

New Productive Forces

Ignite New Momentum
in Hong Kong Manufacturing



Hong Kong Manufacturing Industries Development Study Report

September 2024

創新·綠色·新質生產力
Innovation · Green · New Productive Forces

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Research Focus

Overview, Challenges and Opportunities in Hong Kong's Manufacturing Industry

In-depth Case Analysis to Explore Development Paths and Directions

Hong Kong Manufacturing Industry Development Strategy

Extension of Hong Kong's New Industrialisation Strategy New Productive Forces



2021



2022



2023

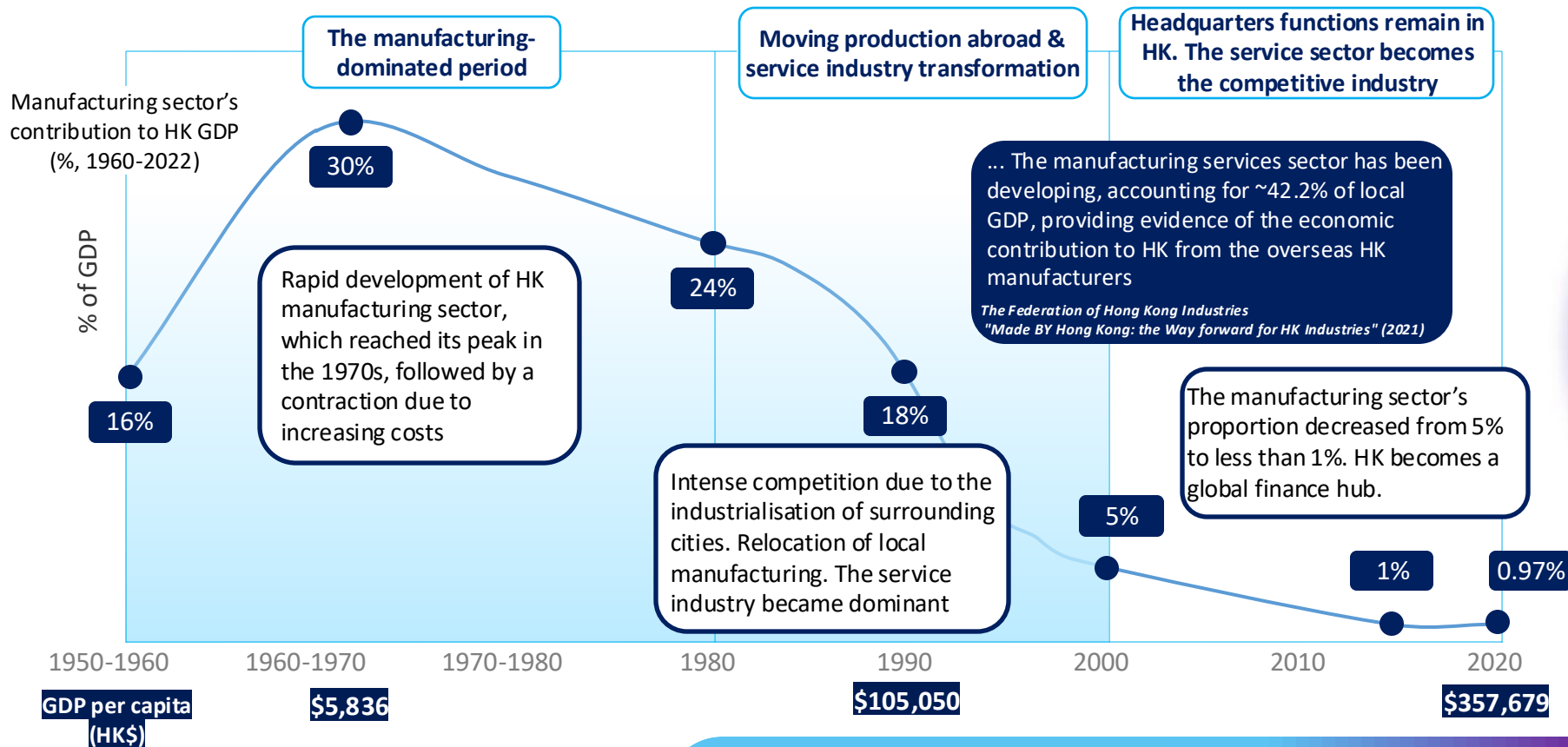


2024

Manufacturing in Hong Kong

... Forming a global production network

Hong Kong's manufacturing industry has ostensibly migrated overseas ...



The inherent advantages of Hong Kong's manufacturing industry lay the foundation for the development of new industrialisation.

Source: the Census and Statistics Department, market research; Deloitte interviews, research, and analysis

Four Challenges of Hong Kong's Manufacturing Industry

Increasingly Fierce Competition

- A HK electrical appliance OEM company**
Project Director
"10 years ago, HK companies had a quality advantage compared to companies in the Chinese mainland, but now the gap has almost been narrowed."
- A chamber of textiles in Hong Kong**
President
"Cost increases have led the industry to shift towards higher value-added production ... Products with high prices and time sensitivity are produced in China."

Declining market share squeezing profits

Global Supply Chain Remodelling

- A chamber of textiles in Hong Kong**
President
"We must adopt the 'China +1' **supply chain strategy**. The supply of goods **exporting to the United States** has been relocated to Southeast Asia."
- A major chamber of commerce in Hong Kong**
Research Leader
"Supply chain locations are affected by technical requirements, production costs, and tariffs, etc.; some raw materials are imported via the Southeast Asian supply chain."

More difficult to manage supply chains and companies

Small Order Volume & Customisation Have Become the New Normal

- A foreign-funded beverage company**
Senior Engineering Manager
"Mass production may lead to unsaleable inventory ... It is more difficult to shorten the product lifecycle."
- A major chamber of commerce in Hong Kong**
Research Leader
"Industrial transformation includes the 'small-batch orders & quick response' mode, which imply high requirements and customisation, an area in which HK has competitive advantages."

Product lifecycle shortening challenging traditional production models

Sustainability is on the Move

- A food company in Hong Kong**
Director of Research and Development and Production
"Globally, the requirements for green production are increasing, and it is difficult for companies to keep up with the rapidly changing requirements."
- An innovative association in Hong Kong**
President
"Regulatory authorities in the Chinese mainland are continuously raising environmental standards for production, making it difficult to reduce costs."

Making green manufacturing/sustainability an essential issue

Source: Deloitte interviews

Implement Industry 4.0 via cross-sectoral cooperation
Maintain leading position in the manufacturing industry

- 2030 Vision for Industries 4.0
- Hanover Industrial Fair



Position the manufacturing sector as a vital segment of the economy

Create a super-smart society

- The 5th Science and Technology Basic Plan
- Talent training for “Society 5.0”
- The 2021 White Paper on Manufacturing Industries

National Digitalisation Strategy
Promote industrial transformation & upgrading

- The Digital Switzerland Strategy
- eGovernment Strategy Switzerland 2020–2023



**Developed Economies:
Formulating National Industrialisation Strategy**



Become a global manufacturing powerhouse
Encourage enterprises to adopt smart manufacturing

- New Growth Strategy 4.0
- Manufacturing Renaissance Vision

Train talent for advanced manufacturing
Develop competitive industries

- Strategy for American Leadership in Advanced Manufacturing
- United States Innovation and Competition Act of 2021



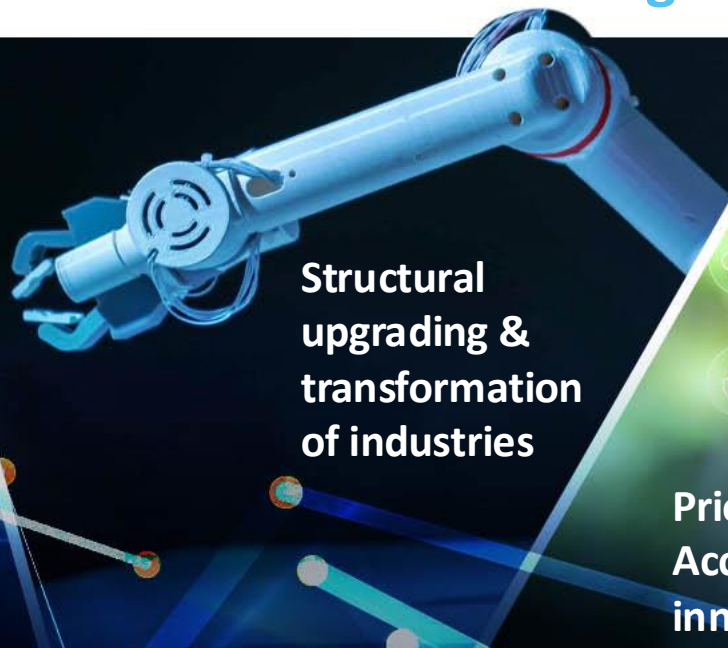
Become a global innovation & talent hub for advanced manufacturing

- Singapore Manufacturing 2030 Vision
- Research, Innovation and Enterprise 2025 Plan

Value Enhancement Centred on Technological Innovation

The 3rd Plenary Session

“Developing New Productive Forces according to Local Conditions”



"New Productive Forces" Strategy

Provide Transformation & Upgrading Opportunities for Manufacturing Industry in Hong Kong

Talent

5 universities in World Top 100
InnoCell Talent Apartments

"Research Talent Hub", "Technology Talent Admission Scheme",
"Top Talent Pass Scheme", "The Global STEM Professorship",
"New Industrialisation & Technology Training Programme",
"Vocational Professionals Admission Scheme"(formatted)

Finance

As the world's largest offshore RMB business hub, HK
processes ~75% of global offshore RMB settlement
The assets under management in HK stand firmly above HK\$30
trillion

"Capital Investment Entrant Scheme"

"Commercial Data Interchange"

"the Multiple Central Bank Digital Currency (m-CBDC) Bridge
Project" (mBridge)

Hong Kong Manufacturing Industry: Relevant Policies & Current Status

"New Industrialisation Funding Scheme" (NIFS)
"New Industrialisation Acceleration Scheme" (NIAS)
"the Microelectronics Centre (MEC)"
"Advanced Manufacturing Centre"

Innovation and Technology Fund

5 R&D centres

"InnoHK research clusters", "Microelectronics Research and
Development Institute", "AI Supercomputing Centre", "Life &
Health Technology Research Institutes", "Data Technology Hub"

Manufacturing and R&D

Hong Kong Trade Development Council
Hong Kong Export Credit Insurance Corporation

A new development paradigm with "Finance in
the south, I&T in the north"

"Cleaner Production Partnership Programme"

"Action Plan on Modern Logistics Development"

BUD Fund - "E-commerce Easy"

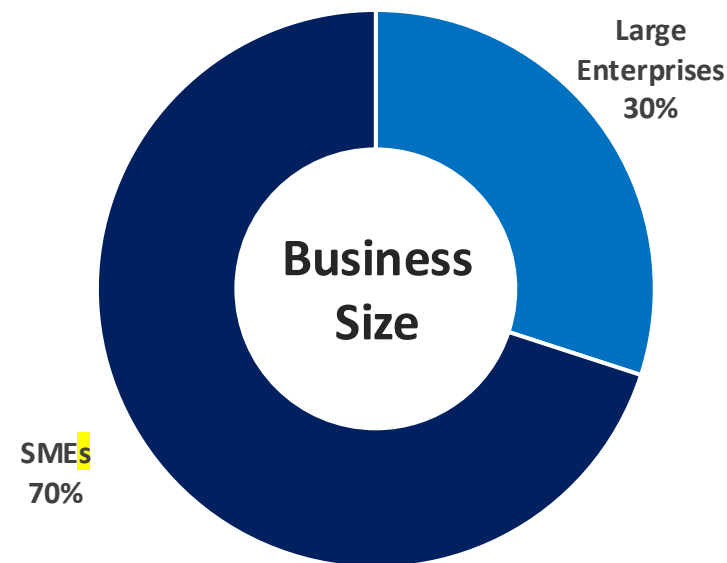
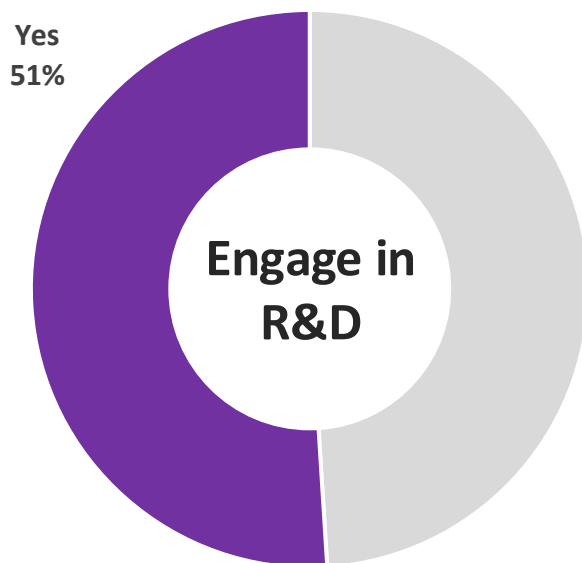
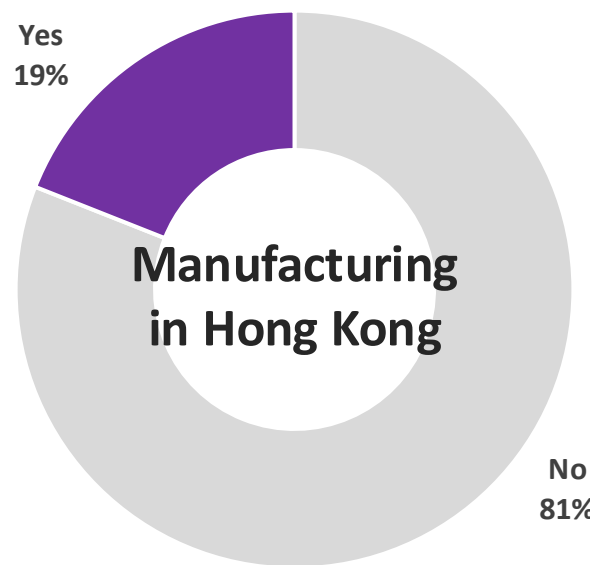
Supply Chain Management

Overview of Hong Kong Manufacturing Industry *Data analysis*



288 manufacturing companies in Hong Kong completed the survey

Covering textiles, electronics, stationery, printing, home products, jewelry, machinery, hardware, building materials and equipment, watches, health and personal care items, chemicals, toys, food, packaging and other industries.



Source: Research by the Productivity Council

Retain High Value-added Functions in Hong Kong

R&D

Yes
31%



Technology &
Product
Development

No
69%

Among them, 72% carry out IP management in Hong Kong

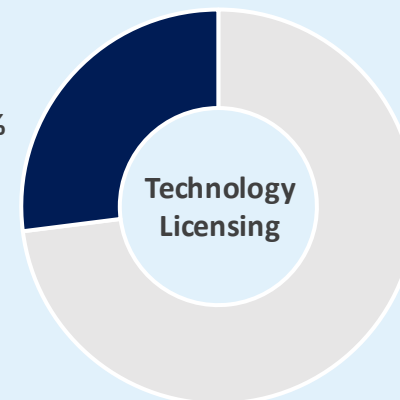
Yes
42%



IP
Application
Management

No
58%

Yes
27%

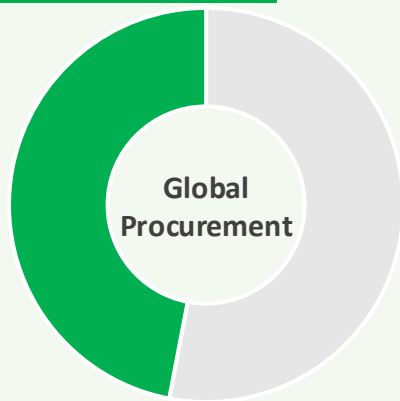


Technology
Licensing

No
73%

Supply Chain Management

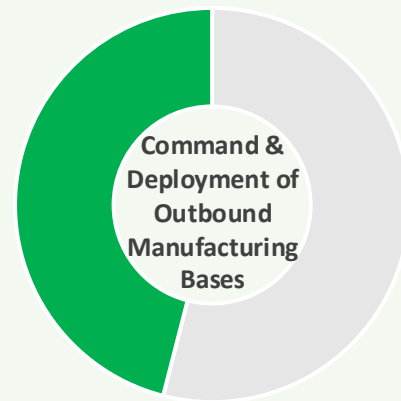
Yes
47%



Global
Procurement

No
53%

Yes
46%



Command &
Deployment of
Outbound
Manufacturing
Bases

No
54%

Finance

Yes
59%



Asset
Management
/ Finance

No
41%

Source: Research by the Productivity Council

Lots of Variety in Fewer Quantities Customisation Become the “New Normal”

69%

Agree that “lots of variety in fewer quantities” is a new trend



81% have yet to adopt smartification solutions

Have no way to deal with
53%

How to cope with the demand for customisation

Have already introduced smartification solutions
19%

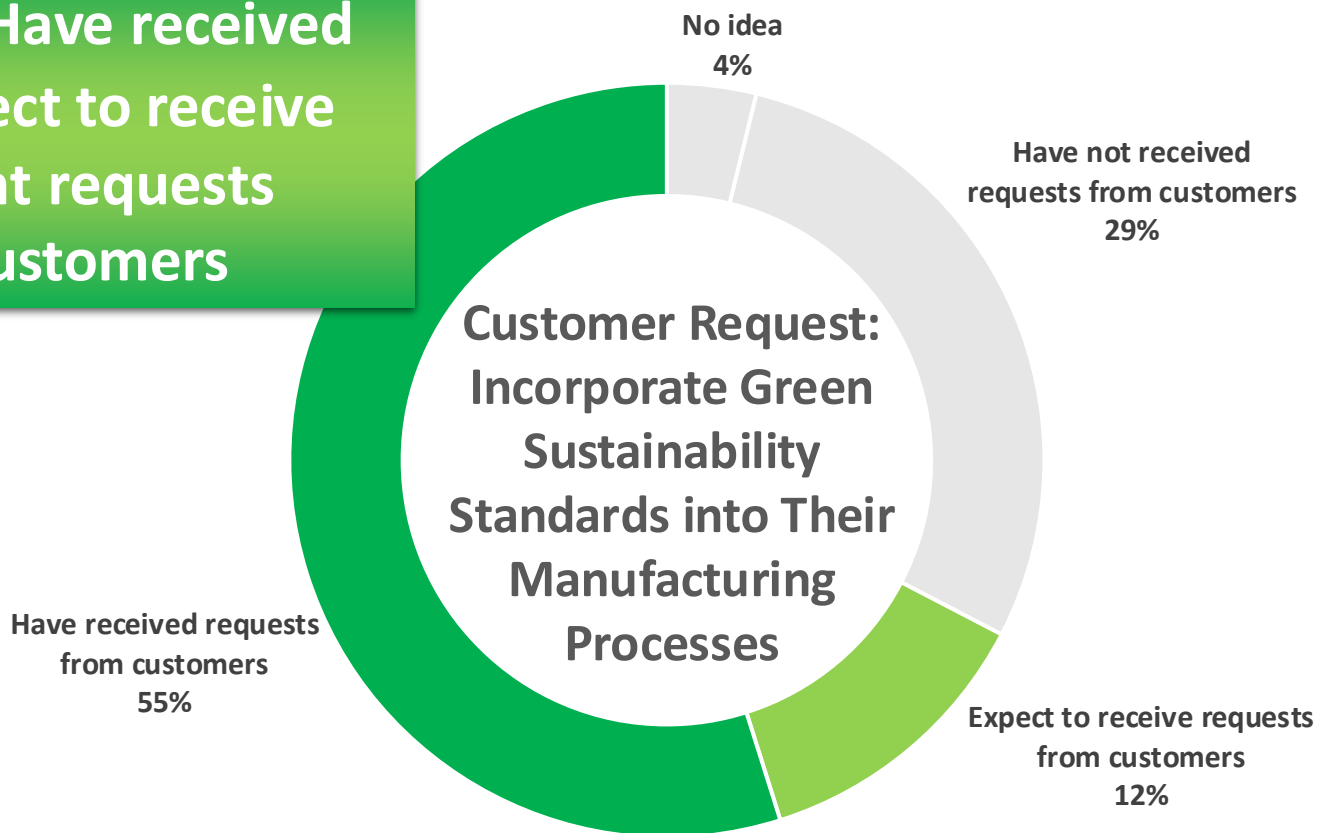
Intend to introduce
20%

Other solutions
8%

Source: Research by the Productivity Council

Green & Sustainable Development Essential Issue for the Manufacturing Industry

67% Have received or expect to receive relevant requests from customers



Examples of Green Manufacturing Requirements & Services :

Carbon-reduction Energy Solutions

Energy Management

Carbon Capture, Carbon Credit Certification, Carbon Trading

International Sustainable Development Certification Services

Sustainable Development Training Course

ESG Reporting, Assurance, Consulting Services

Green / ESG Rating

Green Finance

Sustainability-themed Financing

Source: Research by the Productivity Council

HK Based Enterprise Upgrading & Transformation Analysis

In-depth analysis of

1,300+

Upgrading & transformation cases of Hong Kong-based enterprises

Summarises the

“Three Major Directions and Ten Major Measures”

to Lead the Development of New Productive Forces

1. Pioneering New Manufacturing Models

- 1. Implementing digital transformation
- 2. Enabling green manufacturing
- 3. Promoting flexible production of “Microfactory”

2. Exploring New Growth Engines

- 4. Optimising product development market
- 5. Expanding upstream and downstream industrial chain
- 6. Commercialising patents
- 7. Commercialising production technologies

3. Realising Value Chain Transformation

- 8. Developing product design capabilities
- 9. Establishing brand diversification strategies
- 10. Expanding the scope of product or technology applications

Cases of New Productive Forces Development of Hong Kong-funded Enterprises (1)

The Hong Kong head office of a mold and injection molding product manufacturer is responsible for strategy and investment management, finance, personnel, innovation and R&D and supply chain decision-making management. It plays an important role in the Hong Kong headquarters economy and has production bases in the mainland and Southeast Asia and aims to provide customers with precision injection molding parts and mold products with intricate technology. With its unique mold and injection molding technology developed in-house, it offers one-stop solutions for clients in industries such as medical, healthcare, automotive and industrial supplies, electronics etc.

1. Pioneering new manufacturing models

1. Implementing digital transformation

- Has reached the Industry 4.0 Level-1i maturity standard
- Developing an AI-based digital management system (DMS), and has successfully digitalised the whole process, from product development to mass production
- Connecting the data systems of various operating bases, making real-time monitoring of the operations in different locations through a single system possible

2. Enabling green manufacturing

- It is committed to building a green & low-carbon factory
- Producing products that meet international standards & customer corporate social responsibility requirements
- Has obtained several quality management certifications

2. Exploring new growth engines

4. Optimising product development market, 5. Expanding upstream and downstream industrial chain, 6. Commercialising patents

- Transforming from traditional molds to R&D and production of precision plastic products, and expanding business into various industries and supply chain applications with high-quality and precision products
- Collaborating with R&D institutions to develop new materials. The company owns multiple mold technologies and new material patents, and applies them to products co-developed with clients

3. Realising value chain transformation

8. Developing product design capabilities, 10. Expanding the scope of product or technology applications

- Design solutions from concept to finished product to meet the needs of different industries. The company has a professional engineering team to assist in clients' product development

Cases of New Productive Forces Development of Hong Kong-funded Enterprises (2)

A plastic toy manufacturer primarily engages in injection molding and OEM manufacturing. Considering the continuous rise in costs, it is necessary to upgrade and transform to maintain competitiveness. Therefore, the company actively introduces the concept of Industry 4.0, [hoping to digitalise factory management, while also hoping to develop ODM services, international brand licensing and establish its own brand](#), to produce toy products meeting demands of both parent-child interaction and STEAM education

1. Pioneering new manufacturing models

1. Implementing digital transformation

- Has reached the Industry 4.0 Level-1i maturity standard
- Has established a smart production process, from raw materials to finished products, an intelligent production line, & has successfully digitalised daily operation & production data

2. Enabling green manufacturing

- Achieving resource conservation & environmental pollution reduction through smart production
- Has obtained several social responsibility & international production certifications
- All products meet the specific safety standards of their respective distribution countries

2. Exploring new growth engines

4. Optimising product development market

- Developing new education solution, by integrating technologies such as AR & mobile applications, based on the original plastic toy products

3. Realising value chain transformation

8. Developing product design capabilities, 9. Establishing brand diversification strategies, 10. Expanding the scope of product or technology applications

- Handling the entire business chain, covering product design, manufacturing, distribution & retail, for world-renowned brands
- Developing self-owned brands, offering education toys & promoting environmental conservation information, as well as developing interactive STEAM courses

Cases of New Productive Forces Development of Hong Kong-funded Enterprises (others)

1. Pioneering new manufacturing models

2. Exploring new growth engines

3. Promoting flexible production through “Microfactory”

A garment manufacturer established new production equipment in its existing factory and adopted a unit manufacturing mode for small batch & multi-style production

The upgrade effectively increased the output value of the existing space, reduced inventory and material waste, and achieved quicker market response

A smart security product manufacturer collaborated with HKPC to develop a new U-shaped production line, which can save 50% of the land, allowing for flexible use of factory space

Incorporating real-time data collection & monitoring systems, it ensures adjusting production lines flexibly to meet different market needs based on big data analytics

7. Commercialising production technologies

A juice producer has developed ultra-high pressure sterilisation technology for its own production and has also commercialised the technology, offering manufacturing services to peers, which brings greater value

(Justified formatting)

A mold, precision casting, & injection molding manufacturer are dedicated to R&D of casting and injection molding technologies & new materials. It has obtained multiple related patents

These technologies are not only used in its own production, but also used in manufacturing services provided to peers & clients, converting patented technologies into commercial products, thereby enhancing profitability

**HK Manufacturing
Industry
Development
Strategy
*Recommendations***

Three Levels

'Made in Hong Kong' 'Headquarters Functions' and 'Service Industry of Manufacturing'



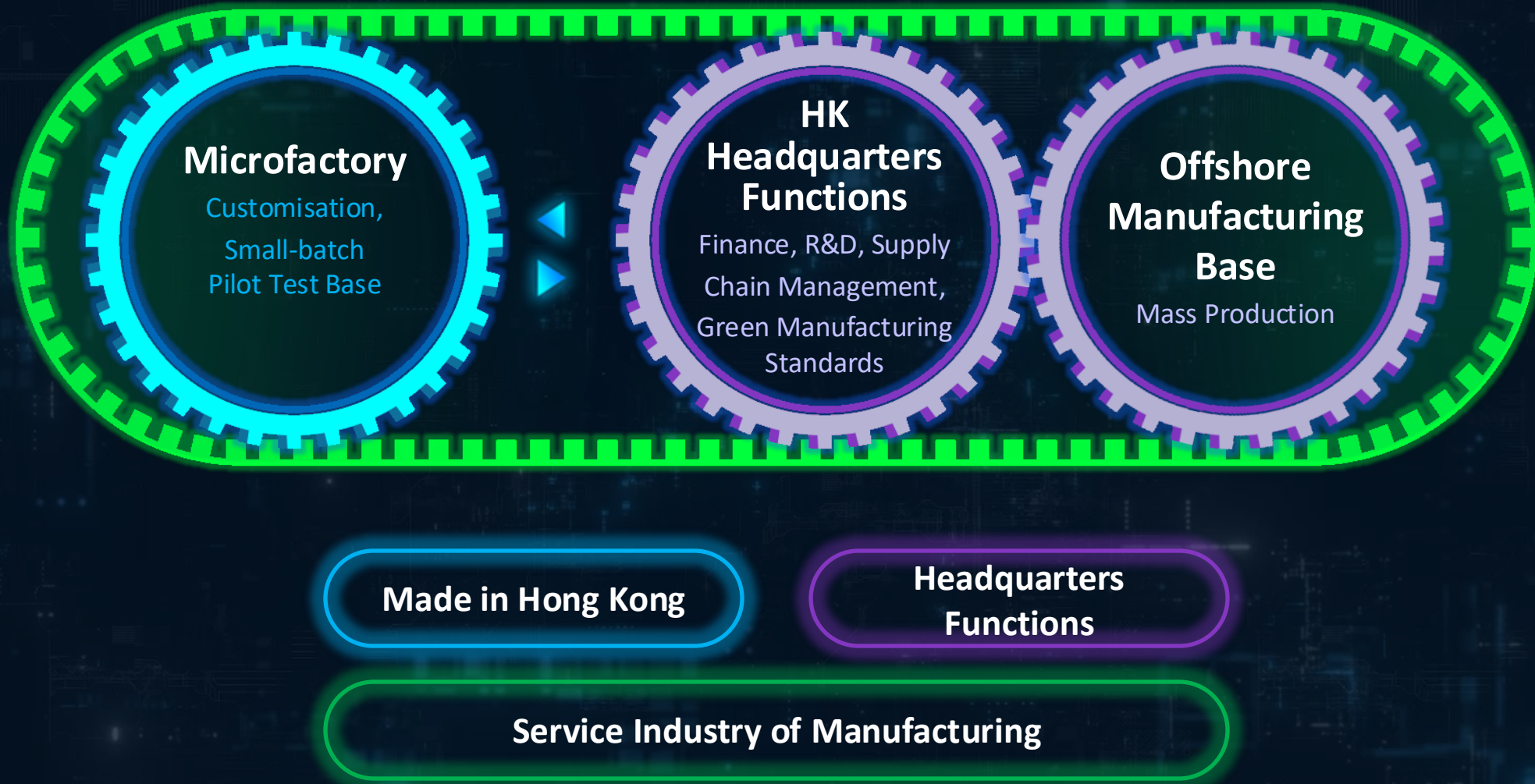
Three Levels

'Made in Hong Kong' 'Headquarters Functions' and 'Service Industry of Manufacturing'



Three Levels

'Made in Hong Kong' 'Headquarters Functions' and 'Service Industry of Manufacturing'





Seven Major Actions

Made in Hong Kong

1

Developing “Microfactory” according to local conditions

Headquarters Functions

2

Strengthening the functions of the Hong Kong headquarters

Service Industry of Manufacturing

3

Cultivating the IP industry

4

Developing green manufacturing services

5

Accelerating recruitment of technical talent

6

Creating a large language model of the manufacturing industry

7

Promoting a new image of the manufacturing industry

Seven Major Actions

Developing "Microfactory" according to local conditions **1**

Develop customised production with this agile new manufacturing model. The "Microfactory" can also accelerate new technology implementation.

Strengthening the functions of the Hong Kong headquarters **2**

Provide preferential incentives to attract high value-added headquarters functions to stay in HK, & promote cross-border e-commerce, connecting the Mainland with overseas markets

Cultivating the Intellectual Properties (IP) industry **3**

Develop Hong Kong into a regional IP trading centre

Developing Green Manufacturing Services **4**

Provide one-stop green manufacturing services, aligning with the new trend

Accelerating Recruitment of Technical Talent **5**

Strengthen the existing policy & design of curriculum system, & introduce diversified technical talents with practical experience

Creating a Large Language Model of Manufacturing Industry **6**

Promote cooperation between industry, academia & research to jointly develop a large manufacturing model ManufacturingGPT

Promoting a New Image of Manufacturing Industry **7**

Optimise the factory environment through new manufacturing models to promote and reshape the new image of the manufacturing industry

Rejuvenate
Hong Kong's Manufacturing Momentum

New Productive Forces

Ignite New Momentum
in Hong Kong Manufacturing



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