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BANGALORE

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A Vestian Global Report
In Association with Assetz Homes



Bangalore, also called Bengaluru, is the capital of the Indian state of Karnataka. Located on the Deccan Plateau in the south-eastern part of Karnataka, Bangalore is well known as a hub for India's information technology sector.

Today as a large city and growing metropolis, Bangalore is home to many well-recognized colleges and research institutions in India. Numerous public sector heavy industries, software companies, aerospace, telecommunications, and defence organisations are located in the city. Bangalore is known as the Silicon Valley of India because of its position as the nation's leading IT exporter. A demographically diverse city, Bangalore is a major economic and cultural hub and the second fastest growing major metropolis in India. It is also placed in Forbes magazine's list: "The Next Decade's Fastest-Growing Cities".



Briskeconomicactivities, multi-cultural population, modern format social & business infrastructure and improving physical infrastructure is setting the tone for Bangalore to be a global city.

Bangalore is the capital city of Karnataka and the economic epicenter of the state. The population of the city has been growing rapidly as compared to 1991 levels. It is now the third most populous city and the fifth largest urban agglomeration in India with urban population of nearly 9.6 million¹.

The population growth in Bangalore and the projected growth for 2021, assuming the current CAGR of 4.3% is as showcased below.

Table 1: Bangalore Metropolitan – Population Projection

Year	1981	1991	2001	2011*	2021 (E)**
Bangalore	2.9	4.1	6.5	9.6	14.0
CAGR	-	3.9%	5.2%	4.3%	4.3%

* As per Census of India: Provisional Population of States, 2011

** CAGR for the period 2011 - 2021 is assumed at 4.3%

The city witnessed rapid influx of migrant population² since late 1990 on account of the rise of the IT/ITeS sector. Development of IT Hubs in Whitefield, Electronics City, Bannerghatta Road and ORR led to inflow of migrant population from other parts of the state and from other states of India. In addition, the city also attracted a large number of expatriates from other nations. This set the tone for development of social & physical infrastructure across the city, thus leading to developments in residential and commercial real estate sectors.



The city has a diversified economic base with IT/ITeS being most dominant sector. Other keys sectors include biotechnology, engineering, manufacturing, aerospace & aviation and textiles. Prominent public sector undertakings (PSUs) and Research Institutions including ISRO, Jawaharlal Nehru Centre for Advanced Scientific Research, DRDO and Raman Research Institute are located in the city.

¹Source: As per Census of India – Provisional Population for States 2011.

²Source: As per the Bangalore City Development Plan for JNNURM (formulated in 2006), migrant population from other parts of Karnataka constitute 53%, Tamil Nadu 19%, Andhra Pradesh 9%, Kerala 7% and others 19%.

Bangalore has a good road (5 National Highways) and rail transportation system, connecting to other major cities across the country. The opening of Bangalore International Airport (BIA) in 2008 (located at approximately 36 km. from the CBD) has further enhanced the connectivity. Apart from major cities in India, there are direct flights to Chicago, San Francisco, London, Paris, Dubai, Sharjah, Mauritius, Singapore, Kuala Lumpur, Hong Kong and other major cities across the globe.

Over the last 2 decades, Bangalore's growth story is dominant in the South-East quadrant. However, in future the North-East quadrant is also likely to grow at a brisk rate.

IT/ITeS Sector:

Bangalore's real estate and economic growth in the last two decades has been largely restricted to the South-East quadrant of the city. This is on account of Bangalore's high dependence on IT/ITeS sector a primary driver of residential space across the city. Majority of the IT hubs are located towards the South-East quadrant of the city, thus driving development of residential & commercial space towards this quadrant.

The progressive growth of the Outer Ring Road (ORR) into a prominent and most active IT hub has further enhanced real estate development across areas including Bellandur, Mahadevapura, Doddanekundi, Sarjapur Road, Varthur Main Road, Haralur Road and Hosa Road.

However, commissioning of BIA in 2008 and improving physical infrastructure along Bellary Road, widening of NH4 in 2009 and construction of flyovers along ORR has put the North-East quadrant into traction. High activity of residential development has been recorded

along Hennur Main Road, Hebbal, Thanisandra Main Road and Old Madras Road towards Hoskote.

Government promoted Devanahalli Business Park & IT Investment Region (ITIR) near the BIA, the emerging Hoskote & Narasapura Industrial Areas and proposed infrastructure initiatives will provide impetus to continued growth of the North-East quadrant.

The major IT/ITeS hubs of the city are detailed below:

Electronics City:

A 580-acre electronics industrial park located along Bangalore – Hosur Road was developed with the objective to promote Electronics & IT/ITeS industries. Jointly developed by government bodies KIADB & KEONICS, the park was developed in three phases: Phase I (300 acres) commissioned in 1978, Phase II (148 acres) commissioned in 2003 and Phase III dedicated to Biotechnology sector (100 acres) commissioned in 2003.

- **IT/ITeS Working Population: 170,000**
- **Key Companies: Infosys, HCL, Siemens, Wipro, TCS, Mahindra Satyam, HP and others**
- **Key Residential Pockets: Hosur Road, BTM Layout, Koramangala, Sarjapur Road, Haralur Road, Hosa Road, JP Nagar and Bannerghatta Road**
- **IT/ITeS Growth Outlook: Low**

Whitefield EPIP Zone:

The Export Promotion Industrial Park (EPIP Zone) of 500 acres was developed by KIADB in 1994 to promote export related industries. Majority of the plots were allotted to IT/ITeS companies and developers who in turn developed IT parks which catalyzed the economic development of this region. The establishment of International Technology Park, Bangalore (ITPB)³ in

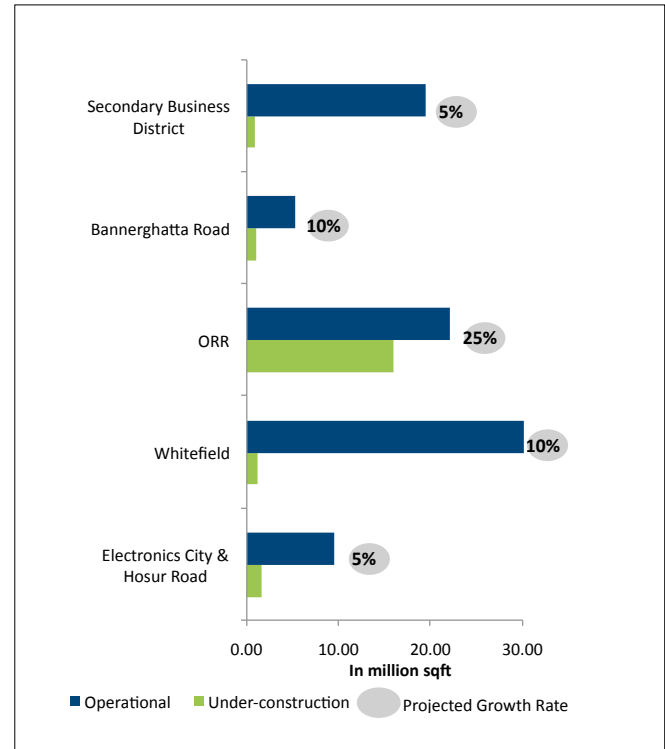
1998 gave impetus to this micro-location to develop into a major IT/ITeS hub of the city.

- IT/ITeS Working Population: 270,000
- Key Companies: GE, SAP, Dell, iGate, TCS, Accenture, HP, L&T, Huawei Technologies and others
- Key Residential Pockets: Whitefield Main Road, Varthur Main Road, Brookefields, Outer Ring Road (KR Puram Jn. to Marathahalli Jn.), Marathahalli, Old Madras Road, Mahadevapura, Kadugodi, KR Puram, Ramamurthy Nagar, Pai Layout, CV Raman Nagar and Old Airport Road.
- IT/ITeS Growth Outlook: Moderate

EAST POINT



Apartments for the Knowledge Worker on ORR, Bangalore
Crafted by Assetz Homes



IT / ITeS Hubs

ORR (Hebbal to Silk Board Jn.) & Sarjapur Main Road:

Construction of ORR began in 1994 and the development of Wipro campus in 1996 & Intel campus in 1999 provided the initial impetus for IT development along this corridor. The announcement of the SEZ Act in 2005 and favourable zonal regulations triggered IT growth. Today, this corridor houses large IT/ITeS SEZ

³Jointly developed by a consortium of Tata Group, Ascendas and KIADB.

and non-SEZ campuses and is the most prominent and active IT hubs of the city.

- IT/ITeS Working Population: 230,000
- Key Companies: Cisco, EMC², Capgemini, Accenture, Honeywell Technologies, Genpact, IBM, Cognizant Technologies and others
- Key Residential Pockets: Whitefield Main Road, Brookefields, Outer Ring Road (Hebbal Jn. to Silk Board Jn.), Marathahalli, Old Madras Road, Banaswadi, Hebbal, Thanisandra Main Road, Hennur Main Road, Kalyan Nagar, Mahadevapura, KR Puram, HBR Layout, Nagavara, Ramamurthy Nagar, Pai Layout, CV Raman Nagar and Old Airport Road
- IT/ITeS Growth Outlook: High

Bannerghatta Road:

Development of Bannerghatta Road as IT hub was initiated when Oracle opened its India Development Centre along this corridor. Proximity to educational institutes such as Christ College, IIM-B and key residential catchments such as Koramangala,

Jayanagar, JP Nagar and BTM Layout led to the growth of this IT corridor.

- IT/ITeS Working Population: 50,000
- Key Companies: Oracle, Accenture, Honeywell Technologies, Convergys, HSBC, Symphony Services
- Key Residential Pockets: BTM Layout, Koramangala, Jayanagar, JP Nagar, Adugodi, Shantinagar, Dairy Colony and Wilson Garden
- IT/ITeS Growth Outlook: Low

Off-central Business Districts:

The secondary business district areas of Koramangala, Inner Ring Road, Indiranagar, Rajajinagar and CV Raman Nagar also house large IT parks and stand-alone buildings occupied by IT companies.

- IT/ITeS Working Population: 120,000
- Key Companies: IBM, Accenture, Target, Supervalu, Microsoft, Amazon, Yahoo, Google
- Key Residential Pockets: Indiranagar, Malleshwaram, Rajajinagar, Koramangala, Ejjipura, CV Raman Nagar, Domlur, RT Nagar and MSR Nagar
- IT/ITeS Growth Outlook: Low

Industrial Sector:

Industrial areas are promoted by Karnataka Industrial Areas Development Board (KIADB) and are located in the peripheral areas of the city. Bangalore has a strong base in sectors including automobile and auto components manufacturing, textile, electrical & electronics good manufacturing, beverage industry, food processing industry and chemical manufacturing industry.




**CLOVER
GREENS**
LUXURY GOLF VILLAS

Luxury Golf Villas on Sarjapur - Attibelle Road
Developed by India Golf Assets in association with Assetz Homes

The table below illustrates industrial areas across Bangalore city and their growth plans.

Currently, the Government is promoting the Northern region with announcements of Industrial, Logistics & IT parks. However, availability of water, a basic infrastructure requirement, would act as a deterrent for future growth.

Government nodal agencies including KSIIDC, KIADB, KEONICS and private players have proposed and initiated several industrial parks for sectors including Logistics & Warehousing, IT/ITeS, Aerospace, Biotechnology and Hardware manufacturing to promote the Northern region as the next emerging economic corridor of the city.

Table 2: Industrial Areas in Bangalore

Industrial Areas	Type of Industry	Total Area (acres)	Key Industries	Growth Plans
Veerasandra, Jigani & Bommasandra Industrial Area	IT, Manufacturing, Biotech	1,874	OTIS, American Power, KTTM, SKF, Maine Precision Tools, HCL, Tata Advanced Material	Phase III - land acquisition in progress on Jigani - Harohalli Road (~ 712 acres)
Peenya Industrial Area	Engineering, Auto Components, Textile, Electrical Goods Manufacturing	1,485	Wipro Lights, ITC, Kirloskar, Karle, ABB	Land acquisition of 200 acres for Greater Peenya industrial area
Narasapura & Hoskote Industrial Area	Auto & Auto Components Manufacturing, Warehousing, Textile	1,602	Volvo, GE India, Celebration Apparels, Autoliv, Indo-US MIM Tech	145 acres in Narasapura industrial area is under development.
Doddabalapur Industrial Area	Textile, Beverages	799	Gokaldas Images, Bombay Rayon Fashions, Gati Limited, Arviva Industries, Mudra Textiles, Grover Vineyards	~ 60 acres in Apparel park is under development
Kumbalagodu Industrial Area	Auto components, Food Processing, Chemical Manufacturing	250	United Breweries, Sumi Motherson, Wirtgen India, Micro Labs	-
Bidadi Industrial Area	Automobile & Auto components, General Manufacturing, Electronics & Electrical Manufacturing	1,192	Toyota, Coco-cola, Tata Auto Plastic Systems, Shashi Exports,	Phase III: 400 acres in planning stage
Harohalli Industrial Area	Granite, Printing, Automobile, Hatcheries and General Engineering	1,102	Basant Betons, Komarla Hatcheries, Stovekraft, AO Smith, Lotus Polymers, Saint Gobain	Phase III: 1365 acres under land acquisition stage

The corridor is poised to witness high economic & real estate activity provided water availability issues are addressed.

Malls are well spread across all micro-locations of the city; however star category hotels are mostly located in Central, Off-central locations and along IT corridors.

Bangalore is home to large retail malls spread across micro-locations, signifying the cosmopolitan

environment of the city. The city has a diversified retail landscape and houses both high-end retail malls such as The Collection, UB City and value format malls such as Forum Value Mall, Whitefield.

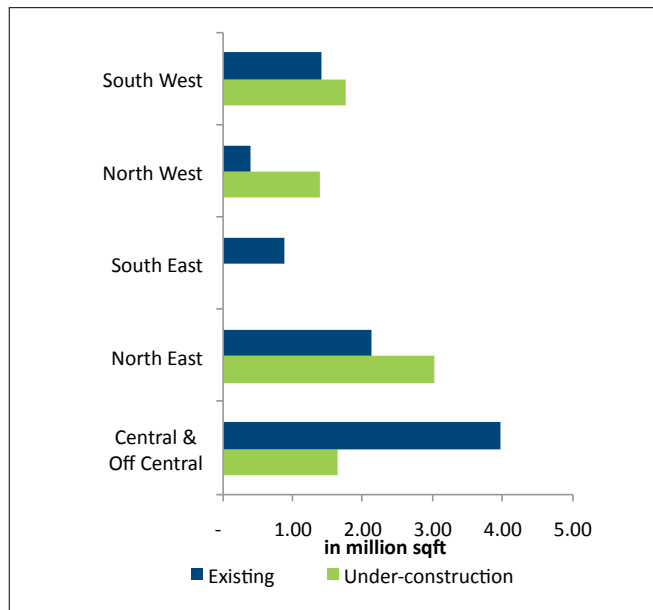
Key under-construction malls include Brigade Orion Mall (Rajajinagar), K Raheja Inorbit Mall (Whitefield), Forum Shantiniketan Mall (Whitefield), Embassy Galaxy Mall (Residency Road), G Corp 1 MG Road (MG Road).

The table below summarizes the area, type and status of industrial developments.

Particulars	Devanahalli Business Park	Aerospace Park	Hardware Park	IT/BT Park	ITIR	Logistics Park
Location	Devanahalli (Adjacent to BIA)	South of BIA	Bagalur Village	Bagalur Village	Muddenahalli, Kanivenarayanapura, Chikkaballapur	Balepur, Near Devanahalli
Area (in acres)	414	1,000	941	1,028	12,000	150
Agency	KSIIDC	KIADB	-	KIADB	KEONICS	KSIIDC
Status	EOI floated to develop project on PPP basis	Land allotment initiated	Land allotment initiated	Land yet to be allotted	Proposed	Land Acquisition Stage
Companies that have been allotted land	-	BEML, AIMIL, Dynamatic Technologies, Sunshine Aerospace, Starrageckert Machine Tools, Centum Electronics	Bangalore Bio-Tech Labs, Shell Technology, Moser Baer	Sunlux Technologies,	55 companies including Infosys, Wipro, TCS, Cognizant have signed up MOUs	-
Proposed Development	IT/ITeS SEZ, Retail and Entertainment, Multi-specialty Hospitals, Finance District, Light Goods Manufacturing, Office Complex and Aviation Academy	250 acres of Aerospace SEZ and Aviation MRO related activities	Hardware Manufacturing Units, SEZs, Logistics, Cargo Activities and Hotels	IT/ITeS SEZs, Warehousing and Logistics Parks, Hotels, Hospitals,	IT/ITeS Companies	Multi-modal Integrated Logistics Center, Inland Container Depot (ICD), Domestic Rail Head, Air Cargo Center, Bulk Warehousing and Retail and other common facilities

Star category hotels (4 & 5 Star) are mostly located in Central, Off-central locations and along Whitefield Main Road, ORR (K R Puram Jn. to Silk Board Jn.) and Electronics City.

Key under-construction projects include Hilton Hotel (Ulsoor Road), Shangri-La (Vasant Nagar), Ritz Carlton (Residency Road) and JW Marriott (Vittal Mallya Road).



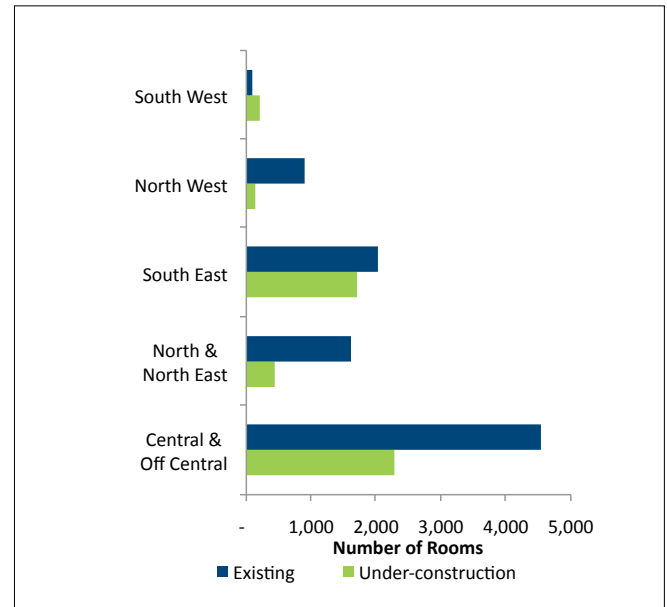
Mall Space in Bangalore

It is observed that most of the activity in terms of under-construction & planned malls and star category hotels are towards the North-East and South-East quadrants of the city.

Bangalore has well developed educational infrastructure & high-end research institutes. Health

infrastructure, which was undersupplied, is now witnessing activity from national players.

The strong education system in Bangalore has been one of the main reasons for growth of the IT/ITeS sector in the city. The city has been in the forefront of promoting English medium education and currently has over 5,000 state & central board schools and over 620 colleges across all micro-locations. The city also has a strong hold in technical education through presence of engineering and technical diploma colleges.



Hotel Space in Bangalore

Nationally renowned institutes such as the Indian Institute of Science (IISc), National Institute of Design



Woodside Homes in Whitefield, Bangalore
Developed by Assetz Homes and Cornerstone Properties

(NID), National Law School of India University (NLSIU), Indian Institute of Management, Bangalore (IIMB), the Indian Statistical Institute (ISI) and International Institute of Information Technology, Bangalore (IIIT-B) are located in the city.

The city also houses numerous national & international schools. However, majority of the international schools are located along the South-East (Varthur Main Road, Whitefield, Sarjapur Road) and North-East (Hennur Main Road, Bagalur Main Road, Bellary Road) quadrants of the city, mainly catering to the IT/ITeS population.

The city is home to the premier mental health institution in India - National Institute of Mental Health and Neuro Sciences (NIMHANS). Jayadeva Hospital, Vydehi Hospital, Bowring Government Hospital, MS

Ramaiah Hospital, St. John's Medical Hospital and Sri Sathya Sai Hospital are the other renowned healthcare facilities in the city.

National players such as Apollo Group of Hospitals, Columbia Asia and Fortis Group have their presence in Bangalore and are currently sourcing development opportunities across the city.

Bangalore is set to witness substantive infrastructure projects, impacting the North, North-East and South-East quadrants.

Bangalore has witnessed substantial activity on the infrastructure front. The Government has implemented & proposed several infrastructure initiatives which will have a direct impact on real estate development across the city.

Table 4: Infrastructure Projects in Bangalore

Project Details		Completion Timeline	Impact on Quadrant	
Signal-free Outer Ring Road (ORR)		Existing stretch of ORR between Hebbal to Silk Board Jn. will be made signal free with the construction of flyovers and under-passes	2012 (E)	North-East & South-East
Expansion of Bangalore International Airport		Expansion of Terminal 1 to double its capacity. To be increased to over 17 million passengers a year. Completion timeline of 18 months	December 2013	North, North-East
Elevated Expressways	Bellary Road	Under-construction six lane elevated expressway connecting Hebbal to Yelahanka. The entire stretch between Hebbal and the BIA will be a 18-lane highway	2014	North
Bangalore Metro Rail	Phase 1	Phase 1: N-S corridor – connecting Hesaraghatta to Puttenahalli in South and East-West corridor – connecting Byappanahalli to Vijaynagar Reach 1 of Phase 1 – Byappanahalli to MG Road was operational in October 2011	Entire Phase 1 in 2015	Central & Off-central Business District
	Phase 2	Phase II: Extension of Phase 1 lines connecting Whitefield (in the east), JP Nagar (in the south), Kengeri (to the west) and Nelamangala (to the North) In addition, two new lines, one connecting Nagawara to Gottigere and the other connecting BTM Layout to Bommasandra has been proposed	Proposed	All quadrants
Monorail		Project will act as a feeder network to Metro Rail. Four corridors, covering 60 km. Formal approval for the project is awaited	Proposed	North-West & South-West
Proposed Peripheral Ring Road		Proposed PRR is being executed by Bangalore Development Authority (BDA) on Public Private Partnership (PPP) basis. The 110 km ring road will circumnavigate the city connecting all major highways and is currently at land acquisition stage	Proposed	North-East, South-East
High Speed Rail Link		High Speed Rail Link connecting Hebbal to BIA to the east of Bellary Road. A 5 m corridor has been identified between the carriageway of NH-44 and the service roads for the HSRL. Timelines not yet announced	Proposed	North

Majority of the under-construction and proposed infrastructure initiatives are towards the North and North-East quadrants, thereby signifying the emergence of a new growth corridor.

Outlook:

- The city is set to witness continued growth in the IT/ITeS sector. Approximately 20 million sq. ft. of IT/ITeS office space stock is expected to be absorbed in the next 2 years across key IT Hubs. High construction activity & demand from occupiers in ORR IT hub will provide traction to real estate developments in the North-East and South-East quadrants
- Completion of under-construction malls & star category hotels will further support the real estate activities along the South-East and North-East quadrants
- Commissioning of under development manufacturing units in Narasapura & Hoskote Industrial area and Apparel Park in Doddabalapur will support residential developments along Old Madras Road, Yelahanka and Doddabalapur micro-markets
- Hebbal, Bellary Road, Thanisandra Main Road, Hennur Main Road, ORR (Hebbal Jn. to Marathahalli Jn.) Yelahanka, Old Madras Road and Whitefield will continue to witness high residential activity on account of under-construction & proposed physical and economic infrastructure activities
- The North, North-East and South-East quadrants will continue to remain high growth corridors, on the basis of ongoing & proposed economic developments & physical infrastructure initiatives



Annexure I: Micro-location Classification

Quadrants	Micro-locations	Location Details
Central & Off-central	Central	Lavelle Road, Brunton Road, Kasturba Road, Ulsoor, Race Course Road, Vasanth Nagar, Sadashivanagar, Frazer Town, Richmond Town, Cunningham Road, Jayamahal Road, Golf Course Road, Wheelers Road
	Off-central	Indiranagar, Koramangala, Jayanagar, J.P. Nagar, Malleshwaram, RMV Extension, Sanjay Nagar, RT Nagar, Pottery Road, Rajajinagar, Old Airport Road
North & North-East	Bangalore North	Banaswadi, HRBR Layout, Hennur Road, Thanisandra Main Road, Bellary Road, Yelahanka, Kogilu, Chokkanahalli, Bagalur Road, Doddaballapur Road, New Town Yelahanka
	Old Madras Road	KR Puram, Old Madras Road, Battarahalli, Avalahalli, Hirandahalli, Budigere, Mandur, Hoskote, Seegehalli
	Whitefield	Whitefield, Brookefields, Mahadevpura, ORR (Marathahalli - KR Puram)
South-East	Hosur Road	Begur Road, Bommanahalli, Electronics City, Bommasandra, Chandapura, Jigani, Anekal
	Sarjapur Road	HSR Layout, ORR (between Silk Board to Marathahalli), Sarjapur Road, Haralur Main Road, Kasavanahalli Main Road
North-West	Tumkur Road	Jalahalli, HMT layout, Yeshwantpur, Peenya, Hesarghatta Main Road
South & South-West	Mysore Road	Vijayanagar, Kengeri, RR Nagar, Uttarahalli, Mysore Road
	Kanakapura Road	ORR (Banashankari to JP Nagar), Kanakapura Road
	Bannerghatta Road	BTM Layout, Vijaya Bank Colony, Arekere, Gottigere, Bilekahalli

Annexure II: Acronyms

BIA	Bangalore International Airport
HSRL	High Speed Rail Link
IT	Information Technology
ITeS	Information Technology enabled Services
PRR	Peripheral Ring Road
KIADB	Karnataka Industrial Areas Development Board
KEONICS	Karnataka State Electronics Development Corporation Limited
KSIIDC	Karnataka State Industrial Investment and Development Corporation

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Gorakh heads Vestian Global's Strategic Advisory Group. With over 8 years of experience in Real Estate research and consulting domain, Gorakh has led real estate focused consulting assignments for leading multinational corporations, global and national developers and investment corporations across India and the Asia Pacific region. His previous associations include UGL Equis and Chandavarkar & Thacker Architects Private Limited.

He is a Fellow of Indian Institution of Valuers India. Gorakh received his Bachelor's degree in Architecture from RV College of Engineering, Bangalore and Masters of Technology from Indian Institute of Technology, Delhi.

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Shwetha has over 7 years of experience in real estate research and consultancy. As an Account Manager for key residential focused clients at Vestian, she is responsible for developing and implementing customized research, corporate strategy and project conceptualization. A qualified Urban Planner from the School of Planning & Architecture (SPA), New Delhi, she has worked in both Indian and US markets.

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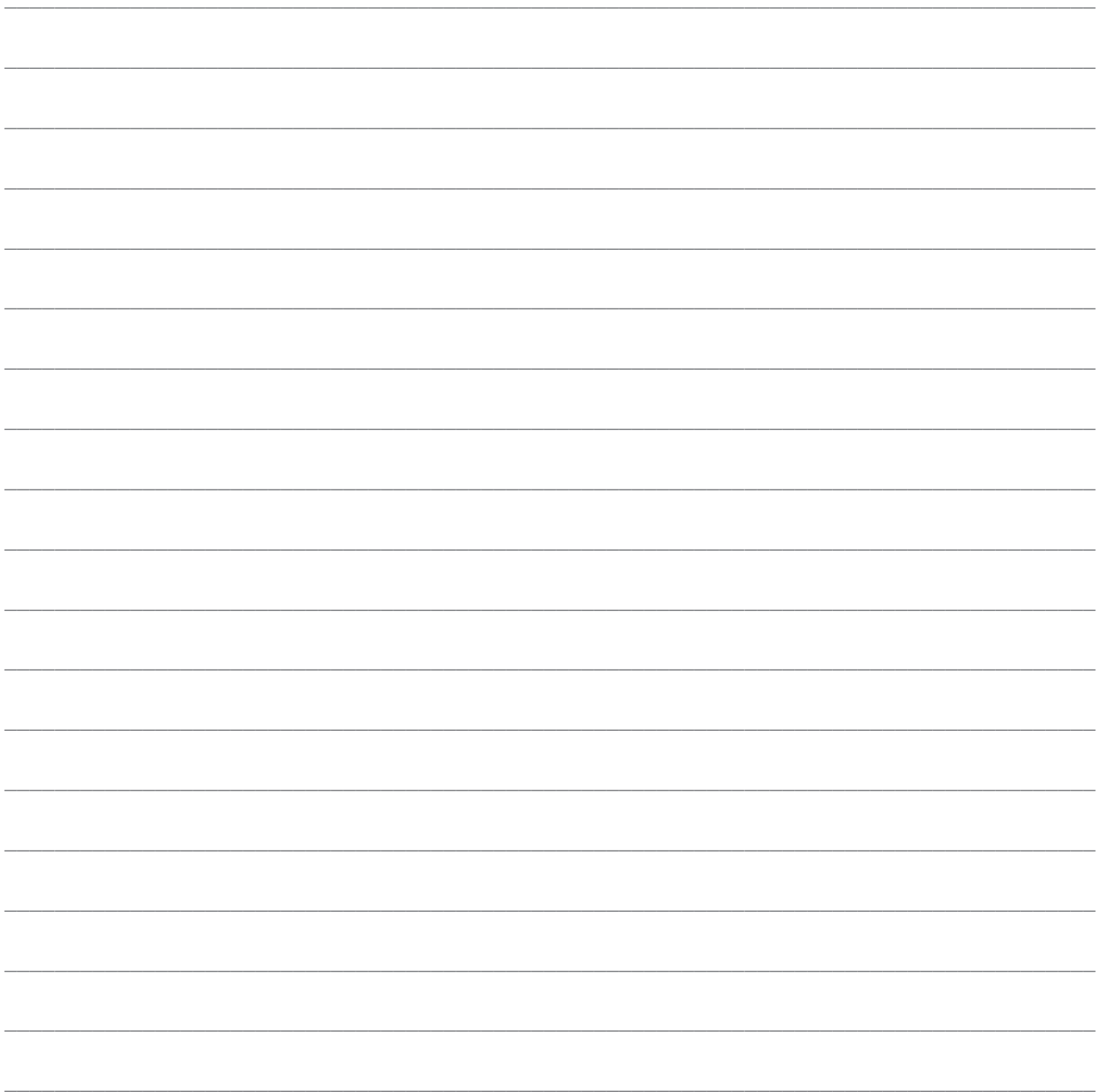
Shailendra contributes to property market reports, research papers as well as client assignments. He has over 4 years of experience in real estate and has worked on consultancy assignments across varied sectors including commercial, residential, hospitality, retail and industrial. Shailendra is an Engineer and holds an MBA from Ohio University, USA.

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