



MALAYSIA PRODUCTIVITY CORPORATION

**DRIVING PRODUCTIVITY
OF THE NATION**

**E&E TECHNOLOGY ADOPTION MENTORING (EETAM)
MENTORING MODULE 4**

6th November 2020

Reviewed and approved

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Objective

Comprehensive programme to help firms assess their capabilities and readiness to adopt Industry 4.0 technologies and processes.

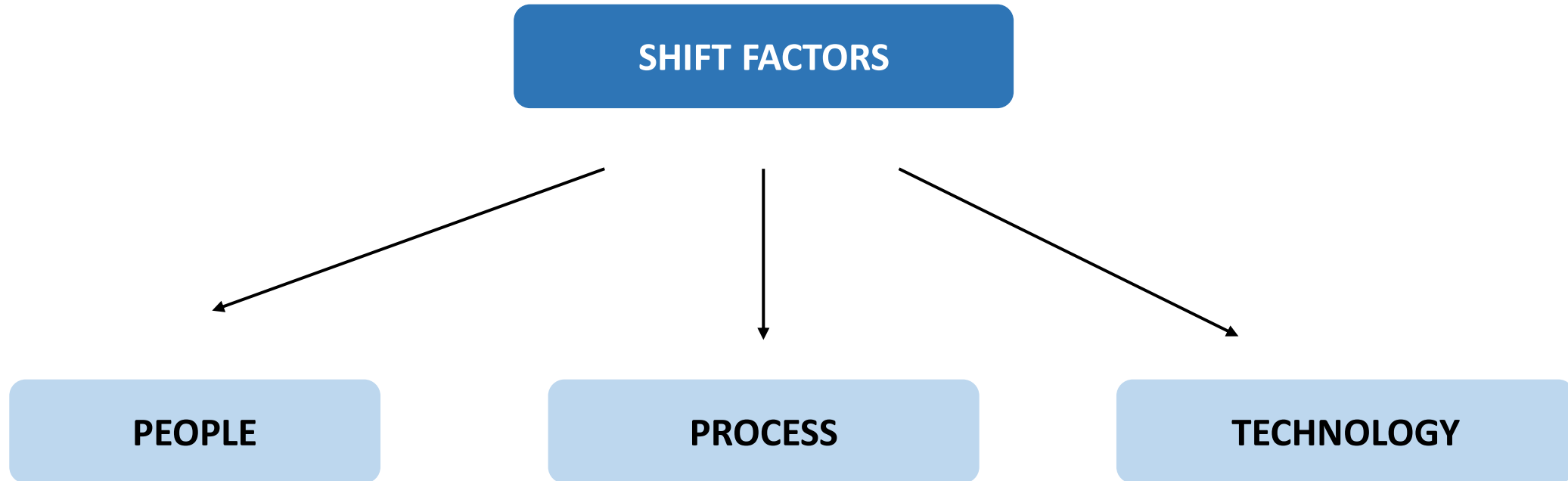
Outcomes

- Determine their state of readiness in the adoption of Industry 4.0 technologies;
- Identify the gaps and areas of improvement for Industry 4.0 adoption as well as opportunities for productivity improvement and growth; and
- Develop feasible strategies and plans to perform outcome-based intervention projects.



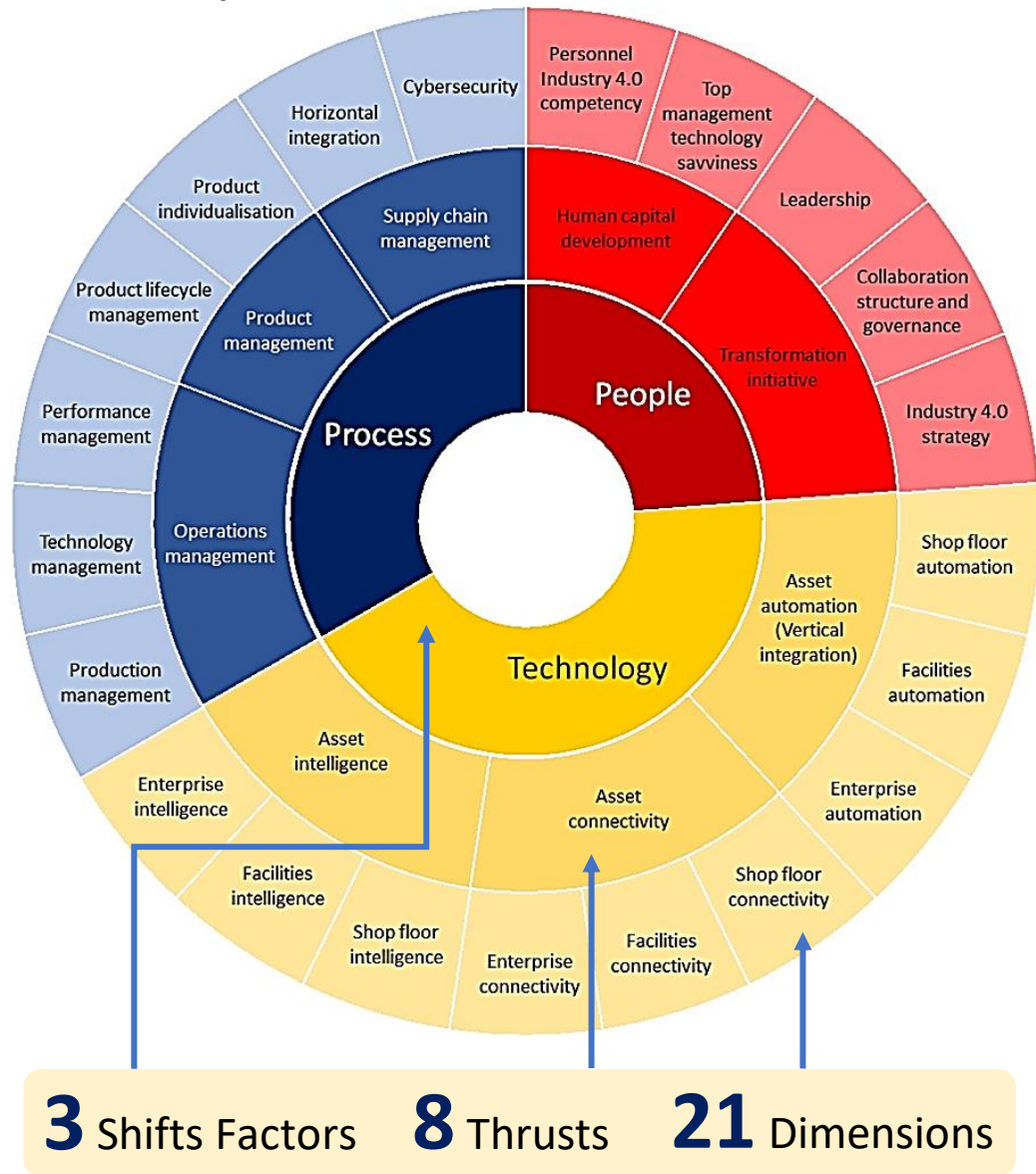
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The Three Shift Factors



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Industry4WRD Readiness Assessment Criteria



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%

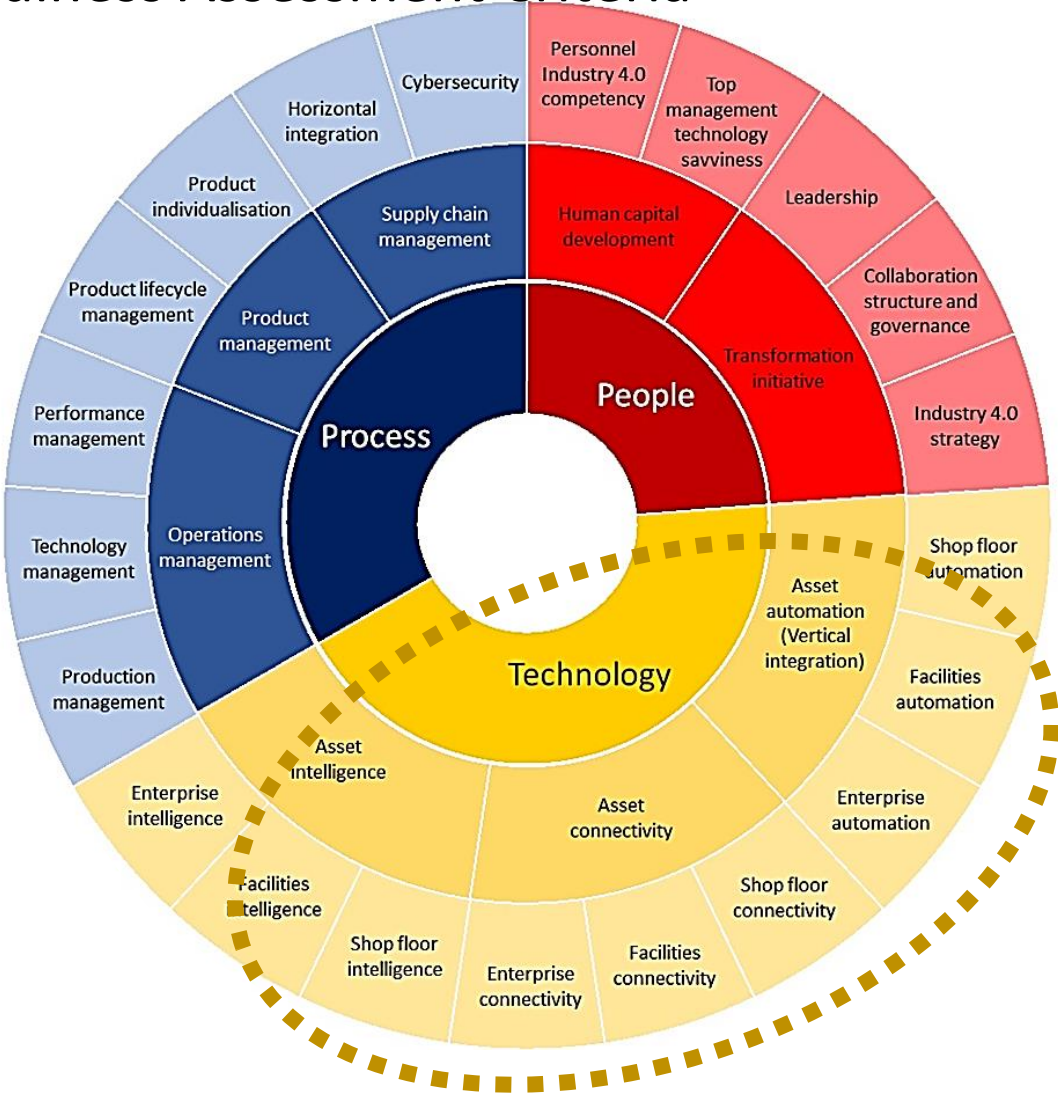


Focuses on the **people** and the entire organisation by emphasising on strategies towards having a **suitable** set of **workforce**

20%

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Industry4WRD Readiness Assessment Criteria



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

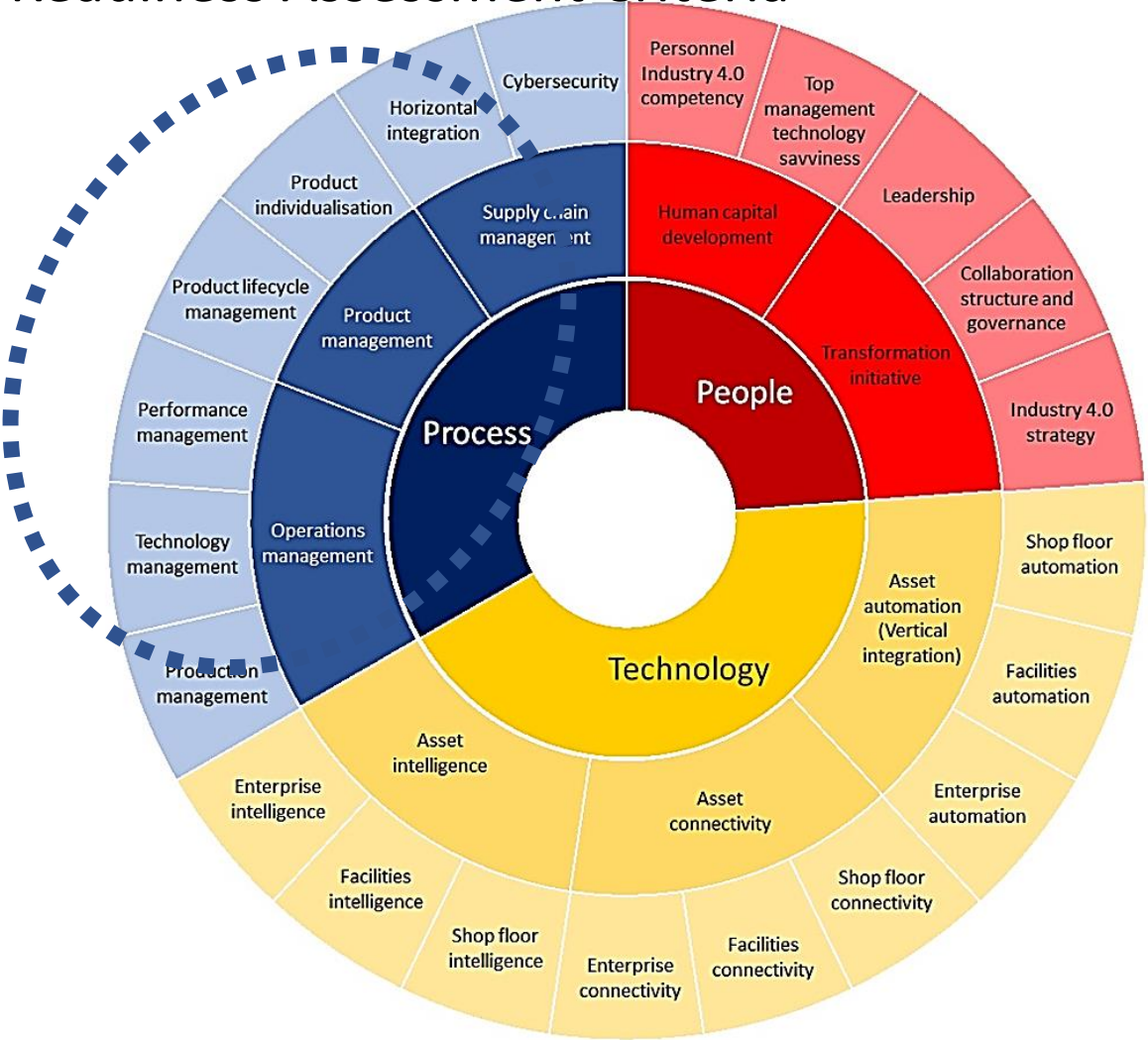


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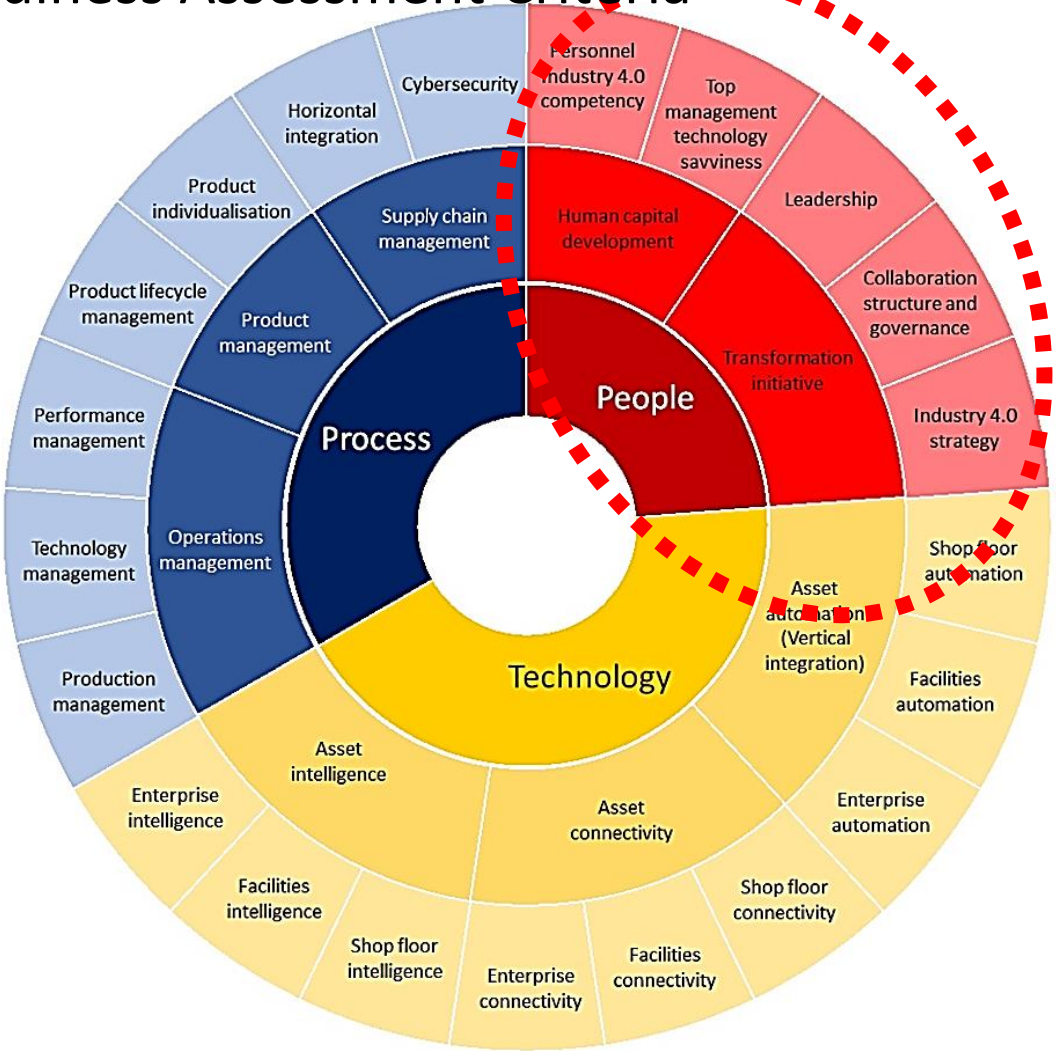
Industry4WRD Readiness Assessment Criteria



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

30%

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



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

20%

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Readiness Assessment Process



Readiness Assessment Process



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Scorecard



SCORECARD

Readiness profile	Percentage scored	General descriptions
Conventional	0 % to 20 %	Operation remains "as is" with no intention or initiative to embark on Industry 4.0 initiative.
Newcomer	21 % to 40%	Have interest to pursue Industry 4.0 but with none or very minimal efforts.
Learner	41 % to 60 %	Have interest to pursue pilot project for Industry 4.0 in operation. Planning and strategies, efforts either simple or scattered initiatives exists. Ready for minor system adoption.
Experienced	61 % to 90 %	Have undertaken small to medium scale Industry 4.0 initiatives in operation as well as horizontal integration. Ready for major system adoption.
Leader	91 % to 100 %	Have implemented large scale Industry 4.0 initiatives (company-wide) and system integration.



People

Thrust 1: Transformation Initiative

- Dimension 1: Leadership and governance
- Dimension 2: Collaboration structure and governance
- Dimension 3: Industry 4.0-related strategy

Thrust 2: Human Capital Development

- Dimension 1: Personnel Industry 4.0 competency
- Dimension 2: Top management's technology savviness

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.



Process

Thrust 1: Operations Management

Dimension 1: Production Management
Dimension 2: Technology Management
Dimension 3: Performance Management

Thrust 2: Product Management

Dimension 1: Product Life Cycle Management
Dimension 2: Product Individualization

Thrust 3: Supply Chain Management

Dimension 1: Horizontal Integration of Enterprise processes
Dimension 2: Cyber Security

Production Management Dimension

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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. This management systems have **analytical and adaptive** capabilities.

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Technology Shift Factor



Technology

Thrust 1: Asset Automation (Vertical Integration)

- Shop floor, Facilities and Enterprise

Thrust 2: Asset Intelligence

- Shop floor, Facilities and Enterprise

Thrust 3: Asset Connectivity

- Shop floor, Facilities and Enterprise

Shop Floor Intelligence Dimension

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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 causes



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



Industry 4.0 Related Incentives

Industry4WRD
Intervention Fund

www.mida.gov.my

Industry4WRD DISF
(Domestic Investment
Strategic Fund)

www.mida.gov.my

Digital Transformation
Acceleration Program
(DTAP)

www.mdec.my/dtap

Automation Capital
Allowance
(Automation CA)

www.mida.gov.my

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Industry4WRD Intervention Fund



Industry4WRD Intervention Fund



What is the incentive ?

It is a matching grant (70:30) on reimbursable basis based on eligible expenditures, up to a **maximum grant of Ringgit Malaysia Five Hundred Thousand (RM500,000.00)**. This fund aims to support SMEs in implementing intervention projects based on the recommendation of Industry4WRD Readiness Assessment (RA) Report on the shift factors of people, process and technology

Industry4WRD Intervention Fund

Who are eligible ?



Manufacturing or manufacturing-related services (MRS) companies incorporated under the Companies Act, 2016



Small & Medium Enterprises (SMEs)

- **Manufacturing:** Sales turnover from RM300,000 to not more than RM50 million and/or employee from 5 to not more than 200
- **MRS:** Sales turnover from RM300,000 to not more than RM20 million and/or employee from 5 to not more than 75



In operation for at least three years in the current business line



Possess a valid business licence and/or Manufacturing Licence



Completed the Government-funded Industry4WRD Readiness Assessment (RA) Programme-*received a report from the Malaysia Productivity Corporation (MPC)*



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Types of funding available



Fund	Reimbursable Basis Ratio	Readiness Assessment (RA)	Equity Ownership	Eligible Activities	Additional Criteria
Existing DISF	50:50	-	Malaysian equity ownership of at least 60%	R&D, Training, Modernisation (outsourcing), Licensing / Purchase New Technology and International Standards / Certifications	-
➔ Industry4WRD DISF	60:40	Undergone RA	Malaysian equity ownership of at least 60%	Activities related to Industry 4.0 [R&D, Training, Modernisation (outsourcing), Licensing / Purchase New Technology and International Standards / Certifications]	Must adopt enabling technologies i.e IoT, AI, Big Data Analytics, etc
Existing HIF	50:50	-	-	R&D and Training	-
➔ Industry4WRD HIF	50:50	Undergone RA	-	R&D, Training and Modernisation (outsourcing) related to Industry 4.0	Must adopt enabling technologies i.e IoT, AI, Big Data Analytics, etc



Objective

A matching grant introduced in 2012, to accelerate the shift of Malaysian-owned companies in targeted industries to higher value added, high technology, knowledge intensive and innovation-based industries.

Scope of Fund



Matching grants on reimbursable basis to cater for expenditure incurred

Activities

R&D activities
carried out in
Malaysia

Training of
Malaysians

Modernisation /
Upgrading
facilities &
equipment

Licensing or
Purchase of
New / High
Technology

Obtaining
International
Standards /
Certifications

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INDUSTRY4WRD DISF: Eligibility Criteria



Incorporated under the Companies Act, 1965 / Companies Act, 2016



New companies in the manufacturing and services sectors with Malaysian equity ownership of at least 60% [a subsidiary, associate or sister company (related company) of an existing company operating in the relevant/related industry with proven track record]



Existing companies in the manufacturing and services sectors with Malaysian equity ownership of at least 60% undertaking reinvestments (expansion / modernization / diversification)



Companies producing promoted products/engaged in promoted activities in the following priority sectors can be considered for DISF



Aerospace



Medical Devices



Pharmaceuticals



Advanced Electronics



Machinery & Equipment



Renewable Energy



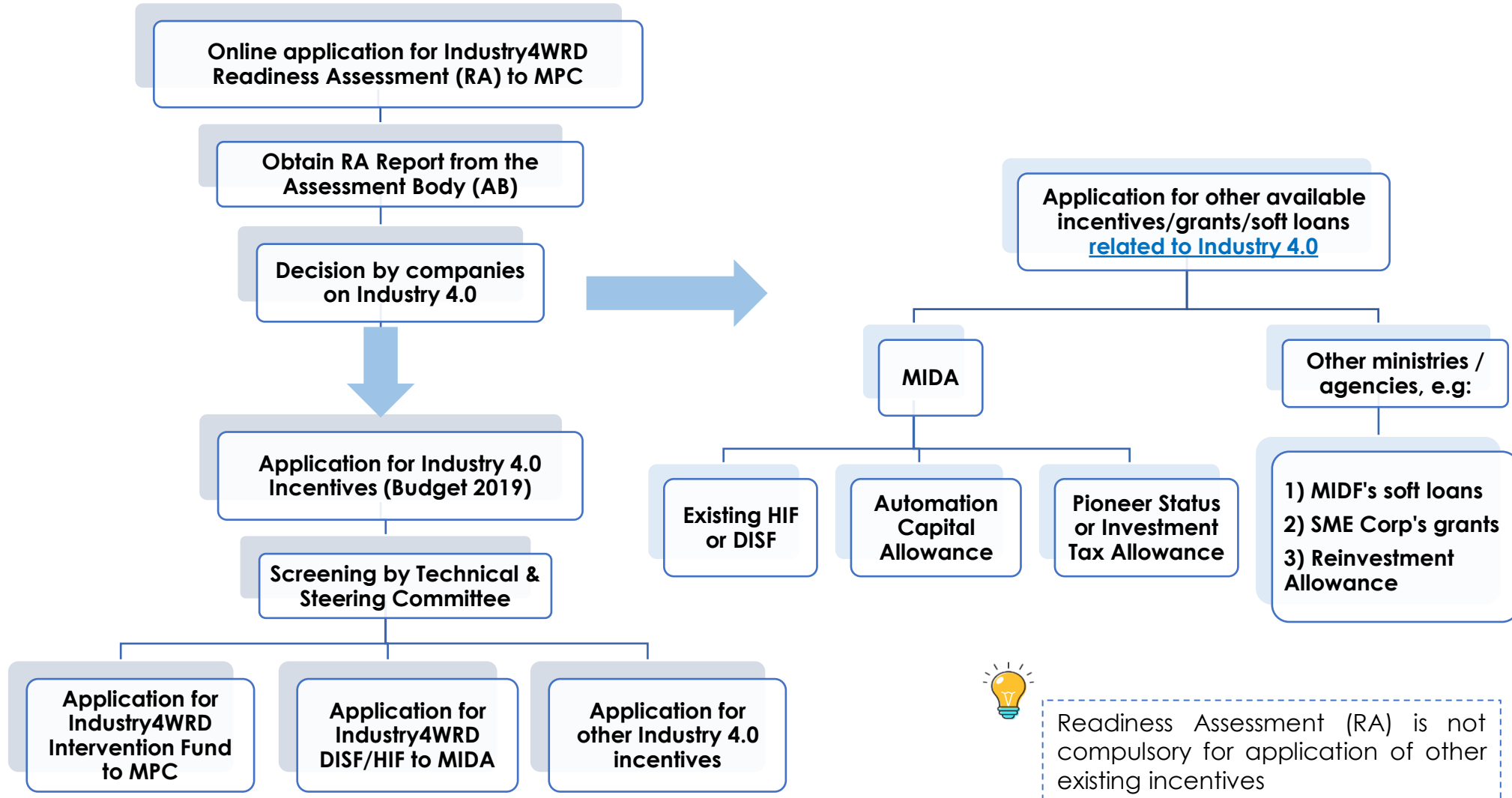
Services Sector



Other industries

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Flowchart for General Grants & Incentives Applications



Thank You



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