



**UNIVERSITI PUTRA MALAYSIA**  
AGRICULTURE • INNOVATION • LIFE

## FINAL REPORT

# Data Analysis on 43 Companies under the Machinery & Equipment Productivity Nexus Virtual Advisory Clinic (MEVAC) Initiative

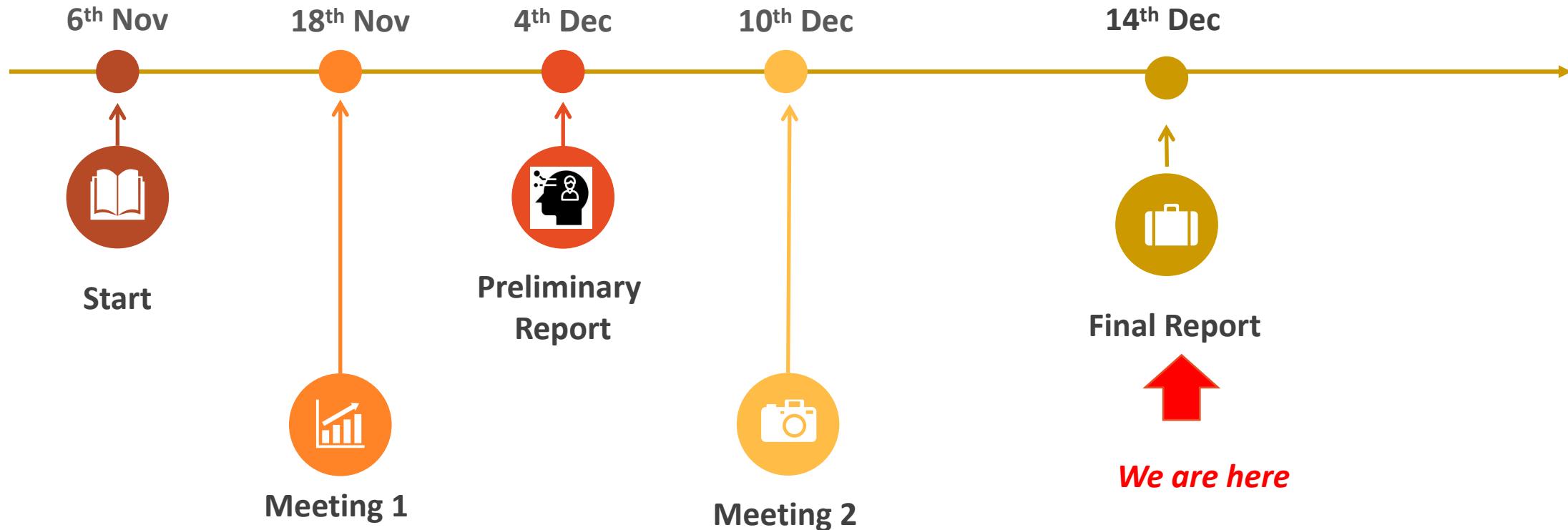
*By:*

*Assoc. Prof. Dr Ng Siew Imm, Serene  
School of Business & Economics*

Disahkan Oleh:

Dr. Mazlina Shafii  
Timbalan Pengarah

# Milestones – Data Analysis



# Method – Thematic analysis

Appendix 2: Report Form

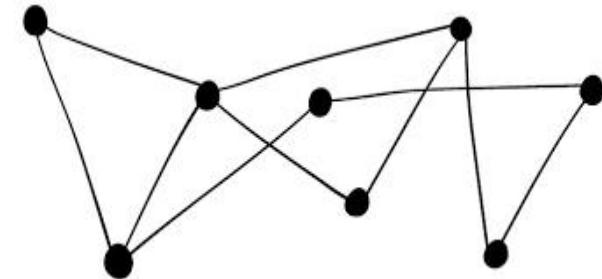
MACHINERY & EQUIPMENT PRODUCTIVITY NEXUS VIRTUAL ADVISORY CLINICS (MEVAC)  
Report for the 1st Session

1 Company's Name	ASIAN NATURE MANUFACTURING SDN BHD
2 Company's Representatives	Mr Ng V Hong A. B.
3 Date & Time of Clinic	1st May 2020 (2pm to 3pm)
4 Name of Advisor	Soo Chum Sum
5 Company's Profile	Business Description and Profile Business Description and Profile
6 Issues / Problem / Challenges	The company faces the following issues: 1. Low Sales 2. High Raw Materials Cost 3. Competitive supply chain cost 4. Operating cash flow
7 Recommendations and Solutions	The following are the recommendations for solution for the problems faced by the company: 1. To increase sales leads by enlarging or doubling the sales team (Currently 21) is recommended to increase sales by 10% per annum. Recommendation to cover more market and increase activity in export market. Recommendation to work or collaborate with MPA to increase market share. 2. Suggest to designate a Vice executive to lead a Quality Improvement Team to prioritize reducing wastages by identifying root causes. Suggest to collaborate with MPA to increase quality of products. 3. Recommend to considerly evaluate material suppliers to bring about cost reduction. 4. Recommend MDA financial assistance/incentive

Prepared by:   
Name: Soo Chum Sum  
Date: 1st May 2020

Reviewed by:   
Name: Dr. Medina Shaffi  
Date: 21st May 2020

Responses



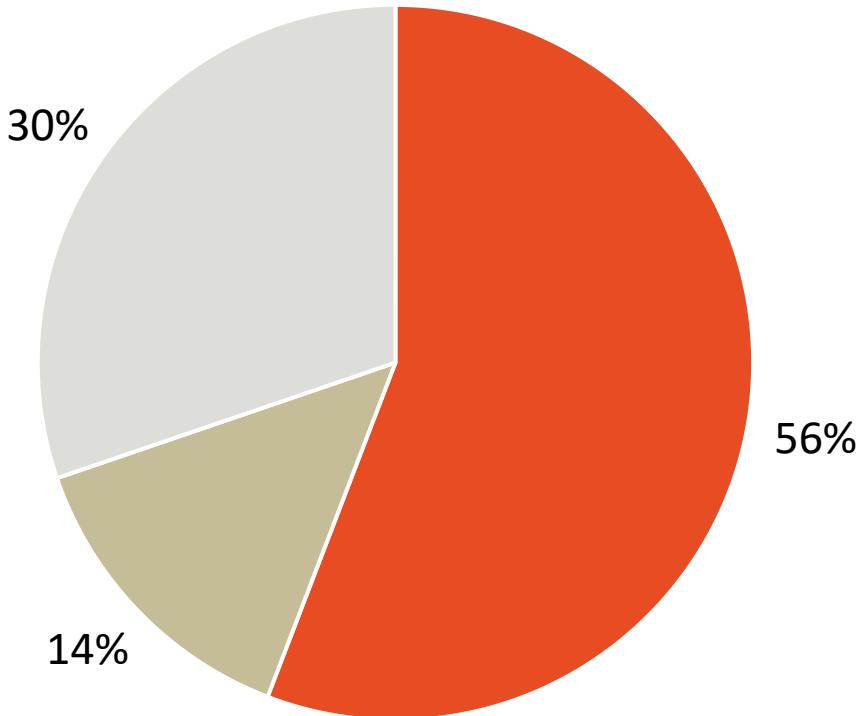
Nodes



Themes

Notes: Iterative process

# Demographic

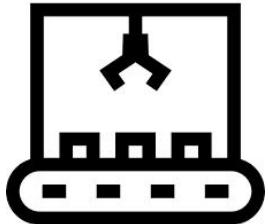


■ Specialised M&E ■ Metal Working ■ General M&E

# Challenges - Themes



*Man*



*Machine*



*Method*



*Supplier*



*Buyer*



*Competitor*



*Material*



*Money*



*Internationalisation*

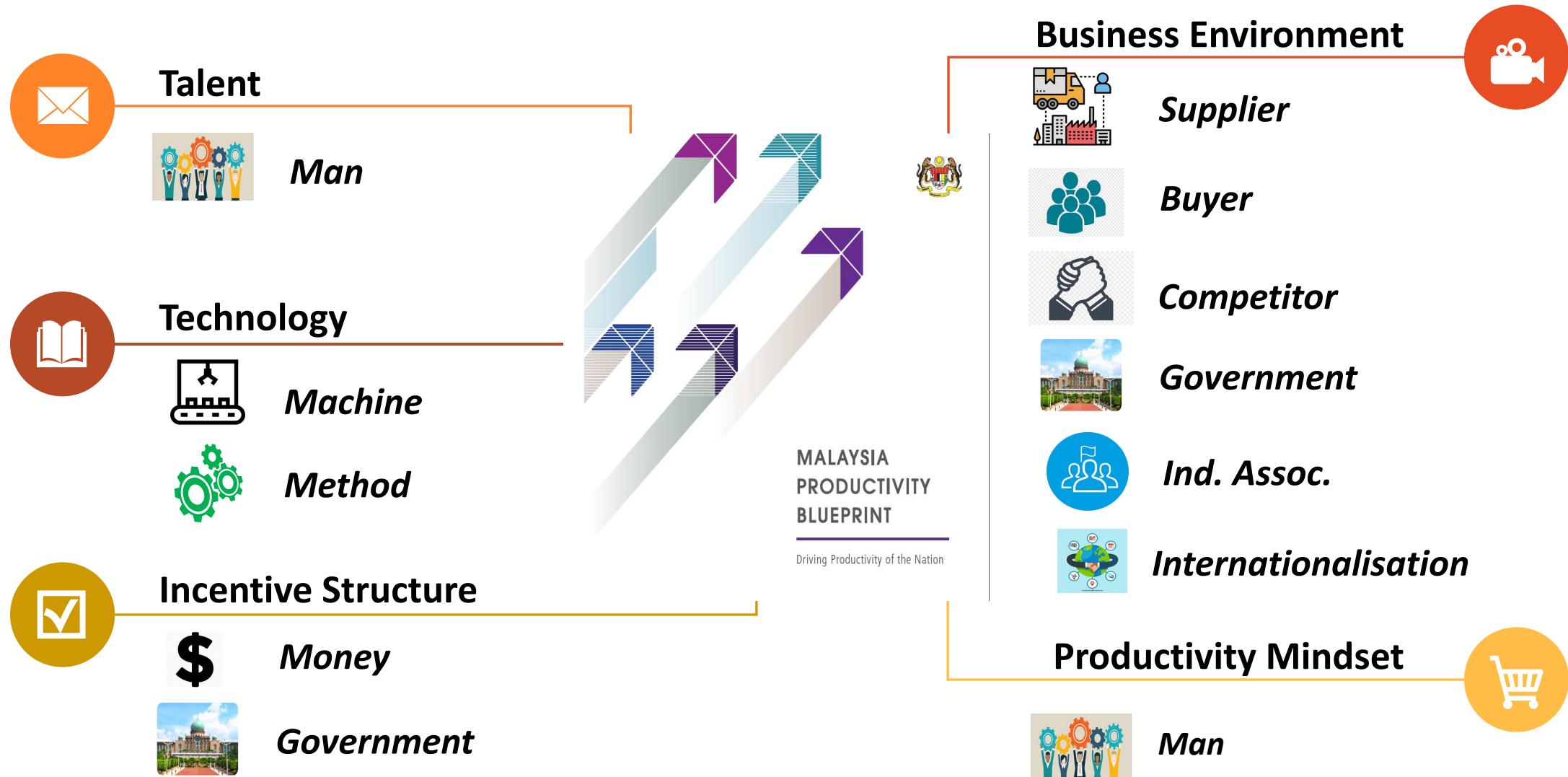


*Government*



*Ind. Assoc.*

# Mapping of challenges found in MEVAC with Malaysia Productivity Blueprint



# Potential Response - Internal



## Man

- Industry – university collaboration
- HRM practices
- Employees' satisfaction survey



## Machine

- Access to financing for upgrade & scheduled maintenance
- Collaboration between firms on production capacity



## Method

- Incentives & financing for automation & technology
- Implement p'vity tools e.g. lean, ISO, etc.
- Creation of shared facilities



## Material

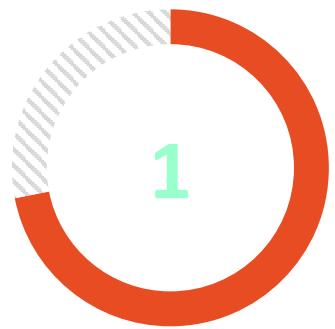
- Reduce wastage
- Co-creation to improve quality & reduce costs
- Sharing of order among M&E to increase bargaining power



## Money

- Explore factoring services
- Leverage crowd funding
- Other financing options e.g. gov't & financial institutions

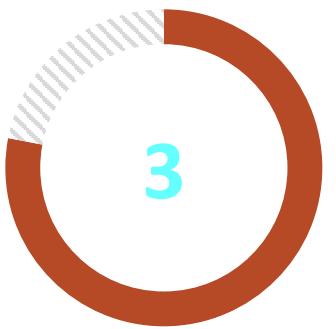
# Potential Response - External



Supplier



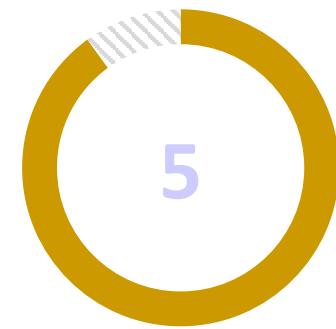
Buyer



Competitor



Internationalisation



Government



Ind. Assoc.

- Shared warehouses
- Collaborate with supplier similar to vendor development programme

- Expansion to international markets
- Work out payment plan

- Form partnerships / alliances
- Create industry cluster

- Ramp-up support for export promotion
- Financing for export

- Online system for incentives application
- Public credit mediation

- Industry cluster
- Develop an app 'LinkME' based on sharing economy concept

# Recommendations

*Cognisance of the importance of taking steps to address the challenges facing the industry, while at the same time taking into account current national priorities and constraints, a more focused recommendations with tangible outcomes is laid out for MPC's consideration on items that are key for providing the leap for the M&E industry*



## Financing

Improve implementation of financing/incentives for industry

## Step-up Internationalisation

Ramp-up export promotion programmes

## Develop Industry Cluster

Focus on developing industry cluster for innovation & internationalisation

## Sharing Economy

Leverage sharing economy concept to address multiple issues facing by the industry via 'LinkM&E App'

## Industry Association

Empower industry association to play more engaging role in assisting the industry

# Recommendations – Financing

## Challenges

- Labour intensive
- Frequent breakdown of machinery
- Long lead time / high backlog
- **Lack of technology & automation**
- **Lack of digitalisation, digital marketing, IT solutions**
- Manual operations
- Lack real-time location inventory tracking
- Lack capability to produce smart products & smart solutions
- Low production capacity & efficiency
- High wastage
- Lack laboratory with facilities to conduct analysis and generate data to support trials
- Lack resources to invest in new technology
- **Lack funding for R&D**
- **Lack financing for expansion plan**
- Lack awareness on government support programme
- **Long & tedious process of applying government incentives**



## Credit Mediation

### Recommendation: Improve implementation of financing/incentives for Covid 19 revenue loss, Machine Upgrade, production system improvement, R&D

- Develop an **online system** to manage application for government incentives for a more effective, efficient, and transparent process with feedback mechanism.
- Fast track financing for **fixed operating costs** e.g. rental and lease.
- Work with Credit Guarantee Corporation Malaysia Berhad (**CGC**) to improve loan accessibility for M&E
- Develop a public **credit mediation initiative** –advising SMEs on documentation requirements to facilitate applications for public & private financing.

# A Centralised Online System for Government Incentives Applications

Initiative	Objective	Scope	Period	Funding	Implementor
A centralised system for government incentives application, aimed to improve productivity of firms	<ul style="list-style-type: none"> <li>To develop an online system to manage application for government incentives for a more effective, efficient, and transparent process with feedback mechanism</li> <li>To provide input to ICCO/MIDA on how system efficiency could enhance productivity more effectively</li> </ul>	<ul style="list-style-type: none"> <li>Currently Incentive Coordination &amp; Collaboration Office (ICCO) at MIDA with its <i>i-incentives portal</i> serves as a central coordinator for all incentives across sectors.</li> <li>To leverage <i>i-incentives portal</i> by adding features i.e. online incentives application.</li> <li>Enable online tracking of application status/ feedback mechanism in a timely manner.</li> <li>To interactively link <i>i-incentives portal</i> with the respective agencies that manage incentives.</li> </ul>	2021 – 2022	RM2,000,000	<p>MIDA/MPC</p> <p><u>Note:</u> Budget under MEPN/MPC</p>

# Fast-Track Financial Aid for SMEs – Germany Case Study

## German government launches temporary aid scheme as part of coronavirus stimulus

*Small and medium-sized companies that were forced to suspend or severely restrict their business activities as a result of the coronavirus pandemic can now receive further liquidity assistance. The temporary aid scheme (Überbrückungshilfe) is a key element of the stimulus package rolled out by the federal government to ensure that Germany emerges from the crisis quickly and at full power.*

### How much temporary aid do recipients get?

The amount of the temporary aid depends on the recipient's fixed operating costs and the extent of the revenue losses suffered.

Revenue loss in the month for which the aid is granted, compared with the same month last year	Amount of the temporary aid
Between 40% and 50%	40 % of fixed costs
Between 50% and 70%	50 % of fixed costs
More than 70%	80 % of fixed costs

- Eligible fixed costs include rents and leases, financing costs, other fixed costs, costs for apprentices, and real property tax.
- Personnel costs for staff that cannot be placed under the short-time working scheme can be claimed at a flat rate of 10% of fixed costs.
- **The maximum amount of the temporary aid is €50,000 per month for a period of up to three months.**
- Businesses with up to five employees can receive up to €3,000 per month for up to three months, while businesses with up to ten employees can receive up to €5,000 per month for up to three months.

# Fast-Track Fixed Operating Costs Aid to M&E Firms – Leverage on Penjana Model



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TRENDING NOW | Budget 2021 highlights | Economic Recovery Plan | The Edge Covid-19 funds

MALAYSIA | CORPORATE

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## Penjana financing benefits 2,556 SMEs with RM639.57m disbursed

KUALA LUMPUR (Sept 22): The PENJANA SME Financing for small and medium enterprises (SMEs) affected by COVID-19 has approved 2,556 applications with a total value of RM639.57 million until Sept 11, 2020.

The government has allocated RM2 billion for the financing scheme, with priority given to SMEs that have never received any financing from banks.

Finance Minister Tengku Datuk Seri Zafrul Abdul Aziz said under the National Economic Recovery Plan (PENJANA) Credit Financing under Bank Simpanan Nasional (BSN), a total of RM42.92 million has been disbursed and utilised by 1,146 SMEs and micro SMEs.

# Fast-Track Short Term Financial Aid to M&E Firms - Leverage on Penjana Model

Initiative	Objective	Scope	Period	Funding	Implementor
Fast-track fixed operating costs aid to M&E firms for revenue loss from Covid 19	<ul style="list-style-type: none"> <li>To provide 3-months fixed operating cost aid specific to M&amp;E firms who suffer revenue loss due to Covid 19.</li> </ul>	<ul style="list-style-type: none"> <li>Currently Penjana's "Wage Subsidy Program" only support salary payment (variable cost; RM600 per employee), M&amp;E's fixed cost is relatively high, propose to provide aid to cover fixed cost.</li> <li>Financial aid proposed is 50% of fixed cost x 3 months.</li> </ul> <p>THREE criteria:</p> <ol style="list-style-type: none"> <li>1. Evidence of revenue loss for at least 6 months.</li> <li>2. Past Year Average Revenue record of minimum RM500,000 per year.</li> <li>3. Fixed cost incurred is at least RM20,000 per month.</li> </ol>	2021 – 2022	RM30,000,000 (1,000 firms x 10,000 x 3 months)	<p>MPC</p> <p><u>Note:</u> Budget under MEPN/MPC</p>

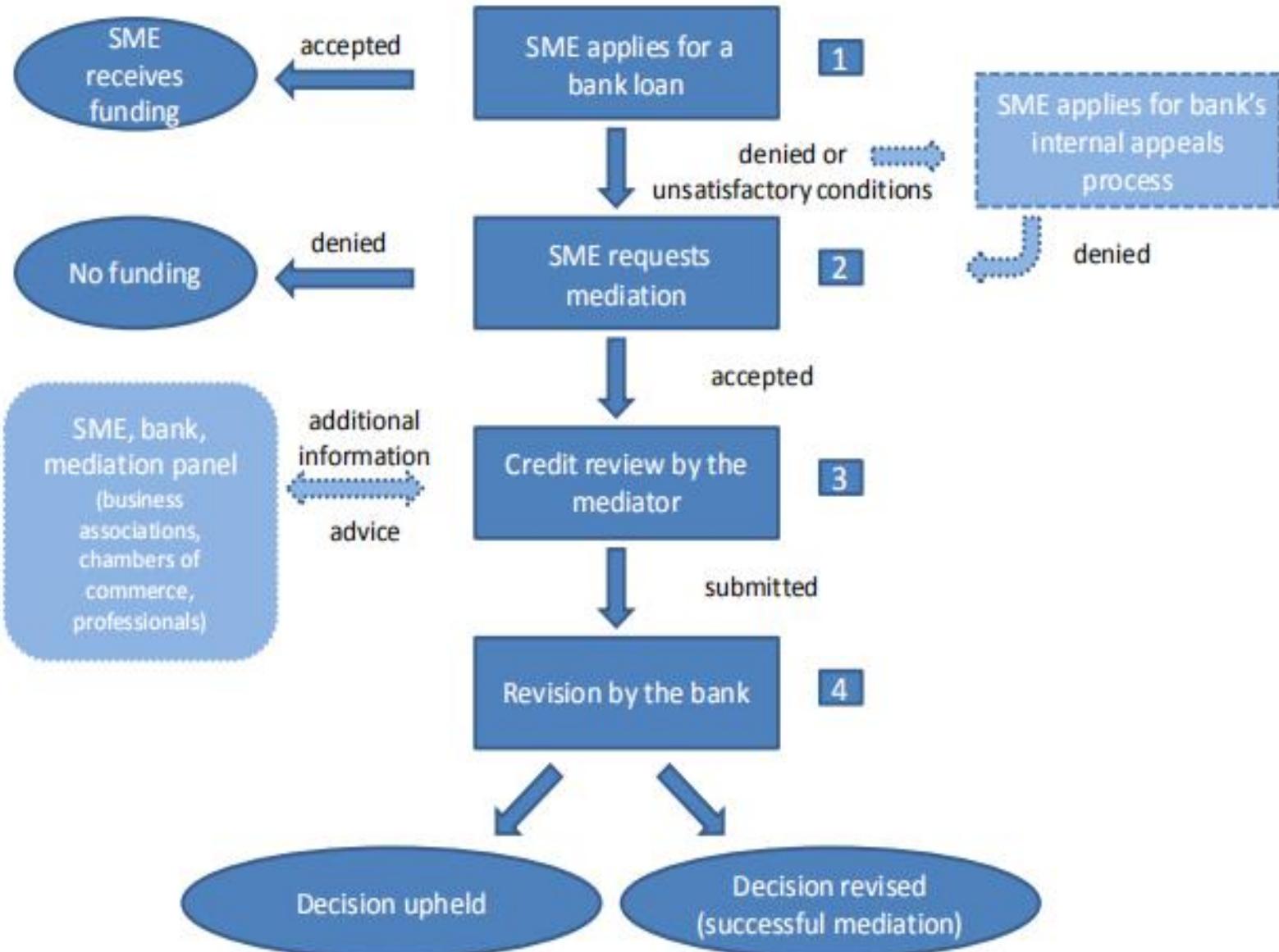
# Credit Guarantee; Short-term Loan to M&E

Initiative	Objective	Scope	Period	Funding	Implementor
Work with Credit Guarantee Corporation Malaysia Berhad (CGC) to improve loan accessibility for M&E	<ul style="list-style-type: none"> <li>To provide credit guarantee to deserving M&amp;E firms for machinery and production system upgrade.</li> <li>Annual guarantee fee (Secured Portion: 0.50% - <b>1.85%</b> and Unsecured Portion: 0.80% -<b>2.15%</b> per annum) to be subsidised by MEPN.</li> </ul>	<ul style="list-style-type: none"> <li>Currently CGC charges annual guarantee fees of about 4% (1.85 + 2.15%) per annum, that is on top of loan interest charged by bank.</li> <li>Financial aid is proposed to subsidise guarantee fees for a maximum of 5 years.</li> </ul> <p>Assumption: 1 Mil loan x 0.04 = RM40,000 gurantee fee a year.</p> <p>MEPN to subsidise 50% of guarantee fee.</p>	2021 – 2025	RM10,000,000 (100 firms x RM20,000 x 5 years)	MIDA/MPC  <u>Note:</u> Budget under MEPN/MPC

## Public Credit Mediation

- A government funded agency to work closely with temporarily appointed **expert advisers (accountants, retired bankers)** to help SMEs whose credit applications were rejected by banks.
- No charge for their services (e.g. France, Belgium, Germany), completely dependent on **public funding**.
- Address some of the main hurdles or sources of conflict in the credit process, such as information asymmetry and **communication deficiencies**.
- Facilitate exchange of information between prospective lenders and borrowers, and the development of **joint solutions**.
- Provide advice to entrepreneurs on how to improve the articulation and communication of business plans.
- Direct firms to other available support services.

# Public Credit Mediation



- In Germany, the mediation programme was directed at self-employed, entrepreneurs and SMEs whose rejected credit was above EUR 15,000.
- The mediation process is activated within three months after applications were rejected.

# Public Credit Mediation

Table 1. Credit mediation schemes: key indicators

Programme	Years	Key evidence
Corporate Credit Mediator Belgium	2009-2011	<ul style="list-style-type: none"> <li>• 712 applications treated</li> <li>• 712 firms assisted (98% with less than 50 employees)</li> <li>• EUR 153 million mobilised</li> <li>• 64% of the employment preserved (2 605 jobs)</li> <li>• <b>Successful mediation: 60%</b></li> </ul>
Credit Mediation Office France	November 2008 – December 2012	<ul style="list-style-type: none"> <li>• 30 196 applications accepted</li> <li>• 16 501 firms assisted</li> <li>• 291 314 jobs involved</li> <li>• EUR 4 196 million mobilised</li> <li>• <b>Successful mediation: 62%</b></li> </ul>
Credit Mediator Germany	March 2010 - December 2011	<ul style="list-style-type: none"> <li>• 1 290 firms assisted, of which 307 had been denied credit</li> <li>• EUR 254.5 million mobilised</li> <li>• 9 794 jobs preserved</li> <li>• <b>Successful mediation (on earlier full credit rejection): 31%</b></li> </ul>
Credit Review Office Ireland	April 2010 – September 2012	<ul style="list-style-type: none"> <li>• 262 applications accepted</li> <li>• EUR 9.6 million mobilised</li> <li>• 813 full time and 46 part time jobs protected</li> <li>• <b>Successful mediation (on earlier credit rejection): 56%</b></li> </ul>
Appeals Process UK	April 2011 – March 2012	<ul style="list-style-type: none"> <li>• 2 177 appeals</li> <li>• <b>Success rate: 39.5%</b></li> </ul>

Source: CeFiP (2011a; 2011b), Mediateur du Credit (2012), Credit Review Office (2012), Kreditmediator (2011), Griggs (2012).

# Credit Mediation Service for M&E – Leverage on Expert Advisor

Initiative	Objective	Scope	Period	Funding	Implementor
Provide credit mediation services to M&E firms whose loan application was rejected	<ul style="list-style-type: none"> <li>To provide credit mediation services to M&amp;E firms via expert advisors (eg. ex-banker, ex-accountant).</li> </ul>	<ul style="list-style-type: none"> <li>MEPN to appoint experts as advisors to needing M&amp;E firms.</li> </ul> <p>Assumption: expert appointment = RM1,000/day x 10days/firm = 10,000/firm</p>	2021 – 2025	RM1,000,000 (100 firms x 10,000)	MPC <u>Note:</u> Budget under MEPN/MPC

# Recommendations – Internationalisation

## Challenges

- Low sales during Covid-19
- **Small & saturated domestic market**
- No critical mass due to small and ad-hoc nature of orders
- Clients cutting down spending/investment on machinery
- Competition from local and foreign players e.g. China & Taiwan
- Price war leading to tight margins
- **Lack resources to expand overseas**
- Lack capability to conduct market research
- Challenges in getting work permit for Malaysian professionals to work in sites in markets such as Indonesia and Taiwan
- Quantum for overseas expansion financing is insufficient



## Recommendation: Ramp up existing export promotion initiatives under Matrade

- M&E international trade events (physical & virtual).
- International sourcing programmes for M&E e.g. incoming buying missions (physical & virtual).
- Internationalisation industry cluster \*refer to Industry Cluster Initiative.

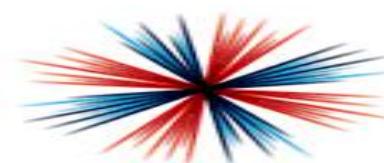
# Ramp-up Support for Export Promotion Programmes

Initiative	Objective	Scope	Period	Funding	Implementor
Trade events (physical & virtual)	<ul style="list-style-type: none"> <li>To enable M&amp;E industry to promote their products and build networking.</li> </ul>	<ul style="list-style-type: none"> <li>Organise physical/ virtual trade events for M&amp;E.</li> <li>Facilitate the participation of M&amp;E industry in trade events in Malaysia and overseas (physical &amp; virtual).</li> </ul>	2021 – 2025	RM10,000,000 (RM2,000,000 X 5 years)	<p>Matrade/MPC</p> <p><u>Note:</u> Budget under MEPN/MPC</p>
International sourcing programmes for M&E (physical & virtual)	<ul style="list-style-type: none"> <li>To develop new pool of export-ready M&amp;E.</li> </ul>	<ul style="list-style-type: none"> <li>Organise physical/virtual international sourcing programmes for M&amp;E via incoming buying mission.</li> <li>Facilitate the participation of M&amp;E industry in international sourcing programmes in Malaysia and overseas (physical &amp; virtual).</li> </ul>	2021 – 2025	RM10,000,000 (RM2,000,000 X 5 years)	<p>Matrade/MPC</p> <p><u>Note:</u> Budget under MEPN/MPC</p>

### 3 Recommendations – Industry Cluster Initiative 2021

#### Challenges

- Lack of skilled talents
- Low production capacity & efficiency
- High wastage
- Limited space in current warehouse
- Lack laboratory with facilities to conduct analysis & generate data to support trials
- Difficulties in getting supply of input materials (need to incur more costs for keeping buffer stock)
- No critical mass due to small and ad-hoc nature of orders
- Low cost competitiveness
- Competition from foreign players
- **Price war leading to tight margin**
- Lack resources to expand overseas
- Lack financing for expansion
- **Lack technology, automation, and R&D**
- Manual operations
- Lack design & manufacturing software
- Lack digitalisation, digital marketing, IT solutions



**INDUSTRIAL  
STRATEGY**

#### Recommendation: Develop Industry Cluster

- Industry cluster on internationalisation.
- Industry cluster on innovation.

**\*Refer to Industry Cluster Initiative 2021**

# Develop Industry Cluster Initiative 2021

Initiative	Objective	Scope	Period	Funding	Implementor
Create industry cluster based on shared economy concept	<ul style="list-style-type: none"> <li>• To improve competitiveness, productivity, and innovation .</li> </ul>	<ul style="list-style-type: none"> <li>• To conduct a pilot project for industry cluster for M&amp;E.</li> </ul>	2021 – 2023	RM2,000,000	<p>MEPN</p> <p><u>Note:</u> Will be explained in greater detail in industry cluster initiative 2021.</p>

***\* Refer to industry cluster initiative 2021***

# 4 Recommendations – Develop ‘LinkM&E App’ Based on Sharing Economy Concept

## Challenges

- Lack of skilled talents
- Low production capacity & efficiency
- High wastage
- **Limited space in current warehouse**
- Lack laboratory with facilities to conduct analysis & generate data to support trials
- Difficulties in getting supply of input materials (need to incur more costs for keeping buffer stock)
- No critical mass due to small and ad-hoc nature of orders
- Low cost competitiveness
- Competition from foreign players
- Price war leading to tight margin
- Lack resources to expand overseas
- Lack financing for expansion
- Lack technology, automation, and R&D
- Manual operations
- Lack design & manufacturing software
- **Lack digitalisation, digital marketing, IT solutions**

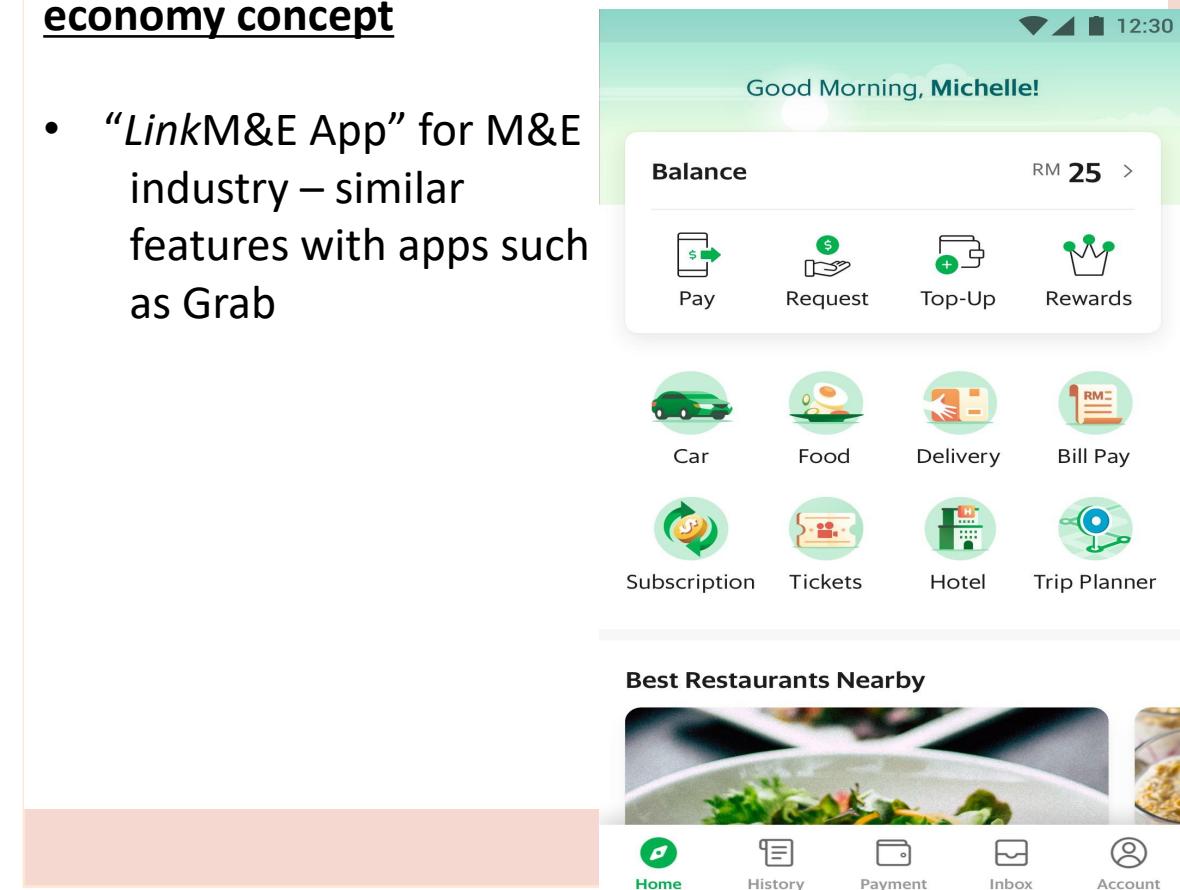


Link **ME**

**Leveraging Integrated Networks Klusters for M&E**

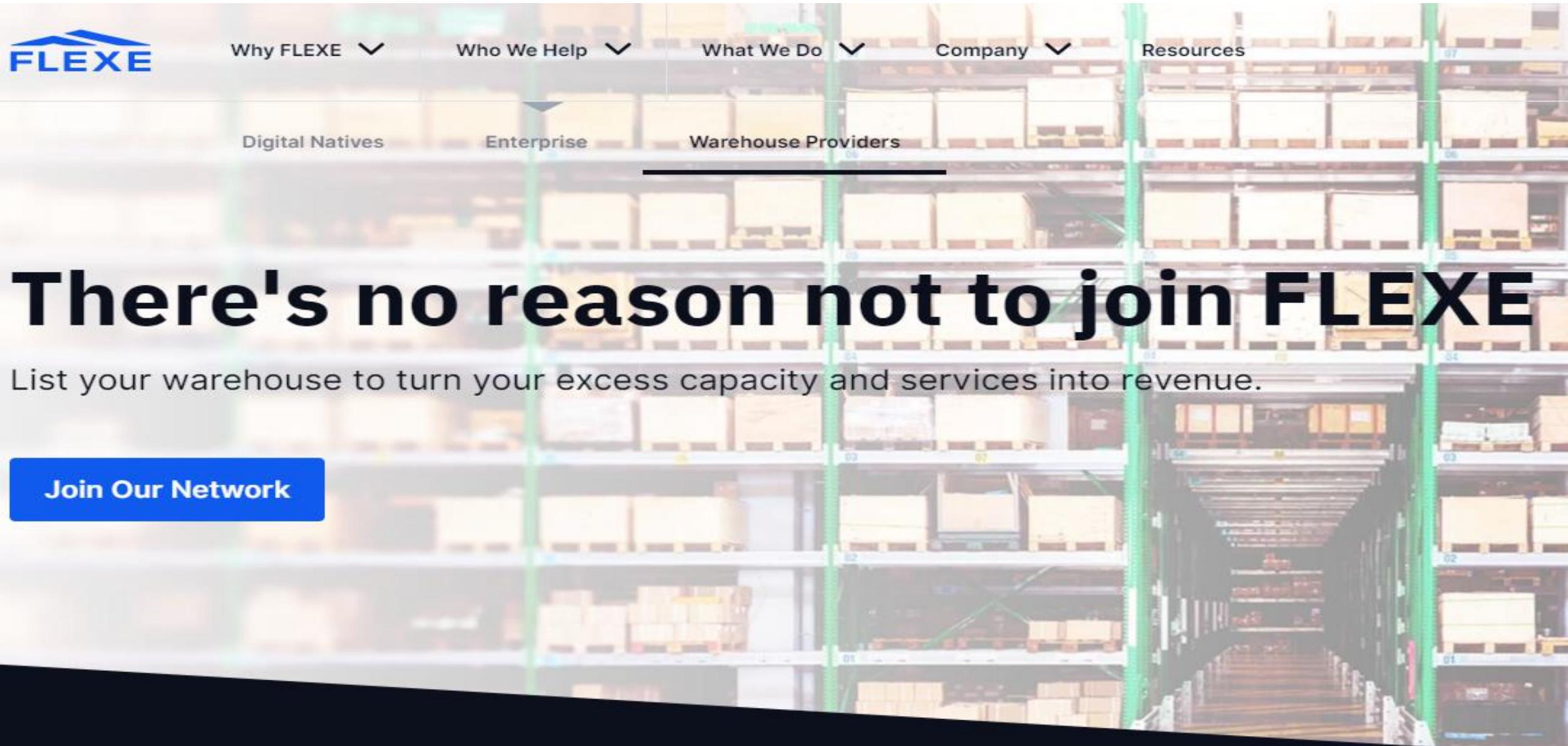
**Recommendation: Develop an app based on sharing economy concept**

- “*LinkM&E App*” for M&E industry – similar features with apps such as Grab



## Germany Model: Sharing warehouse excess capacity

<https://www.flexe.com/who-we-help/warehouse-providers>



# Germany Model: Sharing warehouse excess capacity

<https://www.flexe.com/who-we-help/warehouse-providers>

The screenshot shows the FLEXE homepage. The navigation bar includes links for 'Why FLEXE', 'Who We Help', 'What We Do', 'Company', 'Resources', 'Sign In', and a prominent 'Get Started' button. Below the navigation, there are three categories: 'Digital Natives', 'Enterprise', and 'Warehouse Providers', with 'Enterprise' being the active tab. The main content area features three icons: a clock, a clipboard, and a stack of boxes, each associated with a benefit: 'Instant access', 'Save time & costs', and 'Control at scale'.

The screenshot shows the 'Control at scale' section of the FLEXE website. It features a large image of a 3D warehouse unit with dashed lines representing different sections. Below the image, text explains that the FLEXE solution is designed to scale, providing both short-term and long-term solutions to meet strategic goals. The 'Enterprise' category is highlighted in the navigation bar.

The screenshot shows the 'Network' section of the FLEXE website. The navigation bar includes links for 'Why FLEXE', 'Who We Help', 'What We Do', 'Company', 'Resources', and 'Sign In'. Below the navigation, there are four tabs: 'Overview', 'Technology Platform', 'Network', and 'Expertise', with 'Network' being the active tab. The main content area features an illustration of several warehouse buildings connected by dashed lines, representing a network of providers.

The screenshot shows the 'Find the right match' section of the FLEXE website. It features a large image of a 3D warehouse unit with dashed lines representing different sections. Below the image, text explains that FLEXE sources providers to meet clients' needs, with a 90+% track record. The 'Network' tab is highlighted in the navigation bar.

# Leverage on Sharing Economy Concept via “LinkM&E App” (Virtual Cluster)

Initiative	Objective	Scope	Period	Funding	Implementor
Development of “LinkM&E App”	<ul style="list-style-type: none"> <li>To link M&amp;E players in sharing excess capacity for money (Example in Germany- <a href="https://www.flexe.com/who-we-help/warehouse-providers">https://www.flexe.com/who-we-help/warehouse-providers</a>).</li> <li>Sharing in terms of: warehouse, production capacity, transportation, supplier database, logistic, legal, accounting, HR etc.</li> </ul>	<p>To develop an app that links the M&amp;E players in Malaysia to share excess capacity.</p> <p>To start with 10-20 committed M&amp;E players in developing initial features, and then slowly increase user numbers</p> <p>To support “cluster sustainability” for real time information and capacity sharing</p>	2021-2022	RM2,000,000	MEPN

## Challenges

- Lack of awareness of any industry association related to recycling
- Lack platform for sharing technologies
- **Lack platform to meet new clients**
- Lack awareness of government support programmes
- Lack capability to conduct market research



## Recommendation: Empower industry association

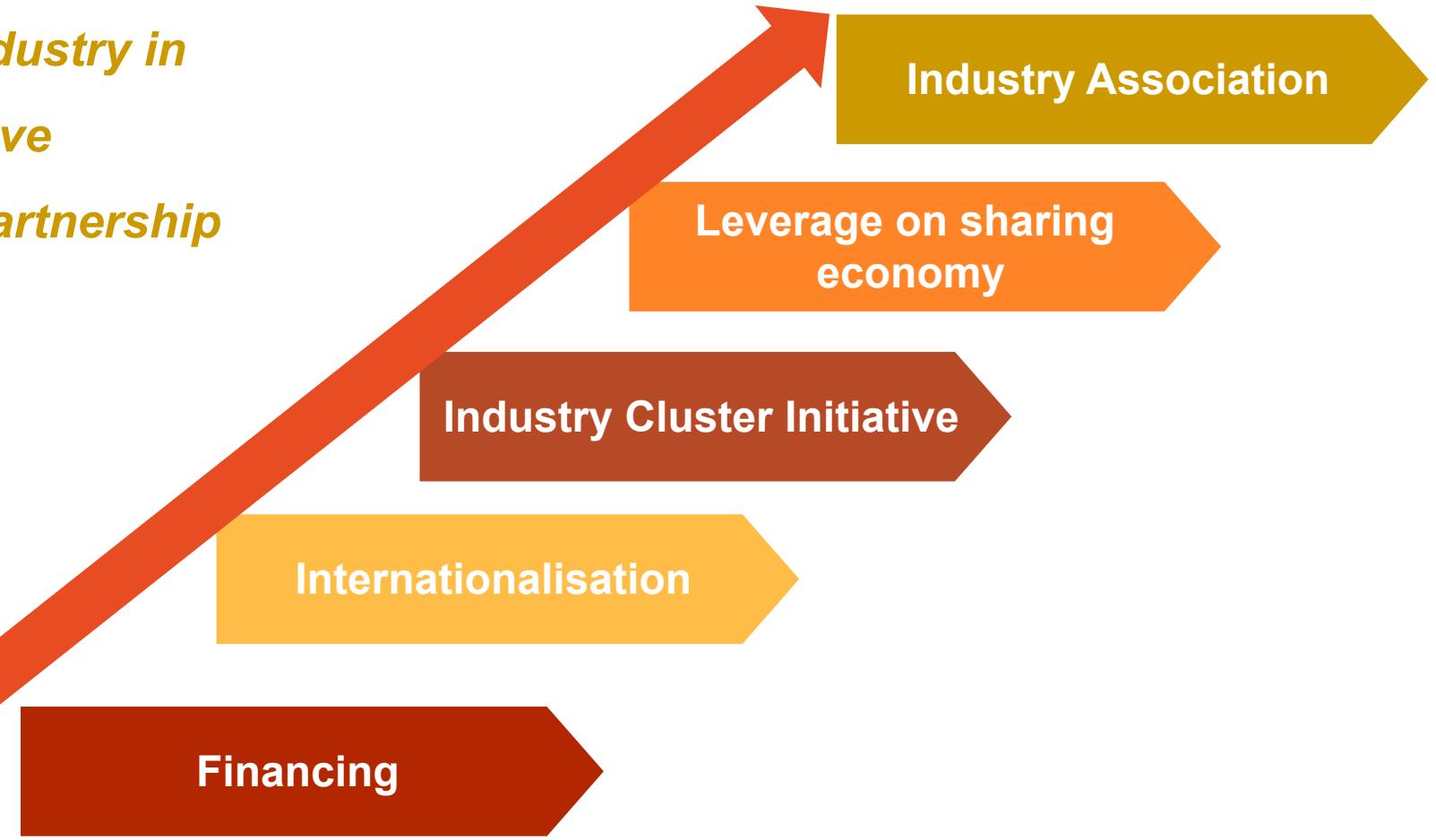
- Conduct structured knowledge sharing sessions (i.e. co-develop training modules with MEPN).
- Create a business matching platform with potential clients.
- Play an more active role in providing advisory services to members, to support MEPN initiatives.
- To consider appointing industry expert as a credit mediator or cluster facilitator.

# Empower Industry Association

Initiative	Objective	Scope	Period	Funding	Implementor
Conduct knowledge sharing sessions with members on e.g. technologies, market expansion etc.	<ul style="list-style-type: none"> <li>To share experience and build networks with members.</li> </ul>	<ul style="list-style-type: none"> <li>Develop specific modules such as Cross-Cultural Management.</li> <li>Develop resources and archives (i.e. reports, videos)</li> <li>Enrich data at the Information Center.</li> </ul>	2021-2025	RM500,000 (RM100,000 X 5 years)	Industry Association and MEPN
Create a business matching platform with potential clients	<ul style="list-style-type: none"> <li>To facilitate business dealings with potential clients.</li> </ul>	<ul style="list-style-type: none"> <li>Organize business matching sessions in collaboration with MATRADE.</li> </ul>	2021-2025	RM500,000 (RM100,000 X 5 years)	Industry Association
Actively provide advisory services to members	<ul style="list-style-type: none"> <li>Leverage on industry experts to support MEPN initiatives.</li> </ul>	<ul style="list-style-type: none"> <li>Providing active advisory services to members.</li> <li>To appoint industry experts as credit mediator or cluster facilitator.</li> </ul>	2021-2025	RM1,000,000 (RM6,000 X 40 companies X 5 years)	Industry Association

# Key Takeaway

*In order to step up the M&E industry in Malaysia, a more comprehensive government – private sector partnership approach need to be taken.*





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TERIMA KASIH / *THANK YOU*  
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# Man: Challenges & Potential Remedies

## Challenges

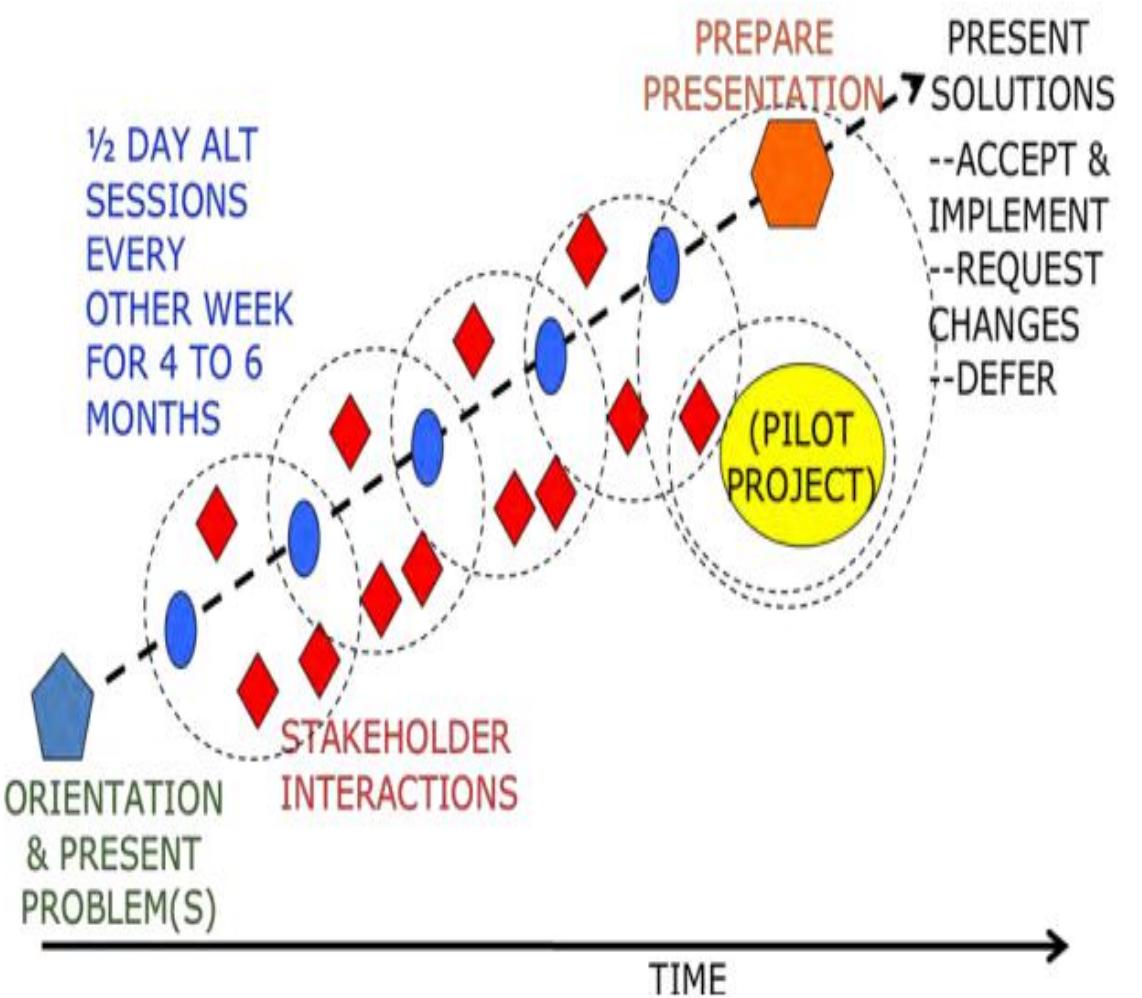
- Lack of skilled talents – e.g. mechanical engineers, design engineers, technicians familiar with CANBUS, industry 4.0, and sales and marketing.
- Talents produced by institutions of higher learning do not meet industry requirements.
- Talents lack soft skills e.g. communications etc.
- High turnover rate esp. for local workers.
- Leadership – lack business development and strategic plans as well as business model.
- Labour intensive.
- Challenges in people management & retaining talents.
- Lack capability and capacity for talent recruitment and training.
- Employees lack ability to adapt to new norm
- Lack teamwork.



## Recommendations

- Ensuring talents that meet industry requirements
  - Close collaboration between industry (facilitated by industry association) and **institutions of higher learning**.
  - Development of a **baseline salary indicator**.
- Talent development
  - Improve **productivity-linked human resource management practices**.
  - Use of recruitment agency for hiring talents.
  - Explore gig-economy model in hiring talents.
  - Employees' satisfaction survey.
  - Needs-based training for employees.
- Leadership
  - Short term **leadership programme for M&E CEO**.
  - Implement value-based leadership via **action learning approach**.

# Action Learning Process



## Sample case (Miller, 2003)

- A private hospital in Australia (250 beds and 400 staff), used AL to create **ONE** common performance management instrument to replace 27 existing systems. Guided by AL Consultant at all phases.
- **Phase 1:** 35 managers attend 2 days seminar on AL and agreed on objectives (performance management policy, the new instrument and the performance indicators), broken into 3 AL groups to work independently.
- **Phase 2:** each group had weekly meetings lasting around 1.5 hours to develop agreed outcomes, took 8 weeks. Then, 3 members from each of the three groups formed a final composite action learning set to combine outcomes from the three action learning sets (draft policy, the new instrument and the performance indicators) into one coherent document.
- **Phase 3:** Implementation - observed and commented by consultants to each of the 35 managers at least once.
- **Phase 4:** Evaluation and Review – Improvement in leadership competencies of managers (leadership, collaborative, listening, coaching, performance setting, empathy, communication).

# Machine: Challenges & Potential Remedies

## Challenges

- Frequent breakdown – old machine.
- Difficulties in getting replacement parts for old equipment.
- Long lead time e.g. mould design.
- Not able to upgrade to new machinery due to continuous operations to meet customers' demand e.g. oven system.
- Lack design & manufacturing software.
- Lack technology & automation.
- Lack digitalisation, digital marketing, IT solutions for telematic.
- Manual data collection.
- Fleet management & inventory control e.g. lack real time location tracking of inventory.
- Lack capability to produce smart products & smart solutions.
- No plans to register IP for process, hardware, & material.



## Recommendations

- Investment in technology
  - Provide greater access to **financing** for investment in technology and machinery.
  - Provide incentive for companies to register **intellectual property rights (IP)**.

# Method: Challenges & Potential Remedies

## Challenges

- Selling of used-machinery are usually conducted face-to-face, which is restricted during movement control order.
- Lack quality management tools to improve quality and operations.
- Low labour productivity.
- High operations costs.
- Low production capacity & efficiency.
- Long lead-time for old machinery.
- High backlog.
- Manual operations.
- High wastage.
- Low value-add products & services e.g. assembly work for pneumatic components sourced from overseas.
- Limited space in current warehouse.
- Lack laboratory with facilities to conduct analysis and generate data to support trials.



## Recommendations

- Enhance productivity
  - Implement productivity tools.
  - Create a **Centre of excellence (CoE)** for M&E industry (e.g. leverage on Technology Park Malaysia).
  - Develop industry cluster for M&E industry based on sharing economy concept.

# Material: Challenges & Potential Remedies

## Challenges

- High costs of raw material.
- Consistent supply of material.
- Quality of material.



## Recommendations

- Ensure continued supply of input materials
  - Sharing of order of input materials among companies.
  - Optimal usage of material.
  - **Collaboration with input suppliers.**

# Money: Challenges & Potential Remedies

## Challenges

- Difficulties in collecting payment from clients e.g. zero income during movement control order.
- Long warranty period for products.
- Lack of resources to invest in new technology/ automation.
- High capital requirement for investing in industry 4.0 e.g. software for fleet management.
- Lack funding for R&D.
- Lack financing for expansion plan.
- Halting spending on important R&D programme to manage cashflow.
- Costs of screening for Covid-19 among workers.



## Recommendations

- Enhance access to financing
  - Crowd funding
  - **Explore factoring services**
  - Venture capital
  - Training for financial literacy
  - Outsource accounting services

# Supplier: Challenges & Potential Remedies

## Challenges

- Difficulties in getting supply of input material (Need to incur more costs for keeping buffer stock).



## Recommendations

- Find other options for supplier.
- Sharing of excess capacity with other companies (i.e. warehouse to keep buffer stock) via Me-On-Demand app.
- Create vendor development programme with supplier.

# Buyer: Challenges & Potential Remedies

## Challenges

- Low sales due to Covid-19.
- Difficulties in collecting payment from clients.
- Cyclical nature of revenue.
- Small/ saturated domestic market/ market segment.
- No critical mass due to small and ad-hoc nature of orders (low volume & highly customised orders).
- Clients cutting down / halting spending on machinery upgrade.



## Recommendations

- Expansion to overseas markets
- Engage clients in coming up with payment plan

# Competitor: Challenges & Potential Remedies

## Challenges

- Low cost competitiveness.
- Competition from local and foreign players e.g. China and Taiwan offer competitive prices with similar quality for injection mould and dies.
- Price war leading to tight margin.



## Recommendations

- Form partnerships/ alliances with local companies with international experience.
- Form partnership with foreign partners.
- Create industry cluster based on shared economy concept to improve competitiveness.

# Internationalisation: Challenges & Potential Remedies

## Challenges

- Lack resources to expand overseas.
- Lack financing for expansion.
- Lack capability to conduct market research.
- Challenges in getting work permit for Malaysian professionals to work in sites in markets such as Indonesia and Taiwan.



## Recommendations

- Provide greater access to financing for overseas expansion.
- Create platform for business matching with foreign buyers.
- Sharing of market intelligence conducted by agencies such as Matrade, MITI, and MIDA with companies.
- Leverage FTAs for expanding into FTA partner countries.
- To harmonise mutual recognition agreement (MRAs) with existing partner countries to facilitate the mobilisation of Malaysian professionals in target countries.
- To expand MRAs with other countries e.g. Taiwan, South Korea.

# Government: Challenges & Potential Remedies

## Challenges

- Lack access to financial support provided by government including for R&D, filing of IP, eco-green test and compliance.
- The quantum of financing is too small (not sufficient to cover costs of international expansion).
- Difficulties in getting fund under Industry4WRD & no clear feedback mechanism e.g. industry 4.0 readiness test.
- The application process of government support programmes takes too long e.g. applications submitted in 2018 still no news.
- Lack awareness/ knowledge about government support programme.
- Project specifications given to local companies do not allow companies to learn and acquire know how (low value-add work) e.g. reliability, availability, maintenance & safety (RAMS).
- Difficulties in getting more significant work with MNCs/GLCs for major infrastructure projects e.g. LRT, ECRL & MRT.
- Lack support for car parking system developed by local companies.



## Recommendations

- Provide greater access to financing for R&D, filing of IP, eco green test & compliance.
- Increase quantum of financing.
- Speed up the application process for government support e.g. leverage MPC's ease of doing business initiative.
- Create a system to manage application for government support for a more transparent process with feedback mechanism.
- Facilitate business opportunities (procurement) with MNCs and LLCs in Malaysia.
- Provide greater opportunities for higher value-add works to enable local M&E companies to build know-how and experience.
- Provide targeted programmes for M&E industry.
- Create awareness/ drive about government programmes.