Global Central Business Districts 2.0
- New World of Opportunities

— A view beyond COVID-19

Nomura Research Institute Ltd.

May, 2021
MEGA-TRENDS that will define the future of offices!

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

2. Mixed Use Developments – Setting foundation for Future CBD’s Masterplans

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

* 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

<table>
<thead>
<tr>
<th>Country</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>Tokyo</td>
</tr>
<tr>
<td>Singapore</td>
<td>Singapore</td>
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<tr>
<td>South Korea</td>
<td>Seoul</td>
</tr>
<tr>
<td>USA</td>
<td>New York</td>
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<tr>
<td>India</td>
<td>Delhi</td>
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<tr>
<td></td>
<td>Bangalore</td>
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<tr>
<td>Philippines</td>
<td>Manila</td>
</tr>
<tr>
<td>Thailand</td>
<td>Bangkok</td>
</tr>
</tbody>
</table>

Player Relevance

- Developers
- Investors
- Construction Cos.
- Equipment Suppliers
- Service Providers
- Value-Chain Stakeholders
- Diversified Conglomerates
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

<table>
<thead>
<tr>
<th></th>
<th>Business Growth</th>
<th>Cost Control</th>
<th>Talent Acquisition</th>
<th>Mobility</th>
<th>New Development</th>
<th>Re-Development</th>
<th>Flexible Work Space</th>
<th>Satellite Offices</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>• Sectors such as IT, ed-tech, e-commerce healthcare grew despite of COVID-19; Shifting businesses out of China by foreign companies</td>
<td>• Tenants from adversely impacted industries downsizing their businesses and cutting down office spaces</td>
<td>• Tenants from growing industries expanding their businesses &amp; demanding offices with top-notch designs to attract best local &amp; global talent</td>
<td>• Govt push for high quality public infrastructure and enhanced connectivity across major cities</td>
<td>• Real estate developers planning new commercial developments due to land availability, govt incentives, demand for certain locations, etc.</td>
<td>• Substantial renovation of existing office structures</td>
<td>• 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</td>
<td>• Distribution of HQs into multiple different offices</td>
</tr>
<tr>
<td>2</td>
<td>• Implications – Creation of business opportunities in specific sectors &amp; geographies leading to increased demand for commercial real estate</td>
<td>• Implications – Decreased demand for commercial real estate</td>
<td>• Implications – Increased demand for attractive and cost efficient office spaces</td>
<td>• Implications – Shifted tenant preference towards infrastructurally advanced cities; Boost to city’s economy and real estate</td>
<td>• Implications – Increased business opportunities for developers, multiple option availability for the tenants</td>
<td>• Implications – Re-development may lead to mixed use developments, revitalization of business districts and renew prosperity to entire community</td>
<td>• Implications – Business continuity for tenants, flexibility of work to the employees</td>
<td>• Implications – Cater new demand of tenants relocating to suburbs/ fringe locations closer to employees’ residences</td>
</tr>
</tbody>
</table>
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

<p>| | | |</p>
<table>
<thead>
<tr>
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</table>
| 9 | Mixed Use Development | • 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 |
| 10 | 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 |
| 11 | Contactless Buildings | • Buildings equipped with contactless access, contact tracing, etc.  
   |   | • Implications – Top-notch safety provision to the employees of tenants |
| 12 | 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 |
| 13 | AQM* Upgrade | • Building air replacement with new air-filtration technologies, energy efficient cooling system  
   |   | • Implications – Provide safe environment for employees, operational cost optimization |
| 14 | Deep Tech | • Leveraging AI, IoT, RE Tech for digital transformation of workplaces  
   |   | • Implications – Enhanced transparency, improved tenant comfort and fostered digital culture |

*AQM Upgrade – Air Quality Management System Upgradation Work*
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

1. Business Growth
2. Mobility
3. Cost Control
4. Talent Acquisition

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

5. New Development
6. 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

7. Flexible Work Space
8. Satellite Offices
9. Mixed Used Development
10. Building Ecosystem

**New Normal**
COVID-19 has brought an eye of detail about safety and health measures. Technology would play a vital role within real estate environment

11. Contactless Buildings
12. Smart Fittings
13. AQM Upgrade
Multiple opportunities will emerge for multiple stakeholders

**Demand vs Supply Analysis: Traditional Biz**

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

**New Concept vs New Normal: Technology Led**

- **A** With prior Global experience, diversified conglomerates can contribute with multiple products
- **B** There are immediate business opportunities to sell advanced products as well as services
- **C** Demand for advanced products as well services keeping in behavioural change of end-asset users
- **D** With no behavioural change new products are difficult to sell
### Global View | Our Findings

#### Summary of topics being discussed in each city (1/2)

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

**Priority**

- 🌟 High
- 🔴 Low
- 🟥 No

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### Satellite Offices

**Tokyo:** Few cases of decentralization of HQ

**Singapore:** Instead hybrid (home + office)

**Seoul:** Decentralization and shift to sub-urbs

**New York:** Hub & spoke model to optimize working space

**Delhi:** Only in the form of co-working space

**Bangalore:** Mega size of tenants makes it unviable

**Manila:** Hub & spoke adopted by BPO segment

**Bangkok:** Majority of tenants are small

### Mixed Use Development

**Major focus area**

**Key focus and includes residential**

**Direction towards urban regeneration**

**Residential as part of mixed use is focus**

**Has become a new focus area**

**Had been a priority to decongest**

**Key area to attract workforce**

**Identified pre-COVID but will slow down**

### Building Ecosystem

**Partially CBDs already cover**

**Less important with mixed use development**

**Eg. like installing art museums**

**Partially already exists**

**First focus on basics of office buildings**

**Young age employees as driving factor**

**Employees back to office is priority**

**Less priority as of now**

### Contactless Buildings

**Gradual steps towards face recognition**

**Crowd management & face recog.**

**Contactless gates planned for subways**

**Heavy focus on sensors and new technology**

**Market not yet mature**

**Advanced elevator systems**

**No major steps on account of cost**

**Sensor based touchless entry systems**

### Smart Fittings

**Has been focus are pre-COVID times**

**Multiple applications acceptable**

**Local Govt. high emphasis on innovation**

**Work-stations installation in parks & hotels**

**Advance surveillance will pick-up**

**Companies still evaluating restart time**

**No major steps on account of cost**

**Intelligent building mgmt systems**

### AQM Upgrade

**Advance AC systems and filters**

**Subsidy for low energy air conditioners**

**One of the 1st city to identify spread via air**

**MERV13 filters and bipolar ionization**

**Tenants have started demanding**

**Because of push from tenants**

**Similar to global trend**

**New system to upgrade existing ones**

### Deep Tech.

**AI based tech for disaster management**

**AI & MLR with data of spatial & behaviour**

**Govt. funds for advanced digital tech.**

**IoT for cleaning and sanitization**

**Will remain a slow agenda**

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**Data security a concern with work from home**

**Considering data driven sys gradually**

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**Global View | Our Findings**

**Summary of topics being discussed in each city (2/2)**

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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.

Note: Diversified Conglomerates may join hands with other RE developers or investors to enter or expand in these cities.
Business opportunities examples and illustrations (2/2)

New Concept vs New Normal: Technology Led

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

A None of the city falls under this quadrant

B All developed cities offer opportunities around advanced technology and innovative concepts

C Delhi and Bangkok focusing on immediate COVID related problems and not much on technology side

D Bangalore and Manila both, despite being IT oriented business, less focus on new technology or concepts
# 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

<table>
<thead>
<tr>
<th>Overview</th>
<th>Challenges/Opportunity</th>
<th>Solution</th>
<th>Business Opportunity</th>
</tr>
</thead>
</table>
| • Mixed use development efforts happening across Tokyo to generate and sustain vibrancy | • 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 | • 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 | • Real estate developers - Plan & execute mixed-use developments  
• Investors - Invest in potential projects for higher gains & reduced risks |

### Tokyo Midtown Yaesu, Chuo, Tokyo

- Mixed use high rise project developed by the redevelopment association managed by Tokyo based real estate developer Mitsui Fudosan
- 3.0 Mln sq. ft. mixed-use skyscraper
- Offices and Bvlgari 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

### Toranomon-Azabudai project

- 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

Source: News Articles
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**

<table>
<thead>
<tr>
<th>SCADAFence</th>
<th>Mitsui Fudosan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global leader in Operational Technology (OT) &amp; Security</td>
<td>Leader in smart cities digital transformation and innovation</td>
</tr>
</tbody>
</table>

- 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

**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

<table>
<thead>
<tr>
<th>NEC Corporation</th>
<th>Mitsui Fudosan</th>
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<tr>
<td>Japanese multinational IT and electronics company</td>
<td>“Sequence,” new hotel brand by Mitsui Fudosan</td>
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- “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

**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

Source: News Articles
How NRI Can Help?

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

**Corporate Planning**
- Corporate Strategy Development
- New Market Entry Strategy
- M&A, Partner Search and PMI
- Market Research and Insights

**Business Model Innovation**
- Digital Transformation - Dx
- ICT Adoption Strategy
- Cross-Industry Integration – Energy, Mobility, etc.
- Project/Asset Portfolio Concept Planning

**Portfolio Building**
- Investment Opportunity Identification
- Asset/Product Mix Development
- Demand Assessment and Sales Forecasting
- Project Feasibility Assessment

**Business Effectiveness**
- Organisation Structure Design
- Sales and Marketing Effectiveness
- Customer Satisfaction Assessment & Improvement
- Vendor and Cost Management
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※ For accessing detailed report and further discussion on the topic please contact <gpg-infra@nri.co.jp>
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