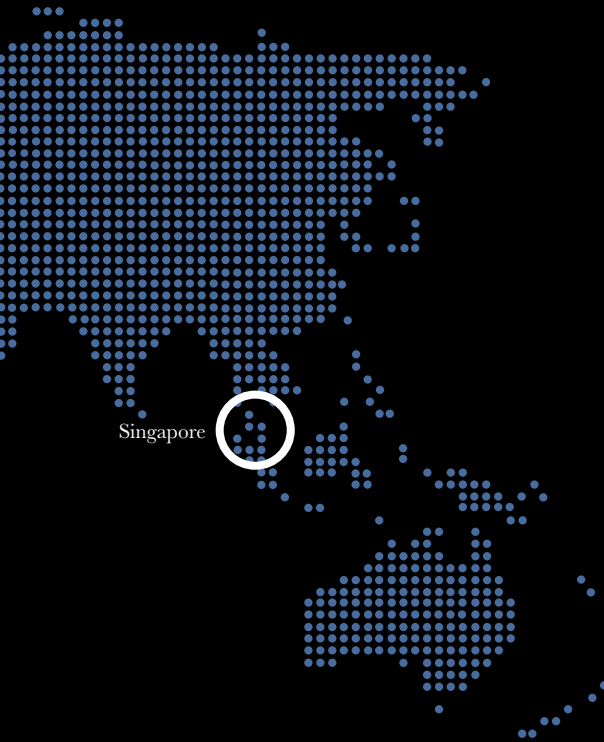


# one-north

*TURNING DENSITY  
INTO ADVANTAGE*

**A**s the national custodian and developer of industrial space and solutions, JTC Corporation develops land and infrastructure for Singapore's economic development, and seeks to maintain the city-state's competitive advantage, despite its land scarcity. Since Singapore began moving towards a knowledge-driven economy, JTC had to adapt the industrial landscape to support new industries. one-north was conceived as an integrated R&D 'city within a city', with a high-density, exciting and conducive work-live-play-learn environment that would attract global R&D activities and talent.



Singapore





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## The Challenge

Industrialisation drove the engine of Singapore's rapid economic development for two decades since the early 1960s. This was supported by the Jurong Town Corporation (now JTC Corporation), a government agency that prepared land and developed standard factories and flatted factories in the sprawling Jurong Industrial Estate and elsewhere to provide the necessary physical infrastructure for industrialisation. The quick start-up and plug-and-play industrial environment quickly gained the confidence of overseas industrialists who were also drawn to Singapore's lower costs.

The pace of industrial growth accelerated rapidly in the 1970s and early 1980s. However, as lower cost regional countries started to compete for similar investments, it signalled the need

for Singapore to move up the value chain, from low-cost manufacturing to a knowledge-based economy that could sustain higher wages and land costs. JTC developed the first generation of science and technology parks, beginning with the Singapore Science Park in the early 1980s.

By the 1990s, Singapore had intensified its efforts to become a knowledge-based global economy to ensure its competitive edge. As the quality of its industrial infrastructure has long played an important role in differentiating Singapore, as well as to use limited land more productively, JTC had to rethink its approach. It had to go beyond just providing efficient infrastructure and move towards optimising land use and providing innovative industrial infrastructure solutions, in tandem with the move of the economy upstream.



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01 Aerial view of the standard factories in Jurong Industrial Estate in the 1960s.

02 Singapore Science Park, built in the early 1980s.



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## The Solution

one-north is an excellent example of a new generation integrated research business hub, designed to serve new growth knowledge clusters such as biomedical and engineering sciences, infocomms and media. It also exemplifies Singapore's cluster development strategy, as part of a broader national industrial policy. The strategy facilitates the sharing of core capabilities and infrastructure between industries within targeted clusters, thus sharpening Singapore's competitive edge by creating value-added synergies for investors.

The 200-hectare one-north site is at the heart of a technology corridor first envisioned in Singapore's 1991 Concept Plan. It is close to the National University of Singapore,

the teaching hospital at the National University Hospital, INSEAD Business School, Singapore Polytechnic and the Singapore Science Parks. This co-location of industry and academia, public and private sectors, facilitates synergies and a culture of collaboration.

It is also a 'city within a city' where knowledge workers work, live, learn and play in a dense, vibrant community. At one-north, JTC has shifted from purely providing hard infrastructure to also developing the soft aspects that makes a place liveable. From the master plan – by Pritzker prize-winning architect Zaha Hadid – stage in 2001, one-north has redefined ideas of what an industrial park should be.



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Sited on a natural undulating landscape, one-north has three distinct clusters – Biopolis, Fusionopolis and Mediapolis – each with dedicated buildings. They form the central arteries of a dense network of social, commercial and residential nodes. Some developments include The Star, a civic-cultural-retail complex and The Rochester, a mixed-use development with a business hotel, condominium and shopping mall.

In the midst of the new developments, there are also conserved 'black-and-white' style colonial bungalows – former military barracks at Rochester Park and Nepal Hill which have been transformed into a leadership and training development hub, and a chic restaurant and bar enclave, respectively – and low-rise colonial apartments at Wessex Estates, that lend a depth of heritage and charm.

Within the densely built environment, a 16-hectare park links all the clusters within one-north. It creates a scenic contrast to the heritage bungalows and new state-of-the-art buildings. It also provides a welcome respite

for people to unwind and interact. In one-north, JTC has created an intensive and variegated multi-use environment conducive for people to work, live, learn, and play.

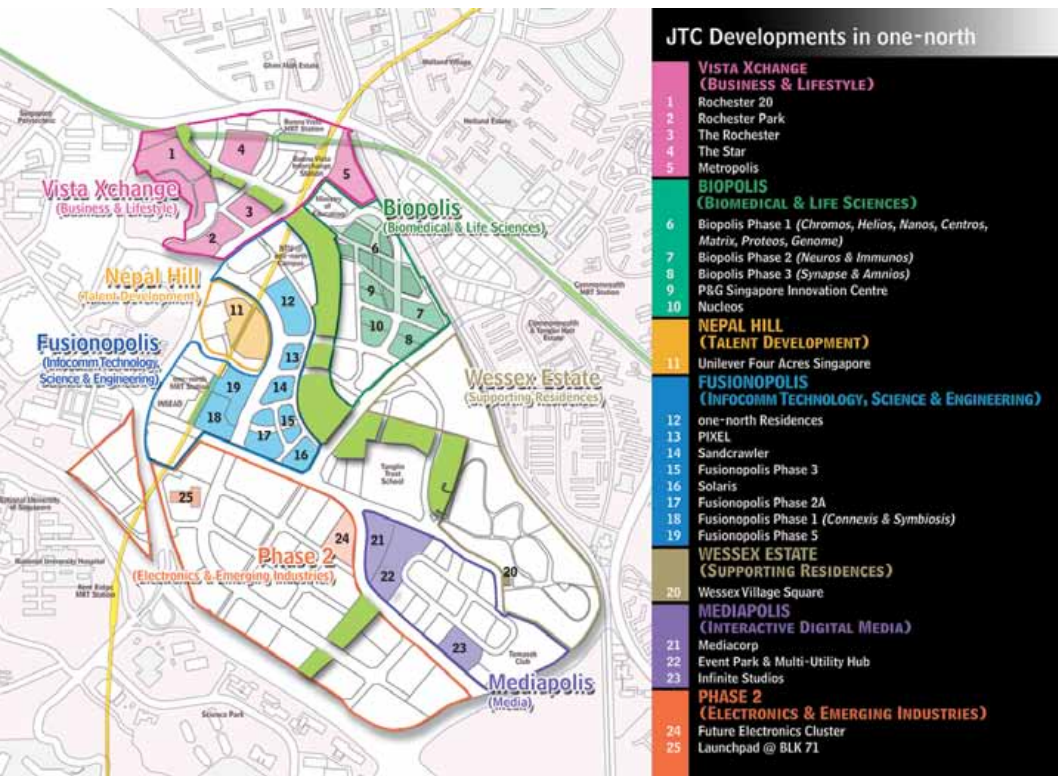
This raises its appeal not only to potential investors, but also to the globally mobile talent required by knowledge industries.

Beyond physical infrastructure, JTC is promoting innovation in one-north through the EXCITE programme which was initiated with several other government agencies. EXCITE@one-north supports the industry development strategy by providing companies with opportunities for on-site test-bedding, showcasing and commercialisation of ideas. Current test-bed projects include an RFID-enabled bike share programme and an electric vehicle sharing scheme, which offer 'last mile' connections between the subway and work locations.

- 01 Biopolis
- 02 The park at one-north.
- 03 The conserved 'black-and-white' bungalows at Rochester Park.

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## The Outcome

Today, Biopolis is an established enclave for biomedical sciences, housing private and public sector research institutes with over 260,000 square metres of space. An iconic two-tower building with over 120,000 square metres of space developed by JTC is the hallmark of Fusionopolis. Several new developments are underway in Biopolis and Fusionopolis. This includes Fusionopolis Phase 2A, which will comprise three towers and house several research institutes of Singapore's Agency for Science Technology and Research. Leading companies such as GlaxoSmithKline, Novartis, Merck, P&G and Double Negative have established their operations

in Biopolis and Fusionopolis to take advantage of the unique environment, shared facilities and opportunities for collaborations.

The 19-hectare Mediapolis is set to become a media eco-system anchored by shared facilities such as soundstages, advanced digital screen studios, motion capture studios, and broadcast facilities. Key media companies that have already announced major projects at one-north include the globally renowned Lucasfilm, Infinite Studios, Mediacorp and a suite of new media start-ups.

Moving forward, the one-north Masterplan 2020 vision aims to enhance connectivity within one-north and beyond. JTC is currently conducting feasibility



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- 01 Map of one-north.
- 02 Food court in Fusionopolis.



studies for a development that decks across the air space above the Ayer Rajah Expressway. If found viable and implemented, it would create new space and provide better physical connectivity between one-north and the Science Parks. This would help spur greater multi-disciplinary collaborations and seed new industries.

At every stage of Singapore’s economic development, JTC has had to stretch its imagination and dream up new ways to differentiate Singapore and overcome its

land constraints. one-north is an excellent example of an innovative solution in response to Singapore’s challenges and opportunities. Here, density has been used to enhance vibrancy, sustainability and synergy, as well as optimise the use of limited land. The growing presence of global and local companies and talent in one-north attests to its success in contributing to the growth of important new economic sectors for Singapore, while improving the liveability and sustainability of the one-north community.

Mr **Manohar Khiatani** is the CEO of JTC Corporation. JTC is the Singapore Government’s lead agency to plan, promote and develop key industrial infrastructure and facilities, in support of economic development. Prior to joining JTC, Mr Khiatani was the Deputy Managing Director at the Singapore Economic Development Board (EDB). He joined the EDB in 1986. Between 1994 and 1999, Mr Khiatani was Managing Director of Preussag SEA. He returned to the EDB in 1999. Mr Khiatani, a Singapore Government Scholar, holds a Masters Degree (Naval Architecture) from the University of Hamburg, Germany. He attended the Advanced Management Program at the Harvard Business School in 2006.