

JTC ANNUAL REPORT FY2023



BUILDING INDUSTRIES

Contents

| | |
|-----------------------------------|-----------|
| Message From Chairman and CEO | 02 |
| Board Members | 04 |
| Senior Management | 06 |
| Financial Year 2023 Highlights | 10 |
| CHAPTER 1: | |
| BUILDING UP OUR INDUSTRIES | 13 |
| CHAPTER 2: | |
| REALISING GREEN POTENTIALS | 18 |
| CHAPTER 3: | |
| INNOVATING FOR PROGRESS | 22 |
| CHAPTER 4: | |
| ROAD MAP TO THE WORLD | 26 |
| CHAPTER 5: | |
| THE PEOPLE BUILDER | 30 |
| Stories From Our Spaces | 33 |
| Financial Highlights and Review | 37 |

Right: Seletar Aerospace Park is a favourite spot for cyclists.



Message From Chairman and CEO

In the coming months, Punggol Digital District (or PDD in short) will near completion. PDD, heralded as Singapore's first smart and sustainable business park district within the broader smart Punggol New Town, stands as JTC's single largest project in the last 10 years. It represents a showcase of how JTC has propelled integrated industrial development forward in shaping Singapore's industrial future. Seamlessly integrating different elements within the overall ecosystem, such as the Singapore Institute of Technology, retail and commercial businesses, business park tenants, and convenient social amenities such as childcare and community activities, PDD sets the benchmark for next-generation estates that JTC is conceptualising and constructing for the future.

Even as JTC propels Singapore's industrial future forward, the global economy has never faced more challenging times. Inflation and elevated interest rates post-COVID-19 have led to sustained increases in pricing. Additionally, the ongoing global polarisation and fragmentation caused by various global conflicts, along with an uncertain economic environment brought about by protectionism, have created significant instability for businesses and countries alike.

However, we have also witnessed sustained optimism in the industrial sector. Technology and connectivity, advancing at an unprecedented pace with artificial intelligence at the forefront, have now made access to information and opportunities more accessible than ever for businesses. The challenge for JTC is to respond actively and responsively to these developments in a timely manner, as we endeavour to remain relevant and up to date in providing ready access to the land and infrastructure that forms Singapore's industrial development.

Tan Chong Meng

Chairman
JTC Corporation



Tan Boon Khai

Chief Executive Officer
JTC Corporation



Underpinning the above is JTC's commitment that in everything we do today and tomorrow, just as we have done in the past, the pillars of ESG, in particular environmental sustainability, remains at the heart of our efforts. We are dedicated to ensuring that future industrial infrastructure and buildings are integrated, well-designed and environmentally friendly, while also minimising our carbon footprint. Accomplishing this with the best people and talent, and establishing a robust governance framework to cater to all our stakeholders, is JTC's pledge to forging a more robust and equitable future for the next generation.

Through this Annual Report, we hope you will gain a deeper understanding of what we do at JTC and how our work impacts businesses and lives as part of Singapore's economic agenda. From building the next-generation industrial developments at Jurong Innovation District, to awarding a tender for the largest solar deployment, launching the first localised Singapore Building Carbon Calculator, to preserving and repurposing mature industrial buildings, our work is multifaceted, technologically diverse, and enriching. Whether in planning, development, operations, or business, you will witness a fusion of creativity, innovation, and governance, all made possible by our dedicated people, partners, and stakeholders. It is deeply meaningful to us that our achievements reflect a collaborative effort encompassing the government and Singapore as a whole, working towards the betterment of everyone within the industrial ecosystem and the advancement of Singapore's industrial sector.

May we present to you JTC's Annual Report for FY2023.

Thank you.



Tan Chong Meng
Chairman, JTC Corporation



Tan Boon Khai
Chief Executive Officer, JTC Corporation

Board Members

As at 31 July 2024



Tan Chong Meng

Chairman
JTC Corporation



Tan Boon Khai

Chief Executive Officer
JTC Corporation



**Muthukrishnan
Ramaswami**

Group Chief Executive Officer
GXS Bank



Jill Lee

Non-executive Director
Schneider Electric SE,
PSA International,
65 Equity Partners



Tan Chin Hwee

Chairman
Singapore Trade Data Exchange Services
Chairman
Energy Supply Resilience Advisory Panel,
Energy Market Authority



Mok Wei Wei

Managing Director
W Architects



John Lim

Deputy Secretary
(Opportunity & Resilience),
Ministry of Social & Family
Development



Goh Swee Chen

Chairman
Nanyang Technological University
Board of Trustees



Judy Lee

Managing Director
Dragonfly LLC
Chief Executive Officer
Dragonfly Capital Ventures LLC



Wee Siew Kim

Group Chief Executive Officer
Nipsea Group
Co-President
Nippon Paint Holdings
Chairman
Jurong Port



Bernard Menon

Director
U PME,
National Trades Union Congress



Rachel Eng

Managing Director
Eng & Co. LLC



Keith Tan

Deputy Secretary (Industry)
Ministry of Trade & Industry



Andrew Kwan

Group Managing Director
Commonwealth Capital Group



**VADM Aaron Beng
Yao Cheng**

Chief of Defence Force
Ministry of Defence

JTC Board Committees

Audit & Risk Committee (ARC)

Chairman:

Jill Lee

Members:

Muthukrishnan Ramaswami

Judy Lee

VADM Aaron Beng Yao Cheng

The ARC assists the Board in fulfilling its oversight responsibilities, particularly in relation to financial reporting, overseeing the internal and independent auditors, compliance with legal and regulatory requirements, risk management, and the system of internal controls of the Corporation.

Development Committee (DC)

Chairman:

Tan Chong Meng

Members:

Tan Boon Khai

Keith Tan

Bernard Menon

Chee Wan Chin (GCFO)*

The DC assists the Board in providing oversight and direction, including approvals on expenditures and development works of the Corporation.

Digital Technology Committee (DTC)

Chairman:

Muthukrishnan Ramaswami

Members:

Tan Boon Khai

John Lim

Goh Swee Chen

Andrew Kwan

The DTC provides strategic oversight and guidance for the Corporation's Digital Technology initiatives, particularly in the areas of Digitisation and Digitalisation, transforming customer experience, cybersecurity, and ensure the Corporation leverages on technology to become a datadriven and digital organisation.

Finance & Investment Committee (FIC)

Chairman:

Tan Chin Hwee

Members:

Tan Boon Khai

Keith Tan

Rachel Eng

Teo Jwee Liang*

Adrian Chua*

The FIC assists the Board in providing strategic guidance and oversight to the Corporation in key finance and investment-related matters to drive financial discipline and ensure the financial sustainability of the Corporation in the long run.

Human Resources Committee (HRC)

Chairman:

Tan Chong Meng

Members:

Tan Boon Khai

Mok Wei Wei

Goh Swee Chen

The HRC provides overarching oversight and guidance to the Corporation's management on key human resource issues within the Corporation to ensure that the Corporation continues to provide a strong and conducive environment for all its officers and remains a highperforming organisation in Singapore.

Senior Management

As at 31 July 2024

**Tan Boon Khai**

Chief Executive Officer
Corporate, Policy & Planning

**David Tan**

Assistant Chief Executive Officer
Development
Group Director
Contracts & Procurement

**Christine Wong**

Assistant Chief Executive Officer
Enterprise Cluster, Industry Cluster

**Calvin Chung**

Assistant Chief Executive Officer
Engineering & Operations

**Lim Soon Chia**

Chief Digital Officer
Digital Technology

**Chee Wan Chin**

Group Chief Financial Officer
Finance

**Finn Tay**

Group Director
Engineering

**Leong Hong Yew**

Group Director
Enterprise Cluster
Director
Industrial Estates

**Mark Koh**

Group Director
Facilities & Estates Management

**Kok Poh June**

Group Director
Facilities & Estates Management

**Leow Thiam Seng**

Group Director
Industry Cluster
Director
Cluster Solutions

**Vivien Tan**

Group Director
Industry Cluster

**Jan Seow**

Group Director
Land Planning & Redevelopment

**Nelson Liew**

Group Director
New Estates
Director
New Estates 1

**Yvonne Lim**

Group Director
Policy & Research

**Wong Wei Loong**

Group Director
Project Management

Senior Management (Cont.)

As at 31 July 2024

CEO'S OFFICE

Lim Lek Lim

Director
Billing & Reporting

Caroline Wong

Director
Communications

Lee Chuay Noi

Director
Human Resources

Tan Chin Huat

Director
Treasury & Payments

CORPORATE, POLICY & PLANNING

Goh Thong

Director
Audit & Advisory

Wee Pei Yean

Director
Corporate Planning

Md Hafiz Bin Sayuti

General Counsel
Legal Services

Stanley Tan

Director
JTC Academy

Eng Xing You

Director
Policy & Research

Mae Tan

Acting Director
Valuation

DEVELOPMENT

Elaine Lee

Director
Contracts & Procurement
(Construction)

Dawn Chiang

Director
Contracts & Procurement
(Corporate)

Agnes Chew

Director
Land Planning

Kelvin Wang

Director
Land Redevelopment

Gina Foo

Director
New Estates 2

Yap Eai-Sy

Director
New Estates Business Development
& Marketing

Tang Hsiao Ling

Director
Urban Planning & Architecture

James Tan

Director
Smart District

Senior Management (Cont.)

As at 31 July 2024

DIGITAL TECHNOLOGY

Goh Chye Kiang

Director
Applications Development

Stanley Tan

Director
Centre for Information Management

Andy Yeo

Chief Information Security Officer
Cybersecurity

Benjamin Chan

Director
Data Science

Alan Siow

Director
Digital Infrastructure & Operations

ENGINEERING & OPERATIONS

Kenny Lim

Director
Building Projects

Ng Eng Sin

Director
Facilities Engineering & Systems

Jason Foo

Director
Facilities Planning & Enforcement

Chan Chee Choong

Director
Facilities & Estates Management (Central)

Yap Chung Lee

Director
Facilities & Estates Management (East)

Hubert Tan

Director
Facilities & Estates Management (West)

Derrick Ong

Director
Facilities & Estates Management (Public)

John Kiong

Director
Future of Building & Infrastructure

Brian Koh

Director
Infrastructure Projects

Tan Mei Ling

Director
Public Projects

Chua Leong Yew

Director
Reclamation
Director
Workplace Safety & Construction Quality

Tan Su Chern

Director
Technical Services

David Lim

Director
Security

Senior Management (Cont.)

As at 31 July 2024

ENTERPRISE CLUSTER

Tang Li Fun

Director

Industrial Properties Management 1

Gillian Phua

Director

Industrial Properties Management 2

INDUSTRY CLUSTER

Lim AiTing

Director

Aerospace & Marine

Cheong Wee Lee

Director

Biomedical & Electronics

Lim Junwei

Director

Construction & Materials

Cindy Koh

Director

Energy & Chemicals

Eugene Lim

Director

Food & Lifestyle

Yap Eai-Sy

Director

Info-Comm Media & Startup

Anil Das

Director

Logistics & Land Transport

Cheang Tick Kei

Director

Precision Engineering & Urban Solutions

Jurong Island is a testbed for several sustainability initiatives.



FINANCIAL YEAR 2023 HIGHLIGHTS

ALLOCATION OF JTC INDUSTRIAL LAND
AND READY-BUILT FACILITIES

one-north is
Singapore's
vibrant research
and business hub,
fostering innovation
and collaboration
in a dynamic
environment.

LAND AREA (HA)

195.6

NUMBER OF COMPANIES

97

Figures for industrial land exclude land that is tendered out as part of the Industrial Government Land Sales (IGLS) programme.

Numbers may not add up due to rounding.

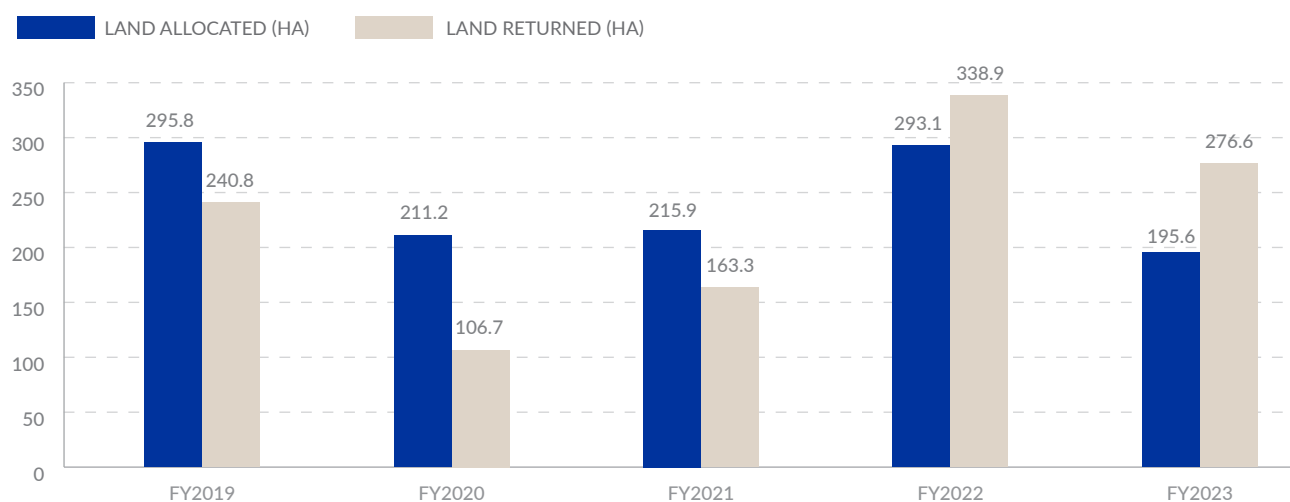
MANUFACTURING

4.3%
Electronics2.0%
Precision
Engineering11.3%
Chemicals3.9%
Biomedical
Manufacturing13.0%
Transport
Engineering5.2%
General
Manufacturing

MANUFACTURING-RELATED & SUPPORTING

0.5%
Information &
Communication2.0%
Professional
Scientific &
Technical Activities8.9%
Transportation &
Storage16.7%
Real Estate/
Financial Activities/
Holding Companies15.0%
Construction17.3%
Other Services

ALLOCATION AND RETURNS FOR JTC'S PREPARED INDUSTRIAL LAND (HA), FY2019-FY2023



Allocation of JTC's Ready-Built Facilities

READY-BUILT
FACILITIES ('000SQM)

355.1

NUMBER OF COMPANIES

579

Numbers may not add up due to rounding.

MANUFACTURING



0.5%
Electronics



7.3%
Precision
Engineering



4.5%
Chemicals



1.0%
Biomedical
Manufacturing



3.5%
Transport
Engineering



11.9%
General
Manufacturing

MANUFACTURING-RELATED & SUPPORTING



1.6%
Information &
Communication



6.3%
Professional
Scientific &
Technical Activities



4.0%
Transportation &
Storage



0.6%
Water Supply
Sewerage & Waste
Management



1.1%
Real Estate/
Financial Activities/
Holding Companies

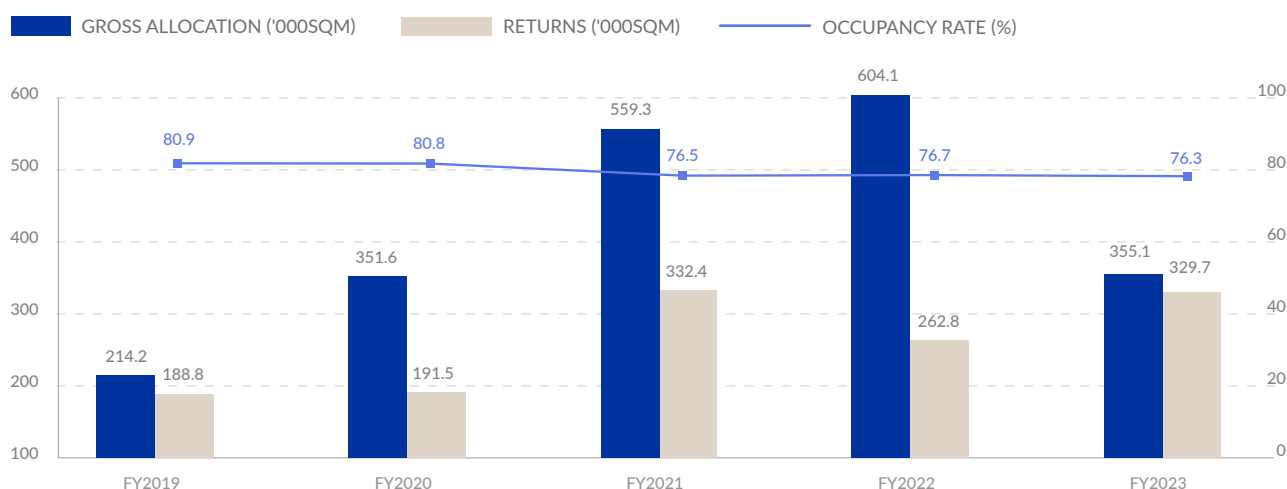


15.8%
Construction



42.0%
Other Services

ALLOCATION, RETURNS AND OCCUPANCY RATE FOR JTC'S READY-BUILT FACILITIES ('000 SQM), FY2019-FY2023



Source for Occupancy Rate: J-Space

CHAPTER 1

BUILDING UP OUR INDUSTRIES



Green pockets
abound in some of
JTC's business parks.

Leveraging our network and expertise to enrich industrial ecosystems

More than an industrial developer, JTC is a partner of growth. Apart from building infrastructure for optimised operations, we also strive to create vibrant ecosystems for collective progress.

Through signature events, we bring like minds together behind common goals. The Punggol Digital District (PDD): Connecting Smartness 2023 was a showcase of an ecosystem expanded through forging and strengthening partnerships old and new. At the event, UOB announced that it will build a new global technology and innovation centre in the smart and sustainable district. Besides housing players in sectors such as Artificial Intelligence, Fintech, and cybersecurity, PDD will also serve as the crucible of industry-academia collaboration when the Singapore Institute of Technology moves into its new campus within the estate.

Innovation is undoubtedly a vital force multiplier in Singapore's industrial story. To foster ecosystems primed for innovation, JTC supported the Singapore Week of Innovation and Technology (SWITCH) 2023 by organising and hosting the first-ever expanded SWITCH @ one-north session. Featuring an experiential innovation showcase, tours of innovation labs, and hosting over 80 startups and more than 1,800 attendees from 20 countries, the event presented valuable networking and collaboration opportunities.

SWITCH @ one-north featured activities ranging from founder-focused panel discussions to tours of innovation labs within the business park.



Cultivating Collective Engagement

To guide innovations through real-world insights, JTC held the first [Jurong Innovation District \(JID\) Day](#). Officiated by the Minister for Trade & Industry, Mr Gan Kim Yong, the event brought some 300 industry leaders, innovators and entrepreneurs together for discussions surrounding the future of advanced manufacturing. The event was also a showcase of JID's role in Singapore's innovation-led growth, with partners within the district—such as A*STAR's Singapore Institute of Manufacturing Technology (SIMTech), National Metrology Centre, and Workforce Singapore—on hand to share their learnings and progress with the participants.

Did you know?

The establishment and maintenance of precise measurement standards are crucial in the manufacturing industry. Situated in JTC CleanTech Three @ JID, the National Metrology Centre is committed to the advancement of measurement science, ensuring the establishment and upkeep of the highest level of accuracy in measurement standards in Singapore.

JID also played host to the inaugural Future of Mobility X—Change event, held in partnership with ABB and Hyundai Motor Group. Mobility players, startups, and regulators turned up to hear from industry heavyweights about mobility trends for smart cities and Singapore's electrification progress. Students from various Institutes of Higher Learning participated in a case challenge and presented novel ideas that answered problem statements by ABB and Hyundai Motor Group.



Attendees of Jurong Innovation District Day also went on curated tours to various developments and facilities within the advanced manufacturing hub.

The past financial year also saw us organising the Jurong Island Networking Night—our first industry networking event after the lifting of COVID-19 restrictions. Over 200 representatives from energy and chemicals companies and trade associations congregated for an evening that spotlighted sustainability drives such as the Jurong Island Circular Economy study and innovation calls on renewable energy and resource reuse. Central to the island's transformation into a sustainable energy and chemicals park, these collaborative initiatives leverage Jurong Island's infrastructure, and the synergistic strength of the community—a demonstration of how we can enrich our estates in more ways than one.

Another of one of our sectoral goals is the enablement of more aviation and aerospace companies to join the ranks of over 70 companies operating at Seletar Aerospace Park (SAP). Singapore's aerospace sector will be supported by JTC aeroSpace Four (AS4), the latest addition to SAP. Planned for completion by 2027, AS4 will add some 11,000sqm of space, and a 25% increase of standard factory units.

The announcement was one of several at Singapore Airshow 2024, where we continued to highlight SAP's ecosystem of aerospace players. The week-long event attracted a record-breaking turnout of over 60,000 trade attendees, gathering to network and discuss collaboration opportunities. Beyond trade attendees, Airshow 2024 also welcomed interested members of the public—from aviation enthusiasts seeking new discoveries to multi-generational families on weekend outings.



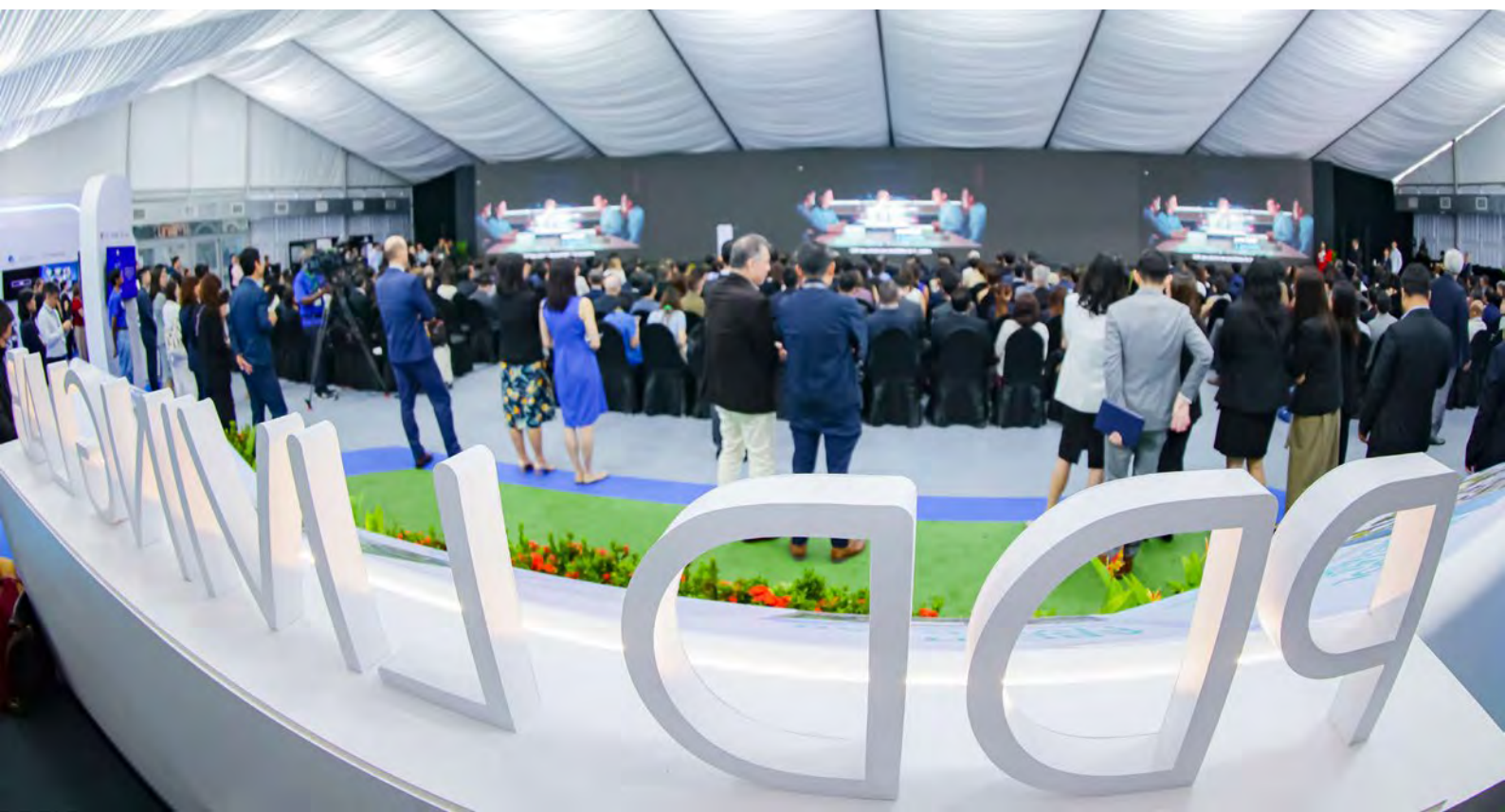
From top: The power of ecosystems were on display during Jurong Island Networking Night and Airshow 2024 (bottom).

Sharing Our Vision at Home and Across Borders

JTC's holistic approach to estate development also extends to making them more accessible to all. At the Wessex enclave within one-north, the Rail Corridor trail is given a new vibrancy through The Everyday Museum. Spearheaded by the Singapore Art Museum, the public art installations by local artists Sookoon Ang, Hilmi Johandi, and Tan Pin Pin celebrate and deliberate over the evolving uses of the 24km track, from colonial railway to wildlife corridor and recreational trail, and invite the public to add their own perspectives.

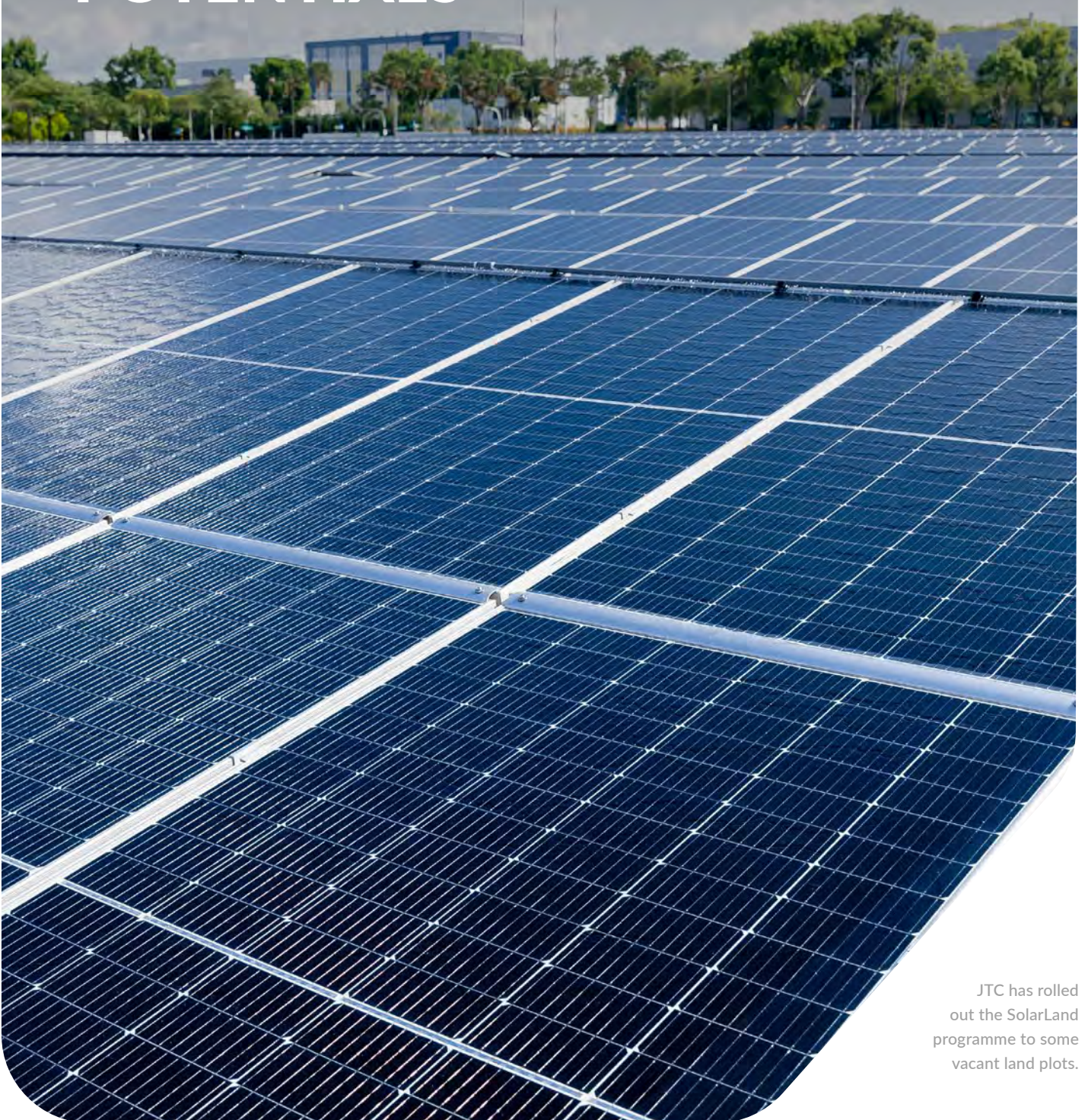
To share our vision of industrial estates and blueprint for sustainability with stakeholders from beyond our shores, we also participated in various international events. JTC—alongside GovTech Singapore and ST Engineering—took part in the 2023 Smart City Expo World Congress 2023 in Barcelona. Apart from a showcase of Singapore's plans for the future, this was also an opportunity to gather with business partners and discuss ideas on designing smarter and more sustainable infrastructure. And at the World Architecture Festival 2023, PDD was bestowed the Smart Cities award—a nod to JTC's efforts in creating smarter and more sustainable industrial estates.

The Punggol Digital District: Connecting Smartness event continued to showcase the role of the district in Singapore's Smart Nation endeavours.



CHAPTER 2

REALISING GREEN POTENTIALS



JTC has rolled out the SolarLand programme to some vacant land plots.

Powering sustainability at different levels with greener estates

From harvesting renewable energy for the national grid, to catalysing the development of green solutions within industries, to adopting eco-friendly infrastructure and green building designs, sustainability is in our DNA.

As key industrial developer, our efforts in sustainability and environmental stewardship support the goals of businesses and Singapore.

SolarRoof, which incentivises the installation of solar panels for businesses, entered a new phase of development. Through a partnership with Sembcorp Industries and ENGIE Southeast Asia, the programme has expanded to facilitate solar deployment on landed terrace workshops with small rooftop spaces.

Maximising the potential of interim vacant plots, JTC awarded Sembcorp Solar Singapore the tender for—[a landmark solar deployment on Jurong Island](#). The largest in scale by far on the energy and chemicals hub, this milestone move will cover 60ha of interim vacant land, alongside the rooftops of five JTC buildings, including the Jurong Rock Caverns' above-ground facilities and Jurong Island Checkpoint. Expected to have a solar generation capacity of 117MWp, this increases the total solar generation capacity on Jurong Island from 25.2MWp to 142.2MWp.

JTC is leading solar deployment across Singapore's industrial estates towards achieving potential solar capacity of 1,250MWp.



Did you know?

JTC's solar initiatives have the potential to supply 1,250MWp of solar energy, contributing 60% of the national target for renewable energy under the SG Green Plan 2030, and bringing us closer to our vision of greener industrial estates powered by clean energy.

Making a Difference, Together

Beyond greening Jurong Island with a three-year project that saw 34,000 trees planted on the island, JTC lent support to the energy and chemicals sector's sustainability thrust in other ways. As part of a partnership that offers transportation of container-on-barge as a greener mode of cargo transportation, PSA Singapore announced the expansion of Jurong Island Terminal (JIT) in 2024. The expansion aims to boost JIT's annual handling capacity to 300,000 twenty-foot equivalent units (TEUs) in response to the rising demand for sustainable and resilient supply chain solutions from industries located on Jurong Island.

JTC also plays the role of catalyst in driving industry players to find green solutions to meet their specific needs, as exemplified by the Jurong Island Innovation Challenge (JICE). Jointly organised by Enterprise Singapore and JTC, JICE allows SMEs and startups to partner government agencies in co-developing solutions for corporations wishing to address issues with water, energy and chemical waste. Since its launch in August 2021, 45 proposals have been received by the close of 2023, including the development of a cost-effective wastewater treatment solution developed for British speciality chemicals company Croda by local water utility company Nanosun.



A total of 44,000 trees have been planted on Jurong Island as part of a greening project.

Paving The Way Forward

From physical constructions and enhancements to digital tools, our efforts to spearhead green solutions run the gamut. Developed by JTC in collaboration with Building Construction Authority, NUS Energy Studies Institute, and the Singapore Green Building Council, the latest iteration of the Singapore Building Carbon Calculator (SBCC) is a free, web-based tool that calculates the upfront carbon of materials used. The first of its kind here, it aims to benefit Singapore's built environment sector by allowing every developer to make informed decisions based on figures that are localised to the Singapore context.

In recent years, adaptive reuse has gained momentum as a sustainable, redevelopment strategy focused on preserving areas with historical and cultural significance. To explore how we can reimagine the future of industrial estates through adaptive reuse, JTC invited architectural, planning, and design professionals from firms such as Arup, Broadway Malyan and WOHA to submit their [bold visions of tomorrow's industrial estates](#). The initiative culminated in Reimagining Singapore's Industrial Landscape, an exhibition that showcased these blue-sky ideas for transforming two mature estates—Yishun and Kallang-Kolam Ayer—into vibrant districts where industry and community can thrive. The exhibition also gave the public an opportunity to share their hopes and dreams for estates of the future.



From top: The JTC team behind the latest iteration of the SBCC; Broadway Malyan's blue-sky ideas included "transparent factories", where ground-floor spaces could be made more open and inviting to the public.

CHAPTER 3

INNOVATING FOR PROGRESS

Woodlands North
Coast is envisioned as a
gateway to opportunities
in the north.

Catalysing growth through embracing new technologies

While Industry 4.0 has put technology adoption front and centre, embracing innovation has always been part and parcel of JTC's forward-thinking approach to development.

Continuing our commitment to innovation are initiatives such as the [trials of autonomous food delivery robot and facial recognition payment systems](#). Introduced at JTC Summit, the autonomous food delivery robot service leverages JTC Summit's Open Digital Platform (ODP): a proprietary digital infrastructure that integrates multiple systems, from a customer-facing food delivery app, to back-end access to security gantry turnstiles and lifts.

Initiated directly by customers, the robots can independently clear building security access and travel to different floors, with its location tracked and monitored real-time on a digital twin developed by JTC. In another first, diners at the JTC Summit canteen can authorise payments through facial biometric scanning. Developed in collaboration with the Singapore Government Technology Agency (GovTech), these smart retail services will also be introduced at Woodlands North Coast. Going beyond augmenting user experience, these plug-and-play digital infrastructure are also part of JTC's effort to support smart businesses and industrialists.

JTC has launched a tender to bring on board robotics providers to scale up and test the commercial viability of the delivery solution in JTC's Woodlands North Coast.



Nurturing Grounds for Breakthrough Ideas

To further champion innovation, JTC also provides test-bedding platforms. In late 2023, [Singapore's first hydrogen fuel cell truck started its year-long trial at JID](#). Developed by Singapore-based fuel cell solutions specialist Spectronik, the truck powered by hydrogen fuel cells presents an environmentally friendly transport and logistics solution, with the road tests providing proof of concept for the viability for wider adoption. The trials mark a significant step in the development of sustainable mobility solutions in JID, underscoring our efforts to supporting companies like Spectronik as they pioneer innovative approaches to decarbonise mobility in Singapore.

At LaunchPad @ one-north, local startup Go!Mama was given space to trial lactation pods powered by smart technology. Installed under the district's Innovators' Playground initiative designed to give new ideas and business concepts a trial space, these pods equipped with an automated ultraviolet disinfection system can be located and booked via an app, lending convenience to working mothers on the go.

Go!Mama joins a list of other startups testing new technologies and business concepts at Launchpad. For example, there's Medistation, a wellness pod that offers a plug-and-play zen sanctuary for fuss-free quick meditation sessions, and The Gym Pod, a series of shipping container gyms that has since progressed to providing training services via its app and smart mirrors in fully automated pods.



From top: A Go!Mama pod at LaunchPad. Spectronik plans to expand its fuel cell R&D, advanced manufacturing and testing facilities at JTC CleanTech Three @ JID.

Together with Building and Construction Authority (BCA), JTC also pioneered [Singapore's first virtual Temporary Occupation Permit \(TOP\) inspections](#) at JTC Logistics Hub @ Gul and JTC semiconSpace. Through advanced reality capture technology such as LiDAR and 360-degree photography, inspectors can remotely assess construction progress with high precision, significantly improving time and resource efficiency. By working with BCA to develop virtual TOP guidelines for our projects, we aim to pave the way for industry-wide adoption.

Did you know?

By utilising technology, the new virtual TOP workflow can potentially reduce time and manpower by up to 30% for both the project team and inspection officers.

The virtual inspection at the two sites is enabled by advancement in reality capture technology, which allows accurate and reliable 3D data to be produced.



A photograph of a modern building with a grid of windows and a courtyard. The building has a white facade with dark window frames. The courtyard is visible at the bottom of the image, showing a checkered floor and some greenery. The text "CHAPTER 4 ROAD MAP TO THE WORLD" is overlaid on the top left of the image.

CHAPTER 4

ROAD MAP TO THE WORLD

JTC's latest developments are designed to integrate work-live-play-learn concepts.

Connecting people and places for bigger, better things

We go further, together. Echoing our efforts in bringing different stakeholders within our estates together for synergistic collaborations, JTC also actively seeks out partnerships from a wider community. Apart from realising our estate's full potential as attractive destinations for a global pool of talent and communities, these efforts further enhance Singapore's global connectivity and competitiveness.

Jointly organised by EnterpriseSG and JTC, [the Aerospace Open Innovation Challenge \(AOIC\)](#) inaugurated in February 2024 is a two-way platform for startups and SMEs to partner aerospace corporations in co-developing solutions for the industry's specific sustainability, productivity and digitalisation demands. The first aerospace-focused innovation challenge of its scale, the AOIC saw ideas crowdsourced for 12 global aerospace challenge statements from seven global corporations. With more than \$500,000 committed under the initiative, innovative solutions for a greener aerospace industry are piloted in a shorter time, and viable ideas could be scaled for broader adoption.

Singapore's position as a leading player in the global digital economy gets a boost with [UOB's upcoming global technology and innovation centre](#) being set up at PDD. This partnership between JTC and UOB also sees the signing of an Memorandum of Understanding (MOU) to jointly promote the adoption of greener business practices by local industrialists, further shaping PDD into Asia's premier smart and sustainable business district.

UOB's new innovation centre will house some 3,000 digital technology talents.



Beyond working with corporate partners, JTC has also signed an MOU with Suzhou Industrial Park Administrative Committee (SIPAC) of the People's Republic of China (PRC) on Deepening Cooperation in Digitalisation and Sustainability at the 19th Joint Council for Bilateral Cooperation in December 2023. The MOU paves way for collaborations in the development and management of smart and sustainable business parks, and knowledge sharing of digital technologies and solutions between Suzhou Industrial Park and Punggol Digital District.

Strengthening Singapore's reputation as a global hub

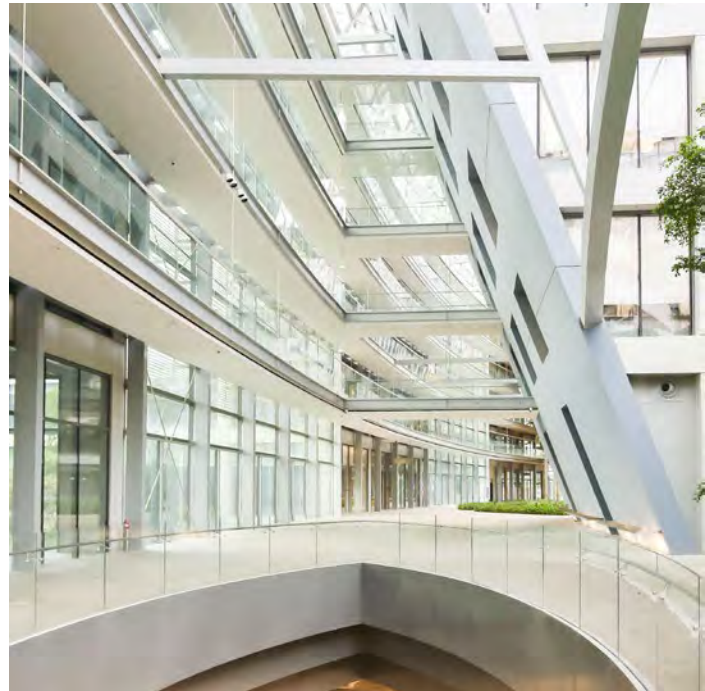
We also welcomed a host of significant openings in the past year: the Surbana Jurong Campus and Hyundai Motor Group Innovation Centre Singapore (HMGICS) in JID; and at Changi Business Park, Kajima's first and only overseas innovation centre, the Lab for Global Engineering, Architecture & Real Estate (The GEAR). Other groundbreaking and expansion announcements from companies such as Croda, Sulzer, and DB Schenker, further underscore the attractiveness of both estate and nation as a launchpad for leading businesses.



From top: AOIC marks a significant industry-wide effort in uniting prominent aerospace players, including those in SAP, to spearhead the transformation of the industry; HMGICS also boasts a test-drive circuit (image courtesy of Hyundai Motor Group).

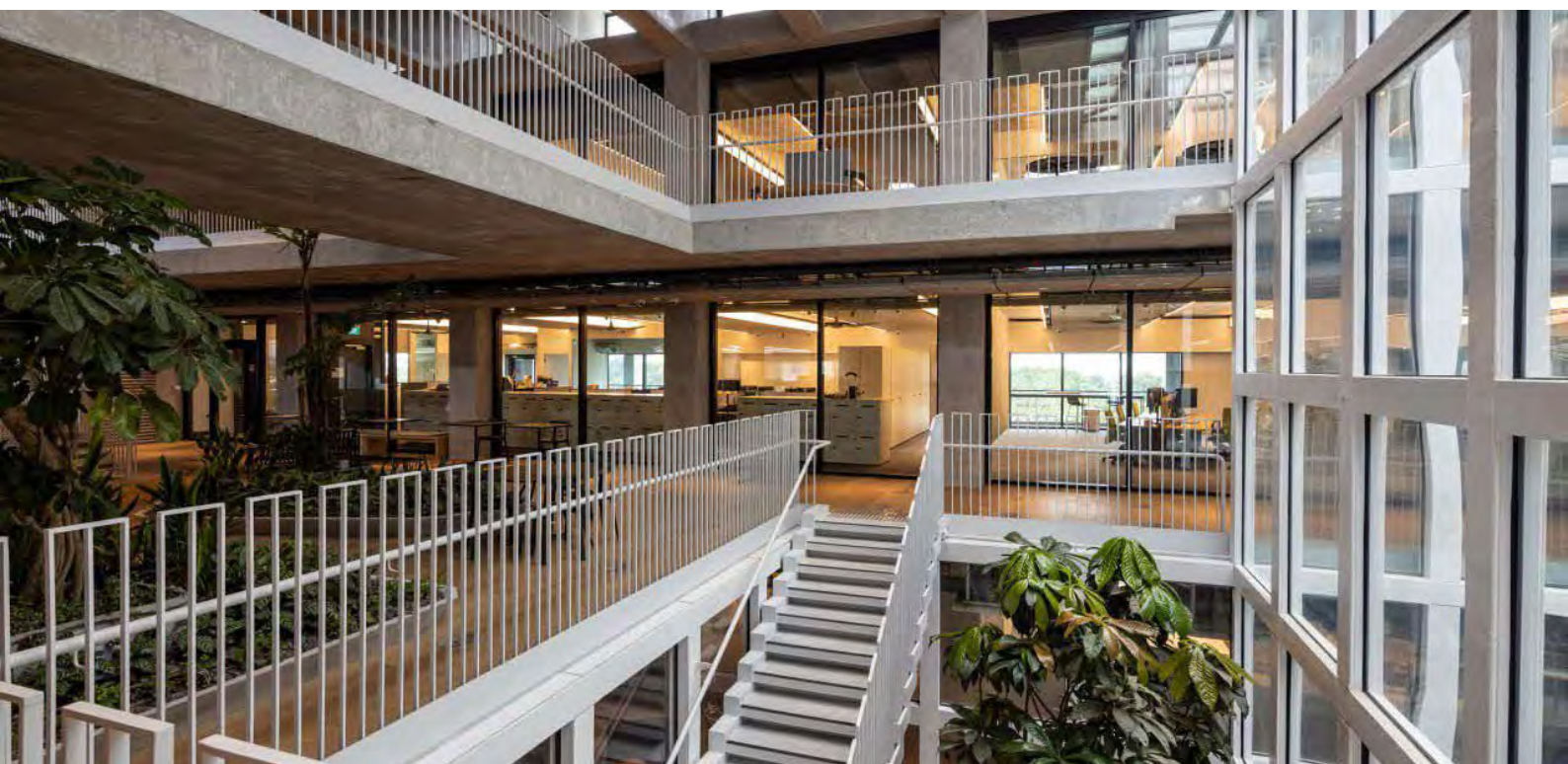
Not one to rest on our laurels, JTC continues to expand and enhance our estates. Addressing the industrial demand for limited waterfront land while bolstering Singapore's status as a leading maritime hub is the second Offshore Marine Centre (OMC2).

Completed in the second quarter of 2023, its plug-and-play infrastructure solutions for the varying business needs and heavy operations of the Marine & Offshore Engineering (M&OE) industry relieves companies of a need to invest in a waterfront facility with heavy machinery and equipment. Whereas at Tampines Wafer Fab Park, the completion of the 32,000sqm JTC semiconSpace, alongside developments such as Silicon Box's \$2 billion advanced semiconductor manufacturing foundry further improves Singapore's attractiveness as a global hub for semiconductor manufacturing.



Surbana Jurong's newest SJ Campus is designed with sustainability features in mind.

Kajima's The GEAR building houses five state-of-the-art laboratories and will serve as the firm's R&D hub (image courtesy of Kajima).



CHAPTER 5

THE PEOPLE BUILDER



JTC organises a range of activities to get its communities involved.

Growing from the core through nurturing talent

From fostering partnerships with corporations from around the world, to nurturing collaborative communities within our estates, people are at the heart of our work. Naturally, JTC grows with its people.

Whether the training and talent retention incentives or cultivating a skilled and adaptable workforce for Singapore's industries, JTC participates in a suite of initiatives aimed at nurturing talent and empowering the workforce within its ecosystem.

Leveraging resources within its network of government agencies, JTC has organised various events zeroing in on hot button topics. Together with Cyber Security Agency of Singapore (CSA), JTC hosted a sharing session on staying safe in the face of digital transformation. Tailored for our facility management partners, the session sought to uplift the baseline of cybersecurity through an awareness of relevant insights and tools.

JTC's Linked-UP was an outreach session for career advisors, faculty staff, and professors from different Institutes of Higher Learning.



With Robotics and automation (R&A) emerging as a key technology powering sustainable cities of the future, we also partnered the Public Sector Science & Technology Policy and Plans Office (S&TPPO) for a two-day showcase. Apart from facilitating discussions and networking among the R&A community and representatives from public service agencies, the event also gave participants a peek into the workings of the Open Digital Platform, gaining insight into how the system facilitates the seamless deployment of robots in smart districts.

Engaging with the next generation of thinkers and leaders is another area of focus. More than 140 polytechnic and junior college students participated in the 2023 Challenge for the Urban and Built Environment (CUBE) workshop. Over the five-day workshop, tertiary students were invited to present blue-sky redevelopment ideas. JTC representatives were also on hand to provide feedback to guide the students as they explored innovative industrial typologies. Through the process, the youths gained the opportunity to gain first-hand experience at urban planning, and gathered insights on urban design.

In another youth development programme, 40 representatives from National Climate Change Secretariat, National Youth Council Singapore, and Ministry of Sustainability and the Environment visited Jurong Island to learn about the industrial estate's transformation into a sustainable Energy & Chemicals Park. The young leaders were also given a preview of Jurong Island's environmental sustainability roadmap towards 2030 and 2050, underscoring the importance of big picture view in estate planning.

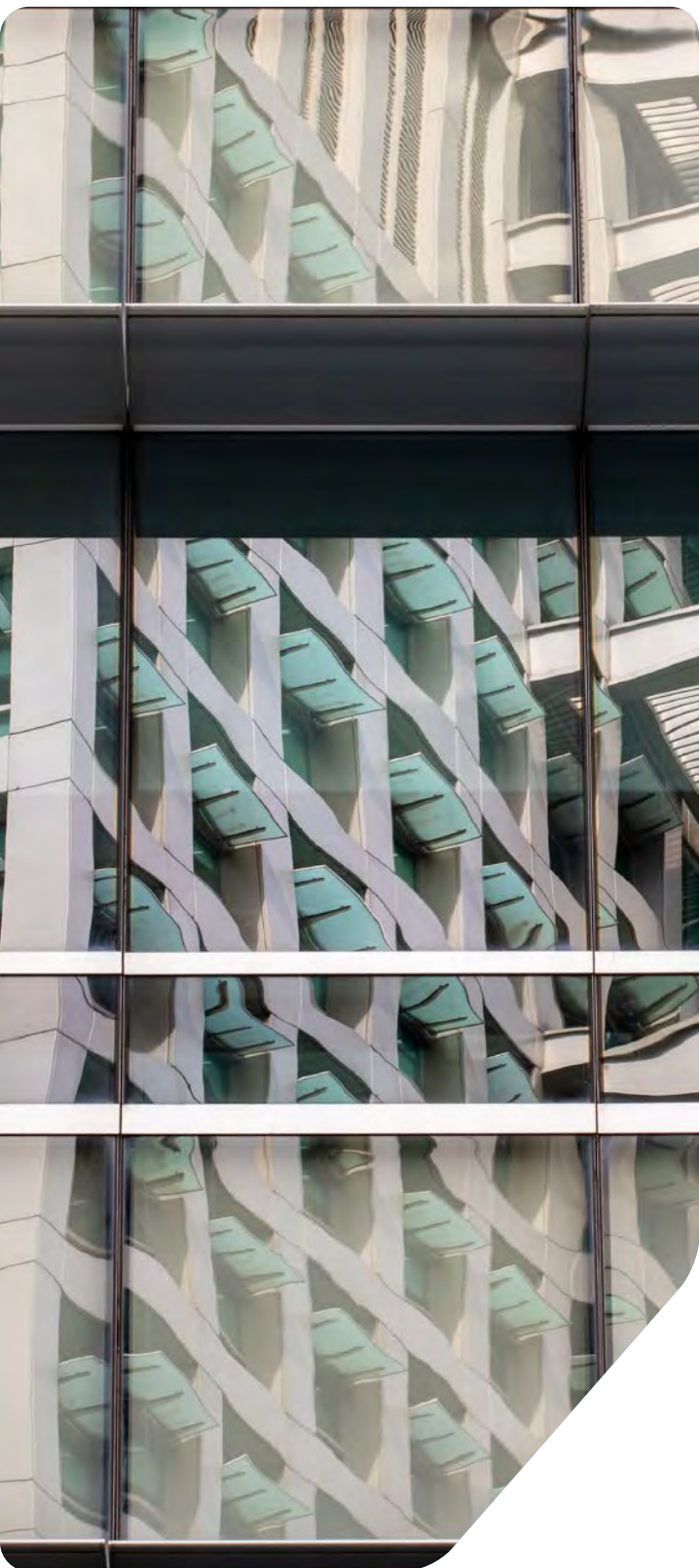


From top: Students could hear from industry experts during the CUBE workshop; Wessex residents at one-north participating in a festive community day

STORIES FROM OUR SPACES



Trendspace is Singapore's first high-rise multi-tenanted, ramp-up development built to serve the needs of both furniture and furniture-related companies.



Based in JTC CleanTech Three @ Jurong Innovation District, VFlowTech is currently involved in a project to test the VRFBs on Jurong Island. The company was among three recipients of grants from Energy Market Authority (EMA), Enterprise Singapore and JTC to trial new clean energy solutions on the energy and chemicals park. Other innovations being tested and piloted include a floating solar panel system developed by Norwegian company Ocean Sun, and a virtual ledger system to support green hydrogen production by Tuas Power.

[→ Read more](#)

Did you know that EV chargers can be certified right here in Singapore? That's just the latest development at the Electrifications and Power Grids Centre (EPGC), developed by Energy Research Institute @ NTU and located on Jurong Island. The facility is connected to Singapore Power's own grid, which allows for manufacturers and distributors to experiment with innovative energy technologies in a safe manner before deployment.

[→ Read more](#)

JTC Space @ Tuas is an example of how industrial buildings can be designed as hubs with seamlessly integrated environments where collaborations can easily take place. Sitting on 6.2 hectares of land, it co-locates landed and flatted factories, amenity provisions, as well as dormitory and heavy vehicle parking spaces all in one development. Its construction also marked the first time JTC utilised the Prefabricated Pre-finished Volumetric Construction (PPVC) method. Architect Bij Borja and senior principal project manager Paul Tan share their experiences working on JTC Space @ Tuas.

[→ Read more](#)

JID is designed to support businesses in the era of Industry 4.0. Bulim Square, an enclave situated in the heart of JID, is one of the developments designed for this purpose. Bulim Square's high-specification space allows tenants to house their entire range of functions, such as research and development, manufacturing and distribution, and prototyping, at one site. This also enables tenants to tap into an innovative ecosystem of partners to facilitate their growth.

[→ Read more](#)

Picture an industrial park — but instead of dirt and grey concrete, it's full of beautiful parks, vivid greenery and houses a vibrant community. Spanning 620 hectares, JID aims to have at least 30% of green coverage — which means about a third of the industrial park will include streetscapes, public parks, rooftop gardens, and an 11km long Sky Corridor that connects its five precincts. The common sights of industrial parks, such as construction materials and heavy vehicles, have been shifted to an underground logistics network. Tang Hsiao Ling, director of the Urban Planning and Architecture Division, and Finn Tay, director of the New Estates Division, share how they master planned the estate.

[→ Read more](#)

Since The Gym Pod's launch in 2018, test-bedding at one-north has allowed Mr Damian Chow to improve on the operating systems and receive feedback from users on his business model. "In the initial months, we did not have a mobile application and the pod was not fully automated. We had to make manual adjustments for every booking, even those occurring at 3:00am," says Mr Chow. Now The Gym Pod has launched smart solutions — all users need to do is download the app, book a pod and proceed to unlock the fully equipped pod that is available 24/7. Discover other wellness testbed initiatives at LaunchPad @ one-north.

[→ Read more](#)

Jurong Island's vibrant ecosystem has been further enriched with the addition of new companies and the innovative products that they are bringing into the market. The technologies that they bring forth are not only cutting-edge but they also champion a greener and more sustainable future. Learn more about this exciting phase of growth, sustainability and collaboration in Singapore's chemical sector.

[→ Read more](#)





From Southeast Asia's largest energy storage system to Singapore's first four-in-one renewable energy site, more developing innovations and sustainability efforts are taking place on Jurong Island, thanks to the efforts of the community which includes Keppel (Infrastructure Division) Sembcorp Industries Ltd ExxonMobil Singapore Sumitomo Chemical and Terrenus Energy.

[→ Read more](#)

Did you know that Singapore's largest artificial reef project can be found at Sisters' Islands Marine Park? Comprising eight structures that are each up to 10 metres tall, the project is the result of a collaboration between JTC, National Parks Board, marine research and interest group communities, and supported by 11 donor companies. We lent our engineering expertise to build the artificial reefs, which contribute some 500sqm of additional reef area to the marine park. Curious to know about the design and construction behind this project, as well as the importance of melding engineering and technology in ecosystem conservation?

[→ Read more](#)

FINANCIAL HIGHLIGHTS AND REVIEW



BUILDING INDUSTRIES

Financial Results

FY2023 operating revenue was \$2.7 billion, 4.0% higher than previous year. The increase was mainly due to new land and building allocations and higher revenue from port operations attributable to increase in throughput from Jurong Port Tank Terminal and Cement Terminal. The property segment accounted for 87.0% of total operating revenue with the remaining from port operations and agency fees.

The Group's operating expenditure for FY2023 decreased by 32.6%, to \$1.0 billion, primarily due to lower loss in recoverable amount of investment properties, driven by positive economic trajectory. Property related expenditure such as depreciation, maintenance and conservancy of properties and property tax made up about 80.0% of the Group's total operating expenditure.

The Group invested a total of \$1.1 billion on capital expenditure which include alienation and lease extension of industrial lands and development of building projects such as Punggol Digital District, Jurong Innovation District, Space @ AMK and Jurong Port Ready Mix Concrete Hub.

As at 31 March 2024, the Group reported a healthy performance with a net surplus of \$1.9 billion. The financial position strengthened, with total assets that stood at \$36.3 billion. Investment properties contributed about 60.0% of the Group's total assets. Total borrowings for the Group amounted to \$0.9 billion, which was about 11.9% of total liabilities.

Right: one-north's Biopolis hosts leading public and private biomedical research institutes and organisations, and anchors the development of the entire R&D value chain of life sciences



Group Financial Highlights

Financial Highlights

| | FY2023 (\$'MIL) | FY2022 (\$'MIL) | CHANGE (%) |
|----------------------|--------------------|--------------------|---------------|
| Operating revenue | 2,703 | 2,600 | 4.0% |
| Non-operating income | 719 | 612 | 17.5% |
| Net surplus | 1,866 | 1,275 | 46.4% |
| Net surplus margin | 69.0% | 49.0% | 20.0% |
| Capital expenditure | 1,140 | 896 | 27.2% |

NET SURPLUS
\$1,866
MILLION

Financial Position

| | FY2023 (\$'MIL) | FY2022 (\$'MIL) | CHANGE (%) |
|---|--------------------|--------------------|---------------|
| Investment properties | 21,792 | 20,898 | 4.3% |
| Total assets | 36,319 | 33,899 | 7.1% |
| Total borrowings | 859 | 893 | -3.8% |
| Total liabilities | 7,194 | 6,622 | 8.6% |
| Total equity (excluding non-controlling interest) | 29,091 | 27,242 | 6.8% |

TOTAL EQUITY
\$29.1
BILLION

Key Financial Ratios

| | FY2023 | FY2022 | CHANGE |
|-----------------------------------|--------|--------|--------|
| Debt-equity ratio (%) | 2.9% | 3.3% | -0.4% |
| Interest coverage (times) | 72 | 76 | -5.3% |
| Return on total assets (%) | 5.3% | 3.8% | 1.5% |
| Return on capital employed (%) | 6.5% | 4.7% | 1.8% |
| Value added per employee (\$'MIL) | 1.6 | 1.5 | 0.1 |

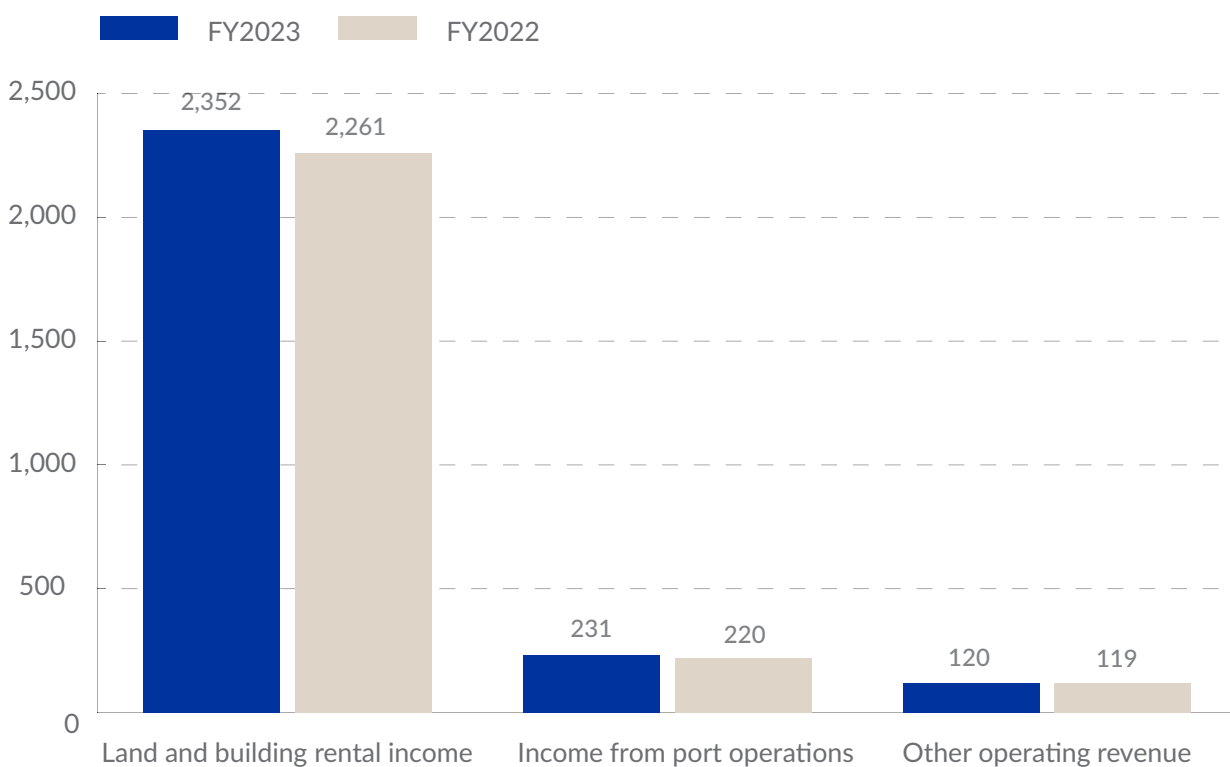
RETURN
ON CAPITAL
EMPLOYED
6.5%

Financial Review

Operating Revenue

Distribution of Group Operating Revenue (\$'MIL)

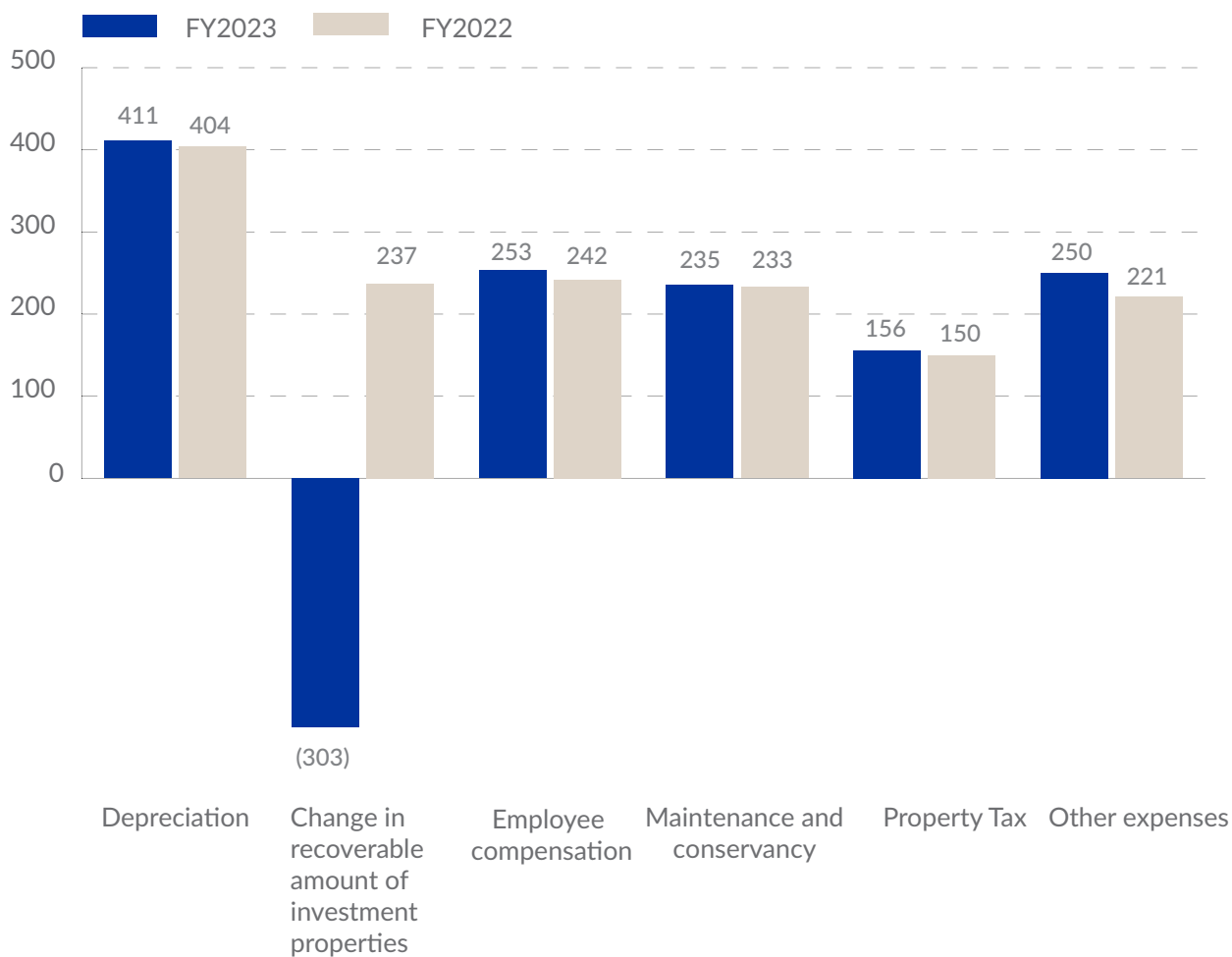
| | FY2023 (\$'MIL) | FY2022 (\$'MIL) | CHANGE (%) |
|---------------------------------|--------------------|--------------------|---------------|
| Land and building rental income | 2,352 | 2,261 | 4.0% |
| Income from port operations | 231 | 220 | 5.0% |
| Other operating revenue | 120 | 119 | 0.8% |
| Total operating revenue | 2,703 | 2,600 | 4.0% |



Operating Expenditure

Distribution of Group Operating Expenditure (\$'MIL)

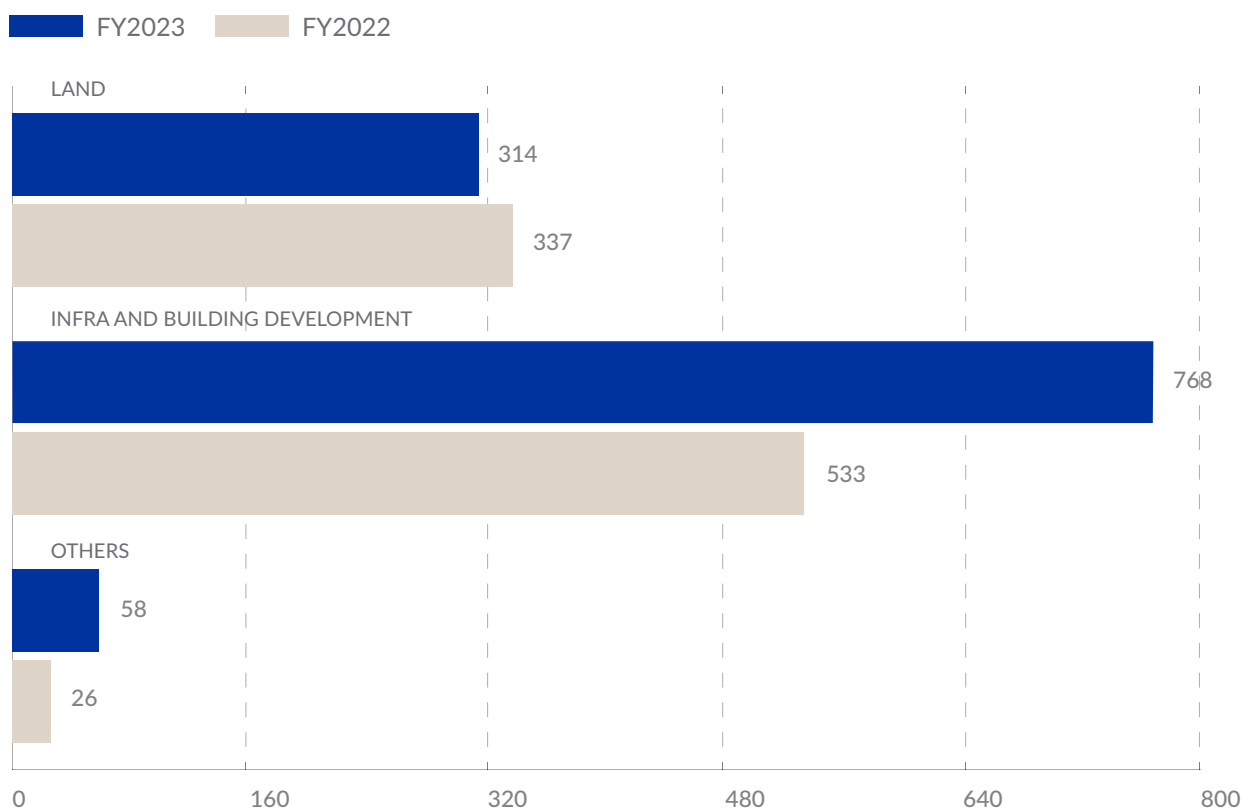
| | FY2023 (\$'MIL) | FY2022 (\$'MIL) | CHANGE (%) |
|---|--------------------|--------------------|---------------|
| Depreciation | 411 | 404 | 1.7% |
| Change in recoverable amount of investment properties | -303 | 237 | -227.8% |
| Employee compensation | 253 | 242 | 4.5% |
| Maintenance and conservancy | 235 | 233 | 0.9% |
| Property tax | 156 | 150 | 4.0% |
| Other expenses | 250 | 221 | 13.1% |
| Total operating expenditure | 1,002 | 1,487 | -32.6% |



Capital Expenditure, Assets & Liabilities

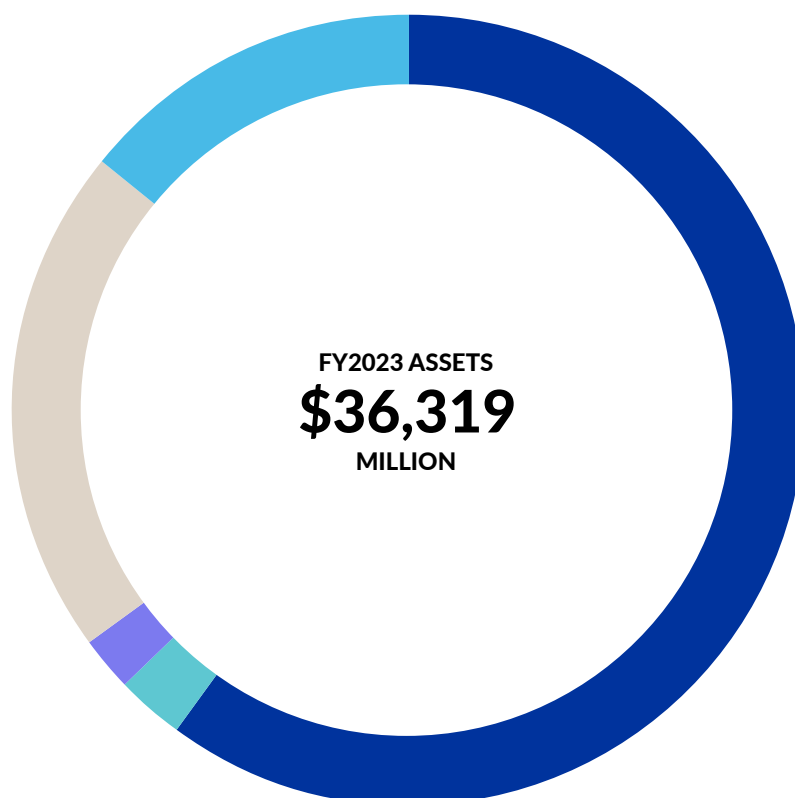
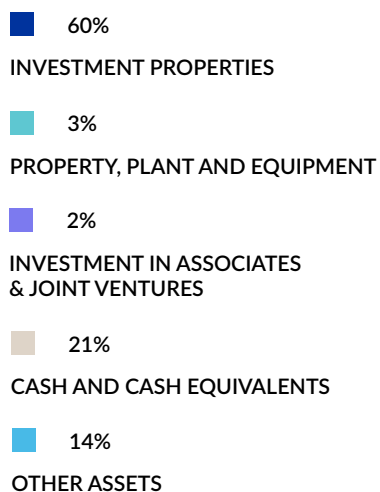
Capital Expenditure (\$'MIL)

| | FY2023 (\$'MIL) | FY2022 (\$'MIL) |
|--------------------------------|--------------------|--------------------|
| Infra and building development | 314 | 337 |
| Land | 768 | 533 |
| Others | 58 | 26 |
| Total capital expenditure | 1,140 | 896 |



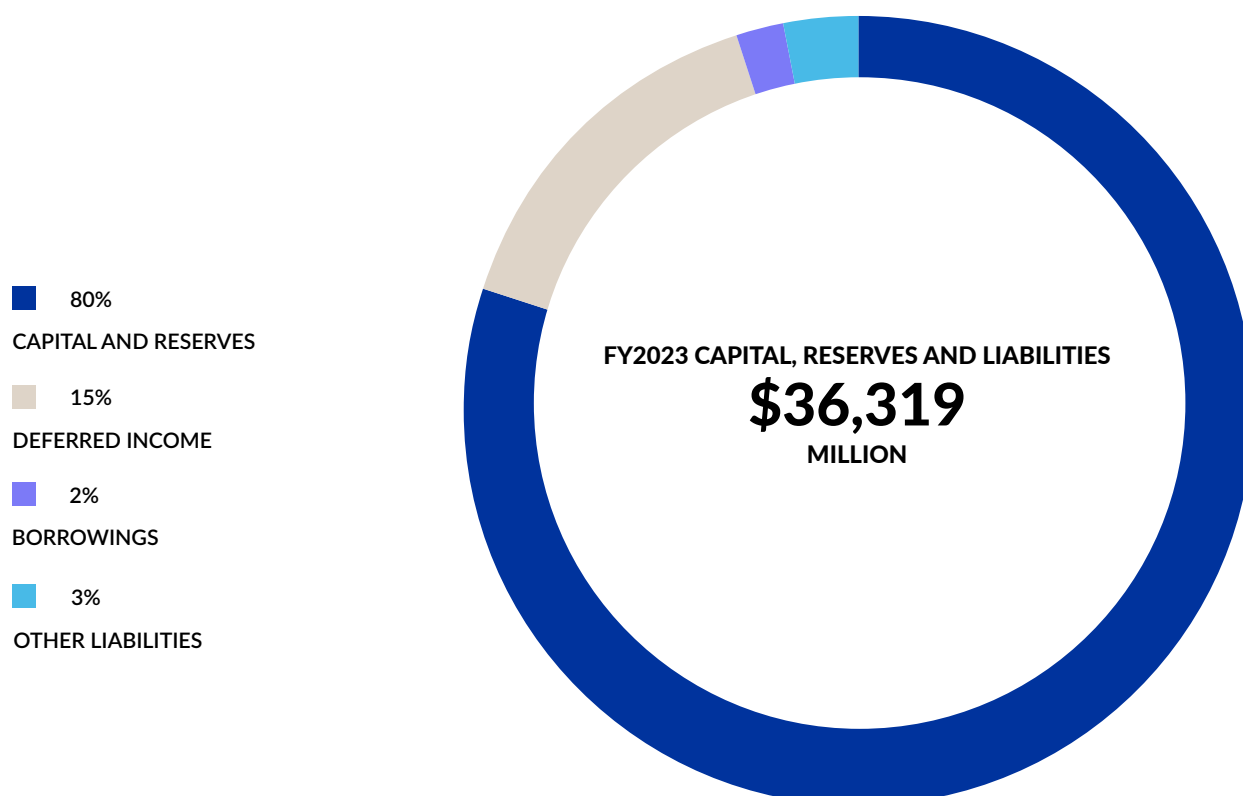
Assets (\$'MIL)

| | FY2023 (\$'MIL) | FY2022 (\$'MIL) | CHANGE (%) |
|---|--------------------|--------------------|---------------|
| Investment properties | 21,792 | 20,898 | 4.3% |
| Property, plant and equipment | 1,270 | 1,311 | -3.1% |
| Investment in associates & joint ventures | 772 | 757 | 2.0% |
| Cash and cash equivalents | 7,540 | 6,213 | 21.4% |
| Other assets | 4,945 | 4,720 | 4.8% |
| Total Assets | 36,319 | 33,899 | 7.1% |



Capital, Reserves and Liabilities (\$'MIL)

| | FY2023 (\$'MIL) | FY2022 (\$'MIL) | CHANGE (%) |
|--|--------------------|--------------------|---------------|
| Capital and reserves | 29,125 | 27,277 | 6.8% |
| Deferred income | 5,274 | 4,859 | 8.5% |
| Borrowings | 859 | 893 | -3.8% |
| Other liabilities | 1,061 | 870 | 22.0% |
| Total Capital, Reserves and Liabilities | 36,319 | 33,899 | 7.1% |



The background of the cover is a photograph of a modern architectural courtyard. Two tall, dark grey buildings with vertical paneling frame a central sky area. The ground level shows a paved walkway, some greenery, and a pedestrian bridge in the distance. The top of the image is framed by a dark blue curved header.

JTC ANNUAL REPORT FY2023

THE JTC SUMMIT
8 JURONG TOWN HALL ROAD
SINGAPORE 609434

www.jtc.gov.sg



BUILDING INDUSTRIES

BUILDING A STRONGER FOUNDATION

Annual Report 2023



YEAR IN REVIEW

2023 was a year of rapid business and organisational change. Despite a challenging business environment, JP did well to stabilise our operations, delivered a stronger-than-expected financial performance, and built a stronger foundation to prepare us for further growth.

In FY2023, our core Multipurpose Terminals (MPT) business achieved steady growth in tandem with the increased demand for construction materials in Singapore. Driven by the handling of more cement, aggregates, and project cargoes through JP, MPT's throughput of 14m tonnes was up year-on-year by 24%. Our Ready-mixed Concrete (RMC) Ecosystem also recorded higher-than expected aggregates (e.g. sand and stone) volume, which helped contribute to the overall throughput growth. Our Lighter Terminals continued to provide strong and consistent support in the handling of ship supplies provided to vessels at Singapore's anchorage.

Overall combined throughput handled by our energy terminals, Jurong Port Tank Terminals (JPTT) and Jurong Port Universal Terminal (JPUT), held steady in FY2023. On the back of prudent cost management and effective initiatives to drive throughput growth, profitability of our overseas joint venture companies improved in FY23.



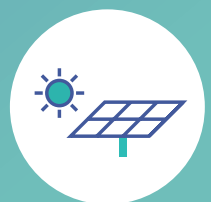
**STRONGER
BUSINESS
PERFORMANCE**



**PRODUCTIVITY
IMPROVEMENTS**



**ENHANCED
PORT SAFETY**



**GREENER
HOMEPORT
OPERATIONS**

FY2023 PERFORMANCE

MPT CARGO THROUGHPUT

OVERALL VOLUMES*

▲ **11%**

20.7 MIL TONNES

Overall throughput increased, driven by cement, aggregates, lighterage and project cargo.

**Excluding JPUT volumes.*

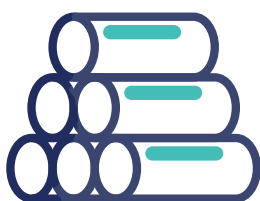


BULK CARGO (CEMENT)

▲ **27%**

5.1 MIL TONNES

Y-o-Y throughput increased, driven by strong construction industry performance and competitive import prices.

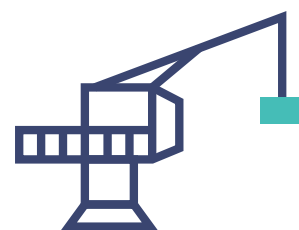


GENERAL CARGO (STEEL)

▼ **9%**

3.0 MIL TONNES

Steel throughput decreased due to a slowdown in demand towards the end of the year, as customers sustained high levels of steel inventory at their yards.



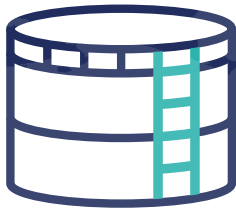
LIGHTER TERMINALS

▲ **2%**

1.2 MIL TONNES

Throughput increased, driven by high level of anchorage utilisation and vessel calls into Singapore for bunkering and ship supplies.

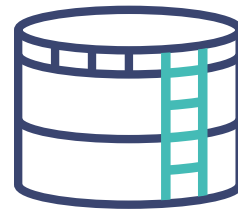
ENERGY TERMINALS' CARGO THROUGHPUT



JP TANK TERMINALS (JPTT)

▼ **4%**
4.8 MIL TONNES

JPTT throughput decreased, due to weakened market demand amidst recessionary worries, geopolitical tensions in Asia and the Middle East, and reduced product exports from China.



JP UNIVERSAL TERMINAL (JPUT)

▲ **7%**
24.8 MIL TONNES

JPUT's throughput increased, driven by customers consolidating their storage and increasing trading volumes.

OVERSEAS JOINT VENTURES



RIZHAO PORT JURONG

Net profit after tax increased by 8%, driven by throughput mix and consistent growth sustained through operational efficiency enhancements.



YANGPU PORT

For FY2023, overall profitability improved by 115%, mainly due to higher revenue driven by an increase in grains throughput, as opposed to a net loss in the prior year.



MARUNDA CENTER TERMINAL

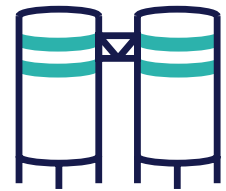
Net profit after tax increased by 2% aided by reduction in operating expenses.

NOTE

Financial reporting period for overseas joint ventures is for the period from January 2023 to December 2023

PRODUCTIVITY IMPROVEMENTS

CEMENT CARGO HANDLING PRODUCTIVITY



549_{TPH}

▲ 2.6%

FY23

535_{TPH}

FY22

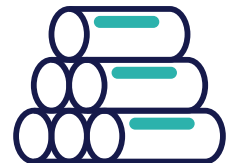
*TPH - tonnes/hr

JP handled 2.6% more Cement (549 tonnes/hr) on a per-hour basis year-on-year.

On the back of productivity improvements implemented in FY2023 such as the installation of tank top sensors on the cement unloader and the semi-automation of unloaders to enable cargo discharge over a longer period. In addition, the operations team collaborated closely with

our customers to conduct 'split mode' discharge of cement using 2 cement unloaders. This helped to facilitate concurrent discharge of cargo from 2 different hatches of the vessel at a faster rate.

STEEL CARGO HANDLING PRODUCTIVITY



326_{TPH}

▲ 6.5%

FY23

306_{TPH}

FY22

*TPH - tonnes/hr

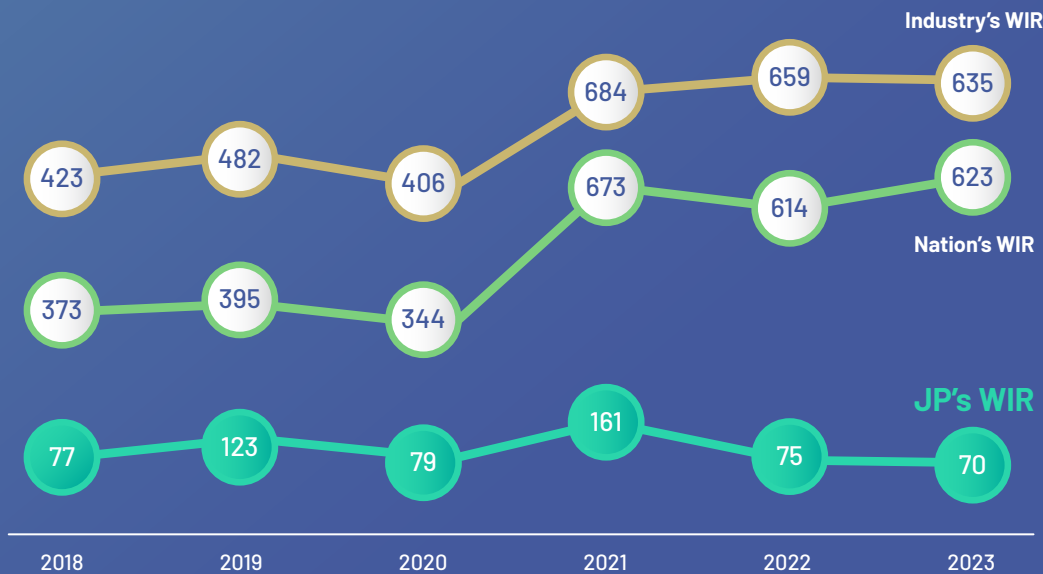
JP handled 6.5% more Steel (326 tonnes/hr) on a per-hour basis year-on-year.

The increase in steel handling productivity was driven by the strategic deployment of maximum number of gangs for steel vessels with lower tonnage, complemented by

minimisation of unproductive non-cargo handling hours (e.g. time spent on switching lifting gears for the discharge of different general cargoes) and close collaboration with stakeholders to shorten port stays.

WORKPLACE SAFETY

WORKPLACE INJURY RATE (WIR) COMPARISON



JP's FY23 WIR (70) outperformed the industry's and the Nation's 2023 WIR by more than 88%.

In FY2023, JP expended significant efforts to improve port safety at a more fundamental level. We rolled out more stringent standards to ensure better stowage of steel rebars and provided better lighting to support night operations. We also improved heat stress and traffic management within the port, etc. along with the successful implementation and enforcement of safety rules among frontline staff.

With our emphasis on safety, compliance to safety protocols (e.g. proper donning of Personal Protective Equipment and wearing of seatbelts by workers manning forklift operations) has improved. We achieved a 7% improvement compared with the FY2022 WIR of 75 and greatly lowered our cumulative Accident Severity Rate (ASR) by 83% year-on-year, with no major injuries or fatalities in FY2023. In addition, since our safety transformation in 2017, JP has consistently outperformed industry and the Nation's Workplace Injury Rate norms.



As a testament of our strong efforts in enhancing port safety, JP received the prestigious bizSAFE Partner Award 2023 by the Workplace Safety and Health Council.

This award recognises our safety culture and underscores the collective effort of our Workplace Safety & Health team, port users and stevedores for their unwavering commitment to uphold the highest safety standards.



Above: Jurong Port recognised as one of the recipients of the bizSAFE Partner Award 2023, presented by Zaqy Mohamad, Senior Minister of State for Manpower of Singapore

DECARBONISATION EFFORTS

JP has committed to reduce our carbon emissions by >60% (from 2005 levels) by 2030 and to become net zero by 2040.

JP currently deploys 9.56 MWp of rooftop solar capacity and at the time of commissioning, it was the world's largest port-based solar facility. Installed in 2016, our 9.56 MWp solar facility is capable of generating more than 9 GWh of electricity annually. JP will continue to maximise our solarisation efforts and install more solar PV systems on available spaces within our port facility. We expect to add another 5.7 MWp solar facility by 2024, with the potential of a further 1.7 MWp solar facility to be added. With this, JP expects our port-based Solar PV system to be able to provide up to 35% of JP's electricity needs.

JP has also embarked on a five-year plan to convert all our port lightings to energy efficient LED lights, which could generate up to 2 gigawatt-hours (GWh) of annual savings in electricity consumption. To date, we have achieved annual electricity savings of 1.2GWh for this project.

JP's externally calculated net calendar year (CY) 2023 Scope 1 and 2 carbon emissions was 8,091 tCO₂e. Although the CY2023 carbon emissions was up year-on-year by 5.2% due to higher throughput handled by our multipurpose terminals, this represented a 1.1% reduction in carbon emissions compared to the CY 2023 target of 8,180 tCO₂e.

| | CY2005 tCO ₂ e (BASELINE) | CY2023 tCO ₂ e | % CHANGE FROM 2005 |
|---------|---|---------------------------|-----------------------|
| SCOPE 1 | 14,723 | 1,965 | -87% |
| SCOPE 2 | 9,329 | 6,126 | -34% |
| TOTAL | 24,051 | 8,091 | -66% |

Table 1: JP's Total Scope 1 and Scope 2 Net GHG Emissions in CY2023.



KEY HIGHLIGHTS

READY-MIXED CONCRETE ECOSYSTEM

Ready-mixed concrete (RMC) is an essential material for constructing buildings and infrastructure. This concrete is created at RMC batching plants by mixing cement, aggregates (i.e. sand and gravel), additives and water. In Singapore, cement is primarily imported through JP, while aggregates are brought in through waterfront facilities managed by the Building and Construction Authority (BCA) in Punggol and previously in Tuas (now via JP). These RMC plants are strategically located near construction sites across Singapore but this has led to logistical constraints and transportation issues.

In 2019, JP worked with these batching plant players, aggregates importers and government agencies such as BCA, HDB and JTC to conceive a plan to co-locate these batching plants close to the port. JP took the lead in building a facility that offers industry players shared services like sludge treatment and truck washing. In addition, JP also leverages the latest technology in material handling, using conveyors and unloaders to eliminate truck use for transporting aggregates to the storage areas.

This port-centric RMC Ecosystem would significantly shorten and lean the supply chain for aggregate importers and batching plant players, resulting in land savings and a reduction of up to 650,000 truck trips annually. The batching plants are able to batch concrete more efficiently on a smaller footprint, while JP can also increase aggregates throughput by up to 6 million tonnes a year. This will enable land in Tuas to be returned to the government for more productive uses.

Construction of this \$200 million facility began in September 2020 and it has been operational since October 2023. Working in concert with other construction supply chains served by JP for cement and steel, the RMC Ecosystem creates a synergistic effect that will benefit the entire construction sector in Singapore. Additionally, the facility is designed to support the installation of solar panels on its rooftop, with potential to generate up to 5.7 MWp of solar power. This will enable JP to further reduce greenhouse gas emissions and be environmentally sustainable and green in the future.

Below: Aerial view of Jurong Port's Ready-Mixed Concrete Ecosystem



KEY FEATURES OF RMC ECOSYSTEM

Batching Plants



Enclosed Aggregates
Storage Facility



Conveyor Belts



Aggregates
Recycling System



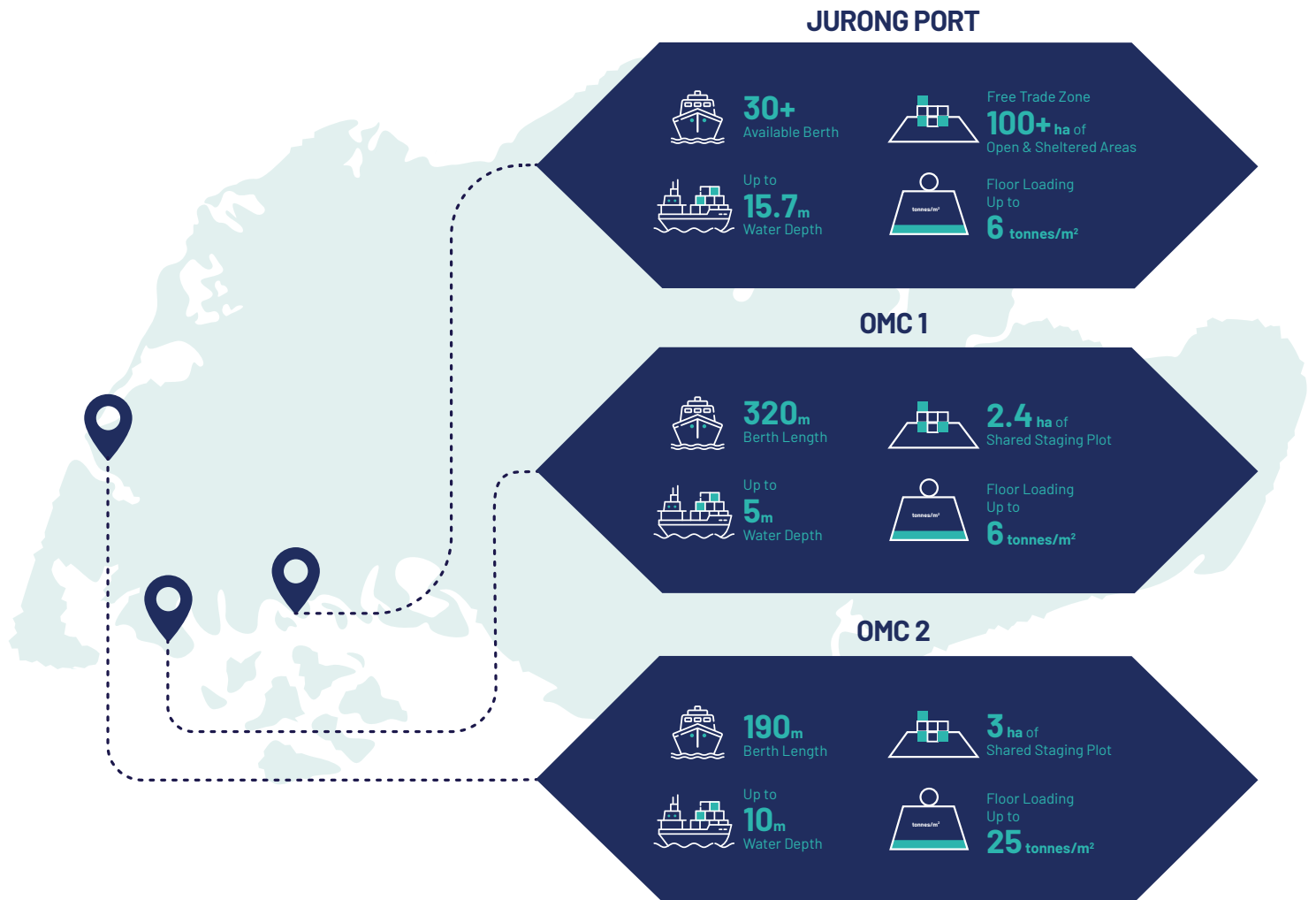
Hoppers



Balance Cranes



OFFSHORE MARINE CENTRES



JTC developed Offshore Marine Centres (OMC) – OMC1 and OMC2 to provide Marine & Offshore Engineering (M&OE) companies shared access to ready-built staging areas and berths for activities such as fabrication, assembly, (MRO) maintenance, repair, and overhaul of offshore rigs, modules, and equipment. Designed to address the demand for limited waterfront access land for industrial use, the facilities offer plug-and-play infrastructure solutions for varying business needs and heavy operations.

On 8 Jun 2022, JTC awarded to JP, via a tender, the 5-year operatorship of both OMC1 (operated by JP since 2012) and the new OMC2. Built with higher floor loading and deeper draft, the new OMC2 can offer more complex fabrication load outs, mobilisations for offshore campaigns, maintenance, repair, and operations activities.

In Q2 FY2023, JP commenced operations in OMC2. With OMC1 and OMC2, together with Homeport's existing offshore marine support capabilities, forming a part of its Project Logistics Hub (PLH) expansion to support the M&OE industry development in offshore renewables projects, JP offers a "Single-Stop Service" that eliminates

time-consuming activities such as planning and scheduling of resources from multiple stakeholders.

Customers can experience centralised coordination, be kept informed every step of the way, and stay focused on their business goals. Without cost pressure to invest in a waterfront facility with heavy machinery and equipment, customers can stay cost-competitive and focused on exploiting business opportunities. As such, this one-stop approach will meet diverse customer needs and help enhance Singapore's overall competitiveness in the rapidly growing project logistics marketplace.



JP offers a "Single-Stop Service" that eliminates time-consuming activities such as planning and scheduling of resources from multiple stakeholders.

DIGITALISATION & MECHANISATION



Several years of hard work in developing our port digital twin (JP Glass) paid off as JP was one of the 4 top awardees at Esri's inaugural GeoInnovation Awards ceremony.

Above: Jurong Port's Digitalisation Department receiving the inaugural Esri GeoInnovation award

Several years of hard work in developing our port digital twin (JP Glass) paid off as JP was one of the 4 top awardees at Esri's inaugural GeoInnovation Awards ceremony. This award serves as an industry-leading benchmark in the field of geographic information systems. JP Glass was recognised for its outstanding level of innovativeness and comprehensive geospatial capabilities that can collate operating data from multiple sources and translate them into near-real-time insights for informed decision-making.

This award serves as an industry-leading benchmark in the field of geographic information systems. JP Glass was recognised for its outstanding level of innovativeness and comprehensive geospatial capabilities that can collate operating data from multiple sources and translate them into near-real-time insights for informed decision-making.

In FY2023, the launch of the JP Autonomous Cargo Submission platform (JACS) and Digital Tally Solution (DTS) mobile application will help to further increase productivity. The JACS uses intelligent document processing capabilities to translate hatch lists from agents in their semi-structured format into structured data. Complemented by the DTS which digitalises all cargo counting activities into and from JP, both digital solutions work synergistically to enable our staff to be more efficient in discharging cargo.

On the mechanisation-front, JP completed successful trials on more than 5 vessels in the use of artificial intelligence and video analytics to auto-detect and escalate non-compliance to safety rules, such as usage of personal protective equipment by frontline staff. This in-line with our plan to leverage on technology for productivity growth and enhancement of workplace safety.



Below: Implementation of hatch CCTV camera system



JP thanks the Board for guiding us through another challenging year. We also thank Mr Robert Yap and Mrs Gina Lee-Wan for their outstanding leadership, stellar service, and dedication as Board of Directors till 1 October 2023.

JP welcomed Ms Marina Chin, who joined the Board as of 1 October 2023.

BOARD MEMBERS

As at 31 July 2024

Mr Wee Siew Kim
Chairman

Mr Tan Boon Khai
Director

Mr Terence Seow
Director

Mr Muthukrishnan Ramaswami
Independent Non-executive Director

Mr Vincent Chong
Independent Non-executive Director

Mr Lee Chiang Huat
Independent Non-executive Director

Mr Wan Chee Foong
Independent Non-executive Director

Ms Jamie Ang
Independent Non-executive Director

Ms Marina Chin
Independent Non-executive Director

Mr David Tan
Alternate Director

SENIOR LEADERSHIP TEAM

As at 31 July 2024

Mr Terence Seow
Director and Chief Executive Officer

Mr Samuel Siew
President, Multipurpose Terminals

Mr Francis Nyan
Chief Financial Officer

Mr Desmond Lim
Chief Corporate Services Officer

Mr Desmond Ong
Chief Digital Officer

37 Jurong Port Road
Singapore 619110
T: +65 6265 0666

 www.jp.com.sg

 [jurong-port-pte-ltd](https://www.linkedin.com/company/jurong-port-pte-ltd)