Shifts in Vietnam's Industrial Manufacturing Landscape: A Developer's Perspective

February 2025

CUSHMAN & WAKEFIELD
Media partner

BW INDUSTRIAL
OUR PROPERTY IS YOUR ADVANTAGE

Contents

BW INDUSTRIAL
OUR PROPERTY IS YOUR ADVANTAGE

Forewords

Dear readers,

Vietnam stands at the forefront of industrial transformation in Asia, driven by a unique combination of strategic location, burgeoning manufacturing capabilities, and a thriving logistics ecosystem.

At BW Industrial, we are proud to play a pivotal role in shaping this journey, offering innovative solutions to meet the dynamic demands of global and local businesses.

This white paper is more than a reflection of market insights; it is a testament to our commitment to excellence and partnership. Ready-built factories ("RBF") are not just infrastructure – they are enablers of growth, designed to empower businesses with agility and scalability in an ever-changing world.

We believe that industrial real estate is not merely about space but about creating opportunities. As you explore this report, we hope to inspire you with a vision of what's possible in Vietnam's vibrant industrial landscape.

Thank you for your continued trust and partnership.

Warm regards,

Lance Li
CEO of BW Industrial

1. Evolution of Ready-built Factory Market in Vietnam

1.1. RBF shifting from simple steel frames to modern specification structures RBFs

Initially, Vietnam's Ready-built Factory ("RBF") market primarily emerged from manufacturers leasing their excess facilities or local developers constructing low specification factories. These early structures often featured simple steel frames with outdated, detached or semi-detached designs, targeting tenants in traditional and cost-sensitive industries. These facilities met only basic building and firefighting standards, offered limited operational flexibility, and incurred high maintenance costs.

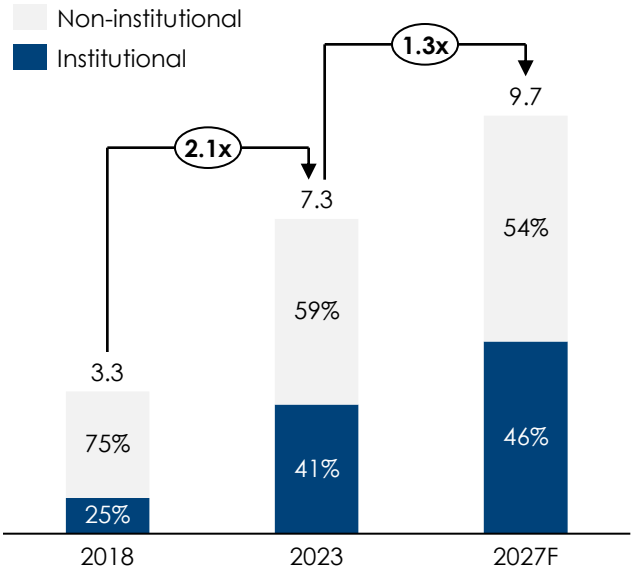
Since 2018, institutional players have revolutionized the RBF market landscape

The RBF market has seen significant growth with the entry of institutional developers like BW Industrial, KCN, and Gaw NP, who have introduced modern specifications RBF, offering full facilities management, and value-added services such as fit-out and licensing support.[1]

These modern facilities, although requiring higher capital investment, are particularly well-suited for (i) international tenants with advanced operational requirements, such as enhanced floor load capacities or firefighting systems that follow latest standards (especially when firefighting standards are evolving very fast in Vietnam), and (ii) tenants in advanced industries like automation, electronics, or machinery. Their contemporary designs and efficient layouts are tailored to meet the needs of high-tech manufacturing, ensuring both productivity and streamlined production setup in Vietnam.

The RBF sector is set for sustained growth through 2027 with institutional investors representing almost half of the market (Exhibit 1)

Exhibit 1: Vietnam RBF supply projected to reach 9.7 million sqm by 2027, with growth led by institutional investors (in million sqm)



The institutional basket includes assets developed by prominent institutional and high-profile developers

Source: JLL

Traditional factories

- Basic steel structures with outdated designs, suited for single tenants and low land-use efficiency
- Minimal compliance with fire safety and environmental standards
- High maintenance costs and operational downtime, with facilities management usually handled by tenants
- Limited flexibility in leasing options, and tenants typically manage licensing

Modern ready-built factories

- Modern multi-story designs support multi-tenant use and maximize land efficiency
- High regulatory compliance and operational optimizations for tenants
- Developer-managed facilities, reducing tenant maintenance burdens
- Flexible leasing options with licensing support and essential ancillary facilities

Exhibit 2: Evolution of RBF specifications

Master plan transformation

- Transitioned from detached/semi-detached designs to row buildings to optimize efficiency and accommodating more tenants within the same area. This allows clustering of related operations and facilitates vertical integration.
- Additionally, the new layout also supports future expansions and caters to manufacturers requiring larger spaces.

Roofing innovations

- Upgraded from traditional multi-span (sawtooth) roofs to modern single-span roof designs to eliminate the need for internal gutters and downpipes, reducing maintenance and addressing frequent leakage issues.
- Outdated jack roofs have also been removed, in line with updated fire safety codes, further improving leakage problem.

Floor quality enhancements

- Introduction of super-flat floors minimizes cracks, ensuring durability and operational efficiency.
- These floors support precision equipment, meeting the requirements of high-tech manufacturing industries.

Comprehensive firefighting infrastructure

- Comprehensive firefighting systems are pre-installed, saving manufacturers time and reducing the need for costly fit-outs.
- This approach minimizes upfront expenses and accelerates operational readiness for tenants

Focus on sustainability

- Adoption of Environmental, Social, and Governance (ESG) strategies in RBF development.
- More facilities include LEED Gold or Silver certifications, meeting global sustainability standards and enhancing energy efficiency.

Exhibit 3: BW Industrial's Nhon Trach 2: Pioneering, modern double-story cargo lift design for cost-effective solutions in strategic location nearby Long Thanh Airport

1.2. Driving Foreign Direct Investment (FDI) growth: How RBFs are catalyzing investment and shifting tenant preferences from ownership to leasing

Vietnam, alongside India, has emerged as a key destination for FDI in recent years, thanks to favorable policies and competitive labor costs.

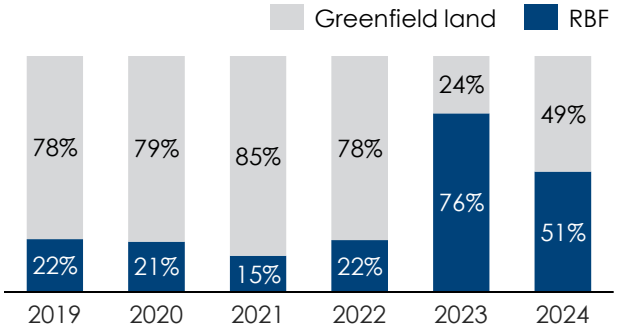
From 2019 to 2024, registered FDI has recorded a total of $200bn, including $122bn for manufacturing facilities across key industrial hubs.[2]

In provinces that have become strong FDI magnets, there is a noticeable shift toward investors preferring RBF over self-acquiring land and constructing their own factories (Exhibit 4).

Establishing a manufacturing presence in a new country is a complex and resource-intensive process, requiring significant investment, detailed analysis, and navigating complex legal procedures. These challenges can lead to substantial costs and delays in commencing operations.

The growing preference for RBF solutions is therefore understandable. RBFs address these challenges by offering faster time-to-market for investors and providing an agile approach for manufacturers entering a new geography. By enabling companies to "test the waters" with reduced risk, RBFs act as incubators for growth and long-term scalability. This strategic role positions RBFs as the key driver of Vietnam's FDI expansion, particularly in the manufacturing sector (Exhibit 5).

Exhibit 4: Shift of industrial investors from greenfield land to RBF products in key FDI-magnet provinces



FDI-magnet provinces includes: (North) Hai Phong, Bac Giang, Bac Ninh, Hai Duong, Vinh Phuc, Ha Nam, Thai Nguyen, Quang Ninh; (Central) Nghe An; and (South) Binh Duong, Dong Nai, Long An, Binh Phuoc

Source: BW Industrial

Investors seeking to establish manufacturing arms in Vietnam are increasingly drawn to RBFs due to its strategic advantages and operational flexibility

Exhibit 5: RBFs as comprehensive strategic solutions for manufacturers: Accelerating FDI attraction and serving as "incubators" for Vietnam's manufacturing expansion

Owning factory

~$500-600 psm
Of average sunken CAPEX cost

Self-maintenance
Create additional burden

30-40s years
Long-term leasehold (depends on IP)

Immobilization
Unable to move, upscale, or descale

Time to market – minimum 36 months

Leasing RBF

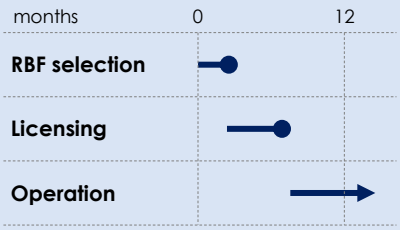
~$5 psm
Of average rental OPEX cost

Developer-managed
Focus solely on operation

3-10 years
With flexible lease term

Mobilization
Ease of expansion or province relocation

Time to market – 6-7 months

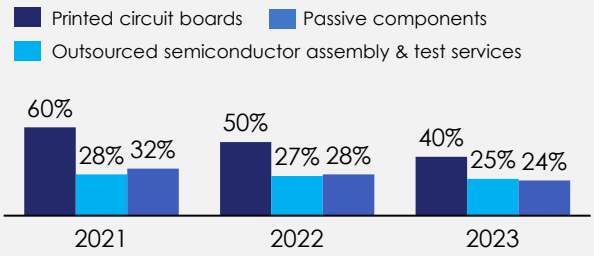


"RBF provides an optimal solution for manufacturing tenants seeking to quickly establish a production base without going through the complete land acquisition and construction process"

1.3. The global supply chain shift and Mainland China's manufacturing relocation are fueling greater demand for RBF, with more midstream electronics manufacturers expected to relocate comprehensive production supply chains to Vietnam

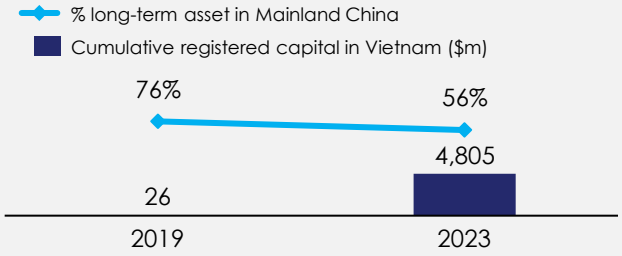
Exhibit 6: Gradual shift of midstream electronic producers out of China, following the ongoing downstream relocation to Vietnam to form productive industrial clusters

The relocation of assets out of Mainland China for major midstream producers is in early stage…



Passive components including Vishay, Samsung, Murata, TDK; Printed circuit boards including AT&S, TTM Technologies; Outsourced semiconductor assembly & test services including Amkor, Powertech, JCET

…with Vietnam emerging as key destination driven by the ongoing shift of downstream EMS in recent years



Noncurrent assets & capital of Hon Hai Precision Industry, Pegatron, Quanta Computer, Compal Electronics, Wistron, and Inventec. Collectively, these firms account for more than half of global Electronics Manufacturing Services sales

Source: Press release, S&P Global Ratings

As China increasingly shifted from a capital importer to an exporter, Vietnam emerged as a strategic destination, receiving $12bn in Chinese investment in its manufacturing sector in 2023.[3] The country has solidified its position as Southeast Asia's largest exporter, with export values rising from $264bn in 2019 to $405bn in 2024, achieving a CAGR of 8.9%.[4] This growth has been fueled by strong FDI in the manufacturing sector, particularly in electronics, and increased Chinese investment is expected to further reinforce this trend, strengthening Vietnam's role as a critical hub in global supply chains.[5]

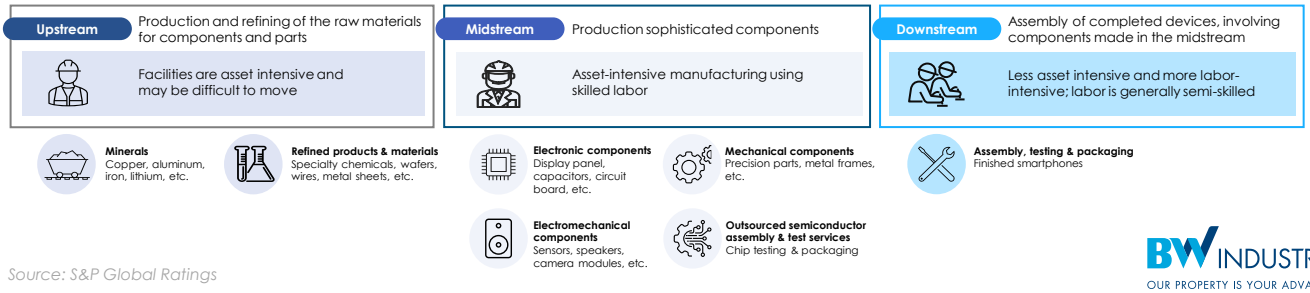
The relocation of midstream electronic suppliers from China to Vietnam is driven by end-users' concerns over geopolitical risks, trade disruptions, and rising costs in China. Midstream production, focused on components and intermediate goods, is more complex and capital-intensive than downstream operations. As global tech companies diversify their supply chains, Vietnam has become an attractive alternative, offering proximity to China alongside a rapidly developing manufacturing ecosystem, a skilled workforce, and an expanding downstream electronics sector (Exhibit 6).

The vulnerabilities of concentrated supply chains were starkly exposed during the COVID-19 pandemic, particularly with the 2022 lockdown in Shanghai, which disrupted final assembly for firms like Apple. While companies like Apple managed the fallout, the event emphasized the importance of diversification to prevent similar crises in the future for tech giants.[6]

Relocating midstream operations represents a key phase in the restructuring of global supply chains. While this shift requires significant capital and strategic planning, it presents an opportunity to create more resilient and efficient production networks. Vietnam, with its expanding industrial ecosystem, access to suppliers, and skilled labor, is well-positioned to attract foreign investment in midstream manufacturing, helping companies mitigate risks while also benefiting from Vietnam's favorable industrial, manufacturing, and regulatory environment.

Vietnam is expected to remain the key destination for FDI, driven by the ongoing global shift in supply chains

Exhibit 7: Role of suppliers in the manufacturing a smartphone



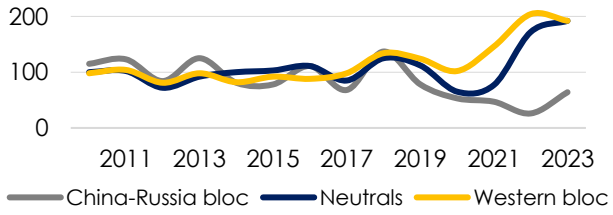
Source: S&P Global Ratings

1.4. Vietnam's neutral political stance, combined with a cost-effective and skillful labor pool, creates a stable business environment that is attractive to FDI

Over the years, Vietnam has skillfully navigated its global relations through a policy of strategic autonomy, known as Bamboo Diplomacy – Be friends with everyone, threaten no one.[7] After the passing of former General Secretary (GS) Nguyen Phu Trong, his successor, GS To Lam, has smoothly transitioned into power and pledged to uphold the same diplomatic approach.

As shifts in global geopolitics influence trade and investment dynamics, countries maintaining a neutral and open stance have demonstrated an ability to attract increased FDI in new factories and projects (Exhibit 8).[8]

Exhibit 8: Greenfield FDI inflows by bloc showing neutrality is proving advantageous



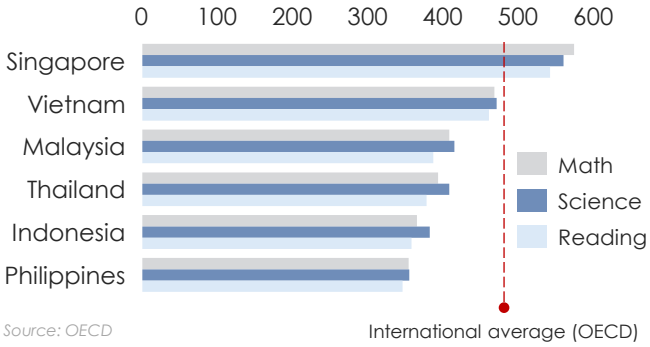
Indexed, 2010-2019 average = 100

Source: UNCTAD, Bloomberg

On the domestic front, GS To Lam is advancing transformative reforms to streamline governance. Plans to reduce the number of Ministries by five reflect a commitment to modernizing the administrative system, reducing bureaucracy, and creating a business environment that is more efficient, transparent, and conducive to investment.

Vietnam, with its dynamic and growing population of over 101 million, is still far from reaching the Lewis Turning Point - where surplus rural labor is fully absorbed into factories, leading to significant wage increases.[9] By 2023, the average monthly wage in Vietnam stood at $331, which is 4.2 times lower than in China and remains competitive compared to $790 in Malaysia and $427 in Thailand.[10]

Exhibit 9: Vietnam ranked 2nd highest PISA score in the region



Source: OECD

Over the past 5 years, Vietnam's labor productivity per hour has grown at an impressive CAGR of 3.6%, almost double the ASEAN's average of 2%.[11] Furthermore, Vietnam boasts the second-highest PISA scores in the region[12] (Exhibit 9) and is increasingly proficient in manufacturing complex products, reflecting its improving workforce capabilities (Exhibit 10 & 11).

These factors collectively position Vietnam as an attractive destination for companies looking to relocate their supply chains to a country with a cost-effective, expanding, and skilled workforce.

Strong leadership, combined with a rapidly improving skillful labor force, continue to position Vietnam as a highly desirable destination for FDI

Exhibit 10: Inside Vinfast's factory in Hai Phong – EV made in Vietnam

Source: ZNews

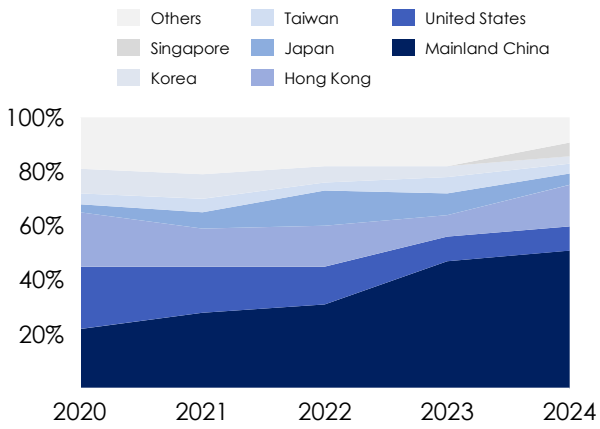
Exhibit 11: Apple's latest product, the carbon-neutral Mac Mini M4, manufactured in Vietnam

Source: VnExpress

2. A Snapshot of BW Industrial's Tenant Base Dynamics

Since establishment in 2018, BW Industrial has grown alongside the transformation of Vietnam's industrial real estate landscape. To date, BW Industrial has signed more than 2 million sqm GLA of manufacturing space to over 400 tenants, supporting businesses expanding their operations in Vietnam.

Exhibit 12: Tenants from the top 7 national FDI investors account for c.90% of RBF leased area



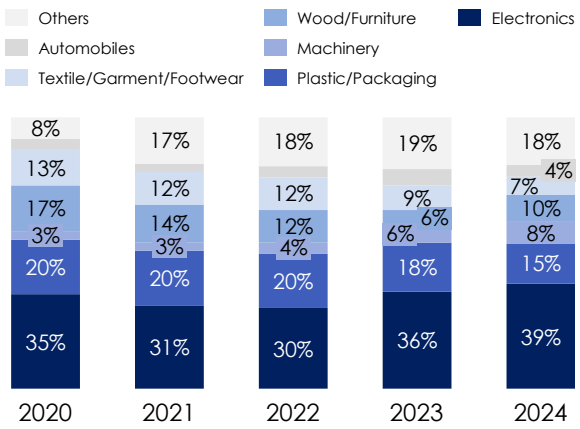
Source: BW Industrial

BW Industrial's tenant base reflects the dynamic growth of this market, with c.90% of total leased area attributed to tenants from the top seven FDI source countries. Recent years have seen increased interest from Chinese tenants, driven by shifts in regional manufacturing strategies (Exhibit 12).

This growing demand is bolstered by Vietnam's strategic geographic proximity to Chinese-speaking regions such as Mainland China, Singapore, Taiwan, and Hong Kong. Strong trade ties and integration into global supply chains further enhance its appeal. Moreover, shared Eastern business practices and cultural values provide a familiar and collaborative environment, making Vietnam an increasingly attractive destination for these tenants.

> **60%** *of BW's accumulated inquiries from 2019 originate from Chinese-speaking regions such as Mainland China, Singapore, Taiwan, and Hong Kong.*

Exhibit 13: Balanced growth across key industries in BW Industrial's tenant base



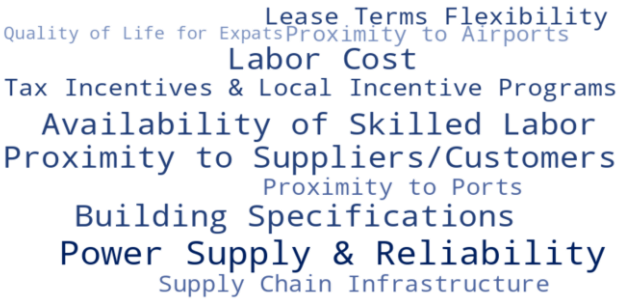
Source: BW Industrial

Across industrial sectors, BW Industrial has observed balanced development, with a slight uptick in advanced industries such as electronics and machinery. At the same time, traditional industries continue to expand their operations in Vietnam, reflecting sustained demand and growth potential (Exhibit 13).

FDI industries have been entering Vietnam in distinct waves, driven by shifting global market dynamics and sector-specific opportunities. For example, the consumer electronics sector saw significant momentum in 2023, setting the stage for household appliance manufacturers who began establishing operations in early 2024. Currently, the furniture industry is making notable advances. These waves illustrate how different industries are strategically timing their market entry, responding to evolving global demand trends, and taking advantage of the rapidly evolving industrial ecosystem in Vietnam.

Although showing balanced growth, tenants have entered Vietnam in waves: consumer electronics in 2023, household appliances in early 2024, and now the furniture sector

Exhibit 14: Key considerations for tenants establishing a presence in Vietnam



Top 5 factors

1. Power supply & reliability
2. Availability of skilled labor
3. Labor cost
4. Proximity to suppliers and customers
5. Tax incentives & local incentive programs

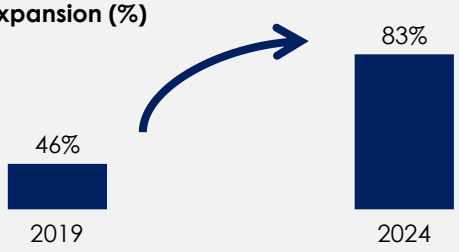
Source: BW Industrial

Overall, tenants from across the globe share many common priorities when establishing new manufacturing operations in Vietnam (Exhibit 14). However, some regional preferences do emerge. For instance, tenants from Greater China region often place a stronger emphasis on cost efficiency, prioritizing lower rental costs and being open to locations slightly further from key infrastructure. Meanwhile, Western tenants typically favor proximity to critical infrastructure, such as ports and airports, even if it involves higher rental expenses. Western tenants are also more inclined to seek facilities with green requirements (e.g., LEED, rooftop solar), while tenants from Greater China tend to be more flexible regarding these fields.

Note: Greater China region including Mainland China, Hong Kong, and Taiwan

Exhibit 15: The step changes in BW Industrial's tenant base reflect the rapid evolution of the RBF market

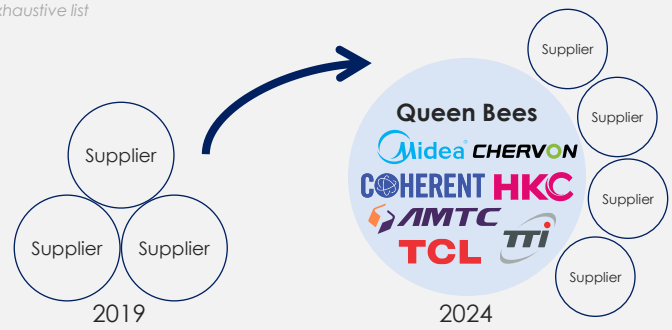
Nearly doubling of manufacturing classifications reflects industry expansion (%)



Compared to the early stages of Vietnam's RBF market in 2018-2019, BW's tenant profile was more concentrated towards electronics and machinery. Today, FDI in manufacturing is widespread across all industries. Currently, BW hosts over 400 tenants spanning over 83% of Vietnam's manufacturing industry classification codes.

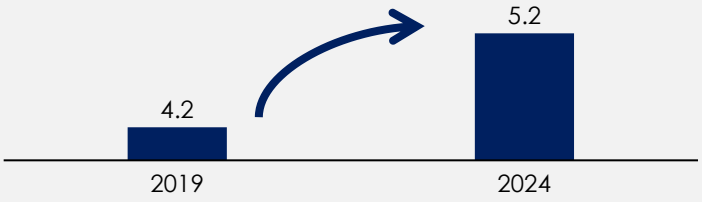
A shift of RBF tenants base – from supply-chains to Queen Bees

Non-exhaustive list



Likewise, in early 2018-2019, most tenants were suppliers within the supply chain. Today, an increasing number of Queen Bees are leasing RBF spaces. The top 10 RBF tenants have leased areas ranging from 34k sqm to 99k sqm, and all of them are Queen Bees.

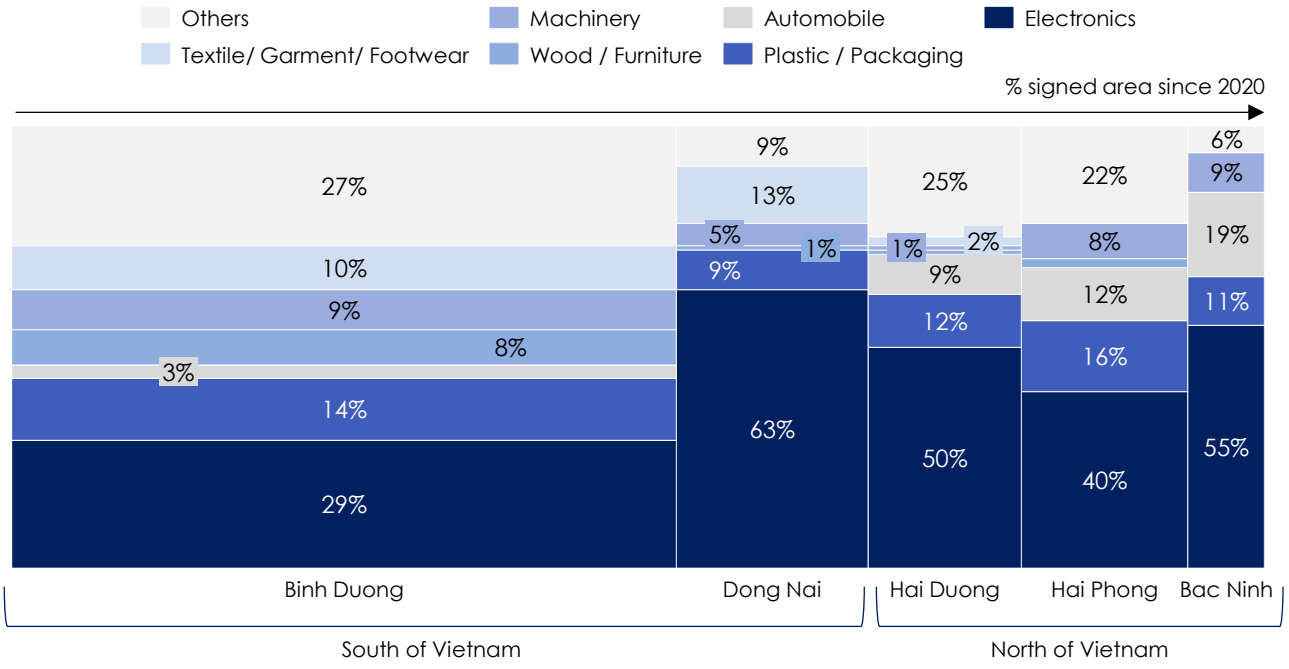
Rising average RBF leased area per tenant reflects industry scaling and tenant evolution (k sqm)



As more Queen Bees lease RBF, the average leased area per tenant at BW has increased by 24%, from 4.2k sqm in 2019 to 5.2k sqm in 2024. Specifically, the average leased area for Greater China tenants is 6.2k sqm.

Source: BW Industrial

Exhibit 16: Electronics lead tenant mix in BW Industrial's key industrial provinces



Source: BW Industrial

Binh Duong, spanning 2,694 square kilometers and ranking third in GDP contribution, was where BW Industrial's journey in Vietnam began. By 2024, it has remained the key focus of BW Industrial's operations, accounting for 51% of signed GLA. The province boasts a dynamic and well-balanced tenant mix within the portfolio. Notably, electronics tenants are concentrated in BW My Phuoc industrial hub, while furniture manufacturers show a preference for BW Bau Bang industrial hub.

Dong Nai, on the other hand, has seen increasing interest from electronics tenants, driven by recent infrastructure advancements and the anticipated completion of Long Thanh International Airport in 2026.

Overall, the Southern region, encompassing Binh Duong, Dong Nai, and Ho Chi Minh City, remains Vietnam's most dynamic economic zone and the pioneering hub for industrial development. With its early start, the South has maintained a significant growth advantage, offering tenants a well-established business ecosystem supported by thriving manufacturing, retail, and e-commerce sectors.

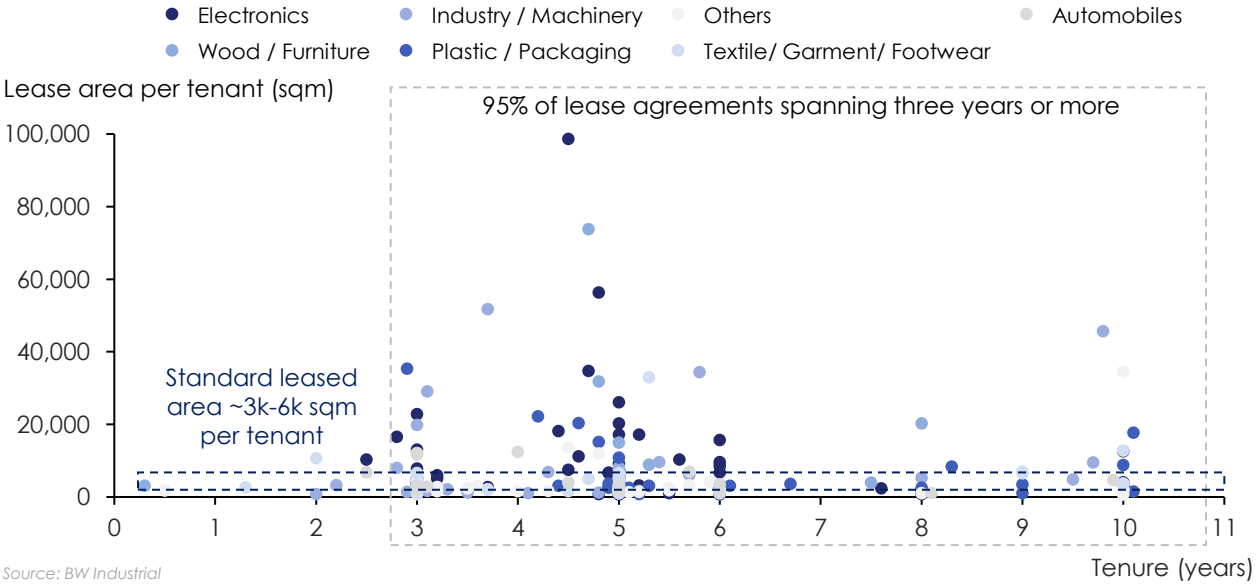
Simultaneously, BW Industrial's clusters in the North also witness strong presence of electronics tenants, driven by substantial investments from leading global technology players such as Samsung, LG, Amkor, Foxconn, etc. The presence of these tech giants has created a magnetic pull, drawing their suppliers and ecosystem partners into the region.

The North's strategic advantages, including its proximity to key export markets and advanced road infrastructure, further enhance its appeal. Anchored by Hanoi, Bac Ninh, Hai Duong, and Hai Phong, the region has undergone significant transformation over the past 5 to 10 years. This development has elevated the North into a sophisticated industrial hub, attracting capital-intensive projects from neighboring countries and beyond.

Additionally, the Northern region is increasingly favored by businesses engaged in high-tech manufacturing and R&D. Its growing network of industrial parks and export processing zones, coupled with favorable government policies and an improving talent pool, solidifies its position as a cornerstone of Vietnam's industrial growth trajectory.

The North and South of Vietnam remain the two spearheads propelling the nation's industrial development forward

Exhibit 17: Tenants typically lease an area between 3-6k sqm, with 95% of lease agreements spanning three years or more



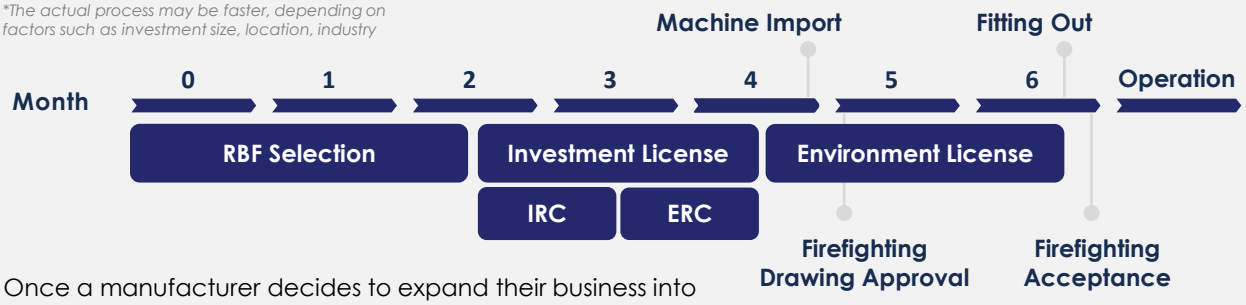
Source: BW Industrial

Despite variations in industries and tenant origins between the North and South, most tenants favor a lease area of 3k-6k sqm, making it the preferred size range for establishing manufacturing operations in Vietnam (Exhibit 17). This size strikes a balance between operational efficiency and cost-effectiveness as it provides sufficient space for production lines, equipment, and storage. The adaptability of this range also suits a wide variety of industries, allowing tenants to optimize workflows.

Tenants leasing over 20,000 sqm are predominantly from the electronics and advanced machinery sectors, accounting for 71% of such leases. Interestingly, 72% of these large leases are concentrated in Southern Vietnam, highlighting the region's strategic importance. These tenants typically invest in large-scale operations to capitalize on the advantages of their own established ecosystems, enabling efficiency and scalability in their supply chains.

Exhibit 18: Streamlined processes for setting up manufacturing operations in Vietnam

**The actual process may be faster, depending on factors such as investment size, location, industry*



Once a manufacturer decides to expand their business into Vietnam by leasing an RBF, they can expect a standard timeline of 7 months since inception till finalizing all requirements and officially start operation.

However, this process can be sped up depending on their industries and provinces' policy. In example, large electronics tenants in BW Nhon Trach cluster have gotten their IRC after just 10 days.

COHERENT

10 days from submission date to IRC obtain date

AMTC

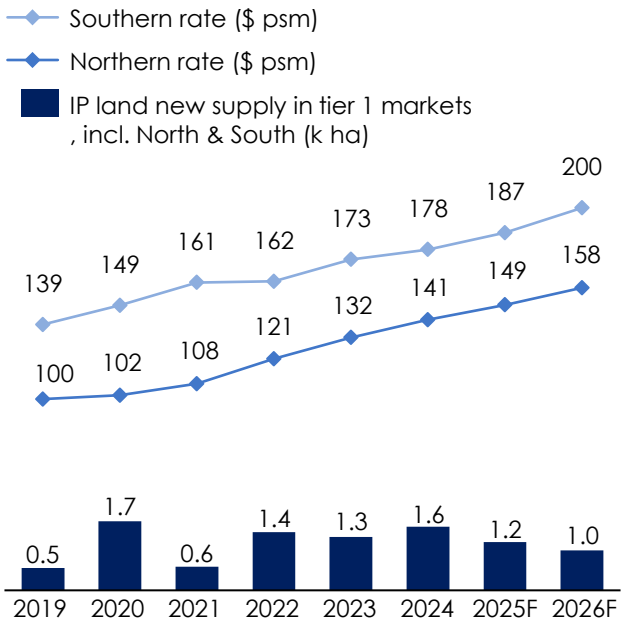
10 days from submission date to IRC obtain date

Source: BW Industrial

3. Future Trends of RBF Market in Vietnam

3.1. The arising of multi-story facilities

Exhibit 19: Increasing land rental rates driven by industrial land scarcity are expected to promote multi-story facilities



Tier 1 markets include HCM, Dong Nai, Binh Duong, and Long An for the South and Hanoi, Bac Ninh, Hai Phong, Hung Yen, and Hai Duong for the North

Source: CBRE

Land scarcity near city fringes and urban centers continues to pose significant challenges for industrial development in Vietnam. Rapid urbanization and residential expansion have substantially reduced the availability of industrial land, driving costs up by 41% in the North and over 28% in the South since 2019 (Exhibit 19). These constraints force both developers and tenants to adapt, balancing location preferences with rising costs and limited space.[13]

Vietnam's situation parallels challenges faced by developed industrial hubs such as China, Japan, Singapore etc., where vertical integration and clustering have proven effective in addressing land scarcity and improving operational efficiency. Vertical integration, particularly in the form of multi-story factories, maximizes land use by consolidating production processes. Industrial clustering has proven to creates synergies that improve supply chain efficiency and reduce transportation costs.

In Vietnam, the concept of multi-story factories was first introduced in 2015 with the Tan Thuan Export Processing Zone in HCMC, marking a key milestone in addressing land constraints. Today, forward-thinking developers are leading the charge by introducing modern multi-story factory solutions, equipped with advanced features such as lifts and ramps to enhance functionality. These innovations allow tenants to optimize operations in high-demand areas while addressing the constraints of limited land supply. By unlocking additional leasable space in urban-adjacent locations, these facilities offer a viable alternative for businesses that value both accessibility and efficiency.

As Vietnam strengthens its position as a global manufacturing hub, the broader adoption of multi-story factories and strategic industrial clustering will play an increasingly vital role. These approaches not only mitigate land constraints but also position tenants to enhance efficiency and remain competitive in an evolving industrial landscape.

By end of 2026, BW Industrial estimates that RBF multi-story facilities can reach >2 million GFA in Vietnam

Exhibit 20: BW Nhon Trach 1 – a pioneering double-story RBF facility in Vietnam

Source: BW Industrial

Pingshan New Energy Automobile Industrial Park – a case study on multi-story RBF in China, showcasing its leadership in implementing advanced industrial solutions

China stands at the forefront of multi-story factory development, exemplified by a state-of-the-art industrial complex located in Shenzhen's e-vehicle park. Spanning two phases, the first phase occupies a land area of approximately 108k sqm, delivering 321k sqm of industrial space. The highlight of this project is a 17-story building reaching a height of 90 meters. Each floor is meticulously designed to cater to diverse industrial needs, with the ground floor featuring a height of 8 meters and a load capacity of 2.5 tons per sqm, while standard floors offer a height of 6 meters and a load capacity of 650 kilograms per sqm.

The second phase is set to expand the complex with an additional 257k square meters of industrial space on a 66k sqm site, including a building that will rise to 152 meters. This project, China's first prefabricated high-rise factory, is tailored to support clean energy vehicle research and development, production, and auxiliary processes under one roof. It incorporates features such as vibration-proofing, wide corridors, and industrial elevators to ensure seamless operations across levels.

By designing the first three floors with increased height and load capacity, the facility accommodates upstream functions such as manufacturing, testing, and packaging. This vertical integration not only addresses land scarcity by maximizing space utilization but also fosters operational synergy by housing supply chain-integrated firms in close proximity. Major companies, including automaker BYD and lithium-ion battery chemical manufacturer Capchem, have already committed to leasing space, reflecting the growing appeal of such advanced facilities. High-rise factories are now considered as a transformative solution, enabling high-density industrial operations in urban tech hubs like Shenzhen.

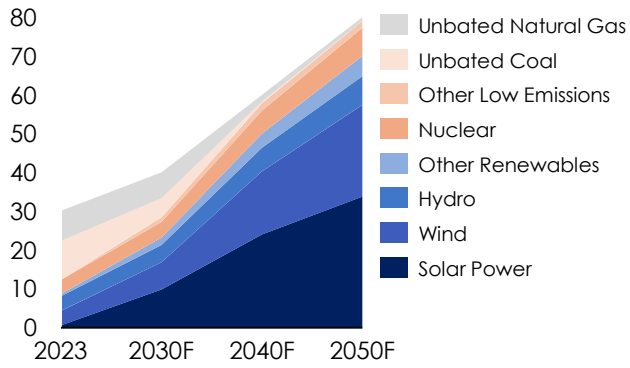
Source: Press release, BW Industrial

3.2. The transition into green & sustainable development, with rooftop solar is the key initiative

Sustainable development has become a global priority as nations collectively aim to combat climate change, reduce environmental degradation, and build a better future for generations to come. COP26, the key milestone of Vietnam on a global stage by pledging to achieve net-zero emissions by 2050, demonstrated strong commitment to global green and sustainable development. Since then, the green transition within Vietnam has started to accelerate.

As industrial zones are responsible for a significant share of global carbon footprint – estimated to contribute over 25% of the total emissions – they play a pivotal role in achieving this ambitious target.[14] Their transformation into greener, more sustainable ecosystems will not only align with national priorities but also enhance Vietnam's competitive edge in attracting eco-conscious investors and tenants (Exhibit 21)

Exhibit 21: Solar power is set to become a key pillar of global electricity supply by 2050 (in k TWh – NZE case)



Other renewables: bioenergy, geothermal, concentrating solar power and marine; other low-emissions: fossil fuels with CCUS, hydrogen & ammonia

Source: International Energy Agency (IEA)

All companies will inevitably face the challenges of climate change, and how they prepare for a warmer or greener world will influence their ability to adapt and remain competitive.[15] In response to this global shift, industrial parks and sub-developers like us have actively integrated sustainable development principles into operations. BW Industrial's approach focuses on comprehensive solutions to reduce environmental impact while maintaining operational efficiency, including implementing greener energy solutions and enhancing wastewater treatment systems.[16]

Rooftop solar stands out as a key initiative in aligning RBF development with global sustainability trends. Leveraging Vietnam's strong solar potential, rooftop solar energy enables tenants to access clean energy directly at their facilities, supporting emissions reduction efforts and advancing their sustainability objectives.

From the tenants' perspective, solar energy offers significant benefits, providing an opportunity to actively participate in Vietnam's green transition. By utilizing rooftop solar power, tenants can reduce their operational carbon footprint, access cost-effective clean energy, and align with global sustainability standards. This not only enhances their corporate social responsibility profile but also strengthens their competitive edge in increasingly eco-conscious markets.

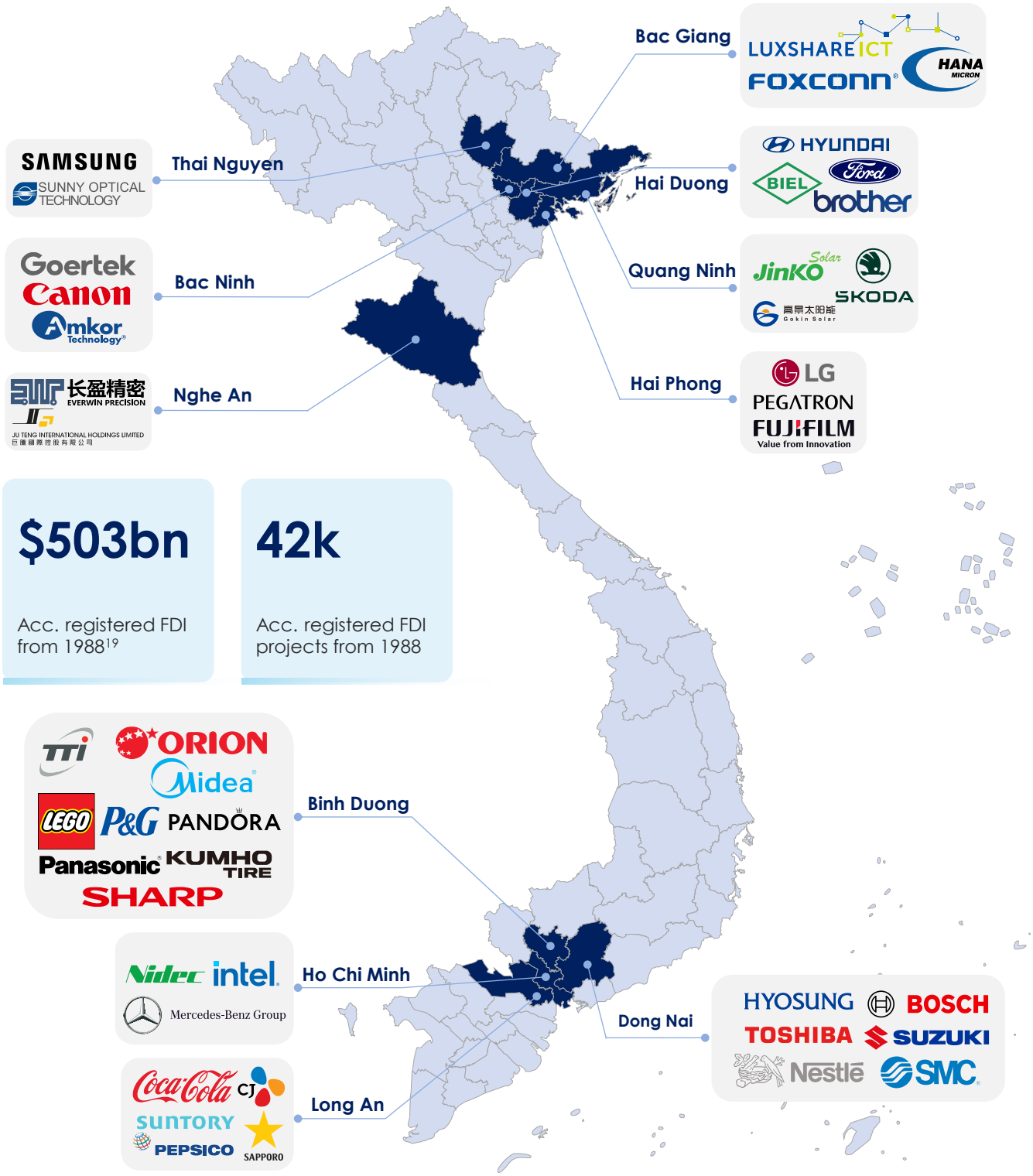
By 2023, Vietnam's solar electricity capacity reached 16.6 GW.[17] According to Electricity VIII, Vietnam aims to achieve 189 GW of solar power by 2050, representing 38.5% of the national capacity[18]. This ambitious target highlights significant opportunities for solar energy development, including rooftop solar, as a key contributor to Vietnam's renewable energy transition

Vietnam's Solar Energy Landscape: Regulatory Clarity Key to Future Growth

The solar energy landscape in Vietnam holds significant potential but remains constrained by regulatory challenges. While Decision 500 sets a national plan for 2,600 MW of self-production and self-use solar power by 2030, Decree 80 on direct power purchase agreements (DPPA) is not yet workable due to uncertainties surrounding grid connection requirements, licensing, and fees. Additionally, Decree 135, which restricts self-production and self-use of solar energy from being sold to third parties, limits its feasibility for industrial developers. Many are navigating this by adopting alternative agreements, though these approaches carry regulatory risks. Encouragingly, stakeholders anticipate that clearer and more detailed regulations will emerge by mid-2025, helping to unlock Vietnam's vast solar energy potential and driving sustainable industrial development.

Queen Bees Map across Vietnam

Non-exhaustive list



Note: A "queen bee" refers to a large, high-profile investor, who will create a strong draw for other businesses, particularly suppliers, distributors, and service providers, forming a thriving ecosystem around the "queen bee".

Source: Press release, MPI by Dec-24

BW Industrial – Vietnam's leading for-rent logistics & industrial developer

An alliance that combines global expertise and local insight

WARBURG PINCUS

1966 Establish

21 Private Equity Funds

40+ Countries

$116bn+ Invested

BECMEX

1976 Establish

10+ World-class IPs

Fortune 500 Business Partners & Clients

ESR

$154bn+ Total AUM

$80bn+ Fee-related AUM

2,000+ People

28 Countries

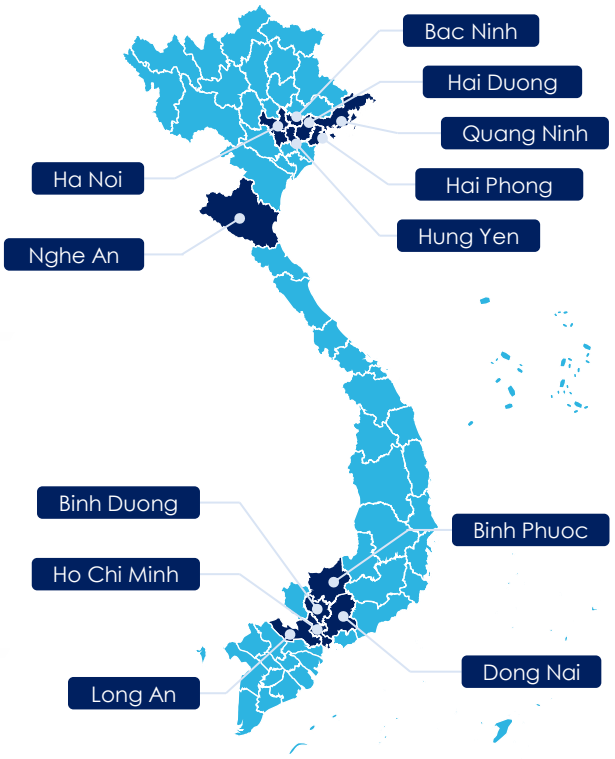
Largest and fastest growing logistics and industrial for-rent platform

1,008 ha
Land bank

59
Projects

400+
Tenants

12
Key provinces



Hotline: (+84) 28 710 29 000
Email: leasing@bwidjsc.com

BW INDUSTRIAL
OUR PROPERTY IS YOUR ADVANTAGE

Endnotes

1. https://www.jll.com.au/en/trends-and-insights/research/transforming-vietnam-s-logistic-and-industrial-market-landscape
2. https://www.mpi.gov.vn/portal/Pages/solieudautunuocngoai.aspx
3. https://www.fdiintelligence.com/content/feature/china-shifts-to-capital-exports-83834
4. https://www.gso.gov.vn/bao-cao-tinh-hinh-kinh-te-xa-hoi-hang-thang/
5. https://www.mckinsey.com/mgi/our-research/geopolitics-and-the-geometry-of-global-trade
6. https://www.spglobal.com/ratings/en/research/articles/240902-the-shifting-of-china-tech-supply-chains-the-hard-part-starts-13193217
7. https://cdn.dragoncapital.com/media/2024/09/26092625/Investment-Case-Whitepaper_DragonCapital_0924.pdf
8. https://www.bloomberg.com/graphics/2024-global-trading-blocs/
9. https://www.undp.org/vietnam/blog/core-principles-growth-still-apply
10. https://www.ceicdata.com/en/indicator/vietnam/monthly-earnings
11. https://rshiny.ilo.org/dataexplorer29/?lang=en&id=GDP_2HRW_NOC_NB_A
12. https://www.oecd.org/en/data/datasets/pisa-2022-database.html
13. https://www.cbrevietnam.com/press-releases/cbre-and-bw-joinly-release-a-report-on-the-emergence-of-multi-storey-facilities-in-vietnam
14. https://www.iea.org/reports/net-zero-by-2050
15. https://www.weforum.org/publications/the-cost-of-inaction-a-ceo-guide-to-navigating-climate-risk/
16. https://www.joneslanglasalle.com.vn/en/trends-and-insights/research/accelerating-the-green-transition-in-vietnams-industrial-sector
17. https://vneconomy.vn/go-diem-nghen-phat-trien-dien-mat-troi-mai-nha.htm
18. https://vepg.vn/wp-content/uploads/2023/05/PDP8_full-with-annexes_EN.pdf
19. https://www.mpi.gov.vn/portal/pages/solieudtnnchitiet.aspx?nam=2024&thang=12&phanloai=1

Disclaimer

For inquiries regarding the report, please contact BW Industrial Investment Team at investment@bwidjsc.com

This document has been prepared by BW Industrial for informational purposes only and is intended for general circulation. The content within this document does not constitute investment advice, financial advice, legal advice, or any other form of professional counsel, nor does it constitute an offer or solicitation to buy, sell, or hold any investments.

The information and opinions expressed herein are based on sources believed to be reliable as of the date of publication. However, BW Industrial makes no representation or warranty, express or implied, as to the accuracy, completeness, or timeliness of the information provided. The content is subject to change without prior notice, and BW Industrial shall not be liable for any loss or damage arising from reliance on this document or any of its content.

Any forward-looking statements contained within this document are based on current assumptions and expectations and are inherently subject to risks, uncertainties, and changes in market conditions.

The distribution of this document may be restricted by law in certain jurisdictions, and recipients are responsible for ensuring compliance with applicable regulations.