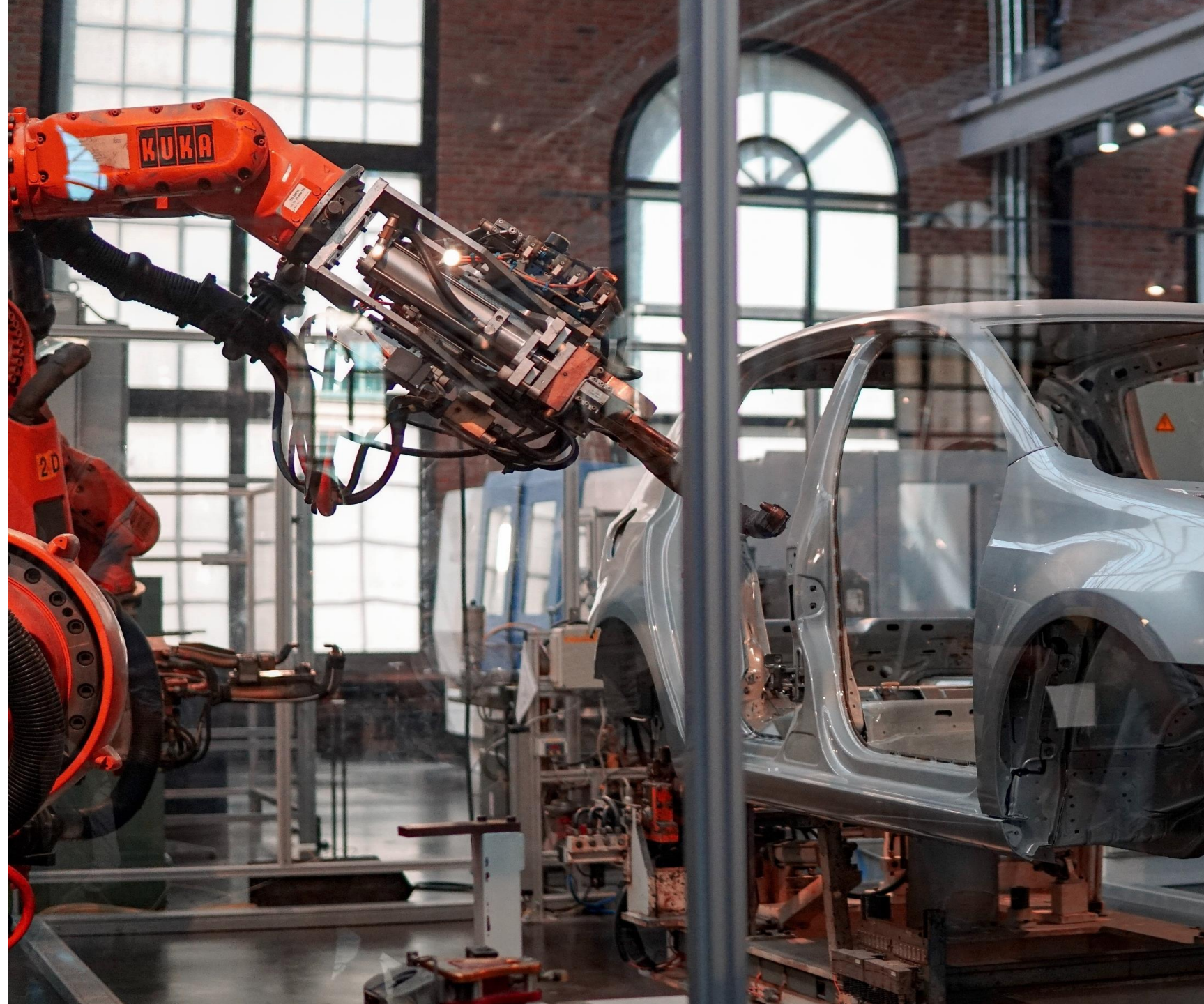


REVITALIZING MANUFACTURING TOWARDS A SUSTAINABLE & INCLUSIVE INDUSTRIAL DEVELOPMENT

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SECRETARY

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Respectable PH Manufacturing Performance vs Neighbors

- PH manufacturing grew at a respectable rate reaching 10.3% in 2013
- VN grew consistently at a much faster rate with double digit level from 2015-2019
- PH manufacturing share to GDP remained almost unchanged
- VN increased steadily from 2013-18

MANUFACTURING GROWTH (YOY %)

Country	2013	2014	2015	2016	2017	2018	Q1-Q3 2019
China	10.5	9.4	7.0	6.8	7.0	6.2	5.6
India	5.5	5.0	7.9	13.1	7.9	5.9	0.9
Indonesia	4.4	4.6	4.3	4.3	4.3	4.3	0.2
Japan	-0.1	3.0	3.8	2.0	2.2	0.0	-1.6
Malaysia	3.4	6.1	4.8	4.4	6.0	5.0	4.0
Philippines	10.3	8.3	5.7	7.1	8.4	4.9	3.7
Singapore	1.7	2.7	-5.1	3.7	10.4	7.5	-2.4
South Korea	3.6	3.5	1.8	2.4	4.4	3.6	1.2
Thailand	1.9	0.1	1.6	2.3	2.9	3.0	-0.4
Vietnam	7.2	7.4	10.6	11.9	14.4	13.0	11.4

MANUFACTURING SHARE (% of GDP)

Country	2013	2014	2015	2016	2017	2018
India	16.1	15.9	16.0	16.7	16.7	16.5
Indonesia	21.7	21.6	21.5	21.4	21.2	21.0
Japan	20.4	20.9	21.5	21.7	21.8	-
Malaysia	22.9	23.0	22.9	22.9	23.0	23.0
Philippines	22.8	23.3	23.2	23.2	23.6	23.3
Singapore	19.0	18.8	17.4	17.5	18.6	19.3
South Korea	28.8	28.8	28.5	28.4	28.7	29.0
Thailand	28.8	28.6	28.0	27.7	27.3	27.0
Vietnam	14.6	14.8	15.4	16.2	17.4	18.3



Significant increases in approved manufacturing investments expected to expand production capacities, address supply chains gaps, improve GVC participation

- Total IPA-approved investments in 2016-2018: PHP 730B, 57.3% higher than 2013-2015
- BOI registered 76% of total IPA-approved manufacturing investments in '16-'18
- Growth in BOI-approved manufacturing investments increased 8-fold: 82% '16, 95% '17 & 327% '18
- BOI-approved investments in manufacturing hit PHP 409B in '18: double total investments registered in last 5 years
- BOI registered investments to address supply chain gaps, reduce import dependence
 - Huili Investment Fund, HBIS Group and Steel Asia Project: hot rolled coils with annual capacity of 4.5M MT, slabs with annual capacity of 600K MT
 - Steel Asia Project : PHP 65.8B investment to produce nails, staple wires, paperclips and construction-grade steel products such as wire rod, wire mesh, medium & steel sections
 - Florida Blanca Steel Industries Corp: Php 250M to produce steel pipes
 - Electronics: Wistron (manufacturing arm of Acer) & Ever Win (transfer from China to PH)

Manufacturing growth has slowed down

YEAR	Q1-Q3 growth	Annual growth
2016	8.6	7.1
2017	5.6	8.4
2018	5.6	4.9
2019	3.7	

- US-China trade war, rising global protectionism, global slowdown
- Sectors that declined/contracted: 33% share to manufacturing
- **Challenges: US-China trade war; import competition; the lack of raw materials; reduced export demand; and even the maintenance shutdown of a petroleum company.**

Manufacturing GVA Growth (in %)	2018	2019
Food manufactures	4.9	7.3
Beverage industries	3.7	6.7
Tobacco manufactures	-15.2	12.5
Textile manufactures	-0.4	6.5
Wearing apparel	-0.2	10.5
Footwear, leather, leather products	4.7	9.7
Wood, bamboo, cane, rattan	11.9	22.4
Paper and paper products	14.1	0.6
Publishing and printing	4.8	9.2
Petroleum , other fuel products	17.7	-15.0
Chemical & chemical products	-1.5	8.0
Rubber and plastic products	12.4	4.1
Non-metallic mineral products	12.3	1.5
Basic metal industries	-1.1	21.1
Fabricated metal products	6.9	7.1
Machinery, equipment ex electrical	7.0	4.7
Office, accounting, computing machinery	13.4	3.3
Electrical machinery & apparatus	4.6	13.1
Radio, TV, communication equipment, app	10.3	-2.0
Transport equipment	-0.4	0.9
Furniture and fixtures	2.7	-21.4
Miscellaneous manufactures	2.4	2.7
GROSS VALUE ADDED IN MANUFACTURING	5.6	3.7

Addressing Growth Constraints

Government Programs to Address Manufacturing's Most Binding Constraints

1

Value Chain

Incentivize thru BOI Investment
Priorities Plan; Local Supplier
Development Program

2

Efficient and Competitive Power Cost

BOI Investment Priorities Plan
Incentivize Renewable, Non-
Renewable, & Energy Efficient
Technologies in Manufacturing

3

HR Development, Upskilling and increasing productivity

Industrial Human Resource Capability
Building; Upskill/reskill our workforce;
Industry 4.0 training facilities for SMEs

**Non-renewable
Energy: 20
approved projects;
2,044 employment
generated**

**Renewable Energy:
180 approved
projects; 6 921
employment
generation**

Energy Efficiency in Manufacturing

Addressing Growth Constraints

Government Programs on Manufacturing's Most Binding Constraints

4 Efficient Logistics

- Roads Leveraging Linkages of Industry and Trade or 'ROLL IT'
- Proposed Law on High Shipping Cost
- Cut red tape and Eliminate corrupt practices
- Philippine National Standard (PNS) on Shipping & Transport

6

Countering Unfair Trade Practices

Safeguard Measures

- Cement until 2022
- Ceramic Floor and Wall Tiles until 2020
- Clear and Tinted Float Glass including Reflective Glass until 2020

Anti-Dumping Measures

- Clear and Bronze Float Glass from PROC until 2022

5

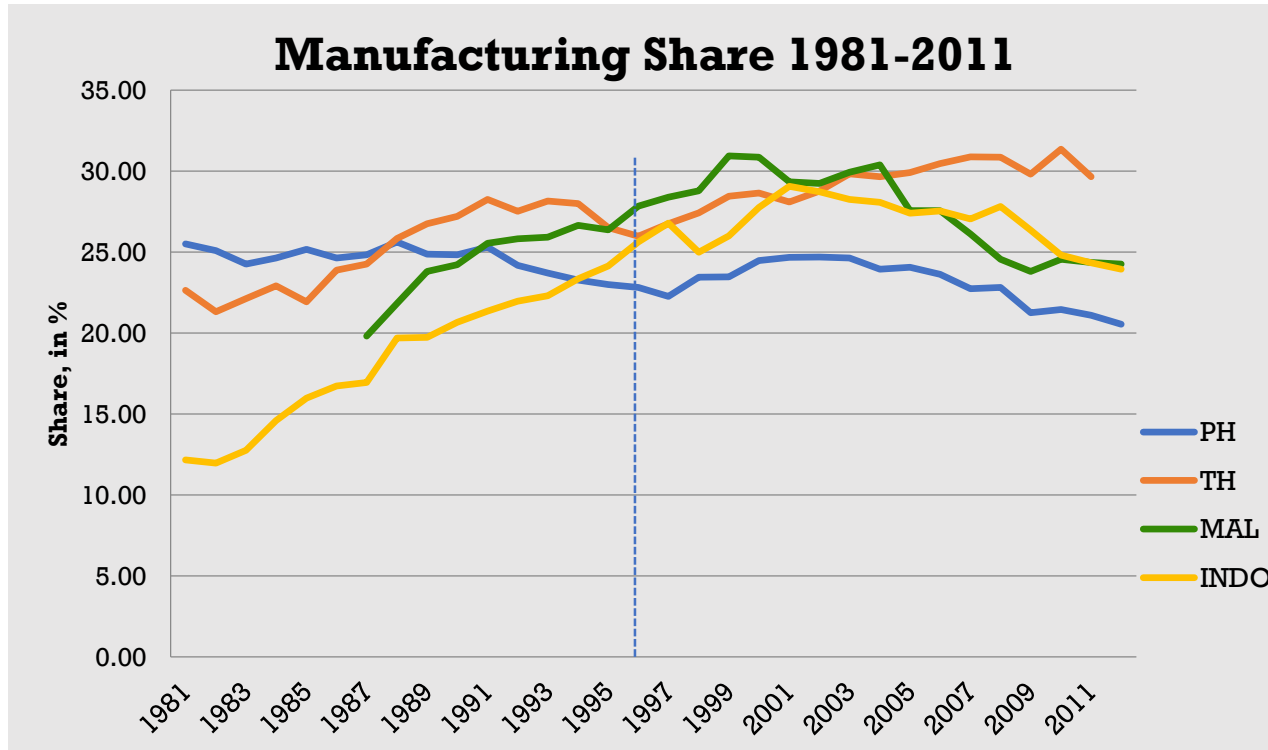
Addressing Smuggled, Substandard and Counterfeit Products

- Philippine Standard (PS) Certification Mark Licensing Scheme
- Import Commodity Clearance (ICC) Licensing Scheme

Segments Under Mandatory Product Certification:

- Electrical Products
- Mechanical/Building & Construction Materials
- Chemical & Other Consumer Products

Successful Industrial Policy in Thailand & Malaysia resulted in manufacturing reaching over 30% share of GDP



	GDP/capita		Exports	
	2012	1980	2017	1980
PH	\$2,588	\$685	\$68.7B	\$14.8B
TH	\$5,474	\$683	\$236.7B	\$12.1B
MAL	\$10,780	\$1,775	\$217.8B	\$17.6B

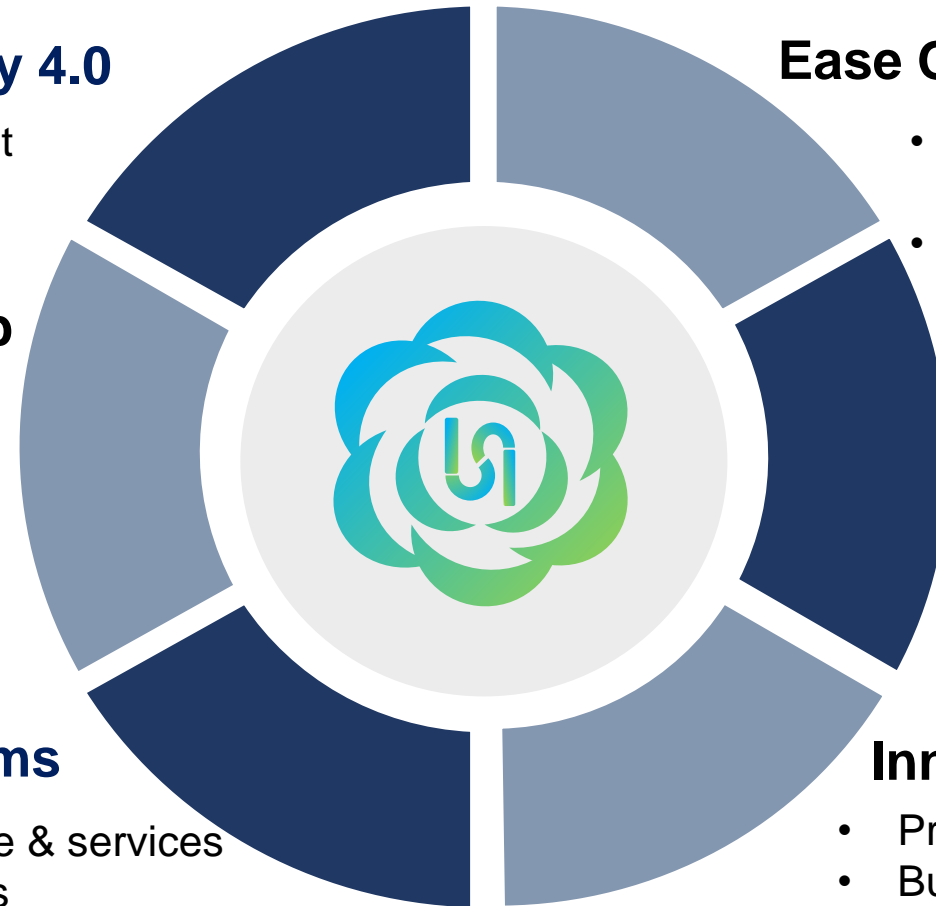
- Thailand 1997 Industrial Restructuring Program US\$1.19 B:** soft loans, technical assistance to 13 industries (food, textile, garments, pharma, chemical, rubber, plastic, auto, electronics, iron & steel, petrochemicals)
- Malaysia 7th Plan '95-'00:** new industrial policy to move to high-tech manufacturing, budget allocation **RM2.5B** (integrated steel mill, wafer fabrication, aerospace, petrochemical)
- PHIL:** Limited adjustment program, liberalization not well-calibrated, 5% uniform tariff by 2005

MFG GR	PHIL	THAI
82-85	-4.2	4.7
86-90	5.1	15.1
91-95	2.1	12.1
96-00	3.2	3.02
01-05	4.3	6.52
06-10	3.9	4.74

EMP SH	PHIL	THAI
81-85	9.7	7.5
86-90	9.9	8.1
91-95	10.3	11.1
96-00	10.1	13.5
01-05	9.5	14.8
06-10	8.7	14.9

ASEAN Comparison of Support Programs for Industrial Innovation

Incentives	Philippines	Vietnam	Malaysia	Thailand	Indonesia
Program	Philippine Innovation Act	National Technological Innovation Fund and Science and Technology Development Fund	(1) Industry 4RWD Transition Fund, (2) Innovation Loan Fund, (3) Industrial Digitalization Transformation	Thailand Competitive Fund	2020 Industry 4.0 Funds from the National Budget to Improve Manufacturing Competitiveness
Industrial Innovation Subsidies/Grants/Loans	US\$ 20M / PHP 1B	US\$ 45M, 50% deduction on commercial interest rates for innovation loans	(1) US\$ 50.6M (2) US\$ 481M (3) US\$ 722M Total : \$1.25B	US\$ 331M	US\$ 178 million



Embrace Industry 4.0

- Use and adapt new technologies

Ease Of Doing Business

- Simplification of processes, automation
- Power, logistics, infrastructure

Innovation Entrepreneurship Ecosystem

- Promote research commercialization
- Creation of new products, services, business models

Upskill/Reskill Workforce

- Upgrade education curricula
- Skills training programs
- Improve digital skills

Integrate Production Systems

- Link manufacturing with agriculture & services
- Participation in global value chains

Innovative SMEs & Startups

- Prepare SMEs for Industry 4.0
- Build startup ecosystem

INCLUSIVE INNOVATION INDUSTRIAL STRATEGY i³S

INDUSTRIAL PLANS & STRATEGIES IN PLACE BUT NO PROGRAM FUND SUPPORT

15 PRIORITY INDUSTRIES FOR DOMESTIC AND EXPORT MARKETS

Hi-technology, innovation/R&D, infrastructure, regional imbalance, labor-intensity, sustainability, spill-over/multiplier effects, value/supply chain linkage



Electrical & Electronics



IT BPM



Agri-business



Transport, Logistics, Construction



Creative



Auto & Auto Parts



Tool & Die, Iron & Steel



Shipbuilding, RORO



Innovation, R&D



Tourism



Aerospace Parts



Chemicals



Furniture, Garments



Climate Change, Environment



E-Commerce

priority activities

A circular inset image showing a close-up of a complex microchip or integrated circuit with various components and traces.

electrical and electronics

R&D , IC Design, Expansion Facilities for Advanced Products and Technologies (IoT, Robotics, Drones, AR, cognitive cloud, 3D Printing), auto electronics (GPS, infotainment, wireless communication modules, telematics, autonomous vehicle sensors, VR, systems, onboard computers, microprocessors), aerospace electronics, batteries, consumer electronics; manufacture of electrical equipment and parts, lenses, medical devices

A circular inset image showing a blue and white engine, likely a diesel or gas engine, with various components visible.

automotive

Auto electronics, ADAS components, engineering services outsourcing, sensors, motors automatic transmission, metal casting, forging products, machining products, electric motor powertrains like **battery**, charging facilities, **EV(E-PUV, E-trikes, E-buses)**

A circular inset image showing a metal processing or casting operation, with a bright orange molten metal being poured into a mold.

metal products, machinery, and equipment

Metal Products & parts; surface treatment; heat treatment; engines & equipment; machinery, equipment, & parts, automation machinery, robots

A circular inset image showing a close-up of a metallic aircraft component, possibly a landing gear or engine part, with a blue and white finish.

aerospace parts and MRO

Flight control actuation systems, servo actuators, servo valves, galley inserts, structures and equipment, seat parts, lavatories, interior fit-out, panel assembly, electronics, airframes and sub-assemblies; MRO: base and line maintenance for commercial aviation

Industrial Projects requiring funding support

ECO-PUV Program

- Manufacture of jeepneys using both ICE & EV technology
- Parts & components of OEM platform & Eco-PUV body
- Production volume & fixed investment support

DTI-National Development Corporation Co-investment Program

- Co-fund innovation projects to develop new products, new capabilities
- Funding assistance for developing & testing technology projects
- Matching Grants

EV Incentive Scheme (EVIS) Program

- CARS-like incentives: fixed and production volume incentives
- E-jeepneys, buses, trikes, motorcycles

Industrial Transformation Program

- Support to companies that are shifting to Industry 4.0 technologies to improve productivity (digitalization, automation, technology adoption)

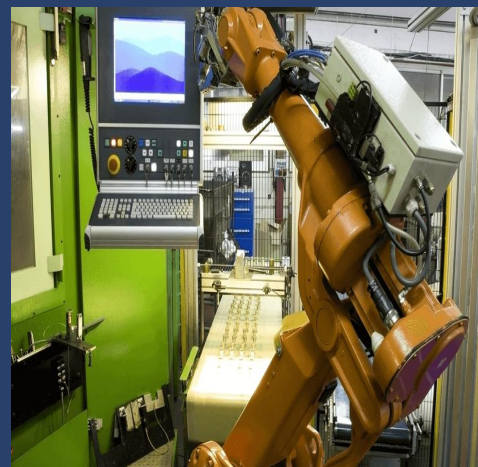
INDUSTRY 4.0 READINESS INITIATIVES that would require funding



**INDUSTRY 4.0
ROADMAPS**



SME ACADEMY



**INDUSTRY 4.0
PILOT FACTORY**



**PHILIPPINES AS AI
CENTER of excellence**



**UPSKILLING &
RESKILLING OUR
WORKFORCE**

Proposed projects to prepare firms, industries, & workers for Industry 4.0 : create support funds to facilitate transformation of firms to new technologies, establish Industry 4.0 training facilities for SMEs and Industry 4.0 pilot factories to serve as demonstration facilities, build pool of data scientists, upskill/reskill our workforce

SECURING MANUFACTURING REVITALIZATION & TRANSFORMATION (SMaRT) PROGRAM

Guiding Principles	<p>PERFORMANCE-BASED TARGETED TIME-BOUND</p> <p>TRANSPARENT</p>
What to support selection criteria & guidelines	<p>ADOPTION OF INDUSTRY 4.0 TECHNOLOGIES UPGRADING PROCESS</p> <p>UPGRADING PRODUCT UPGRADING SERVICE NEW BUSINESS MODEL</p> <ul style="list-style-type: none"> • Global Value Chain upgrading • Social Benefits and externalities (EV: E-PUV, E-jeepneys, E-trikes, E-buses) • Adoption of Industry 4.0 technologies to catalyze manufacturing growth & the economy • Innovation, R&D, commercialization of market-oriented research • Emerging industries, clusters & activities that would address gaps in supply/value chains • Industrial development in rural areas
How to support	<p>SOFT LOANS REDUCED Trade Barriers (sugar) FUND SUPPORT (CARS-Like: EV, E-PUV)</p> <p>GRANTS VOUCHERS INCENTIVES (SIPP) STANDARDS SAFEGUARD MEASURES</p>
Proposed budget	<p>PHP25-30B to support small, medium, and large companies for a period of 3 years</p>

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