NRI Point of View

Global Central Business Districts 2.0

- New World of Opportunities

— A view beyond COVID-19

Nomura Research Institute Ltd.

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MEGA-TRENDS that will define the future of offices!

CBD areas will remain centre of attraction – pride for all stakeholders: Government, occupants and employees

1)

Mixed Use Developments – Setting foundation for Future CBD's Masterplans

2 }

Inevitable intervention of technology to play a vital role in deciding new age office buildings

3)

* CBD: Central Business District

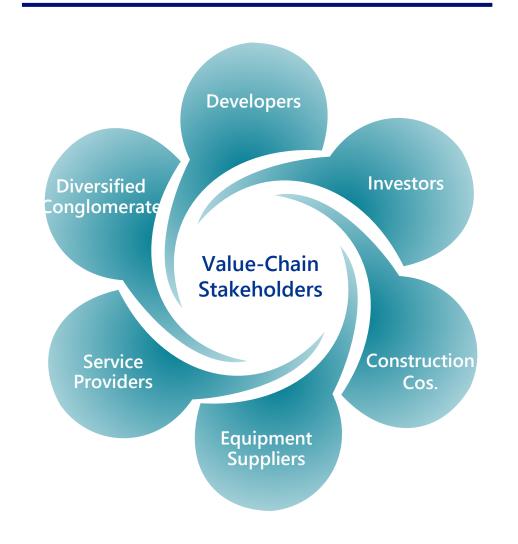
New and multiple business opportunities already on the way for system integrators and equipment suppliers

We analysed 8 global cities and identified opportunities for key stakeholders

Market Coverage

Country City Japan Tokyo Singapore Singapore South Korea Seoul **USA New York** Delhi India **Bangalore Philippines** Manila **Thailand** Bangkok

Player Relevance



Major Challenges for CBDs

Covid-19 added to the list of challenges faced by Real Estate developers

COVID Induced Recent Challenges

Increased Demand for Safety

 Physical distancing has become a necessity in the current scenario

Work from Home Challenging **Physical** Workspaces

 Remote working/ WFH has emerged as the substitute for traditional office spaces

Unaffordable **CBDs**

• Falling economy forced businesses to look for cheaper office spaces away from **CBD**

Non-COVID Legacy Challenges

Rising **Demand for Flexibility**

• Companies look for spaces that can be easily adjusted to their changing needs

Deep Congestion in Cities

Businesses want to provide work life balance to their employees, with limited commute

Promoting Workforce Engagement

Companies prefer office spaces that provides modern amenities and make their employees feel belonged

What Global Top Executives are talking about?

Based on statements made by direct stakeholders like developers, investors, tenants, Government, employees, etc.; major agendas have been identified (1/2)

Hot Topics Being Discussed after COVID-19

Sectors such as IT, ed-tech, e-commerce healthcare grew despite of COVID-19; Shifting **Business** businesses out of China by foreign companies Growth Implications – Creation of business opportunities in specific sectors & geographies leading to increased demand for commercial real estate • Govt push for high quality public infrastructure and enhanced connectivity across major cities **Mobility** Implications – Shifted tenant preference towards infrastructurally advanced cities; Boost to city's economy and real estate Tenants from adversely impacted industries downsizing their businesses and cutting down Cost office spaces Control Implications – Decreased demand for commercial real estate Tenants from growing industries expanding their businesses & demanding offices with top-notch **Talent** designs to attract best local & global talent **Acquisition** Implications – Increased demand for attractive

and cost efficient office spaces

- New **Development**
- Real estate developers planning new commercial developments due to land availability, govt incentives, demand for certain locations, etc.
- Implications Increased business opportunities for developers, multiple option availability for the tenants
- Re-**Development**
- Substantial renovation of existing office structures
- Implications Re-development may lead to mixed use developments, revitalization of business districts and renew prosperity to entire community
- Flexible Work **Space**
- Ready to support and agile work spaces with flexible furniture and design, hybrid work culture where employees can work from offices, homes or any suitable location
- Implications Business continuity for tenants, flexibility of work to the employees
- Satellite

Offices

- Distribution of HQs into multiple different offices
- Implications Cater new demand of tenants relocating to suburbs/ fringe locations closer to employees' residences

What Global Top Executives are talking about?

Based on statements made by direct stakeholders like developers, investors, tenants, Government, employees, etc.; major agendas have been identified (2/2)

Hot Topics Being Discussed after COVID-19



- Urban development with functionally integrated offices, retail centres, restaurants, creative spaces, etc.
- Implications Short commutes and better work life balance for the employees of tenants

Building **Ecosystem**

- Provision of amenities like entertainment centres, amphitheatres, etc. to the office buildings
- Implications Creation of atmosphere where employees can get engaged and spend more time around offices

Contactless **Buildings**

- Buildings equipped with contactless access, contact tracing, etc.
- Implications Top-notch safety provision to the employees of tenants

Smart Fittings

- Office buildings equipped with smart features like motion sensors for crowd monitoring, conference room scheduling, smart surveillance
- Implications Greater control of the office space, frictionless workplace experience

AOM* **Upgrade**

- Building air replacement with new air-filtration technologies, energy efficient cooling system
- Implications Provide safe environment for employees, operational cost optimization

Deep Tech

- Leveraging Al, IoT, RE Tech for digital transformation of workplaces
- Implications Enhanced transparency, improved tenant comfort and fostered digital culture

What Global Top Executives are talking about?

From real estate point of view, such hot topics are being categorized in 4 critical factors which will directly or indirectly shape future of office segment

Categorization of Major Agendas

Demand Drivers

Demand drivers will help in deciding which city will bring more development potentials in near future. Which would also assess importance of office space

- Business Growth
- Mobility
- Cost Control
- Talent Acquisition

Supply Drivers

Supply drivers will suggest kind of development city is inclined towards based on land availability and maturity

- New Development
- Re-Development

New Concept Related

With the challenges of pollution, congestion and ease of life; new concepts will emerge which needs to be followed by entire real estate ecosystem

- Flexible
 Work Space
- Satellite Offices
- Mixed Used Development
- Building Ecosystem

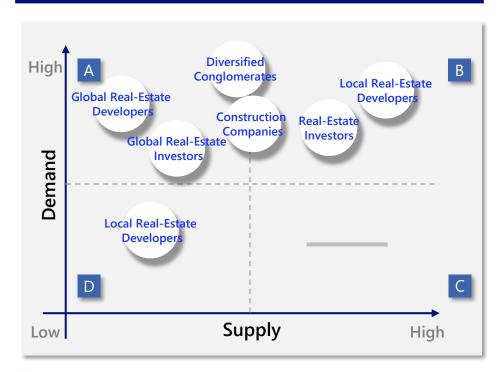
New Normal

eye of detail about safety and health measures. Technology would play a vital role within real estate environment

- Contactless Buildings
- Smart Fittings
- AQM Upgrade
- Deep Tech.

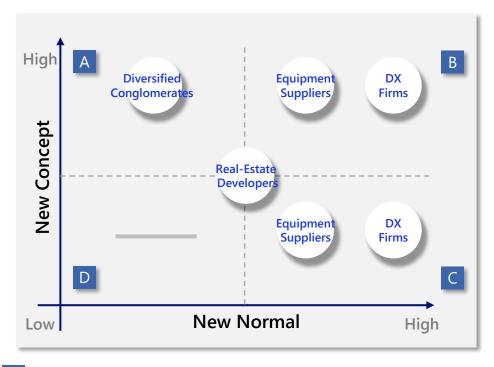
Multiple opportunities will emerge for multiple stakeholders

Demand vs Supply Analysis: Traditional Biz



- Low supply is a clear sign of weak financial position of local players and so create opportunities for Global investors to developers
- With both high demand and supply, more opportunities for local players. Diversified conglomerates may partner for multiple synergies
- No demand but higher supply led market, pushes existing players for defaults or bankruptcies
- Very limited opportunities to lie with local players

New Concept vs New Normal: Technology Led



- With prior Global experience, diversified conglomerates can contribute with multiple products
- There are immediate business opportunities to sell advanced products as well as services
- Demand for advanced products as well services keeping in behavioural change of end-asset users
- With no behavioural change new products are difficult to sell

Global View | Our Findings

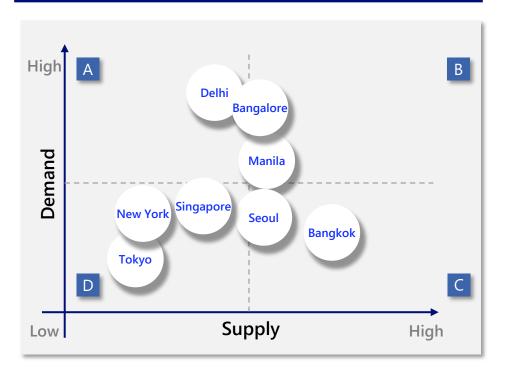
Summary of topics being discussed in each city (1/2) **Priority** (O) High X No Medium Low (8) **New York** Delhi Singapore Seoul Manila Tokyo Bangalore Bangkok Improved with Firms expect With restricted Being centre One of the IT dependent **Tourism** Moderate as a **Business** only moderate of world, biz to fastest with city supporting focus on BPO focused, big travel will whole country Growth growth remain slow be usual heavy FDI & POGO growth impact Large scale IT City depend More of wait Instead In very rare Few start-ups Not a move as Shutdowns & & watch, some companies on domestic focus on cases cut space, shift of now space cut **Cost Control** triggered majorly done announced companies restructuring to co-work Already well Pub. transport Technology **Employees** use A legacy Not an agenda Autonomous Not a focus which is long is one of the required for problem, need established private area in current as of now Mobility pillar of city efficiencies vehicles solution situation network term X Fairly mature Fairly mature City as majority This is high **Employees** Fairly mature Office at prime Not an agenda **Talent** market market population, less priority to be look for prime being IT location, an as of now **Acquisition** important placed in CBD capital of India imp. criteria and new X Land Less activities Focusing on Almost Abundant land Will remain Short term New New unavailable because of low slow with work sib-urban negligible in and shifting slow down unoccupied **Development** from home demand **CBDs CBDs** because of stock added areas X increased vacancy. New Slow activity Still no agenda **CBD** incentive Low priority Grade B & C Not required Not required activities may Rebuildings in to with low scheme by for old CBD start in 2~3 (central Delhi) **Development** residential demand Government X years Office fixture Opportunities Opportunities Only in the Avg. employee Shared offices Being cost High focus to Flexible Work & furniture for fixtures & contain virus in for fixtures & form of cospace less & sensitive, no are being **Space** initial days so possibilities considered innovation furniture furniture working major moves

Global View | Our Findings

Summary of topics being discussed in each city (2/2) **Priority** (O) High X No Medium Low **® ® New York** Delhi Tokyo Singapore Seoul **Bangalore** Manila Bangkok Hub & spoke Instead hybrid Decentralization Hub & spoke Only in the Mega size of Majority of Few cases of form of cotenants makes adopted by decentralization (home + and shift to model to tenants are **Satellite Offices** of HQ office) sub-urbs optimize rent working space it unviable **BPO** segment small Identified pre-Major focus Key focus and Residential as Had been a Key area to Direction Has become a Mixed Use includes COVID but will towards urban part of mixed new focus area priority to attract area Development use is focus workforce residential regeneration decongest slow down (0)Partially CBDs Less priority as Less important Eg. like **Partially** First focus on Young age **Employees** Building with mixed use basics of office employees as back to office already cover installing art already exists of now **Ecosystem** development buildings driving factor is priority museums Heavy focus on Sensor based Gradual steps Contactless Market not vet No major steps Crowd Advanced Contactless towards face management gates planned sensors and new mature elevator on account of touchless entry **Buildings** recognition & face recog. for subways technology systems cost systems X Has been Multiple Local Govt. Work-stations Advance Companies No major steps Intelligent surveillance focus are preapplications high emphasis installation in still evaluating on account of building mgmt **Smart Fittings COVID** times acceptable on innovation parks & hotels will pick-up restart time cost systems Similar to Advance AC Subsidy for One of the 1st MERV13 filters Tenants have Because of New system to systems and low energy air city to identify and bipolar started push from alobal trend upgrade **AQM Upgrade** conditioners demanding filters spread via air ionization existing ones tenants Considerina Al based tech AI & MLR with Govt. funds for IoT for Will remain a Will remain a Data security a for disaster data of spatial advanced cleaning and slow agenda slow agenda concern with data driven sys Deep Tech. digital tech. & behaviour sanitization werk from home management gradually

Business opportunities examples and illustrations (1/2)

Demand vs Supply Analysis: Traditional Biz



- Delhi and Bangalore continue to keep with demand, though some challenges. Attractive destinations for development as well as investment
- Manila, being outsourcing hub, will continue to get business and could be a zone for investment backed
- Tokyo, NY & Singapore may not bring new demand but some local level activities shall tend to continue
- In short run, Bangkok continue to struggle with weak economy and already oversupplied with office stock

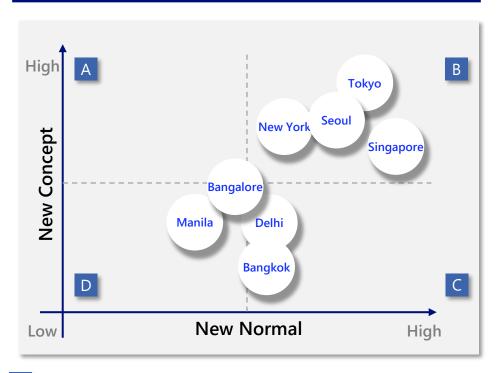
Business Opportunity Suggestions

City	Kind of Opportunities	For whom!
Delhi NCR	Investment into existing projects in districts with high potential	Global RE Investors
Delhi NCR & Bangalore	New development in core CBD areas (JV possibilities)	Global & Local RE Developers
Bangalore	Co-working culture to get re-energised because of start-ups	Global RE Investors & Local RE Developers
Manila	Some development work will continue	Global RE Investors & Local RE Developers
Tokyo, Singapore & New York	Sluggish demand will lead to limited new supply	Local RE Developers
Seoul	New development out of CBDs (sub-urban areas)	Global RE Investors & Local RE Developers
Bangkok	-	-

Global View | Our Findings

Business opportunities examples and illustrations (2/2)

New Concept vs New Normal: Technology Led



- None of the city falls under this quadrant
- All developed cities offer opportunities around advanced technology and innovative concepts
- Delhi and Bangkok focusing on immediate COVID related problems and not much on technology side
- Bangalore and Manila both, despite being IT oriented business, less focus on new technology or concepts

Business Opportunity Suggestions

City	Kind of Opportunities	For whom!
All Cities	Clear need of better air circulation in terms new system or upgradation	Equipment Supplier & Integrators
Developed Cities	Mixed use development to achieve sustainability	Diversified Conglomerates, Design Consulting & Advanced Engineering
Developed Cities	Al & IoT solutions to solve future problems via data driven approach	DX Consulting
Developing Cities	Face recognition, advanced elevator systems, sensors for touch free environment	Electronic Equipment & System Integrators
Developing Cities	Light mixed use development approach	Diversified Conglomerates & Global Real Estate Developers

Tokyo | Case Study #1

Tokyo is transforming itself from suit-and-tie office environment into a vibrant and lively hub to attract tenants & create sustainable environment

Prospects of Mixed-use Developments In Tokyo



Tokyo Midtown Yaesu, Chuo, Tokyo



Toranomon-Azabudai project © DBOX for Mori Building Co.

- Mixed use high rise project developed by the redevelopment association managed by Tokyo based real estate developer Mitsui Fudosan
- 3.0 Mn sq. ft. mixed-use skyscraper
- Offices and Bylgari Hotel Tokyo, along with an elementary school atop a retail podium and a below-grade transportation hub
- Direct access to Tokyo Station
- Scheduled to be completed in 2022
- Mixed use urban redevelopment project by Mori Building Company and Heatherwick Studio
- 6,000 sq. m. central landscaped square, office, residential, retail, school & temple
- Multi-purpose development will create city-within-city full of greenery
- Scheduled to be completed in 2023

Overview

Mixed use development efforts happening across Tokyo to generate and sustain vibrancy

Challenges/ Opportunity

- Need to rejuvenate the city that currently has 60-70% buildings that are more than 50 years old
- Make sub-districts young and lively
- Optimize the use of underutilized resources in the city

Solution

- Public private partnership with a shared vision of urban rejuvenation and mixed use redevelopment
- Developers and property owners seeing value in helping to make surrounding areas more attractive, recognizing that it will enhance their own individual developments

Business Opportunity

- Real estate developers Plan & execute mixed-use developments
- Investors Invest in potential projects for higher gains & reduced risks

Tokyo | Case Study #2

Developer Mitsui Fudosan is leveraging deep tech to strengthen disaster prevention capabilities of its buildings and make them more user friendly

Use of Deep Tech By Mitsui Fudosan

SCADAFence



Mitsui Fudosan

Global leader in Operational Technology (OT) & Security



- Secure Mitsui Fudosan's critical facilities & building management systems
- Enhanced ability to adopt Smart City technologies & digitalize OT infra
- Collaboration in line with Japanese govt's efforts to ensure that hackers don't use IoT devices to launch attacks against Japanese infrastructure

NEC Corporation



Mitsui Fudosan

Japanese multinational IT and electronics company

"Sequence," new hotel brand by Mitsui Fudosan



- "Smart Hospitality Service" uses facial recognition to match pre-registered facial images with customer reservations to improve safety and security
- Boosted customer experience by enhanced hotel services such as check-in, entertainment facilities, cashless payments

Overview

Japanese real estate developer, Mitsui Fudosan emphasizing on the use of technology in their buildings for enhanced tenant experience and safety

Challenges/ Opportunity

- Need for real estate developers to make their buildings (residential, commercial, hotels, etc.) disaster proof, safe and seamless for their tenants/ users
- Special emphasis to be given by Japanese developers to make buildings protected from earthquake

Solution

- Mitsui Fudosan is incorporating deep technologies in its assets such as office buildings, hotels to enhance safety and customer experience
- Set up of Mitsui Fudosan Comprehensive Technology Academy, a building management training facility aimed at improving technical capabilities during normal times and improving practical skills in emergencies

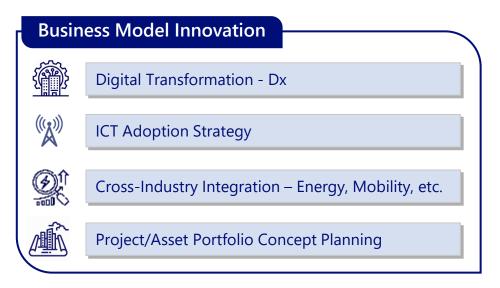
Business Opportunity

- DX Firms Innovate & develop deep tech solutions to enhance safety and experience of the buildings depending on geographical characteristics
- Investors/ Diversified Conglomerates Identify potential start-ups, companies/ technologies for investments

How NRI Can Help?

NRI offers end-to-end solutions, covering strategy creation to implementation









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