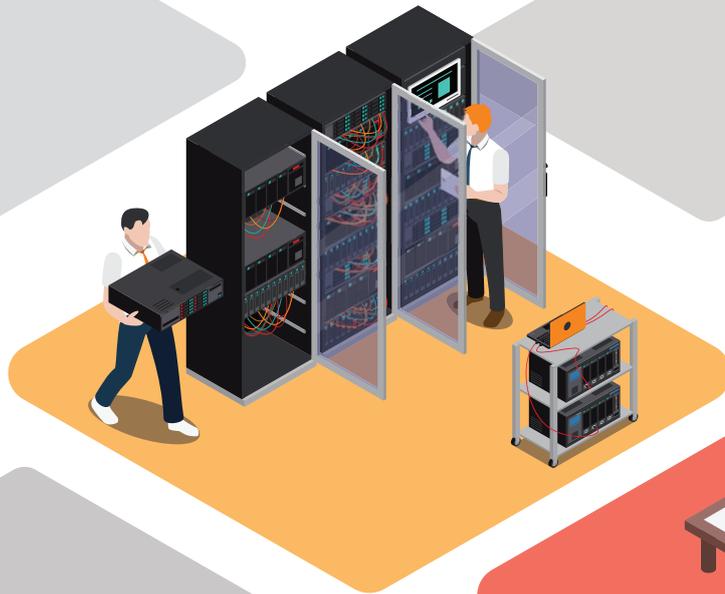




EMERGING ASSET CLASSES

The Future Looks Promising

February 2020



Contents

Foreword	1
From the Research Head's Desk	2
Co-Living: Offering Rental Housing with a Lifestyle Quotient	4
Defining Co-living: Old Idea in New Packaging	5
Need for Co-living: Evolving Demographics Driving Change	5
Socio-economic Factors Promoting Co-living	5
Demand Drivers: Millennials and Young Professionals	6
Top Players and their Footprint	7
Types of Co-living Models	8
Global Scenario for Co-living : Snapshot of US and UK Markets	9
Mapping Industry Lifecycle	10
Lack of Regulation: Posing Future Challenges	12
The Way Ahead	13
Coworking - A Need for Changing Cultures	14
Commercial Office Space Dynamics	16
Coworking Operators: A Snapshot	17
Rental Model: Coworking and Commercial Office Spaces	18
Comparison of Business Models: Coworking and Commercial Office Space	19
Private Equity Deals in Coworking in India	19
Global Coworking Market	20
Coworking in India: Still in Nascent Stage	20
Government Policies	21
The Way Ahead	21
Senior Living	22
Types of Senior Living	24
National Footprint: Realisation of the Real Need	26

Key Players of Senior Living	27
Nascent Segment with High Growth Potential	27
Mapping Future Potential	28
Current Policy Framework: Model Guidelines for Senior Living Projects	29
The Way Ahead	31

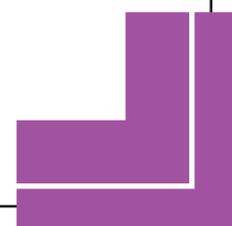
Student Housing In India **32**

The Growth Story of Higher Education in India	33
The Growing Need for Student Housing	35
Student Housing Landscape: An Emerging & Promising Alternative Asset Class	36
The Rise of Organised Players: Developers Acknowledge the Asset	37
The Differentiating Factor: Better suited than PG or Rented Accommodation	38
Student Living Business Models: Various Models for a Wider Reach	39
Mapping Industry Lifecycle: A New Concept with a World of Opportunities	40
Increased Investor Interest	41
The Way Ahead	41

Data Centres: Future Engines of Growth **42**

Data Centre Basics	43
Data Centre Market Development/ Evolution Models	44
Industrial Revolution 4.0 to bring a Tectonic Shift	47
Legal & Regulatory Environment	49
India: Challenges for Data Centre Market	54
Is the Data Centre Business Sustainable in India?	55

The Way Forward



Foreword

“Innovation is the calling card of the future.”

-Anna Eshoo

Call it change, reinvention or keeping up with the times, innovation is the key to stay relevant. India’s real estate sector has manifested this evolution in the form of emerging alternate asset classes. Segments like senior living have been in vogue since the turn of the century while the other segments are relatively new. However, most of these such as co-living and student housing have been in existence earlier in different forms which were largely unorganised. The alternate real estate assets that we are currently witnessing in India are mostly in the early stages of their lifecycle.

The demographic changes that have made these assets popular in other developing countries are currently underway in India. Changing lifestyle and evolving businesses have certainly created a need for these products. The transitions to these assets are truly interesting to observe. The changing dynamics and social mores ranging from an enabling environment for start-ups or rising interest in higher education to increase in migratory population in search of career and livelihood, and aging population have created space for new assets.

It is also pertinent at a point when the traditional residential real estate asset class comprising apartments and villas is witnessing serious concerns of stuck and delayed projects or significant unsold inventory across the country. There are nearly 576,000 units which are stalled in residential projects across the top 7 cities.



Anuj Puri

**Chairman - 2nd CII Real Estate Confluence
Group Chairman - ANAROCK**

There has been a major shift in investors’ interests in this segment. Private equity inflows into residential segment reduced to only 8% in 2019 from 53% in 2015. While there are many factors that led to the shifting trend, annuity-based assets in this segment may witness a renewed interest. A close inspection of many of the alternate real estate products reveal that they are evolved versions of residential assets. Co-living, Student Housing or Senior Living are fundamentally innovative and specialised residential assets but with a varied business model. Such products are capable of generating income yielding assets which can increase the interest of investors.

A collaborative, multi-stakeholder approach has the potential to transform India’s landscape of alternate real estate assets and bring it to a level that is comparable with global standards.

I hope you find the report insightful.

From the Research Head's Desk

Reeling from the global slowdown and dwindling consumer demand, the Indian economy is feeling the heat with the GDP growth rate slipping to 4.5% in the second quarter of 2019-20, the lowest in over six years. The real estate sector has undoubtedly borne the brunt of the slowdown with the liquidity crunch also hitting hard. It's no surprise that the demand for residential real estate has been sluggish with housing sales registering an annual rise of only about 5% in 2019. At the same time, capital returns on residential property in the top 7 cities have been limited to around 12% over the last five years while rental yield remained in the range of 1-3%. This extended period of churning and sluggishness has shifted the focus from the traditional asset classes to the emerging ones. Changing demographics and social mores, rising trend of entrepreneurship and digitisation, and the emergence of millennials have also transformed real estate consumption pattern and pushed the need for new segments.

Co-living which has been prevalent under different formats and names came under the spotlight with the entry of organised players and inflow of institutional capital. Unique characteristics such as plug-and-play living, use of technology, convenience, and community living are finding favour with millennials and young professionals. However, the need of the hour is to finalize the policy framework which

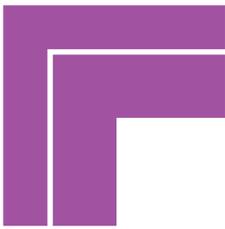


Prashant Thakur

can ensure the long-term and sustainable growth of co-living assets.

The last five years or so have seen the growing popularity of coworking spaces among start-ups, millennials, medium and even large-sized businesses for their affordable infrastructure and flexibility. IT-ITeS driven cities such as Bengaluru, Chennai, Hyderabad, and Pune have low vacancy levels between 5-10% for Grade-A offices, creating a sizeable demand for coworking spaces. This emerging segment not only offers flexibility to work in an open environment but also provide a cost advantage of up to 40% over traditional commercial offices. Despite the buzz created by coworking.

Senior living projects may have had a presence for many years, albeit in an unorganized manner, but it's only recently that the stigma attached to such properties is gradually fading away. Improved healthcare systems and precautionary measures have improved life



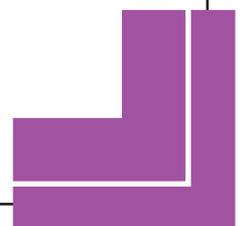
expectancy from 41.4 years in 1960 to 62.5 years in 2000 and 68.8 years in 2018. The population aged above 60 years has already breached the 100 million mark and is expected to be over 500 million by the end of this century. Keeping in mind the growing future demand, the Ministry of Housing and Urban Affairs (MoHUA) has drafted a set of model guidelines to develop and regulate the retirement homes. To provide our elders with a comfortable and dignified living option in their golden years, there needs to be increased participation from developers, institutionalisation of care givers and specialised service providers and backing by institutional investors.

Another significant and growing demographic, students are defining the need for the student housing segment. For over 37 million students, there are just over 6.54 million hostel beds compelling students to consider student housing. With the help of the 'Study in India' campaign, the government expects to attract 200,000 international students to India. Compared to traditional accommodations, student housing comes with a host of amenities and greater flexibility relating to leasing terms, security deposits, and lock-in periods.

The latest and most exciting emerging asset class in our report is data centres. The next industrial revolution will be supported by big data, IoT, 5G communications, and artificial intelligence leading

to a massive rise in demand for the data centres. With 451 million active internet users, 1,173.75 million mobile subscribers, rise in digital transactions and government measures such as Smart Cities Mission, and Personal Data Protection Bill, the demand for data centres is likely to stay high. However, availability of uninterrupted power supply, real estate obtainability at competitive prices, skilled workforce and robust policy framework are challenges faced by the segment. Despite these roadblocks, the data centre outsourcing market in India surely appears to be lucrative and we've seen many developers taking positions on this asset class.

Our report attempts to chart the genesis and growth of these emerging asset class while exploring their future potential. While most of these segments are in the nascent stage of development, the changing socio-economic landscape of the country and proactive government policies is likely to push them towards future growth.



1

Co-Living: Offering Rental Housing with a Lifestyle Quotient



Defining Co-living: Old Idea in New Packaging

Against the backdrop of the emerging 'shared economy', the burgeoning millennial workforce in urban areas and metros has turned to options beyond traditional owning or renting. Unlike earlier when 'ownership' was fundamental to success in life, today 'sharing' has taken the centre stage. While the idea has gained traction in the transportation sector with concepts such as pooled/shared rides, it has also made an imprint in the commercial real estate segment under 'coworking', and 'co-living' on the residential side.

Call it a buzzword or a hot trend, but co-living is essentially an old idea in shiny new packaging. The concept of individuals co-habiting is not new and has existed for decades — whether it was the boarding houses of New York or London in the 1940s or mess houses and PG accommodation in Calcutta and Bombay during the same period. The concept of co-living has existed in India for many decades under different names. But the term co-living came under the spotlight in the last few years with organised players venturing into it and when capital starting to flow. Significantly, what has also changed today is the emergence of purpose-built co-living spaces constructed and/or managed by professional firms who are viewing it as a viable business opportunity. For homeowners too, the low rental yields have pushed the need for new models higher than ever, especially as many of them are bearing EMI payments for several years. Here, we attempt to map the genesis and growth of the co-living sector in India and explore its potential as an alternative asset class in the real estate sector.

Need for Co-living: Evolving Demographics Driving Change

With the Indian residential real estate sector stuck in a vicious loop of increasing prices and tepid demand for home buying, there is a massive stock of unsold inventory which is around 6.5 lakh units in the top 7 cities itself. Uncertainty and fluctuations in job prospects have significantly altered the demand dynamics of the residential segment. In the last decade or so, careers have become more dynamic and millennials are not sure how long they want to remain in a job and in a particular city. They certainly don't want their residence holding them back if there is a better opportunity that requires them to change locations.

Young professionals migrating to metropolitan cities are not keen on the traditional rental model that entails inconsistent rents, high brokerage, nosy landlords and rule imposition. Instead of spending a

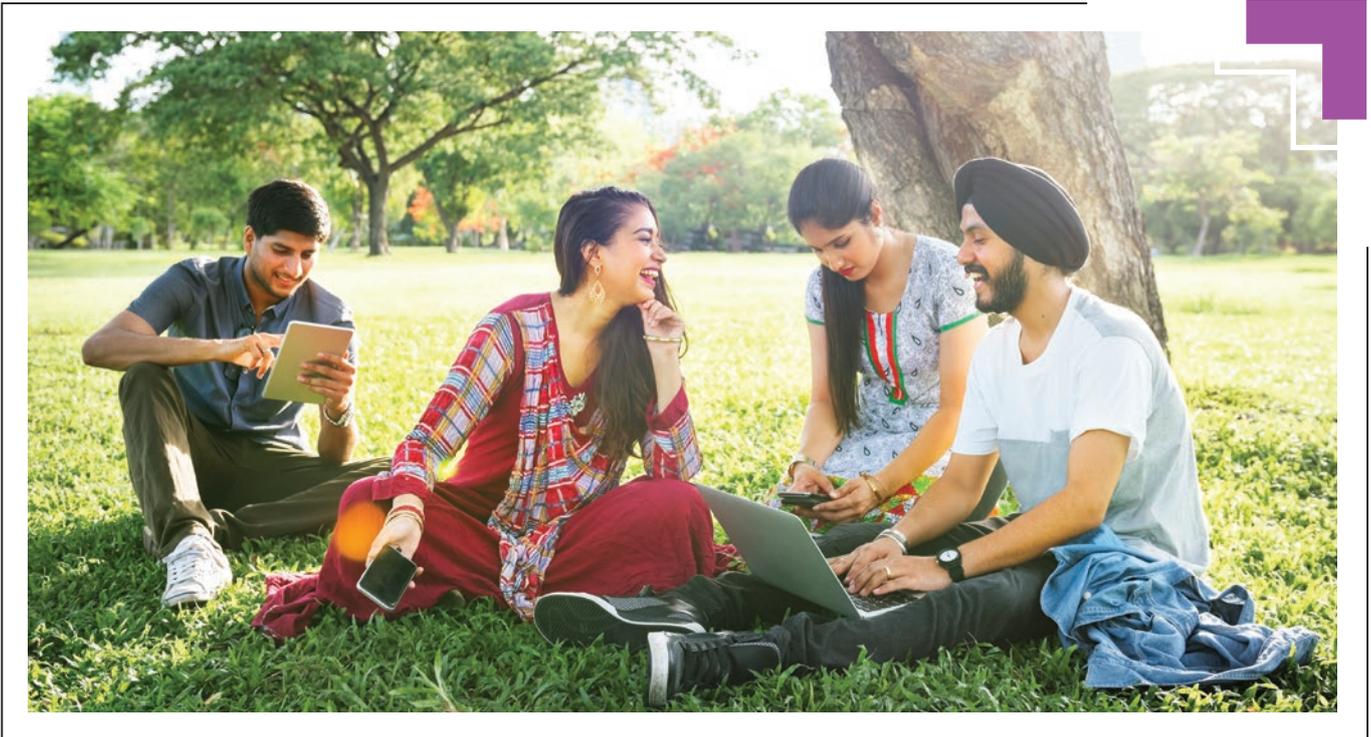
big share of their wallets on renting their own space they are more inclined towards sharing living space at a fraction of that cost. Sensing this demand for shared rental accommodation, unorganised as well as organised players have begun to create offerings to suit the need of such migrant millennials in India's top cities.

Young professionals migrating to metropolitan cities are not keen on the traditional rental model that entails inconsistent rents, high brokerage, nosy landlords and rule imposition. Instead of spending a big share of their wallets on renting their own space they are more inclined towards sharing living space at a fraction of that cost.

Socio-economic Factors Promoting Co-living

The socio-economic landscape also favours the expansion of the co-living segment, the demand for which is primarily led by millennials and young professionals. According to Statista, India's median age is estimated to be 28 years making us amongst the youngest countries in the world and home to a growing middle-income segment. As per UN Population statistics and analysis by Deloitte India, 34% of the country's population belongs to the age bracket of 18-35 years, and it is this demographic group that will continue to drive the consumption story across sectors, including real estate. With their intrinsic need for mobility, connectivity, and tech-enabled living spaces, millennials are expected to not only drive but also redefine the manner in which real estate shapes up in the coming decade or so.

Rising urbanization is another trend that will have far-reaching ramifications on real estate demand and supply in the coming years. As per urban statistics released by the Ministry of Housing and Urban Affairs, the share of India's urban population has increased from 28% of the total population in 2001 to 31% in 2011. This is further expected to increase to 40% by 2030. As estimated by the UN Department of Economic and Social Affairs (DESA), India will have added 416 million urban dwellers by 2025. With our cities packed to the rafters, alternate options like co-living are likely to gain traction.



Demand Drivers: Millennials and Young Professionals

The demand for co-living spaces in India is currently driven by millennials and young professionals who are not yet ready to put down roots but are willing to travel and work remotely across locations. Other working professionals such as entrepreneurs and freelancers are also deferring big-ticket purchases such as a home at the beginning of their career and also considering the erratic nature of their work. Moreover, they are open to using their disposable incomes on travel, food and other 'experiential' lifestyle options. Factors like delayed marriage and child-rearing are also creating a discernible change in the consumption behaviour of recent generations.

Even renting a private apartment in the commercial or educational hub is often beyond financial means for most millennials. Not to mention that it involves a lot of due diligence and paperwork too. In this context, a majority of millennials prefer co-living over traditional rental models as they do not have to deal with a lack of standard practices for security deposits, notice periods and monthly rentals.

The following unique characteristics of co-living setups have further found favour with young consumers:

Plug-and-play Living

Co-living spaces are ideal for people who are looking for complete flexibility and homes that are

fully furnished, serviced, and managed. This format also cuts down individual costs by factoring in all overheads into the rent while offering flexible and shorter lease terms including monthly lease options.

Powered by Technology and Convenience

Co-living operators use modern technology to develop mobile apps which create an online platform, giving the residents access and flexibility and smoothing communication between the tenant and operator. Technology is also harnessed to create surveillance, facial recognition software or biometric or keyless access to ensure the safety and security of residents.

Privacy Amidst Community Living

Co-living operators are cultivating communities by placing emphasis on organizing social activities, events and workshops. They also use personality profiling to match residents with other like-minded people. Regular events that are focused on festivals, sports events, and weekend music, dance, yoga, aerobics are organised to engage the customers.

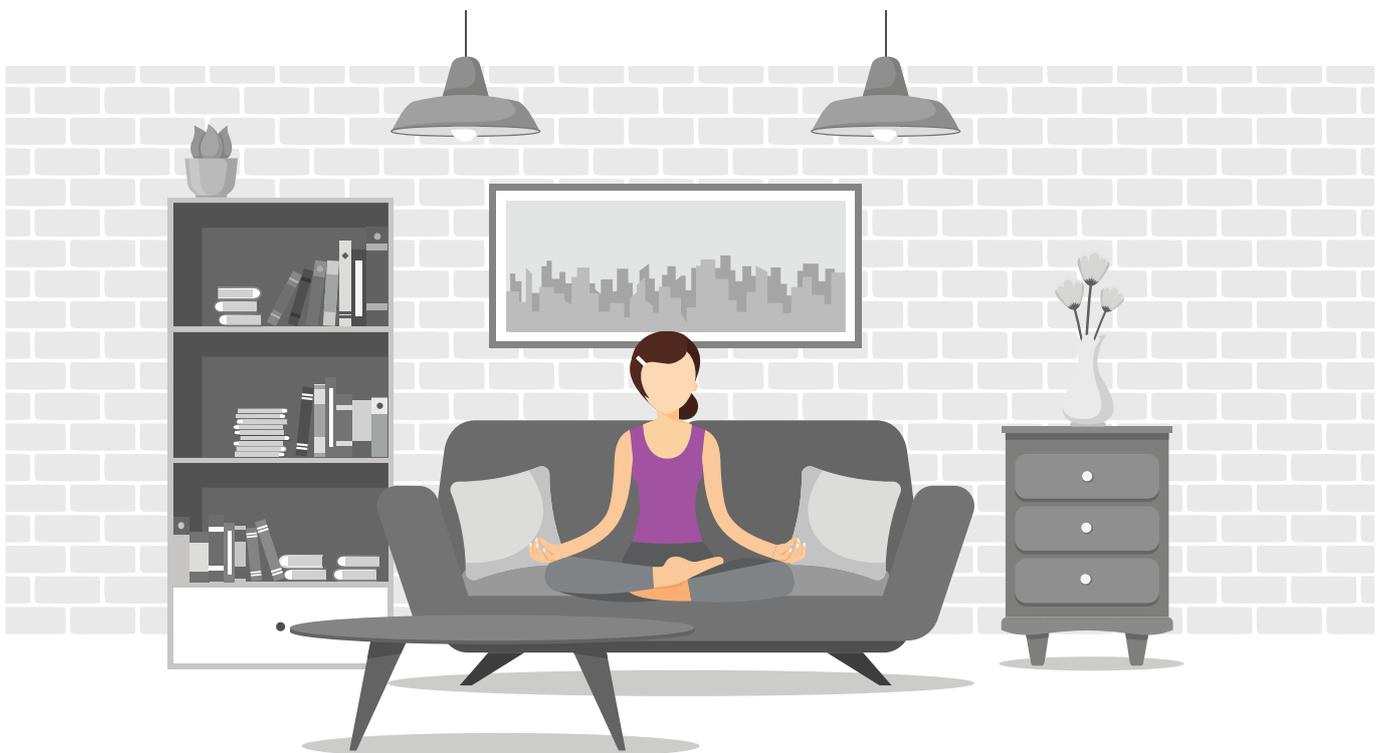
A majority of millennials prefer co-living over traditional rental models as they do not have to deal with a lack of standard practices for security deposits, notice periods and monthly rentals.



Top Players and their Footprint

Player	Year of Inception	Number of Beds	Presence	Target Audience	INR Rate/person/month
CoHo	2015	5,000	Delhi, Gurgaon, Noida, Bengaluru	Working professionals and students	9,000 - 25,000
CoLive	2016	20,000	Bengaluru, Chennai, Hyderabad	Working professionals	6,500 - 30,000
Zolo Stays	2015	50,000	Delhi, Gurgaon, Noida, Mumbai, Coimbatore, Bengaluru, Kota, Pune, Hyderabad, Chennai	Working professionals and students	6,000 - 12,000
Oyo Life	2018	40,000	Delhi, Noida, Gurgaon, Ghaziabad, Bengaluru, Mumbai, Pune, Kolkata, Hyderabad, Chennai, Jaipur, Coimbatore, Mysore	Working professionals and students	6,000 - 18,000
Stay Abode	2016	1,500	Bengaluru	Working professionals and students	13,500 - 27,000
Square Plums		1,500	Bengaluru	Working professionals and students	14,000 - 20,000

Source: Compiled by ANAROCK Research



Types of Co-living Models

The business potential in this segment has been significant and attractive enough to lure organised players to enter the market. Organised players distinguish themselves from their unorganised counterparts by their quality of accommodation, quality of service offerings, tech-enabled applications for ease and convenience. Here are some business models adopted by organised players:



Lease and operate model

This is the most popular business model due to its asset-light strategy. It entails co-living operators leasing residential units or an entire block from a landlord/property owner and sub-leasing individual rooms or beds to end-users. The arrangement between the operator and landlord is either a fixed lease rental or revenue share basis for a period of 3-9 years. The onus of renovation or upgradation of the property is on the co-living player.



Management contract model

This model involves long-term management agreements between operators and developers or investors or property owners and allows operators to run their premises as a co-living facility. In this arrangement, the responsibility of managing the returns lies with the property owner while the co-living operator is simply the custodian of the property and gets a commission for operating the facility. In the management contract model, the end-user/tenant signs the lease agreement directly with the owner.



Franchise model

As the name suggests, this model entails the co-living operator lending its brand name to property owners and unorganised PG/hostel operators who intend to run a co-living business. With this arrangement, the franchisee gets access to the technology platform, marketing capability, staff training, and vendor reach of the organised co-living operator. This model is apt for developers loaded with unsold inventory as it provides them an alternative platform to generate higher returns while still retaining their ownership.

Assessment of Co-living Business Models

Business Model	Pros	Cons
Lease and operate model	<ul style="list-style-type: none"> ▶ Minimises cost burden on operator. ▶ Equitable sharing of revenue. ▶ Better managed facilities and amenities for tenants. 	Contract with just the operator and tenant is not as binding as one between tenant and owner.
Management contract model	<ul style="list-style-type: none"> ▶ Improves the quality and facilities of the accommodation. ▶ Lease agreement signed directly with owner is binding. 	Onus of managing returns remains with the property owner.
Franchise model	<ul style="list-style-type: none"> ▶ PG/hostel operators get to upgrade their facilities and amenities. ▶ Suitable for developers looking to utilise unsold inventory. 	Quality of accommodation may not be uniform across different franchisees.

Global Scenario for Co-living: Snapshot of US & UK Markets

In the global context, co-living spaces have grown inversely with the decline in home ownership across major world cities. This segment has gained ground in Asian countries where urban density is pushing the residential markets towards alternatives. In Hong Kong and Singapore's exorbitantly priced housing market, which is out of bounds for many, co-living is an apt housing option. Across the Pacific Ocean in the US, Start-ups like PodShare and Eddy are making up for the shortage of affordable housing in cities like San Francisco and Los Angeles by providing tenants a co-living experience. Even as the challenges associated with affordability have considerably reduced home ownership in younger population, renting has become destigmatised and flexible. Co-living is also catching up in New York, Washington D.C., Chicago, and Seattle where options are being offered by players such as Open Door, WeLive, Roam. With its growing student and millennial population and exorbitant residential prices, the UK has witnessed the emergence of co-living spaces as the preferred solution for solving the housing crisis. The most well-known of these in the UK is The Collective. However, many co-living projects are said to be targeted at relatively affluent professionals and don't necessarily provide options for people on lower incomes families. Furthermore, the size of the co-living sector remains limited to a small share of Britain's build-to-rent private rental sector.



Comparison with Rental and Paying Guest (PG) Accommodation

Apart from flexibility, maintenance and tech-enabled living provided by co-living spaces, they also have a cost advantage over PG and rental accommodation. That's because while more people share the rent, they also enjoy additional services such as daily housekeeping, laundry/ on-call resident facility management, curated meals, etc. To illustrate this, let's consider the Koramangala locality of Bengaluru that is mushrooming with the rental, PG as well as co-living accommodations. While renting a 1 BHK apartment in this area costs upwards of INR 17,000/month, the monthly cost for a bed at a paying guest accommodation starts at INR 8,000/month. Co-living spaces are priced at almost the same level as PG accommodation, though the pricing can go as high as INR 20,000/month depending on the amenities and facilities available.

Co-living has gained ground in Asian countries where urban density is pushing the residential markets towards alternatives. Operators are making up for the shortage of affordable housing in cities like San Francisco and Los Angeles by providing tenants a co-living experience.

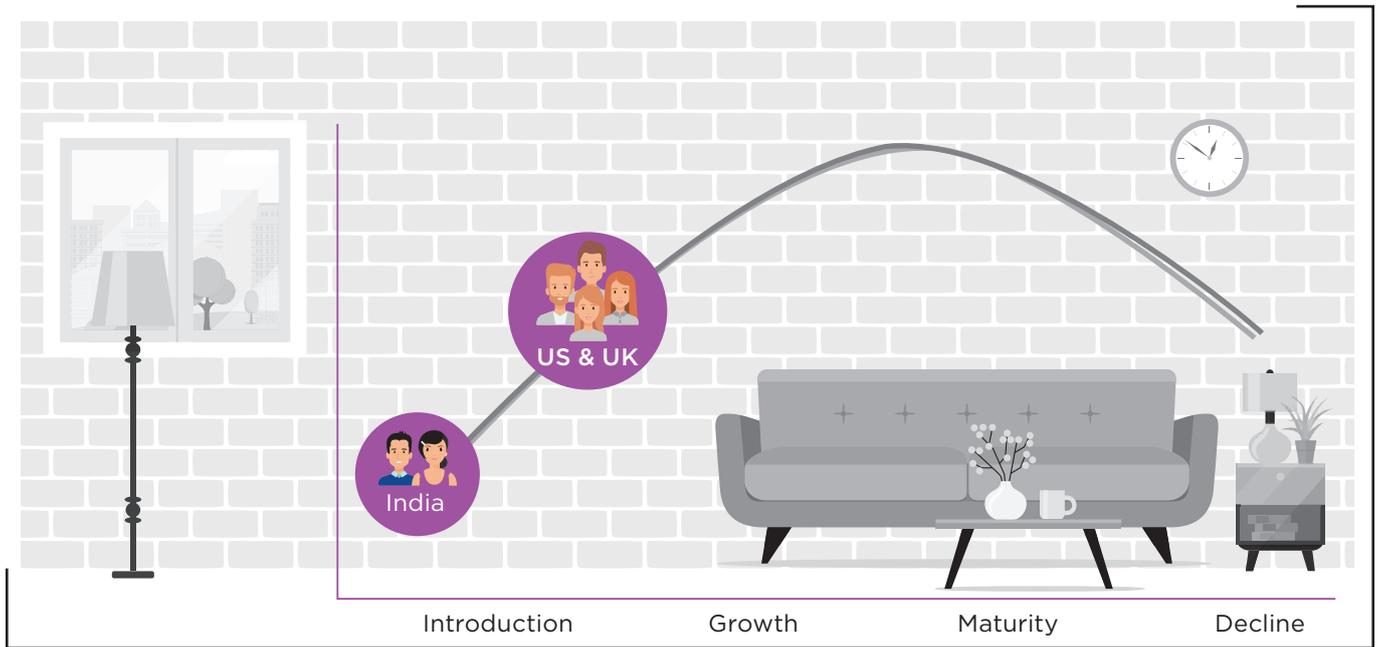
Comparison of Co-living Spaces with Rental Accommodation

	 Co-living Premises	 Rental Accommodation
Monthly Rent	Paid to operator	Paid to landlord
Security Deposit	2-3 months' rent	6-10 months' rent
Tenure	Flexible	11 months lock-in
Flexibility	High: flexible terms of exit	Low: stringent with a one-month notice period
Common Area Maintenance	Included in rent	Not included
Utility Charges	Included in rent	Not included
Meals	Optional	Not included
Housekeeping	Included	Not included
Use of Technology	Technological integration for services and convenience	No tech interface
Amenities and Social Life	Wi-Fi, common areas and community events	Extra cost for amenities, no social interaction

Mapping Industry Lifecycle

Co-living may be a rage amongst millennials and digital nomads but as an asset class it is still in its nascent stages in India. Sensing the huge potential in the domestic market and taking cues from established global players, start-ups ventured into this space to transform it into a professional, service-based offering. Attractive ROI has led to several local players entering the fray but there remains a lack of clarity with respect to design specifications, approvals, and licenses for properties, to operate as co-living spaces.

In comparison, the market for co-living has moved to the growth stage in developed markets such as the US and UK. There is a proven demand for the product, and this is supported by the growing number of players entering the market. Established companies are now expanding to new cities and markets, while beefing up their capacity at existing locations. It's safe to say that co-living in these mature markets has gone past the early stages to move towards establishing itself as a niche asset class.



Let's see how co-living measures up to these five forces:

► Rivalry among existing competitors

Currently there are less than 10 national players in the co-living sector. Given the rising demand for built-to-suit co-living spaces, this number is still very limited giving each player scope to expand and scale-up without eating into each other's share of the market.

► Potential of new entrants into the industry

The seriousness of this threat largely depends on barriers to enter the sector. Presently, there are hardly any formalities or permissions to seek for a new entrant enters the co-living market. As the number of young professionals, migrant workers, and digital nomads increases, the demand for co-living is likely to be sustained in the coming years. Cities such as Bengaluru, Gurugram and Pune were the first to witness the emergence of co-living rental housing. It is now also taking root in smaller cities such as Lucknow and Jaipur and other cities with a large student and millennial workforce populations.

► Bargaining power of suppliers

The concentration of suppliers and the availability of substitute suppliers are important factors in determining supplier power. The fewer there are, the more powerful they are likely to be. Operators and developers that make up the supply side of co-living, command bargaining power due to their

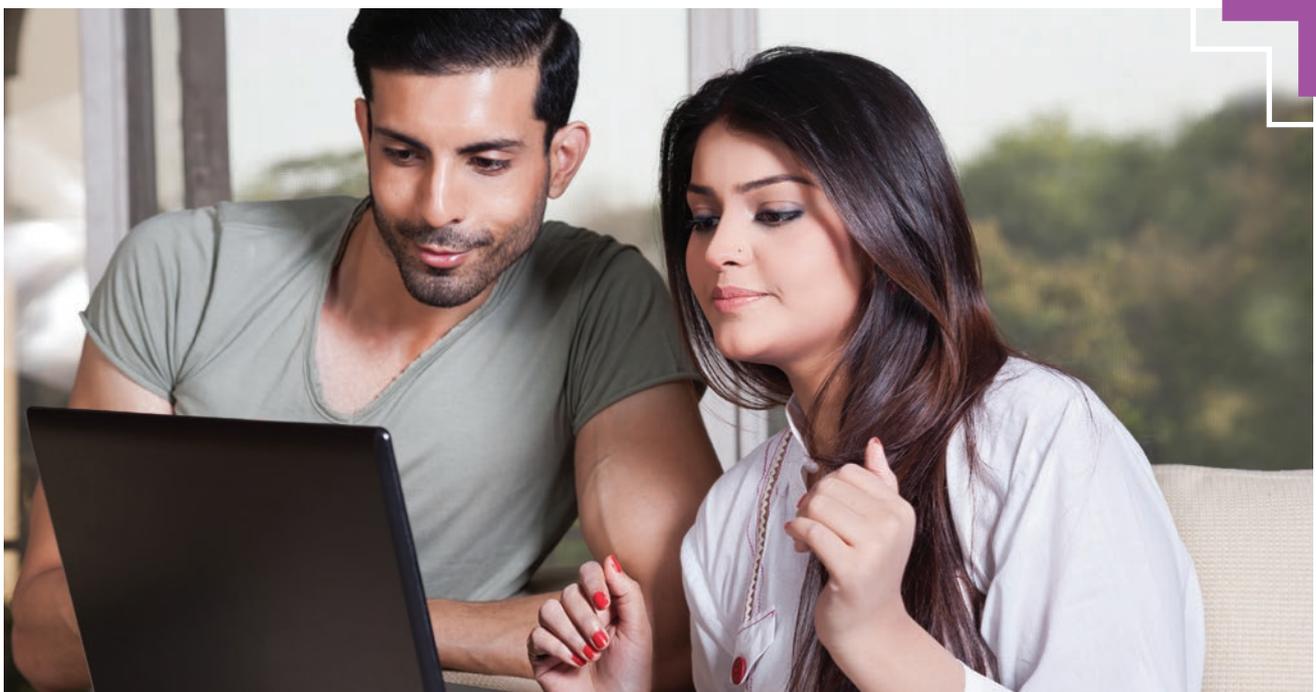
small numbers and limited offerings. As current and potential customers are disproportionately higher compared to operators, it is up to the latter to decide the pricing and quality of the product offering.

► Bargaining power of customers

Customers typically command power when there aren't many of them and when they have many alternatives to choose from. Considering that co-living is in nascent stages of development and the companies' valuations are determined by the occupancy rates, the bargaining power of customers is high. Operators are looking to being full capacity which gives the customers an advantage to get the best deal.

► Threat of substitutes

PGs and shared rental spaces pose a definite threat to co-living considering these formats are still more popular and preferred. These traditional modes have survived over the decades and cater to a wider audience looking a simpler and more basic form of rental accommodation. Opposed to these formats, co-living spaces call for much higher investment, in terms of the setup costs, as well as regular maintenance and servicing. PGs and shared rental spaces will continue to dominate the rental market, though are likely to modernize and streamline their offerings to compete with smarter co-living options.



Institutional Funding: Enabling Operators to Expand and Grow

As the co-living asset class gained traction in India in recent years, it has also attracted investments from both domestic and global institutions. From seed funding to subsequent rounds of financing, private equity players, developers and individual investors have backed the segment. Start-ups have particularly benefitted from the infusion of funds that has enabled them to scale up operations and expand their footprint to multiple cities.

Major PE Deals in Co-living

Year	Name of Investor	Co-living Company	Amount
2017	Nexus Venture Partners Innovent capital	Zolo Stays	USD 5 million
2019	IDFC Alternatives, Mirae Asset, and Nexus Venture Partners	Zolo Stays	USD 30 million
2019	Venture Catalysts	Grextor	USD 2 million
2019	Salarpuria Sattva	Colive	USD 9.2 million

Source: Compiled by ANAROCK Research

From seed funding to subsequent rounds of financing, private equity players, developers and individual investors have backed the segment. Start-ups have particularly benefitted from the infusion of funds that has enabled them to scale up operations and expand their footprint to multiple cities.

Lack of Regulation Posing Future Challenges

Even as co-living spaces grab headlines, there’s no shying away from the fact that the sector remains largely unregulated. Co-living is a relatively new concept in India and blends different sectors and verticals such as real estate, technology, and hospitality. The lack of policy framework does support this arrangement nor is it conducive for the long-term and sustainable growth of the sector.

Short, flexible leases may be one of co-living’s main draws, but this could also be a risk factor. As the co-living operators often sign a long-term lease with landlords but earn their revenues through shorter-term rental agreements. Operators need to be wary of the volatility in their revenue streams, especially during the times when economic slowdown may negatively affect the leasing demand from tenants.

With the co-living market gaining momentum, the government must look to formalise the sector through industry-friendly regulations. Not to mention, a clear policy framework will also attract more foreign investments into this growing segment. Currently,

any residential rent-out fetching value below INR 2 million annually is exempt from GST, whereas 18% GST is levied if it is above this value. When co-living operators lease out a building, 18% GST is applicable to them which gets added on to the accommodation costs for end-users. For short-term occupants, if the overall charge is below INR 1000/day, the tariffs are exempt from GST. Going forward, to formalize the market for co-living, the government must consider it as residential leasing to exempt it from GST or put it in a lower GST bracket of 1% or 5%. Furthermore, short-term stays in co-living facilities must be clearly defined in terms of a maximum number of permissible days and be exempt from GST.



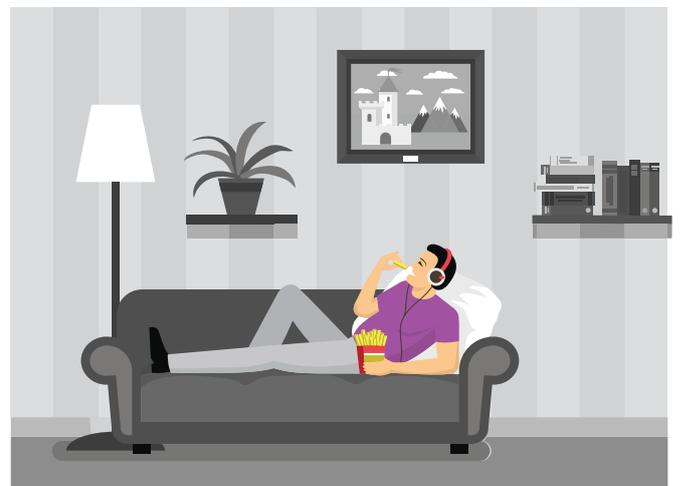
The Way Ahead

A 2019 report by India Brand Equity Foundation (IBEF) states that the real estate industry in India may have a market value of USD 1 trillion by 2030, with the residential market accounting for the lion's share of the market. Looking at the scope of the industry, the number of players in the co-living space in India is growing at a fast clip and expanding to Tier 2 and Tier 3 cities as well.

While entry barriers are limited in this segment, the critical issue of 'relevant supply' will be the key differentiator in the times to come. Relevant supply refers to purpose-built structures to be operated as co-living units. With an increase in the influx of competitors backed by venture capitalists, there is pressure on existing players to stand out and offer something different to the customer and gain competitive advantage.

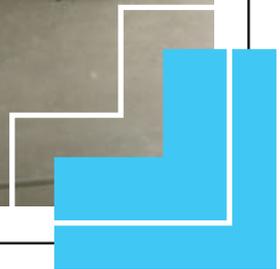
Co-living as a business model has the potential to provide a fresh lease of air to cash-starved developers who are battling slower sales and mounting unsold inventory. Select developers have already tied up with operators in Delhi NCR and Pune to lease out select towers from their township projects. Developers are also exploring opportunities to construct purpose-built co-living facilities and either operate the same themselves or lease them out to operators.

India's co-living sector has taken big strides over the last two years and emerged as an asset class to reckon with. In developed economies and markets such as the US and UK, the sector is set to mature to the growth stage and grow further with significant institutional investment. It may not be a flash in the pan but co-living still accounts for the very small size of India's rental market and barely reached dozen-odd cities. Is co-living a viable alternative to other asset classes? Not in its present form and size. Nevertheless, it is a segment that has the potential to grow exponentially with the backing of institutional funding and the right policy framework.



2

Coworking - A Need for Changing Cultures



Coworking, as the name suggests, is nothing but shared workspaces between multiple companies that prefer to be present within a cross-cultural environment. The concept is not new in India considering that companies such as Regus have existed in the country for many years. However, the coworking business model is still emerging as many companies continue to operate in commercial office buildings (independent or leased) but prefer to operate disjointedly so as to set up their own systems and processes and refrain from any kind of violations. Across large cities in India, coworking spaces have mushroomed at such a rapid pace; it is difficult to keep a track of how many are around.

Originally billed as the perfect working space for millennials, coworking spaces are becoming very popular among large and even medium-sized businesses for their affordable infrastructure and business opportunities. This, however, begs the question- what is fuelling this growth and is this a bubble? Many feel with India becoming the third largest start-up hub in the world and the second largest freelancer workforce in the world, there is a huge potential demand for coworking spaces in the country.

However, in the last two years, the coworking segment has been garnering significant attention from investors as well as occupiers, which leads us to take a look at the key factors which have fuelled the growth of these spaces in India:

The Rise of Start-ups

India has emerged as the third-largest start-up ecosystem in the world, growing seven folds from 2008 to reach 50,000 in 2018 as per a KPMG report released in February 2019. Start-ups are generally boot-strapped in the initial years and operate from the founder's home or a lesser-known office space. Even during the seed funding days, start-ups have a low propensity to spend on real estate considering that it requires significant investments. Such start-ups are generally the key target occupiers of coworking space operators.

Coworking spaces offer an opportunity to lease desks as per requirement as compared to the necessity of leasing an entire unit (space) in a traditional commercial office building. This reduces the pressure to invest in real estate assets during the early stages

of a start-up's life cycle. Start-ups also get to work with diverse businesses which allows them to reach out to many stakeholders within their ecosystem, resulting in an increased market reach while staying within office premises. This helps them in establishing deep business relationships in the early stages of their life cycle.

Plug-and-play Nature of Coworking Spaces

Apart from the basic real estate rentals, the additional cost of setting up an office with work stations, conference rooms, internet connectivity, housekeeping, etc. are again repelling many new-age corporates/start-ups to opt for conventional commercial offices where the initial set-up costs are very high. Coworking spaces allow them to just rent a desk/office and start focusing on work as they provide the basic infrastructure of workstations, conference rooms, internet connectivity, housekeeping, pantry services, etc.

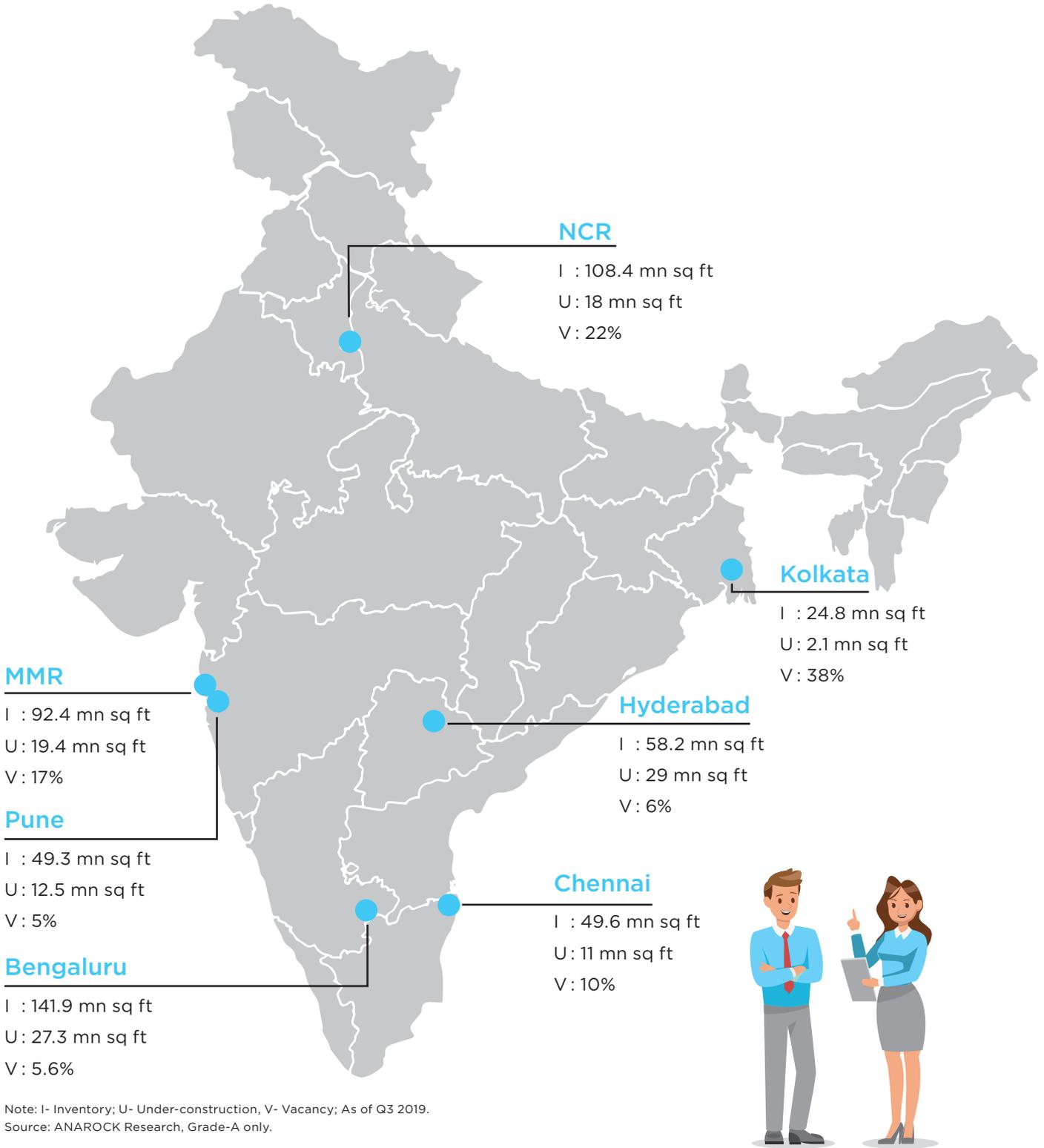
Ease of Setting up Smaller Offices

Large corporates have started to opt for coworking spaces as it allows them to have multiple offices within the same city. Instead of having one large space in the core area of the city, they now prefer smaller segregated offices in multiple locations. This allows employees to work from locations nearer to their residence and clients, which offers a better work-life balance and thereby increases productivity. Coworking also lets large corporates expand their reach into multiple geographies and service a bigger market in an efficient manner.

Bringing the Entire Eco-System Under One Roof

A different dimension of coworking facilities that the industry has still not witnessed is that these spaces have the potential to bring an entire eco-system of an industry under one roof. This concept can specifically work for firms who can consider housing vendors, buyers, support companies, technology providers, etc. all under one roof like the auto industry. This will help them to seamlessly operate within the industry as the time and effort spent on communication will reduce significantly.

Commercial Office Space Dynamics: South India riding on IT-ITeS expansions



Premium locations in NCR such as Aerocity, MG Road, Golf Course Road, and CyberCity in Gurugram have vacancy levels below 10%. The Noida and Delhi markets have high vacancy levels taking the overall average higher for the city. But IT-ITeS driven cities such as Bengaluru, Chennai, Hyderabad, and Pune have low vacancy levels in Grade-A offices, creating a huge demand for coworking spaces in these cities. In case of MMR, where vacancy levels stand at 17%, there is demand for coworking as offices are shifting from one zone to another. Corporates across MMR are expanding aggressively and shifting their operational divisions to smaller distributed locations to be present closer to their clients.

Note: The India map is not to scale. This is for indicative purposes only.

Coworking Operators: A Snapshot

Global players aggressive to expand base in Indian sub-continent

India, riding on the start-up wave, has emerged as an opportunity for coworking space operators to expand their operations. The coworking wave which came in 2014 in India has led to many global and domestic players setting up their base and operations in the country.

To better understand various coworking business models, we have assessed top domestic and global players operating in India.

Parameter	Local Players	Global Players
Top operators	Innov8, Awfis, CoWrks, 91SPRINGBOARD, Smartworks	WeWork, Regus
Total offices	152*	191**
Geographic Presence	Metro & Tier-I cities	95-97% in Metro & Tier-I cities, 3-5% in Tier-II & III cities
Year of Operations	2014 onwards	2004 onwards
Clientele	IT start-ups, investment banks, corporates, FMCG, automobile companies	IT start-ups, financial institutions, corporates, automobile companies
Rental Models	Hourly, weekly, monthly, yearly	Hourly, weekly, monthly, yearly

Note: * indicates the aggregate for 5 domestic players; ** indicates the aggregate for 2 international players
Regus started operations in India in 2004 while WeWork started operations in India in 2015.
Source: ANAROCK Research

A quick comparison of the local and global players reveals the following:

- ▶ Even though both players follow the same rental models, global players entered India much before coworking as a concept started to pick-up.
- ▶ Local players largely cater to start-ups and extended small teams of large corporates whereas global players have full fledged corporates operating within their spaces.
- ▶ Local players are present only in metro & tier-I cities whereas global players have started expanding beyond the big-8 cities to tier-II & III cities.
- ▶ Local players have largely taken up spaces in existing commercial buildings and converted the space into coworking whereas global players have largely taken up the entire buildings.



Rental Model: Coworking and Commercial Office Spaces

Discounted seats yet not attracting corporates

Coworking spaces not only offer flexibility to work in an open environment but also provide a cost advantage over traditional commercial offices. Lower costs along with attached amenities are a big draw for start-ups and corporates who are using the coworking spaces for either setting up or expanding their current business.

City	Region	Coworking (INR/desk/month)	Conventional commercial real estate (INR/desk/month)	Coworking discounting
MMR	CBD	18,500 - 28,500	24,500 - 30,000	14%
	SBD	13,000 - 20,000	25,000 - 32,000	42%
Gurugram	CBD	9,000 - 14,000	9,500 - 15,000	6%
	SBD	6,500 - 12,500	5,500 - 9,000	-31%
Bengaluru	CBD	7,500 - 15,000	10,000 - 18,000	20%
	SBD	4,000 - 8,500	6,500 - 15,000	42%
Chennai	CBD	6,000 - 14,000	7,000 - 15,000	9%
	SBD	6,000 - 9,500	7,500 - 10,000	11%
Hyderabad	CBD	5,000 - 8,500	6,000 - 9,000	10%
	SBD	4,000 - 6,500	3,500 - 7,000	0%
Pune	CBD	5,000 - 10,000	10,000 - 12,500	33%
	SBD	4,000 - 8,000	8,000 - 9,000	29%

Note: Rentals are based on per desk basis, Assuming 100 sqft per desk for conventional commercial real estate

MMR: CBD - Ballard Estate, Colaba, Churchgate, Fort & Nariman Point; SBD - Bandra-Kurla Complex, Bandra East, Kalina;

Gurugram: CBD - Cyber city, MG road, Golf Course road; SBD - NH-8 Prime/Non-Prime, Gurugram others

Bengaluru: CBD - M.G. Road, Millers Road, Vittal Mallya Road, Residency Road, etc; SBD - Koramangala, Bannerghatta, Hosur road, Electronic city etc.

Chennai: CBD - Anna Salai, Nungambakkam, RK Salai; SBD - T.Nagar, Alwarpet, Kilpauk, Egmore, Chetpet, Royapettah, Kotturpuram;

Hyderabad: CBD - Gachibowli, Madhapur, Manikonda, Kondapur etc. SBD - Pocharan, Uppal etc

Pune: Laxmi road, Camp, Bund garden, Koregaon park, Shivaji nagar etc; SBD - Kalyani nagar, Yerwada, Viman nagar, Aundh, Baner etc.

Source: ANAROCK Research

Coworking spaces' rentals are much lower and they also come with added facilities such as high-speed internet, waiting areas, flexible workstations, etc. making them favourable for many. With the government promoting entrepreneurship, the new wave of open and flexible workspaces will help promote the move with low operational cost for such individuals/companies.

Even with perks such as discounted prices,

coworking spaces also have certain restrictions such as no separate canteen or pantry for occupiers. They don't usually allow corporates to organise any event in common areas. These factors have hindered large companies from shifting completely to coworking spaces. Even though several companies may have some presence in coworking spaces, they are still not very keen on completely depending on them for their future expansions.



Comparison of Business Models: Coworking and Commercial Office Space

Lucrative business model for coworking spaces to pave way for its future

Coworking and conventional commercial office spaces both essentially provide workspaces for start-ups, corporates, etc. However, the models on which they operate are remarkably different. For the purpose of understanding, we have identified the following differences in the business models of both these products:

Parameter	Coworking Space	Commercial Office Space
Rentals	Hourly, daily, weekly, monthly	Monthly
Area leased	As small as 1 desk	Minimum one office unit
Amenities	Fully setup desk, internet, electricity, water, maintenance, printers, pantry	Bare shell or warm shell office to be further developed by the lessee
Car parking	Additional charges	Based on area leased, few car parks are allotted to the office
Meeting rooms	Available to the occupant for few hours a month (as per commitments) and subsequently on chargeable basis	Have to be developed within the leased space by the lessee
F&B	Managed by the operator	Self-develop F&B space and manage the franchises
Pet-friendly	Yes	No
Events	Organised for the occupiers by operators	To be taken care by the lessees themselves

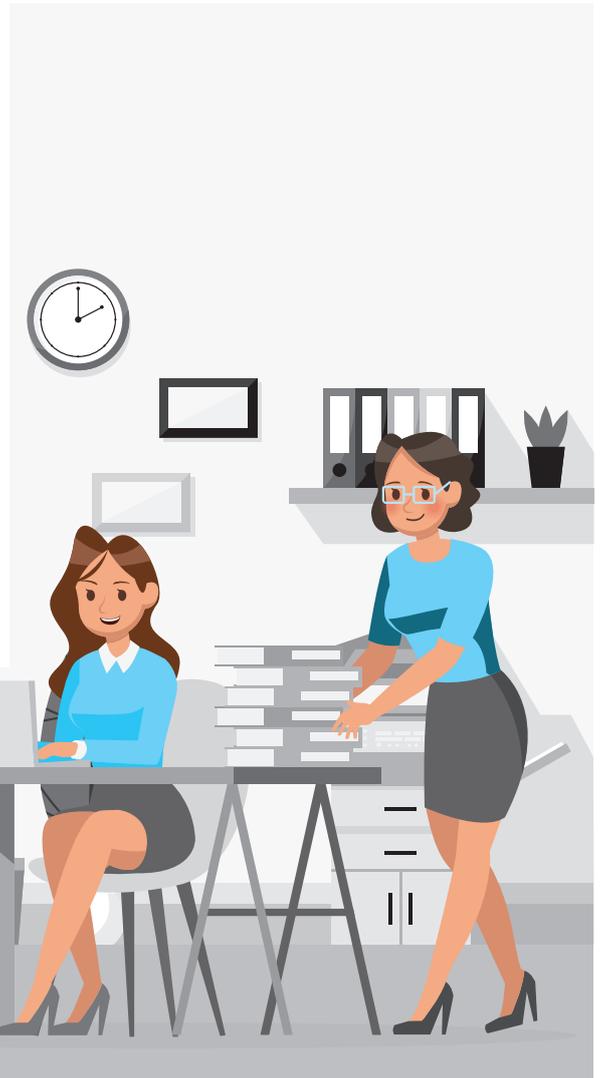
Private Equity Deals in Coworking in India

Changing ways of industry operations attracting private equity players

Private equity players have caught a fancy for coworking as it is changing the way the industry operates. Despite the buzz created by this new segment, PE players haven't invested heavily into it. The investments in the coworking are a fraction of traditional commercial assets.

Year	Name of Investor	Coworking Company	Amount (USD million)
2018	Sequoia Capital	Awfis	20
2018	Credence Family Office	Innov8	4
2019	ChrysCapital	Awfis	30

Source: ANAROCK Research, Secondary Sources



Global Coworking Market

Coworking nascent in India is reaching maturity across developed economies

Coworking is believed to be preceded by European hacker spaces of the 1990s where programmers would exchange skills and best practices. They were developed as an alternative to working in cafes and coffee shops, or in isolation in independent or home/offices.

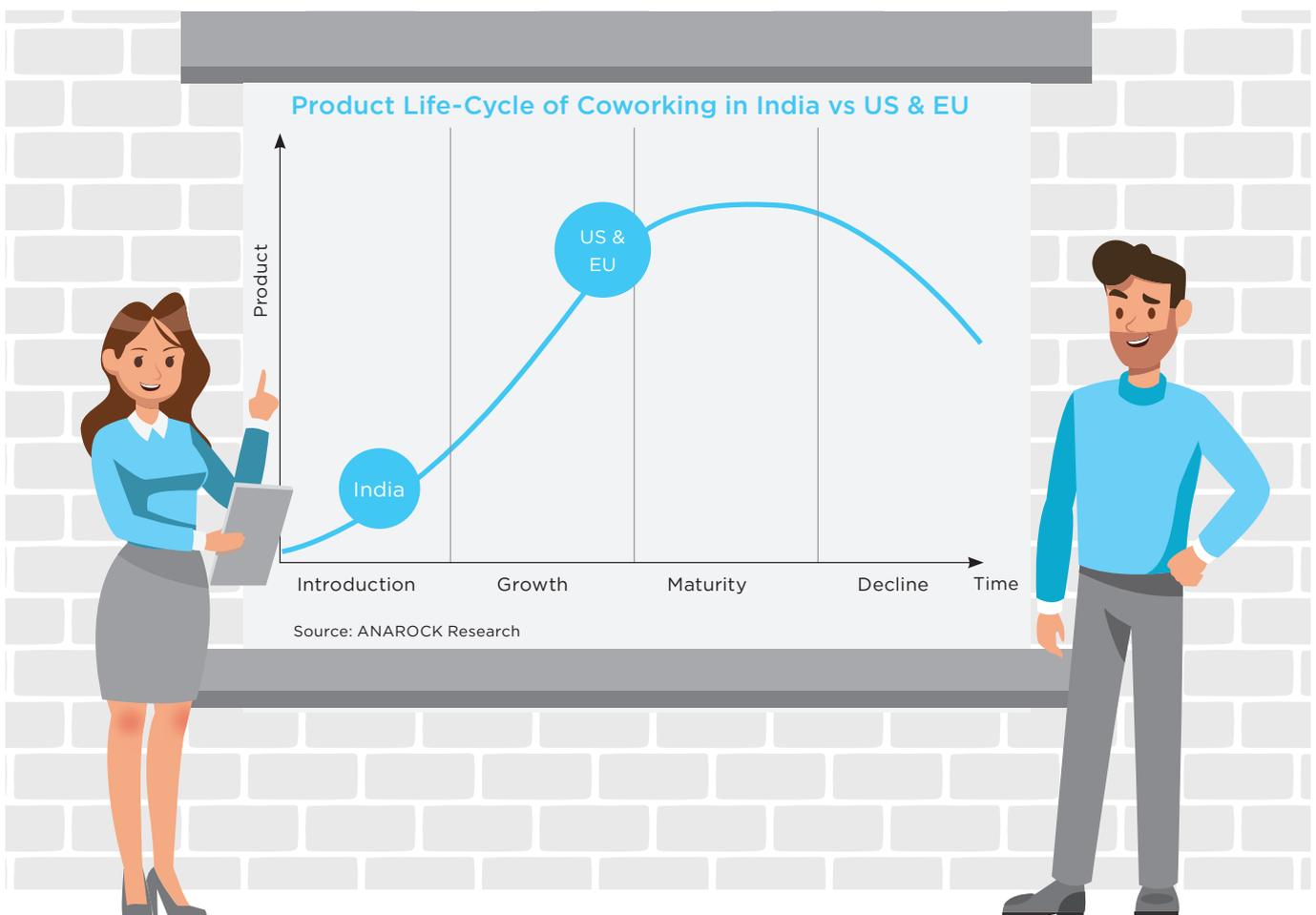
Coworking emerged in the major economies in EU in 2001. Since then, the coworking market has grown significantly and spread its wings to developing nations as well. As per industry estimates, coworking spaces have grown by more than 200% in the EMEA region as compared to the early 2000s. It has surpassed the nascent stage in the product cycle across developed economies like the US and EU and is approaching the maturity phase. Most corporates have started depending on coworking stations for their expansion plans within and beyond the city limits. In the Indian scenario, where coworking spaces have largely evolved from incubators. Start-ups operated from them until their business model was established and the business started to generate

revenue. Today, incubators are getting replaced by coworking spaces which aren't too cost-intensive and also allow budding entrepreneurs to connect and network for fast-paced results.

In the last two decades, since coworking started to emerge in developed economies of US and EU, the concept is no longer an alternative to conventional commercial real estate. With the rise in millennial population across the globe, the traditional way of operating within boundaries has been broken down and companies have started to operate in an open cross-cultural environment. Coworking spaces have expanded beyond developing economies in Asia and Southeast Asia and helped large corporates to explore new geographies without worrying about the setup costs.

Coworking in India: Still in Nascent Stage

Coworking spaces started to emerge in India much later as compared to other developed economies. Even as global companies like Regus started operations in India many years ago, Awfis was the first domestic coworking space provider to start operations in 2014 with its first centre in Delhi-NCR. However, across the globe, the coworking concept existed from early 2000s.



Although coworking started in late 2014 in India, it has emerged as the second biggest coworking market in Asia and Southeast Asia after China.

With the global market approaching maturity, it will be interesting to see how it shapes up in the near future. Other asset classes have started to witness a downturn due to lack of initiatives taken to reinvent the product. It remains to be seen how coworking operators plan their operations and strategies in the future to keep the demand and momentum going.

Government Policies

Government yet to support the segment with policy

Currently, since coworking spaces are an emerging concept in the country, and are not counted as a mainstream business, the government has yet to devise a complete policy to govern the emerging asset class. The following lacunae must be addressed to protect coworking from imploding in later stages:

- ▶ It is still unclear if the concept of coworking spaces is treated as a new start-up in the country or a full-fledged company and is taxed accordingly.
- ▶ There is no clarity on how the landlord is getting taxed on the income he is generating from coworking operators.
- ▶ There are no incentives for coworking operators leasing conventional commercial office spaces for their operations as the cost of leasing the space and again subletting is different. The current burden is still lying with the coworking operator.
- ▶ There is no incentive for coworking operators to make spaces available for start-ups.

Apart from addressing these issues the government must come up with a definitive policy to make this asset class a main stream business.

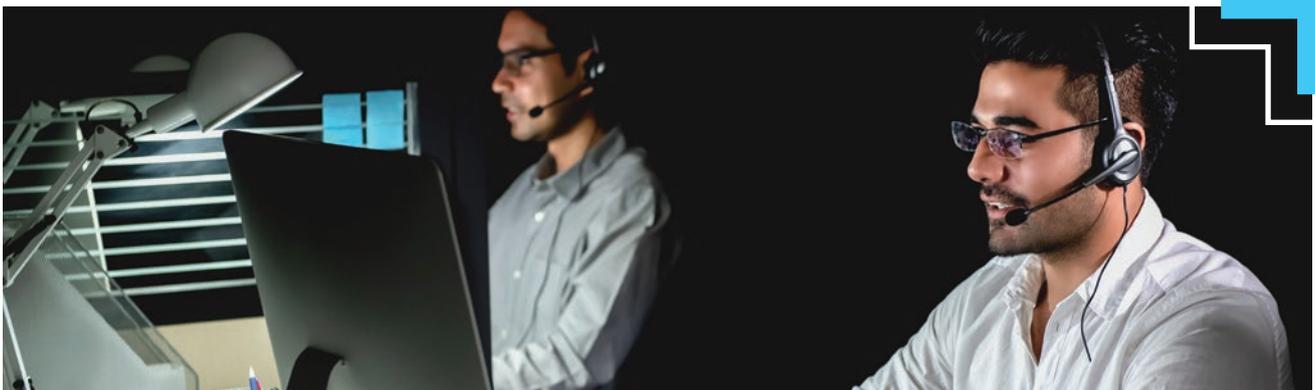
The Way Ahead

Coworking spaces emerged as an alternate asset class to traditional commercial office spaces offering an open and flexible workspace to millennials and freelancers who seek innovative and cost-effective workspaces. These flexible spaces not only allow them to be asset light in the early stages of their business but also focus on increasing the value of their enterprise.

Even though the concept of coworking in India is nascent, it is not regulated and/or governed by the government. It is still unclear if the segment is treated as a start-up and is taxed accordingly or it is treated as a regular commercial office when it comes to income of these operators. Its future and growth prospects I will hinge on whether the government brings a new policy to support the growing culture of flexible workspaces or it opposes the fast-paced growth these coworking spaces offer.

Discounted lease rentals offered by coworking operators are acting as a driver for the new age start-ups and freelancers. But it remains to be seen if it is financially viable for them to sustain the same discounted lease levels in the future.

There's no doubt that coworking creates an inventive and stimulating work environment, but it also comes with certain riders attached to collaborative workspaces. To truly realise their potential and grow on a fast clip, coworking spaces must innovate and rethink their business models. The current lease-based structure does not offer much flexibility and cost efficiency. The new year is likely to see the rise ownership model developed in partnership with the landowner, developer, or the space-provider. This arrangement will create built-to-suit spaces that are customised as per the tenant's needs. There's no doubt about the scope of coworking sector and its potential for growth but it may be some years for coworking to become India's preferred work ecosystem.



3

Senior Living



Senior Living – A Lifestyle without Stigma

India in the 21st century has a large population of older people who are financially capable but are living alone and away from their family and children. These senior citizens also aspire for community living amidst modern amenities and an amicable environment that provides physical and medical support.

The concept of senior living in India has gained momentum since the turn of the century. Earlier the ingrained social norm was the moral obligation of children to assume the responsibility of the ageing parent. Old age homes were perceived as the last resort for older people as it came with the social stigma for the family.

The old age homes in earlier days run by charitable institutions provided a shelter to cater to the needs for its inhabitants. Today the concept, assets and infrastructure have transformed significantly. Senior living properties today offer a unique mix of real estate, hospitality and healthcare. With rising life expectancy and higher disposable incomes, the concept of senior living has changed rapidly.

Senior living projects provide a variety of benefits including socialization, resident assistance and services including meals, transportation, laundry, housekeeping, security, and emergency response among others. These services enable senior citizens to remain independent and enjoy a high quality of life as they age. The benefits of senior housing include supportive services and care coordination also. Since ageing is accompanied by various physical and social illnesses, healthcare considerations should be of paramount importance when considering housing solutions for the senior living segment. The aged population faces numerous issues, which are typical to the sunset years of their lives - the growing sense

of insecurity, loneliness, fear of obsolescence within the family, increasing physical disability, complexity in conducting daily chores and compatibility with others.

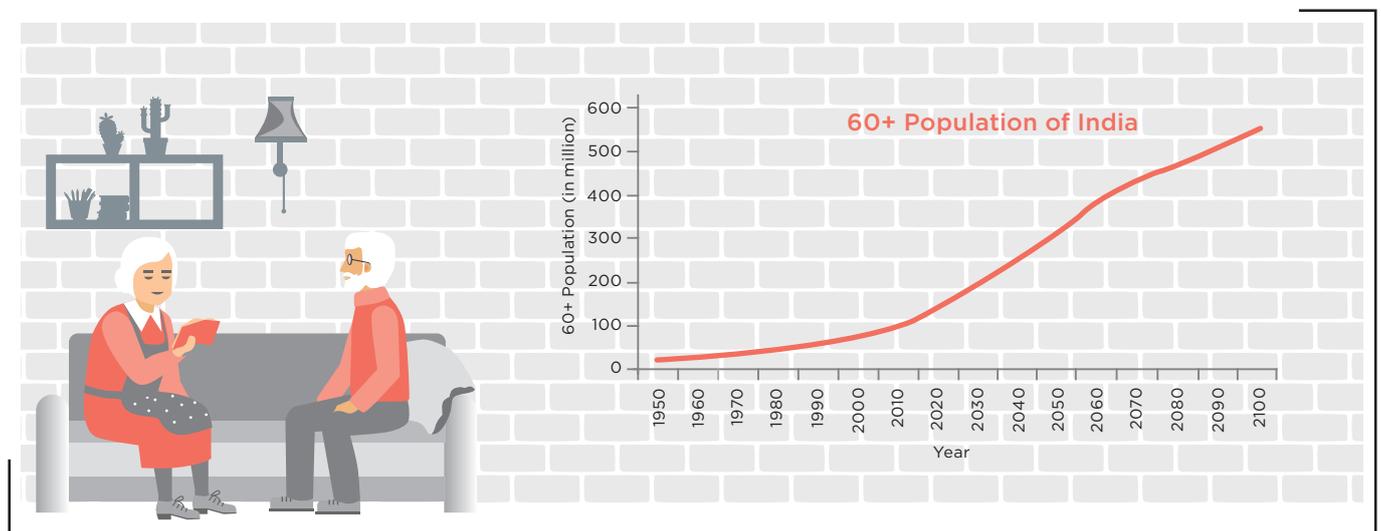
It is imperative that real estate developers understand and acknowledge the unique necessities of the elderly while catering to the sector. They should also keep in mind sensitivities unique to Indian cultural aspects regarding how seniors are treated in India and offer community life upholding their sense of respect and self-esteem.

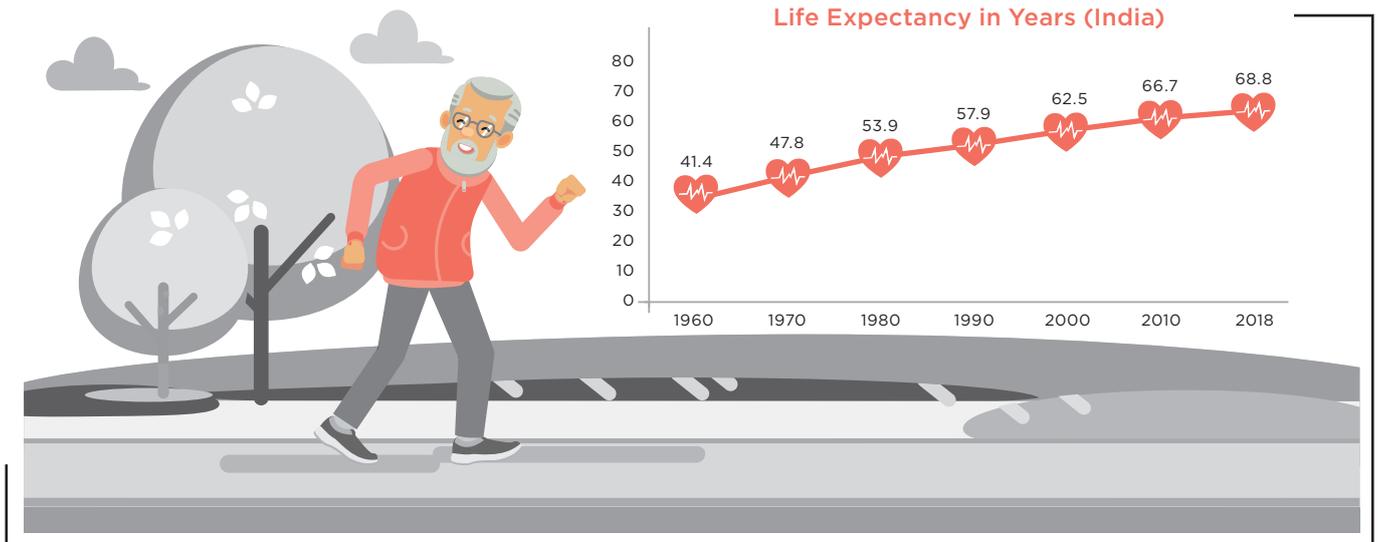
Ageing World Population and Improving Life Expectancy Key Demand Driver

The world's population is ageing. In almost every country the population of people older than 60 years is seen to be growing continually. As populations grow older, it is important to design and innovate policies and amenities specifically targeted towards the older generation.

Rising life expectancy

- ▶ According to a study by the United Nations, the global population aged over 60 years more than doubled from 382 million in 1980 to 962 million in 2017. It is projected to reach 2.1 billion by 2050.
- ▶ Globally, the number of persons aged above 80 years is projected to rise more than three times from 137 million in 2017 to 425 million in 2050.
- ▶ The overall life expectancy in India has improved significantly from 41.42 years in 1960 to 62.505 years in 2000. Improved healthcare systems and precautionary measures adopted have improved life expectancy to 68.8 years in 2018.
- ▶ In India, the population aged above 60 years has already breached the 100 million mark and is expected to be over 500 million by the end of this century.





Source: World Bank Life Expectancy Indicator (Compiled by ANAROCK Research)

With rising income levels, a growing number of these senior citizens are now economically independent and willing to pay for facilities and services related to their physical, medical and psychological needs. There is already a growing trend in senior citizens choosing to reside in commercially developed and professionally managed facilities.

Increasing Dependency Ratio

Old Age Dependency Ratio is defined as the number of persons in the Old Age group 60+ per 100 persons in the age group 15-59. The dependency ratio in India increased from 10.9% in 1961 to 14.2% in 2011. While there is significant variance across the states, it is more pronounced in rural areas. It is also observed that elderly women are more likely to live longer than men, indicating a higher dependency ratio for females.

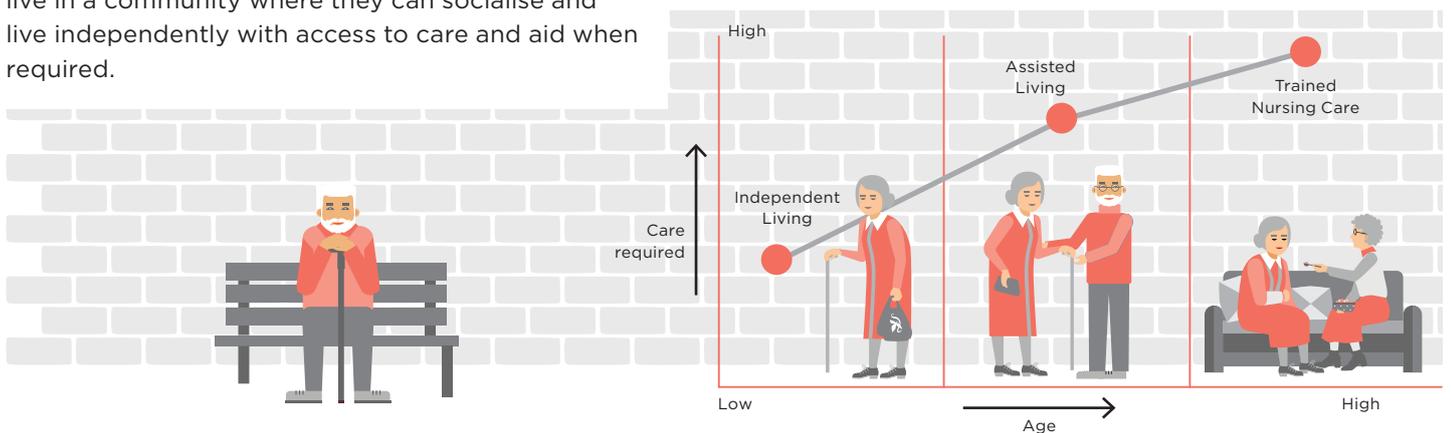
The Social Factor

The social stigma of being left alone in an old age home has been gradually fading away. Today many young people are compelled to move away from their ancestral houses and native places in search of livelihood and pursue their professional aspirations. The retired and elderly are financially capable of taking care of themselves and prefer to live in a community where they can socialise and live independently with access to care and aid when required.

The changing social and economic factors coupled with the increased life expectancy has been instrumental in creating the need for a separate real estate asset - senior living. The demand for such developments should be perennial. However, caution should be exercised in designing the product which should complement the medical and social needs of the age group under consideration.

Types of Senior Living

The type of senior living arrangement depends on the level of care and support required by the inhabitants. While age is an important factor to determine the variant required, it is not always proportional to the care that may be warranted for that age. It is observed that with age the disablement may differ for different individuals. While a person at an advanced age may be mentally fit but fails to perform physical activities and vice versa. Thus, the requirement of care and attention will vary. Given the complexities that we see with age, the senior living may be broadly classified as under.



Independent Living

Typically, an independent living unit is no different from traditional housing. However, it is better designed from an architecture standpoint with various design interventions that are needed to take care of senior residents. These could range from better lighting to mobility facilitation. Bathrooms and kitchens are designed to accommodate wheelchairs and walkers, hallways and doors are wider, and tiles and flooring are anti-skid. Socialization plays an important role in uplifting the atmosphere of the Independent Living and improving the health stature of the residents. The residents in this category usually have impaired vision, lack of agility and at times hearing difficulty. However, they are perfectly capable of taking due care of themselves and perform routine chores.

Assisted Living

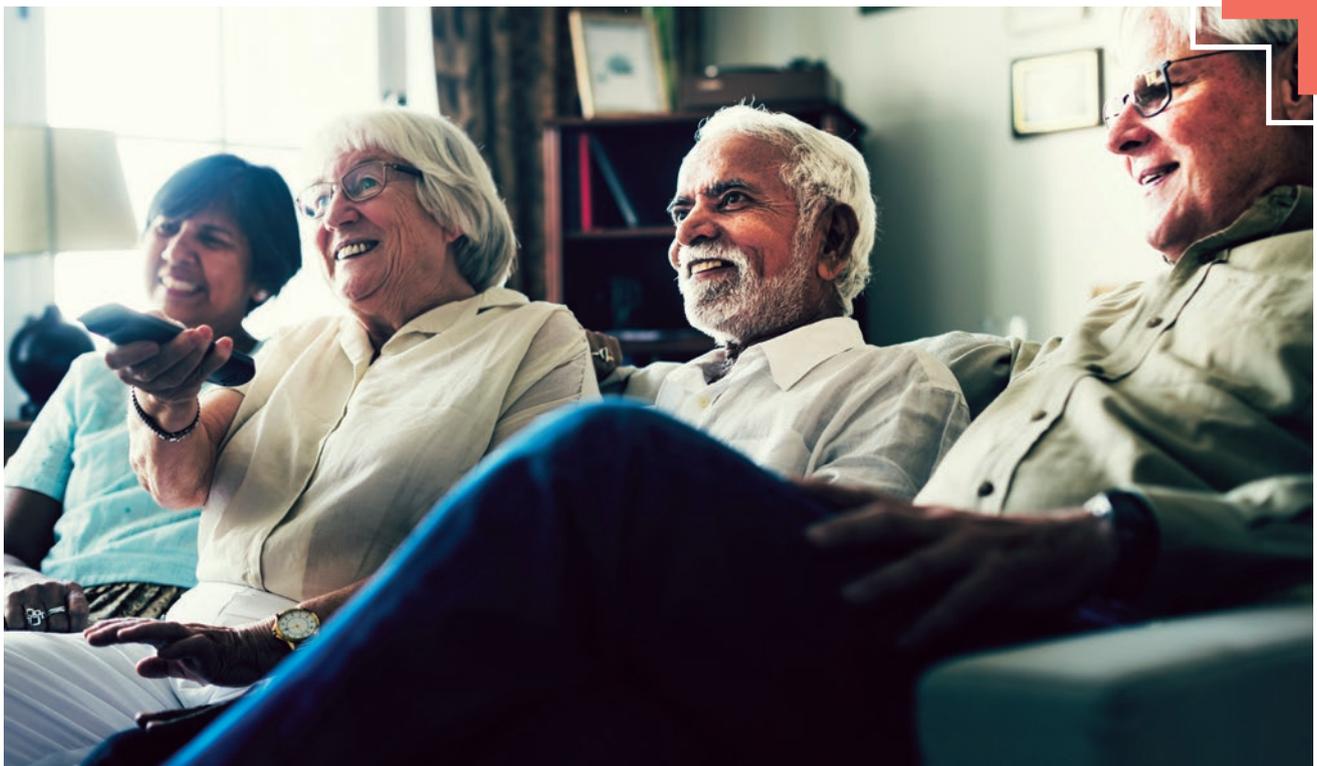
There is a significant overlap between independent living and assisted living. While the former graduates to the latter, the level of care and attention differentiate the two. Assisted living warrants the need for care workers who assist the residents on a daily basis. Their level of attention will be more due to frequent ailments and diseases coupled with their reduced mobility and ability to react to the given situation. In addition to the ailments and challenges above, the residents in this category require constant

medication and routine medical examinations. They also suffer from reduced mobility due to acute arthritis and other ageing symptoms such as Alzheimer's or dementia. Care and attention are required for a longer period of the day compared to those in the independent living category.

Trained Nursing Care

The residents here require significant care and nursing assistance more frequently than the rest to assist them with their physical and mental disabilities. At times there is also a need for rehabilitative therapies. The requirement of care and service increases considerably in this stage and may require constant monitoring, emergency, medical services and occupational therapists. The prime objective during this stage is to provide a holistic and home-like environment to the residents.

A senior living project in its true sense should provide for all three types of living conditions. This will enable continued care for the residents across the various stages of life. Such communities are truly capable of addressing the needs of senior living and will cover a larger spectrum of the population ranging from 60 - 80 years. In India, we have very limited such options. Only a few corporate groups have ventured into the segment offering 360 degrees of care and services for the seniors.



The standards and norms for senior living projects are those that are prescribed in the National Building Code’ (NBC), ‘Model Building Bye Laws’ (MBBL) and ‘Harmonized Guidelines and Space Standards for Barrier Free Built Environment. These are prescribed particularly for the habitation of the disability and elderly persons. Some of the important norms are listed below that mandates developers of senior living asset to follow:

Trained Nursing Care

 Building Design	 Services
All buildings with more than one floor should have lifts, suitably sized to accommodate locomotion aids and equipped with audio visual signages and signalling systems	24X7 onsite ambulance with oxygen support
All internal and external spaces should enable free movement of wheel chairs	24X7 water and electricity supply
Use of easy grip door knobs and door handles	Single window facilities and helpdesk to access the services of social welfare department and urban local body
Ramps should be used to connect level changes and stairs be avoided as far as possible	Transport and mobility assistance including pick up and drop facility for nearby locations and electric vehicles such as e-carts for internal movements within the Retirement Home complex
Mandatory installation of Gas detection systems	Emergency rooms, equipped with medicines and medical accessories to accommodate two patients and an attendant
All flooring, including bathrooms to be fitted with anti-skid tiles	Emergency alarms and light controls at bedside and bathrooms
100% power back up including common areas	Monitoring through CCTV cameras on all floors and common areas



The aged population faces numerous issues, typical of the sunset years of their lives. It is imperative that real estate developers understand and acknowledge the unique necessities of the elderly while catering to this segment and develop products accordingly.

National Footprint: Realisation of the Real Need

Today, India has a large share of educated seniors who are better equipped to take decisions post-retirement. It is now that they consider an opportune moment to pursue a hobby, develop new interests, or start a new engagement of their choice. The real need of the senior citizens and their accommodation are yet not clearly understood by the industry, particularly in India. One of the key issues that impact senior living is affordability. While, on one hand, there is a desire to live independently, on the other hand diminishing returns on post-retirement finances concerns them equally.

In western countries, the senior living industry has matured. However, in India, it is still growing, albeit with its share of challenges and issues. The population projected for the coming decades shows the immense potential for this specialised alternate asset class. India provides an opportunity to developers, service providers, healthcare players and operators to create solutions specific to India while leveraging learning from across the world.

Many such developments by real estate developers have started to take shape mainly in the outskirts of the major cities and in tier II & III cities across the country. Bhiwadi in NCR, Neral in Mumbai, Talegaon in Pune and Devanahalli in Bengaluru are some of the locations of Senior Living in major cities.

Some of the features that may not be mandatory but are capable of enhancing the service quality and the lives of the residents are:

- ▶ Yoga, physiotherapy and exercise centres.
- ▶ Adequate indoor and outdoor recreation facilities.
- ▶ Provision for sanitation and disposal of waste.
- ▶ Reading and audio-visual rooms with libraries.
- ▶ Pharmacy tie up for door step delivery of medicine.
- ▶ Other services such as internet, laundry, special meals, attendants etc.



Challenges for Development of Senior Living Projects in Top Cities

- ▶ Lack of large contiguous land parcel at optimum cost is a major concern in metro cities. High land cost directly impacts the cost of operations of such assets thereby impacting their affordability.
- ▶ Senior living projects must be in close proximity to full-service hospitals within a radius of 10 km so that secondary or tertiary medical care can be accessible with 30 minutes from any major casualty.
- ▶ Due to high cost of land in major cities, it is tough to develop large campuses with amenities specifically suited for the residents such as temples, gardens, malls, clubs etc.

Key Players of Senior Living

LOGO Name	Headquartered	Senior Living Presence	Number of Senior Living Projects
Paranjape Athashri	Pune	Pune, Bengaluru, Vadodara	6
Covai Care	Coimbatore	Coimbatore, Bengaluru, Mysuru, Pondicherry	5
Ashiana Senior Living	Delhi	Bhiwadi, Chennai, Jaipur, Pune	4
Serene Senior Living	Chennai	Coimbatore, Chennai, Pondicherry	4
Bahri Estates	Chennai	Kodaikanal, Bengaluru	4
Oasis Senior Living	Pune	Pune, Bhopal	2
Aamoksh-One Eighty	Gurugram	Kasauli, Kodaikanal	2
Antara	Noida	Noida, Dehradun	2
Primus	Bengaluru	Bengaluru	1
Columbia Pacific	Bengaluru	Bengaluru	1
The Golden Estate	Faridabad	Faridabad	1
Tata Housing	Mumbai	Bengaluru	1
Brigade	Bengaluru	Bengaluru	1
Ananya Nana Nani	Coimbatore	Coimbatore	1
Infra Housing	Kochi	Kochi	1

An increasing number of developers are venturing into the senior living space of Indian market. While most of the projects being launched in this space are holistically dedicated to senior citizens, many developers are also launching integrated townships with a proportion of units dedicated to senior living. It is anticipated that most of these projects will thrive in tier II & III cities.

Nascent Segment with High Growth Potential

Post the turn of the 21st century there has been an increasing awareness about the lives and rights of senior citizens in the country. Much of it was warranted due to the transformation of the social practices and trends such as the nuclear families gaining prominence and migration of younger generations to metros or other countries in search of livelihood.

The enactment of Maintenance and Welfare of Parents and Senior Citizens Act in 2007 mandated children to take care of their parents in old age and the state governments to establish old age homes. While the conventional real estate assets are witnessing sluggish

growth, this sunrise sector can challenge the market trends owing to the high demand and low supply. Some developers have already plunged into this segment and are trying to establish senior living as a separate asset class.

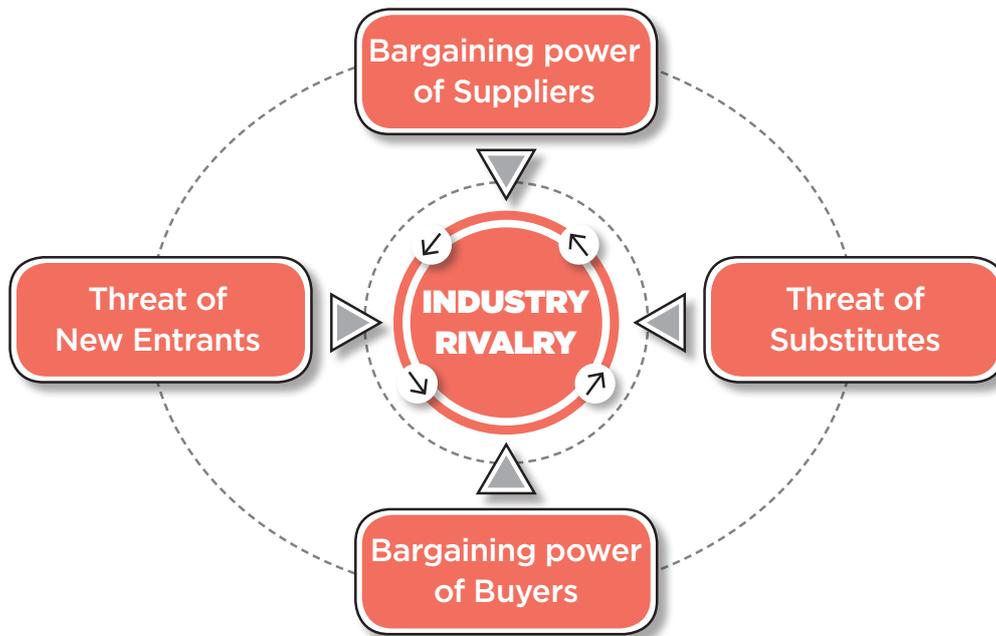
The impressive growth projected for the industry in India seems quite possible as the market in developed countries for such products is sizeable. It is an established asset class in most developed economies across the world with a sizeable market of senior living.

The state-run old age homes across the country are severely burdened and have to limit new admissions. The private sector, being inspired by the size of the market in the U.S. and the potential for the same in India has stepped in to reduce the demand-supply gap. Industry estimates indicate that over 53% of the senior living projects are in the southern cities followed

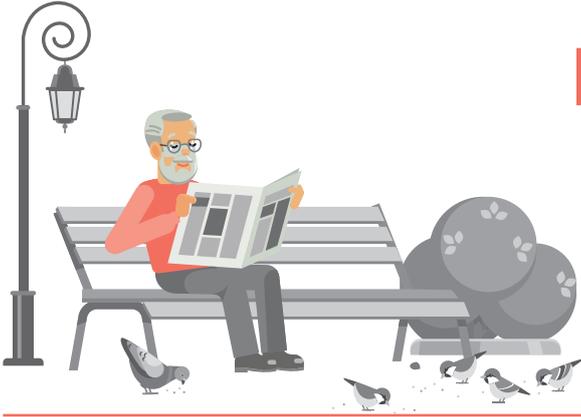
by western and northern regions accounting for 25% and 22% respectively. Bengaluru, Chennai, Hyderabad, Coimbatore, Mysore and Puducherry are the key cities in the southern region that have emerged as their preference for post-retirement destinations. The key reasons for cities emerging as a retirement friendly destination are better connectivity, native places, familiarity with the area and, familiarity with the climatic conditions.

Mapping Future Potential

While this segment is bound to grow in the future, a deeper analysis of the acting forces. Porter’s five forces were used to analyse the structure of the industry and assess its level of the competition as detailed below:



Competition	<ul style="list-style-type: none"> ▶ The industry is at a nascent stage ▶ Few players have already entered the segment. Given its size and the potential growth of the asset, there is room for more players ▶ Since it is a niche segment, the competition will be relatively low compared to traditional and established real estate assets
Potential for New Entrants	<ul style="list-style-type: none"> ▶ Increasing aged population will always be on the rise ▶ Foraying into the segment will require proper management of resources and selection of partners and service providers ▶ Tier II & III cities will provide financially viable options owing to the reasonable cost of land
Suppliers and Service Providers	<ul style="list-style-type: none"> ▶ Healthcare is an established and matured industry in India making the segment reliant on service providers and suppliers ▶ Quality of service and its control will be decisive in the success of the venture
Substitutes	<ul style="list-style-type: none"> ▶ Being a relatively new concept, which focusses on care and amenities, the old age home may continue to be a threat for some time ▶ The differentiation in care and amenities and their combinations will lead to the creation of competitive options within the segment



The potential for Senior Living is immense in India. The concept, though old has the potential to emerge as a sunrise sector. While the government is cognizant of the need for such an asset it also realises the need for private participation to ensure large scale coverage. The Ministry of Social Justice and Empowerment in India is already committed to build an inclusive society which also includes senior citizens.

Current Policy Framework: Model Guidelines for Senior Living Projects

The government recognises the need and has stipulated guidelines. The Ministry of Housing and Urban Affairs (MoHUA) has drafted a set of Model Guidelines, which can be implemented by the State Governments and Union Territories to develop and regulate the retirement homes in order to ensure senior citizens an independent and dignified life post-retirement. The efforts and focus of the ministry and government are directed towards protecting the rights of the buyers.

The basic premise of the framework is based on the regulations and guidelines for the residential real estate, as senior living is largely a part of this sector. There are also defined models for operating retirement homes and their monitoring. Realising that Retirement Home Projects are different from conventional real estate projects and have special requirements, the planning norms have been clearly laid down. These include sizes of dwelling units that are permissible for such projects, FAR allowed for such projects and inclusion of such developments within the residential zones of the city's masterplan. It is also mandated the physical standards shall conform to the National Building Code Model and its Bylaws.



Average Size of Dwelling Units

Area	No. of Rooms	Size of Dwelling Unit (sq m)
Plains	1 BHK	40 - 60
	2 BHK	50 - 80
Hilly	1 BHK	30 - 45
	2 BHK	40 - 60

Indicative norms for Retirement Homes as Group Housing*

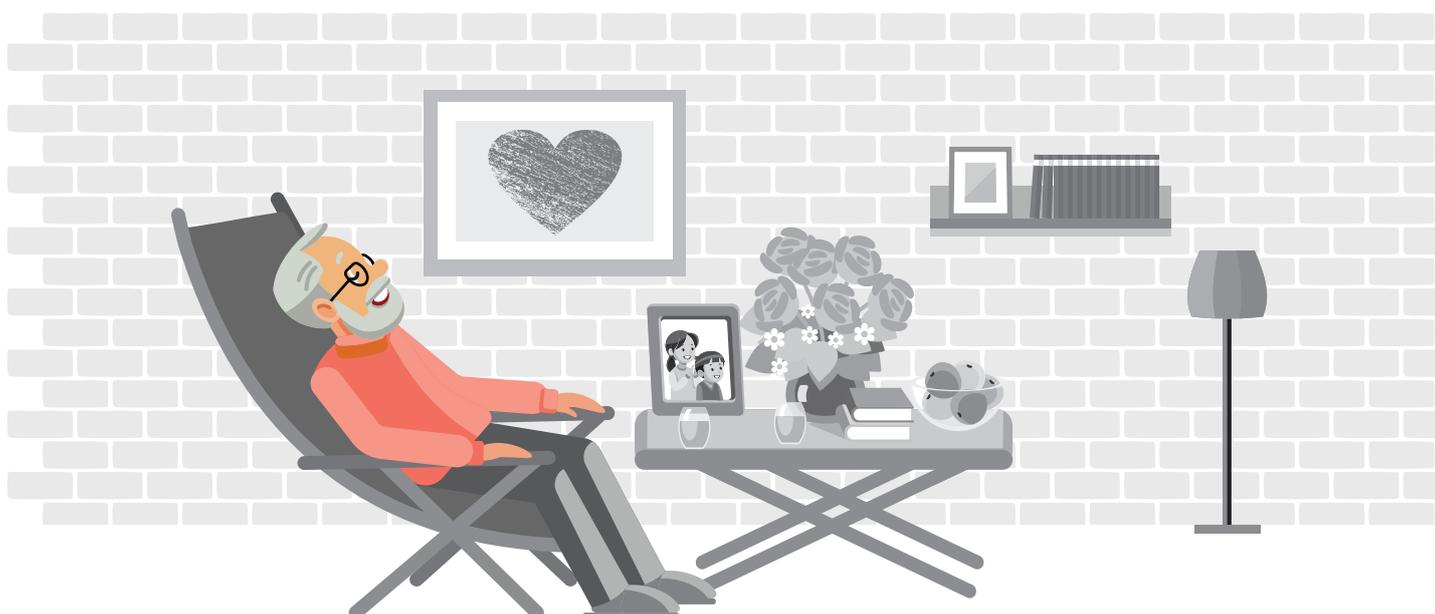
Plot Size (sq m)	Ground Coverage (%)	FAR	Dwelling Density (DU/Acre)	Height Excluding stilts (m)
Plains				
3,000	35	2.0	150	18
Hill Towns				
1,500	45	1.2	100	12

Source: MoHUA

*The norms prescribed above are indicative in nature, which may vary from State to State and region to region, owing to factors including topography, local demand and affordability and other parameters

Specifications for Community Facilities and Open Spaces

Area	Medical Room	Community Space	Convenience Store	Total Open Space
Plain	Minimum 15 sq m/25 DUs or part thereof	2 sq m / person or 500 sq m whichever is lesser	2% of Built-up Area (BUA) or 30 sq m whichever is lesser	65% of Site area
Hill	Minimum 15 sq m/25 DUs or part thereof	2 sq m / person or 300 sq m whichever is lesser	2% of BUA or 20 sq m whichever is lesser	55% of Site area



The Way Ahead

Senior living in India is going through a growing phase. It is during this time it is learning and evolving to offer the best possible solutions. It is likely to be a thriving market in the India for this segment owing to the rich demographic dividend. This is expected to open up growth plans for senior friendly communities and specialized senior living and care facilities. The same demographic changes that have made senior living a popular option in other rapidly developing countries are now underway in India.

The growing senior housing sector is likely to push growth, productivity, investments and employment in other sectors of the economy such as healthcare, construction, hospitality and several others.

The sector is capable to generate employment opportunities as large number of trained and skilled manpower is needed such as doctors, paramedical staff, professionals and care workers working in areas

of setting up, executing and operating senior housing premises. Hence, there is an emerging need to pay greater attention to ageing-related issues and to promote holistic policies and programmes for dealing with the ageing society.

While the regulatory body for managing and developing such assets are already there, visible interest among developers, institutionalisation of care givers and specialised service providers is likely to be the next step. Once done, there is likelihood of institutional capital flowing into the segment as such assets are income yielding, depending on the model adopted.

Going ahead, our country needs more health and medical services, facilities and resources to fulfil caring needs of aged persons. A new destination of “Vanaprastha” is on the offing which will connect India to Bharat.



4

Student Housing in India



Introduction

Due to several macro-economic changes, the Indian real estate sector has been facing headwinds for quite some time now. A prolonged period of churning has shifted the focus from the traditional asset classes to alternative asset classes. One such emerging asset class is student housing, which has created a niche for itself in the Indian real estate sector.

As the education landscape evolves in India, the country has witnessed a significant revolution in terms of growing number of students. Currently, the country has over 37 million students¹ enrolled in higher education², which is more than double the size of student housing markets in the West. The government also expects to attract 200,000 international students³ to India, more than four times the current number.

Given the lack of adequate supply of on-campus accommodation in India, student housing is a market worth exploring. In addition to providing quality accommodation for students, this alternative asset class offers benefits for various stakeholders. For instance, for real estate developers and investors, it offers an opportunity to diversify their portfolio. It can also help the government achieve its Study in India targets by providing safe accommodation for international students. Considering the high demand, asset management companies can also gain some additional business from this alternative real estate asset.

Interestingly, student housing has already caught the attention of various leading investors. According to data compiled by ANAROCK research, about USD 90 million of capital has flowed into the sector since 2017.

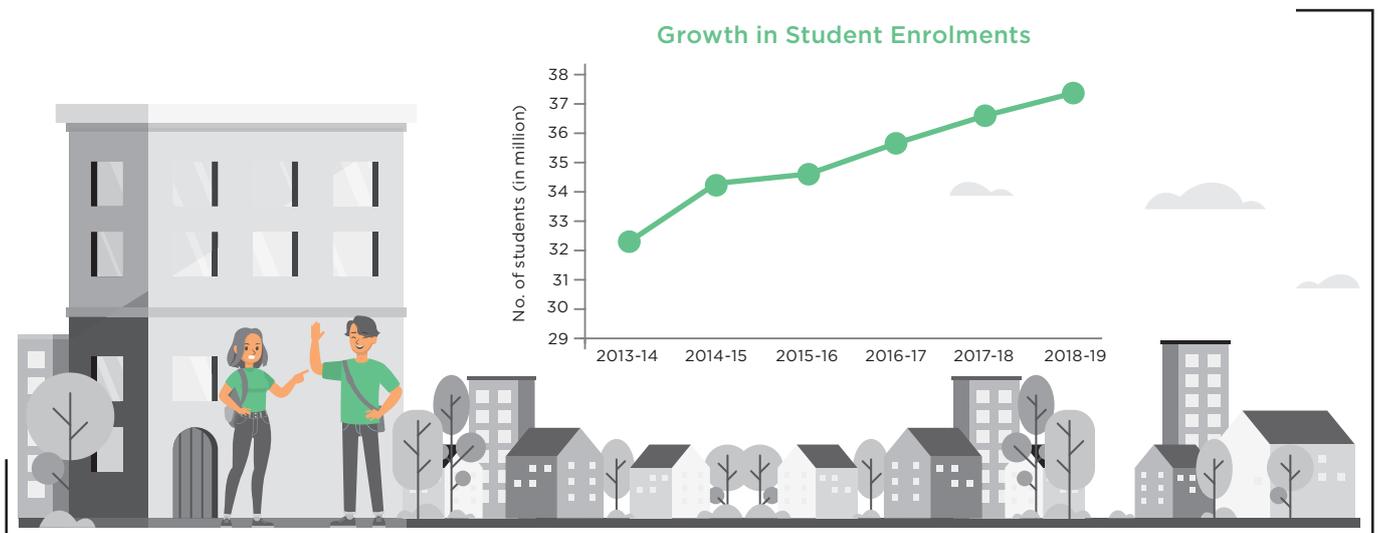
While on-campus accommodation is preferred by most students, lack of adequate space and sub-standard living conditions in hostels often compels them to look for accommodation outside their college/university.

In this chapter, we attempt to establish the need for student housing in India. We also touch upon various aspects that can contribute to the growth and emergence of student housing as an established and mature asset class in the future.

The Growth Story of Higher Education in India

Every year, lakhs of students (Indian and international) migrate to various cities of India in pursuit of better educational opportunities. Among many other challenges, finding decent accommodation is the biggest concern for this migrant student population. Before we delve further, let's look at some statistics.

At present, India has more than **37 million students**⁴ enrolled in universities across the country. From 32.3 million in 2013-14, this number has increased to 37.4 million in 2018-19, an evident rise of 15.7%. Considering that 19% of India's total population is aged between 15 and 24, these numbers are only expected to grow⁵.



Source: AISHE (All India Survey on Higher Education) 2018-19

¹ AISHE (All India Survey on Higher Education) 2018-19, Ministry of Human Resource Development

² According to All India Survey on Higher Education, higher education is defined as the education, which is obtained after completing 12 years of schooling or equivalent and is of the duration of at least nine months (full time) or after completing 10 years of schooling and is of the duration of at least 3 years.

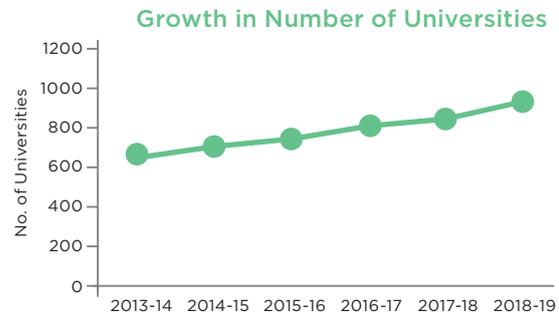
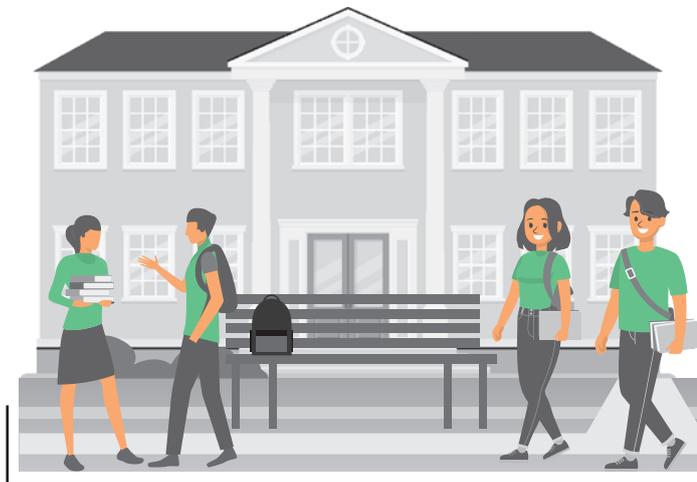
³ Industry estimates

⁴ AISHE (All India Survey on Higher Education) 2018-19, Ministry of Human Resource Development

⁵ http://mospi.nic.in/sites/default/files/publication_reports/Youth_in_India-2017.pdf

Interestingly, the number of universities and similar institutions listed on the AISHE portal has also increased by almost 37.3% since 2013-14. The increase in the number of reputed and world-class institutions has improved access to higher education in Indian

cities, thereby contributing to the rise in enrolment rate. So much so that India is now the third-largest higher education system in the world, after the US and China⁶.



Source: AISHE (All India Survey on Higher Education) 2018-19

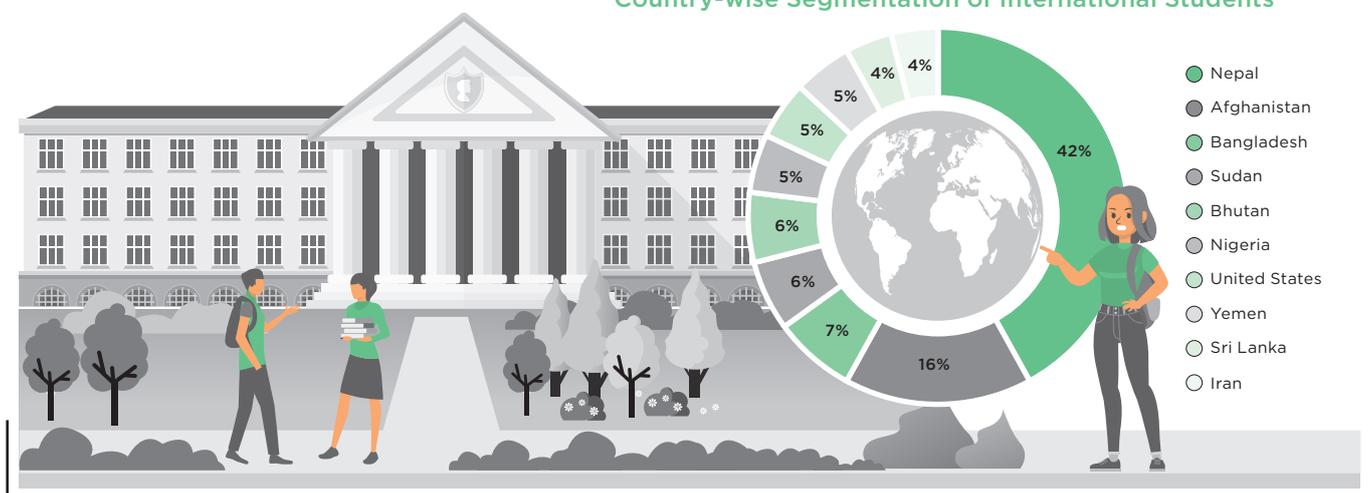
Additionally, international students form an important demand generator for purpose-built student accommodation; considering they are unfamiliar with the local market and the language. In 2019-20 Budget speech, Finance Minister Nirmala Sitharaman announced several measures to strengthen the 'Study in India' campaign launched in 2018. The campaign focuses on bringing international students to India for premier education at affordable rates.

With the help of the 'Study in India' campaign, the government expects to attract 200,000 international students to India, more than four times the current number. The following chart depicts the top 10 countries from where international students came to pursue higher education in India.

The Indian education system has clearly secured a strong position in the international circuit. Currently, the total number of foreign national students enrolled in India is 47,427⁷ from 164 different countries across the globe. This number has recorded a rise of 36% since 2012-13 when the number of international students in India stood at a little over 34,770.

With constant improvements in the education sector, India is expected to emerge as the single largest provider of global talent, with one in four graduates in the world being a product of the Indian higher education system.⁸

Country-wise Segmentation of International Students



Source: AISHE (All India Survey on Higher Education) 2018-19

⁶ World Economic Forum: India's superpower is education. Here's why it must build on this

⁷ AISHE (All India Survey on Higher Education) 2018-19, Ministry of Human Resource Development

⁸ <http://ficci.in/PressRelease/1405/FICCI-press-nov13-education2.pdf>

The Growing Need for Student Housing

With the growing enrolment rate, the need for student housing has become all the more significant in the present times. While the majority of students prefer on-campus accommodation, limited availability and sub-standard living conditions compel them to look outside their college/university.

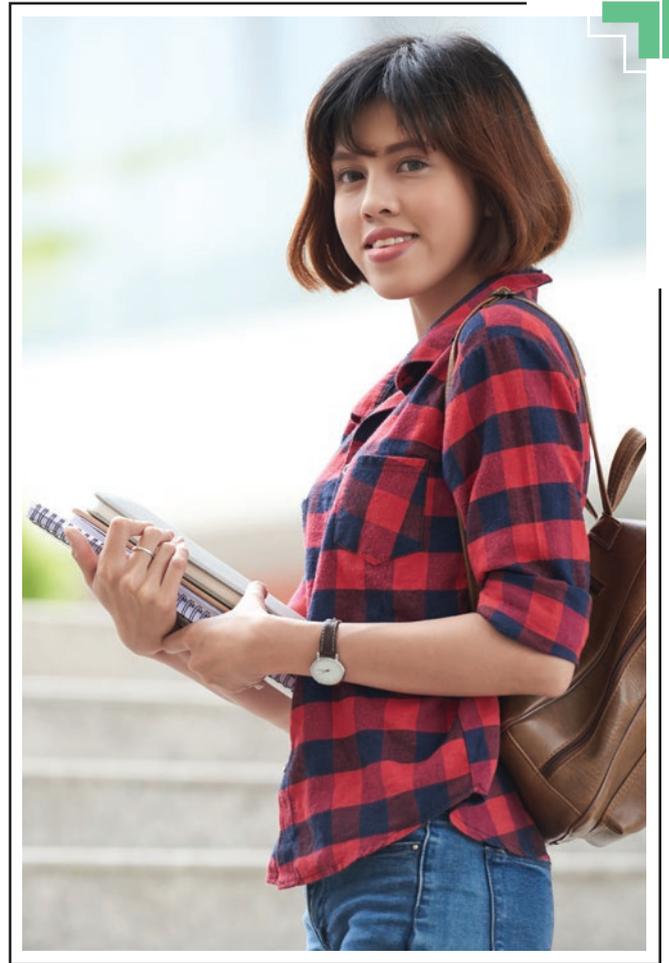
Currently, for over 37 million students, there are just over 6.54 million hostel beds⁹, which is merely a little over 17.4%. Besides these, many students also migrate to bigger cities to prepare for a variety of competitive exams, for which there is no substantial data but this segment surely spikes up the requirement for more beds.

Additionally, the gross enrolment ratio (GER), which is the number of students enrolled in a specific level of education expressed as a percentage of the total eligible students in the same level, has increased from 19.4% in 2010-11 to 26.3% in 2018-19, a rise of 6.9%. According to the 12th Plan Document¹⁰, the set GER target for 2020-21 is 30%. To achieve this target, various measures have been taken by the government.

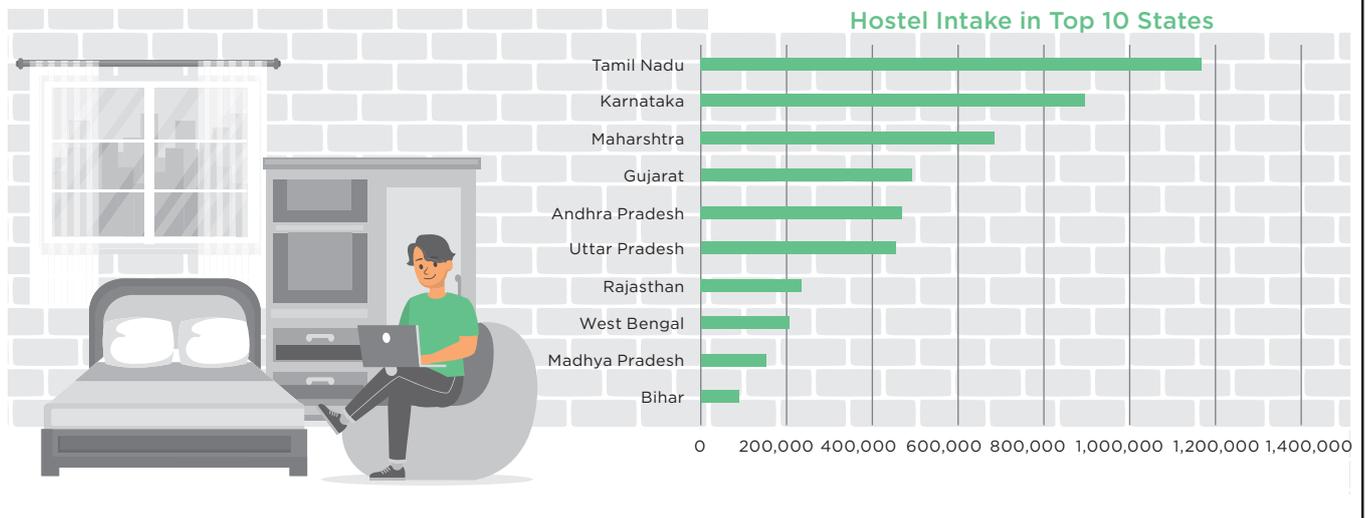
In such a scenario, off-campus accommodation is the only viable option for the students.

Until a few years ago, this demand was primarily met by homeowners who provided a paying guest (PG) facility but this arrangement had its own challenges. These include restrictions on timings, poor quality food, lack of personal space, slow or no internet connection, among others.

Realising the immense potential that the sector holds; a few start-ups have ventured into this space to provide high-quality accommodation for students. Also, as residential and commercial



real estate continue to face headwinds, some real estate developers are also considering joining the bandwagon to diversify their portfolios. Not to mention the vast supply-demand gap, that offers a good value proposition to realty stalwarts in terms of returns.



Source: AISHE (All India Survey on Higher Education) 2018-19

⁹ AISHE (All India Survey on Higher Education) 2018-19, Ministry of Human Resource Development

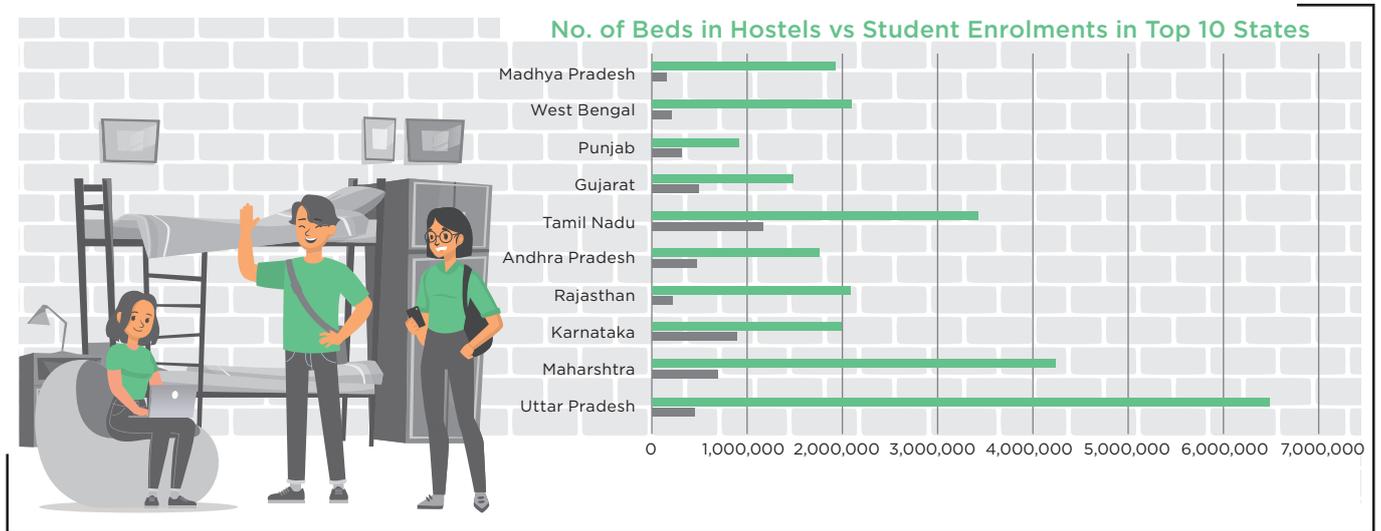
¹⁰ <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1541358>

Student Housing Landscape: An Emerging & Promising Alternative Asset Class

As mentioned earlier, student enrolment in the country has been rising at a fast pace. From 32.3 million in 2013-14, it increased to 37.4 million in 2018-19. When

compared to this, the availability of hostel beds in Indian colleges is way below the required mark.

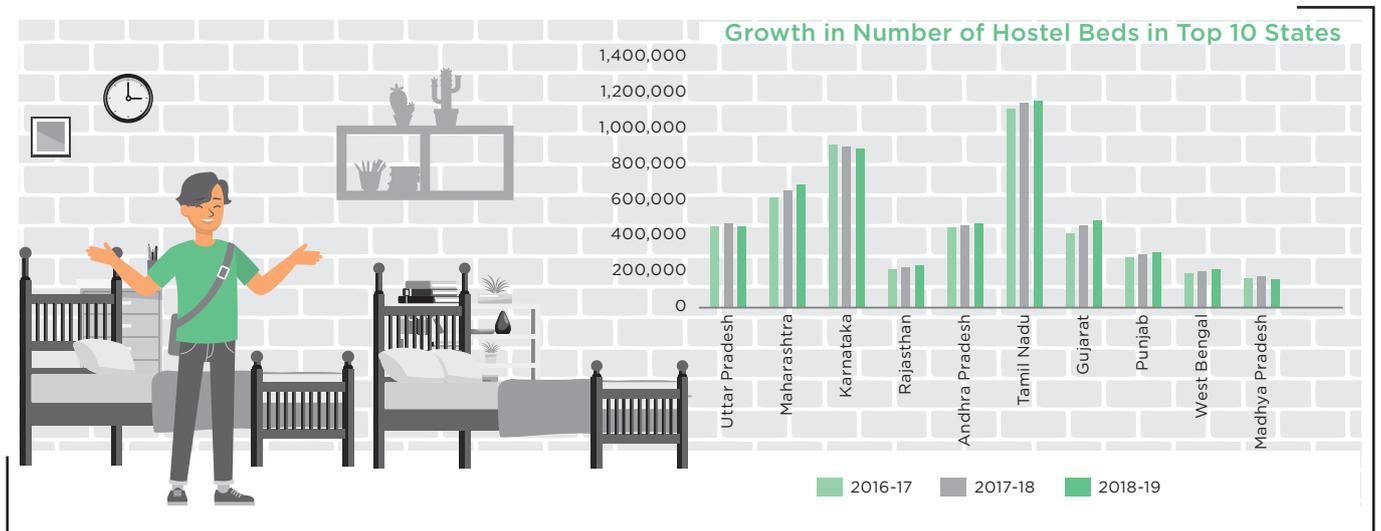
The graph below indicates the total beds in hostels vs total enrolments across the top 10 states. Clearly, the growth in hostel bed space has not kept pace with the increase in enrolment rate.



Source: AISHE (All India Survey on Higher Education) 2018-19

(*Note: Enrolment at various levels include enrolment for Ph.D, M.Phil, Post Graduate, Under-Graduate, PG Diploma, Diploma, Certificate, and Integrated courses)

To break it further, let's look at the year-on-year trends for growth in enrolments and number of beds in hostels.



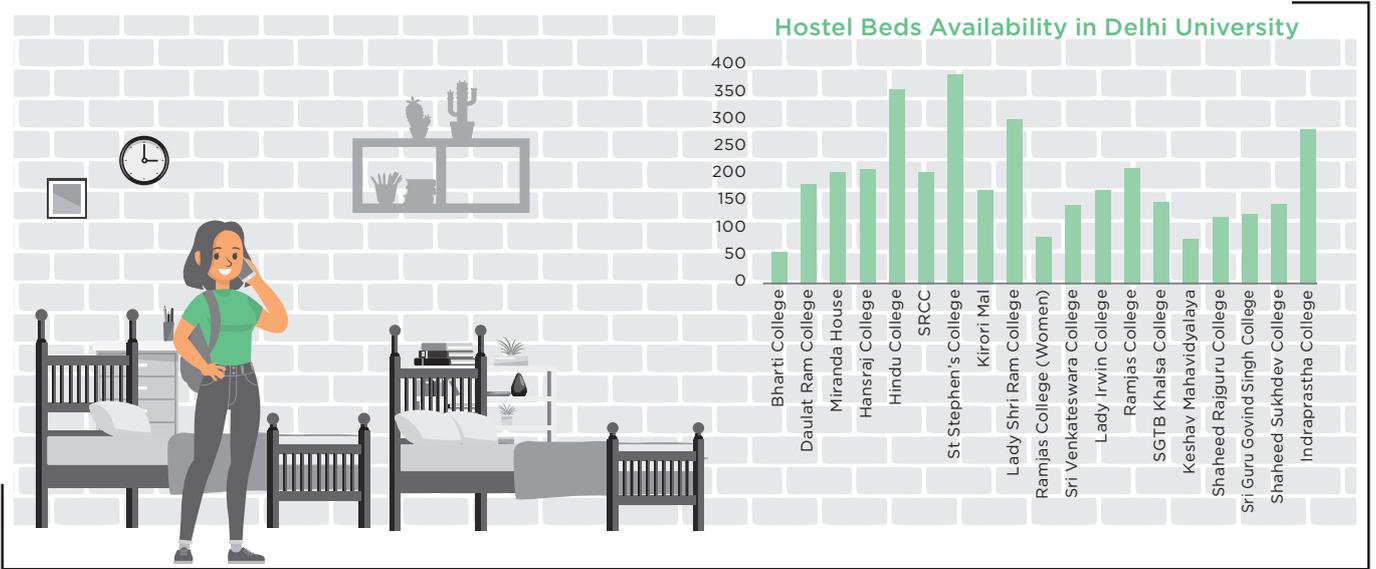
Source: AISHE (All India Survey on Higher Education) 2018-19

Over the last three years, while the number of beds in hostels across the top ten states has recorded a decent growth (6.55%); it has not kept pace with the increase in student enrolments. For instance, in 2015-16, the total enrolment was estimated at 34.6 million, while the hostel intake was 6.1 million. Similarly, in 2017-18, the number of students was about 36.6 million, while the overall hostel intake rose to merely 6.5 million. In 2018-19, the number of enrolments increased to

over 37 million, but the hostel intake still stood at 6.5 million.

Now, let's take the example of Delhi University, one of the most prestigious universities in India that has over 80 colleges with over seven lakh students¹¹. Surprisingly, out of over 80 colleges, merely 20 colleges have hostel facilities with limited seat availability. The graph in the following page indicates the same.

¹¹<http://du.ac.in/du/index.php?page=about-du-2>



(Note: This data has been collected by secondary research, which includes sources like college websites and news articles. The numbers have not been verified with college spokesperson).

The Rise of Organised Players: Developers Acknowledge the Asset

Realising the potential of student housing, several players have already started their operations in key cities. The majority of these players are targeting metro cities and a few Tier II and III cities. Some of the prominent names include Stanza Living, Oxfordcaps, Placio, and Grexter. Many of these players have also announced expansion plans in terms of beds in existing cities as well as expansion to other cities.

It is important to note that out of the top 10 districts with maximum number of colleges (Bengaluru (Urban), Jaipur, Hyderabad, Pune, Prayagraj, Rangareddy, Nagpur, Mumbai, Guntur, and Bhopal) none of the prominent players are active in some areas. These include Prayagraj in Uttar Pradesh (formerly known as Allahabad), Ranga Reddy in Telangana, Nagpur in Maharashtra, Guntur in Andhra Pradesh, and Bhopal in Madhya Pradesh.



The table below lists the number of beds by significant players and the cities they are present in.

 Major Players	 No. of Beds	 Tier I cities	 Tier II & III cities
Stanza Living	20,000+	Bengaluru, Delhi, Greater Noida, Hyderabad, Noida, Pune	Dehradun, Indore, Vadodara
Oxfordcaps	15,000	Gurgaon, Bengaluru, Delhi, Greater Noida, Pune	Dehradun, Indore, Jaipur, Ahmedabad
Zolostays	16,000	Mumbai, Noida, Delhi, Bengaluru, Pune, Chennai, Gurugram, Hyderabad	Coimbatore, Kota
YourSpace	2,500	Delhi, Mumbai, Noida, Pune	Ahmedabad, Chandigarh, Indore, Jalandhar
Placio	3,000	Greater Noida, Hyderabad, Delhi, Noida	Indore, Jaipur, Lucknow
Coho	1,200	Delhi, Gurgaon, Noida, Bengaluru	
TribeStays	550	Pune, Mumbai, Bengaluru	
Studentacco	55,000	Delhi	Chandigarh, Dehradun, Kota, Jaipur
Renaissance Living Spaces	1,500+	Delhi, Bengaluru	Kota
Good Host Spaces	14,000	Bengaluru	Jaipur, Manipal, Punjab
Youthville	500 (in Pune)	Pune, Mumbai	
Grextor	1,800	Bengaluru	
MyRoomie	500	Bengaluru	

In addition to these, Oyo, one of the largest hospitality companies in India, also plans to venture into student housing. Currently, they have three buildings in Noida and Gurgaon. These buildings have a tie-up with one educational institution dedicated to students enrolled there¹².

As of now, there has been no major developer participation except by Bengaluru-based DivyaSree Developers. The company targets to have at least one lakh beds over the next three years, of which 4,000 beds are already operational¹³.

The Differentiating Factor: Better suited than PG or Rented Accommodation

Organised students’ accommodations come with a host of features and amenities when compared to an on-campus hostel or even a paying guest accommodation. Rooms with air-conditioners, in-house laundry service, entertainment zones, food courts, indoor games, and much more. There is also biometric access for residents. Additionally, there are many digital conveniences like Wi-Fi, ample spaces indoors and out for studying and collaborating, and cutting-edge fitness facilities to maintain wellness.

Unlike traditional accommodations, these spaces come with greater flexibility when it comes to leasing terms, security deposits, and lock-in periods.

Student housing accommodations are quite spacious when compared to on-campus or paying guest accommodations. The average carpet area is in the

range of 50-200 sq ft per student and comes with an attached washroom, bed, wardrobe, and a study table.

In terms of cost, these spaces cost about 10-15% more than regular accommodations. For instance, a regular double sharing paying guest accommodation with meals in Koramangala (Bengaluru) would cost about INR 8,000-12,000 per month. However, for double occupancy in an organized student housing property, one will have to shell out about INR 13,000, which includes meals, housekeeping, laundry, Wi-Fi, doctor on call, power backup, and much more. It also includes activities like CV building, internship opportunities, adventure activities, musical evenings, industry talks, among others.

In a nutshell, these purpose-built student accommodations (PBSA) offer everything that millennials look for in rental space at a decent cost.



¹² <https://economictimes.indiatimes.com/industry/services/property/-/cstruction/divyasree-developers-eyes-student-housing-market/articleshow/69553726.cms?from=mdr>

¹³ Industry estimates

Comparison of Student Housing Accommodation with PG/Rental Accommodation

Parameters	Student Housing Accommodation	PG/Rental Accommodation
Security Deposit	2 months' rent	6-12 months' rent (varies from city to city)
Monthly Rent*	INR 13,000	INR 8,000-INR 12,000
Housekeeping and Maintenance	Included in rent	Not included
Food and Wi-Fi	Included in rent	Not included
Biometric Access	Yes	No
Social Events and activities	Yes	No
Tenure	Flexible	11 months lock-in

(*Note: Rent considered for a standard student housing accommodation and a PG accommodation in Koramangala, Bengaluru.)

Student Living Business Models: Various Models for a Wider Reach

Student housing works on various business models across the globe. Some of the conventional models include:

- ▶ **BOOT:** In **Build, own, operate, transfer**, commonly referred to as BOOT, student housing players collaborate with educational institutions/universities on a long-term lease to build, own, and operate the accommodation.

This model can work in Indian cities as well. Real estate developers can invest capital to build accommodation on land provided by the institution, while educational institutions can take up the responsibility of getting students. The developer or service provider could manage the accommodation.

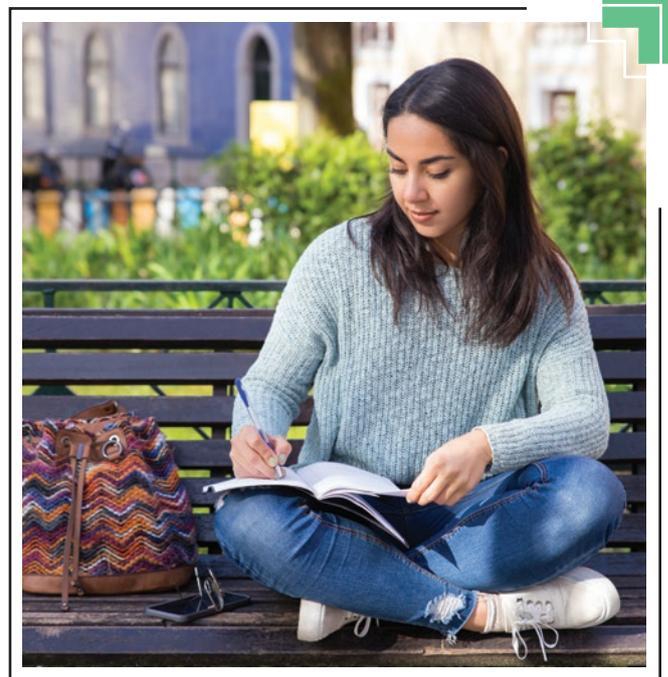
- ▶ **Management-only service:** In another model, student housing players collaborate with educational institutions or developers to provide only their **management services**. Currently, many universities and institutions have hostel accommodation, but they lack the quality and facilities that millennials demand.

This model can work where the college/institution has large bed spaces.

- ▶ There is another popular model in which student housing provider **builds and manages the properties themselves**. Since this requires huge upfront capital expenditure, it is suitable for real estate developers.

Now, let's look at some models that are followed in India.

- ▶ **Lease model:** As the name suggests, the student housing operator first acquires property on a long-term lease from the owner. The property is



then refurbished in line with their guidelines. The students are charged on a per bed basis, which could either be monthly or annually.

Leading players in the segment like Oxfordcaps, CoHo, Stanza Living, Your Space, and Zolo follow the lease model.

- ▶ **Aggregator model:** This model has been a massive success in the residential sale and rental market. Thus, some players are also focusing on this. Here, the operator creates an online marketplace for listing properties by owners and charge them for every booking. There is no ownership of services in this model as it is purely commission-based.

Delhi-based Studentacco and NestAway follow this model.

Assessment of Student Living Business Models

 Business Model	 Pros	 Cons
Build, own, operate, transfer (BOOT)	<ul style="list-style-type: none"> ▶ Minimises cost burden on universities/institutions for infrastructure development ▶ Scope for innovation ▶ Better managed facilities ▶ Better amenities and facilities for occupiers 	<ul style="list-style-type: none"> ▶ Suitable only for large-scale projects
Management-only service	<ul style="list-style-type: none"> ▶ Improves the quality and facilities of an accommodation 	<ul style="list-style-type: none"> ▶ Can only work where the college/institution doesn't have large bed space
Lease model	<ul style="list-style-type: none"> ▶ Guaranteed income for small landlords ▶ No hassles of dealing with tenants/students ▶ Timely maintenance of properties ▶ Operator to address students' grievances 	<ul style="list-style-type: none"> ▶ Student Housing being a new concept, it is difficult to get smaller landlords on board ▶ No cap on in and out timings, which might impact the security and safety aspect
Aggregator model	<ul style="list-style-type: none"> ▶ Smaller/unknown properties get featured under a bigger brand name ▶ Better visibility for smaller landlords 	<ul style="list-style-type: none"> ▶ Student Housing being a new concept, it is difficult to get smaller landlords on board

Source: ANAROCK Research

Mapping Industry Lifecycle: A New Concept with a World of Opportunities

To gauge the potential of the segment, let's try to map the industry lifecycle of student housing by considering the four broad stages: Introduction, Growth, Maturity, and Decline.

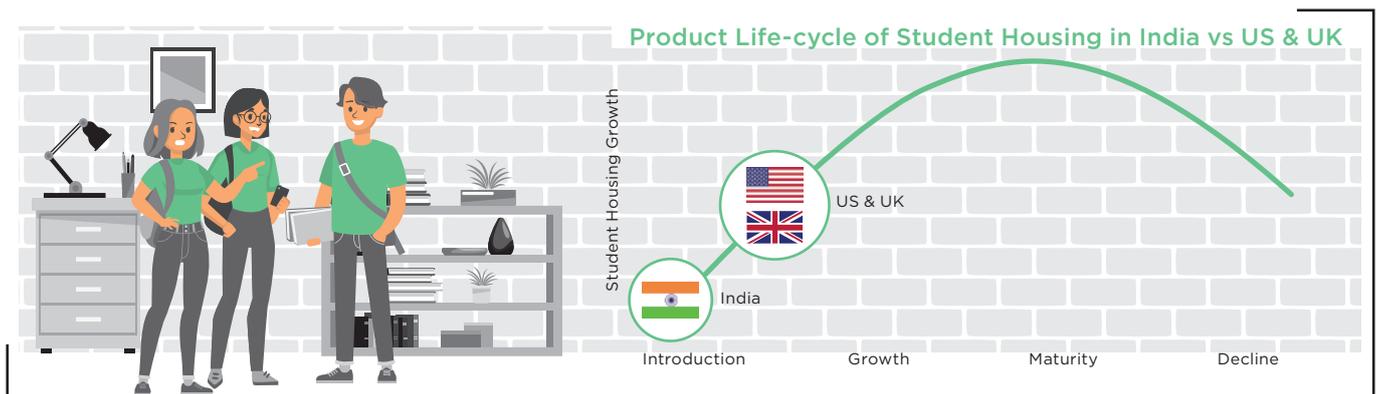
Despite all the buzz around the segment, the fact that unorganised form of student housing has always been there cannot be dismissed. Be it hostels or the paying guest accommodation; student housing has been available in some form or the other.

So, is it an old idea is a new package? Not really.

Considering the wide demand-supply gap, there is a vast potential which many start-ups are trying to unlock. Currently, there are about 15 odd major players in the student housing space offering services in Tier I and some Tier II cities.

In global markets like the US, UK, and Australia, student housing as an asset class has already embarked on a growth trajectory with increased investment. In fact, it wouldn't be wrong to say that from an alternative asset class, student housing is gradually maturing into a mainstream investment asset class. One of the prominent global players in the Student accommodation include Greystar, which has presence in US, UK, Spain, Netherlands, and Austria. Scion Communities (present in US, UK, Germany, Australia) and IQ Student Accommodation that has presence in US, UK, and Australia are two other major players.

Currently, student housing in India is at a nascent stage of development. However, as new players start venturing into the segment and existing players start expanding their footprints, it is only a matter of time when the segment will reach the growth stage.



Source: ANAROCK Research



Increased Investor Interest

Over the last two years, many student housing players have attracted private equity investments. ANAROCK's research indicates that since 2017, about US\$ 90 million of capital flowed into the sector. Considering the massive potential that the sector holds, this number is only expected to rise.

Company	Amount (US\$M)	Investors
MEMG	50	Goldman Sachs
Stanza Living	20.1	Sequoia India, Alteria Capital
Good Host Spaces	10	HDFC
OxfordCaps	8	Kalaari Capital, 500 Startups
Placio	2	Prestellar Ventures

Source: ANAROCK Research

The Way Ahead

Student housing presents a host of opportunities for all stakeholders:

- ▶ For **developers**, it provides a fresh avenue of diversifying from the presently tepid Indian residential markets.
- ▶ For **investors**, it is an emerging asset class with high potential for returns.
- ▶ For **educational institutions**, it is a value-add and a means of providing accommodation as well as a holistic environment to students.

Since student housing is in the nascent stage in India, there is a significant scope for development and

scalability. Not to mention, the vast supply-demand gap. However, for the segment to emerge as a key asset class, there's still a long way to go.

For the concept of student housing to operate to its full potential, there is a dire need for a policy framework to ensure standard operating practices. Without any policies in place, it is up to individual players to decide on the overall quality of accommodation, operating practices, and safety norms. For instance, food provided by these players should undergo a stringent quality check; for safety, CCTVs should be in place and regularly monitored; and buildings must adhere to fire safety norms, and so on.

According to the All India Survey on Higher Education 2018-19, there are about 85,877 differently-abled students enrolled in higher education. Out of this, about 56% are male, while the remaining 44% are female students. This presents a massive opportunity for private players to offer accommodation facilities for these students and offer enhanced security features for a comfortable stay.

While the potential of residential REITs is still unexplored in India, the government should also start thinking about student housing REITs. Lastly, tax rebates for industry players should also be considered to bridge the supply-demand gap.

Globally, student housing is fast evolving into a mature asset class. While in India, it is still in its early stage of development, the potential is huge. Considering the huge demand and supply gap, it is high time that real estate developers, as well as the government, realise the importance of this rapidly evolving alternative asset class.

5

Data Centres: Future Engines of Growth



Data is the new oil – This is the mantra of new age global economies that work cohesively through a widely-connected digital network. In today's world, almost everything is available at the click of a button. While the website or to be specific, the front-end, looks quite simple and appears to be a child's play, what goes on at the back-end is a series of complex data matching, number crunching, recommendations, tallying, and decision making. To support these activities, there are large servers that run 24x7 and process numerous transactions at a rapid pace. These servers are the most critical components of any digital operation and are housed in specially designed buildings or facilities that are known as data centres.

Did you know?

- ▶ Data centres are also referred to as 'server farms' due to a significant number of servers placed together on various racks in a specialized building.
- ▶ The Natural Resources Defense Council (NRDC) from the US estimates that data centres consume up to 3% of all global electricity production.
- ▶ Data centres are critical for the simplest of operations such as e-mail and file sharing to the most complex ones involving big data and artificial intelligence.
- ▶ The largest data centre in the world is 6.3 million sq ft, situated at Langfang, China.
- ▶ Facebook has a data centre at the edge of the Arctic Circle in Sweden and uses icy Nordic air to keep the servers cool.

Data Centre Basics

What is a data centre?

A data centre is a specialized building/location/facility where many computing and networking devices/machines are placed together to collect, store, process and distribute a large amount of data. In simple terms, it is an agglomeration of several servers put together in a controlled and monitored environment of specifically designed buildings. Also, such facilities have stringent access restrictions due to the fact that they deal with sensitive information about one or many companies. While these facilities may appear similar to large commercial office buildings from the exterior, the internal developments are significantly different considering that they are built for a specific purpose.

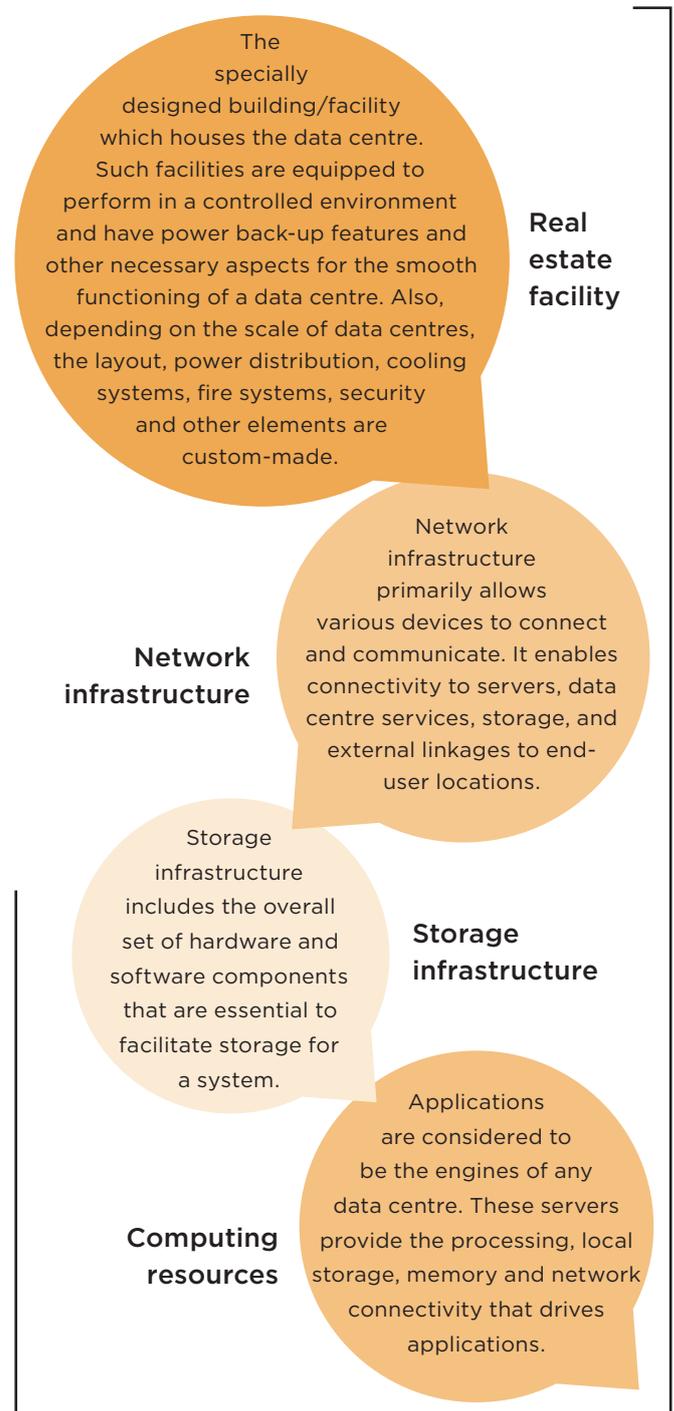
Why do we need a data centre?

A data centre is critical for any business as this is the master storage and processing unit considered as the brain of various applications, including:

- ▶ E-mail and file sharing.
- ▶ Productivity applications.
- ▶ Customer Relationship Management (CRM) and Enterprise Resource Planning (ERP).
- ▶ Big data, artificial intelligence, and machine learning.
- ▶ Communications and collaboration services.

Core components of a data centre

The core components of a data centre include real estate facility, servers, routers, switches, storage systems, firewalls, and application delivery controllers, aggregated under various subsets listed below:



How is a data centre real estate facility different?

Data centre facility requires an entirely different setup than regular commercial office buildings. The setup has to be designed to support the data centre's hardware and software, including:

- ▶ Power subsystems.
- ▶ Uninterruptible Power Supplies (UPS).
- ▶ Ventilation and cooling systems.
- ▶ Fire suppression system.
- ▶ Backup generators.
- ▶ Connections to external networks.

Data Centre Market Development/ Evolution Models

The data centre market development/evolution can be broadly classified into the following models:

1. Model I: In-house data centre

Corporates owned servers and stored data in their own premises. **Limited capital-intensive model but offers total data security and control.**

2. Model II: Outsourced; self-owned equipment and facilities

With rising data computing needs and increasing complexity of operations, data centres evolved to become more specialized and as such needed to be based out of a separate facility. As a result, corporates moved out data centres from their existing commercial offices to specialized buildings. **Capital intensive model but offers total data security and control.**

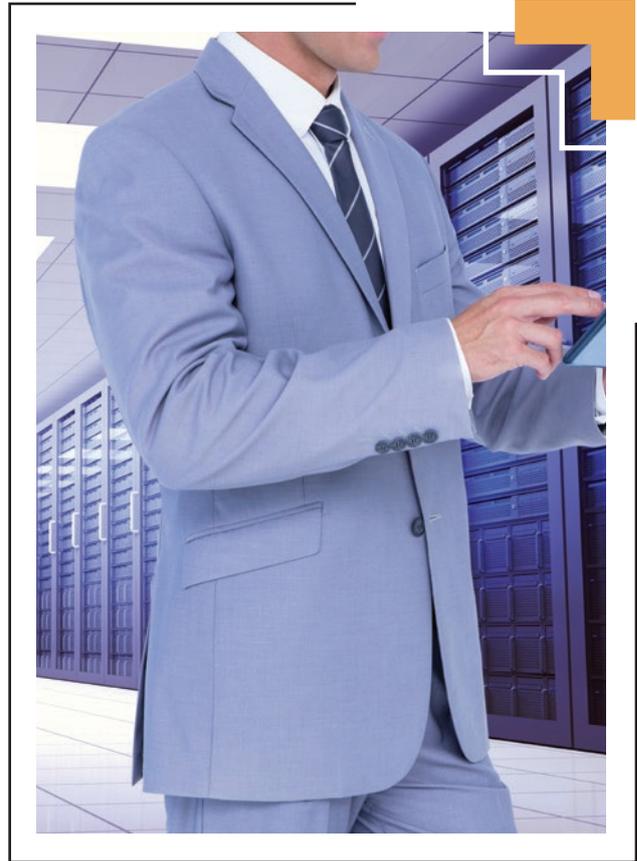
3. Model III: Outsourced; Hybrid – a combination of self-owned and third party

As data operations became further complex, corporates started to work with third-party data centre operators. In such an arrangement, the facilities were managed by the third-party operators while the corporates still had the responsibility of managing the IT hardware. **Capital intensive model but offers limited data security and control.**

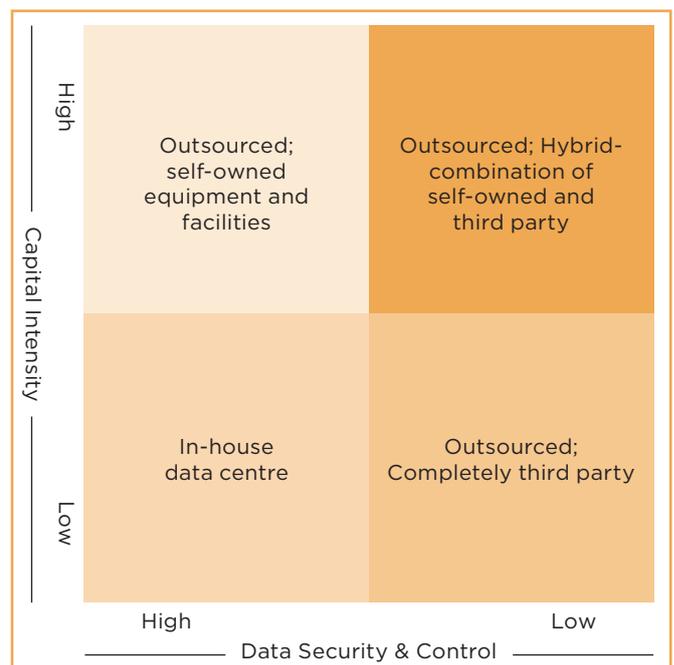
4. Model IV: Outsourced; Completely third party

Companies have been grappling with make or buy decisions across various businesses and data centres are no different. With an aim to reduce costs, many

companies have started to completely outsource the data centre operations to third party operators who specialize in such businesses. **Capital light model, limited data security and control necessitating need for stringent systems and processes.**



Mapping data centre market developments



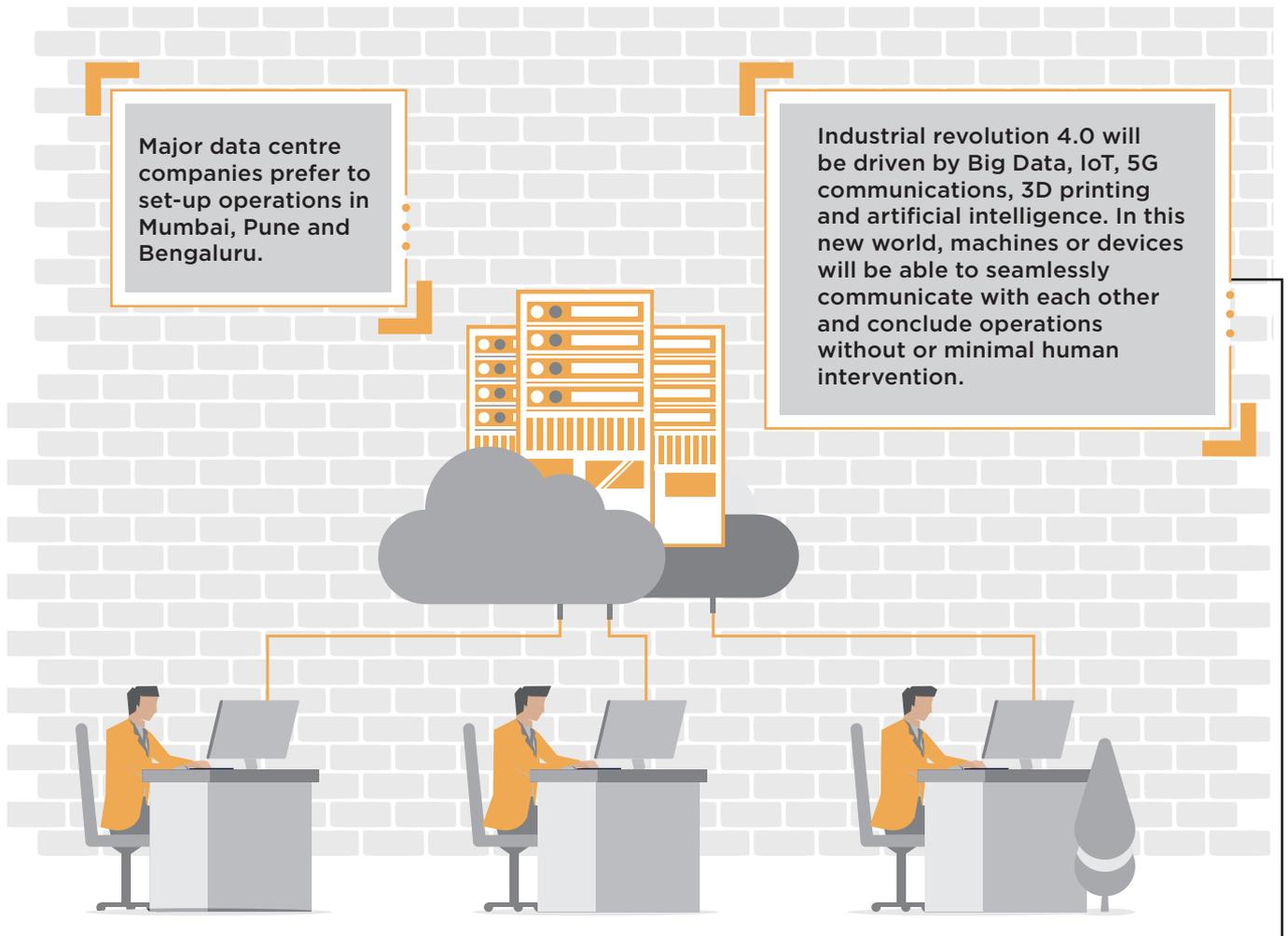
Major Data Centre Companies Across the World

		
Company Name	Number of Data Centres	Presence
China Telecom	700+	Australia, China, India, Indonesia, Japan, Kazakhstan, Malaysia, Myanmar, Pakistan, Singapore, Korea, Sri Lanka, Thailand, Vietnam, Philippines, Cambodia, Belarus, France, Germany, Russia, Spain, Turkey, United Kingdom, The Netherlands, Belgium, Luxembourg, Czech Republic, Sweden, Italy, Denmark, Hungary, Switzerland, Kenya, Mauritius, South Africa, UAE, Egypt, Brazil, Canada and United States.
Digital Realty Trust	210	Japan, Australia, China, Singapore, United States, The Netherlands, Ireland, Germany, United Kingdom and Brazil.
Equinix	200+	Australia, China, Japan, Indonesia, Singapore, South Korea, Bulgaria, Finland, France, Germany, Ireland, Italy, The Netherlands, Poland, Portugal, Spain, Sweden, Switzerland, Turkey, UAE, United Kingdom, United States, Mexico, Colombia, Canada and Brazil.
NTT Communications	140	Australia, China, India, Indonesia, Japan, Malaysia, Philippines, Singapore, Taiwan, Thailand, Vietnam, United States, Austria, France, Germany, The Netherlands, Spain, Switzerland, United Kingdom and South Africa.
Microsoft Azure	100+	United States, Canada, Brazil, Ireland, Netherlands, France, United Kingdom, Germany, Switzerland, Norway, China, Singapore, Australia, India, Japan, South Korea, South Africa, UAE and Qatar.
Amazon Web Services	NA	United States, Canada, Brazil, Ireland, United Kingdom, France, Germany, Sweden, Bahrain, India, Singapore, China, Australia, South Korea and Japan.
IBM	60	Canada, United States, Mexico, Brazil, Norway, United Kingdom, The Netherlands, Germany, Switzerland, Italy, Spain, France, India, Singapore, China, South Korea, Japan and Australia.
CyrusOne	45+	United States, Germany, Ireland, The Netherlands, United Kingdom, China, Singapore, Colombia and Brazil.
Telehouse	40	United Kingdom, France, Germany, Russia, Turkey, China, Japan, Singapore, Vietnam and United States.
Google	19	Chile, Ireland, Netherlands, Denmark, Finland, Belgium, Taiwan, Singapore, United States and India.
Global Switch	13	The Netherlands, Germany, United Kingdom, France, Spain, China, Singapore and Australia.
Apple	11	China, United States and Denmark.

Major Data Centre Companies in India

		
Company Name	Number of Data Centres	Presence
STT GDC	15	Delhi, Mumbai, Pune, Bengaluru, Chennai, Ahmedabad, Kolkata and Hyderabad.
NTT-Netmagic	9	Mumbai, Bengaluru, Chennai and Noida.
Reliance	9	Mumbai, Bengaluru, Chennai and Hyderabad.
NextGen HDDC	9	Bengaluru, Ahmedabad, Faridabad, Ghaziabad, Jaipur, Ludhiana and Mumbai.
Net4	7	Bengaluru, Chennai, Hyderabad, Kolkata, Mumbai, Delhi and Pune.
CtrlS	6	Mumbai, Hyderabad, Noida, Bengaluru and Chennai.
Sify	6	Chennai, Bengaluru, Mumbai and Noida.
BSNL-SIS data centre	6	Ahmedabad, Faridabad, Ghaziabad, Jaipur, Ludhiana and Mumbai.
Tulip Data Centre	5	Mumbai, Delhi, Bengaluru and Kolkata.
Cyfuture	4	Jaipur, Noida and Raipur.
Microsoft Azure	3	Chennai, Pune and Mumbai.
NDC	3	New Delhi, Pune and Hyderabad.
Web Werks	3	Delhi, Mumbai and Pune.

Source: Compiled by ANAROCK Research



Industrial Revolution 4.0 to bring a Tectonic Shift

The world is at the cusp of industrial revolution 4.0 which will bring in a tectonic shift in the ways and means in which we operate today.

- ▶ The first industrial revolution was driven by the usage of water and steam to mechanise production.
- ▶ The second one was dominated by the usage of electric power to undertake various tasks – large and small.
- ▶ The third industrial revolution was driven by the usage of electronics and IT.
- ▶ Industrial revolution 4.0 will be a big leap ably supported by big data, IoT, 5G communications, artificial intelligence and many such cutting-edge technologies. In this new world, machines or devices will be able to efficiently communicate with each other (within the same domain or otherwise) and conclude operations with minimal human intervention.

What this will lead to is the effective and efficient utilization of available resources. Driverless cars, 3D printing, robotics, etc. will be the new norm in

the industrial revolution 4.0. Human intervention will decline significantly as the machines connected to each other will be able to undertake complex operations, solve issues, discuss and decide the future course of action. For example, a smart refrigerator can order eggs or milk directly, without or limited human intervention, when low on supplies. What this means is also that the Indian workforce has to upskill significantly as labour-intensive jobs will go out of the market and skilled personnel possessing excellent knowledge of IT, AI, VR, etc. will be in demand. So, are we prepared for this shift is the question?

However, all these developments will surely lead to a massive rise in demand for the data centres as these complex operations managed directly by the machines will require a lot of data crunching, information flow and decision making. So, as we step into the industrial revolution 4.0, it is critical for Indian companies to prepare for the future and increase their investments into data centres, be it in-house or third-party. The future of data centres certainly seems to be bright in India.

Data centres in India: Key Growth Drivers

 High Internet Users	1 451 million active internet users as of Mar-19 ¹⁴	2 Second only to China in terms of internet users ¹⁵	
 Low Internet Penetration - Phenomenal Upside Possibility	1 India - 36% ¹⁶	2 China - 61.2% ¹⁷	
 Significant Mobile Subscribers	1 India - 1,173.75 million ¹⁸	2 Growth rate of 26% between Sep 2014 to Sep 2019 ¹⁹	
 Heavy Process-Based Mobile Applications, Online Games, and Online Streaming Services	1 Most of the heavy computing done on servers for applications rather than mobile devices	2 Rising popularity of multiplayer online games such as PUBG, Apex Legends, Fortnite	3 Rising popularity of online streaming services such as Amazon Prime, Gaana, Spotify, Google Music etc.
 Smart Cities Mission - 100 cities identified	1 Aims to use data and technology to revamp the cities and make it sustainable and efficient for the future, which in turn will enhance the quality of life		
 Personal Data Protection Bill, 2019	1 Emphasis on data localisation / local data storage		
 Rise in digital transactions	1 A massive rise in UPI transaction volume from 0.285 million in Nov 2016 to 1,218.77 million in Nov 2019 ²⁰ . Demonetization prompted the industry to adopt digital payments		
 Digital India Programme	1 The Government of India launched the 'Digital India' programme in 2015 to ensure that services are made available electronically by increasing internet connectivity and support infrastructure		
 Draft E-commerce Policy, 2018	1 Necessitating e-commerce companies to store data locally - prompting higher requirement of data centre facilities		
 Rising Youth Population	1 As per census 2011, the youth population in India (aged between 15 - 24 years) was 19.1% of total and is expected to increase to 34.33% of the total by 2020. This massive scale-up of digitally-savvy young population will surely lead to a higher data footprint in India		

India has the second highest internet users in the world after China, but the penetration is low at 36% and thus provides massive scope for future growth. After demonetization, digital transactions skyrocketed to 1,218.77 million in Nov 2019 from 0.285 million in Nov 2016. While digital is the next big thing in India, the rise in the volume of sensitive data became a cause of concern for the government, resulting in various data localization policies.

¹⁴ Internet and Mobile Association of India (IAMAI)

¹⁵ IAMAI

¹⁶ IAMAI

¹⁷ China Internet Network Information Center (CNNIC) - Statistical Report on the Development of the Internet in China

¹⁸ Telecom Regulatory Authority of India (TRAI), as of 30th Sep 2019

¹⁹ Telecom Regulatory Authority of India (TRAI)

²⁰ National Payments Corporation of India (NPCI)

Legal & Regulatory Environment

The Data Localization Gambit and Policy Framework in India

India has an average broadband internet speed of 42.14 Mbps which is way lesser than the global average of 73.58 Mbps, as per the December 2019 Global Index by Ookla. Singapore tops the chart with 200 Mbps average broadband internet speed which is also an undisputed frontrunner in the Southeast Asian data centre market. Internet speed is one of the necessities for the growth of the data centres as a sector. Singapore also has a robust

policy and regulatory framework to ensure a strong infrastructure for the establishment of data centres.

On the other hand, India needs structural regulatory reforms to promote the data centres' ecosystem. As of now, all the policy measures, either on draft stage or notified, focus on the data localization which is evident to create demand in future for data centres in India.

A quick look at various policies that helped to organize the market.

 Policy Measures	 Objective	 Status
Personal Data Protection Bill, 2019	<ul style="list-style-type: none"> ▶ Protection of personal data of individuals ▶ Establishment of a Data Protection Authority for the same 	Waiting for approval in Lok Sabha
E-commerce Policy	<ul style="list-style-type: none"> ▶ To setup a legal and technological framework for restrictions on cross-border data flow ▶ Conditions for businesses regarding collection or processing of sensitive data locally and storing it abroad 	At the draft stage
Storing data related to payment systems locally	<ul style="list-style-type: none"> ▶ As per the circular of Reserve Bank of India, all data related to payment systems should be stored locally in India ▶ To facilitate supervision and monitoring of payment systems in India to detect suspicious or fraudulent activities 	RBI issued a circular in April 2018
Draft E-Pharmacy Regulations	<ul style="list-style-type: none"> ▶ To keep the data localised, generated by e-pharmacy portals 	At the draft stage
Data Localization Rules in FDI Policy 2017	<ul style="list-style-type: none"> ▶ The companies under the broadcasting sector are not permitted to transfer the subscribers' data to any person/place outside India 	Notified
National Telecom M2M Roadmap	<ul style="list-style-type: none"> ▶ As per the rules, all M2M (Machine to Machine) Gateways and application servers, servicing the customers in India, to be physically located in India 	Notified
Maintain e-books of companies' accounts on local servers, Companies Act 2013	<ul style="list-style-type: none"> ▶ A copy of the electronic books of companies' accounts should be maintained on servers in India 	Notified
The IRDAI (Outsourcing of Activities by Indian Insurers) Regulations, 2017	<ul style="list-style-type: none"> ▶ Original policyholder records to be maintained in India 	Notified
Guidelines on the cloud storage of government data	<ul style="list-style-type: none"> ▶ The cloud services provider should store data locally within India 	Guidelines issued by the Ministry of Electronics and Information Technology in 2017
Information Technology Act, 2000	<ul style="list-style-type: none"> ▶ Primary law to deal with cybercrime and electronic commerce 	Notified in October 2000
National Cyber Security Policy	<ul style="list-style-type: none"> ▶ To protect the public and private IT infrastructure from cyberattacks 	Notified in 2013

Source: Compiled by ANAROCK Research

The localization push can generate demand for local data centres in India but can put stress on the already depleted energy sector. The mandatory localization can increase the cost of operations for companies

which might be imposed on consumers. This can also lead to suppressed innovation and deleterious industry. Additionally, workers need to upgrade their skills to fulfil the requirements of data centres.

Robust Policy Framework Abroad Propelled Growth

India checks many boxes on the policy front to support the growth of the data centres but is no comparison to the robust regulatory environment of Japan which is a benchmark for future growth. In 2018, BSA|The Software Alliance, which is the leading advocate for the global software industry before governments and in the international marketplace,

released its Global Cloud Computing Scorecard, mapping the legal and regulatory environment of 24 countries around the world including India. India secured 20th position in 2018, down by two ranks since 2013. However, India witnessed major policy reforms such as Personal Data Protection Bill 2019, Draft E-commerce Policy and RBI’s circular for data localization since 2018 which might have improved country’s rank and position amongst other countries.

Mapping of Legal and Regulatory Environment

 Category	 Question	 India	 China	 Singapore	 Japan	 United States
Data Privacy	Is a data protection law or regulation in place?	Partial	Partial	Yes	Yes	Partial
	Is a data protection authority in place?	Partial	No	Yes	Yes	Yes
	Is the data protection authority enforcing the data protection law or regulation in an effective and transparent manner?	Partial	Not applicable	Yes	Partial	Yes
	Are cross-border data transfers free from arbitrary, unjustifiable, or disproportionate restrictions, such as national or sector-specific data or server localization requirements?	Partial	No	Yes	Yes	Yes
	Is there a personal data breach notification law or regulation?	No	Partial	No	Partial	Yes
Security	Is there a national cybersecurity strategy in place?	Yes	Yes	Yes	Yes	Yes
	Are there laws or appropriate guidance containing general security requirements for cloud service providers?	Yes	Yes	Yes	Partial	Partial
	Are laws or guidance on security requirements transparent, risk-based, and not overly prescriptive?	Partial	No	Yes	Yes	Partial



Category



Question



India



China



Singapore



Japan



United States

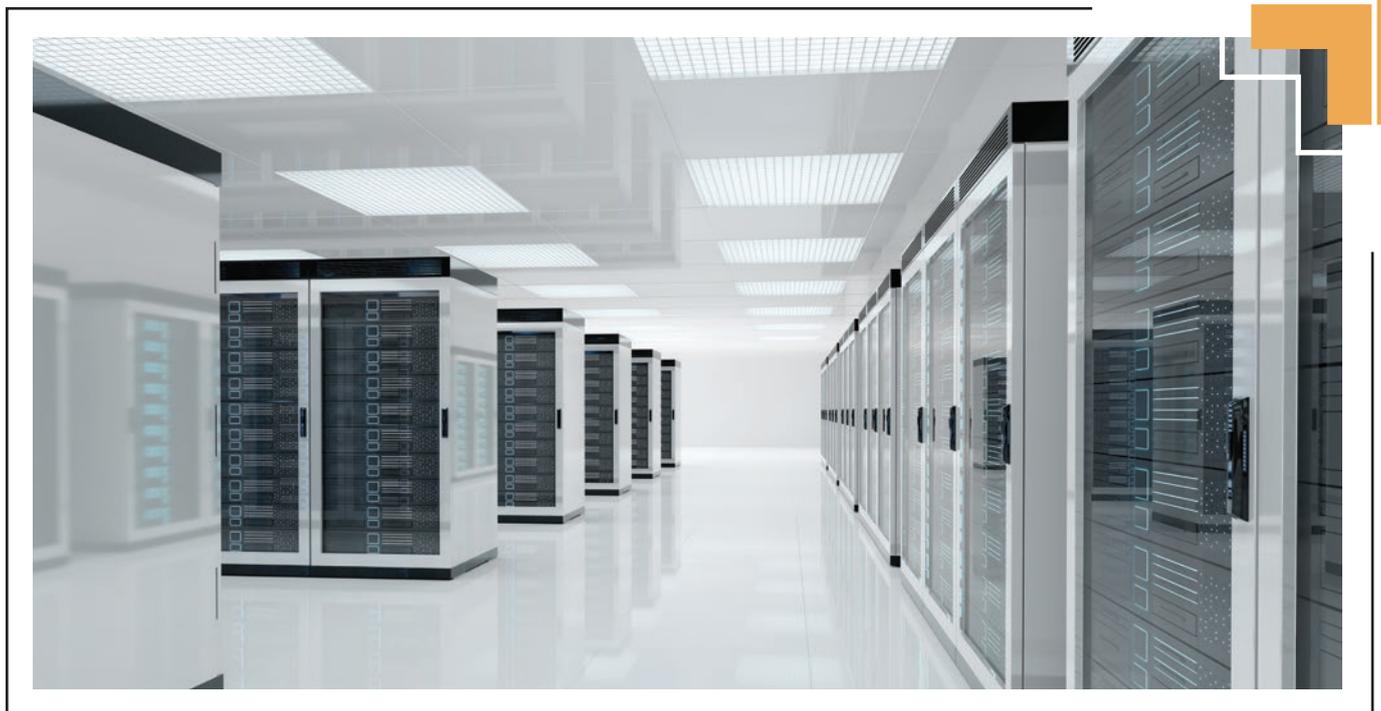
Category	Question	India	China	Singapore	Japan	United States
Cybercrime	Are cybercrime laws or regulations in place?	Yes	Yes	Yes	Yes	Yes
	Are arrangements in place for the cross-border exchange of data for law enforcement purposes that are transparent and fair?	Yes	Yes	Yes	Yes	Yes
Intellectual Property Rights	Are copyright laws or regulations in place that are consistent with international standards to protect cloud service providers?	Partial	Yes	Yes	Yes	Yes
	Is there clear legal protection against misappropriation of trade secrets?	No	Yes	Yes	Partial	Yes
	Is the law or regulation on trade secrets effectively enforced?	No	Partial	Partial	Partial	Yes
	Are there clear legal protections in place for software-implemented inventions?	No	Partial	Partial	Partial	Yes
Standard and International Harmonization	Is there a regulatory body responsible for standards development for the country?	Yes	Yes	Yes	Yes	Yes
	Are international standards favoured over domestic standards?	Partial	Partial	Partial	Yes	Yes
	Are e-commerce laws or regulations in place?	Yes	Draft	Yes	Partial	Yes
	Is there a law or regulation that gives electronic signatures clear legal weight?	Yes	Yes	Yes	Yes	Yes

Promoting Free Trade	Is a national strategy or platform in place to promote the development of cloud services and products?	Yes	Yes	Partial	Partial	Partial
	Are there any laws or policies in place that implement technology neutrality in government?	Partial	No	Partial	Partial	Yes
	Are services delivered by cloud providers free from tariffs and other trade barriers?	Partial	Partial	Yes	Yes	Yes
	Are cloud computing services able to operate free from laws or policies that impose data localization requirements?	Partial	No	Yes	Yes	Yes

Note: The table is only representative and compiled to depict certain aspects of the rules and regulations across countries

Source: BSA Cloud Computing Scorecard 2018

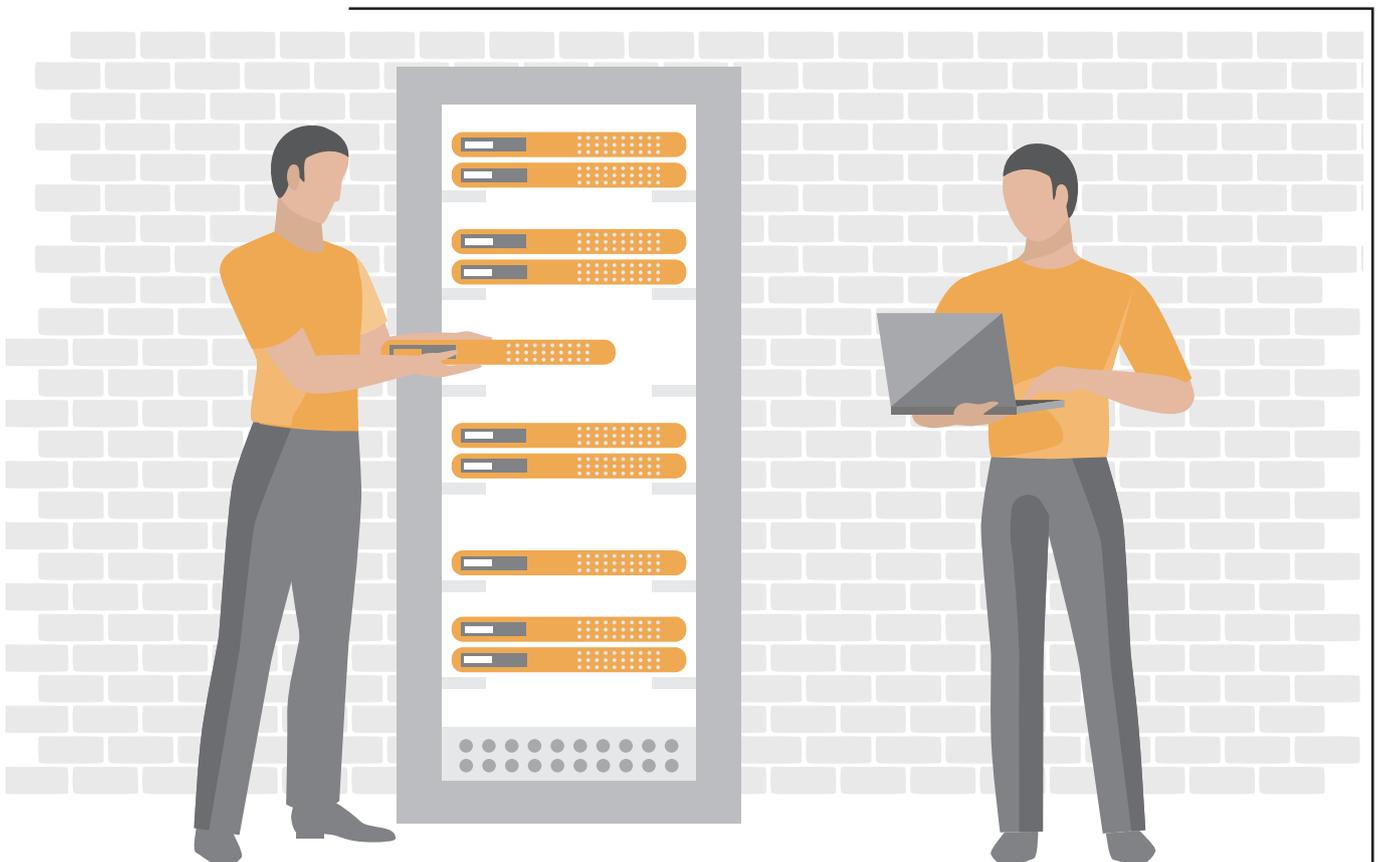
India currently has limited infrastructure support for the sector but the government’s focus to make data localization mandatory surely makes the future look attractive. Robust regulatory environment in countries such as Japan and Singapore helped data centres to grow rapidly. As India’s legal and policy framework for the data centre market is still in the introductory stages, benchmarking to the advanced nations can surely be a step in the right direction for the long-term growth of the sector.



Case Study

Singapore: New Epicentre of Data Centre World

- ▶ Singapore started building its telecommunication infrastructure to support the dot com wave in between 1994 to 2000. Since then, Singapore has become a favoured destination for the data centre world.
- ▶ Solid IT infrastructure, advanced server market, uninterrupted power supply and talented local workforce are the major growth drivers.
- ▶ As per the industry estimates, the country has a total capacity to generate 13,350MW electricity while peak demand averaged a mere 7,000MW.
- ▶ Influenced by the robust environment for the growth of the data centre market, many companies either have plans to set-up a new data centre or expand the existing one in Singapore.
 - Facebook announced a mammoth 150MW facility in Jurong East²¹.
 - Global Switch launched a new 30MVA data centre at Woodlands Heights in 2019²².
 - A 50MW facility by Digital Realty Trust is under construction and expected to be completed by Q3 2020²³.
 - Equinix's SG4 data centre is expected to launch in 2020²⁴.
 - ST Telemedia Global Data Centres is preparing its 30MW Loyang Data Centre to come online in 2020²⁵.
 - AirTrunk is building a 60MW data centre campus scheduled to launch soon²⁶.



²¹The Singapore Economic Development Board

²²Information as per the company website

²³Information as per the company website

²⁴Information as per the company website

²⁵Information as per the company website

²⁶Information as per the company website

India: Challenges for Data Centre Market



Challenge



Status



Solution

Challenge	Status	Solution
<p>Uninterrupted power supply</p>	<ul style="list-style-type: none"> ▶ India had an energy requirement of 1,274.6 Billion Units (BU) and availability of 1,267.5 BU in 2018-19, a shortfall of 7 BU²⁷. ▶ Government's emphasis on electric vehicles may put immense pressure on already over-utilised electricity sector. ▶ Unlike Singapore, uninterrupted power supply remains a challenge for India. 	<ul style="list-style-type: none"> ▶ India has a wide list of options to generate electricity such as thermal, nuclear, hydro and renewable energy sources. ▶ In Singapore, most of the electricity is generated through natural gas. ▶ Wide list of options provides the liberty of capacity expansion. ▶ The government is constantly working on the dream to provide 24X7 electricity.
<p>Slow internet speed</p>	<ul style="list-style-type: none"> ▶ India has an average broadband internet speed of 42.14 Mbps which is way lesser than the global average of 73.58 Mbps²⁸. ▶ Singapore tops the chart with 200 Mbps average broadband internet speed²⁹ which is also an undisputed frontrunner in the Southeast Asian data centre market. 	<ul style="list-style-type: none"> ▶ With the introduction of Fibernet broadband services in India, the internet speed has reached a maximum of 1 GBPS. ▶ With the introduction of 5G in India, the average mobile internet speed is expected to increase significantly.
<p>High real estate costs</p>	<ul style="list-style-type: none"> ▶ Land parcels near commercial areas are costlier which increases the operating cost of the data centre. ▶ For example, the average commercial office's monthly rent in the BKC area is in the range of INR 250-300 per sq ft. 	<p>Government land/space should be available on subsidized rates.</p>
<p>Unskilled workforce</p>	<ul style="list-style-type: none"> ▶ About 40% of India's total workforce must be reskilled over the next five years to cope with emerging trends such as AI, IoT, machine learning and blockchain³⁰. 	<p>Increased expenditure on education and emphasis on professional and practical courses can increase the number of skilled labours.</p>
<p>Limited policy framework</p>	<ul style="list-style-type: none"> ▶ Currently, the legal and regulatory framework is moderate in India. ▶ Japan or Singapore can be considered as a benchmark country for the development of data centres. 	<p>Data Protection Bill, E-commerce Policy and Data Localization are steps in the right direction.</p>

²⁷ Central Electricity Authority
²⁸ December 2019 Global Index by Ookla
²⁹ December 2019 Global Index by Ookla
³⁰ NAASSCOM

Despite a promising future, the data centre market in India still has some challenges such as availability of uninterrupted power supply, real estate obtainability at competitive prices, skilled workforce and robust policy framework.

Is the Data Centre Business Sustainable in India?

India has a population of 1.2 billion³¹ and mobile subscribers' base of 1.17 billion³². Mobile subscribers have grown at the rate of 26% between Sep 2014 to Sep 2019³³ but the internet penetration is low at 36%³⁴ as compared to China's 61.2%³⁵.

Many new entrants are foraying into the market with high hopes and existing players are planning to take a big leap forward. In 2019, three major business groups announced the plans to enter the data centre market.

- ▶ Adani group is expected to invest up to INR 70,000 Cr to set up solar-powered data parks in Andhra Pradesh.
- ▶ Hiranandani Group plans to invest INR 14,000 Cr.
- ▶ Reliance Industries partnered with Microsoft to provide cloud services to small and medium enterprises.

Along with new announcements, existing players have also shown interest for expansion. Oracle announced

the launch of two 'Gen 2 Cloud region' in Mumbai and Hyderabad. STTelemedia Global Data Centres planned to double the existing capacity of 70MW by March 2020 and grow further to 200MW within three years.

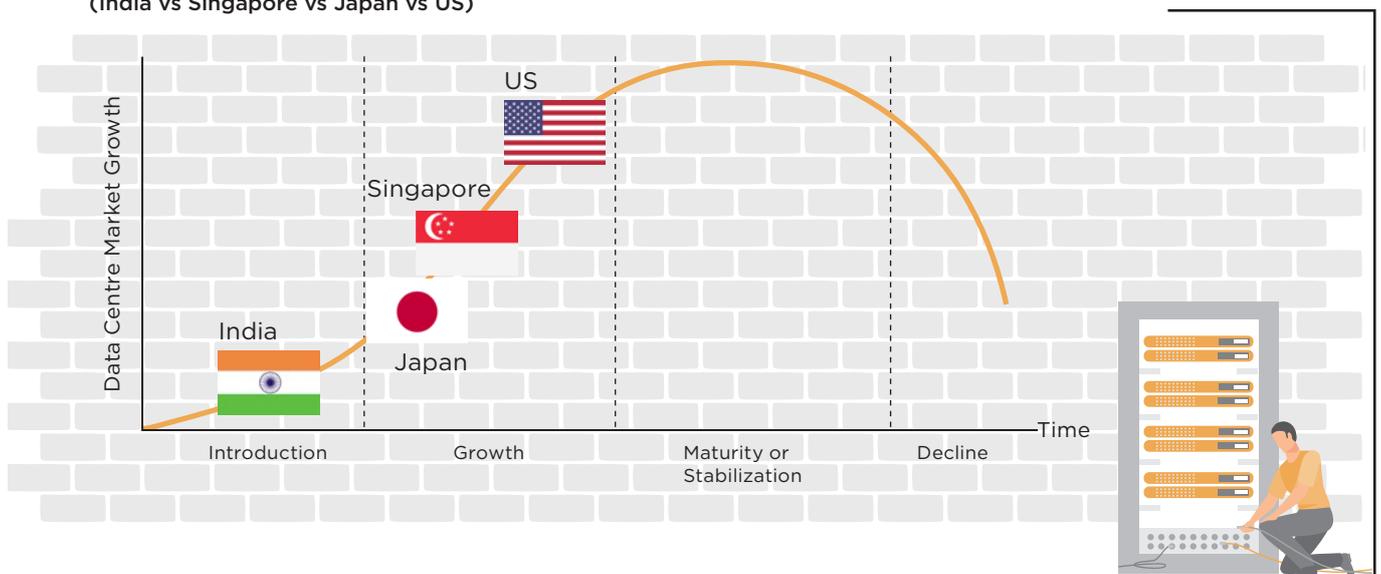
Many small players such as Web Werks and ESDS Software Services also have expansion plans. These local data centre players are now actively looking beyond Tier I cities and setting up operations in Tier-II towns.

The data centre business is capital intensive and can be sustainable in the long-term only with the economies of scale.

Introduction of online streaming services in India and the government's digitization drive is expected to boost the demand for data centres further. According to industry estimates, the data centre outsourcing market in India, currently pegged at close to US\$ 2 billion, is projected to grow at a CAGR of 25% to reach US\$ 5 billion by the financial year 2023-24.

Product Lifecycle of Data Centre Market

(India vs Singapore vs Japan vs US)



Data centre market of India is in nascent stage but its growing rapidly whereas the data centre market of Singapore and Japan have already reached the growth stage and the data centre market of US is about to reach the maturity.

³¹ Census 2011

³² Telecom Regulatory Authority of India (TRAI), as of 30th Sep 2019

³³ Telecom Regulatory Authority of India (TRAI)

³⁴ IAMA

³⁵ China Internet Network Information Center (CNNIC) - Statistical Report on the Development of the Internet in China

In India, the data centre market has an immense potential to grow but the regulatory environment, availability of uninterrupted power supply, lack of skilled labour force and slow internet speed are challenges which need to be addressed immediately. Recent announcements and policy measures such as Data Protection Bill, Draft E-commerce Policy are expected to strengthen the policy and regulatory environment in the country. Further, incentivizing the establishment of data centres can work as a catalyst for the expansion of the sector. Mass rollout of 5G and Internet of Things (IoT) gaining momentum in India are expected to open new avenues of growth for the sector.

As India's core established residential real estate business is reeling under pressure, a need to search for an alternate asset class is evident. Data Centre business may be a solution to that in long-term. However, the government shoulders a huge responsibility of providing the necessary impetus to this evolving sector.

The Way Forward



The demographic dividend that our country enjoys is capable of ushering in the changes that are warranted today. The socio-economic fabric has undergone a sea change, resulting in driving demand for many new products and formats. The institutionalisation of many old asset classes has the potential to unearth a host of possibilities for all stakeholders.

We are living in an era where there is a rise of awareness among consumers coupled with their capacity and willingness to pay for better services and amenities which are greatly different when they are professionally managed. While the demand for professionally managed and built-to-suit real estate alternatives is gaining prominence, there is a discerning need to manage services within a robust and pre-decided framework.

Effectively addressing the needs of these segments requires synergy between the

government, private sector, and investors. This is imperative today as a single entity cannot address the disparate elements of emerging products. The government's role spans policy, financing, and delivery mechanisms, for which it can act on its own or through public private partnership (PPP) models. The private players can potentially improve the quality of the supply, quality and cost by creating the required infrastructure and assets. The future also calls for closer collaboration among different stakeholders who may be able to share the risks and undertake efficiency and cost containment measures.

The government initiatives currently in place are likely to drive incremental changes. But a significant transformation in the landscape requires a more definitive policy framework to catalyse the future provision of the products that are emerging today.

India's maiden REIT of commercial income yielding asset and its success may pave the way for the future. Many products among these upcoming real estate segments can generate a steady income and the future may witness REITs in alternate assets as well.

The emerging asset classes are expected to reboot the real estate sector with renewed demand from a new generation of users, it is also expected to favourably affect the rising need of housing, data centres and work spaces which will help to develop an efficient and more enabling environment. While most of these real estate segments are in the nascent, experimental phase, their growth and maturity into more bankable and yield-generating asset classes is an imminent reality.



Confederation of Indian Industry
125 Years: 1895-2020

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the development of India, partnering industry, Government, and civil society, through advisory and consultative processes.

CII is a non-government, not-for-profit, industry-led and industry-managed organization, playing a proactive role in India's development process. Founded in 1895 and celebrating 125 years in 2020, India's premier business association has more than 9100 members, from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 300,000 enterprises from 291 national and regional sectoral industry bodies.

CII charts change by working closely with Government on policy issues, interfacing with thought leaders, and enhancing efficiency, competitiveness and business opportunities for industry through a range of specialized services and strategic global linkages. It also provides a platform for consensus-building and networking on key issues.

Extending its agenda beyond business, CII assists industry to identify and execute corporate citizenship programmes. Partnerships with civil society organizations carry forward corporate initiatives for integrated and inclusive development across diverse domains including affirmative action, healthcare, education, livelihood, diversity management, skill development, empowerment of women, and water, to name a few.

India is now set to become a US\$ 5 trillion economy in the next five years and Indian industry will remain the principal growth engine for achieving this target. With the theme for 2019-20 as 'Competitiveness of India Inc - India@75: Forging Ahead', CII will focus on five priority areas which would enable the country to stay on a solid growth track. These are - employment generation, rural-urban connect, energy security, environmental sustainability and governance.

With 68 offices, including 9 Centres of Excellence, in India, and 11 overseas offices in Australia, China, Egypt, France, Germany, Indonesia, Singapore, South Africa, UAE, UK, and USA, as well as institutional partnerships with 394 counterpart organizations in 133 countries, CII serves as a reference point for Indian industry and the international business community.

Confederation of Indian Industry

The Mantosh Sondhi Centre

23, Institutional Area, Lodi Road, New Delhi - 110 003 (India)

T: 91 11 45771000 / 24629994-7 • F: 91 11 24626149

E: info@cii.in • W: www.cii.in

Follow us on



[cii.in/facebook](https://www.cii.in/facebook)



[cii.in/twitter](https://www.cii.in/twitter)



[cii.in/linkedin](https://www.cii.in/linkedin)



[cii.in/youtube](https://www.cii.in/youtube)

Reach us via our Membership Helpline: 00-91-124-4592966 / 00-91-99104 46244

CII Helpline Toll Free Number: 1800-103-1244

Copyright © 2020 Confederation of Indian Industry (CII). All rights reserved.

No part of this publication may be reproduced, stored in, or introduced into a retrieval system, or transmitted in any form or by any means (electronic, mechanical, photocopying, recording or otherwise), in part or full in any manner whatsoever, or translated into any language, without the prior written permission of the copyright owner. CII has made every effort to ensure the accuracy of the information and material presented in this document. Nonetheless, all information, estimates and opinions contained in this publication are subject to change without notice, and do not constitute professional advice in any manner. Neither CII nor any of its office bearers or analysts or employees accept or assume any responsibility or liability in respect of the information provided herein. However, any discrepancy, error, etc. found in this publication may please be brought to the notice of CII for appropriate correction.

Published by Confederation of Indian Industry (CII), The Mantosh Sondhi Centre; 23, Institutional Area, Lodi Road, New Delhi 110003, India, Tel: +91-11-24629994-7, Fax: +91-11-24626149; Email: info@cii.in; Web: www.cii.in

ANAROCK PROPERTY CONSULTANTS PVT. LTD.

ANAROCK is India's leading independent real estate services company with a presence across India and the Middle East. The Chairman, Mr. Anuj Puri, is a highly respected industry veteran and India's most prominent real estate thought leader. The Company has diversified interests across the real estate lifecycle and deploys its proprietary technology platform to accelerate marketing and sales. ANAROCK's services include Residential Broking and Technology, Retail, Commercial, Investment Banking, Hospitality (via HVS ANAROCK), Land Services, Warehousing and Logistics, Investment Management, Research and Strategic Advisory & Valuations.

The Company has a unique business model, which is an amalgamation of traditional product sales supported by a modern technology platform with automated analytical and reporting tools. This offers timely solutions to its clients, while delivering financially favourable and efficient results. ANAROCK has a team of over 2000 certified and experienced real estate professionals who operate across all major Indian (Mumbai, Navi Mumbai, Pune, Ahmedabad, NCR - Delhi, Gurugram, Noida, Ghaziabad, Chennai, Bangalore, Hyderabad, Kolkata, Lucknow) and GCC markets, and within a period of two years, has successfully completed over 300 exclusive project mandates. ANAROCK also manages over 80,000 established channel partners to ensure global business coverage.

Our assurance of consistent ethical dealing with clients and partners reflects our motto - Values Over Value.

Please visit www.anarock.com

OUR AUTHORS

Virendra Joshi - VP, Research

Ashim Bhanja Chowdhury - AVP, Research

Ravindra Kumar Kumawat - Manager, Research

Nikunj Joshi - Manager, Research

Roubal Khorana - Asst. Manager, Research

For Research Services, please contact:

Prashant Kumar Thakur, Head of Research
prashant.thakur@anarock.com

For Business Queries, please write to

Rajkumar Singh
rajkumar.singh@anarock.com

OUR EDITOR

Archana Adnani - Editor, Research

REGISTERED OFFICE

1002, 10th Floor, B Wing, ONE BKC, G Block,
Bandra Kurla Complex, Bandra East,
Mumbai 400051



MahaRERA Registration No. A51900000108
available at <http://maharera.mahaonline.gov.in>

© 2020 ANAROCK Property Consultants Pvt. Ltd.
All rights reserved.

All information in this report is provided solely for internal circulation and reference purposes. ANAROCK makes no statement, representation, warranty or guarantee as to the accuracy, reliability or timeliness of the information provided. No part of this report may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods.

ANAROCK
VALUES OVER VALUE