable of utilising any predetermined machine or equipment for the purpose of continuous production. **Flexible** manufacturing systems **are highly automated**. Machines are **fully integrated** at the shop floor and at enterprise level. These management systems have **analytical and adaptive** capabilities.



Assessment bands for Shift Factor : People



Leadership dimension

BAND

0

Unfamiliar

Management is **unfamiliar with the concept** of the Fourth Industrial Revolution and/or Industry 4.0 product requirements, and/or technology trends. (Traditional leaders)



1

Reactive

Management is **aware** of the changes brought by the Fourth Industrial Revolution and/or Industry 4.0 but adopts a **wait and see** approach of peers before responding or depend on external parties before developing initiatives.



2

Beginner

Management have **strategic perspective and critical analysis** of opportunities and threats posed by the Fourth Industrial Revolution and/or Industry 4.0. Have plans to be early adopters. (Fast follower)



3

Strategist

Management **understands application of latest technology and trends**. Management has a sustainable **plan for early adoption** which is efficiently organised and resources coordinated to ensure a successful implementation. (Pace setter)



4

Flexible

Management can **independently adapt and apply its organisational transformation framework** based on changing needs and technology trends, with a clear vision for Industry 4.0. Sustainable implementation plan is continuously reviewed and monitored. Management is actively engaged with each personnel group.



Scoring and Readiness Profile

SCORE READINESS PROFILE GENERAL DESCRIPTION



0%
- 20%

○ **Conventional** Operation remains “as is” with no intention or initiative into Industry 4.0 adoption

21 %
- 40 %

○ **Newcomer** Has interest to pursue Industry 4.0 but with none or very minimal efforts or initiatives

41 %
- 60 %

○ **Learner** Has interest to pursue pilot line Industry 4.0 adoption in operation, with existence of planning and strategies, efforts or simple and patches of initiatives being implemented. Ready for some system adoption

61 %
- 90 %

○ **Experienced** Has pursued small to medium scale Industry 4.0 adoption initiatives in operation, horizontal integration and ready for large scale system adoption

91 %
- 100 %

○ **Leader** Has implemented large scale Industry 4.0 adoption initiatives (company-wide) and system integration

Report Structure



Company Profile

Company information including name of organization, product & services, production capacity, contact person



Assessment Findings & Opportunity for Improvement

Point scored for 21 dimensions, strengths and opportunity for improvement



Classification of Organization based on its Readiness Level

Overall score and readiness profile



Assessment Summary

Highlight of pain points in relation to Industry 4.0



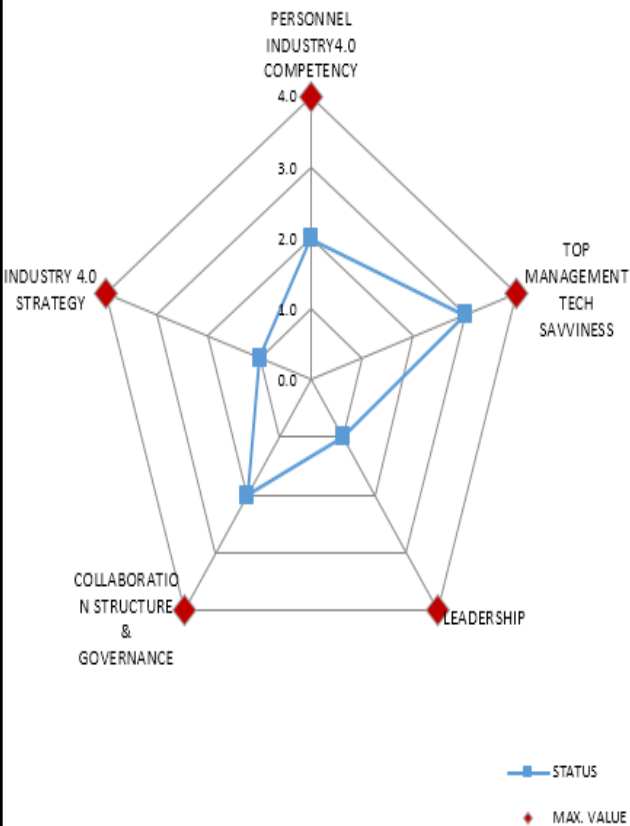
Proposed Action Plan

List of possible action plan to address the pain points

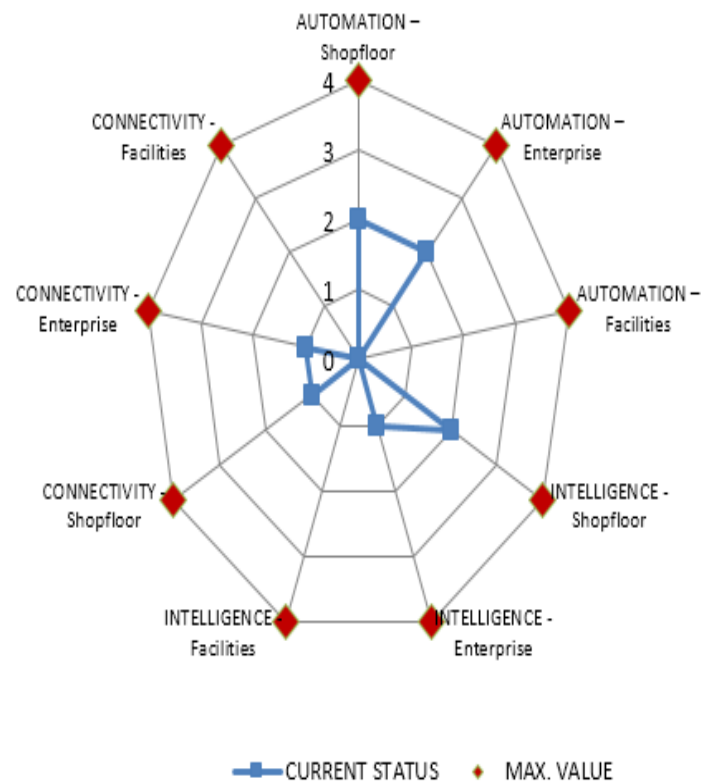
Snapshot of Shift Factor Scoring



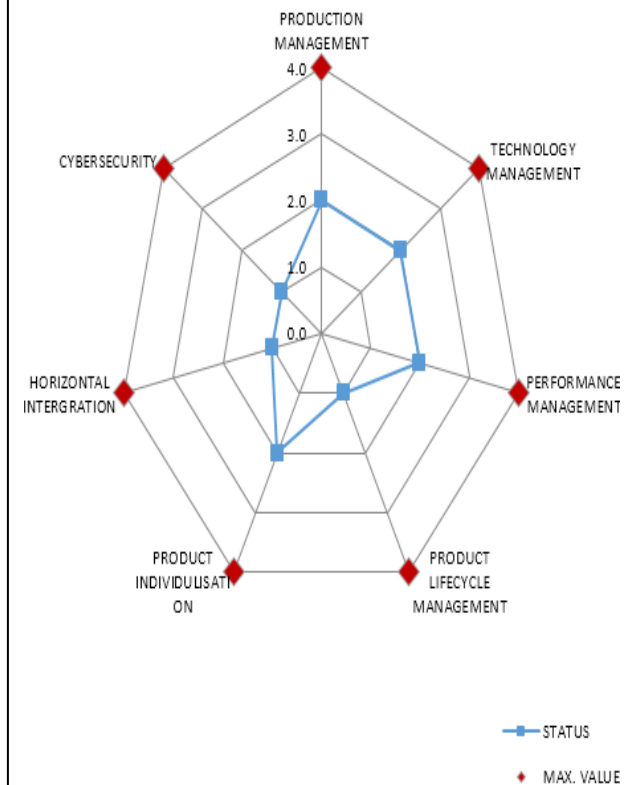
People (20%)



Technology (50%)

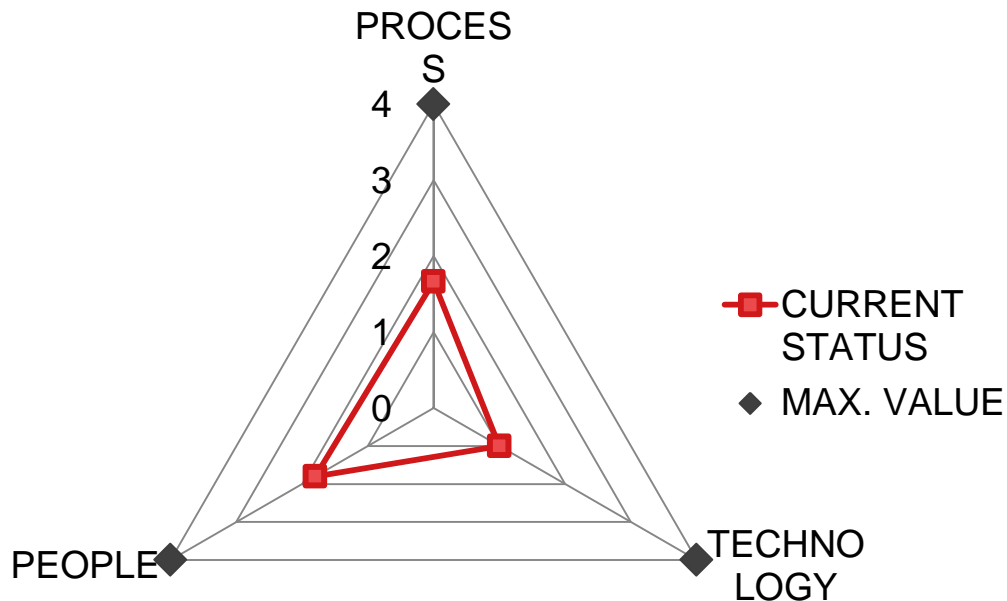


Process (30%)



Report Summary

Company scored overall 34%

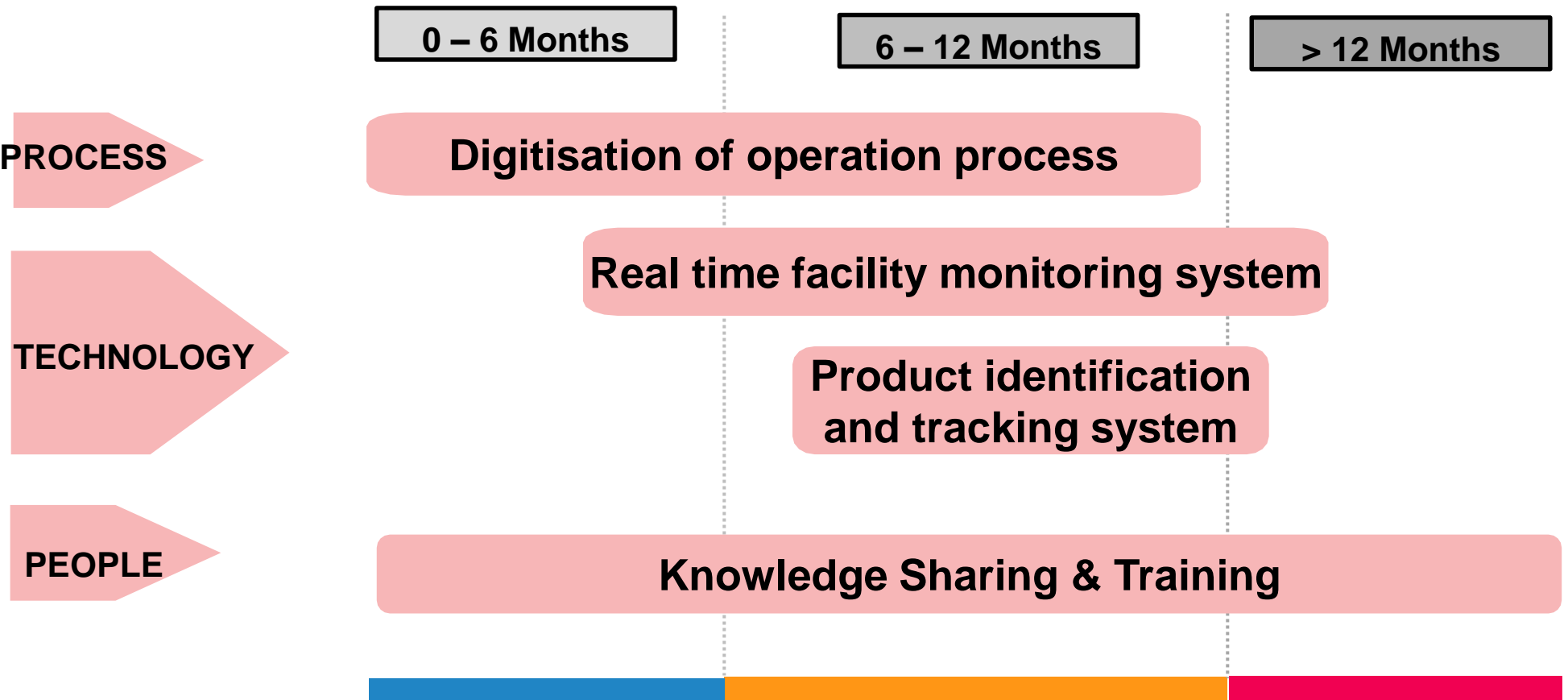


Readiness Profile	Points
Conventional	0 %-20 %
Newcomers	21 %-40 %
Learners	41 %-60 %
Experienced	61 %-90 %
Leaders	91 %-100 %

Assessment Summary:

- Overall the company has experience in terms of strategy and technology moving towards Industry 4.0 but currently their focus is on 3 major areas of improvement; product quality, production bottleneck and marketing & branding.
- Currently, some of the machines are Industry 4.0 ready but not fully exploited, due to their priority areas as mentioned. In terms of strategy, they have technology and business roadmaps which states their vision towards becoming an IPO company in 2022.

Snapshot Proposed Action Plan



CONTACT US:

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www.mida.gov.my

Opening hours:
Monday - Friday
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SSM NATIONAL CONFERENCE 2019

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To assist investors who are looking for local service providers



To promote and encourage the utilisation of local service providers for investment projects



To facilitate linkages programmes by MIDA or other agencies

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