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REAL ESTATE - A RELOOK

CBRE RESEARCH | 2019

CONTENTS

04

REAL ESTATE DISRUPTERS:
WHAT'S HOT
& WHAT'S NOT

12

REAL ESTATE (RE) BOOST:
THE POLICY TALK

18

BUILDING
'FUTURE READY' TALENT

22

BUILDING THE
'TECH' WAY

EXECUTIVE SUMMARY

The Indian real estate sector is in the midst of a metamorphosis which is being shaped by rapid technological progress, a changing policy scenario, shifting end-user demand and the emergence of new asset classes in response to these changing demands.

Our workplaces are becoming more modern and open, in keeping with the aspirations of the millennial working population. With a steady growth in mobile population, alternate sectors such as flexible spaces are fast changing gears as they enter the “mainstream”. Flexible operators have been bullish about India and leased about 4.6 million sq. ft. of space in H1 2019, an increase of about 52% on a y-o-y basis. India today is one of the biggest flexible space markets in APAC with a stock of almost 20 million sq. ft. and is only expected to grow from strength to strength.

Changing workplaces, evolving work patterns and a pro-tech government stance are encouraging public enterprises and private businesses to adopt newer technologies. This has enabled companies to digitize processes and make data-driven decisions about how to manage and use space. While the increased focus on effective space utilization has placed greater importance on workplace strategies, technology is also playing a pivotal role in the successful implementation of these strategies. To develop a futuristic workplace, developers would need to look across the spectrum and focus on all aspects that define the future of real estate such as construction techniques, use of technology and newer workplace strategies. The adoption of automation and Artificial intelligence will enable organisations to redefine many occupations, transform certain business processes and re-evaluate the way they develop people and their skillsets.

However, in order to be able to redefine people and their skill sets, it is imperative that India ensures that it has a workforce that has a certain threshold of skill. Today, India is home to one of the youngest populations in the world. If channelled and skilled correctly, its young working class (with a median age of 31.4 in 2030) has the potential to achieve significant productivity gains. However, the growth benefit of this demographic dividend would not be automatic. In order to support the country’s growth outlook, increased spending on human capital segments such as education and skill development will be imperative. The government has begun focusing on skill enhancement of the population and has announced several new measures in Budget 2019-20 to improve the education sector in India.

As mentioned previously, not only are alternate asset classes in the office space becoming mainstream, the same is also being witnessed in the residential space. Affordable housing, a largely a neglected sector for very long, has always had the potential to accelerate the growth of the residential segment in the country. However, it’s the government’s focus over the past three years which has resulted in various steps being taken to ease both supply and demand side issues. These steps include GST rate cuts, relaxation in carpet area and granting of infrastructure status to affordable housing, thereby bringing the sector back in the limelight.

However, these initiatives have not remained limited to the affordable housing segment. Several other steps such as setting up RERA authorities, GST implementation as well as opening up additional funding avenues via REITs have expanded and improved the growth prospects of the RE industry. What’s further encouraging is that most of these reforms have not gone into dormancy mode and are actively being reviewed / revised by the government to ensure that they remain relevant and address concerns of the stakeholders involved.

After witnessing decades of traditional approaches, the real estate sector is now in the midst of a wave of enabling disruptors, which are helping in the development of new business models, policies, technologies and strategies that will redefine the country’s-built environment.

REAL ESTATE DISRUPTERS – WHAT'S HOT & WHAT'S NOT

The Indian real estate sector is in the midst of a complete metamorphosis – shaped by rapid technological progress, a changing policy scenario, shifting end-user demand and the emergence of new asset classes. After witnessing decades of traditional business approaches, the sector is now in the grip of a powerful wave of disruption, which has helped in the development of new business models and strategies that will redefine the country's built environment.

The growth of smart cities will be one of the influencing factors that will shape the future of the country's real estate environment. Meanwhile, workplaces are becoming more modern and open, keeping in line with aspirations of the millennial working population. The logistics industry is embracing technology to keep pace with the increasingly digital times. At the same time, housing is getting more affordable, on the back of government initiatives and the growing needs of young families.

Smart cities – A progress update

Across the world, cities are making tremendous progress in achieving economic, environmental and social sustainability to improve living standards. Conceptualization, development and implementation of smart cities would go a long way in achieving this goal as it would require deployment of technology as well as collaborative partnerships (usually between different government departments and with private players) to drive the digital transformation of a city.

Launched in 2015, the Indian government's '100 Smart Cities Mission' aims to convert our cities into sustainable and liveable urban centres of growth. The focus is on sustainable and inclusive development through the use of 'smart' solutions, thereby creating employment opportunities and ensuring inclusive development.

FIGURE 1.1: PROGRESS OF SMART CITIES MISSION



Source: Press Information Bureau (PIB)

CURRENT STATUS*

Number of projects tendered - **3,589 projects worth INR 1,33,407 crore** (57% of total sanctioned projects)

Number of projects completed - **2,793 projects worth INR 88,898 crore** (38%)

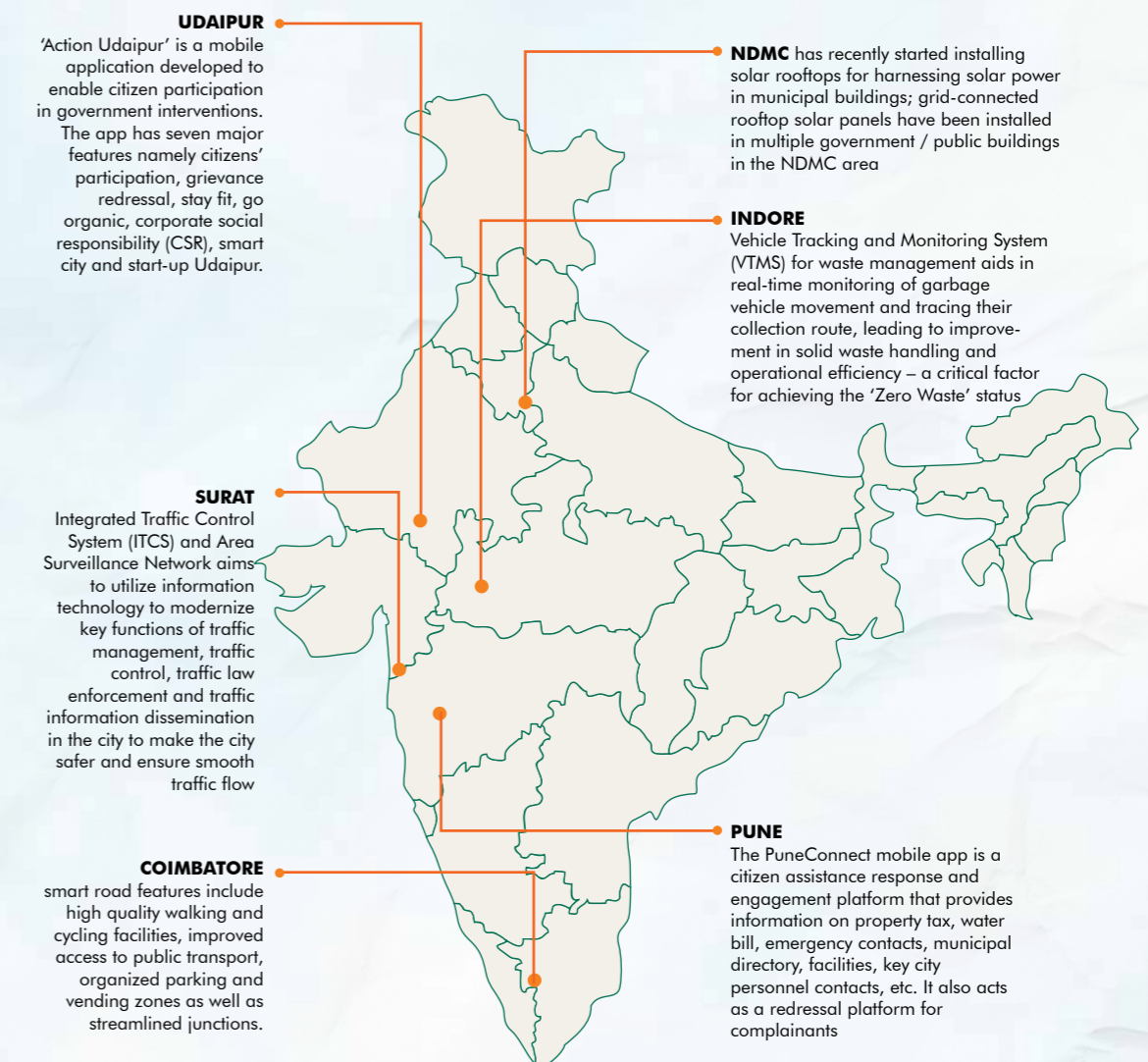
Number of projects to be implemented by **100 SPVs - 5,151 projects worth INR 2.05 lakh crore**

Smart road projects completed in **25 cities at a cost of INR 837 crore**

*PIB

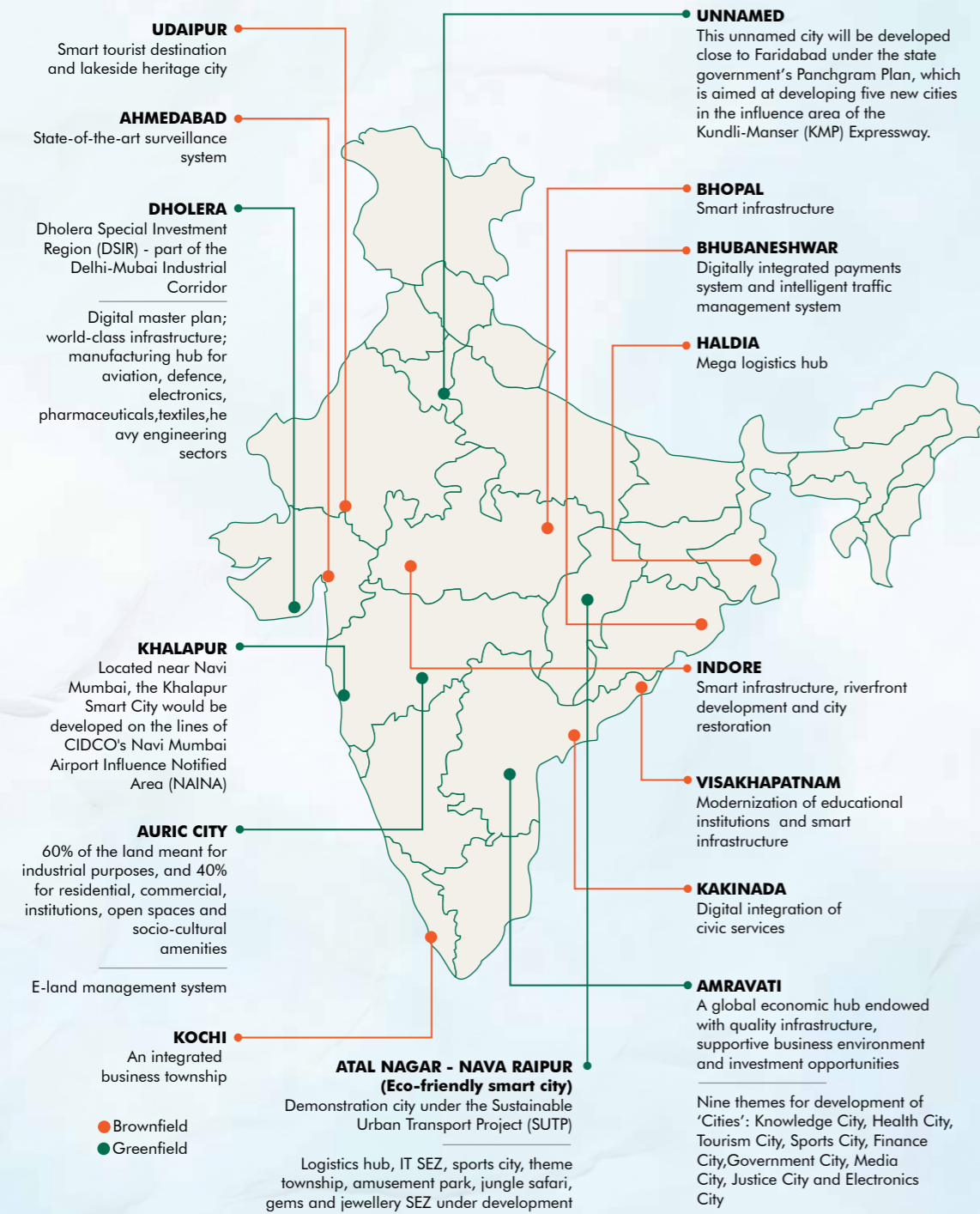
As India strides into the next phase of growth, flagship initiatives such as the recent 'Smart Cities Mission' are expected to improve the quality of life in cities and aid in the development of cities with modern facilities. While the development of smart cities has begun, the path to their creation is not easy. For one, it requires efforts from across all quarters – the governments, municipal bodies as well as the citizens. It has been three years since the mission was launched, and yet several of the selected cities are still grappling with the implementation of these ambitious projects. However, the task of remodelling Indian cities is an onerous one, and the pace of development is slow but the momentum is now picking up steadily.

FIGURE 1.2: SUCCESS STORIES – SMART CITIES



Source: CBRE Research

FIGURE 1.3: SMART CITIES OF THE FUTURE



Source: India Smart Cities, Ministry of Urban Development; Smart Cities Mission, Ministry of Housing and Urban Affairs; CBRE Research, Q2 2019

Co-working – Changing the workspace dynamics

With looming business and economic uncertainty, corporates are constantly evolving workplace strategies by stress testing flexible space combinations. The framework for these solutions has evolved beyond the usual cost and agility requirements: corporates are now equally stressing on talent attraction / retention by providing amenities or inculcating latest technologies. Companies continue to implement workplace strategies within their corporate office by providing various types of spaces. However, several of them have also tilted towards using third-party flexible spaces recently.

This has resulted in flexible office space operators growing rapidly in India, making the country one of the biggest flexible space markets in APAC. With the recent wave of rapid expansion, flexible spaces account for about 1.7% of the total office stock in APAC currently. Shanghai and Delhi-NCR were the only two markets in the region where flexible spaces accounted for more than 3% of the overall office stock¹.

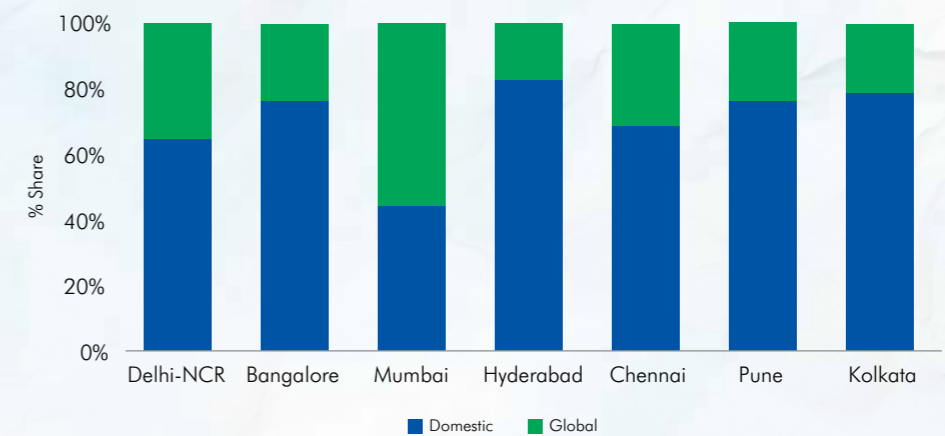
Keeping pace with the demand, the overall stock of flexible space in the country (including all seven Indian cities) increased by almost 52% y-o-y to almost 20 million sq. ft. by H1 2019. In H1 2019, almost 30% of the flexible space leasing took place in Bangalore.

FIGURE 1.4: QUARTERLY FLEXIBLE SPACE LEASING ACTIVITY



Source: CBRE Research, H1 2019

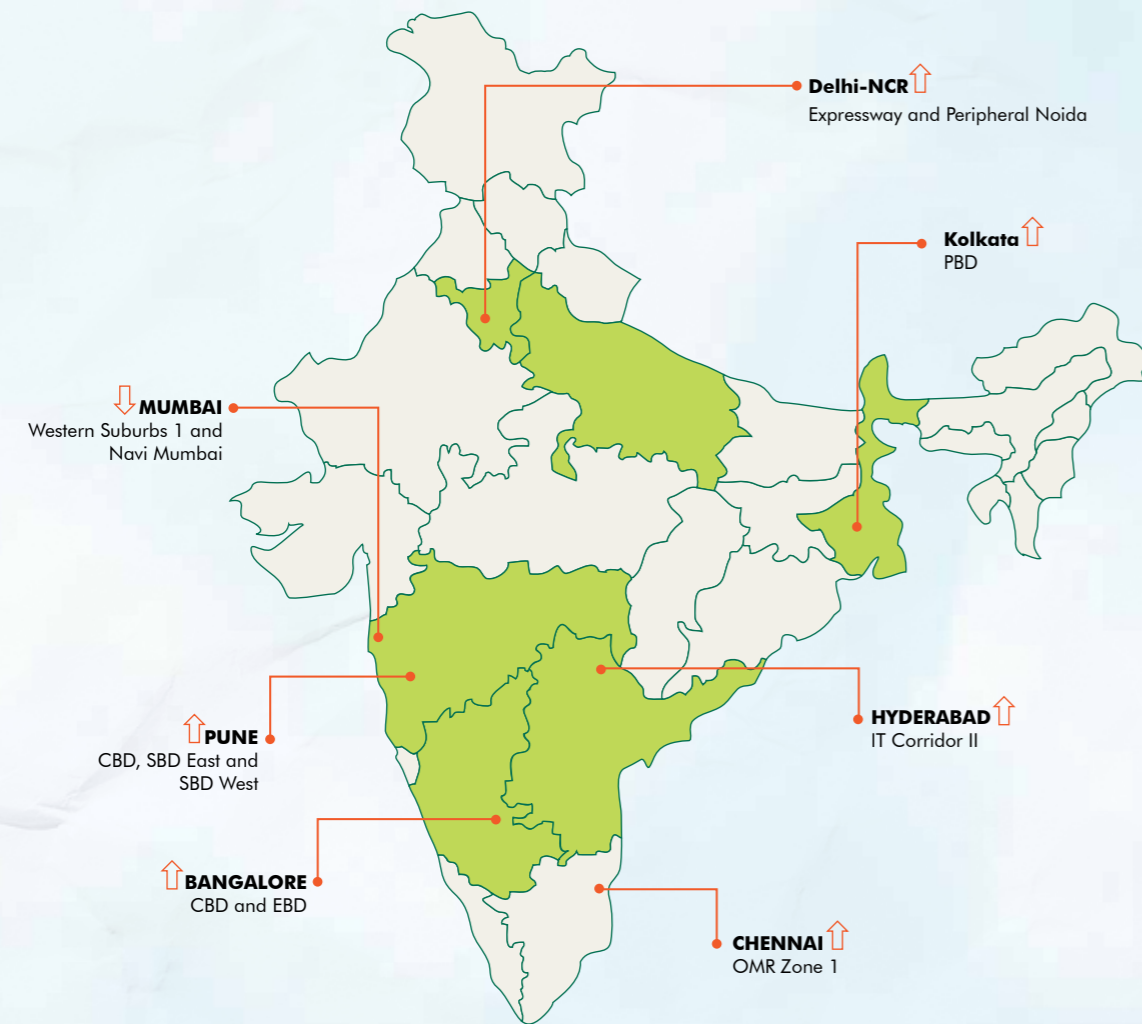
FIGURE 1.5: SHARE OF DOMESTIC VS GLOBAL OPERATORS IN INDIA, BY AREA



Source: 'CBRE India Flexible Space Tenant Survey – 2018/19'

¹CBRE India Flexible Space Tenant Survey – 2018/19'

FIGURE 1.6: HOW DID THE CITIES PERFORM IN H1 2019 IN TERMS OF FLEXIBLE SPACE DEMAND?



Source: CBRE Research, H1 2019

As employees are keen on the percolation of flexibility to all aspects of work, it is evident that flexible spaces are here to stay.

Affordable housing – New-age offerings

The year 2018 witnessed housing demand inching past supply, resulting in a dip in the unsold inventory levels. With the government announcing GST rate cuts for residential properties in February 2019, the GST taxation gap between an under-construction and completed property has been narrowed (from an end-user perspective), and this could result in a demand pick-up for under-construction properties as well. Currently the GST rates on affordable housing stand at 1% on under-construction property with no ITC (Input Tax Credit), whereas there is no GST on completed projects.

Affordable housing, especially in India, has always had the potential to drive the growth of the residential segment in the country. The government's increased focus over the past two years has resulted in various steps to ease both supply and demand side issues impacting the affordable housing sector in India.

In the latest budget speech, the government has allowed an additional deduction of INR 1.5 lakh on interest on housing loans borrowed for affordable housing valued up to INR 45 lakhs.

In addition, the government also recently changed the definition of affordable housing,

- 60 sq. m. in metropolitan cities (NCR including Delhi, Noida, Greater Noida, Ghaziabad, Gurgaon and Faridabad), Bangalore, Mumbai – MMR region, Chennai, Hyderabad and Kolkata) having value up to INR 4.5 million.
- 90 sq. m. in non-metropolitan cities / towns with value up to INR 4.5 million.

Relaxing the carpet area for affordable housing means that a significant majority of the country's residential stock now falls in the 1% GST category (higher in tier II cities, lower for the major tier I cities), which will give a boost to the housing for all by 2022 programme.

Current Status

TABLE 1.1: RURAL HOUSING – TARGET AND PROGRESS

YEAR	TARGET	HOUSES COMPLETED	FUNDS AVAILABLE (IN INR LAKHS)	PERCENTAGE UTILISATION
2017-18	3,204,663	2,522,994	6,742,246	79.8
2018-19	2,516,481	2,207,239	5,904,065	79.2

Source: Ministry of rural development and PMAY-Gramin (as accessed on 20 August 2019)

TABLE 1.2: URBAN HOUSING – PROGRESS

	FINANCIAL PROGRESS (INR CRORE)				PHYSICAL PROGRESS (NO. OF UNITS)			
	Project proposals considered	Investment in projects	Central assistance sanctioned	Central assistance released	Houses sanctioned	Houses under construction	Houses completed*	Houses occupied*
PAN INDIA	17,113	495,838	130,161	51,415	8,362,975	4,831,580	2,607,913	2,396,783

Source: PMAY-Urban (progress as on 1 July 2019); *including incomplete houses of earlier NURM

Backed by strong government initiatives, affordable housing is expected to drive the supply and demand in the next few years.

Logistics & Warehousing: The new 'automation' playing field

The logistics sector in India is experiencing unprecedented structural shifts in the form of automation, leading to blurring of lines with the retail sector, transformation of supply chains and growing investments. As technology permeates the sector, demand for quality space is increasing and corporates across segments are opting for large, modern warehouses. In the future, advances in technology, particularly automation, will enhance the specifications and operations of logistics assets, thereby pushing older, inferior-grade properties down the demand pyramid. Leasing activity rose by almost 31% compared to H1 2018, crossing 13 million sq. ft. in H1 2019.

The government's ambitious 'Make in India' initiative is expected to act as a catalyst for growth in the logistics sector. With the focus being on manufacturing, developers need to ensure that they are not only prepared for higher demand from the manufacturing sector, but also for a probable shift in type of manufacturing i.e. high value manufacturing. Corporates involved in this kind of manufacturing would have slightly different requirements from traditional occupiers, which may eventually propel the shift from "technology driven" warehouses to "smart" warehouses in the medium to long-term.

FIGURE 1.7: FASTEST GROWING MANUFACTURING HUBS BY 2025

Country	Market size in 2015 (ML)	CAGR 2016-25
Vietnam	\$23,410	6.8%
India	\$356,226	6.3%
Philippines	\$59,605	5.3%
Pakistan	\$27,474	5.1%
Indonesia	\$212,778	5.0%
Estonia	\$3,464	4.6%
China	\$3,200,063	4.5%
Saudi Arabia	\$79,585	4.1%
Slovenia	\$8,986	3.9%
Oman	\$6,721	3.9%
Emerging	\$6,241,879	4.0%
Developed	\$6,046,315	1.2%
World	\$12,287,820	2.7%



Source: The future of global manufacturing | CBRE Research

As of now, Indian e-commerce companies, 3PL players and online grocery chains are increasingly using innovative tech solutions to improve inventory management. The use of fleet management software (provides live tracking of goods), RFID systems for inventory identification and automated pallet storage is growing quickly, as is the number of start-ups aimed at bridging the technology gap in this sector.

GEARED TOWARDS A DYNAMIC FUTURE:

What's next for each of these RE disrupters...

SMART CITIES



- Infrastructure renewal in Tier II and III cities
- Development of townships as a result of new industrial corridors (under 'Make in India')
- Widespread deployment of state-of-the-art surveillance systems and integrated intelligent traffic management systems expected to streamline basic amenities
- Growing digital integration of civic services to ensure smooth delivery of services

CO-WORKING



- By 2020, leasing by flexible space operators expected to touch 7-9 million²; expansion from 'gateway' cities to 'getaway' cities
- More established corporates to opt for flexible spaces; large sized deal closures expected
- Flexible spaces unlikely to be limited to office buildings
- 'Free-addressing' policies to boost operator expansion
- Increased funding for flexible spaces; small scale mergers and acquisitions

AFFORDABLE HOUSING



- Housing demand remains concentrated in affordable and mid-end segments
- Projects launched in locations with basic physical and social infrastructure expected to see greater traction
- Given the improving affordability of the population, definition of affordable housing and mid-end housing expected to somewhat blur.

LOGISTICS AND WAREHOUSING



- Widespread deployment of IoT to create smarter warehouses with improved supply chain efficiencies
- Advent of bigger warehouses that are constructed at greater distances not only from each other but also from residential districts
- Partial crossover between warehousing and retail property expected; for instance, shopping centres in large US and European cities often have self-storage facilities where buyers take delivery of goods ordered online

² 'CBRE India Flexible Space Tenant Survey – 2018/19'



REAL ESTATE (RE) BOOST: THE POLICY TALK

The government has been proactive in streamlining key segments of the real estate sector – plugging in gaps to ensure accountability and improve real-time efficiencies. Policy reforms across various sectors in 2018 led to a tremendous improvement in India’s Ease of Doing Business Ranking. According to the World Bank, India currently ranks at 77, up 30 places from last year. The country now aims to enter the top 50 bracket in the coming years on the back of progressive government policies.

Providing a regulatory framework for the real estate (RE) sector has always been a major requisite of serious, long-term global players, and is thus likely to permanently alter investment avenues offered by the country.

Investments in RE: The need for additional funding avenues

India’s real estate industry has witnessed a paradigm shift from traditional finance to an era of structured finance, private equity and future public offerings. During 2018, the commercial real estate investment market witnessed few large-scale deals which has led to about USD 4.8 billion of investments.

Transaction activity was led by private equity investors focusing on office and retail sectors, while local investors focused on investing in land parcels for RE developments. The inflow of long term, patient capital from PE and institutional players – especially in office and retail has provided the sectors with funds that are needed for a steady growth curve. However, in a situation wherein the NBFC sector is causing some liquidity stress for the RE sector, there is a need for additional sources of viable capital to allow the sector to achieve its growth potential.

FIGURE 2.1: INVESTMENTS IN INDIAN REAL ESTATE SECTOR (2014 – H1 2019)



Source: CBRE Research, H1 2019

How did reforms pave the way for a REIT listing?

The Securities and Exchange Board of India (SEBI) outlined the regulations for REITs in 2014. However, the regulations were stringent in terms of legal structure, minimum capital requirements, listing requirements and distribution of income to the REIT investors. But in order to make the REIT listing a success, progressive regulations were drafted by SEBI. By 2018, almost all concerns regarding the viability of a REIT launch had been addressed, making it an opportune time for a REIT listing.

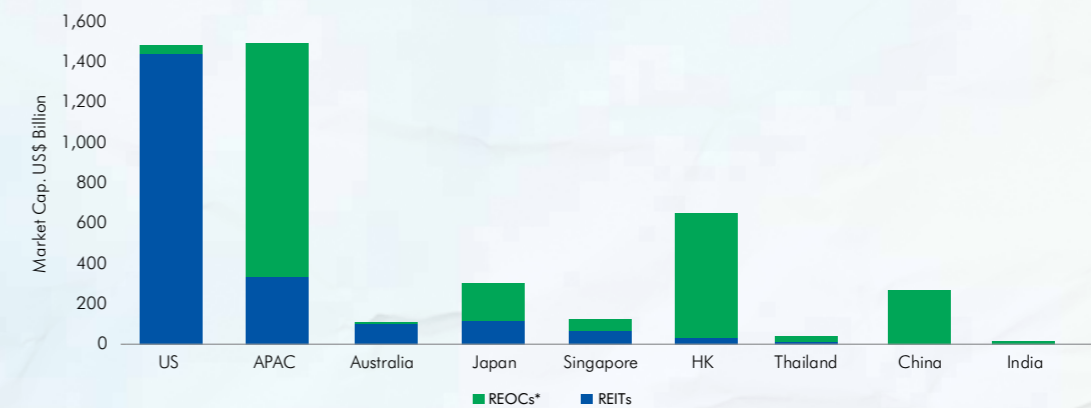
A landmark move - India’s first REIT listing

Marking a major milestone in the Indian real estate sector, ‘Embassy Office Parks’, a joint venture between the real estate company Embassy and private equity firm Blackstone launched the country’s first REIT in March 2019. Termed as ‘Embassy REIT’, the trust issued up to 158 million units at a price of INR 300 per unit aggregating up to INR 4,750 crores. The key stakeholders of the ‘Embassy REIT’ includes Axis Bank (the trustee), Embassy Office Parks (the manager), Embassy (the sponsor) and Blackstone (the sponsor).

Drawing comparisons: Trends in Global REIT’s

The market capitalization of APAC REOCs is higher than the US, indicating that there is room for APAC REOCs to spin off their investment properties into REITs.

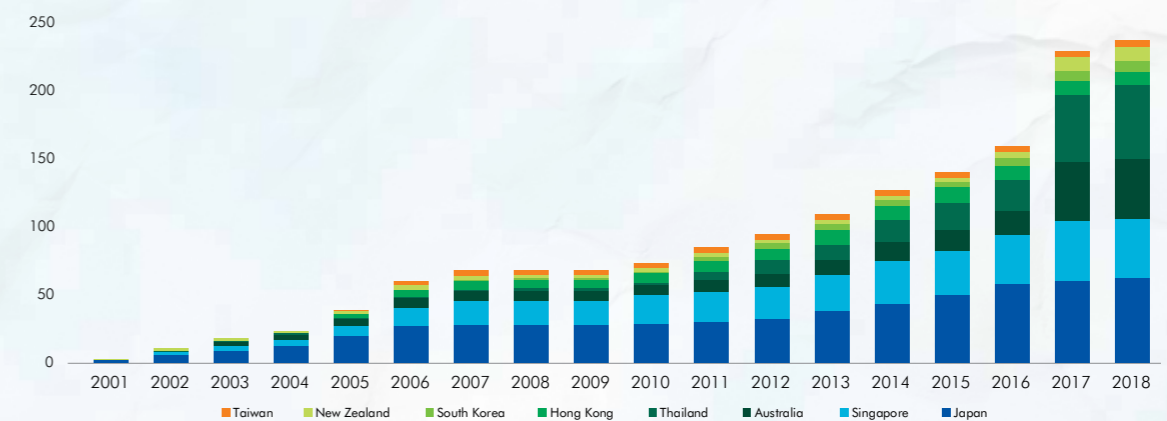
FIGURE 2.2: COMPARISON OF REIT MARKET SIZE TO US



Source: CBRE Research, Bloomberg, March 2019; Note: Data as on December 2018

Japan and Singapore in particular, have reached the largest REIT market capitalization in the APAC region.

FIGURE 2.3: TOTAL NUMBER OF REITS IN APAC



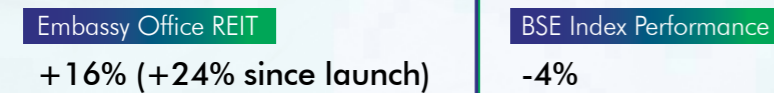
*Note: APAC includes: Japan, Singapore, Hong Kong, Taiwan, Thailand, South Korea, Australia, New Zealand
Total number of REITs has taken into account the delisting and merger of REITs and is end of the year number

Source: CBRE Research, S&P Capital IQ, March 2019

India offers major advantages for REITs including availability of a wide variety of quality assets, sustained government support in easing regulations, a wide investor base, and opportunities for capital appreciation, among others.

How has been the performance of India's first REIT?

Performance (April – Jul'19)



Note: Price as of end of the month; Embassy REIT was launched on 18th March, 2019 at a price of INR 300; Growth from launch: 24% (18th Mar – 31st July)

Fact check: Are we on the right path?

In 2016, CBRE had identified ten critical success factors for I-REITs, covering three key aspects – regulation, market performance and investors. A look at the below table reveals that from a policy perspective, almost all key issues that are critical for providing a conducive operating environment have been addressed. We take a relook at those factors and their current status:

TABLE 2.1: CURRENT STATUS OF SUCCESS FACTORS – 2019

REGULATORY FACTORS	
Tax pass through	<ul style="list-style-type: none"> MAT exempted on gains from transfer of shares by SPVs to REIT DDT exempted on rental income distributed by SPVs to REIT
Clear regime	<ul style="list-style-type: none"> SEBI regulates / monitors all REIT stakeholder activities
Enable growth	<ul style="list-style-type: none"> Stakeholder concerns addressed by the government; guidelines revised in 2016 and subsequent changes made in 2017 and 2018
Transaction tax	<ul style="list-style-type: none"> Clarity given on applicable transaction taxes
MARKET FACTORS	
Market Cycle	<ul style="list-style-type: none"> Right timing to enter in Indian commercial market as rental growth likely to continue across most prime markets
Risk Adjusted Returns	<ul style="list-style-type: none"> A REIT is likely to offer higher yields (compared with 10-year government bonds), thereby appealing to investors
ISSUER / INVESTOR FACTORS	
Core stabilized assets	<ul style="list-style-type: none"> Players with serious intentions of launching REITs have been acquiring prime properties over the past few years
Increase investible assets supply	<ul style="list-style-type: none"> The allowance of 20% investment in under-construction projects and other instruments, widened definition of real estate, establishing a 'Holdco' and allowance of REIT to invest through a Holdco are steps in the right direction
Broad investor base	<ul style="list-style-type: none"> Foreign investors (including Registered Foreign Portfolio Investors or RFPs), portfolio investors and NRIs can now invest in REITs
Investor preference	<ul style="list-style-type: none"> REITs are now likely to be viewed as a viable investment option vis-à-vis development projects

RERA and GST – Twin towers of RE reform

The residential segment in India has witnessed the implementation of two key policy initiatives in the past few years viz., Real Estate Regulation and Development Act (RERA) and Goods and Service Tax (GST). RERA, enforced in May 2016, aimed at ensuring accountability and infusing transparency and uniformity in practices prevalent in the RE sector by bringing both ongoing and new projects under its purview. A single tax (GST) subsumed several indirect taxes in July 2017 resulting in bringing in much needed efficiency to the country's tax system.

Impact of RERA

It has become quite apparent that RERA's implementation has now started to pick pace, leading to signs of revival in the residential segment. RERA implementation has already taken place in all key states with organized residential activity and it is now only a matter of time that all states will fully implement the act, bringing in the much-needed uniformity and transparency to the residential segment in particular. As of March 2019, nearly 42,000 projects have been registered across Indian states till date.

TABLE 2.2: TOP 5 STATES IN PROJECT REGISTRATION

Maharashtra	• 21,825 (excludes Dadra and Nagar Haveli & Daman and Diu)
Gujarat	• 5,875
Karnataka	• 2,801
Uttar Pradesh	• 2,679
Tamil Nadu	• 1,071

Source: State RERA websites

RERA and residential activity: Establishing the relationship

As the after-effects of the implementation of RERA and GST slowly faded, residential sales and supply has inched upwards in the last 1-2 years. In H1 2019, supply at a pan India level inched up by 17% y-o-y while sales grew by 16% y-o-y. The vast majority of this supply and demand was contributed by Mumbai, Pune, Gurgaon and Bangalore. It is to be noted that **Haryana (Gurgaon), Maharashtra (Mumbai and Pune) and Karnataka (Bangalore) are amongst the most active RERA** authorities and have set up fully functional RERA websites. These states have to a large extent ironed out the teething issues that developers face while registering with RERA. At a pan India level, Maharashtra RERA has the maximum number of registered real estate agents. In fact, Maharashtra RERA has created resolution panels which have a consumer representative and a developer representative. The panel will interact with banks, home buyers and builders - who could potentially take over the project construction.

However, more policy intervention is needed

While the act has been a positive step towards resolving issues related to accountability, transparency and investor confidence, however the performance of the authority has not been uniform across various state RERA authorities. The overall complaint resolution has been low – only 52% of all complaints registered across all RERA websites had been resolved. The Ministry of Housing and Urban Affairs has suggested that it might make amendments to the law to make it more effective and fast paced. Also, the ministry announced that it is developing a common platform that will provide information on all the judgments passed by the different RERA authorities to ensure synergy and avoid confusion. These changes are imperative to allow the act to achieve its end objective which is to revive consumer sentiment, resulting in a more resilient and end-user driven demand in the residential segment going forward.

Rationalizing taxes: Recent changes in GST norms

Further initiatives have been undertaken by the government to boost the performance of the residential segment in 2019. It was observed that high GST rates for under-construction properties tilted buyer preference towards completed units, adversely impacting sales and unsold inventories of developers. In order to provide a respite to both homebuyers and developers, the GST committee recommended revisions in GST rates for non-affordable (5% on under-construction property with no ITC) and affordable housing (1% on under-construction property with no ITC).

TABLE 2.3: GST RATE CHANGE SINCE IMPLEMENTATION

YEAR	DESCRIPTION
Core stabilized assets	• First tax slab -12% on both affordable and under construction project
Increase investible assets supply	• Amendment on tax slab - 12% with ITC for under construction projects and 8% with ITC on affordable housing projects
Broad investor base	• Rate cut - From 12% to 5% without ITC for other under construction projects; from 8% to 1% without ITC for affordable housing projects • Re-defined the size of units for affordable housing projects in metro and non-metro locations

Source: GST Council

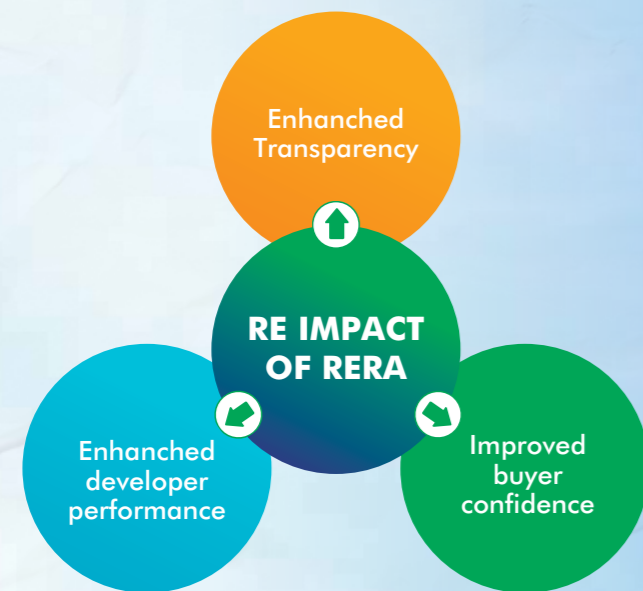
In order to spur construction activity, the government should also look at reducing the GST rate on construction materials such as cement (28%) and steel (18%) - this is likely to boost cost efficiencies for the affordable housing segment. Moreover, a longstanding expectation from the government has been to take a holistic view on integrating completed assets as part of GST by subsuming stamp duty and registration charges in the regime in the near future.

Creating some other policy first's...

Apart from the aim of removing irregularities in the residential segment, the government is also looking at revamping efficiencies of other RE segments as well. These include "industry firsts" such as a Draft Logistics Policy, a Draft Industrial Policy, a Draft E-commerce Policy and a Draft Retail Policy. After the release of the draft document of these policies, the government is expected to incorporate stakeholder views before finalizing these as enforceable acts in the coming quarters.

REAL ESTATE (RE) BOOST: THE POLICY TALK

The residential segment in India has witnessed the implementation of two key policies: RERA and GST.



At present **30 states and Union Territories** have notified the RERA rules with more than

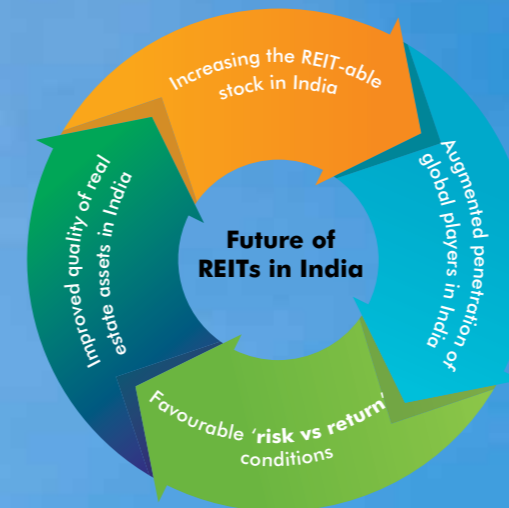
42,000

housing projects registered so far².

The GST committee recently recommended key revisions to boost the residential segment.

RE IMPACT OF GST REVISION	
• Improved transparency on ITC	• Boost to Pradhan Mantri Awas Yojana (PMAY)

FUTURE OF REITS IN INDIA



²Press Releases, July 2019

BUILDING 'FUTURE READY' TALENT

India is home to one of the youngest populations in the world. If channelled and skilled correctly, its young working class (with an expected median age of 31.4 in 2030) has the potential to achieve significant productivity gains, thereby bolstering economic growth. However, the growth benefit of this demographic dividend would not be automatic. A lot depends on how well this working population can be trained and whether enough jobs are created to employ the new labour force additions every year.

TABLE 3.1: COMPARISON OF INDIA TODAY AND IN 2030

PARAMETERS	INDIA IN 2019	INDIA IN 2030
Population	1.3 billion	1.5 billion
Share of urban population	33.6%	38.5%
Jobs created for every 1% GDP growth	750,000	1,000,000
Median Age	27.0	31.4
Workforce	Dominated by Gen-X ¹ and Gen-Y ²	Dominated by Gen-Y, Gen Z ³

Exchange rate as on Q2 2019, INR per USD - 69.55

Source: Government of India (GoI), Q2 2019; 2018; United Nations Development Programme (UNDP), Worldometers, Q2 2019; CBRE Research, Q2 2019

Four major factors are expected to drive India's aspired economic growth in the coming decade: promotion of human capital (education, skill development and health), infrastructure enhancement, strengthening of institutions (governance, administration and law), and policy reforms. Among these, development of our human capital is expected to have the most far reaching impact on the country's socio-economic evolution.

Human capital upgrade

In order to support the country's strong economic growth outlook, increased spending on human capital segments such as education and skill development will be imperative. However, latest data released by the World Bank and the United Nations on human capital index across the world highlights India as one of the underspending countries in this segment. The United Nations Development Program (UNDP) Human Development Index ranks India at 130 among 189 countries.

TABLE 3.2: HUMAN DEVELOPMENT INDEX COMPARISON: INDIA VS GLOBAL LEADERS

COUNTRY	INDIA	NORWAY	HONGKONG	SINGAPORE	UNITED STATES	JAPAN	BRAZIL	CHINA
UNDP Rank	130	1	7	9	14	19	79	86
Life Expectancy at Birth	68.8	82.3	84.1	83.2	81.7	83.9	75.7	76.4
Expected years of schooling	12.3	17.9	16.3	16.2	17.4	15.2	15.4	13.8
Mean years of schooling	6.4	12.6	12.0	11.5	12.9	12.8	7.8	7.8

Source: UNDP 2018

¹Born between 1960 to 1979

²Born between 1980 to 1994

³Born between 1995 to 2015

The government has now begun focusing on this skill gap and has recently announced several new measures in Budget 2019-20 to improve the education sector in India. This includes proposal of a new 'National Education Policy' to transform the higher education system to global standards, introduction of a 'Study in India' programme to bring in foreign students to India and allocating USD 57.5 million for improvement of educational institutions in FY2019-20.

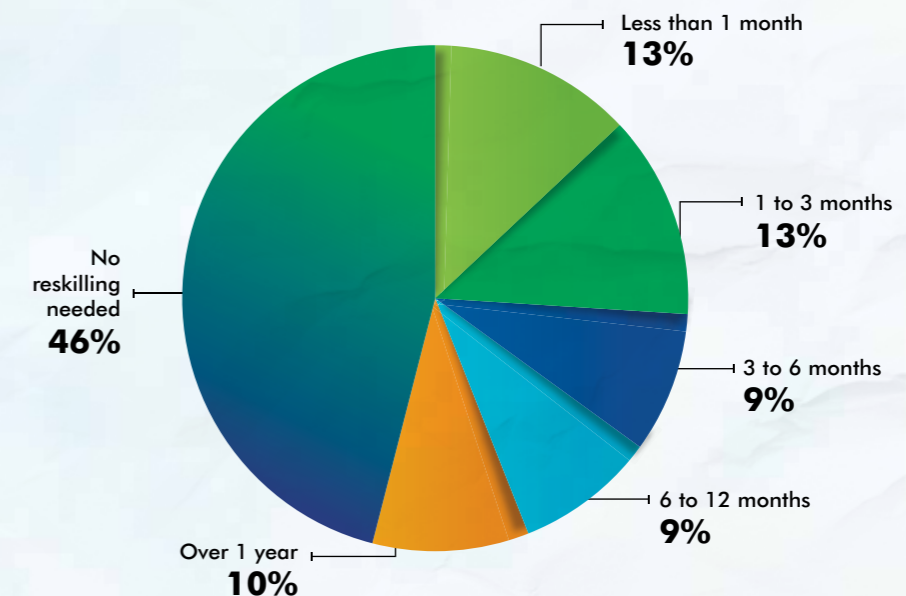
Skill development

With a median age of 28, India is a nation of young workers. The youth largely drives both income and consumption in the country. The trend is expected to continue, as India will have a median age of 31.4 years by 2030, compared with 40 years in the US and 42 years in China. According to India Economic Survey 2018-19, the working age population (20-59 years), which contributed to 50.5% of overall population in 2011, is projected to increase to about 58.8% by 2031. This is likely to create implications on the required rate of job creation in the country. In order to keep up with the demands of its young populace, India would have to focus on education, skill development, innovation, productivity enhancement and technology adaptation.

According to the World Economic Forum's report, 'The Future of Jobs, 2018', more than half of Indian workers will require reskilling by 2022 to meet future talent demands. The report also states that each of them will require an average of 100 extra days of learning. Making this a reality would require active participation from all stakeholders, including corporates, educational institutions, non-profit organizations and the government. Further, interventions – such as sector specific skill upgrade programmes, promotion of excellence in new-age technologies, access to e-learning and web-based learning tools and training for entrepreneurial development at national, state and local levels – would be required to upskill and reskill both the existing and future workforce.

FIGURE 3.1: SKILLING NEEDS IN INDIA

Average reskilling requirements in Indian companies, by share of employees, 2018-22

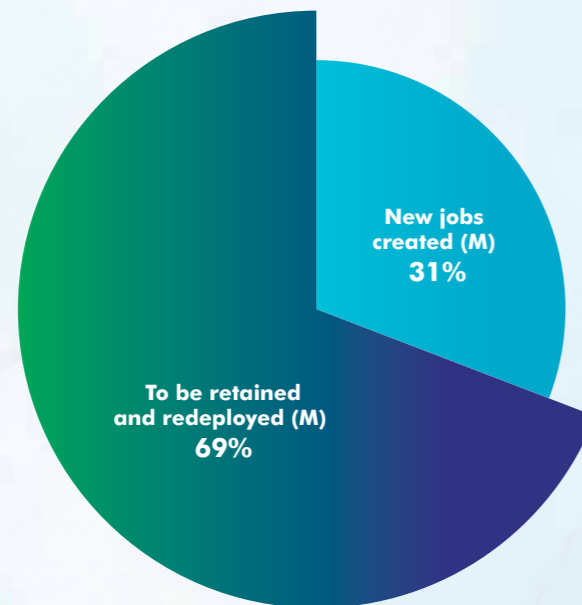


Source: World Economic Forum, 2018; CBRE Research, H1 2019

Impact of digitisation

While most people associate digitisation with job losses, the reality is that it boosts growth and productivity, thereby providing new and improved employment opportunities. As technology pervades the nature of jobs, business operations and models, India's tech sector will continue to be resonant. The value created through digitisation could result in 60-65 million direct jobs in India by 2025. It would also require the retraining and redeployment of nearly 40-45 million workers as digital technologies would reshape their current job profiles¹.

FIGURE 3.2: JOBS CREATED BY DIGITAL BOOM BY 2025



Source: National Sample Survey Organisation

Road ahead for the 'Future Ready' talent

In the past, India's deep pool of well-educated, English-speaking manpower and relatively lower cost of salaries and operations had firmly established the country as a leading technology, business & knowledge process outsourcing (BPO/KPO) market for western multinational corporations seeking to subcontract their office functions. However, recent years have seen a shift away from the traditional focus of customer and technical support, data processing and help desk services, as India has evolved beyond providing basic labour arbitrage and commoditised outsourcing. In this scenario, India's demographic dividend gives it an edge over its competitors, as it has the potential to catapult the country to greater economic heights. Moreover, the decline in emigration of Indian talent since 2015 is expected to strengthen the domestic talent base and contribute to our entrepreneurial evolution over the next 10 years.

¹Source: 'India's Trillion-dollar Digital Opportunity', Ministry of Electronics and IT

ATTRACTING AND RETAINING TALENT

What it takes to create 'Future Ready' talent..

Corporate strategies - reinventing the workspace

- Employees increasingly opting for a high-quality workplace experience which makes their lives easier and is tailored to suit their needs
- Going forward, an increasing number of freelance individuals, small groups and partner businesses to work 'with' organisations; instead, 'for' organisations
- Corporates recognizing the needs of employees to work from multiple locations, leading to increased take-up of flexible spaces
- Corporates providing a diverse range of amenities and value-add services such as cafés, shuttle services, etc.
- Increasing investments in the health and well-being of employees by introducing health and wellness services
- Deploying tech solutions (such as cloud-based apps) for jobs such as booking conference rooms or reporting faults
- Leveraging labour analytics to obtain robust and evidence-based solutions to finding the right talent



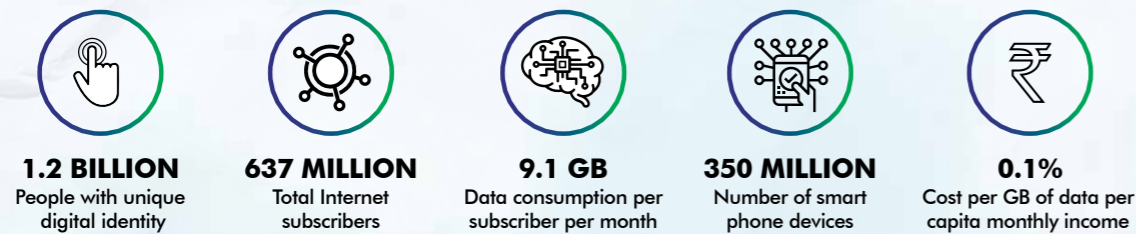
BUILDING THE 'TECH' WAY

India – emerging on the global digitization curve

The world is in throes of the fourth industrial revolution – one driven by the convergence of physical and digital worlds (machine learning, robotics, artificial intelligence, etc.). While India has to cover significant ground when compared with the developed world, technology is now fundamentally changing the way its citizens live and work. Sample this:

- India has the second largest mobile (1.2 billion) and internet subscription base (637 million) in the world¹.
- An average of 9.1 GB of data is consumed per month per data subscriber², exceeding the average of many digitally advanced countries. This growth has been driven by decreasing cost of smartphones and 3G / 4G data packages.
- India's growing digitisation is also visible from the fact that close to 1.2 billion Indians have been linked under its Aadhaar programme, the world's largest biometric identification system³.

TABLE 4.1: INDIA IS ONE OF THE FASTEST DIGITIZING ECONOMIES IN THE WORLD



Source: Telecom Regulatory Authority of India (TRAI) and Unique Identification Authority of India (UIDAI)

Keeping pace with changing technology

Changing global work patterns and a pro-tech government stance are likely to encourage public enterprises and private businesses to adopt newer technologies. Thereafter, our ecosystem of start-ups is expected to dive headfirst into the race to apply these technologies to solve unique Indian problems in sectors as diverse as agriculture, urban transport, energy management, affordable healthcare, etc.

FIGURE 4.1: LEADING TECHNOLOGIES AND HOW THEY ARE LIKELY TO SHAPE THE NEXT 10 YEARS



Source: CBRE Research, H1 2019

¹Indian telecom service performance indicators, Telecom Regulatory Authority of India, March 2019; Strategy Analytics, as of December 2018; Digital in 2018: Southern Asia, Eastern Asia, We Are Social, December 2018. ²Indian telecom service performance indicators, Telecom Regulatory Authority of India, March 2019; Strategy Analytics, as of December 2018; Digital in 2018: Southern Asia, Eastern Asia, We Are Social, December 2018. ³Aadhaar Dashboard as on April 2019, https://uidai.gov.in/aadhaar_dashboard/

Prominent technologies that are redefining the industry

INTERNET OF THINGS (IOT)

- **What is driving its adoption:** Digital India initiative, Software Defined Networking (SDN), artificial intelligence, higher processing speed.
- **How it affects the Indian industry**



SUPPLY CHAIN AND LOGISTICS:
IOT sensors can be used to make government-managed logistics chains for essential food items efficient by ensuring need-based re-filling and reduction in wastage of food items.
IOT sensors can also enable governments to provide universal ambulance services at any place.



SMART STORES
Retailers using IoT can create smart check-out counters that makes the experience smooth for customers.
CUSTOMER ENGAGEMENT
IoT allows retailers to connect and understand customers and their choices as it arms retailers with information needed to make a decision.



SUPPLY REPLENISHMENT
When supply count drops below a certain level, the system can use IoT sensors to order a requisition, thus saving time and cost.

EQUIPMENT REPAIR
IoT sensors in machines and equipment can provide real-time information on the condition of the machine and notify whether any repair or service is required.



Smart lighting, smart traffic management, smart buildings, smart parkings, Wi-Fi access for city surveillance, solid waste management systems are some of the works for which IOT devices can be used in a smart city.

ARTIFICIAL INTELLIGENCE (AI)

- **What is driving its adoption:** Focus on innovation, Digital India initiative, growth of IoT, increase in digital literacy and tech start-ups.
- **How it affects the Indian industry:**



IN-STORE EXPERIENCE
Based on recent transactions, machine learning can recommend products to customers and help find them easily; thereby improving the overall store experience.

INVENTORY MANAGEMENT
For giant retailers, managing inventory with machine learning can help reduce overall cost, as AI could predict future needs and minimise the possibility of having excess or too little in stock.



OPERATIONAL PROCUREMENT
Tasks such as requisitioning and obtaining approvals, creating Purchase Orders (PO), receiving and verifying products and authorizing supplier payments can be automated via Robotic Process Automation (RPA).

ORDER PROCESSING
Tasks such as processing inquiries and quotes, receiving entering and validating orders, generating invoice and collecting payment can be automated.



PRE-CONSTRUCTION
AI could utilise previous data sets collected by construction firms to develop future outcomes of projects, thereby giving a firm competitive advantage in terms of estimating and bidding on a project.

PRODUCTIVITY
The time wasted in moving about the construction site to retrieve tools, materials and equipment can be reduced through machine learning, thereby increasing worker productivity.



RISK AVOIDANCE
AI's self-optimization can identify potential problems and prevent them from occurring.

OCCUPANT EXPERIENCE
AI can identify potential equipment malfunctions such as elevators and HVACs, thereby improving occupant experience.

BLOCKCHAIN

- **What is driving its adoption:** Lower cost of bandwidth, data storage, decentralized business models.
- **How it affects the Indian industry**



- **Title Management:** Real estate is an industry full of intermediaries: property title, attorneys, banks, mortgage companies, etc. With blockchain, buyers and sellers would be able to leverage smart contracts to execute contracts, transfer titles and ownerships, and send monies (or crypto) without the need for title companies or attorneys.
- **Property Management:** Through smart contracts, the entire property management process – from lease agreements, cashflows to maintenance requests – can be executed by the use of decentralized applications



- It can streamline payments in a faster, cheaper and more secure way with lower counter-party risks.
- Blockchain platforms can improve and accelerate the financing of international trade.



- **Procurement and supply chain:** A blockchain codifies and tracks routes or intermediaries along the supply chain, providing transparency.
- **BIM and Blockchain:** BIM can combine information from blockchain, such as supply chain information, provenance of materials, payment details etc. particularly during construction. This information can be further used by smart contracts for payments and material orders⁴.



- Land registration through blockchain.
- Enhanced security and transparency of voting in public election.

Tech solutions to lead the way

Digital technologies are transforming how individuals and businesses perform day-to-day activities by connecting people from across the globe, and allowing them to collaborate, transact and share information. Automating routine tasks enables organisations to increase productivity, provides tools required to analyse data, and enables organisational leaders to formulate insights and improve decision making. However, the true potential of technology lies in its ability to converge and augment each other to deliver cohesive solutions. Understanding and leveraging such convergence is the key to unlocking the complete potential of future production systems and ecosystems.

⁴Blockchain Technology in the construction industry, Institution of Civil Engineers (ICE), December 2018



Confederation of Indian Industry

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, India's premier business association has around 9000 members, from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 300,000 enterprises from around 276 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 66 offices, including 9 Centres of Excellence, in India, and 10 overseas offices in Australia, China, Egypt, France, Germany, Singapore, South Africa, UAE, UK, and USA, as well as institutional partnerships with 355 counterpart organizations in 126 countries, CII serves as a reference point for Indian industry and the international business community.

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CBRE

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CBRE was the first International Property Consultancy to set up an office in India in 1994. Since then, the operations have grown to include more than 8,300 **professionals across 10 offices with a presence in over 80 cities in India**. As a leading international property consultancy, CBRE provides clients with a wide range of real estate solutions, including Strategic Consulting, Valuations/Appraisals, Capital Markets, Agency Services, Property Management and Project Management.

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- **INR 241 billion** capital arranged for clients
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- **650+ million square feet** of projects managed
- **3,500+** consulting mandates undertaken
- **82,000+** properties valued across all real estate classes

The guiding principle at CBRE is to provide strategic solutions that make real estate holdings more productive and economically efficient for its clients across all service lines.

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