



Quarterly Breakfast 08/12/20

KNOWLEDGE



SUSTAINABILITY

Sustainable quality in buildings requires market leading engineering ability and experience.

Sustainability for us, goes beyond the certification process, and is about delivering buildings that are highly valued by their users and owners, for a long and healthy life, really helping to reduce environmental impact.

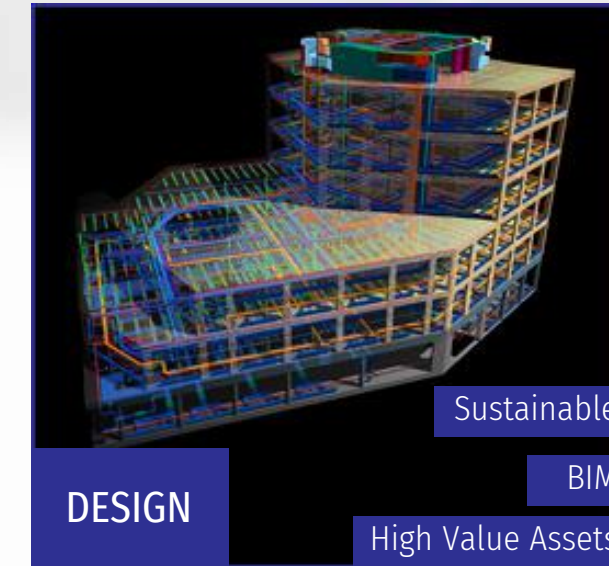


BUILDINGS THAT WORK

Our buildings work!

That means that more satisfied occupants/ tenants/guests, via a better quality environment, leading to better returns and higher asset values.

That means apartment owners enjoy their occupancy, retain their apartments longer, and provide superior returns to owners and investors.



DESIGN

Sustainable

BIM

High Value Assets

At the end of the day, the design quality of your project will be what shines through ... well after approvals have been obtained and the contractors have completed their works.

Indochine Engineering offers international quality design, coupled with local know how.

Using BIM and Sustainable visions infused through our designs, our buildings work, offering clients better returns on their investments.



PLANNING

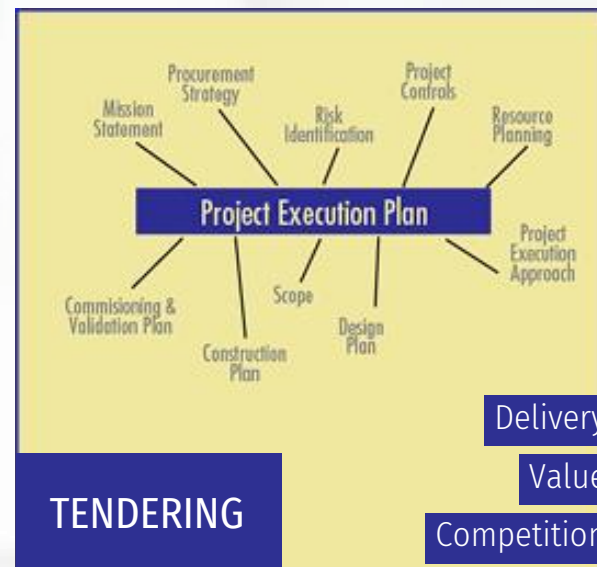
Negotiation

Approvals

Process

Navigating the planning and approval process requires experience, expertise, and diligence ... as well as the ability to know when to do and when to negotiate.

We have a thorough knowledge and experience of the approvals process in Vietnam and increasingly elsewhere in ASEAN.



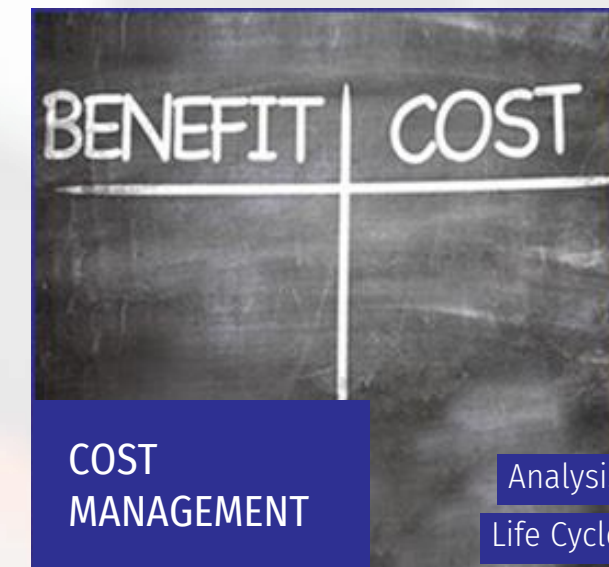
TENDERING

Delivery

Value

Competition

Our tendering processes regularly demonstrate to clients that they are achieving the best possible prices, for their projects from the most qualified contractors.



COST
MANAGEMENT

Analysis

Life Cycle

The structures and associated building systems we design, are financial instruments, built to provide utility and returns to their developers & owners. Indochine provides engineering cost management for capital and life cycle costs, to ensure appropriate decisions are made.



CONSTRUCTION

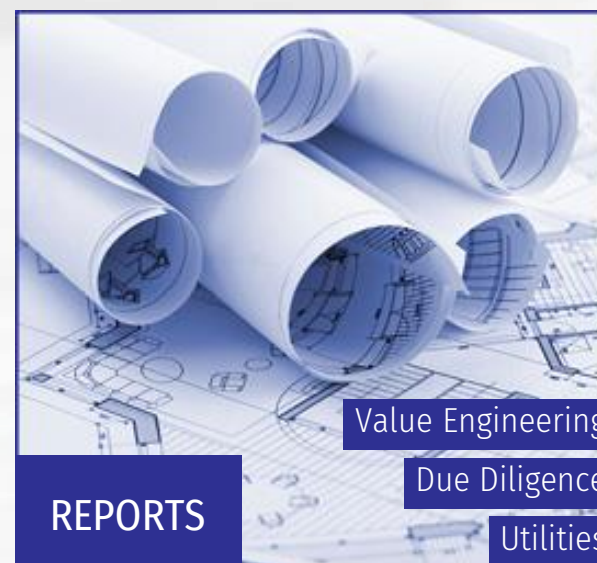
Quality

Supervision

Design Intent

To ensure your project is built as designed and as expected, high levels of construction phase support is essential in Vietnam.

Depending upon the project delivery method, there are legal and practical requirements for our construction phase support.



REPORTS

Value Engineering

Due Diligence

Utilities

We provide our expertise to the market as engineering consultants for reports, audits inspections.

Due diligence, value engineering, technical compliance, energy surveys, and indoor air quality reports.



OFFSHORE RESOURCING

Indochine believe that 3 significant changes are impacting our business globally.

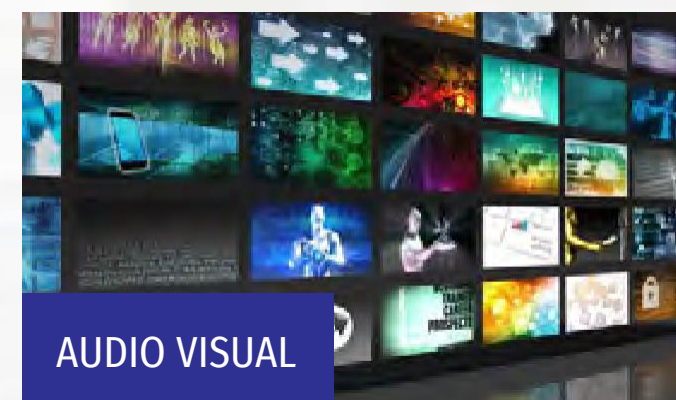
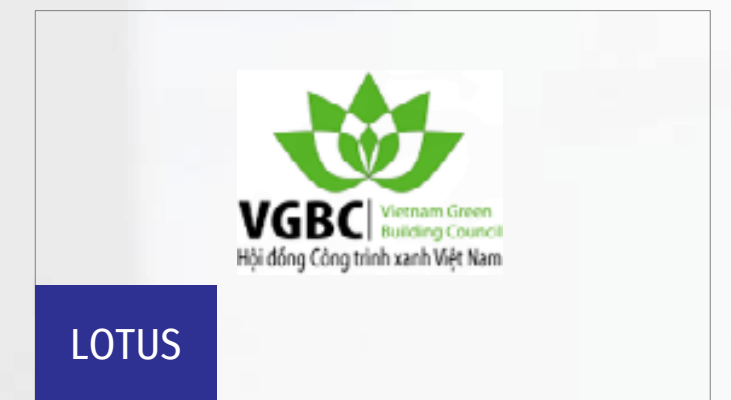
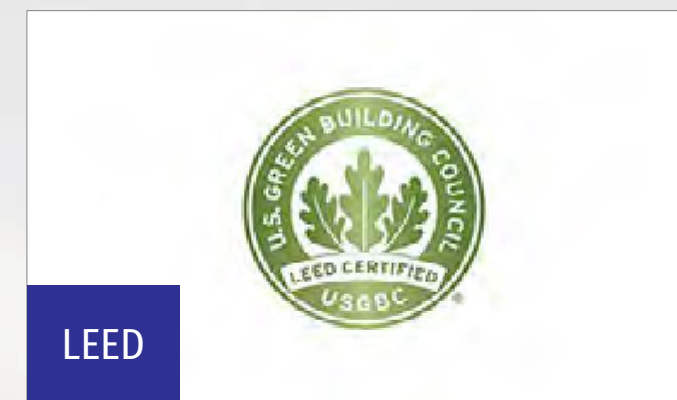
- + BIM and related technologies such as automation,
- + The cloud, being online, sharing, communicating, apps, and
- + Offshoring resources.



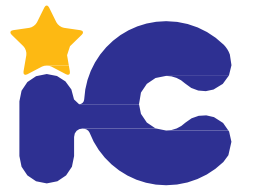
OUR CAPABILITIES



MECHANICAL • ELECTRICAL • HYDRAULIC • FIRE • CIVIL • STRUCTURAL • SUSTAINABILITY • SPECIAL CONSULTANCIES



PROJECTS



OFFICES • EDUCATION • HOTEL & RESORTS • RESIDENTIAL • INFRASTRUCTURE • HOSPITALS • RETAIL • FACTORIES



OFFICES



MANUFACTURING & INDUSTRY



INFRASTRUCTURE



EDUCATION



HEALTHCARE



SUSTAINABILITY



HOSPITALITY & LEISURE



RESIDENTIAL



RETAIL



FITOUT



MANUFACTURING & INDUSTRY

These areas have specialist requirements over a vast spectrum of needs and solutions. We have experience in steel, flour, paint, food and beverage, pharmaceuticals, life science projects, textiles, and oil and gas.

PEMARA FACTORY RELOCATION
Binh Duong, Vietnam - 2018

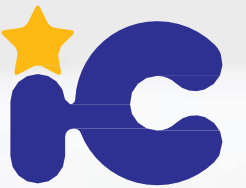
New 10,000sqm factory

✓ M&E design

✕ GFA/CFA: 7,500m²



MANUFACTURING & INDUSTRY



ZUELLIG PHARMA TAN TAO

Warehouse

- ✓ M&E design, tender & authorship supervision
- ✕ Warehouse
- 📍 Ho Chi Minh City, Vietnam
- 📅 2014



HBI NEW HUNG YEN PHASE 1

3 storey office, workshop, cafeteria/storage and some other small buildings

- ✓ M&E design, tender & authorship supervision
- ✕ 3 storey office, workshop, cafeteria/ storage and some other small buildings
- 📍 Hung Yen, Vietnam
- 📅 2015



TAEKWANG VINA FACTORY

Part A: existing building; Part B: building 1, 2, 3 and 7 to 23

- ✓ LEED & LOTUS Consultancy
- ✕ Part A: existing building; Part B: building 1, 2, 3 and 7 to 23
- 📍 Tay Ninh, Vietnam
- 📅 2013



HANESBRANDS SEWING FACILITIES PHU BAI

Garment factory

- ✓ LEED services
- ✕ GFA/CFA: 11,774m²
- 📍 Hue, Vietnam
- 📅 2009



COCA COLA

Renovation and/or additions to existing electrical service, renovations and additions to M&E systems

- ✓ M&E design
- ✕ GFA/CFA: 15,000m²
- 📍 Ho Chi Minh City, Vietnam
- 📅 2011



HANESBRANDS SEWING FACILITIES Hung Yen

Garment factory

- ✓ M&E design
- ✕ GFA/CFA: 14,819m²
- 📍 Hung Yen, Vietnam
- 📅 2010



MANUFACTURING & INDUSTRY



HEINEKEN FACTORY

Extension of a bottling plant

- ✓ A LEED Consultancy
- ✕ GFA/CFA: 38,525m²
- 📍 Ho Chi Minh City, Vietnam
- 📅 2012



BLUESCOPE STEEL FACTORY

Pre-Engineered Buildings factory

- ✓ M&E design, tender & supervision
- ✕ PEB factory
- 📍 Dong Nai, Vietnam
- 📅 2003



STICKLEY FACTORY VISIP

Furniture factory

- ✓ M&E design
- ✕ Furniture factory
- 📍 Binh Duong, Vietnam
- 📅 2004



AMANDA SEAFOOD

Seafood factory extension

- ✓ M&E design
- ✕ Seafood factory extension
- 📍 Dong Nai, Vietnam
- 📅 2005



AVON VSIP

Cosmetic manufacturing facility

- ✓ M&E design, tender & supervision
- ✕ Cosmetic manufacturing facility
- 📍 Binh Duong, Vietnam
- 📅 2004



VINAWOO FACTORY EXPANSION

Wood manufacturing extension

- ✓ M&E design & tender
- ✕ GFA/CFA: TBC
- 📍 Ho Chi Minh City, Vietnam
- 📅 2005



MANUFACTURING & INDUSTRY



RANBAXY PHARMACEUTICAL VSIP

Pharmaceutical production facility

- ✓ M&E design, tender & supervision
- ✕ GFA/CFA: 800m²
- 📍 Binh Duong, Vietnam
- 📅 2001



SAINT GOBAIN HAI PHONG

Plasterboard factory

- ✓ M&E design
- ✕ GFA/CFA: 24,159m²
- 📍 Hai Phong, Vietnam
- 📅 2012



ZUELLIG PHARMA AMATA

Warehousing and distribution Center at Amata industrial Zone

- ✓ M&E design
- ✕ GFA/CFA: 6.600m²
- 📍 Dong Nai, Vietnam
- 📅 2004



AMANDA SEAFOOD

30 ton/day shrimp processing plant

- ✓ M&E design
- ✕ GFA/CFA: TBC
- 📍 Dong Nai, Vietnam
- 📅 2003



INTERFLOUR FLOURMILL

500 ton/day flour mill

- ✓ M&E design
- ✕ GFA/CFA: 20.000m²
- 📍 Ba Ria-Vung Tau, Vietnam
- 📅 2001



ICI PAINTS VIETNAM

Paint manufacturing - renovation

- ✓ M&E design
- ✕ GFA/CFA: TBC
- 📍 Ho Chi Minh City, Vietnam
- 📅 2005

MANUFACTURING & INDUSTRY



3A PHARMACEUTICAL

Pharmaceutical warehouse facility

- ✓ M&E design
- ✕ GFA/CFA: 29,000m²
- 📍 Hanoi, Vietnam
- 📅 2005



YIN HWA LASTS

Shoe Last Factory/ Warehouse

- ✓ M&E + C&S design
- ✕ GFA/CFA: 6,000m²
- 📍 HCMC, Vietnam
- 📅 Current



APP PACKAGING

Packaging Factory/Warehouse

- ✓ M&E + C&S design
- ✕ GFA/CFA: 12,760m²
- 📍 Hanoi, Vietnam
- 📅 2018



OAK ROAD WAREHOUSE

Industrial Warehouse

- ✓ Structure design
- ✕ GFA/CFA: 10,000m²
- 📍 Auckland New Zealand
- 📅 2019



NPL PHARMACEUTICAL UK

Sterile Solutions facility

- ✓ M&E design
- ✕ GFA/CFA: 29,000m²
- 📍 United Kingdom
- 📅 2018

???

YOUR NEXT PROJECT HERE



SUSTAINABILITY

Sustainable design to us, is simply good engineering. From concept phase, onwards, we provide options to clients leading to bench marking projects against relevant standards, or for formal certification against recognised rating systems such as LEED/GreenStar/Lotus.

NEXUS

Ho Chi Minh City, Vietnam - TBC

Mixed-use (Residential, Commercial, Hotel, Retail)

✓ M&E design, C&S Peer-Review, LEED Consultancy

✕ GFA/CFA: 133,835m²



SUSTAINABILITY



TAEKWANG VINA FACTORY

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Extension of a bottling plant

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- 📅 2012



HANESBRANDS FACTORY PHU BAI

Garment factory

- ✓ LEED Services
- ✕ GFA/CFA: 11,774m²
- 📍 Hue, Vietnam
- 📅 2009



VIETINBANK HANOI

LEED Gold office

- ✓ LEED/LOTUS Consultancy
- ✕ GFA/CFA: 350,000m²
- 📍 Hanoi, Vietnam
- 📅 TBC



APPLE HCMC OFFICE LEED

Enhanced Commissioning
and Energy model

- ✓ LEED Consultancy
- ✕ GFA/CFA: 743m²
- 📍 Ho Chi Minh City, Vietnam
- 📅 TBC



DEUTSCHES HAUS

LEED Platinum office

- ✓ LEED/DGNB consultancy
- ✕ GFA/CFA: 56,094m²
- 📍 Ho Chi Minh City, Vietnam
- 📅 TBC



REGIONS

Vietnam and ASEAN are the main markets which account for around 80% revenue.

ASEAN presence includes Myanmar, Malaysia, Laos and Cambodia.

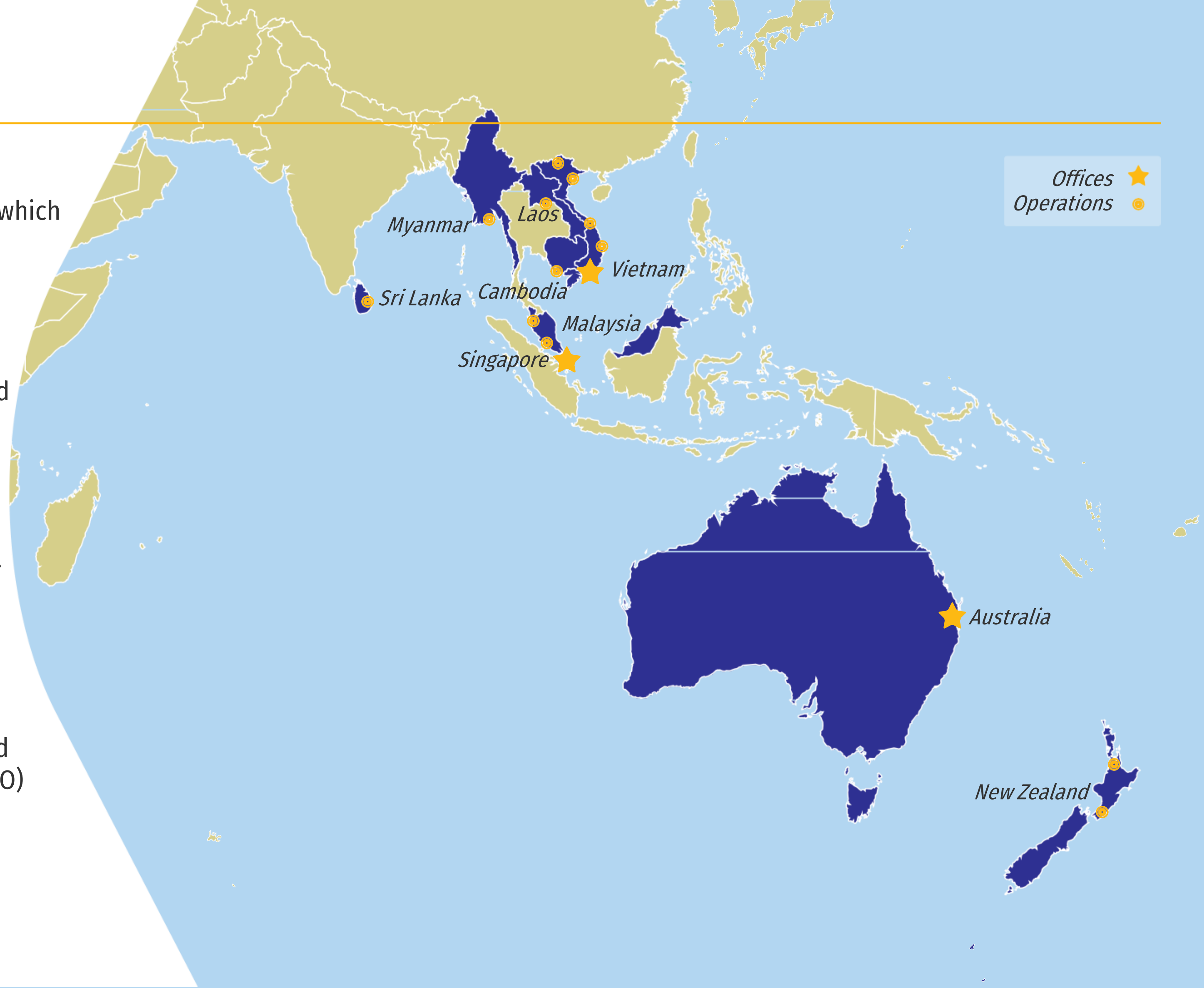
Currently the company has plans to expand business into other ASEAN markets such as Thailand, Indonesia and Singapore.

The business is diversified offering offshore service to various global partners.

The offshoring activities are conducted predominantly in Australia but also in the UK and the USA, with projects across the world.

Services for other locations in Vietnam and ASEAN are provided on a fly-in/fly-out (FIFO) basis.

Explore the various projects at www.indoeng.com/regions



ABOUT US



PEOPLE

Our management team is made up of Australian and Vietnamese directors together bringing an abundance of experience on a variety of projects.

ORGANISATION

Indochine Engineering has been an independent engineering consultancy established in Vietnam in 1999 and has been wholly owned by the directors.

MISSION

Indochine Engineering aims to be a market leading consultant for engineering services in Vietnam and ASEAN.

VALUES

We strive to be the best engineers, principled, ethical, regard for others safety, and the environment. To be a good partner and rewarded for our efforts.

SYSTEMS

Our systems add value to your project. Extranets to share global knowledge data bases and business intelligence systems to manage marketing, human resources, and finance.

NETWORKING

Indochine regularly organize industry breakfasts to raise and discuss popular issues with our key partners. Our breakfasts and informal wine and engineering evenings have become key networking occasions for the industry.





CARL GAY

Carl Gay is our General Director, and is well known throughout the industry in Vietnam.

Carl has over 30 years professional engineering experience, including 20 years in Vietnam.

He holds a bachelor degree in mechanical engineering from the University of Queensland, Australia, and a masters in business management from APESMA/Deakin University, Australia.

He is registered on the Australian National Register of Professional Engineers in the areas of building services, mechanical engineering and management.



LE VU PHONG

Le Vu Phong is a Director with ICE, with specialist expertise in planning approvals and construction management.

Phong has 17 years experience in the construction industry and has degrees in mechanical engineering (University of Technology - HCMC) and in law (National Law University).

Projects of note that he has contributed to prior to joining Indochine Engineering include the following projects; ADB Loan HCM Environmental Improvement Project, Holland Sponsored District 10 Pilot Project, Belgium Loan Medical Waste Treatment Project, 2nd Medical Waste Treatment Project, Vinh Tuong 2 Private Business, Delta Juice Vietnam, Design International (Vietnam), and Triumph International.



LE NGOC HO

Le Ngoc Ho is a Director, with specialist expertise in design and construction management.

Ho has 15 years experience with a refrigeration engineering degree from the Fisheries University in Nha Trang. Ho has excelled as a project engineer, responsible for design and construction phases of projects, for a number of M&E contractors in HCM and surrounding provinces, prior to joining Indochine Engineering.

Projects of note that he has contributed to prior to joining Indochine Engineering include the following projects; Proctor & Gamble Vietnam, Bayer Vietnam, Unilever Vietnam, Coats Phong Phu, Jotun Powder Coating, CU Brewery Danang, Valspar Vietnam, and Chancellor Court.



WARREN GOODIE

Warren Goodie is our Managing Director in Vietnam. He has over thirty-five years experience in engineering design, construction, commissioning, project delivery, maintenance and operations obtained from within the heavy industrial, manufacturing, energy and mining sectors, and is skilled in management of multi disciplinary engineering, design and construct, and EPCM projects.

He has been involved in the provision of engineering, project and construction services for industrial and manufacturing developments in Australia, New Zealand, China, Malaysia and Vietnam.

Warren's role includes ensuring the project works of Indochine are safely delivered and managed with the necessary diligence and are appropriately resourced to the satisfaction of our clients.



Mr Aoto Masaki



Mr Ooya Masahiko

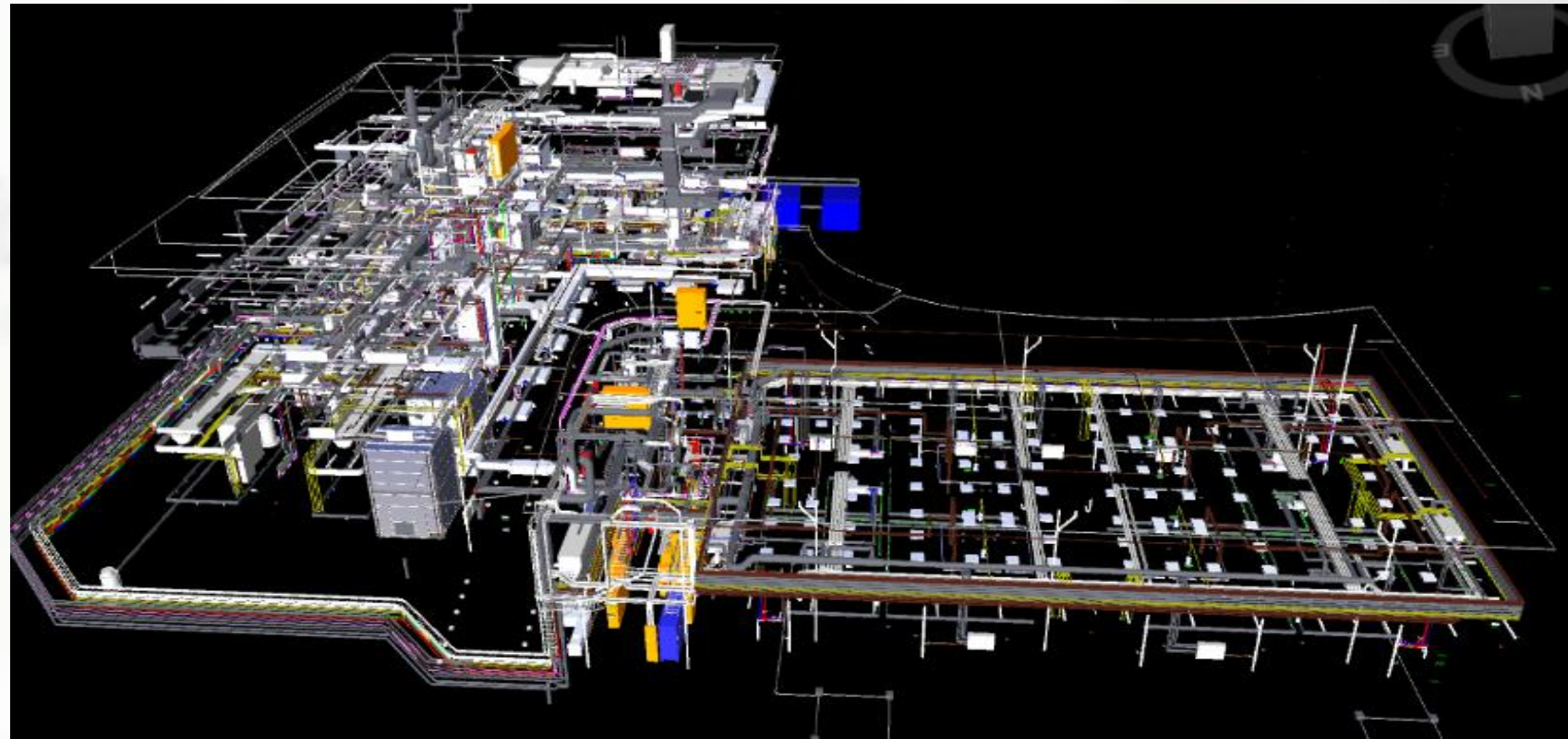
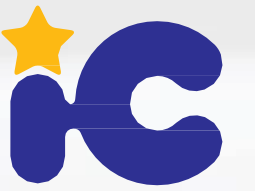
Indochine Engineering has established itself as a leading multidisciplined engineering consultancy in Vietnam and SE Asia, with a strong offshoring capability using BIM and remote working capabilities.

Indochine is pleased to report that it has been acquired by Tokyu Construction Corporation.

The origin of Tokyu Construction is the urban development of Shibuya and along the Tokyu line, in Tokyo.

Whilst Indochine has been acquired in full, we will continue to provide our consultancy services to existing and new clients, helping deliver projects in Vietnam and SE Asia, and now Japan.

MANUFACTURING FACILITIES AND SERVICES





- Controlled Atmosphere
- Supply/Generation/Reticulation
- Hydraulics & Drainage
- Fire Systems

- Compressed Air
- Flammable and Purging Gases
- Process Water



ELECTRICAL SERVICES



- Back up Generation
- Electronic Security
- Lightning Protection
- Cable Trays and Support



- Mains Connection
- Panels and Switchboards
- Lighting and GPO's
- Data Cabling, Comms

MECHANICAL SERVICES



- Fans & AHU's
- Ventilation
- Air Filtration
- Ducts and louvres



- Refrigeration
- Chiller Systems
- Temperature Control
- **Humidity Control**

Humidity sensitive Industries include:

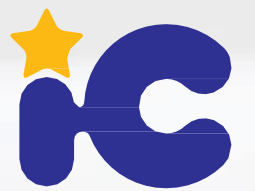
- Paper and Packaging
- Machining and Grinding
- Cement and concrete products
- Electronics
- Semi-conductors
- Food Processing
- Pharmaceutical

Common issues caused by humidity

- Reduce raw materials lifespan
- Reduce finished product quality
- Microelectronics oxidation
- Corrosion of equipment and pipework
- Safety eg slip hazard
- Electrical Safety eg Short Circuit
- Compromise hygiene eg Bacteria

Ho Chi Minh City ranges from 70% to 80% relative humidity and average 78.3%

HUMIDITY EFFECTS



Humidity may not seem like an obvious cause of problems, or something that could even result in production being non-compliant, but this does occur.

Many aspects of your plant and process are influenced by relative humidity.

They can cause production and processes to be less efficient, reduce predictability and reliability, and be more susceptible to producing below specification products.

Some common issues that can arise from poor humidity control are:

Increased energy consumption	Altered aesthetic presentation
Microbiological growth	Chemical reactions
Poor test equipment accuracy	Corrosion
Changes in electrical conductivity	Effects on operators
Degradation of buildings and products	Condensation
Product drying issues	Moisture absorption issues
Reduced refrigeration plant efficiency	Reduced productivity
Ice build up	Health and Safety

GMP REQUIREMENTS



GMP compliance in pharmaceutical manufacturing requires that any process, person, environment and/or equipment with direct impact on the quality and safety of the product being produced must operate within specified limits.

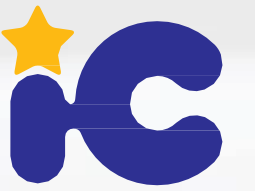
Quality and consistency are key.

Consider typical conditions in areas related to Solid Dosage production:

Production area	Temperature	Humidity
Weighing, Mixing	20 to 22°C	35 to 40% RH
Compression	20°C	25 to 35% RH
Pan coating	15 to 25°C	10 to 70% RH
Filling and Packing	20°C	10 to 35% RH
Storage	20 to 25°C	45% RH

%RH levels should be correctly maintained for the designated process and surrounding areas to ensure no humidity issues occur to either product or equipment throughout the entire process.

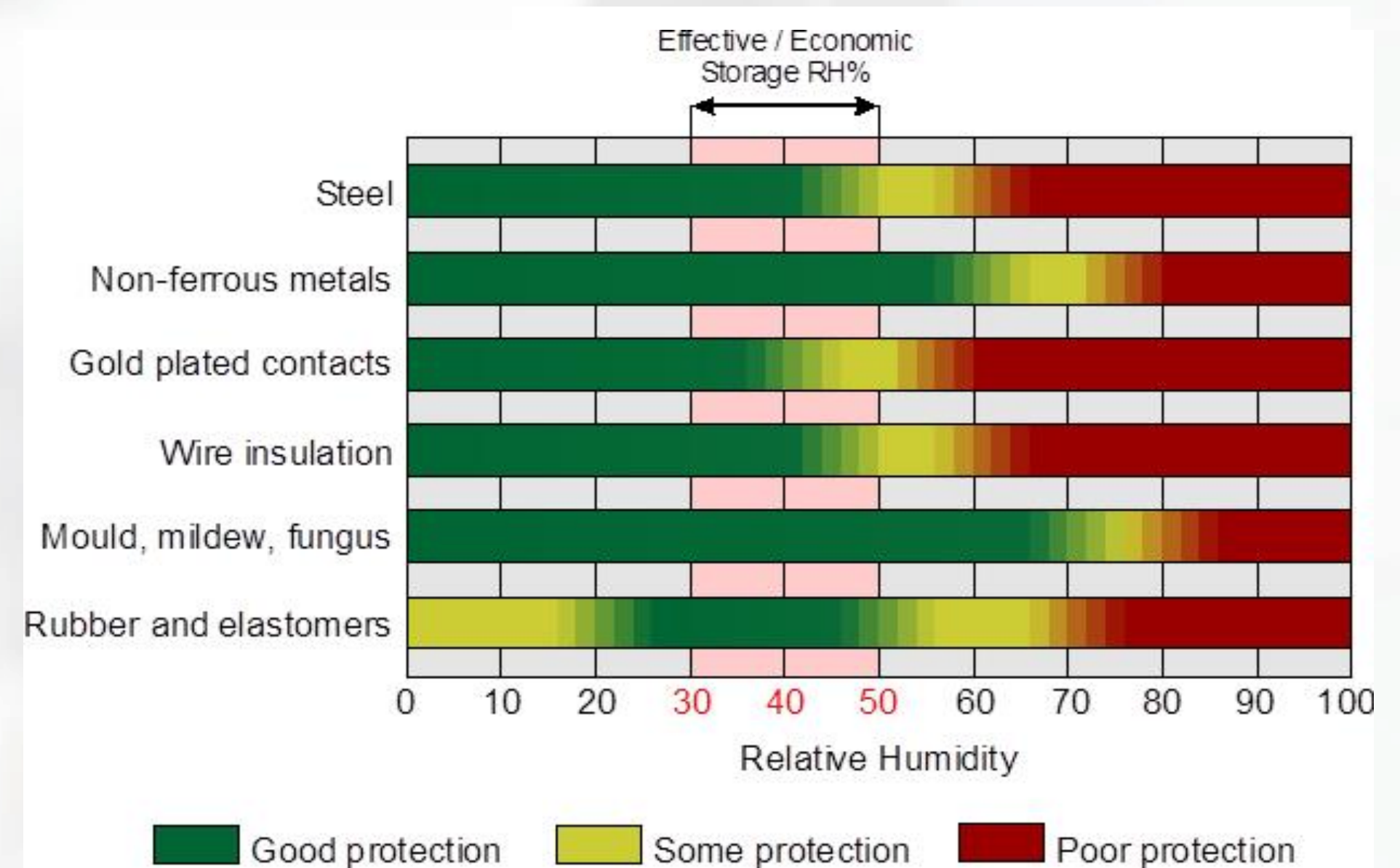
STORAGE AND WAREHOUSING



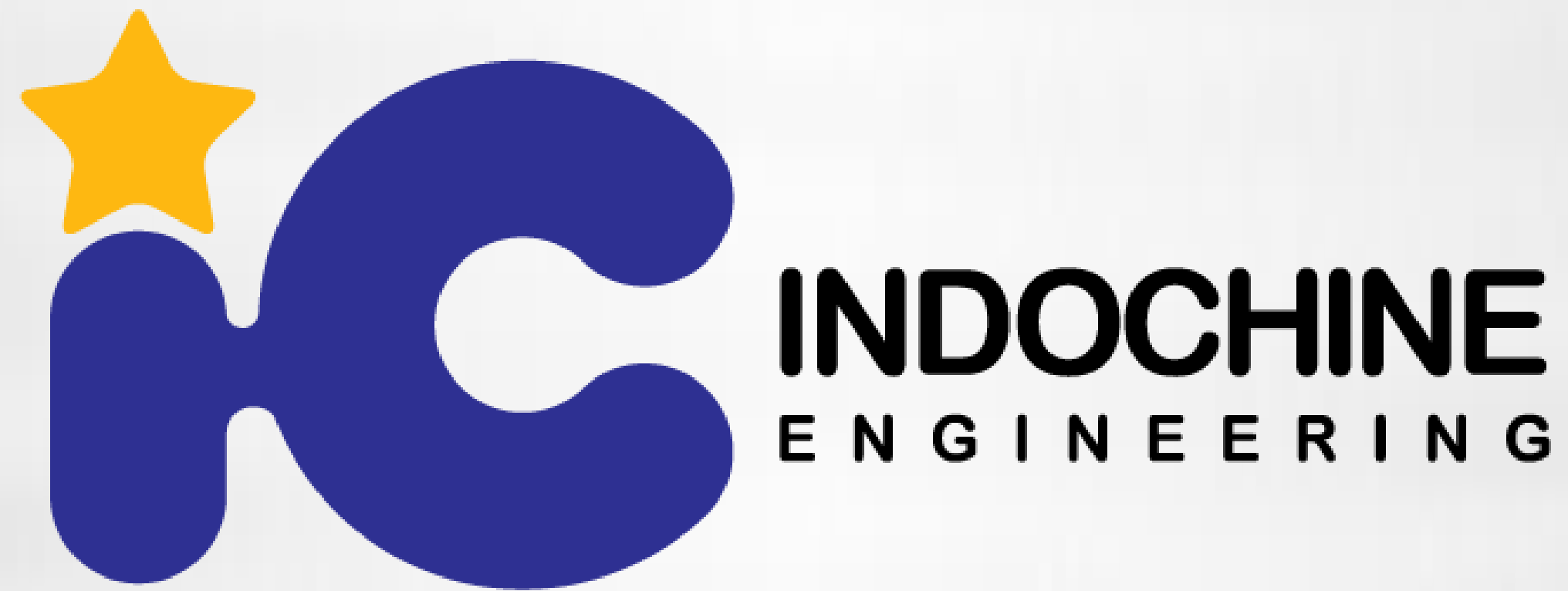
In storage and warehousing, deviations from the desired temperature and humidity conditions must be minimized, controlled, and documented.

Variations in humidity is inevitable, but automated control of HVAC and humidity control systems will improve response and recovery.

It is important to consider the effects of humidity on every stored item. This can be a large and daunting task, as it is not unusual for warehouses to contain thousands of different inventory items now and in the future.



It is important to consider humidity in all areas of production beyond the product itself to mitigate the risks to product quality and safety, and potential disruption to production.



S U S T A I N A B L E Q U A L I T Y

HO CHI MINH CITY

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Ho Chi Minh City, Vietnam

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Suite 65, 5F, 320 Adelaide St
Brisbane, QLD, 4001, Australia

www.indoeng.com

SINGAPORE

KUALA LUMPUR

YANGON



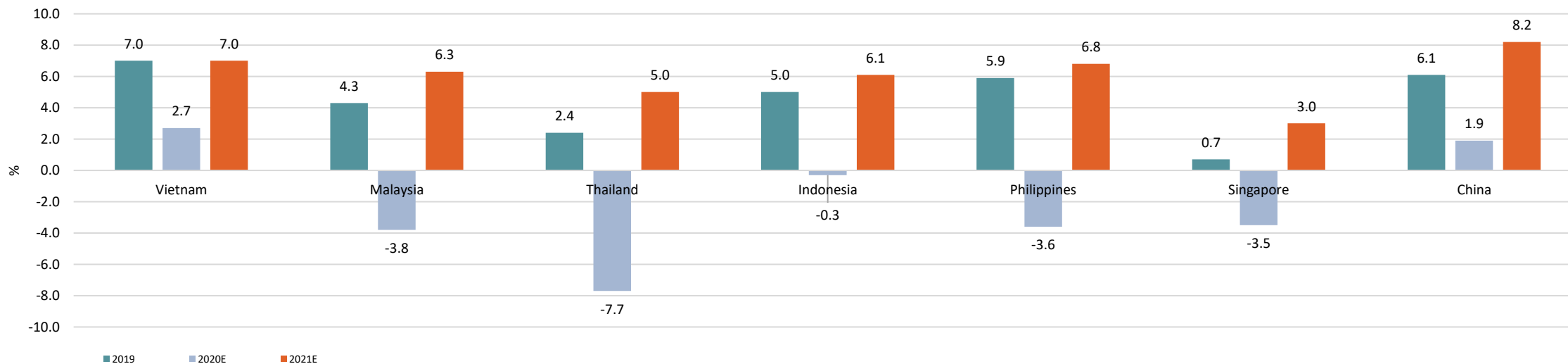
VIETNAM INDUSTRIAL

2020 REVIEW & OUTLOOK

Dec 2020

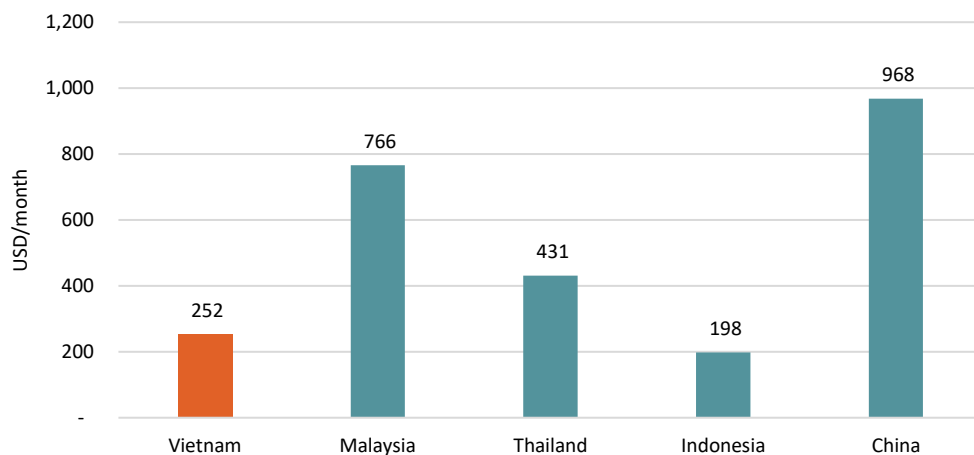
2020 – REGIONAL PERFORMANCE

ASEAN real GDP YoY growth



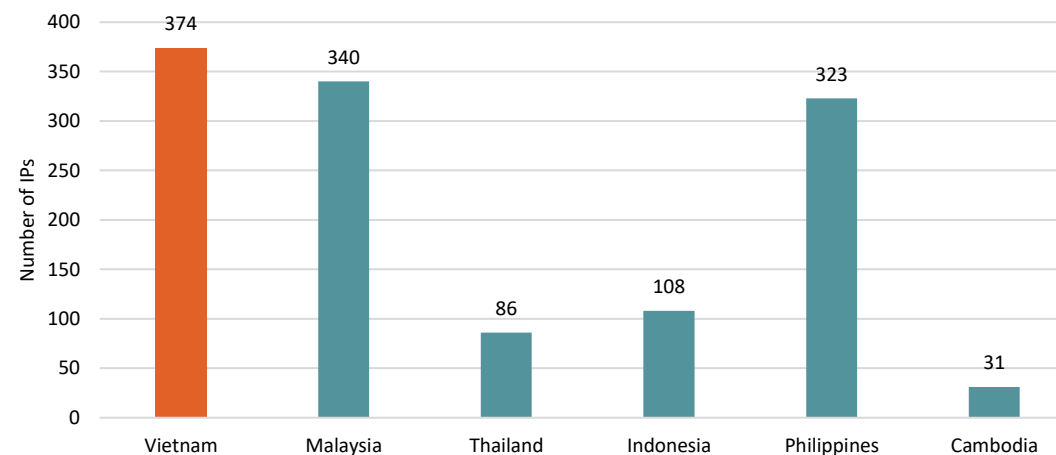
Source CEIC, Vinacapital, 2020

Manufacturing salaries, 2020



Source Trading Economics, 2020

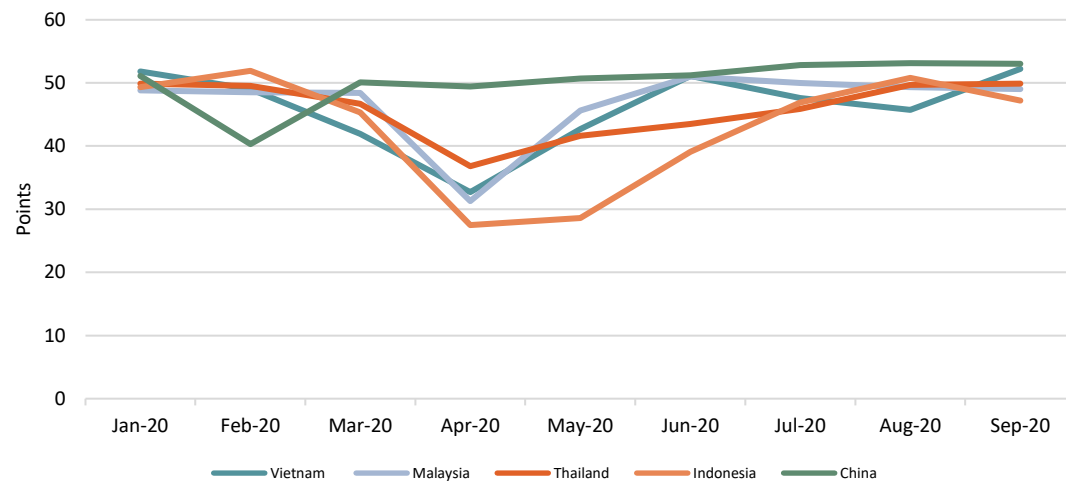
No. of established IPs, 2020



Source Source: Invest Asia, Industrial Park Guide 2020

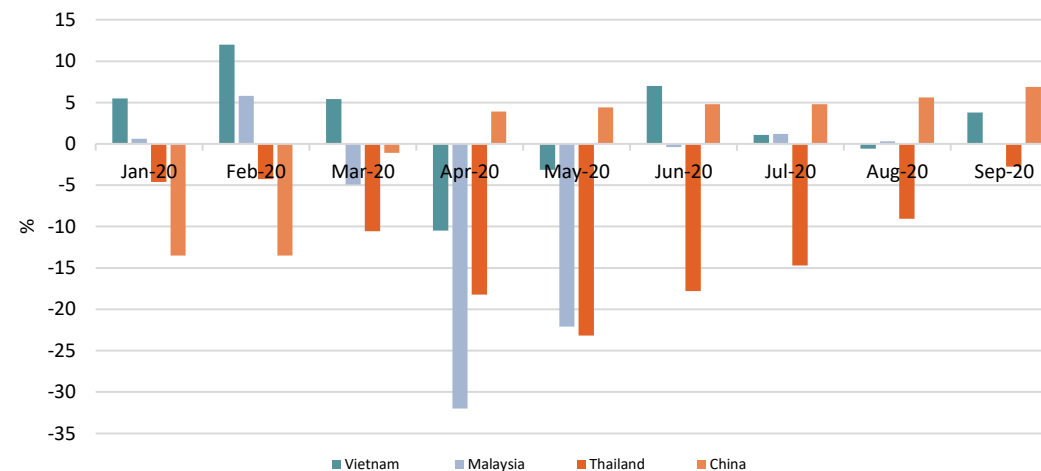
2020 – REGIONAL PERFORMANCE

Regional manufacturing PMI, 9M/2020



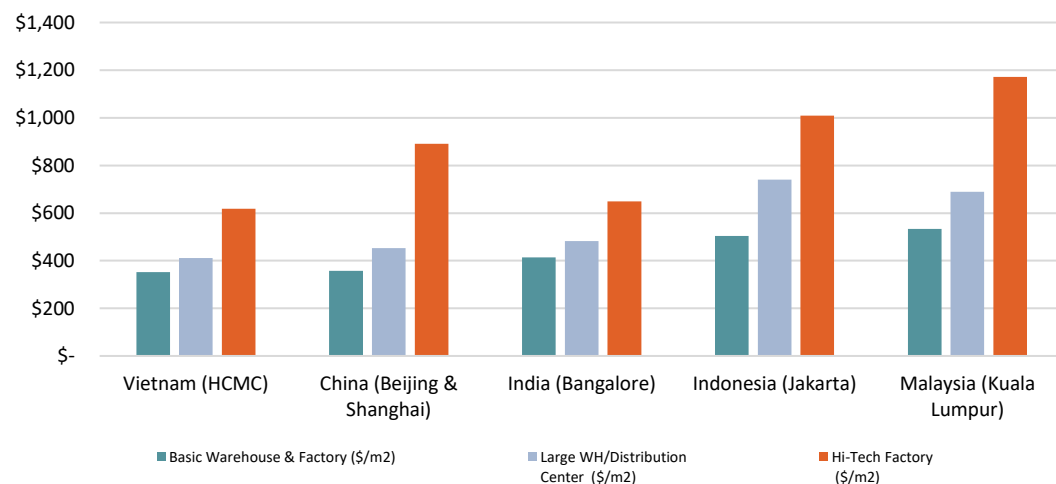
Source FX Empire, 2020

Regional industrial production, 9M/2020



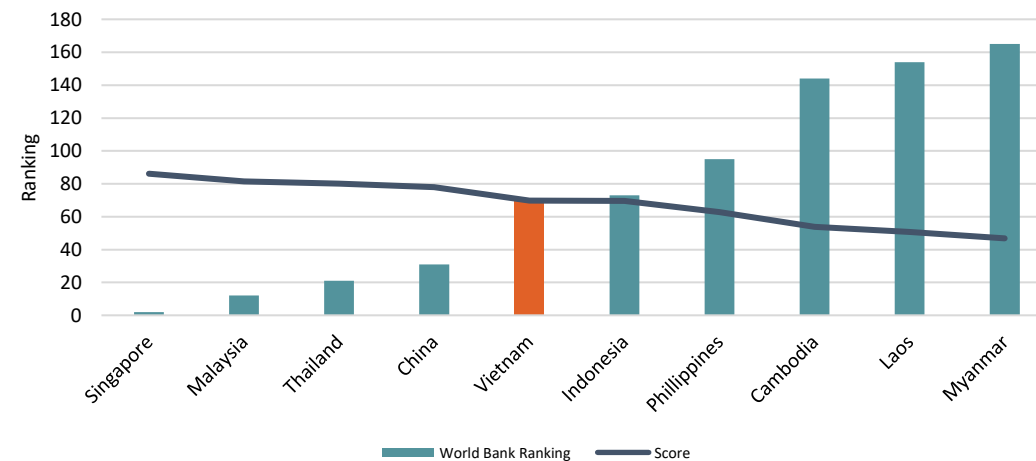
Source Trading Economics and FX Empire, 2020

Construction costs/m2, 2019



Source Turner & Townsend, International Construction Market Survey. 2019

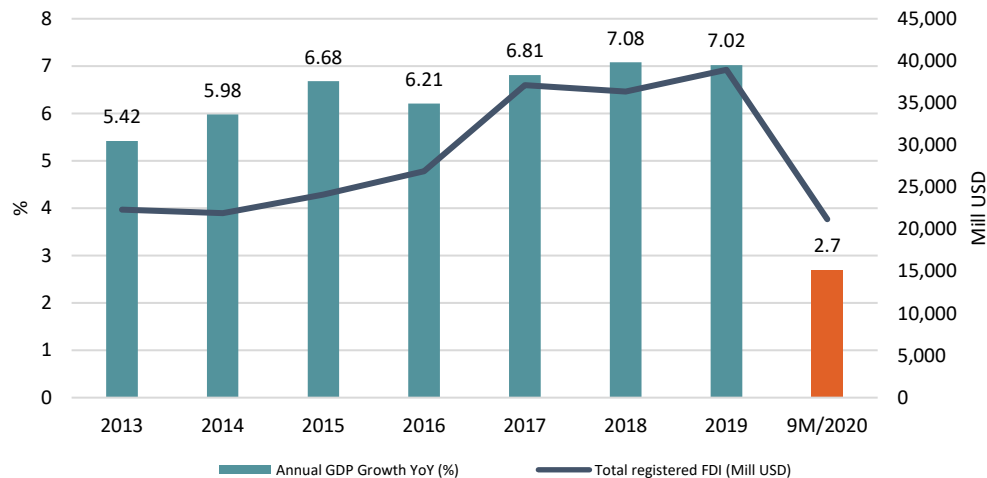
World bank's 'ease of doing business', 2020



Source The World Bank, 2020

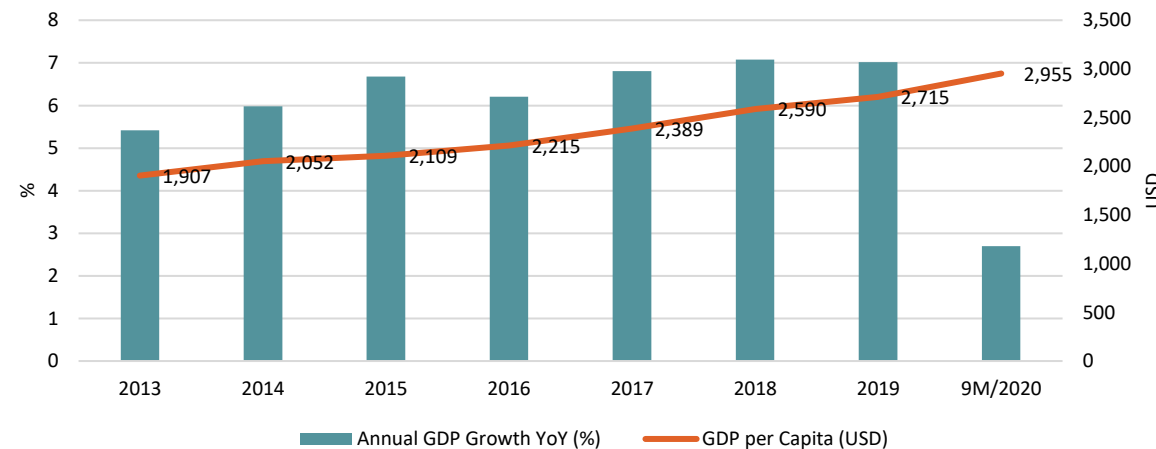
2020 – NATIONAL OVERVIEW

Annual GDP growth YoY



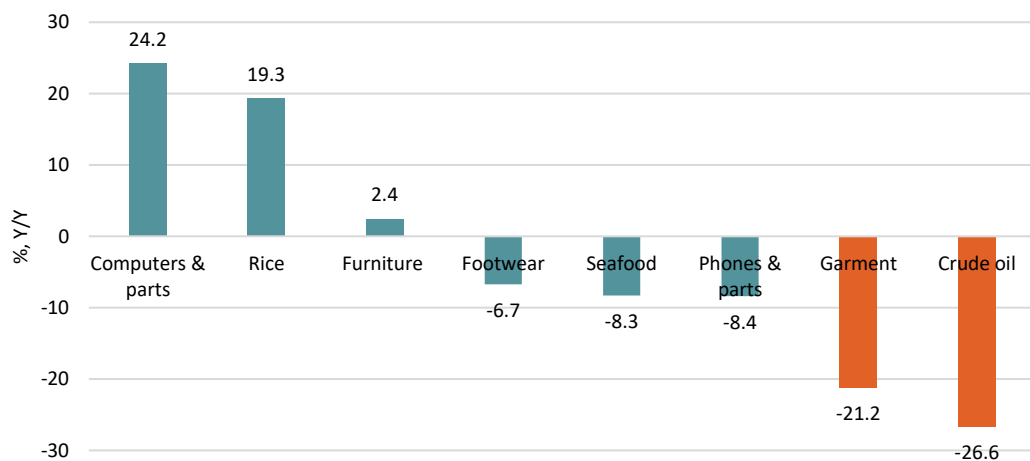
Source MPI, CEIC, Vinacapital, GSO 2020

GDP growth per capita



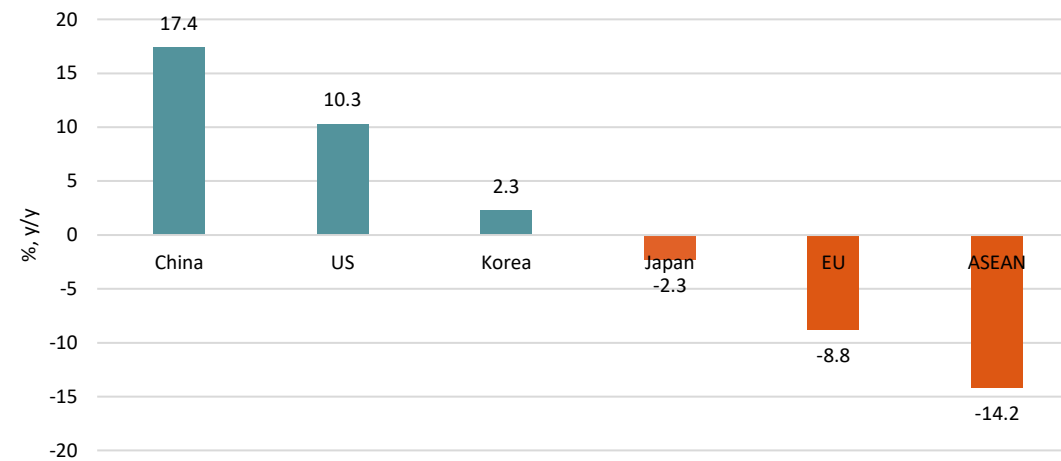
Source CEIC, Vinacapital, 2020

Export categories, H1/2020



Source World Bank, What Will Be the New Normal? 2020

Foreign demand, H1/2020

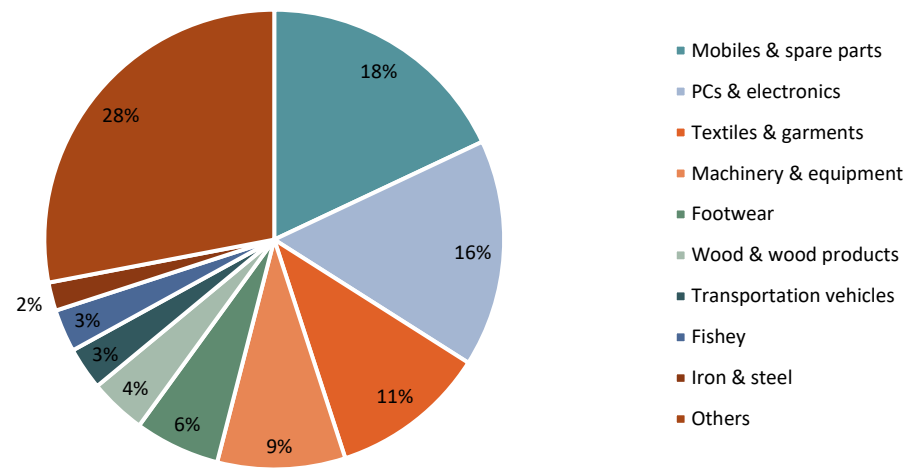


Source World Bank, What Will Be the New Normal? 2020

2020 – NATIONAL OVERVIEW

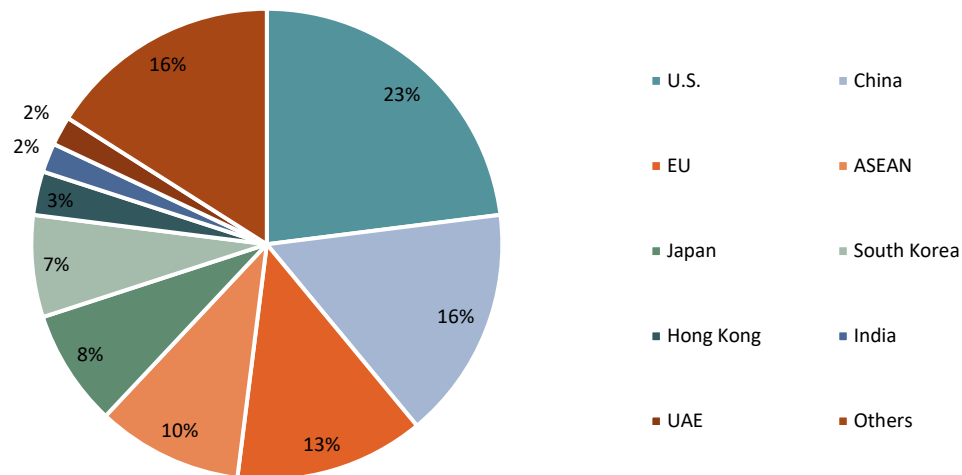


Leading export categories, 9M/2020



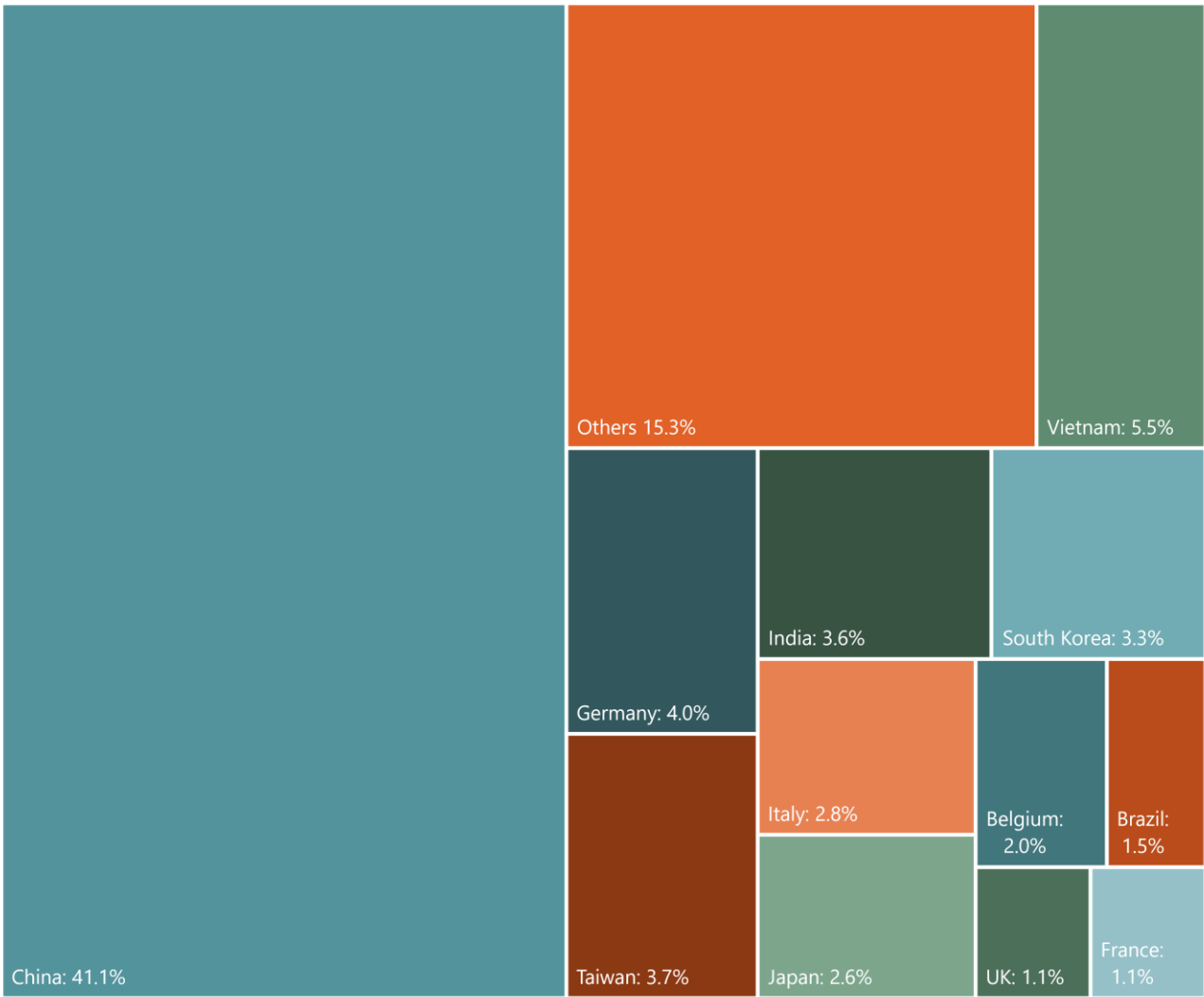
Source Vinacapital: Macro-Indicators Vietnam by Numbers, 2020

Leading export markets, 9M/2020



Source Vinacapital: Macro-Indicators Vietnam by Numbers, 2020

U.S. imports by source, H1/2020

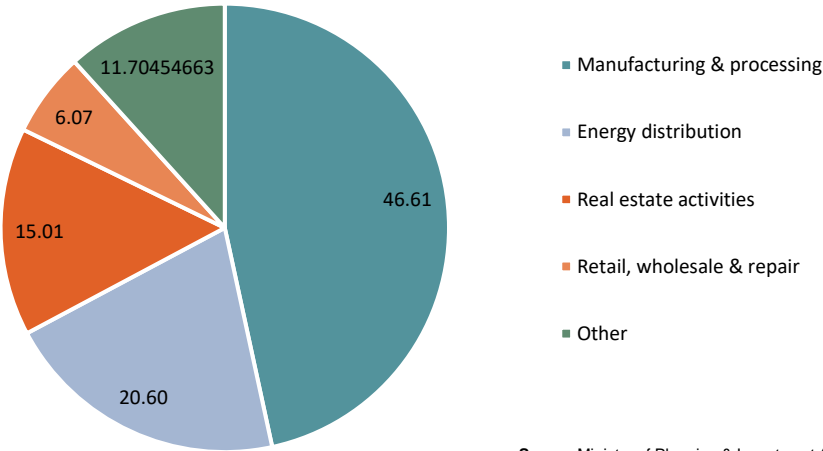


Source JungleScout Global Imports Report, 2020

2020 – FOREIGN DIRECT INVESTMENT (FDI), 9M/2020

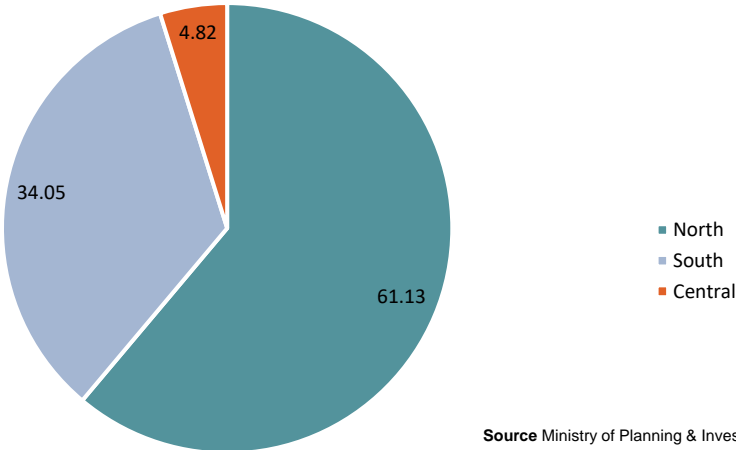


Total registered FDI, 9M/2020



Source Ministry of Planning & Investment (MOPI), 2020

Newly registered manufacturing FDI by region, 9M/2020



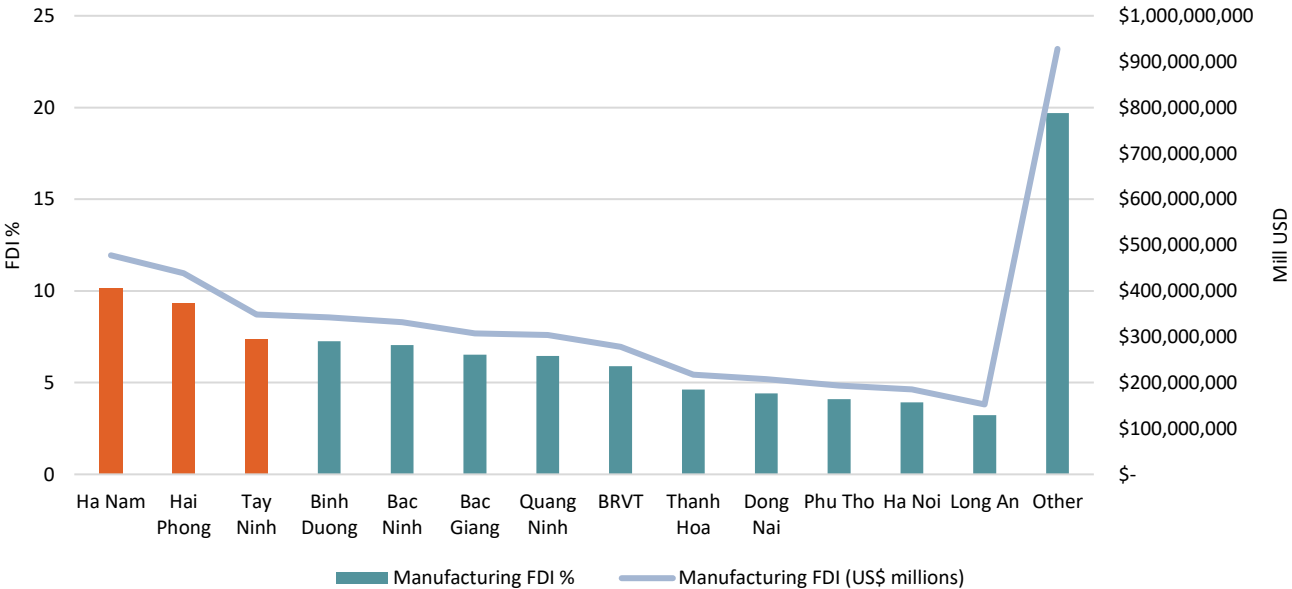
Source Ministry of Planning & Investment (MOPI), 2020

Manufacturing & processing FDI, 9M/2020

New projects	Newly registered capital (US\$ millions)	Existing projects	Added capital on existing projects (US\$ millions)	Projects with capital contribution	Contribution capital (US\$ millions)	Total FDI (US\$ millions)
614	4712.94	487	3646.26	1,165	1524.96	9884.18

Source Ministry of Planning & Investment (MOPI), 2020

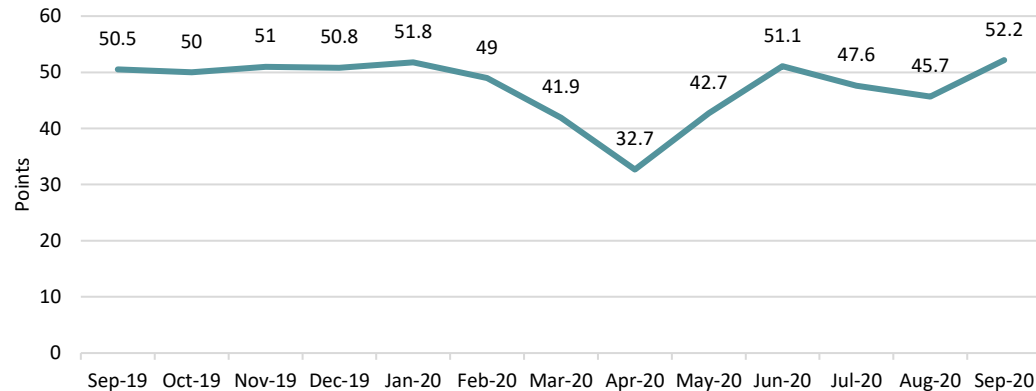
Newly registered manufacturing FDI by province, 9M/2020



Source Ministry of Planning & Investment (MOPI), 2020

9M/2020 – MANUFACTURING PMI & INDEX OF INDUSTRIAL PRODUCTION (IIP)

PMI, Jan 2020 – Sep 2020

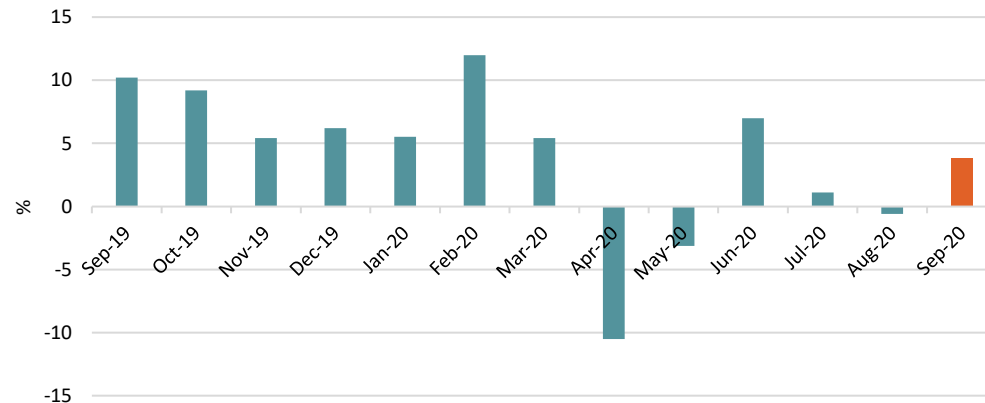


Source IHM Markit, 2020

PMI:

- Manufacturing growth again surpassed the 50-point threshold after Covid-19 concerns.
- Sharpest output in 14 months, due to:
- New orders increased, business confidence strengthened, and rate of job cuts softened.
- Sep reading marked first improvement in business conditions in 03 months.

IIP, June 2018 – June 2019



Source Trading Economics, 2020

IIP:

- Industrial production rose by 3.8% YoY in Sep 2020.
- Strongest growth in industrial output since June 2020, amid Gov. response to Covid-19.
- In 9M/2020, industrial output rose 2.4% compared to the same period of 2019.
- E.g. Output expanded for manufacturing (4.6% vs -0.1%).

Combating COVID-19 and Market Recovery

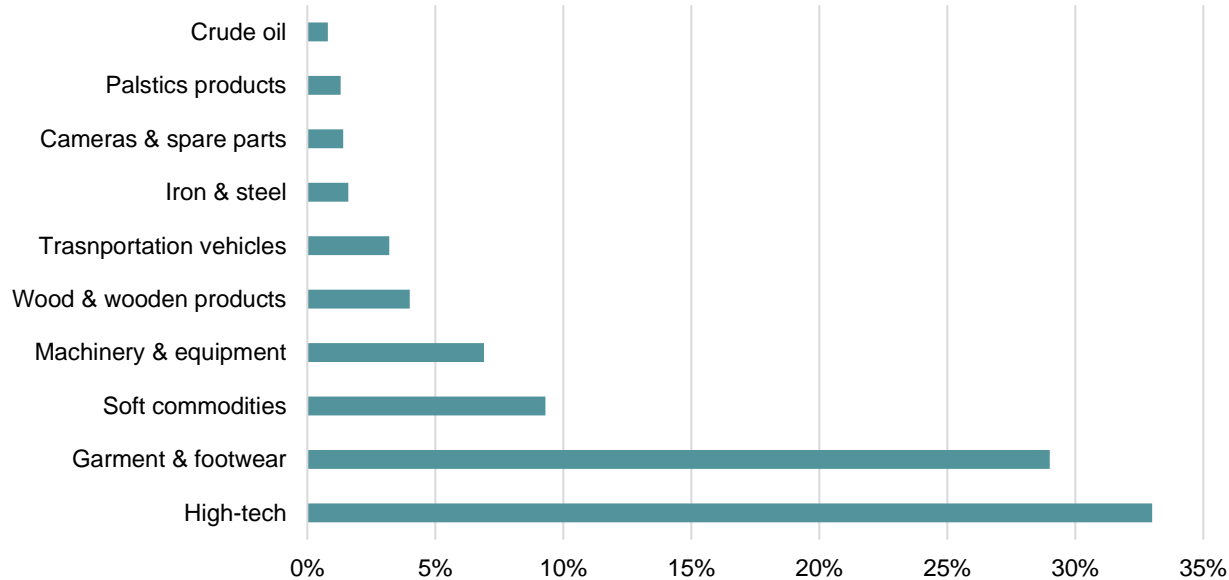
- Robust and growing middle class and dynamic private sector
- Stable business environment
- Continued public spending to contain pandemic
- Ramp up infrastructure spending and unfreeze real estate market
- Bilateral and multilateral trade agreements e.g. EVFTA promises improved market access upon the country's rebound
- Vietnam well positioned to bounce back and prosper post COVID-19 e.g.
- COVID-19 to accelerate relocation wave from China



COVID-19 TO ACCELERATE RELOCATION WAVE FROM CHINA

Key export categories – As % of Total Exports (2019)

Resilient export model



- Export structure has resilient 'barbell' structure – 60% products low-value added (e.g. garments), 40% high-value (e.g. electronics)
- Low-end products expected to hold up well over next 02 year, with increased demand from cost-conscious shoppers.
- High-value added products expected to surge from 2021.

Upcoming relocations due to COVID-19?

- Multinationals that produce these will be under pressure to cut costs – prompting a shift in production to VN
- Previously companies reluctant to set up operation in VN due to supply chains lacking depth
- FDI companies to not only establish new factories in VN, but have greater incentive to foster development of local supply chains
- Finally, wage inflation tends to increase after a pandemic subsidies, prompting manufacturer to leave China for SEA



FOXCONN®

Supply gap

Industrial Parks (IPs) and Economic Zones (EZs)

>335 *FDI projects; with*

H1/2020: estimated newly registered capital totaling **>US\$6 billion**

IP & EZ Supply

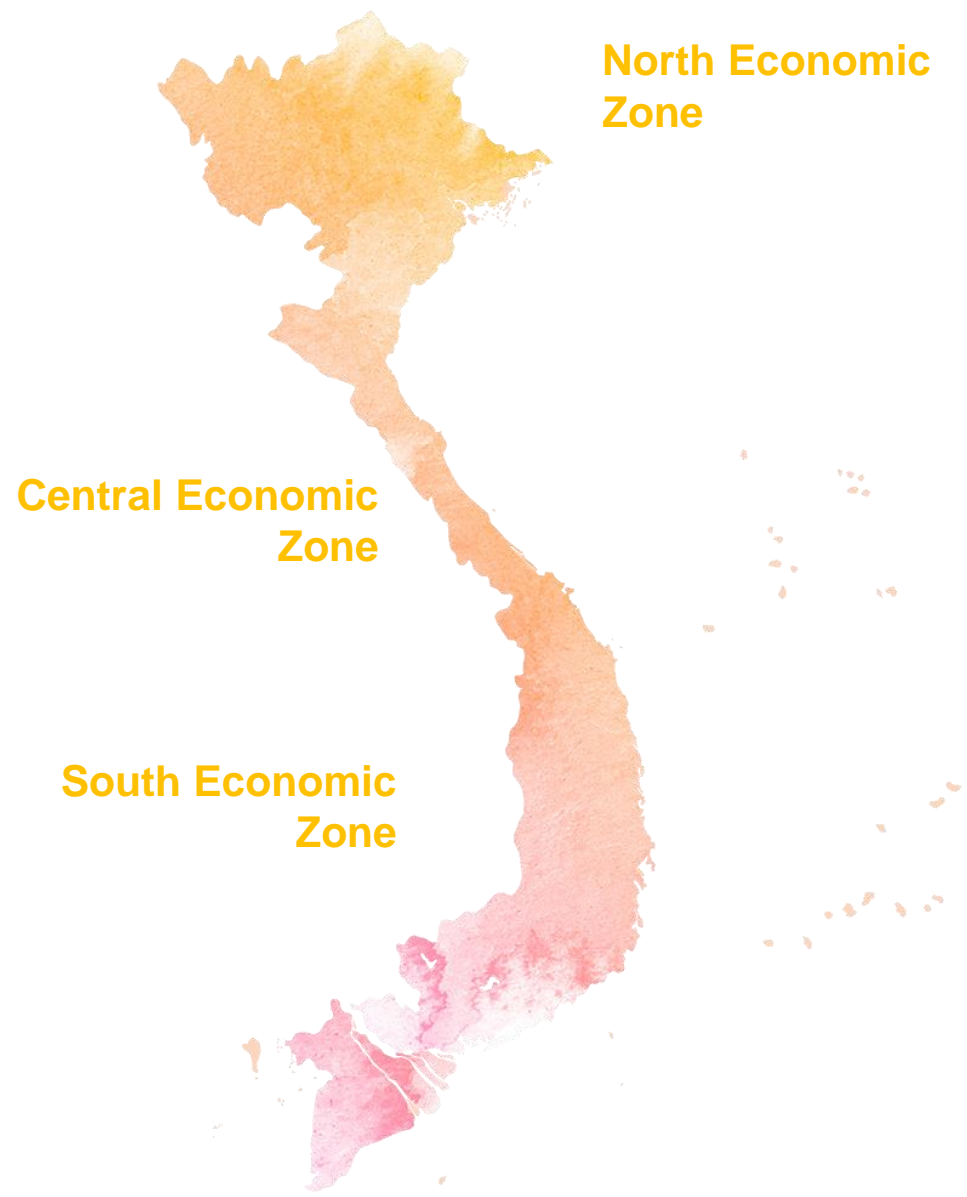
374 IPS - 114,000 ha total area

Operational area: 77,000 ha

280 operational IPs **73.7% occupancy**

75 IPs under construction, site clearance and compensation: 29,000 ha

Source Department of Economic Zone Management (DEZM),
Ministry of Planning and Investment (MOPI), June 2020



2020 – KEY UPCOMING SUPPLY

Q2/2021

Q3 & Q4/2021

Q4/2021 & 2022

**Vinhomes IZ
Nam Trang Cat IP**

Hai Phong

200 ha

**Vinhomes IZ
Thuy Nguyen IP**

Hai Phong

319 ha

**Kinh Bac City
Nam Son Hap Linh IP**

Bac Ninh

238 ha

**TNI Holdings
Song Lo 1 IP**

Vinh Phuc

177 ha

**VNIP
Viet Phat IP**

Long An

1,800 ha

North

- Developed transportation network links
- Prime industrial land between new infrastructure developments
- Companies moving from China
- Heavy industry focus



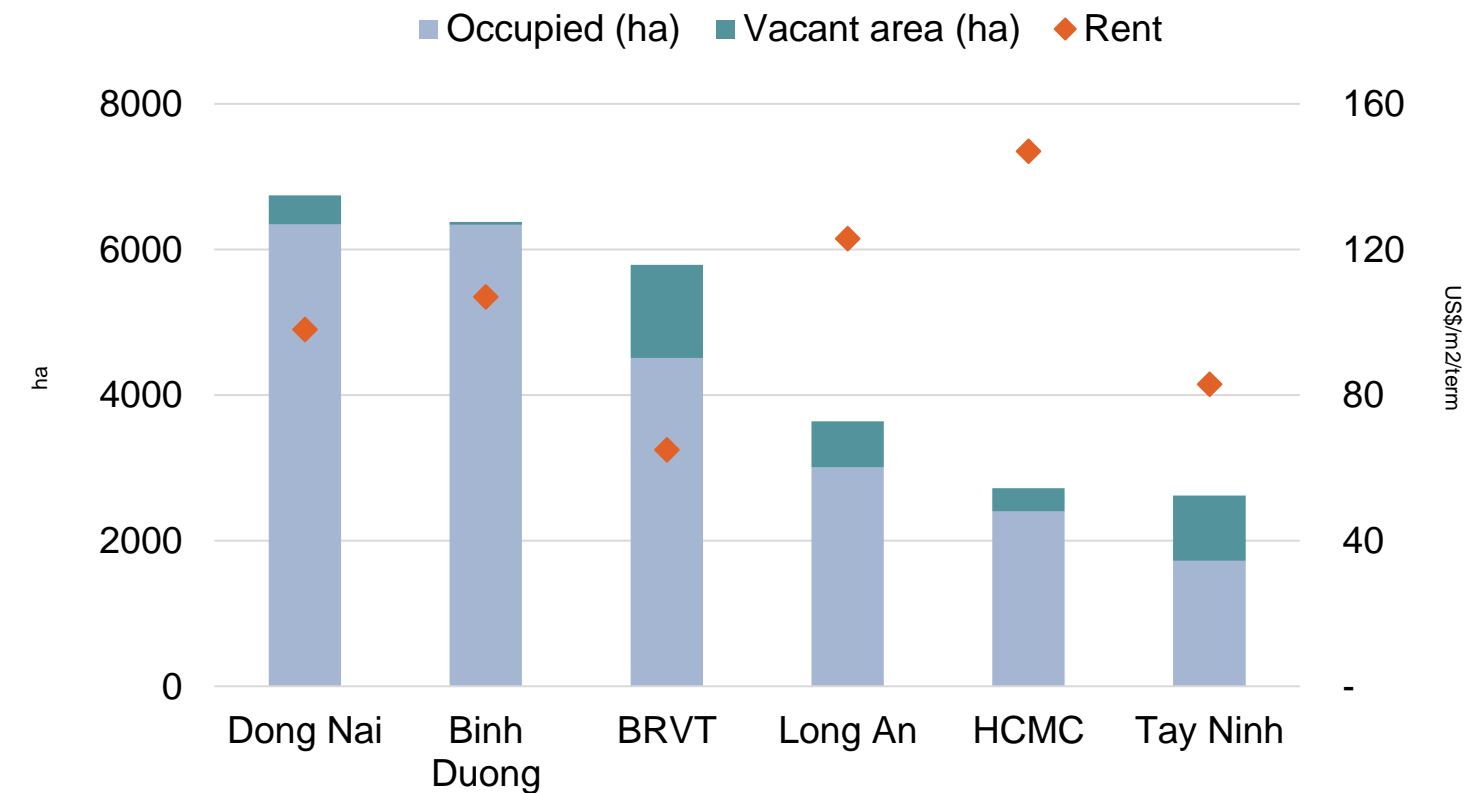
South

- Economic and industrial center of VN
- Near the biggest commercial port in VN
- Educational institutions driving skilled labor
- Diversified sector investment





SEZ Supply & Performance



H1/2020 – SEZ SUPPLY & PERFORMANCE

	Total area (ha)	Leasable area (ha)	Projects	Occupancy	Rent (US\$)	Lease YoY	Occ. YoY
Dong Nai	10,066	6,742	32	94%	98	6.52%	1.08%
Binh Duong	10,159	6,379	31	99%	107	4.90%	2.06%
Ba Ria-Vung Tau	9,327	5,711	12	79%	65	18.18%	12.86%
Long An	5,837	3,641	22	84%	123	7.89%	1.20%
HCMC	4,703	2,720	22	88%	147	0%	1.15%
Tay Ninh	3,390	2,619	6	66%	83	N/A	N/A

Total Area (ha):

43,482

No. of Projects:

125

Land Lease:

US\$104/m²

For entire long-term land lease

Leasable Area (ha):

27,812

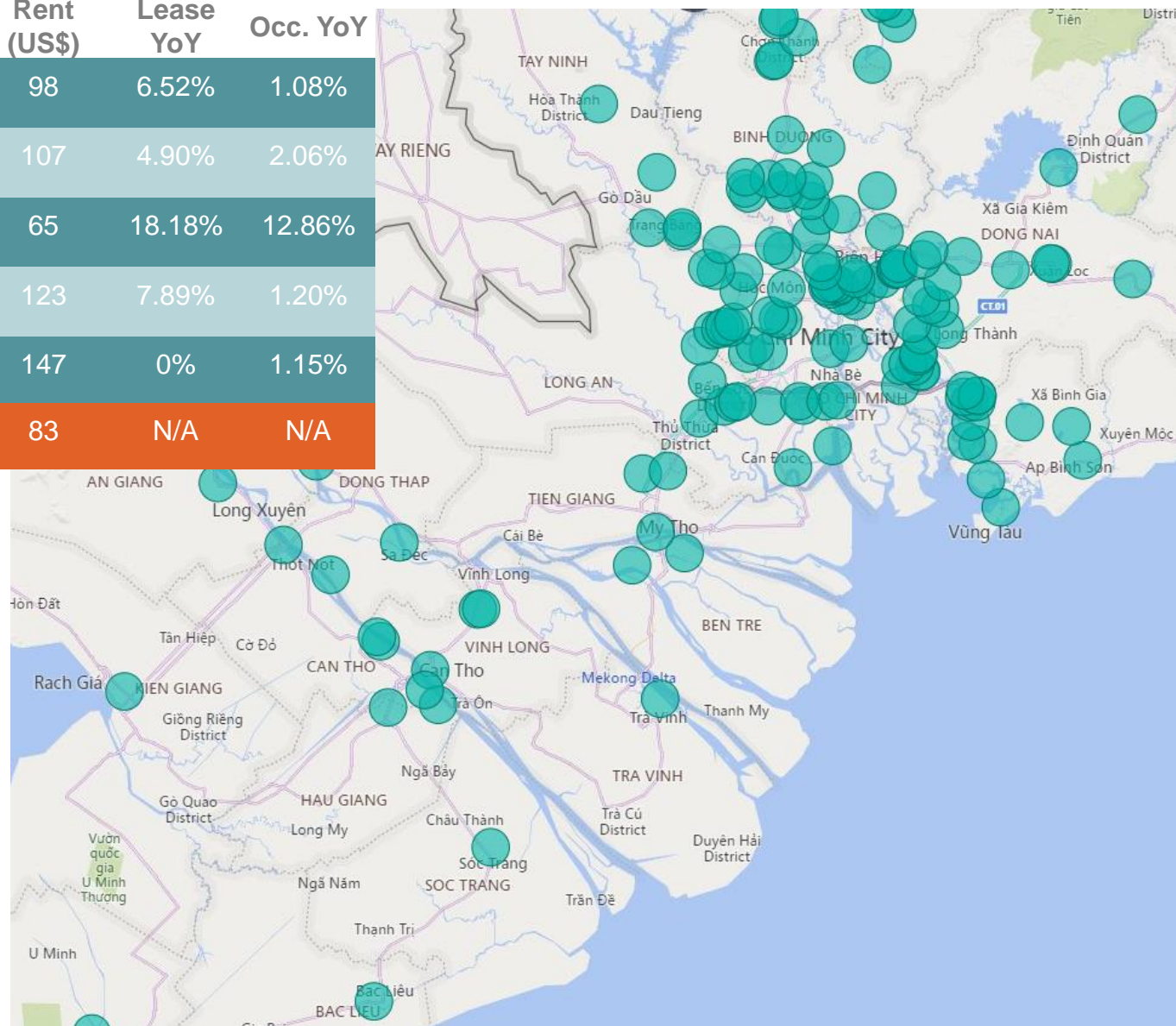
Avg. Occupancy:

85%

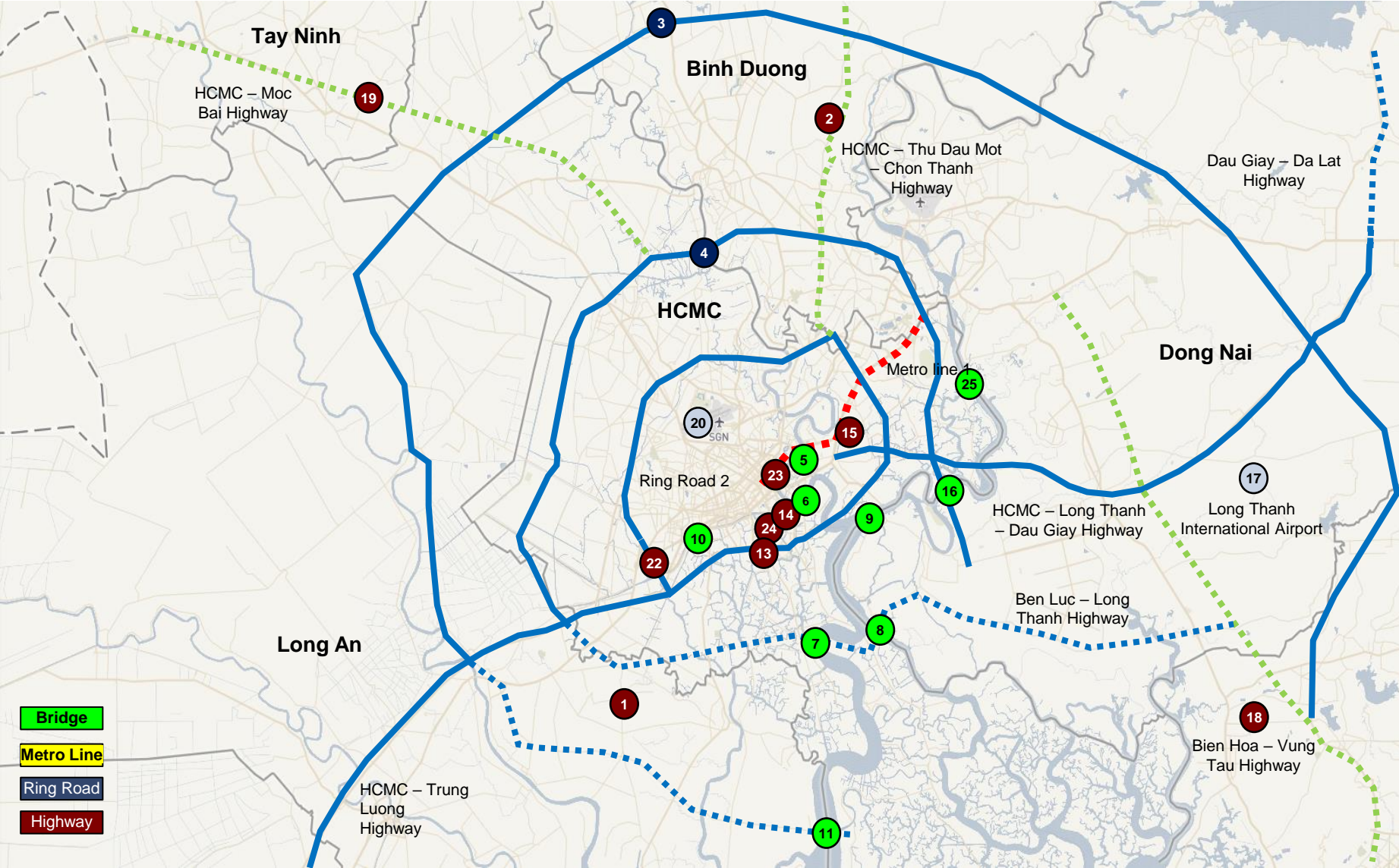
Factory Lease:

US\$4.4/m²

Per month



SEZ KEY INFRASTRUCTURE



2020	
7	Binh Khanh Bridge
8	Phuoc Khanh Bridge
10	Binh Tien Bridge
11	Vam Sat 2 Bridge
14	Ven song Saigon Street
2021	
23	Nguyen Huu Canh Street Upgrades
24	Nguyen Thi Thap Street Upgrades
5	Thu Thiem 2
12	Metro line 1
2022	
2	HCMC – Thu Dau Mot – Chon Thanh Highway
6	Thu Thiem 4
13	Intersection Nguyen Van Linh - Nguyen Huu Tho
18	Bien Hoa - Vung Tau Highway
22	Ring Road 2
2023	
4	Ring Road 3
15	Xa lo Hanoi Highway Expansion
16	Nhon Trach Bridge
1	Ben Luc – Long Thanh Highway
2024	
3	Ring Road 4
9	Cat Lai Bridge
25	Vam Cai Sut Bridge
2025	
19	HCMC - Moc Bai Highway
20	Tan Son Nhat Airport Expansion

9M/2020 – SEZ KEY TRANSACTIONS



No.	Company	Nationality	Industry	Investment capital (US\$)	Industrial park	Province
1.	Jinyu Tire Co., Ltd.	Hong Kong	Rubber products	300 mill	Phuoc Dong	Tay Ninh
2.	Furukawa Automotive Systems Inc.	Japan	Electrical equipment	49 mill	Binh Minh	Vinh Long
3.	Prime Glorious Vietnam Co., Ltd.	Hong Kong	Textiles & apparel	35 mill	Bau Xeo	Dong Nai
4.	Lap Thinh Co. Ltd.	China	Paper products	33 mill	Nam Tan Uyen Expansion	Binh Duong
5.	Khgears International	China	Machinery & equipment	30 mill	Chau Duc	Ba Ria-Vung Tau
6.	Sung Shin Tech Vina	Hong Kong	Plastic products	30 mill	My Phuoc 3	Binh Duong
7.	Samson Industries Co. Ltd.	Hong Kong	Textiles & apparel	27 mill	N/A	Binh Duong
8.	CP Vietnam Co. Ltd.	Thailand	Agricultural products	22 mill	Binh Minh	Vinh Long
9.	Fu Lian (HK) Group Limited	Hong Kong	Textiles & apparel	20 mill	Moc Bai	Tay Ninh
10.	Ever Giant International Limited	Singapore	Metal products	20 mill	Bau Bang	Binh Duong

Ensuring future supply

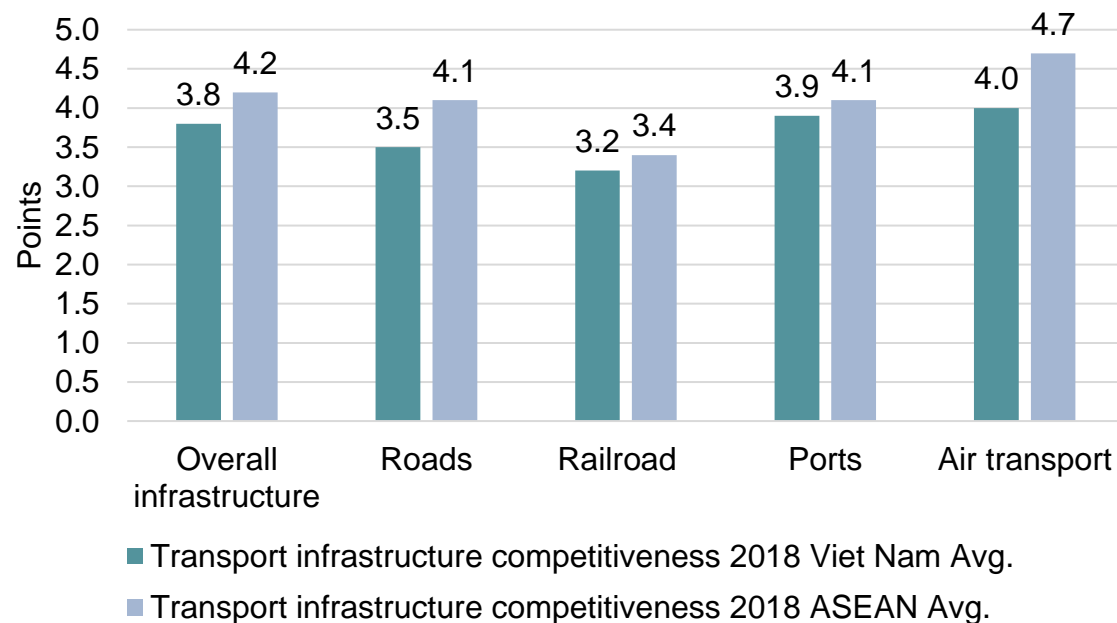
- DEZM announced 561 upcoming IPs over 201,000 ha, approved for master planning integration.
- Of these, 259 utilizing 86,500ha are yet to be established and represent 43.1% of the total new area.
- DEZM must
 - Perfect legal frameworks for IZ development
 - Strengthen management and innovation
 - Enhance master planning efficiency
 - Support niche projects e.g. ecological IPs, supporting IPs, associated IPs, and combined IZ and urban area services models.

Labor: Quality v quantity

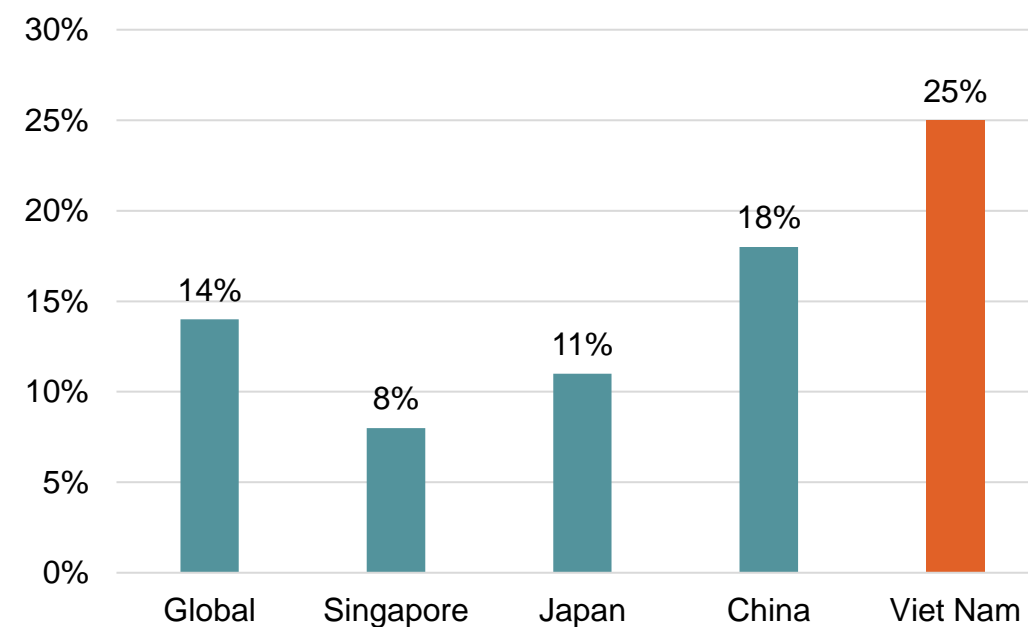
- Low value-added industries continue to struggle with rising lease prices and labor costs.
- To transition to higher-value industries, VN must grow it's supply of skilled labor and invest in:
 - Education, IT, mathematics, sciences -
NATIONALLY.
- Gov. to enforce its National Skills Development, under the FDI Recommendation for 2020-2030

OUTLOOK – IMPROVING INFRASTRUCTURE

Transport infrastructure competitiveness, 2018



Logistics cost/GDP, 2019



- Infrastructure expanding rapidly
- Below needs of economic and social growth
- Rapid growth in urban population and freight transport – primary drivers
- Rising demand for intercity passenger and freight transport – Gov. upgrading expressways and railways

Quality of Vietnamese transport infrastructure is lower than ASEAN average at **all segments**.

Source Vietnam Logistics Association, 2019

9M/2020 Summary

- Amid travel restrictions industrial property sector activity in 2020 revolves around:
 - Companies in Vietnam expanding or relocating their production;
 - Key M&A deals, and the emergence of distressed assets and facilities for sale & leaseback;
 - Strong demand for ready-builds as suppliers are more conservative to make long-term land lease commitments or are relying on short term contracts with their customers;
 - Sector reliance on supply chains migrating out of China is increasingly evident from developers.

2021 and beyond

- China + 1 model – increasingly pursued by manufacturers;
- Resulting in greater demand for industrial space;
- Corporations seek to mitigate risk and diversify locations;
- Industrial to be the ‘poster child’ for real estate, with increasing enquiries and heightened capital market activity.

“Hope is important because it can make the present moment less difficult to bear. If we believe that tomorrow will be better, we can bear a hardship today.”

- Thich Nhat Hanh.



INDUSTRIAL
PROPERTY.VN
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Vietnam as a Life Science manufacturing hub in Southeast Asia

Luke Treloar
Strategy Managing Director
National Head - Healthcare and Life Sciences

December 2020



Vietnam is an attractive investment destination and is uniquely positioned to become a Life Science hub for Southeast Asia



Growing healthcare needs driving the need for new healthcare construction



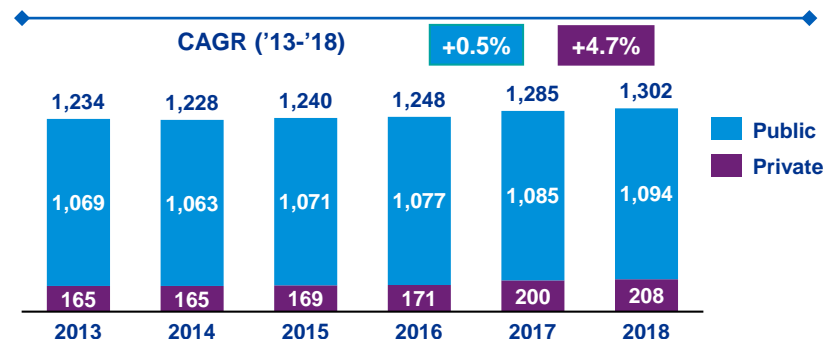
Hypothesis 1: Vietnam will need to build more private hospitals to meet demand gap



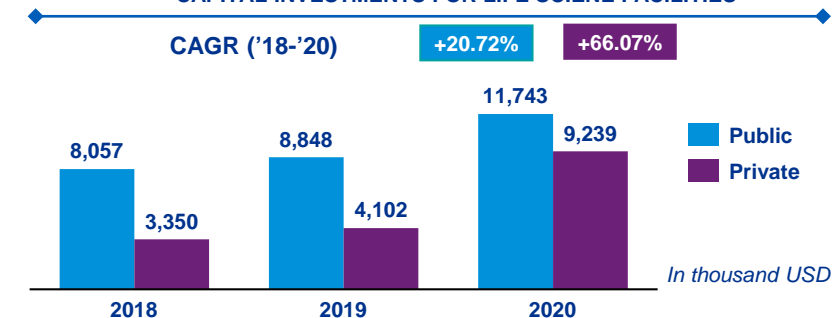
Hypothesis 2: Vietnam is well positioned to become a Life Science hub for Southeast Asia



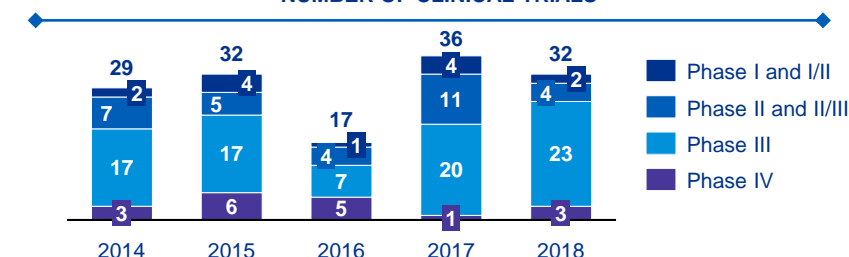
NUMBER OF HOSPITALS



CAPITAL INVESTMENTS FOR LIFE SCIENCE FACILITIES



NUMBER OF CLINICAL TRIALS



Sources: BMI, BCI

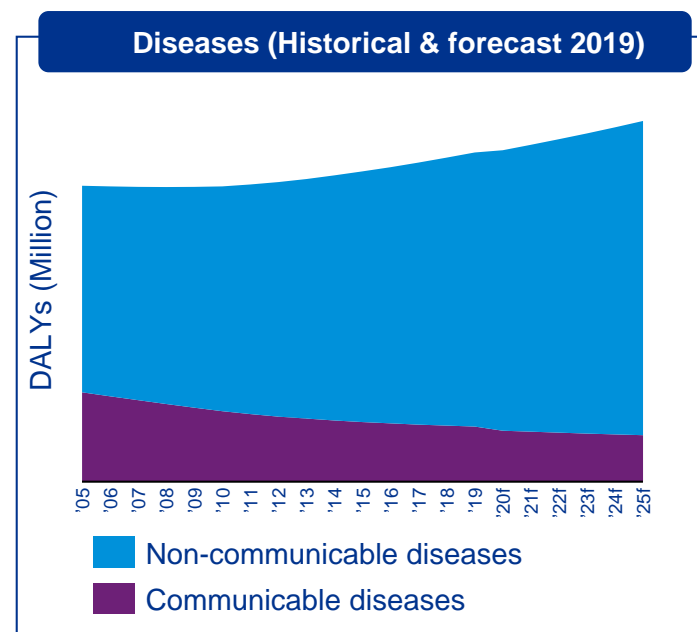
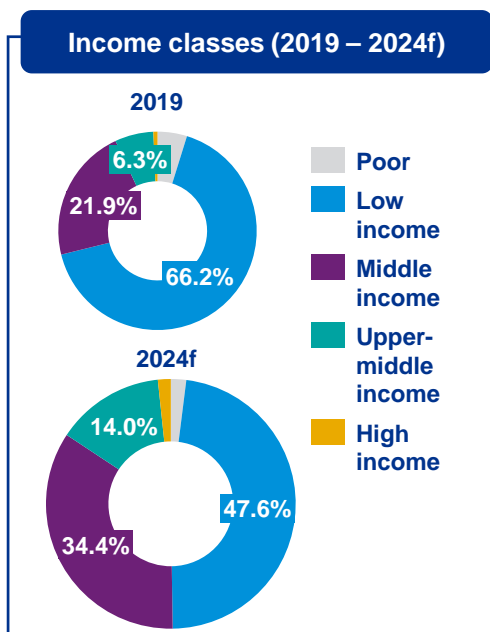
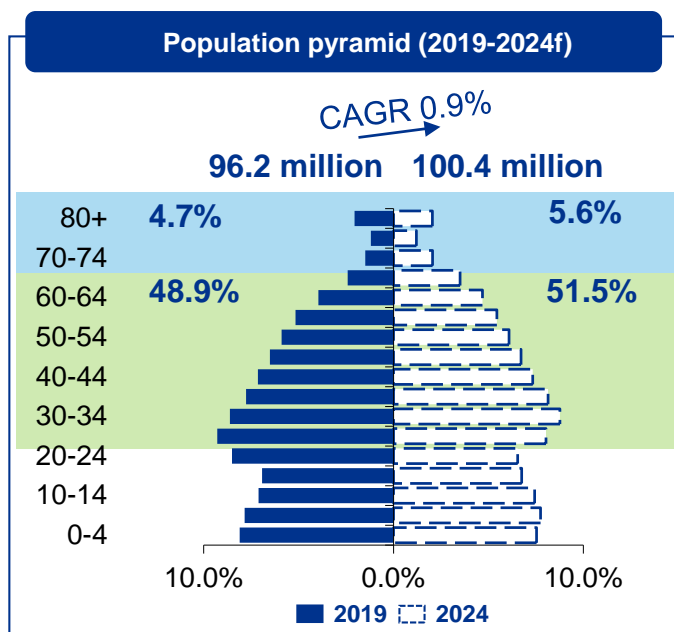


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Growing healthcare needs
driving the need for new
healthcare construction

Aging population and growing income lead to an increase in non-communicable diseases



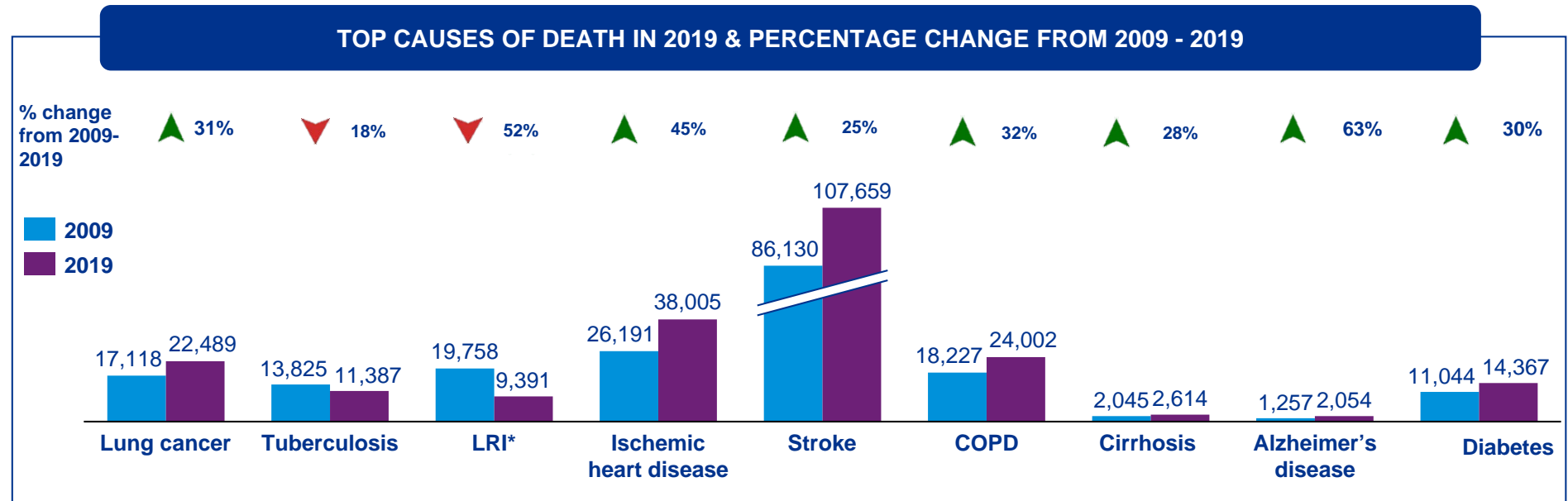
- Vietnam's population is enjoying a “golden structure”, with half the population under 30 years old.
- However, the population is expected to **begin an aging trend**.
- The **high income class experiences highest growth** in the past 5 years, followed by the upper middle and middle income class.
- The rise in Vietnam's non-communicable diseases is **consistent with other emerging economies** as they transition towards middle-income status.

Source: BMI



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Rapidly changing healthcare needs in Vietnam



- Vietnam is moving toward the middle-income status country with higher urbanization rate and an aging trend in population.



Vietnam is rapidly transitioning from a **communicable diseases** market to a **non-communicable diseases** market. This will change the opportunity landscape for course of treatment

Note: *Lower respiratory infections

Source: Global Health Data Exchange



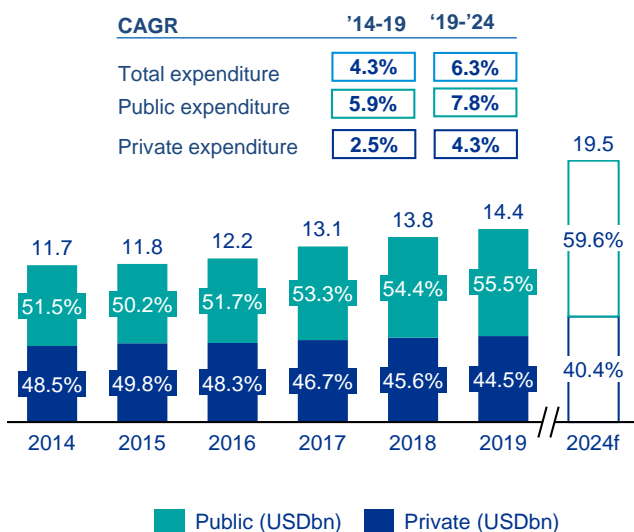
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Total healthcare expenditure is expected to grow by 6% per annum in the next 5 years

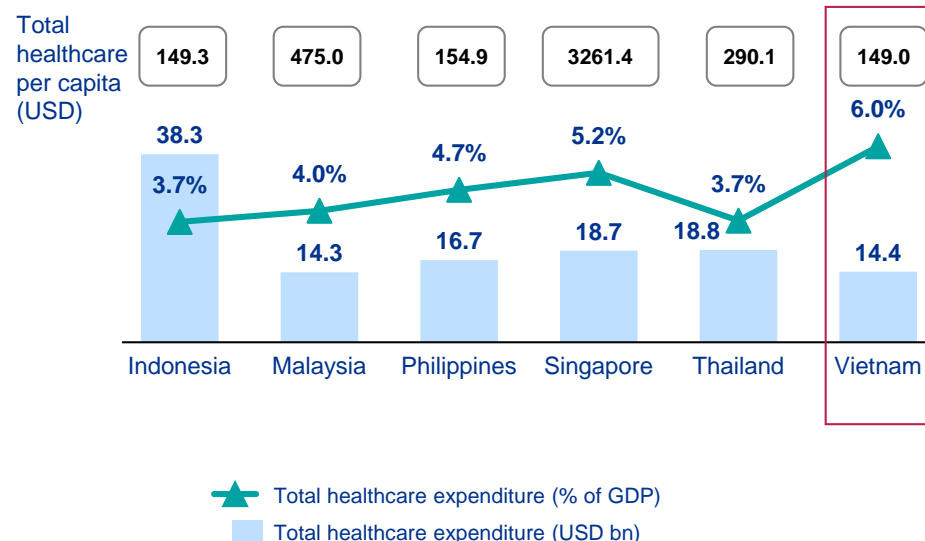
HEALTHCARE EXPENDITURE IN VIETNAM



Vietnam's healthcare expenditure, 2014- 2024f



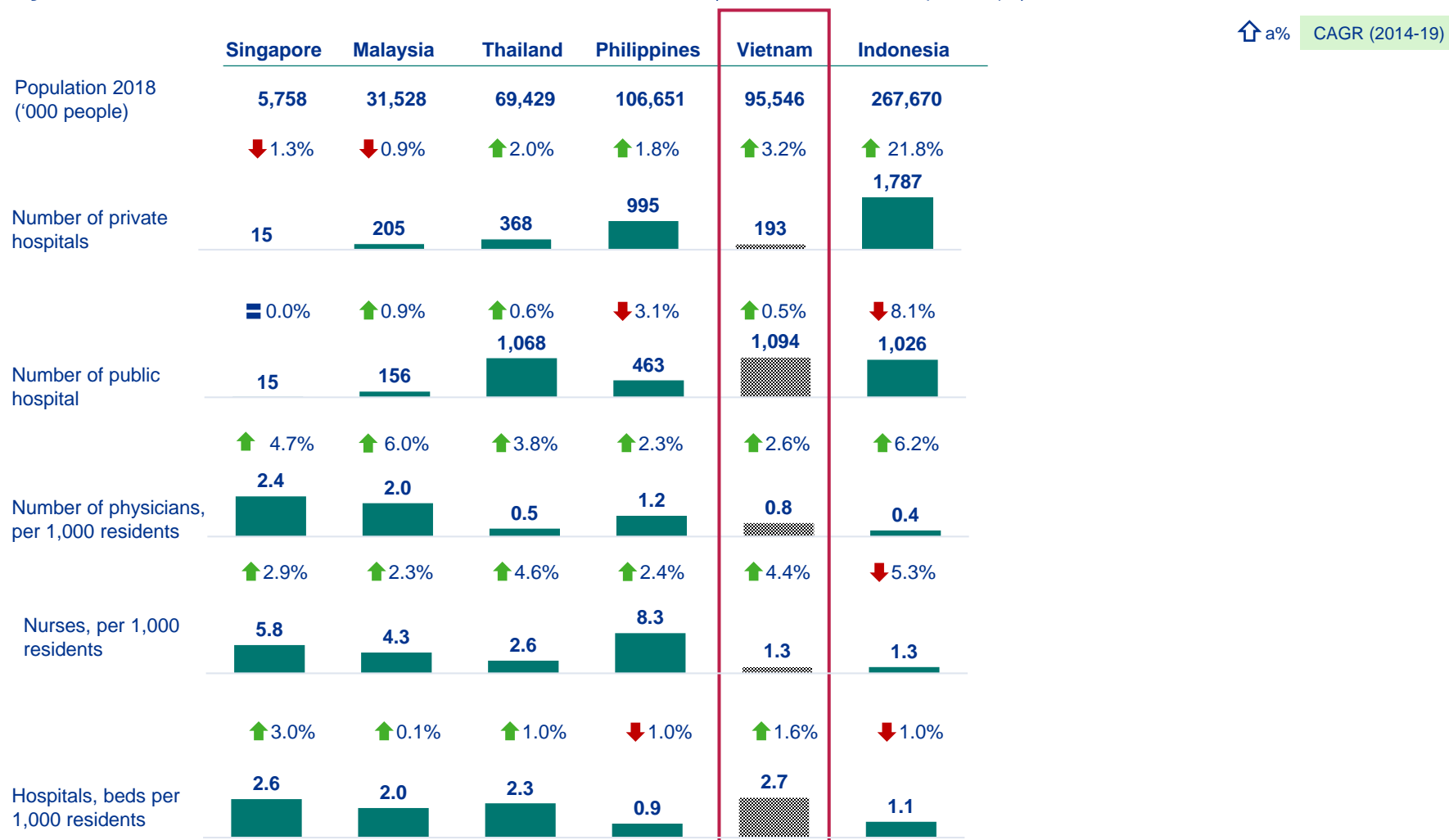
Healthcare expenditure of selected countries, 2019



Vietnam has the highest total healthcare expenditure as a percentage of GDP at 6% in 2018, which was higher than more developed countries in the region such as Malaysia, Singapore and Thailand.

Source: Business Monitor International

Vietnam has one of the smallest proportions of private hospitals in the region. The country also has one of the lowest healthcare practitioner (HCP) penetration rates



Source: BMI, WHO, IMF

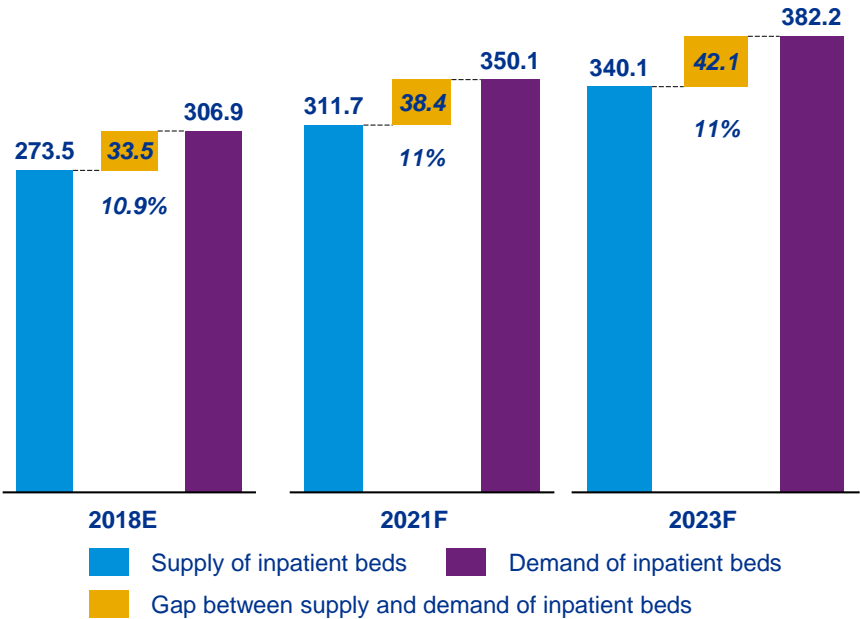


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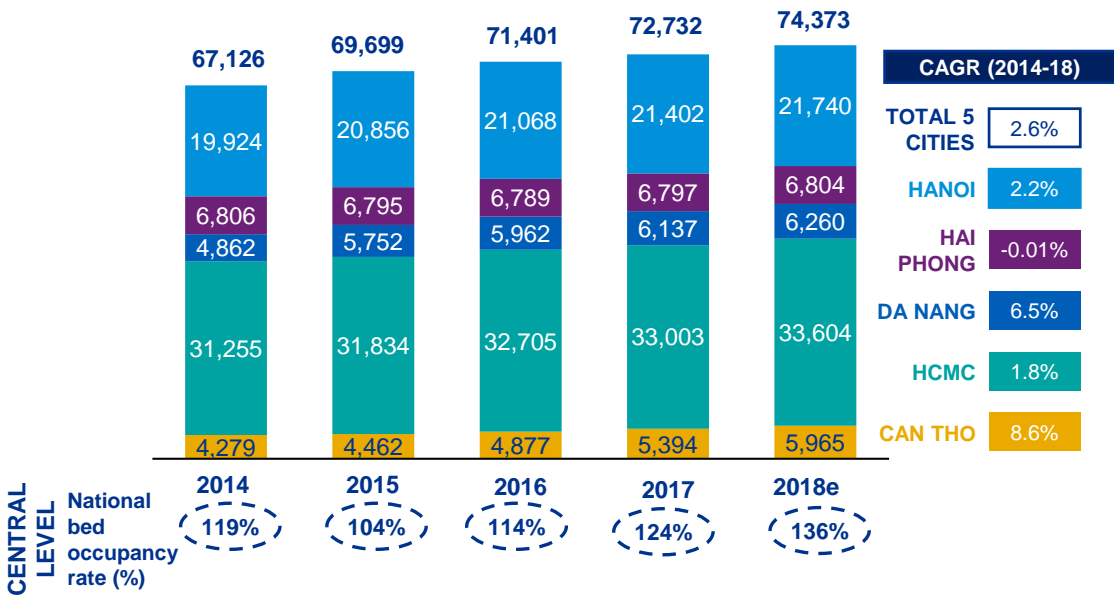
Demand and Supply Forecast - Inpatient

Demand for hospital beds will exceed supply, especially in central hospitals. The government plans to increase number of beds and relocate patients to alleviate the issue

SUPPLY AND DEMAND FOR INPATIENT 2018-2023 ('000 BEDS)



SUPPLY OF HOSPITAL BEDS IN PUBLIC HOSPITALS IN 5 KEY CITIES



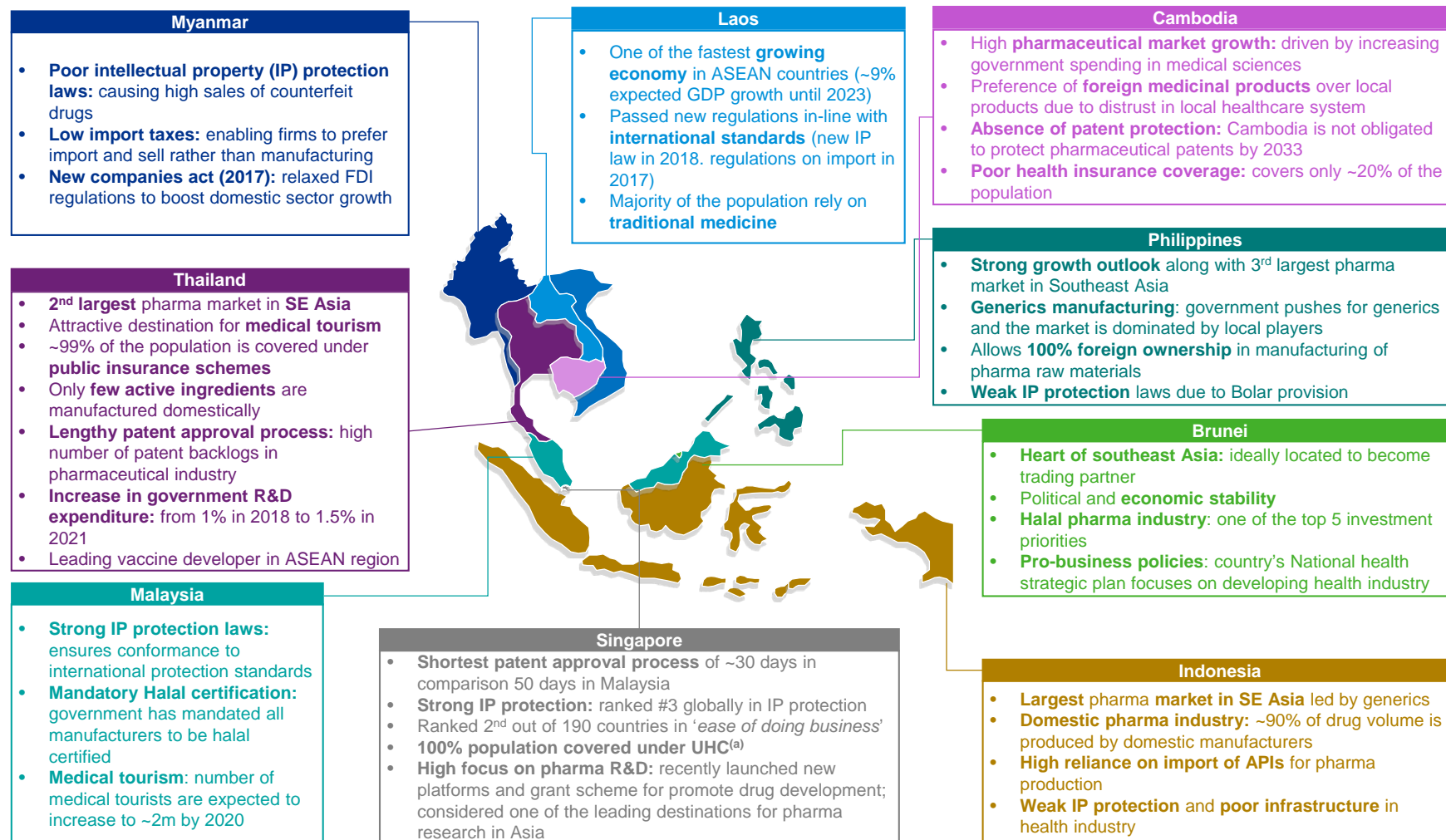
Note: The figure is for both public and private establishments; Calculation methodology is included in Appendix 2
Source: BMI database, Trade press, KPMG analysis





Vietnam as an emerging Life Science manufacturing hub for Southeast Asia

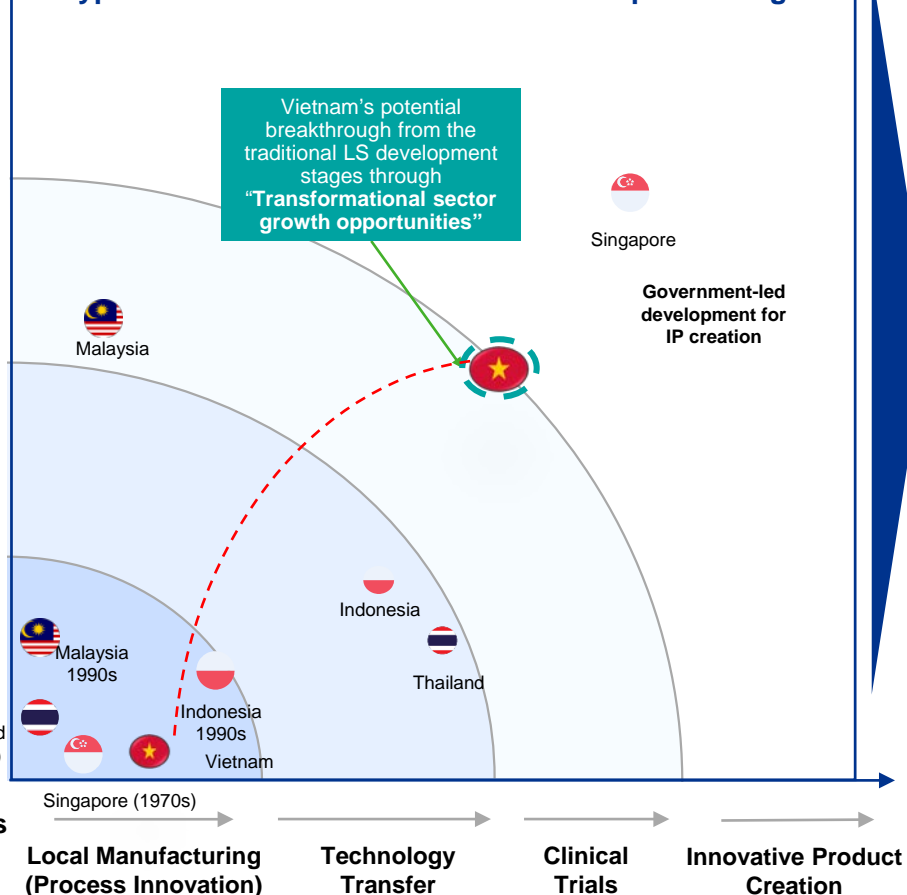
We assessed the Life Sciences and healthcare strength of ASEAN markets to understand the breakthrough potential for Vietnam



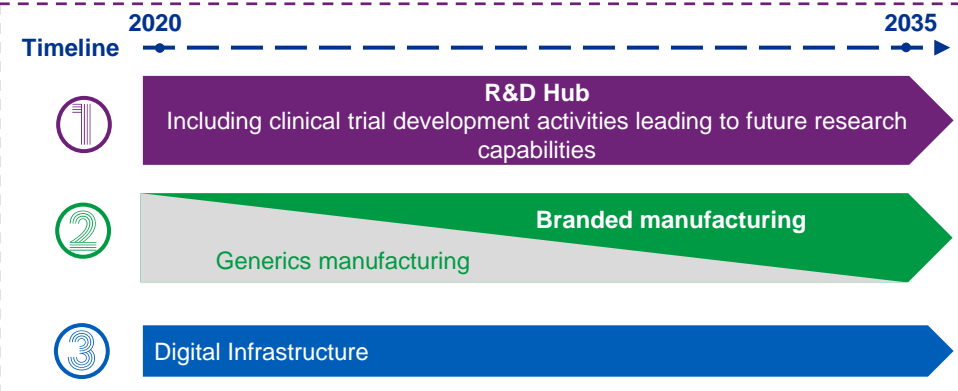
Notes: (a) UHC stands for Universal Health Coverage
Sources: (1) KPMG analysis

Vietnam can become a life science hub for innovation in Southeast Asia

Typical / Traditional Life Sciences development stages



Vietnam has the opportunity to create a "breakthrough" strategy that initiates the stages in parallel, rather than the traditional sequential development model. This parallel model takes advantage of the complimentary nature of the steps and their requirements. By beginning with clinical trials and digital health, Vietnam will start the journey within its current capabilities, while building up for more complex opportunities



Vietnam has the opportunity to become a Southeast Asian life science hub

Opportunity Category

Definition of Opportunity

Impact



Building a High Quality Brand-name Manufacturing Hub for ASEAN

Build globally recognized manufacturing standards, practices and capabilities to grow a patented manufacturing ecosystem and center of excellence for the ASEAN region

- Enhanced affordability and access to innovative medicines
- Life sciences industry growth from standardized manufacturing processes and thus global acceptance of products
- Increased industrial exports and thus improved balance of payments



Creating an Innovative and Leading R&D Hub (through clinical trials and drug discovery)

- ***Develop Vietnam as a clinical trials innovation hub through leading infrastructure development, and capabilities & expertise investment***
- ***Establish Vietnam as a drug discovery innovation hub by investing in existing science parks, expertise investment and enhancing ease of doing business***

- Enhanced availability of quality healthcare to population
- Augmented growth of Life Sciences industry and country's economy due to FDI investments
- Improved education infrastructure and more opportunities for skilled employment
- Strengthening of the reputation of country



Developing and Embedding Leading Digital Healthcare Infrastructure

Develop the digital healthcare infrastructure to enable new R&D capabilities, opportunities and enable enhanced healthcare delivery for the entire Vietnamese population

- Innovative clinical research capabilities & approaches, using RWD / RWE, generated through digital health, disease registry and claims data
- Reduced time required for data collection and patient recruitment for clinical trials
- Quicker accessibility of health data to patients, researchers, doctors and third-party providers
- Provides infrastructure for future personalized cure and IP generation



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