



Dr. Mazlina Shafii
Timbalan Pengarah

P
URPOSE

The purpose of the meeting is to :

1. Clarify the Objective of work
2. Exchange preliminary ideas of way forward

O
UTCOME

1. Define clearly the Objective of work
2. Understand the status of work

W
HY

1. To ensure we are aligned
2. To be able to start documenting ideas

Machinery & Equipment Productivity Nexus

Ir Dr Shahreen Madros

25th November 2020



Disahkan Oleh:

MPC

Dr. Mazlina Shafi'i
Timbalan Pengarah

Machinery & Equipment Productivity Nexus

**Where we were
in 2020**

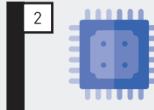
5 STRATEGIC THRUST

5 Key Strategic Thrusts under the Malaysia Productivity Blueprint



1 Building Workforce of the Future

Restructuring workforce by raising the number of high-skilled workers, tightening entry of low-skilled workers, and meeting demands of the future economy.



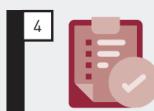
2 Driving Digitalisation and Innovation

Strengthening the readiness of enterprises to effectively adopt and exploit the technology and digital advantage (such as 4th Industrial Revolution).



3 Making Industry Accountable for Productivity

Reducing reliance on non-critical subsidies, linking financial assistance and liberalisation efforts to productivity outcomes, and strengthening industry positioning in higher value and segments of the value chain.



4 Forging a Robust Ecosystem

Addressing regulatory constraints and developing a robust accountability system to ensure effective implementation of regulatory reviews.



5 Securing a Strong Implementation Mechanism

Institutionalise a strong coordination and governance model to secure implementation certainty across government, sector, and enterprise levels.

Building Workforce

Digitalization

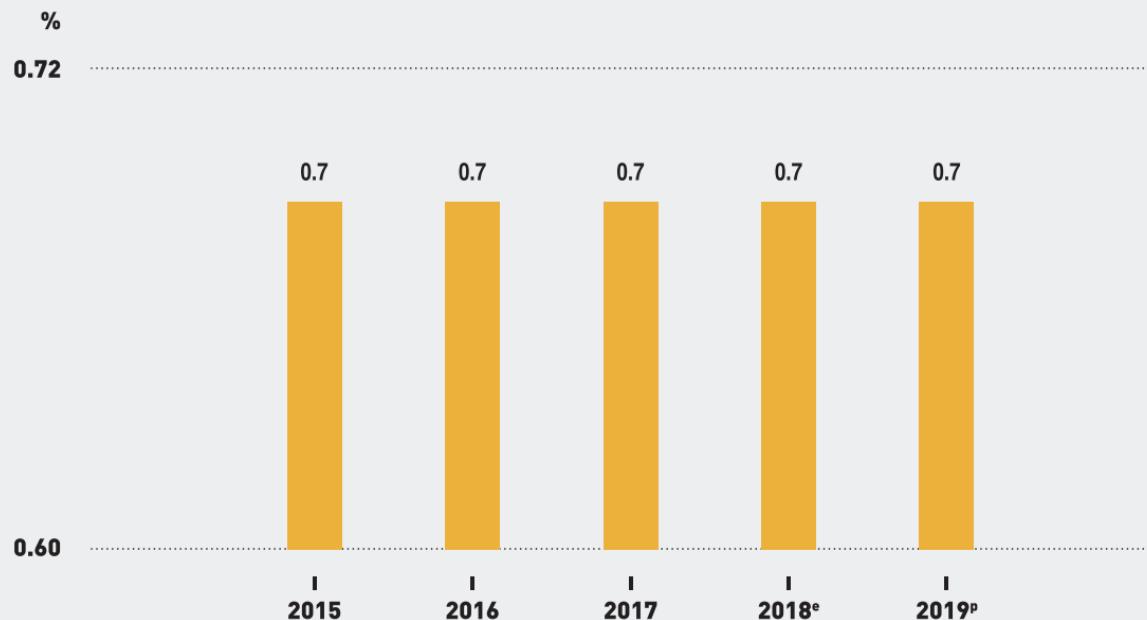
Industry Accountability

Robust Ecosystem

Strong Implementation

M&E SUBSECTOR ECONOMIC CONTRIBUTION

Machinery & Equipment Subsector Contribution to GDP 2015-2019



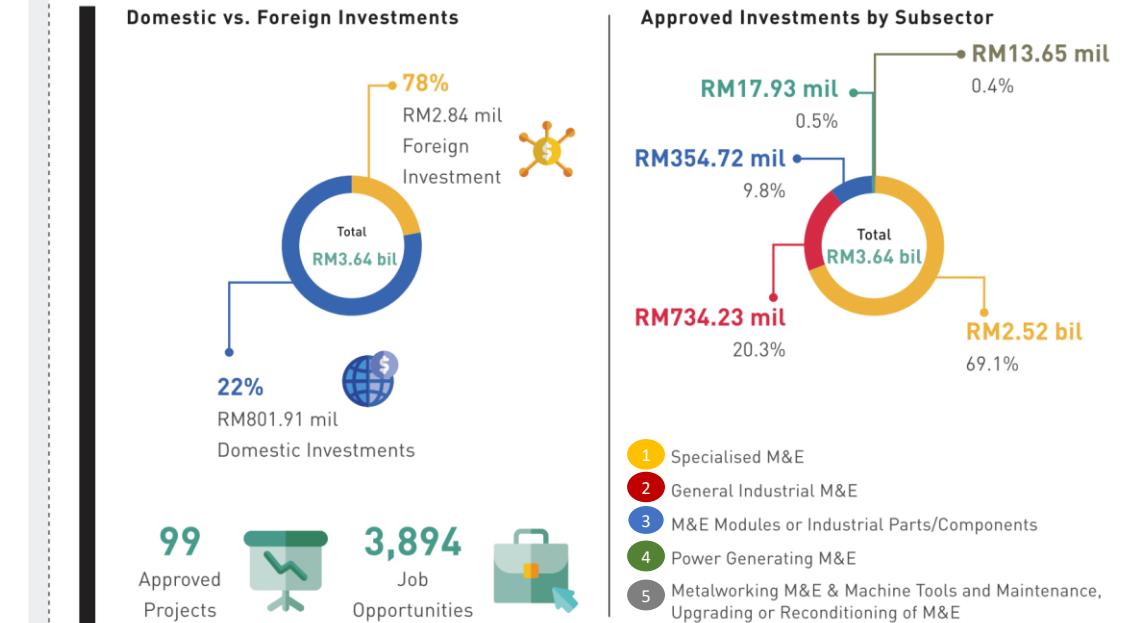
Note : e – estimated

: p – preliminary

: Data is based on constant 2015 prices

Source: Department of Statistics, Malaysia

Investments in Projects Approved in M&E Industry by Subsector for 2019



Source: Machinery & Equipment Productivity Nexus, MPC

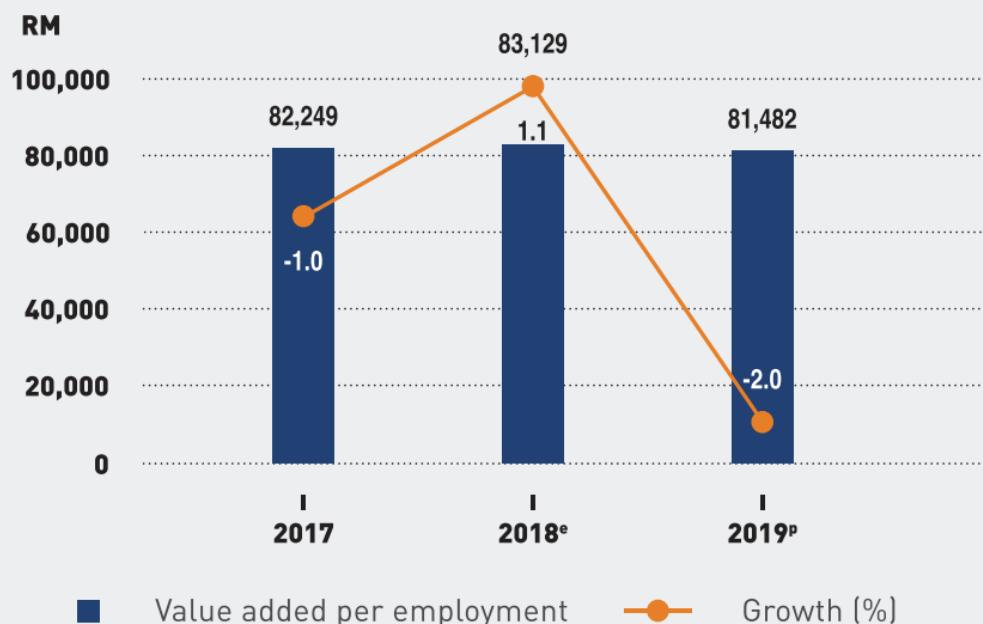
M&E PRODUCTIVITY PERFORMANCE

Machinery & Equipment Subsector Productivity Performance

Value Added Per Hour & Percentage Change



Value Added Per Employment & Percentage Change



Note : e – estimated

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: Data is based on constant 2015 prices

Source: Department of Statistics, Malaysia

M&E PRODUCTIVITY INITIATIVES IN 2020

	<p>Initiative M1: Set up partnership between government and industry association to up-skill existing employees</p>
Business Concerns	<ul style="list-style-type: none">• Firms report constant vacancies for skilled production workers.• Brain drain of skilled Malaysians.• Graduates lack technical skills and require longer training time (+6 months)• Mismatch between curriculum and industry needs leading to higher training cost.
Programmes	<p>Facilitated a number of initiatives that involved TVET educational institutions, industry stakeholders and training, to improve overall skill levels of industry talent.</p>

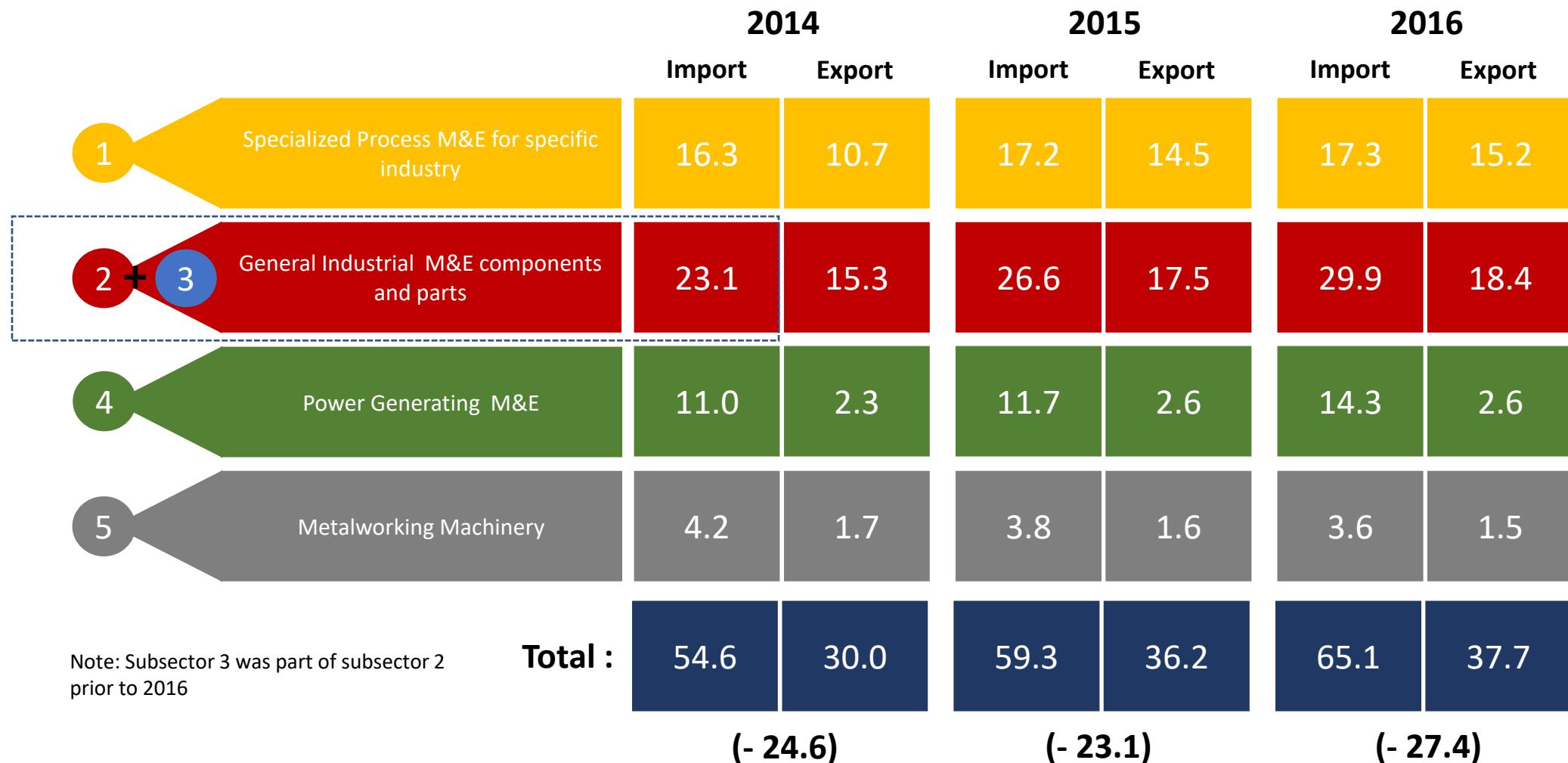
	<p>Initiative M2: Set up centres of excellence (COE) for skilled professionals to share industry expertise and develop new technologies</p>
Business Concerns	<ul style="list-style-type: none">• Heavy reliance on low-skilled labour, limiting ability to adopt technology and automation• MNCs rarely source their inputs from domestic firms due to quality of local manufacturers and lack of product availability.
Programmes	<p>Establishment of M&E's COEs and COE Framework Report</p> <p>Productivity Enhancement Programme using self-diagnosis productivity measurement tools (ezBE and ePGM)</p>

	<p>Initiative M3: Set up more product testing facilities to ensure standards are met</p>
Business Concerns	<ul style="list-style-type: none">• Current standards for local and imported products are lower than international standards for export products leading to lower investment on quality assurance and improvements.
Programme	<p>Review Report on Industry Standards and Regulations</p>
	<p>Initiative M4: Update domestic product standards to be on par with international standards and enforce compliance</p>
Business Concern	<ul style="list-style-type: none">• Current standards for local and imported products are lower than international standards for export products leading to lower investment on quality assurance and improvements.
Programmes	<p>Development of M&E Repository with 500 M&E and Engineering Supporting Services (ESS) high potential companies in the database</p> <p>Publication of Malaysian System Integrators Directory</p> <p>Streamlining process through Reduced Unnecessary Regulatory Burdens (RURB)</p> <ul style="list-style-type: none">- Examples include:> Temporary Import Permit for Mobile Crane> Safety Passport Issued by Regulators> Certificate of Approval for Imported Steel Products
	<p>Impact to Sector</p> <ul style="list-style-type: none">• Easy access to the right information about M&E and Engineering Services providers.• Helps Malaysian SMEs to find the right partners for Industry 4.0 implementation.• Ease of doing business for industry players due to the improvement in regulations.

Machinery & Equipment Productivity Nexus

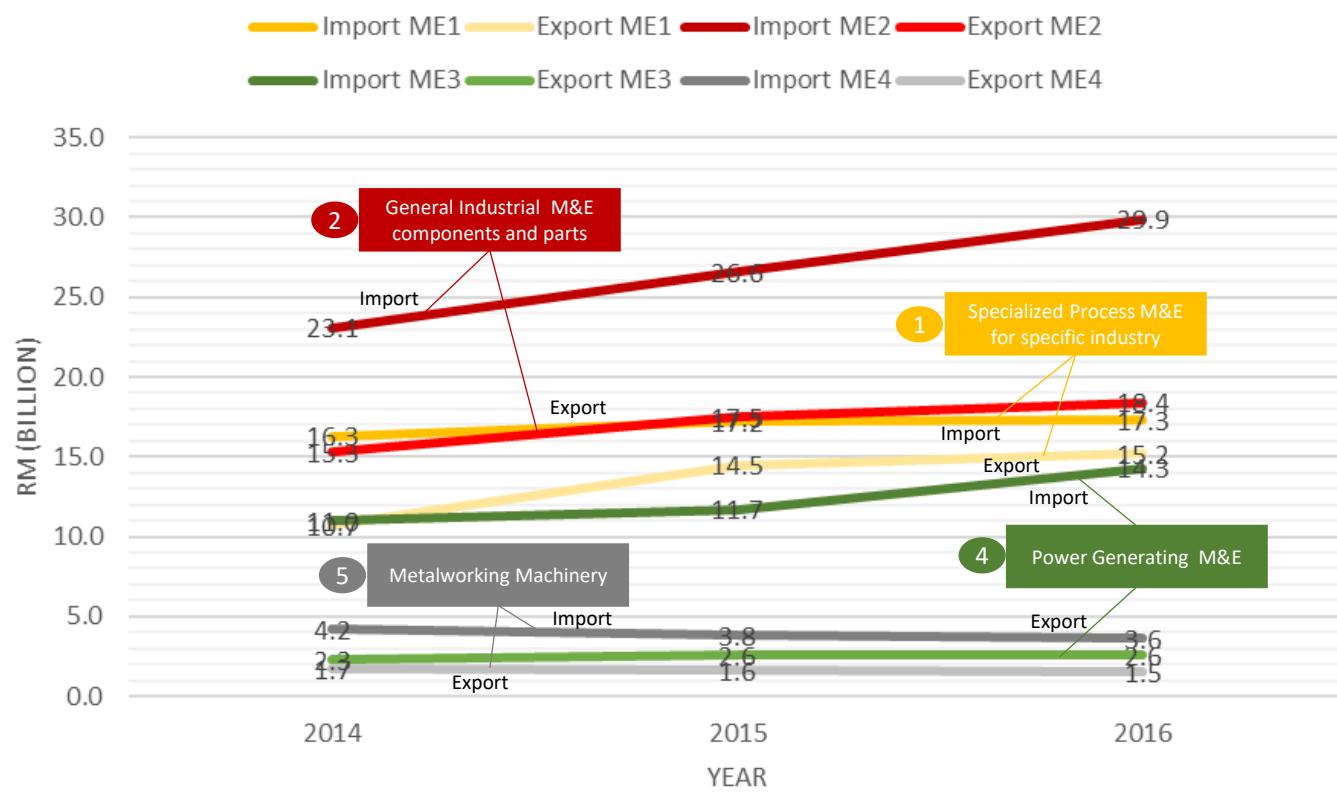
**Which subsector should we
prioritized for productivity
improvement?**

THE MACHINERY & EQUIPMENT INDUSTRY



THE MACHINERY & EQUIPMENT INDUSTRY

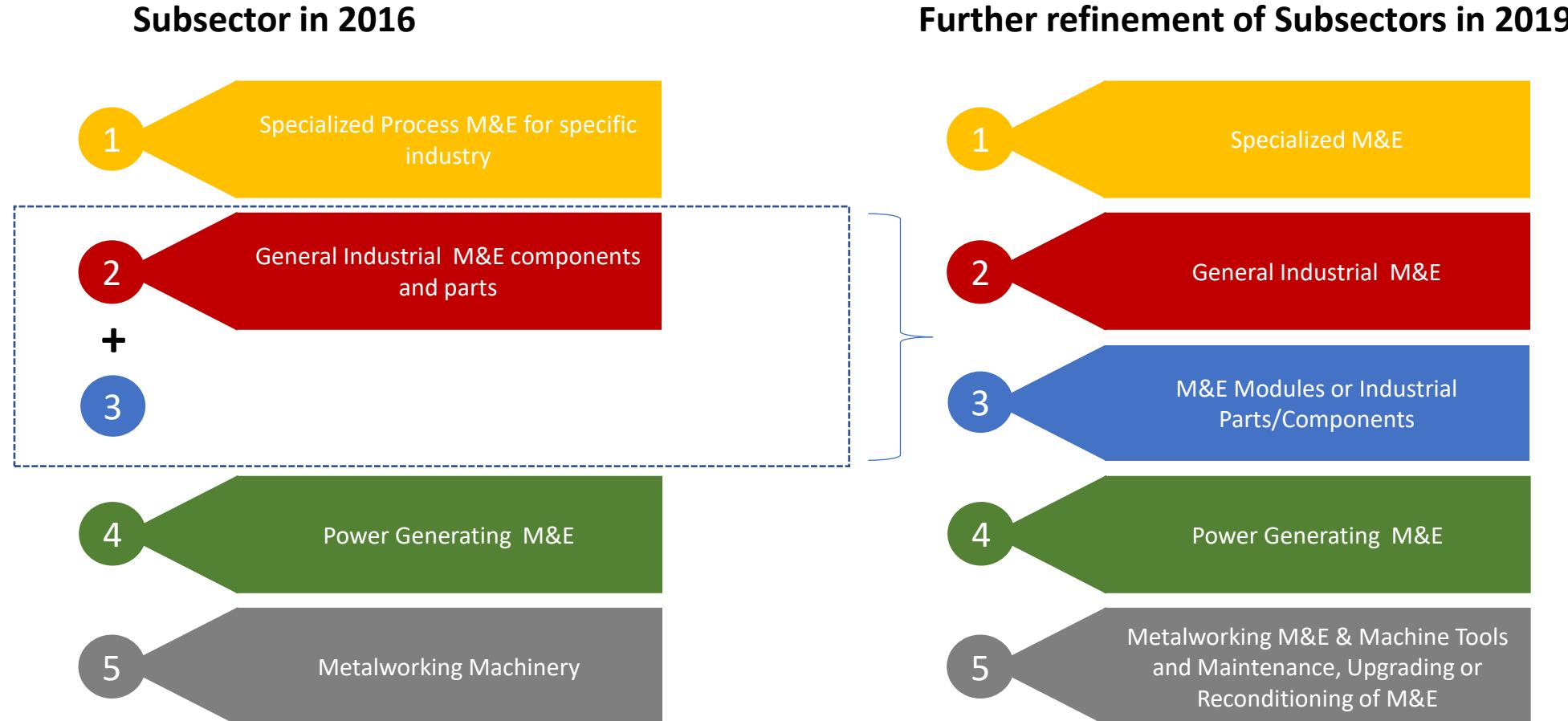
Machinery & Equipment Trade



“In general, we Import more than we Export , thus the overall Machinery & Equipment Trade deficit has been growing Y-O-Y.”

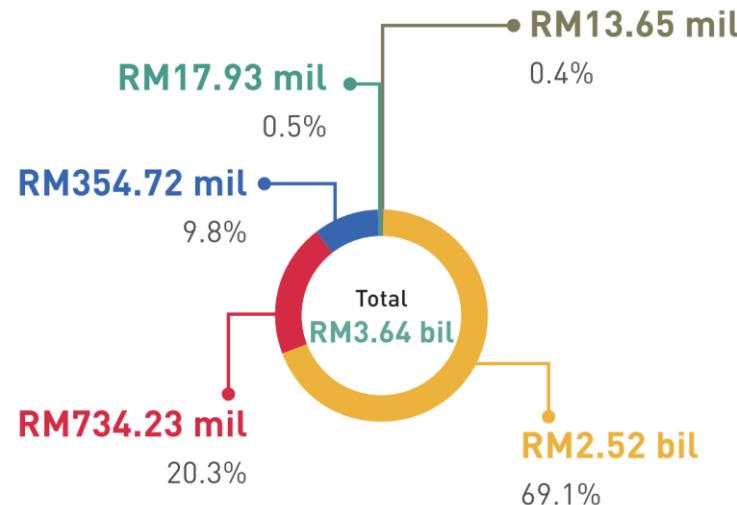
Although, General Industrial M&E has the largest trade, the **Specialized Process M&E holds best growth potential.**

THE MACHINERY & EQUIPMENT INDUSTRY



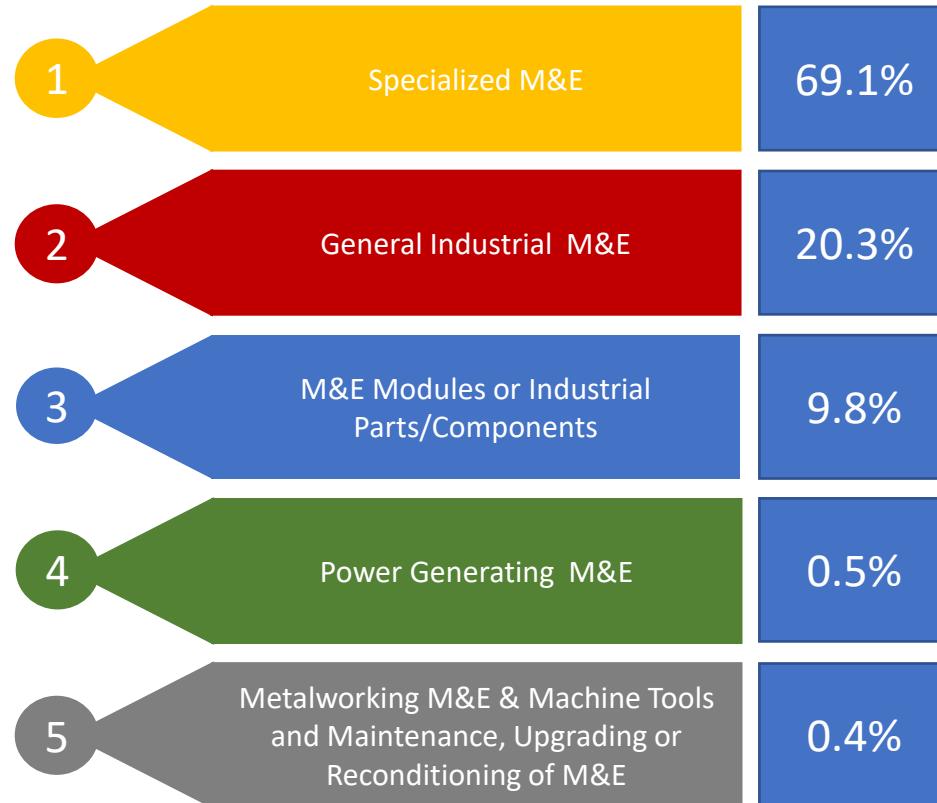
THE MACHINERY & EQUIPMENT INDUSTRY

Approved Investments by Subsector



- Specialised M&E
- General Industrial M&E
- M&E Modules or Industrial Parts/Components
- Power Generating M&E
- Metalworking M&E & Machine Tools and Maintenance, Upgrading or Reconditioning of M&E

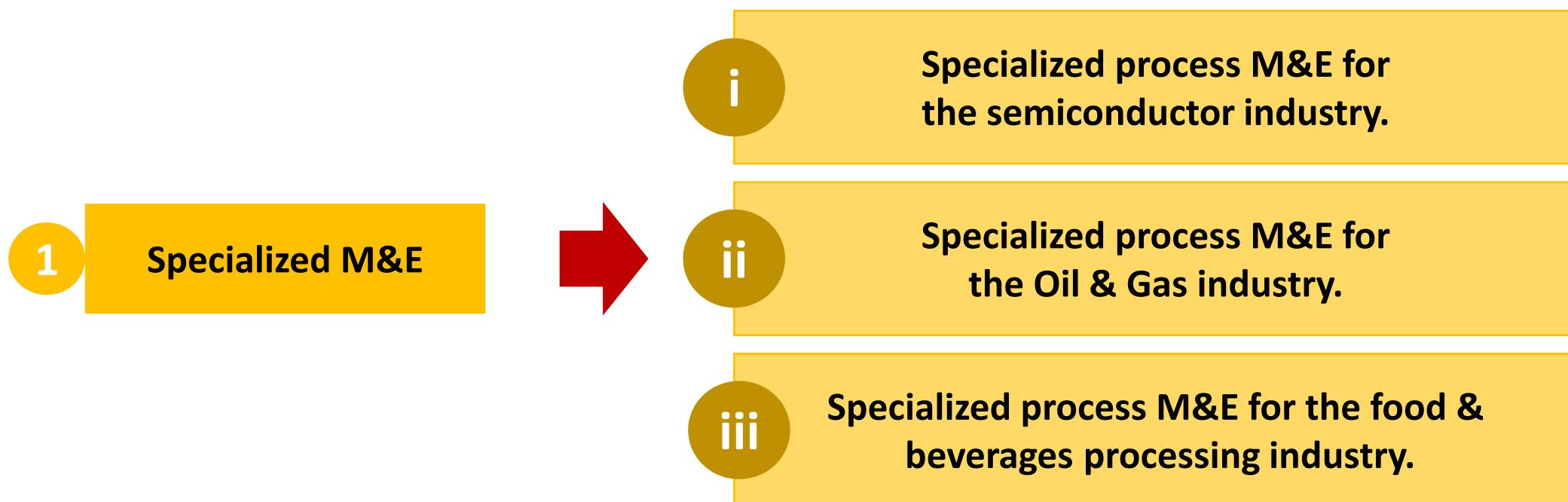
Approved Investment by Subsector in 2019



Specialized M&E shows largest investment segment

THE MACHINERY & EQUIPMENT INDUSTRY

The Specialized M&E Subsector can be further divided into three (3) main categories:



THE MACHINERY & EQUIPMENT INDUSTRY



improve productivity in
any of these sectors?

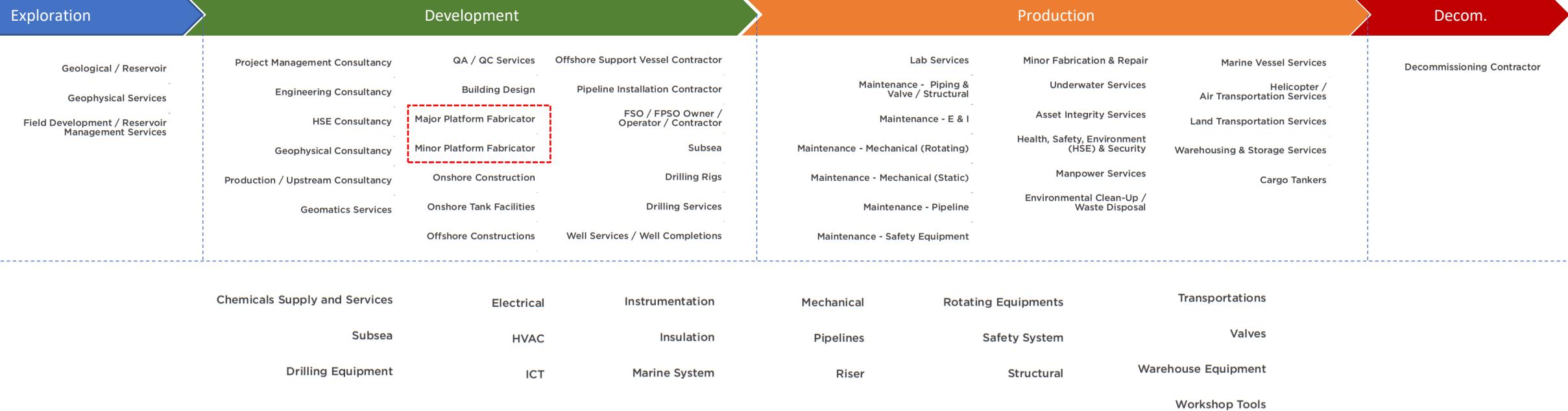
Let's consider subsector ii

SPECIALIZED PROCESS M&E FOR THE OIL & GAS INDUSTRY.

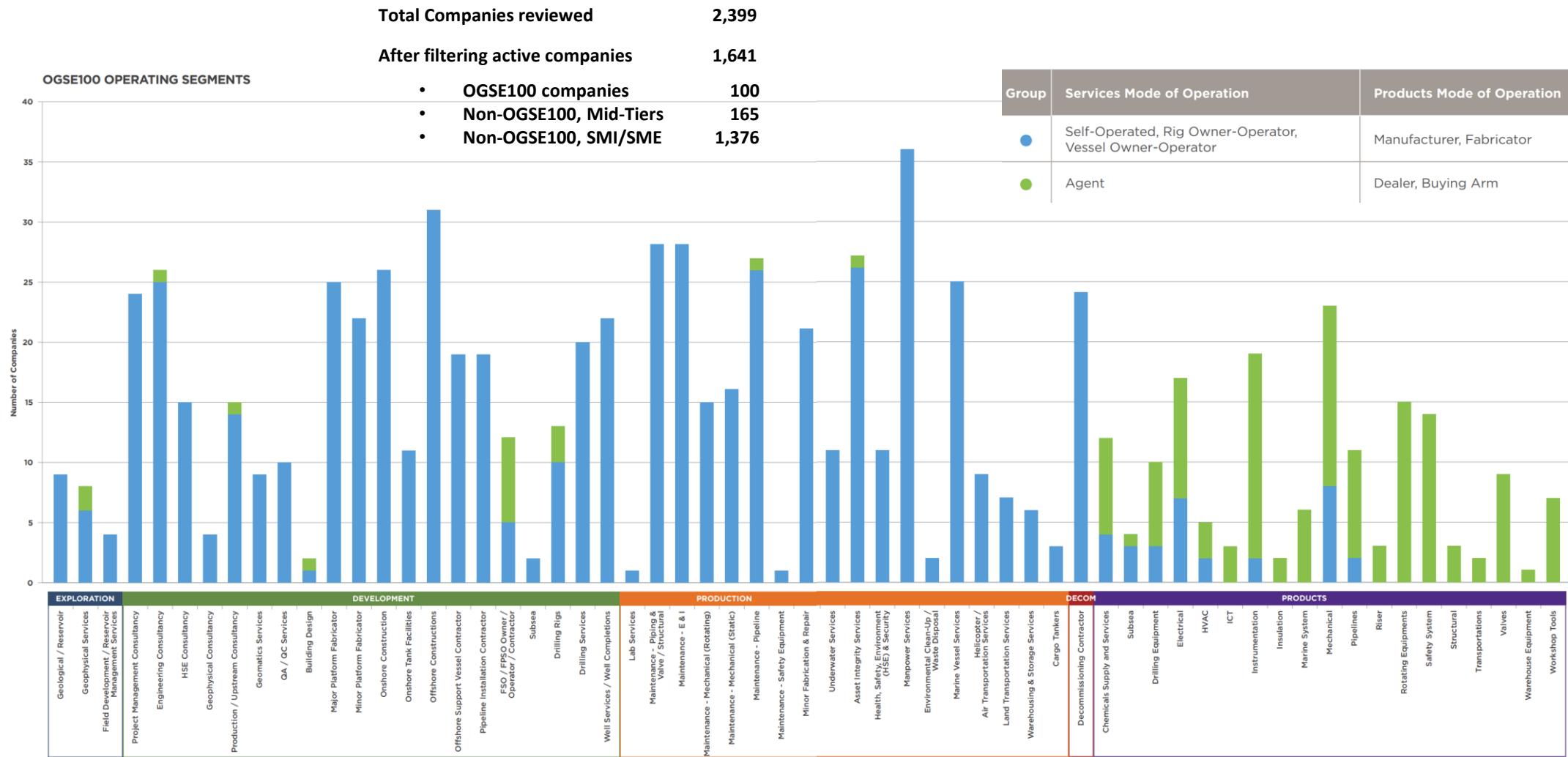


Upstream Oil & Gas Value Chain

Services



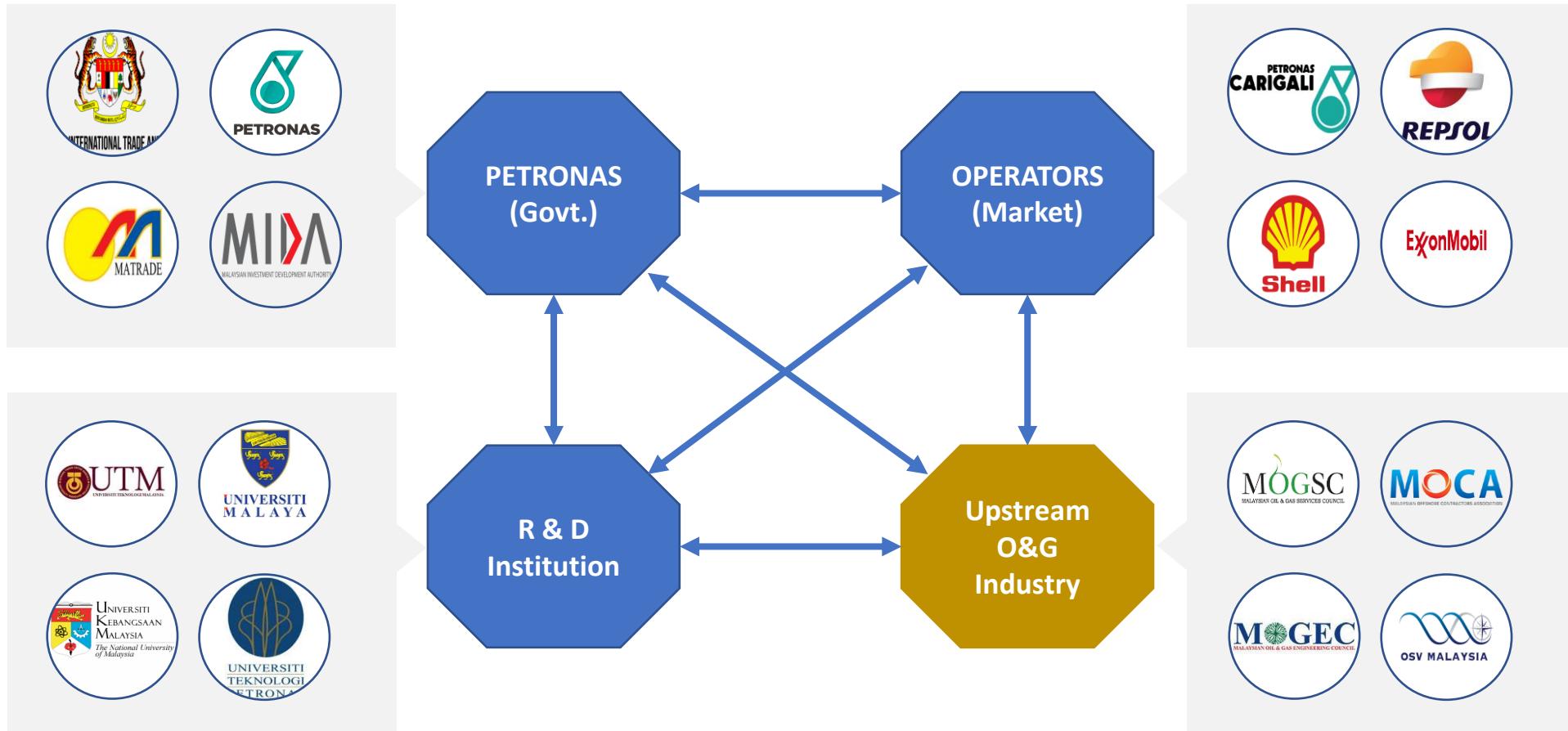
SPECIALIZED PROCESS M&E FOR THE OIL & GAS INDUSTRY.



Source PETRONAS 2018 (From MPRC100 doc.)

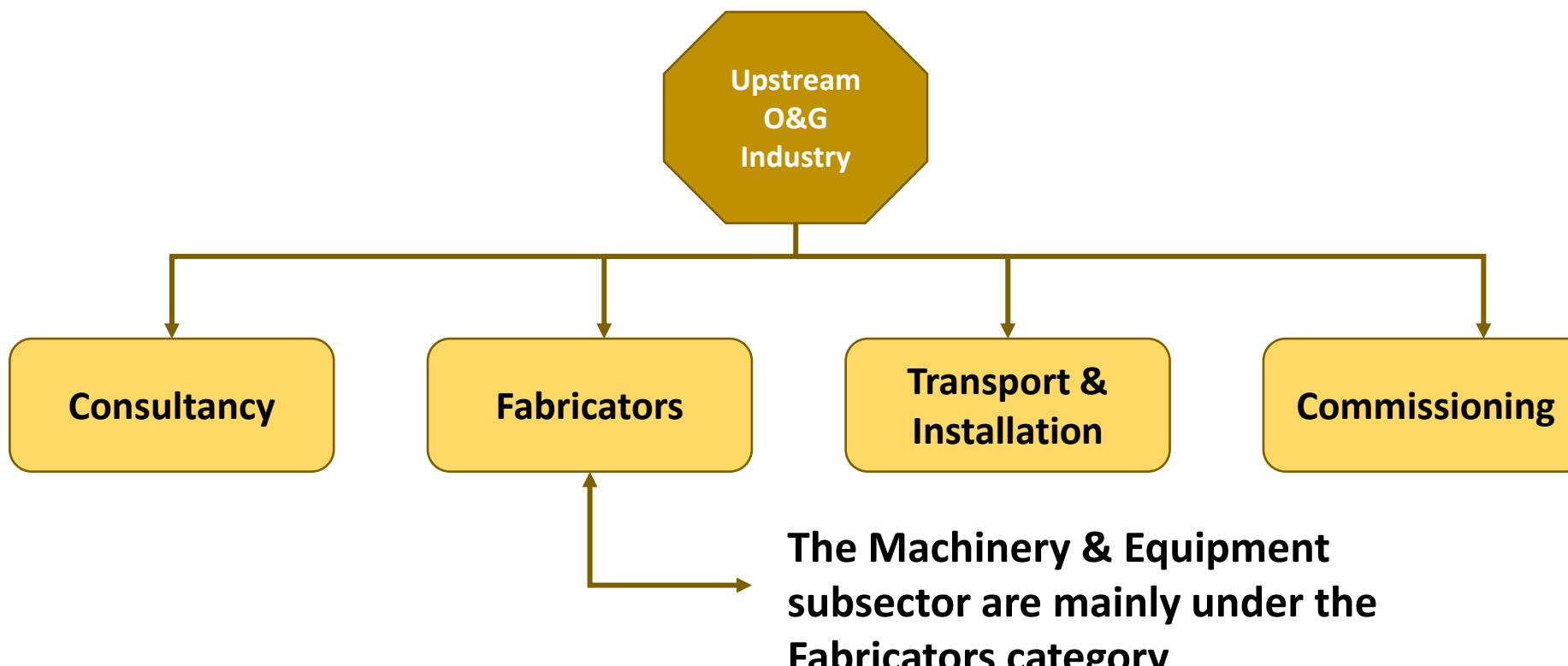
SPECIALIZED PROCESS M&E FOR THE OIL & GAS INDUSTRY.

Quadruple-Helix Model for the Upstream Oil & Gas Industry :

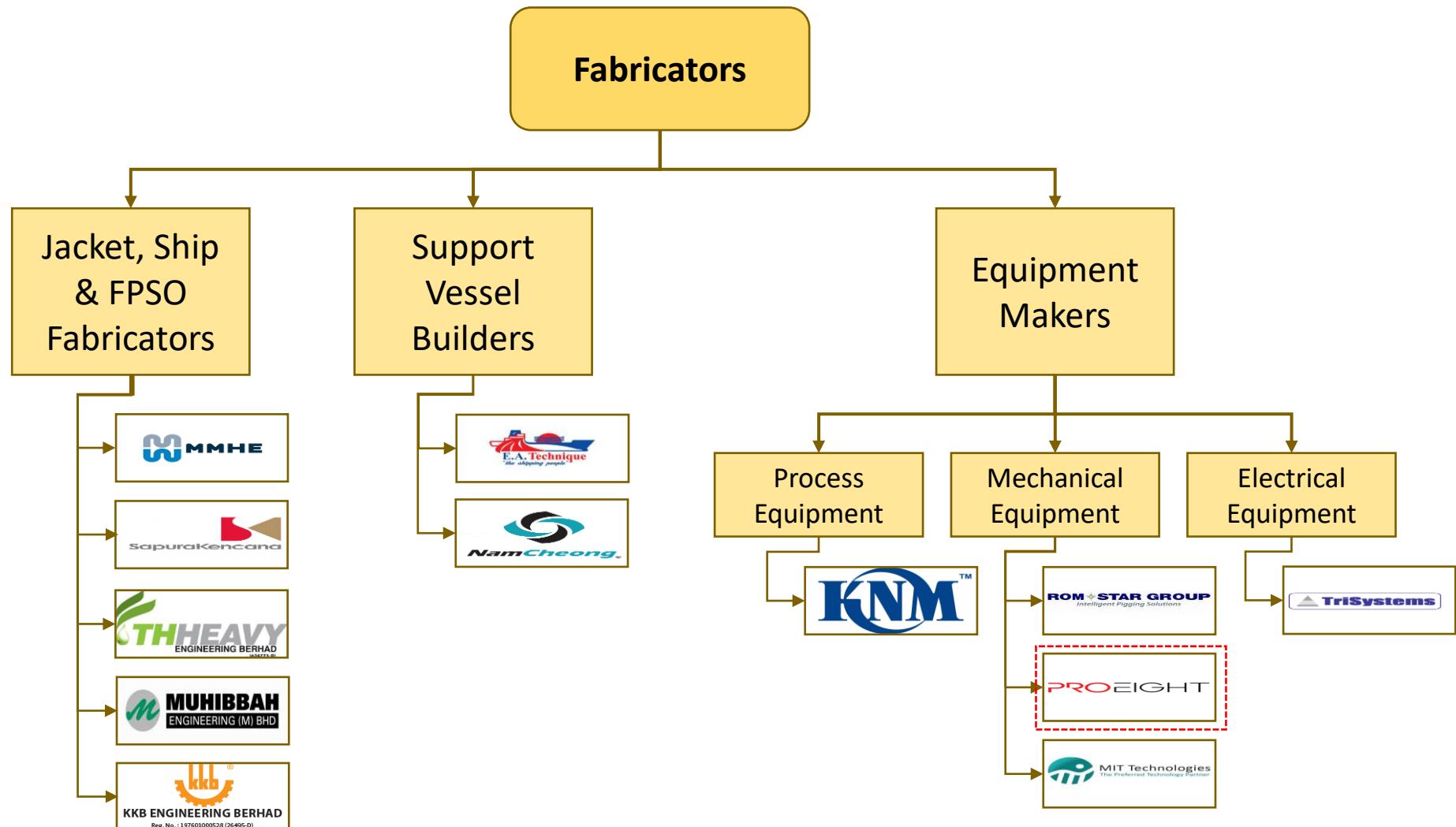


SPECIALIZED PROCESS M&E FOR THE OIL & GAS INDUSTRY.

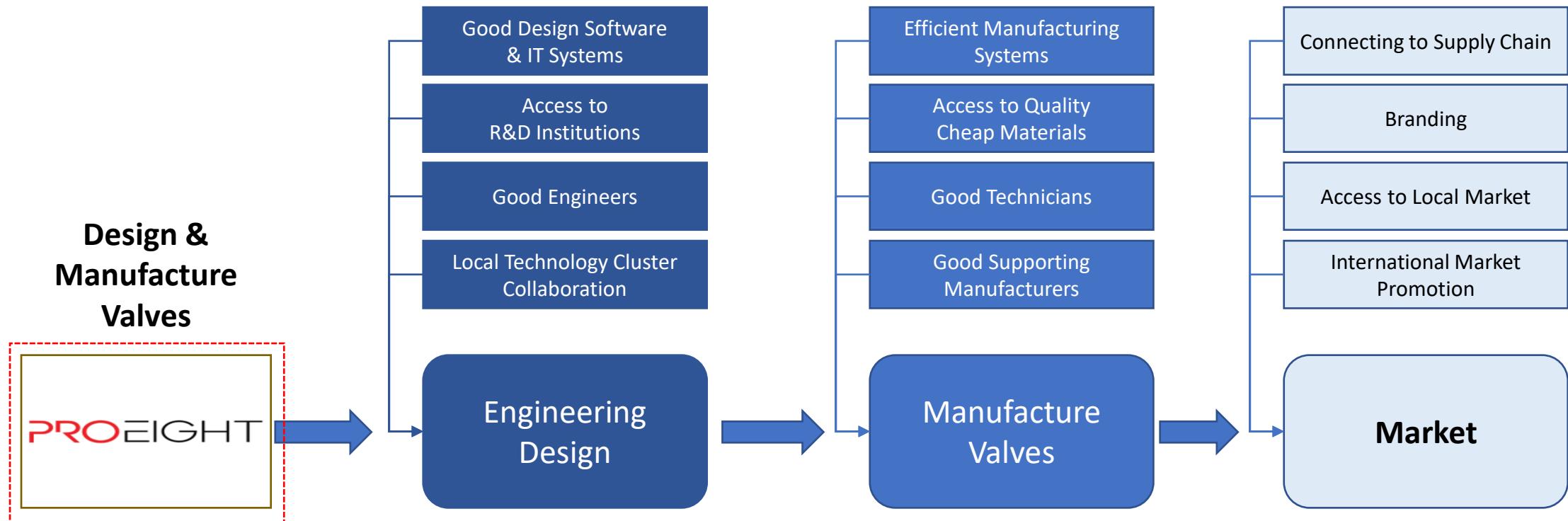
The Upstream Oil & Gas Industry can be categorized broadly into these main subsectors :



SPECIALIZED PROCESS M&E FOR THE OIL & GAS INDUSTRY.



Case Study 1 : How do you improve productivity of PROEIGHT ?

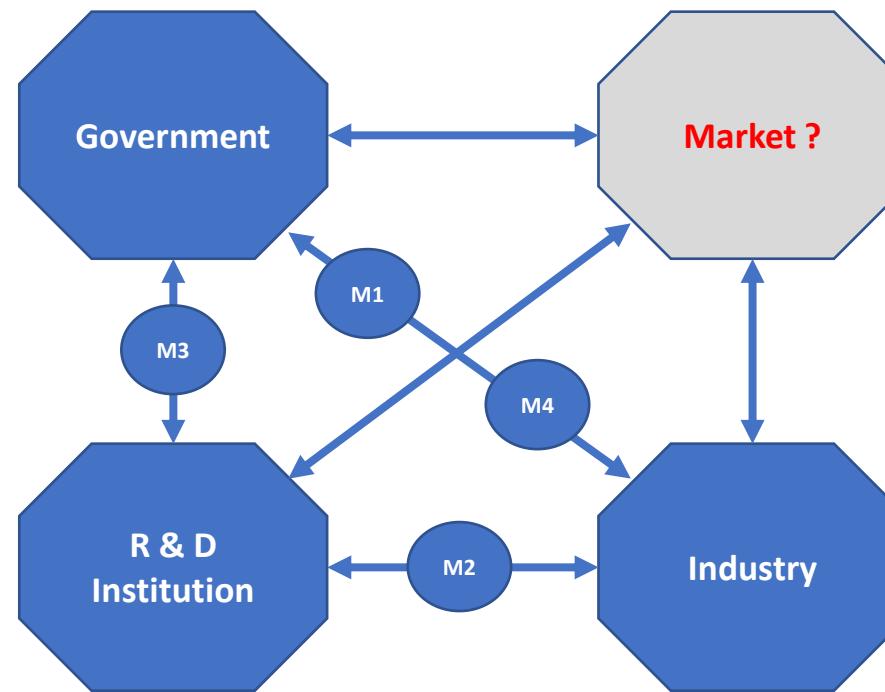


Machinery & Equipment Productivity Nexus

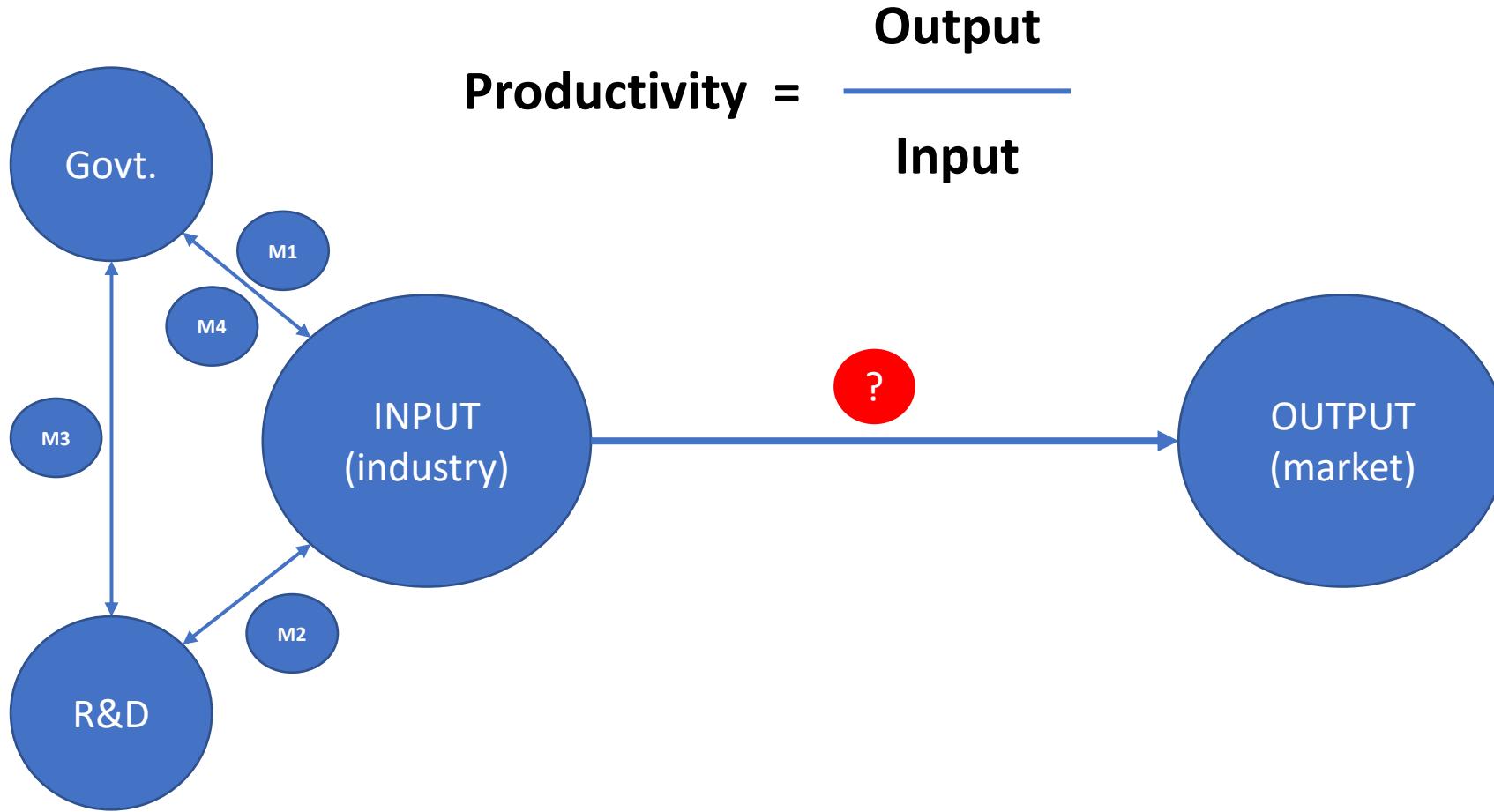
**Some ideas to
move forward**

M&E INITIATIVES SIGNIFICANCE

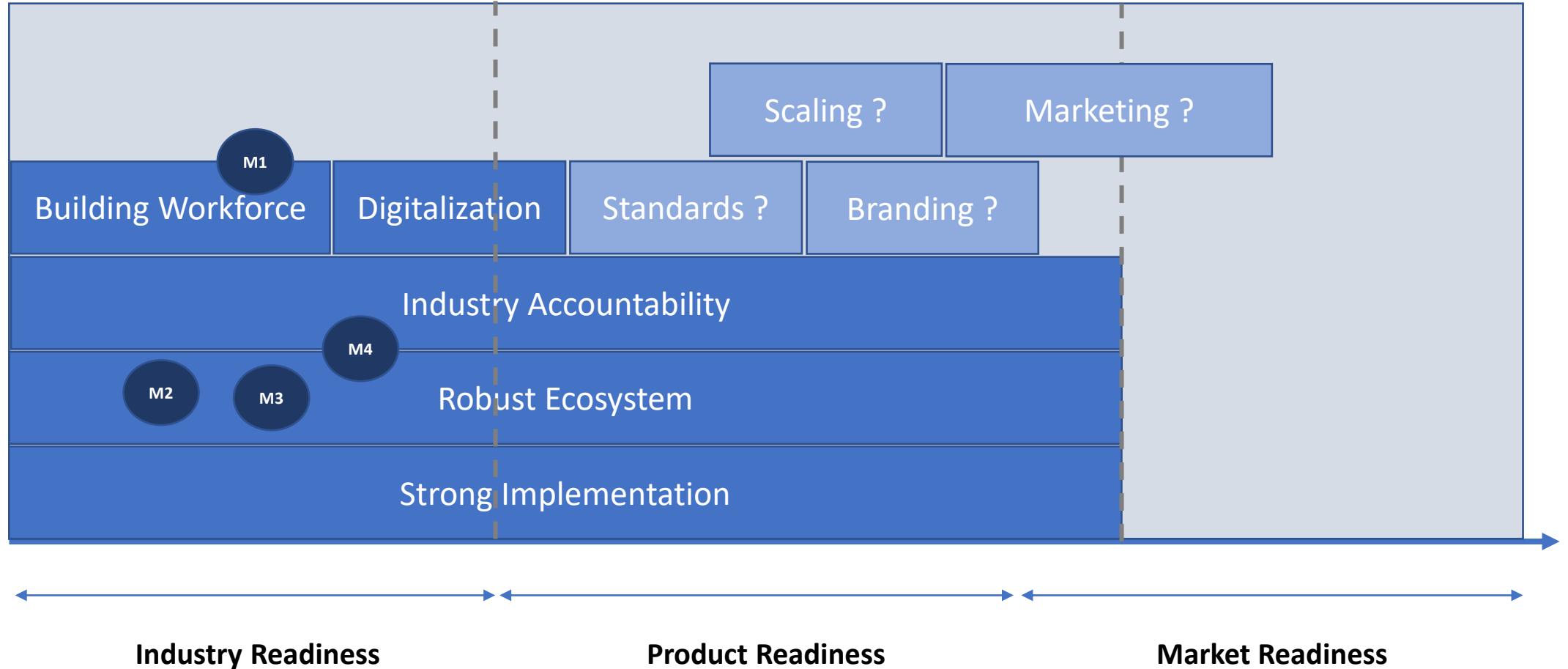
M1	Set up partnership between government and industry association to up-skill existing employees
M2	Set up centers of excellence (COE) for skilled professional to share industry expertise and develop new technologies
M3	Set up more product testing facilities to ensure standards are met
M4	Update domestic product standards to be on par with international standards and enforce compliance



M&E INITIATIVES SIGNIFICANCE

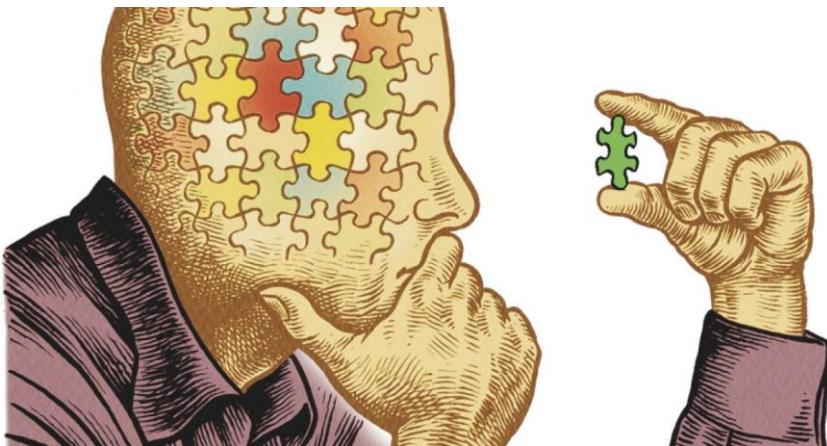


M&E INITIATIVES SIGNIFICANCE



M&E INITIATIVES SIGNIFICANCE

What else ?



Thank You

DSM

Until the
Next Session

THE MACHINERY & EQUIPMENT INDUSTRY

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Specialized process M&E for the semiconductor industry.

