

The background of the entire page is a complex, abstract geometric pattern. It features a network of thin black lines connecting various points, creating a mesh-like structure. Overlaid on this are several large, semi-transparent blue shapes that resemble faceted crystals or modern architectural forms. The overall color palette is light blue and white, with the dark blue of the text boxes providing a strong contrast.

The Future Workplace

Resolving uncertainty- Charting
the future of offices in India

FOREWORD

If 2020 was the year that changed everything, 2021 will be the year where change becomes the 'Next Better' and adapting to this will require resilience, digital insurgency and innovation. While 2021 may not elude all the challenges of a pandemic-affected economy, but the planning and execution for a sector-wide recovery has been laid out. Backed by positive economic fundamentals, healthy demand and quality supply infusion across sectors, India's real estate sector is poised for strong growth.

Urbanization is not slowing down. Physical offices are here to stay. Companies will optimize their portfolio between hybrid working and hence working from home will become a supplement to, rather than a substitute for the office. It fosters in Incubating a dynamic corporate culture.

The report reflects a positive sentiment towards few sectors growth, Technology (IT-BPM) engineering & manufacturing sectors, we believe, will drive the demand in 2021. Technology companies will broaden their office portfolio over the next three years, as demand for artificial intelligence, machine learning, and robotics is expected to grow significantly, and Indian talent is being considered favourably for high-end R&D activities.

With the significant growth of E-commerce and data centers across the country, we expect investors to take a strong interest in data centres as they offer net yields of about 17% per annum.

To conclude capital markets are open and accessible. On the REIT front, Mindspace Business Parks REIT listed in August 2020, followed by Brookfield India REIT in February 2021 is a blueprint to the potential in the Indian market. The right opportunities, developers with strong balance sheets and premium core, coreplus assets to hold the key.



Mr. Raj Menda

Joint Chairman, FICCI Real
Estate Committee and
Corporate Chairman, RMZ Corp

FOREWORD

The past year has been a difficult one, full of uncertainty, hesitation and anxiety about what the future may hold. The pandemic not only gave us a new vocabulary and taught us words like social distancing, quarantine and remote working, it also taught us to devise new ways to incorporate change, embrace the new normal and work around challenges to continue to remain efficient and effective, both as individuals and organisations in the face of such adversity.

This report by Colliers on “Charting the future of offices in India” studies the prospects of office spaces in the aftermath of Covid. Offices, which were considered a top asset class until a few months before the pandemic struck, witnessed a decline in net absorption across the top six Indian cities by 42.8 per cent on a year-on-year basis, owing to stringent lockdowns and social distancing measures.

However, despite muted activity during 2020, there is now positivity regarding the future of the Indian real estate sector with interest towards alternate and emerging asset classes such as data centres, warehouses and of course offices. In future, it is expected that demand will continue to be led by technology and technology led sectors (including R&D) with engineering and manufacturing sectors contributing significantly. Given the increasing importance of artificial intelligence, machine learning and robotics, technology companies will take the lead in increasing their office portfolio. Further, given the focus on bottom line, financial and operational benefits to outsource, India's positioning an attractiveness as a outsourcing destination, there will be an increase in outsourcing, firms establishing back offices, GCC/GIC's in India. This will be led by banking, financial services, insurance (BFSI) companies along with e-commerce and data centres, which will give a significant push to office demand.

The Indian Government has embarked on the largest vaccination drive globally and it is expected that things will bounce back and there will be a steady demand from clients looking at bringing back their employees back to offices. All surveys suggest towards increasing mental health and well-being issues given the continued uncertainty, increased stress and lines having blurred between personal and professional domains as a result; most employees are keen to come back to offices and have a more structured work-life bifurcation.

In the coming times however, there will be a momentous shift in the future of work and in the traditional method in which offices have been used. It is expected that offices will become places for collaboration since most occupiers are inclined towards choosing a hybrid model of working, where employees depending upon their roles etc. will visit the office only for a few days during the week and there will be a trend towards relocation, decentralisation and shift to the flex and core model.

In summary, I would like to say that the future will be a time of transition and evolution, depending upon the needs of an organisation and with a focus on improved wellness, both physical and mental.



Mr. Sanjay Dutt

Joint Chairman, FICCI Real Estate Committee and Managing Director and Chief Executive Officer, Tata Realty & Infrastructure Ltd.

FOREWORD

At Colliers, we are enterprising and believe that challenging times allow us to innovate and drive exceptional results for our clients and people. The year 2020 has ushered in an accelerated trend of reimagination and reshaping of our workplaces. We expect office spaces to remain an integral part of the collaboration, advanced training, and building the corporate culture and delivery of services.

In this report, Colliers examines and resolves how the future of the workplace can be reimaged through the three dimensions of 'Place, Space, and Pace.' We believe that workplaces will revolve around these themes as offices are key elements for occupiers who strive to maintain a corporate culture in the coming years. The first dimension, Place,' explores the workplace's multiple locations, which can provide greater flexibility to the employees and optimize costs for occupiers. The second dimension, Space, highlights the innovations that can be introduced to the workplace's physical size to encourage employees to work from their office. The report suggests how occupiers can prioritize employee safety by incorporating measures like de-densification, design innovations, and investing in employee wellness programs. The third dimension, Pace, explores how technology could integrate with the workspace to enhance employee productivity and better manage spaces through automation.

The report attempts to provide a glimpse of how workplaces could evolve in the near future, helping occupiers maintain their anchors while enhancing productivity and safety.

Overall, creating a workplace that enhances employee experience should be the key theme of occupiers in the changing times. This report's findings can help occupiers recreate safer workplaces for their employees, to the developers for introducing new aspects in the design, which can help attract and retain occupiers and help understand the innovations in the work environment increase productivity. Further, different people from the industry could gain insights into overcoming the challenges at the workplace and moving forward.



Sankey Prasad FRICS
Chairman & Managing
Director | India
Colliers

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Office sector overview for 2020

Commercial office leasing activity in the top six Indian cities of Bengaluru, Chennai, Delhi NCR, Hyderabad, Mumbai and Pune remained sluggish in 2020, due to the uncertain economic environment and business conditions brought on by COVID-19. Colliers noted that net absorption across the top six Indian was 20.6 million square feet (1.9 million square meters), a decline of 42.8% YOY. Occupiers largely focused on portfolio optimization by relocating, consolidating and downsizing¹.

From the sectoral demand perspective, technology firms remained the major demand drivers with about 45% of the demand from large occupiers in recently completed projects offering better wellness and hygiene standards.

The demand from flexible workspace providers remained subdued in 2020 due to stringent lockdowns and social distancing protocols that affected their operations. 2020 saw flexible workspace operators lease 2.9 million square feet (269,000 square meters) of space, down by 75.8% from 2019. Deals amounting to around 1.7 million square feet (158,000 square meters), which were pre-committed or in the final stages, were cancelled across the top six cities in India².

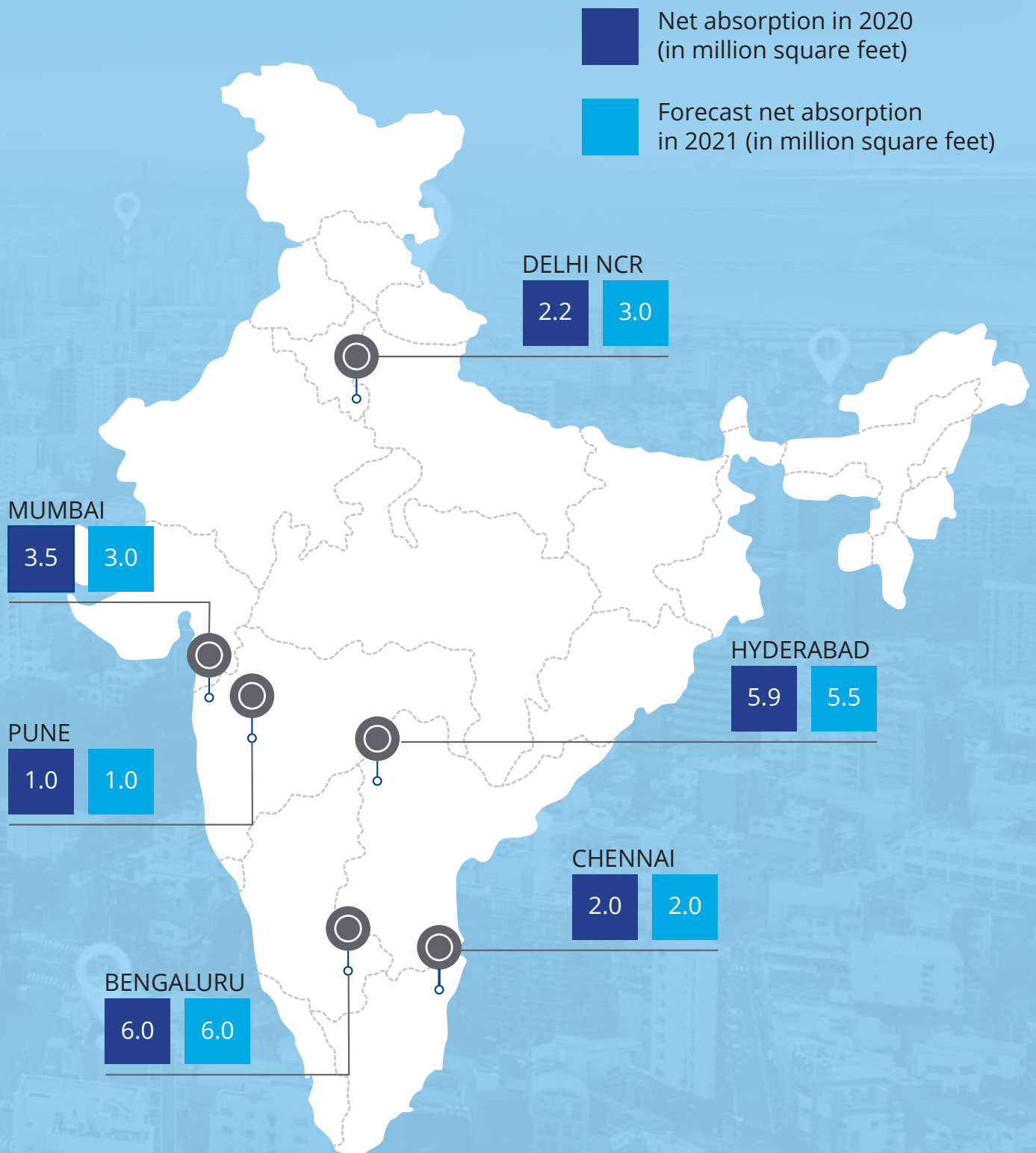
In 2020, we saw new supply of 38.1 million square feet (3.5 million square meters), a 2.4% decline YOY. Bengaluru, Hyderabad and Delhi NCR drove the bulk of new supply. Muted demand prompted developers to adopt a more accommodative stance in negotiating lease terms as they focused on achieving higher occupancy levels. Vacancy rate across the top six cities was noted at 14.3%, an increase of 3.3 percentage points YOY. Although headline rents remained steady till late 2020, effective rents decreased 9.4% YOY as landlords continued to offer more incentives such as longer rent-free fit-out periods.

¹ Colliers India 2021 Outlook





² Colliers India Flash Report - Flexible Workspaces - Important Cogs in Hybrid Workplace Models, 2021



India: New demand in 2020 and 2021



Commercial Office Sector (Aggregate) - 2020

Demand*	Supply	Weighted Average Rent (YOY/ End 2020)	Vacancy Rate (YOY/ End 2020)
 20.6 mn sq ft	 38.1 mn sq ft	 -9.4% INR 97 per sq ft per month	 3.3 pp 14.3%

*Represents net absorption

Source: Colliers

Investment update

During 2020, institutional investments worth INR35,835 crores (USD4.8 billion) were recorded despite a muted activity during Q2 2020, witnessing a drop of 23% YOY. Investors continue to be bullish on the Indian real estate sector and asset classes such as offices, data centres and warehouses are receiving increasing interest. As per Colliers' report Investment Confidence Remains Intact 2021, in Q3 2020, several deals that were stalled in Q2 2020 closed, with transactions rising more than four-fold in H2 2020 over H1 2020.

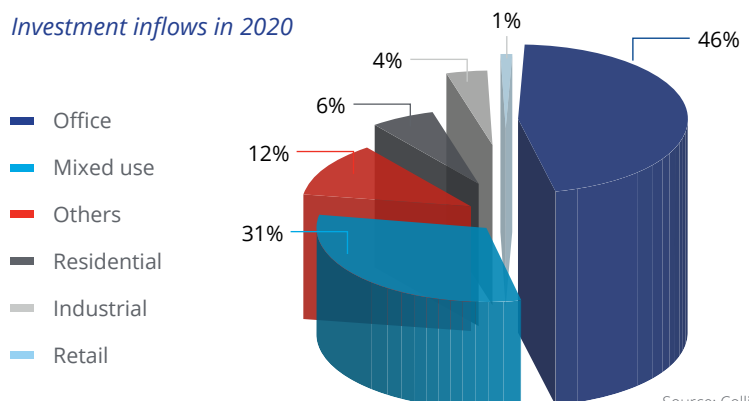
Major Investment Deals 2020, INR crores (USD million)

Investor	Investee	Asset Class	City	Amount
Brookfield	RMZ	Office	Multiple	14,000 (2,000)
Blackstone	Prestige	Mixed-use	Multiple	12,745 (1,500)
The Carlyle Group	Nxtra Data Services	Data Center	Multiple	1,700 (235)

Source: Colliers

During 2020, 46% of the total inflows accounting to INR15,450 crores (USD2.2 billion) were in the office market, signifying investors' unwavering confidence despite India's continuing work from home scenario. On the REIT front, Mindspace Business Parks REIT listed in August 2020, followed by Brookfield India REIT in February 2021.

Investment inflows in 2020



Source: Colliers

Outlook for 2021

With the onset of the second Covid wave in the first quarter (Q1) of 2021, Colliers notes that total gross absorption for the top six Indian cities in the quarter was 4.3 million square feet (396,000 square meters), a decline of 49.8% YOY. We expect transaction volumes to remain subdued over the first half and then improve gradually in the second half, backed by the ongoing vaccines rollout. We forecast 2021 total net absorption to be around 20 million square feet (1.9 million square meters), similar to 2020.

As of the end of February 2021, the total flexible workspace stock stood at 30 million square feet (2.8 million square meters), across the top six Indian cities out of which Bengaluru, Hyderabad and Mumbai accounted for the bulk. We also note that around 11,800 seats have been leased by corporate occupiers in flexible workspaces in these cities during Q1 2021, whilst flexible workspace operators leased around 257,000 square feet (23,900 square meters). We expect flexible workspace operators to continue to optimize their existing flexible workspace portfolios and focus on profitability of the existing centres during 2021. During 2021, we forecast that flexible workspace operators will lease around 3 million square feet (279,000 square meters), similar to 2020 unless larger and established operators sign up multiple deals for managing new offices on behalf of corporate clients. However, in 2022, we expect a pick-up in demand for well-located, high quality and efficient flexible workspaces, resulting in their occupying 5.4% of the total commercial office portfolio in India.

On the supply front, Colliers recorded 6.9 million square feet (644,000 square meters) of new commercial offices, a decline of 48.1% YOY in Q1 2021. Though there is a substantial supply pipeline, we expect developers to taper it to avoid a high demand-supply mismatch, which should result in increasing the vacancy rate and putting pressure on rentals. Hence, we forecast the supply to also be like last year at around 38 million square feet (3.5 million square meters). Though the weighted average rent will likely face downward pressure in 2021, over the next five years, we expect weighted average rents to increase by 0.2% per annum on average, with rental growth turning positive by 2023.

Commercial Office Sector (Aggregate)- 2021

Demand (Net absorption)

We believe net absorption to remain mostly stable in 2021 as occupiers are re-evaluating their growth strategies.

2021



20.0 mn sq ft

Annual average
(2021-25)



28.5 mn sq ft

Supply

We project a steady supply in 2021 from 38.1 million square feet (3.5 million square meters) in 2020 as we expect developers to take it steady and match up with the actual demand.



38.0 mn sq ft



28.5 mn sq ft

Weighted average rent

Over the next five years, we expect effective rents to increase by 0.2% per annum on average, with rental growth turning positive by 2023.

-3.7%



(YOY/ End 2021)

INR 93.0
per sq ft per month

0.2%



(End of 2025)

INR 98.0
per sq ft per month

Vacancy rate

We expect vacancy rate to increase in 2021 led by higher supply and occupiers' portfolio optimization strategies

1.7pp



(YOY/ End 2021)

16.0%

3.0pp



(End of 2025)

17.3%

Source: Colliers








Major sectoral demand drivers

We believe demand in 2021 to be driven by mainly technology (IT-BPM), and engineering & manufacturing sectors. With demand likely to increase substantially for services in artificial intelligence, machine learning and robotics, we believe that technology companies will expand their office portfolio over the next three years as Indian talent is being considered favourably for high-end R&D activities. After taking a dip in 2021, we expect a steady demand from banking, financial services and insurance (BFSI) companies through 2023. E-commerce and data centers are also likely to drive demand significantly as their businesses are set to see significant growth.

Sectors Driving the Demand

	IT- BPM	Engineering & Manufacturing	BFSI
2019	35%	10%	12%
2020	45%	14%	12%
2021 Outlook	 Stable	 Increasing	 Decreasing

Source: Colliers

Investor's Outlook for 2021

We predict about 15% higher inflows YOY in investment as we are already witnessing increased fund raising with some investment firms such as Kotak Realty Fund and Motilal Oswal Financial Services floating new investment funds in the market.

Opportunities for investors

Between 2018 and 2020, commercial office assets accounted for over 55% of the total investments in Indian real estate, showing the high appetite of investors. The top six Indian cities saw an average annual supply of over 35 million square feet (3.3 million square meters) between 2018 and 2020 with the majority being snapped up by institutional investors. Some investment firms are increasingly looking towards developing their own greenfield office assets, even though a similar supply of 38 million square feet (3.5 million square meters) is set to enter the market. We expect investors to take a strong interest in data centres as they offer net yields of about 17% per annum.



The future of work

Over the last year, many have bemoaned the death of offices, due to the global pandemic. At Colliers, we feel that the pandemic is reshaping the workplace, with occupiers reimagining the future of work. We expect the role of offices to remain essential, although the usage is likely to significantly shift over the next five years. We also expect offices to become places for collaboration, rather than simply workspaces, with most occupiers choosing a hybrid model of working where employees go to the office only a few days a week.

Hybrid work-from-home and office model here to stay

Over the next five years, we expect many occupiers to adopt a hybrid model where employees work from both home and the office. This is because working completely from either home or office comes with its own set of challenges in India.



Challenges of working from home

EMPLOYEE'S PERSPECTIVE

- Tech exhaustion: Increased usage of technology, especially online meetings, is resulting in more fatigue and lower engagement levels
- Less demarcation between work and home lives could lead to faster burnout: As per a Colliers survey last year, in India, 28% of respondents work for more than 10 hours a day; 37% of respondents said they are 'working somewhat better at home', but they are spending more hours working
- Infrastructure issues such as poor Internet connectivity or limited bandwidth, inadequate working spaces, and interruptions from family members also working or learning from home
- Feeling of isolation due to the absence of physical interaction with colleagues
- Workers may need to spend out-of-pocket on necessary equipment and supplies

EMPLOYER'S PERSPECTIVE

- Depending on the function / responsibilities, co-ordination between employees could be difficult
- Challenges in maintaining data integrity and security
- Difficulty to build and/or reinforce the 'culture' of the company remotely
- Difficulty providing higher levels of training and mentorship



Challenges of working from the office

EMPLOYEE'S PERSPECTIVE

- Long commute hours: A majority of Indians spend at least two hours daily, on average, commuting to and from the office, occupying almost 8% of their day in transit, leading to exhaustion
- Cost: Long hours of commute and traffic also lead to increased daily travel costs
- Additional cost of living: Employees who migrate from Tier 2 and Tier 3 cities for employment end up paying a significant portion of their earnings toward living costs
- Alienation: Migration to unfamiliar cities can also result in feelings of alienation
- Possible distractions from multiple ongoing activities and/or colleagues in the office
- Difficulty in managing work-life balance

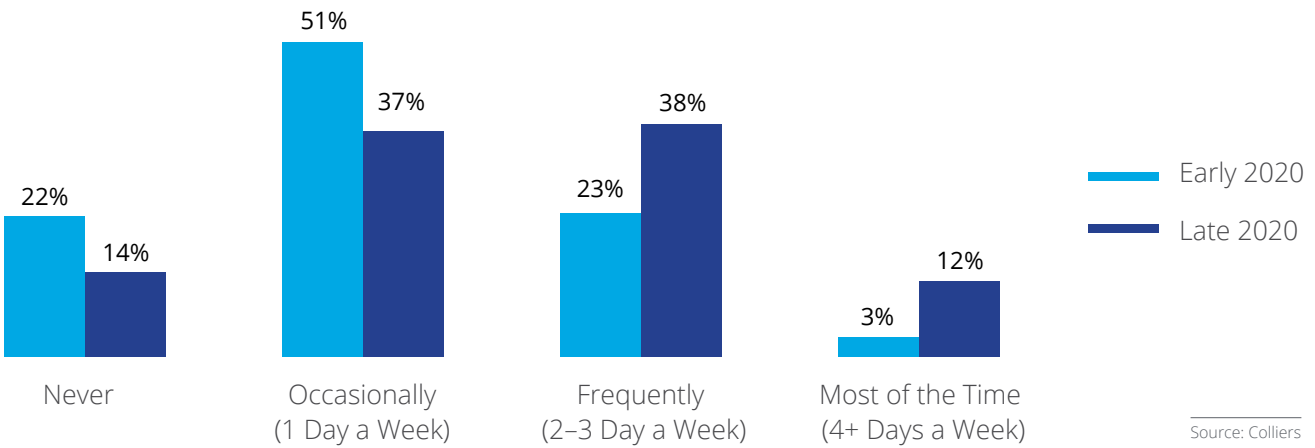
EMPLOYER'S PERSPECTIVE

- Enterprises have to incur operational costs such as subsidised/free food in cafeterias, pick-up/drop-off services, day care, higher air conditioning costs, amongst others
- Difficulty in combating the spread of viruses within the premises; especially, the inconvenience caused by closure, disinfection and re-opening of offices
- Adherence to multiple and complex, local, state level and national laws pertaining to labour, safety, health and hygiene



Colliers conducted a survey in Asia Pacific in March 2020 and then again after six months to understand how Covid-19 had affected remote working perceptions, staff productivity and operational effectiveness during the period.

Remote working preference post Covid-19

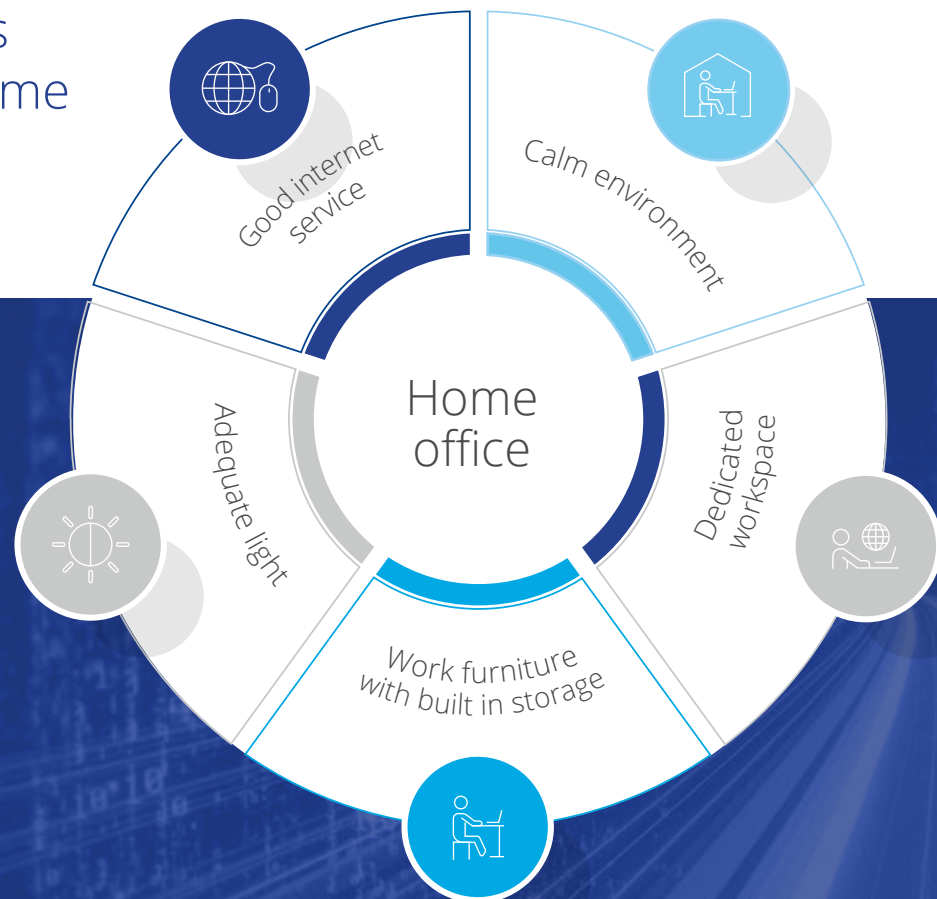


According to the Colliers survey, employees and organizations are highly inclined to incorporate at least one day of remote working into the workweek, which further leads us to believe that there will be no one way of working. We urge occupiers to assess productivity levels and performance on an individual basis and identify working patterns to devise strategies.

Ideal office and work-from-home setup

When employees are working from home, it is essential to have good work infrastructure at home. Some enterprises have stepped up to provide work-from-home solutions for their employees. Meanwhile companies like Awfis, a co-working operator, introduced a subsidiary business model Awfis@Home, which replicates the office environment at home by providing services such as IT infrastructure, office furniture and tech integration.

Requirements of an ideal home office set up



Source: Colliers

Future of work: Towards an experiential workplace

While occupiers, even before the pandemic, were exploring experiential workplaces, we believe that creating a workplace that enhances employee experience should be the key theme in offices. Over the next five years, we expect workplaces to revolve around the following themes as enterprises strive to maintain a corporate culture that attracts and retains top talent.

The future of the workplace will be defined through three dimensions:

Multi-dimensional facets

Place

Multiple work locations

(hub and spoke,
flexible workspaces,
hybrid model)

Space

Experiential workplace

(space utilisation and design,
health & wellness, amenities)

Pace

Technology-driven workplace

(AnyTech, digital workplace)

Place

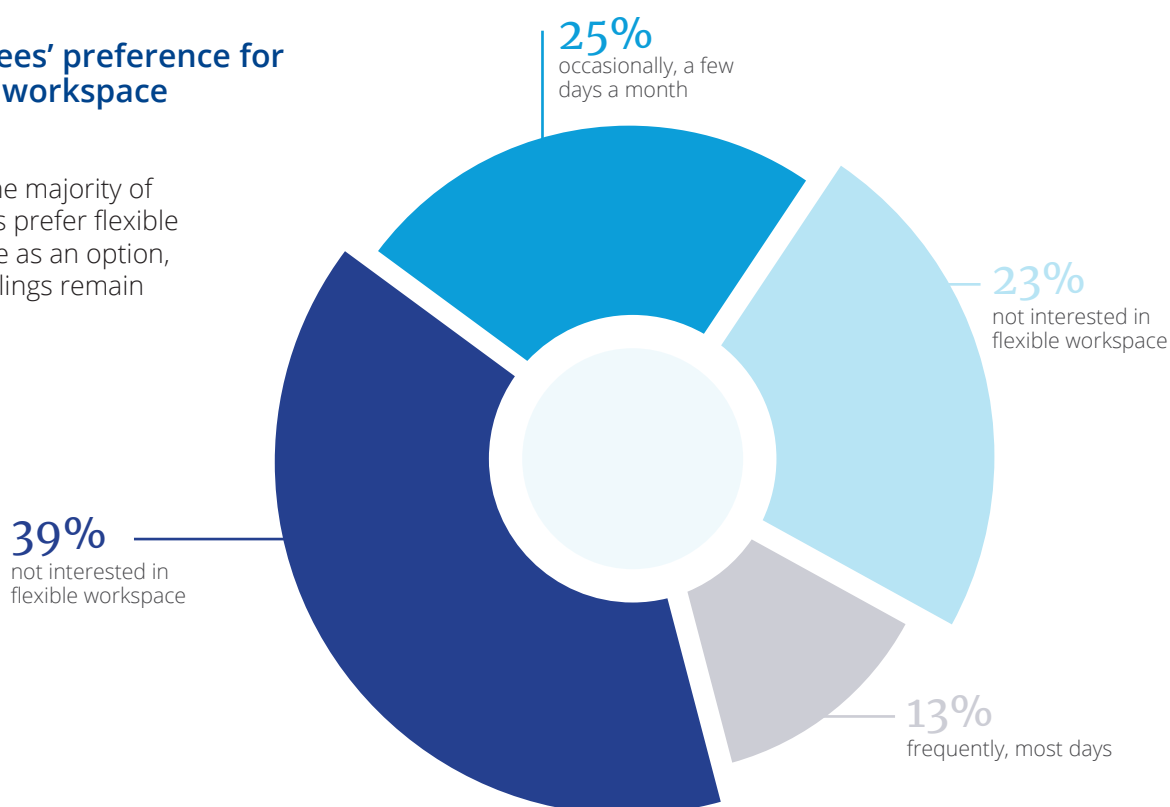
We believe that portfolio optimization will likely be the over-arching theme in 2021 and 2022 as occupiers explore strategies to optimise an efficient corporate real estate portfolio. In Colliers' India Market Outlook 2021, we state that occupiers are anecdotally reporting a focus on reducing their occupancy costs by 6-7% in order to improve profit margins.

Over the course of the next two years, we expect the following to take place:

- Relocation** : Occupiers approaching their lease expiry are exploring relocation options to cheaper and/or smaller offices. For perspective, in 2021, lease expiries totalled about 81 million square feet (7.5 million square meters), with 65% of these being smaller than 10,000 square feet (929 square meters).
- Decentralisation** : While decentralization has gained pace in Asia Pacific, occupiers in India, especially in the technology space, have been consolidating their offices in suburban and peripheral locations over the last decade. However, we now see technology occupiers exploring hub-and-spoke offices with one main office in a tech corridor and multiple smaller offices near residential locations.
- Flex and core** : Large occupiers are also looking at leasing space with flexible workspace operators to provide their employees with workplaces closer to their homes. In 2021, we believe that occupiers should consider flexible leases to allow them to operate in a hybrid work-from-home model and keep their capital expenditure low.

Employees' preference for flexible workspace

Though the majority of employers prefer flexible workspace as an option, mixed feelings remain



Space

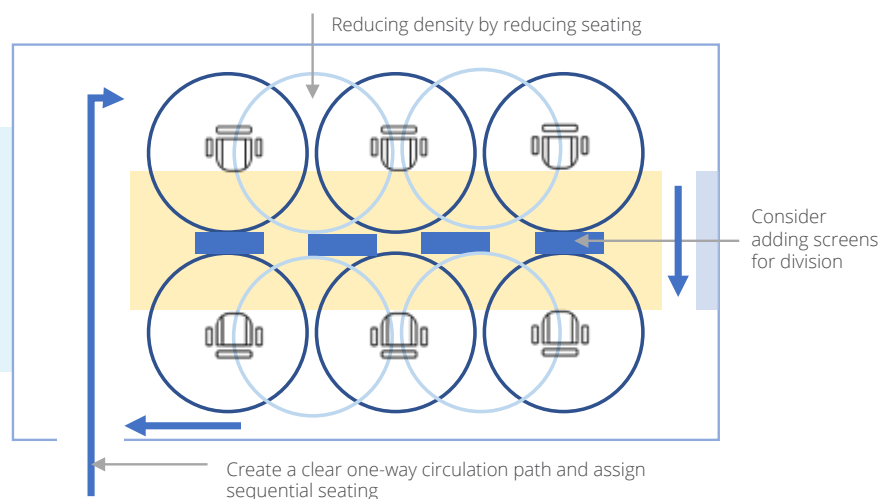
At a time when set notions of a workplace are being challenged, we believe that space within a workplace is being redefined by occupiers. Following the national lockdown that ended in May 2020, workplaces in India slowly opened up. We note that global companies continued to encourage employees to work from home, while domestic companies opened offices for employees to come back to workplaces on a staggered schedule. As enterprises re-opened offices, they established rigorous disinfecting routines and enforced social distancing norms for employee safety. Over the next five years, we believe that occupiers are likely to seek ways to infuse vigour and freshness into the workplace experience.

What employers are doing post-Covid-19 to redesign workspaces:

- Alternate seating arrangements to increase physical distance
- Add circulation patterns for ingress and egress to reduce opportunities for contact
- Adding screens to create division and minimize face-to-face interaction
- Changing orientation of desks to avoid face-to-face or adjacent seating
- Reducing the number of seats in conference/meeting rooms and encouraging standing meetings

Design considerations for a conference room

Source: Steelcase Research



Shared experiences and collaboration are critical to the workplace of the future. We believe that occupiers are likely to transition from fixed space in workplaces to evolving spaces, according to the needs of the enterprise at different times. In an experiential workplace, we expect occupiers to prefer lighter workstations that can be easily reconfigured, depending on requirements. We recommend that occupiers repurpose the workplace for improved wellness to boost staff morale, which has a direct impact on employee productivity.

Before the pandemic, occupiers focused on having more collaborative spaces, with emphasis on 'open plan' layouts to increase interaction with co-workers. Post-pandemic, the intention would remain the same but with added safety guidelines. Considering that in the new normal, employees would be working twice or three times a week from the office, the employees would look forward to collaborating and gaining a sense of belongingness with the brand. Brainstorming, mentoring, team meetings and socializing would likely be the key activities on the days when the employee would visit the office. We suggest occupiers to evolve the existing social spaces along the lines of precautionary measures than remove them due to safety concerns. Having safe, open and green spaces to come together in the workplace can reinstate the collective energy and vibe in the employees.

De-densification for a safer working environment

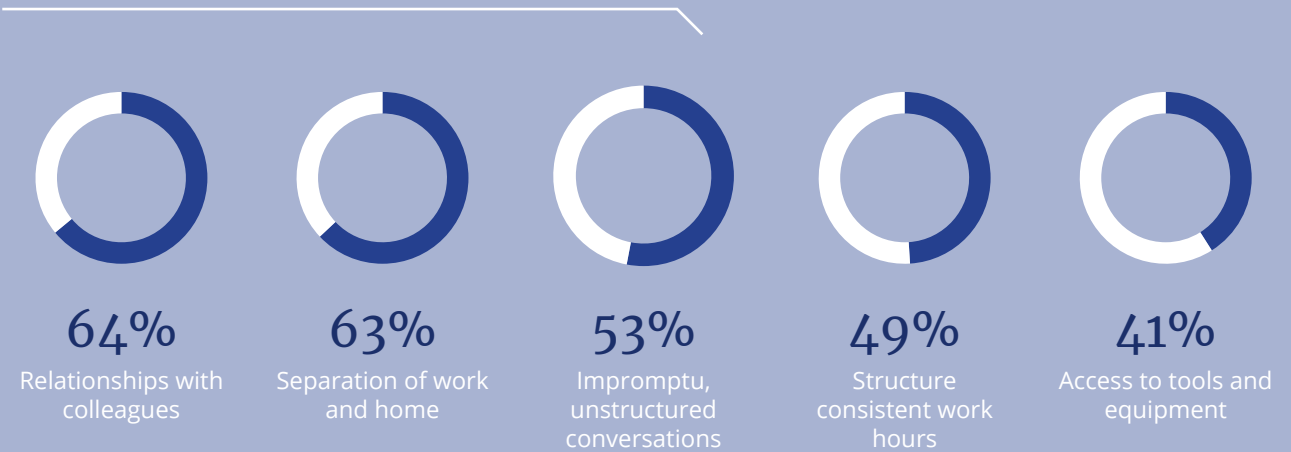
Currently, offices in India have an average density of about 60-80 square feet (5.0-7.4 square meters) of space per employee. To comply with social distancing norms, many enterprises across the globe are aiming to reduce density to improve safety. However, our view is that most occupiers in India are not heavily inclined towards increasing space per employee due to the higher costs it would incur. Therefore, we can expect to see two outcomes. First, large global enterprises may attempt to reduce density adopting hybrid working models. Meanwhile, we expect to see smaller enterprises continue to operate at the same densities due to the steep cost differential involved. We urge such enterprises to incorporate aspects such as physical barriers like glass partitions between desks and having breakout collaborative zones within the office.

Innovations in the physical dimensions of workplace

Design of an office is critical for avoiding 'sick building syndrome,' which reduces employee productivity. Sick building syndrome is a situation where the occupants of a building experience acute health or comfort-related effects that seem to be linked directly to the time spent in the building. To counter this, landlords and/or occupiers are looking at increasing the volume of fresh air intake and reducing the amount of recirculated air. From a building design perspective, occupiers' key focus is to leverage open spaces in the office to promote collaboration and togetherness. Social and collaborative spaces like the cafeteria and breakout spaces are also being set up in the open rather than between confined walls.

Other physical design changes being considered include placement of glass screens between desks, increasing the height of screen dividers, and altering the placement of chairs. Occupiers can add flexible furniture, which can expand and contract, as per the requirement.

What employees miss about working in office



Health & Wellness

Employees spend an average of 40-45 hours a week inside offices, resulting in less time spent outdoors. Offices are now focusing on incorporating biophilic design elements in their buildings, which improve both the physical and the mental health of the occupants by bringing elements of nature to the office space. Health and wellness have become a key focus area for occupiers post-Covid-19. Occupiers are increasingly planning to invest in employee wellness programmes, as they likely to benefit from increased employee productivity. Also, developers and landlords are planning to invest in this area to attract blue-chip companies as their tenants. To maximize the impact of wellness initiatives, we believe that developers and occupiers need to align employees' preferences with their business priorities.

The practice of hygiene and safety should be applied smartly by incorporating them with the existing office layout. We note that wellness certifications such as 'WELL' by Green Business Certification Inc. (GBCI) are becoming prevalent for the health and safety of their employees.

Health and wellness initiatives

- > Promote health through high-performance buildings.
- > Avoid sick building syndrome by using low-VOC (volatile organic compound) and sustainable materials in building design and construction.
- > Design spaces for non-professional reenergizing needs.
- > Install circadian friendly lighting to support human health.
- > Establish employee health monitoring programmes.
- > Provide access to safe last-mile transportation.
- > Organize employee engagement activities such workout sessions and health and wellness contests.
- > Provide elements like indoor planters and living walls instead of bland partitions.

According to Colliers research, investing up to 20% more in a high-performance building offers enhanced value to tenants and can help the owner command a rental premium of 6-7% . A high-performance building is one where facilities technology, environment, energy and efficiency all contribute to greater productivity, health and wellness. An improved workplace can result in a 30% reduction in sick leave days and 5% lower employee churn.

Pace

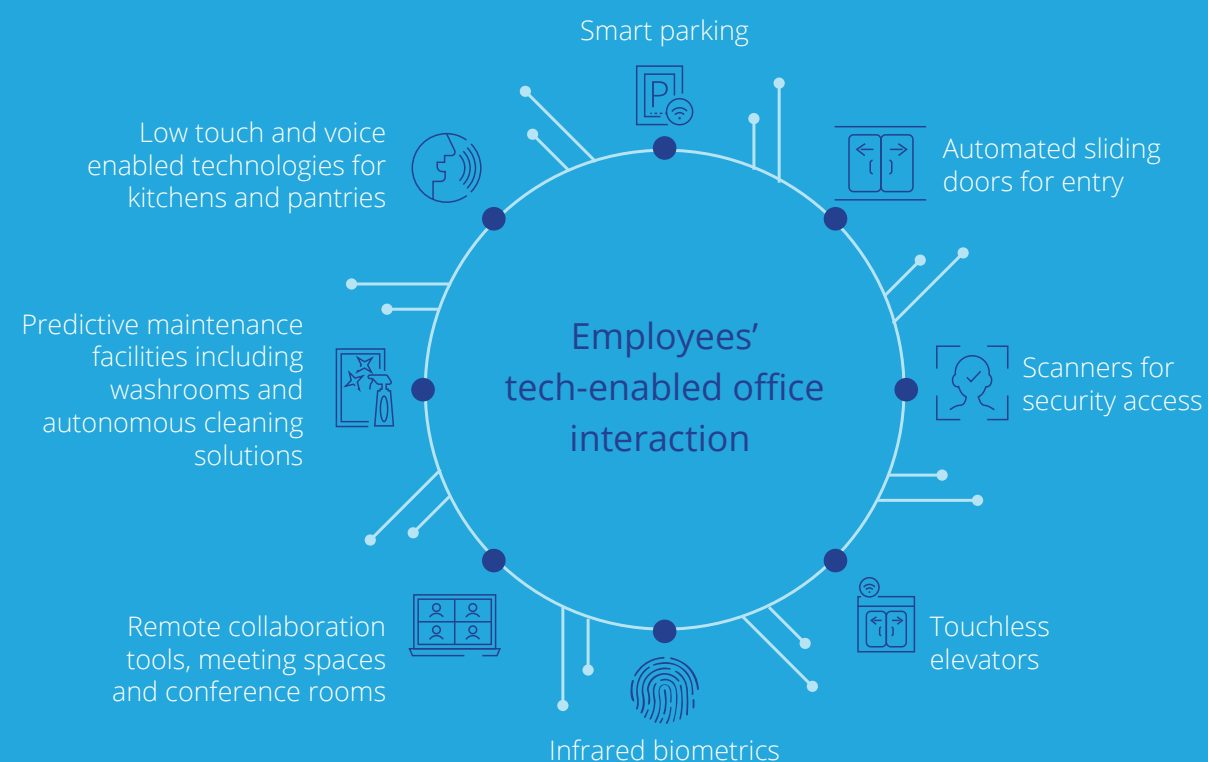
“Clouding” the workforce

Occupiers are accelerating technology adoption in the workplace to make better collaboration and efficiency possible, as well as boost overall productivity and pace of work. The Internet of the Workplace (IoW) is an integrated enterprise architecture that encourages more flexibility, by allowing remote teams to collaborate using remote servers — known as the cloud. Tech-enabled offices are also ushering in flexible workspace configurations where an employee can shift between spaces throughout the workday. This leads to spill-over benefits, including increased creativity and collaboration, while also reducing the tenant’s operational costs.



IoT Integration

Colliers illustrates how technology can be integrated at every step in a workplace. To ensure safety of employees at every step, developers can provide tailored solutions in new developments:



Exposure to surfaces, for health and safety reasons, can be reduced by providing automated sliding doors at entrances, installation of scanners accessed by mobile phones for secure access, and installation of infrared sensors and surfaces that can be operated by foot instead of by hand. A safer employee experience is likely to result in higher willingness to return to the workplace. Furthermore, advances in building operating systems and smart building features should help landlords retain tenants by encouraging them to renew their current leases.

Workplace optimization

We suggest the following approaches for occupiers to achieve a more tech-enabled workplace:

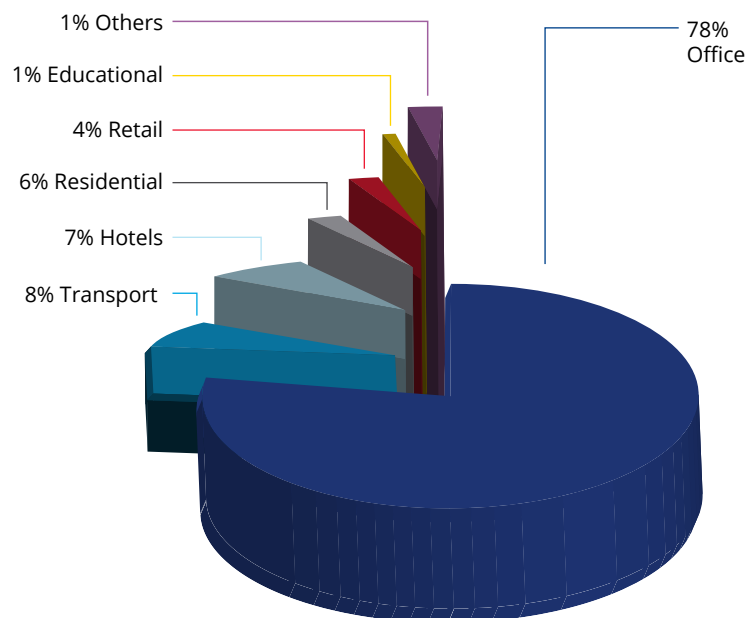
- Collect data to study real-time utilization of common areas in offices, and the usage of seats, on a daily basis. This helps occupiers optimize and repurpose space in an efficient manner and reduce real estate costs.
- AnyTech, as defined in Colliers’ report “The Rise of AnyTech,” published 27 November 2019, is the broad technology-based force reshaping work processes, workforces and the workplace across industries in consistent ways. Technology has been embedded across most sectors and has become a driving force for enterprises. The key drivers of AnyTech — automation, decentralization and collaboration and artificial intelligence — enhance employee experience and have a positive impact on productivity. With the rapid advancements in technology like 5G, and work-from-home culture, we expect a greater number of occupiers to adopt AnyTech to improve efficiency.
- Property technology (PropTech), is gaining the interest of developers, investors and property managers. With proptech applications, landlords and operators can monitor metrics like power and energy consumption, and other building management functions. AI and IoT can be used to monitor real-time occupancy of the building. This can be very beneficial in crowd management operations and maintaining social distancing. Occupiers also can get an insight into interior layouts and fitouts in order to optimize the number of seats.
- Predictive maintenance can be used in workplaces to maintain equipment in the building. By using machine learning and real-time data, it is possible to analyse the factors that trigger repairs and perform maintenance ahead of time. Automated facility management systems are built around generated actions like maintenance support tickets from employees. This streamlines the whole facility maintenance system with less human oversight.



Sustainability

Sustainability and green buildings are likely to be a key consideration not only for occupiers, but also investors and developers, as green buildings have lower operational costs, resulting in higher net operating income. Green buildings also have smaller carbon footprints. Over the next five years, we expect developers to consider retrofitting buildings in CBDs in cities like Mumbai, Bengaluru, and Hyderabad, which have a high proportion of Grade B buildings. According to a report by the International Finance Corporation (IFC), 78% of all green buildings in India are office buildings. More than 70% of buildings planned through 2030 are yet to be constructed, which suggests that developers can take this opportunity to increase green buildings and reduce carbon footprints. IFC estimates an investment of INR16.7 lakh crores (USD228 billion) in the commercial sector by 2030.

Type of green buildings



Source: International Finance Corporation (IFC), World Bank

According to the World Green Buildings Council, green buildings certified by the Indian Green Building Council (IGBC) consume 40 - 50% less energy and 20 - 30% less water compared to conventional buildings in India. India has 1,578 LEED certified projects in India with a total floor area of 561 million square feet (52 million square meters). Indian commercial real estate has the third highest green building growth rate in the world. We expect more growth in commercial green buildings in the upcoming years.

Economic advantages of green buildings

Construction cost savings range between	Operational cost savings up to	Price premium of up to	High occupancy up to	Annual rental incomes that are up by
0.5–12%	37%	37% and faster time-to-sale	23%	8%

Source: IFC, World bank

Rise in ESG investments

While sustainability has always been an agenda driven by climate change, investments in Environmental, Social and Governance (ESG) have gained momentum in the past few years. Investment in ESG leads to sustainable and socially conscious investment and reduces the associated environmental and social risks. It also proves to be beneficial in the long run. We expect that with more investment in ESG, India will be able to draw itself closer to achieving the UN SDGs by the targeted timeline of 2030.

Colliers recommends green technologies that can be used in commercial office buildings by developers and occupiers.

- Noise cancellation technology to shield against outdoor noise and provide acoustic comfort to employees.
- Solar panels as a sustainable way to generate electricity, reducing utility costs for the occupier and providing a backup power source.
- Tapping the energy produced by employee footsteps to convert them to electric energy.
- Sensors and smart monitoring can filter out airborne contamination and lead to health benefits for employees.





Established in 1927, FICCI is the largest and oldest apex business organisation in India. Its history is closely interwoven with India's struggle for independence, its industrialization, and its emergence as one of the most rapidly growing global economies.

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Colliers (NASDAQ, TSX: CIGI) is a leading diversified professional services and investment management company. With operations in 67 countries, our more than 15,000 enterprising professionals work collaboratively to provide expert advice to real estate occupiers, owners and investors. For more than 25 years, our experienced leadership with significant insider ownership has delivered compound annual investment returns of almost 20% for shareholders. With annualized revenues of \$3.0 billion (\$3.3 billion including affiliates) and \$40 billion of assets under management, we maximize the potential of property and accelerate the success of our clients and our people.

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