



BENGALURU

The city of opportunities that promotes Walk-to-Work

October 2018

in association with



Foreword

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India witnessed rapid urbanization over the last decade, estimated to be nearly 33.54% in 2017 as per stats. Ample job opportunities, primarily in metros, has today created immense pressure on cities, impacting its quality of life and infrastructure development and also given rise to issues such as traffic snarls, pollution, lack of water supply, etc. To reduce this pressure on metros, there is a dire need for decentralisation of economic activities, distribution of employment opportunities and development of self-sustaining cities. And, one such city that is witnessing rapid urbanization in South India is Bengaluru, the capital of Karnataka, primarily known for its IT-ITeS hubs. Today, the city is considered as one of the fastest growing cities in the world by Forbes.

Bengaluru, popularly known as the 'Garden City' and even 'Pensioner's Paradise', has gradually evolved to be known as the 'Silicon Valley of India' due to the establishment of several IT-ITeS companies. Besides the IT-ITeS establishments, the city also has defence organisations, public sector industries, telecommunication, aerospace, biotechnology companies, etc. There are also many renowned educational, healthcare and research institutes.

To address the ongoing traffic issues and thereby improve connectivity, elevated expressways, ring roads and metro rail are being either developed or planned in the city. Physical infrastructure development along with business-friendly policies announced by the state government has further fuelled the growth of the IT-ITeS sector in the city.

Divided into five zones namely central, east, south, west and north, Bengaluru's major IT-ITeS hubs are largely concentrated in the eastern and southern part. The city centre majorly comprises of administrative setups, public sector industries, corporate offices, etc.

while the western zone has industrial clusters like Peenya industrial estate and is gradually developing due to rapid growth of infrastructure facilities. Post the commencement of international airport at Devanahalli, the northern region has been buzzing with real estate activity including the development of IT parks, aerospace park, etc. Today, the region has developed into a major real estate destination in the city.

Thus, salubrious climate, favourable government policies and relatively affordable property rates have attracted several global IT/ITeS firms to set up their base in the city over the last two decades, followed by a spurt in residential demand by the IT-ITeS professionals to Bengaluru. Driven largely by the end-users, the real estate market in the city has been very resilient even during the slowdown period witnessed across the country. Property prices have always been under check and the city saw emergence of significant real estate trends including the walk-to-work concept. Infrastructure woes led to massive traffic snarls, which is the key reason why builders are promoting walk-to-work concept. Moreover, availability of large chunks of land within city limits has led to development of mixed-use townships including commercial, residential, retail, etc. Thus, the 'walk-to-work' concept has gained prominence in the city with professionals opting to live-work-play in these zones itself.



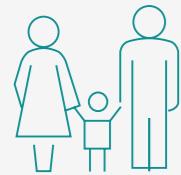


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Introduction



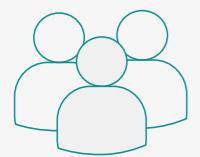
Population
>12 Mn



Population Growth
Rate : 2001 - 2011
47.18%



City Area
709 km²



Population Density
4,381 persons/km²



Bengaluru, is the capital of Karnataka and is located in the south eastern part of the state. The city was well known as pensioner's paradise and garden city until it transformed into the "Silicon Valley of India" due to the advent of IT-ITeS industry. The city's spurring growth is mainly due to the heavy investments in public sector by the central government and the rise of IT-ITeS sectors that led to a significant economic growth. In addition to IT-ITeS, the city caters to various other sectors namely manufacturing, engineering, biotechnology, aerospace & aviation.

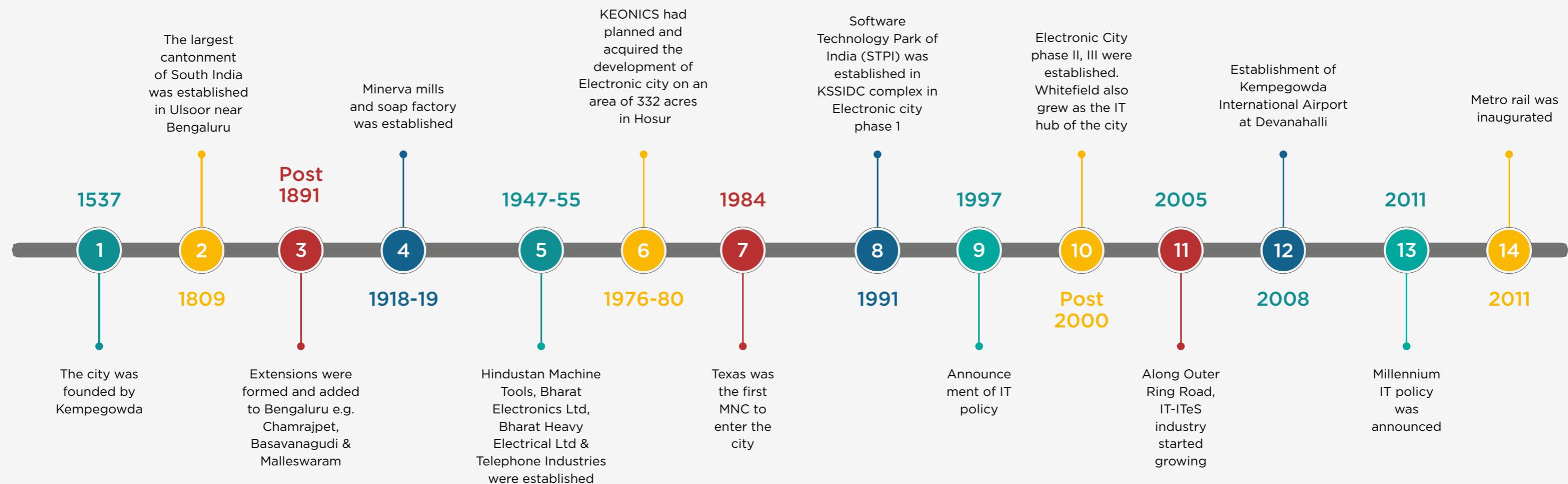
The city's population was a mere 65.4 lakh in 2001 and rose to 96.2 lakh by 2011 and was more than 12 mn as of 2017. Majority of the population, around 90%, reside in the urban area of the city. One of the key factors driving population growth is migration from other cities and countries. The city attracts population within and outside of the city due to the presence of a flourishing IT-ITeS industry and renowned educational institutes such as IISc, IIM etc. As a result, the city's population grew by 47.18% between 2001 and 2011. The population density also increased from 2,985 persons/km² in 2001 to 4,381 persons/km² in 2011.



The city got its name from the term “Bendha Kaalu” which means boiled beans in the local language of Karnataka, Kannada. The place was identified as Bendhakaalooru, later as Bengalooru in Kannada and Bangalore in English.



Evolution & Brief History





Infrastructure Development - Transport

Bengaluru is one of the fastest growing metropolis in India. The state government has consciously taken initiatives to develop world-class infrastructure to complement the burgeoning IT-ITeS sector and develop the city as per global standards. The city has a radial road network, consisting of 6 national highways and 5 state highways. Public transport facility and road connectivity plays a major role in the functioning of the city. The major part of the city's working population includes knowledge and skill-based professionals associated with the IT-ITeS sector.



Bus Transport

Bengaluru Metropolitan Transport Corporation (BMTC) is the largest local bus service provider in the city. It came into existence in 1997 after bifurcating from Karnataka State Road Transport Corporation (KSRTC). BMTC does around 73,000 daily trips with a service spread of 11.69 lakh km. More than 50 lakh passengers commute daily via BMTC.



Railway

Bengaluru city railway station is officially now known as Krantivira Sangolli Rayanna Railway Station. The railway station was renamed in May 2015. The station has 10 platforms, two entrances and is in the city center, in Majestic area. There are 220,000 daily commuters and the station handles 88 trains per day including 63 express trains.



Airport

Bengaluru airport was shifted from HAL Airport to Devanahalli as the city started growing at a faster pace. Kempegowda International Airport was established in 2008 at Devanahalli. As of 2016, it was the third busiest airport in India. Currently there is a single runway and only one passenger terminal handles both international and domestic passengers. Under the expansion plans of the airport, in the second phase terminal 2 (T2) is planned. T2 will be constructed in two phases and the first phase is expected to be commissioned by 2021.

Establishment of airport initiated the real estate development and growth towards North Bengaluru.



Metro

The transport mode which adds to the skyline of the city and ease of commute is the metro rail connectivity, christened as Namma Metro. The responsibility of Bengaluru Metro Rail Project was handed over to Bengaluru Metro Rail Corporation Limited (BMRCL), which is a joint venture between Government of India and Government of Karnataka. Currently phase 1 is complete and functional.

Phase 1 – Construction of the first phase began in April 2007 and Baiyappanahalli – MG Road (purple line) opened in 2011. Two new lines were constructed during phase 1. The purple line (East-West Corridor) is 18.1 km in length and starts from Baiyappanahalli (East) and terminates at Mysore Road (West). The green line (North-South Corridor) is 24.2 km in length and starts from Nagasandra (North) and terminates at Puttenahalli (South).

Phase 2 – This phase received approval from the Government of Karnataka in 2011 and from Union Government in 2014. The construction work commenced from 2015. The green line's extension to Anjanapura Township and purple line's extension to Challeghata will be completed by 2020. The complete phase 2 along with underground section is expected to be ready by 2024.

Two new lines will be constructed in phase 2. The yellow line is 19.14 km and starts from R V Road and terminates at Bommasandra. The red line is 21.45 km starts from Gottigere and terminates at Nagawara. The official colours to the new proposed lines are yet to be announced.

Phase 2A – A 17 km elevated line, connecting KR Puram with Central Silk Board along ORR was announced at Invest Karnataka Summit in February 2016. The Government of Karnataka approved the project's Detailed Project Report (DPR) in March 2017. As of August 2017, BMRCL has signed only 1 MoU worth ₹ 100 Cr and construction is expected to start upon more firms signing up. The official colour to the new proposed line is yet to be announced.

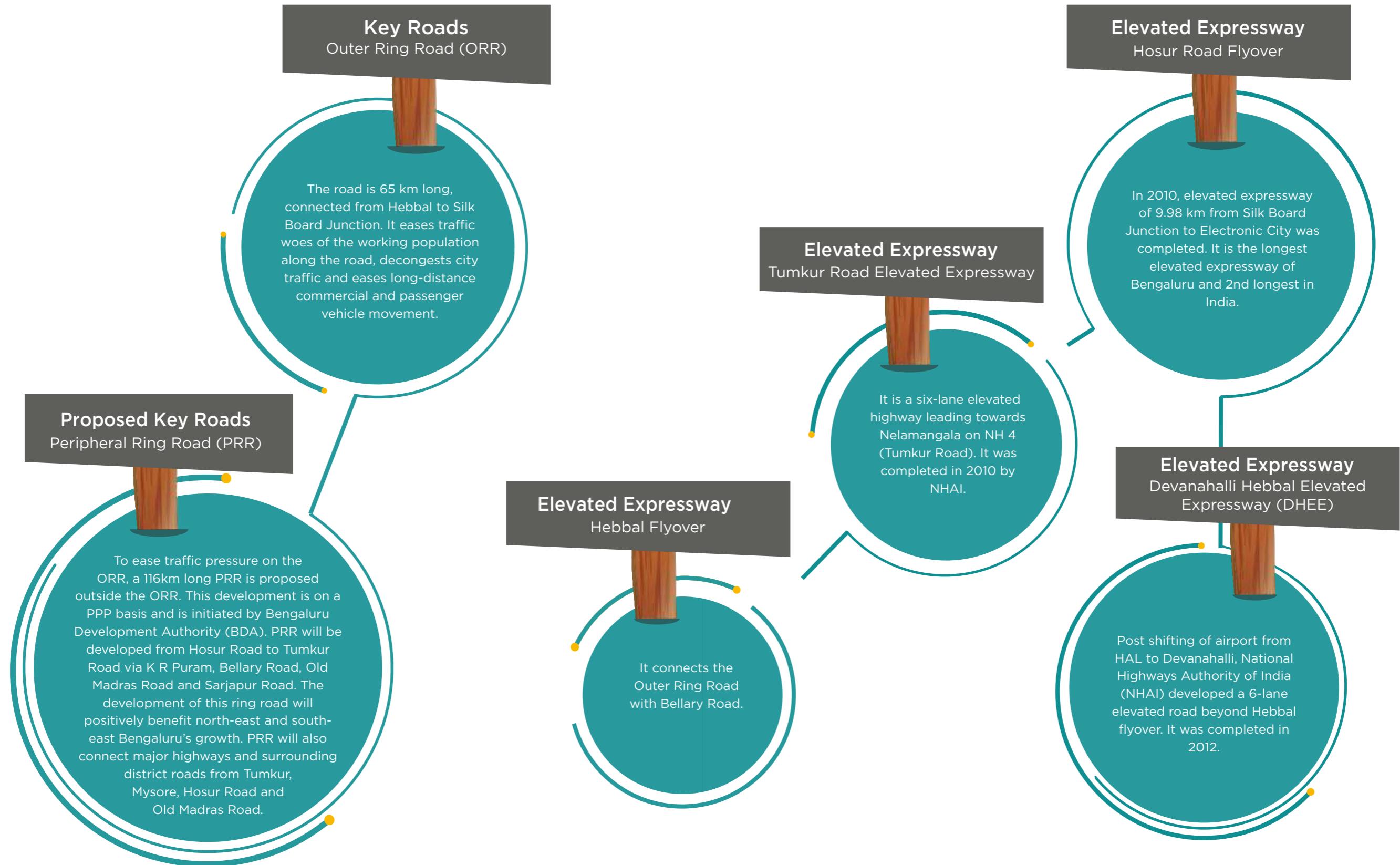
Phase 2B – There is an extension red line from Nagawara to Kempegowda International Airport - 23km. This is expected to be developed under Phase 2B. The official colours to the new proposed lines are yet to be announced.

Phase 3 – This phase is still in the planning stage and spans across a total of 102 km. Pre-feasibility studies have been completed by RITES. The Government of Karnataka has not yet awarded the contract of preparing DPR of this phase. The construction of this phase is likely to commence in 2025 and end in 2030. There are new lines proposed in this phase. The blue line starts from Carmelaram and terminates at Yelahanka (32 km), pink line starting from Marathahalli and terminating at Hosakerehalli (21km) and brown line starts from Silk Board via KR Puram and terminates at Hebbal.

The current working metro lines are green line running from Nagasandra to Puttenahalli and purple line running from Baiyappanahalli to Mysore road. Both the lines have extension plans which are under construction. Extension of purple line towards Whitefield and upcoming yellow line from R V road to Electronic City will be beneficial for a large working population in the East and South zones of the city.



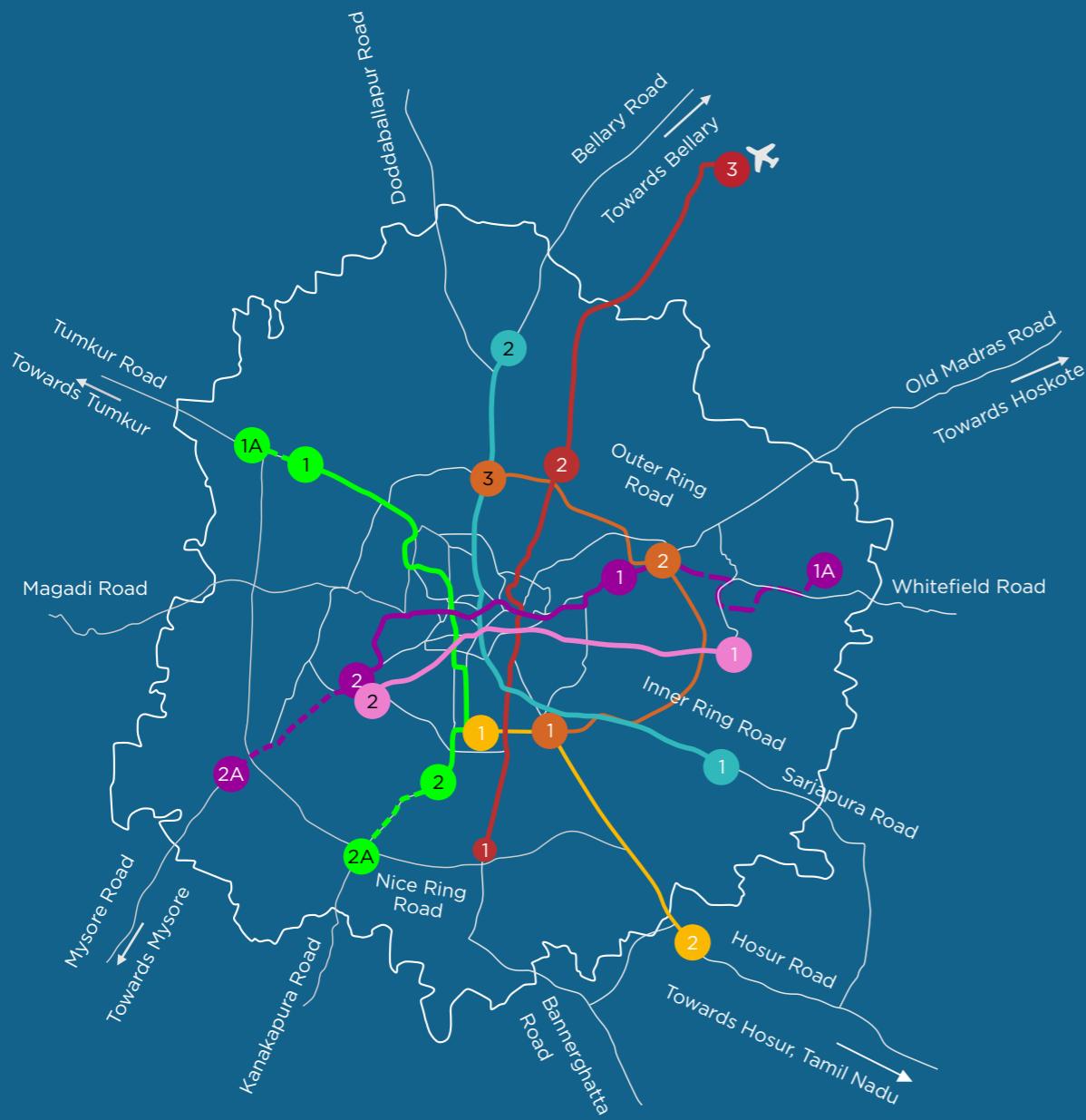
Connectivity





Metro Rail Development

Map 1: Metro Rail Development, Bengaluru



Legend

Phase 1 - Purple Line - Operational	Phase 1 - Green Line - Operational	Phase 2 - Purple Line - Under Construction
Phase 2 - Green Line - Under Construction	Phase 2 Red Line - Proposed	Phase 2 - Yellow line - Under Construction
Phase 2A & 2B - Brown line - Proposed	Phase 2B - Red line - Planned	Phase 3 - Blue line - Planning
Phase 3 - Pink line - Planning	City Boundary	Bengaluru Main Roads

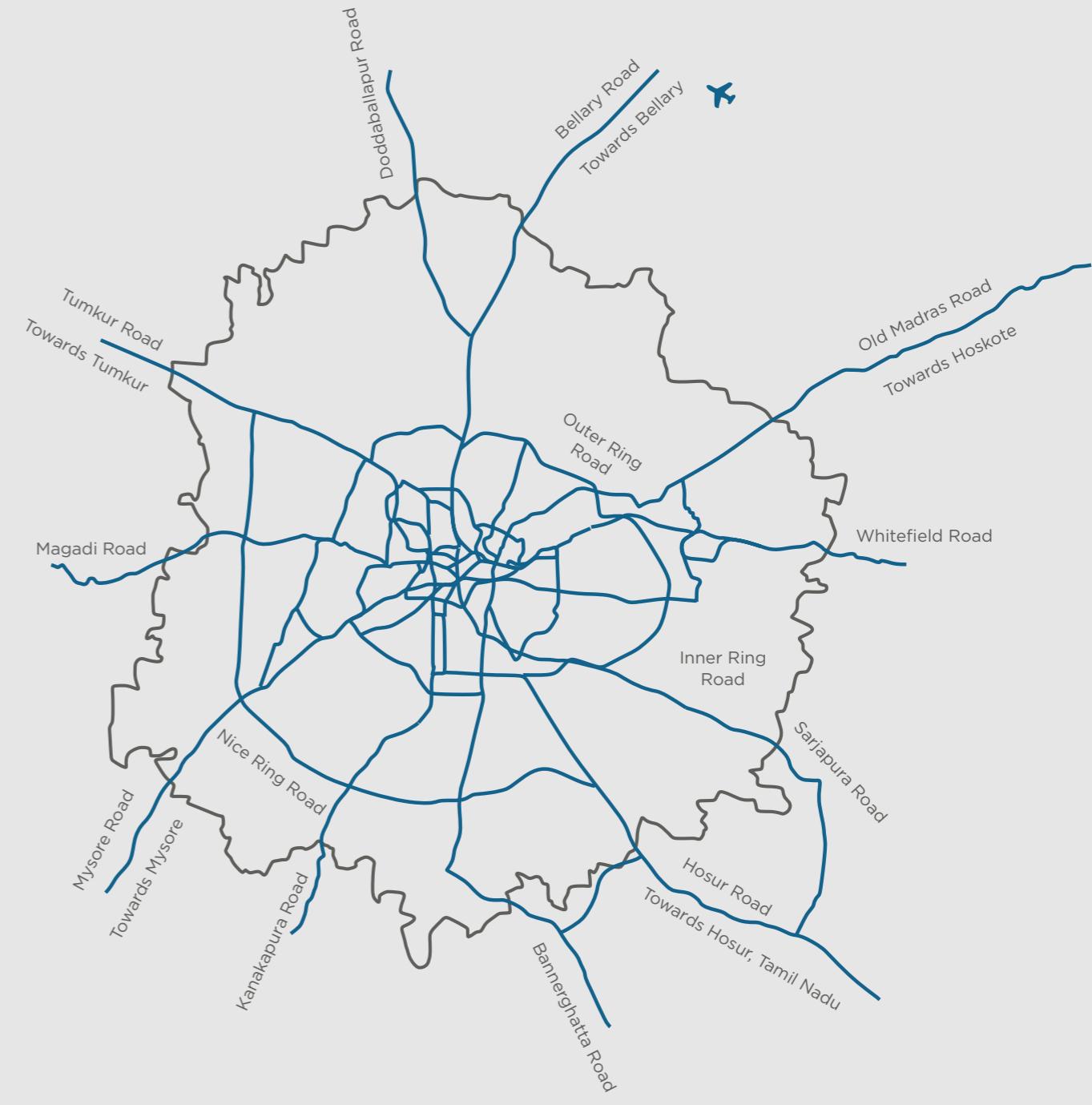
- | | | | | | | | | | | | | | |
|----|-----------------|----|--------------------|---|-----------|---|-------------|---|------------|---|------------|---|---------------|
| 1A | Whitefield | 1A | BIEC | 1 | Nagawara | 1 | R V Road | 1 | Silk Board | 1 | Carmelaram | 1 | Marathahalli |
| 1 | Baiyappanahalli | 1 | Nagasandra | 2 | Gottigere | 2 | Bommasandra | 2 | KR Puram | 2 | Yelahanka | 2 | Hosakerehalli |
| 2 | Mysore Road | 2 | Puttenahalli | 3 | KIAL | 3 | Hebbal | | | | | | |
| 2A | Challeghatta | 2A | Anjanpura Township | | | | | | | | | | |

*UC- Under Construction



Key Roads

Map 2: Key Roads of Bengaluru



Legend

City Boundary
Bengaluru Main Roads



City Level Residential Overview

Bengaluru real estate market is considered as one of the most resilient markets in the country. The realty market of the city is driven by the IT-ITeS sectors and is largely end-user driven. The market experienced its peak during 2013-15. Subsequently, the real estate sector was impacted by the triple tsunami of DeMO, RERA and GST in 2016 and 2017, which obstructed the sales but brought in more transparency and accountability.

The new unit supply increased by 20% in 2014, decreased by 16% in 2015 when compared to 2014 and dropped drastically in 2016 and 2017 due to various macroeconomic changes. The absorption increased by 13% in 2014 and by 20% in 2015 and recorded lowest in Q3 & Q4 of 2016. Year 2017 was a challenging one but in Q1 2018, the city witnessed an increase in both supply as well as absorption, a positive sign for Bengaluru's real estate market. Thus, despite the slowdown in the overall realty market, Bengaluru realty stood strong primarily because unlike its counterparts like NCR it was an end-user driven market where developers followed professionalism and were majorly transparent.

Figure 1: Price Trend

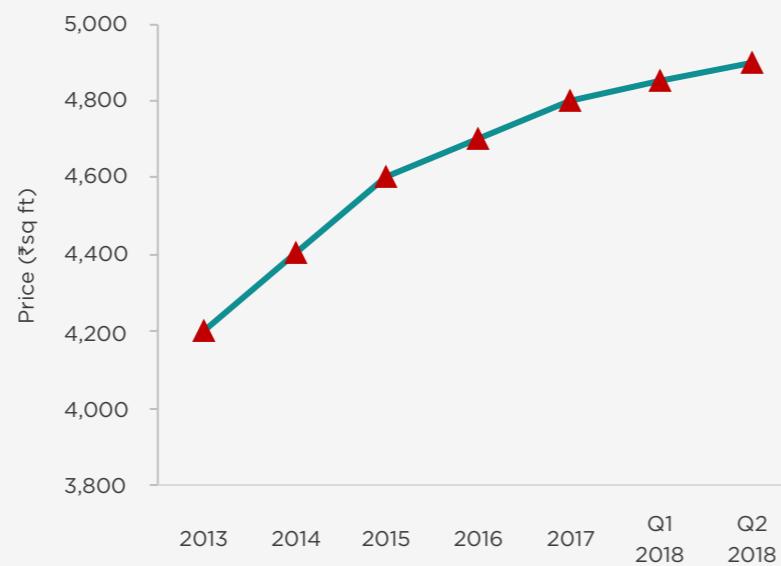
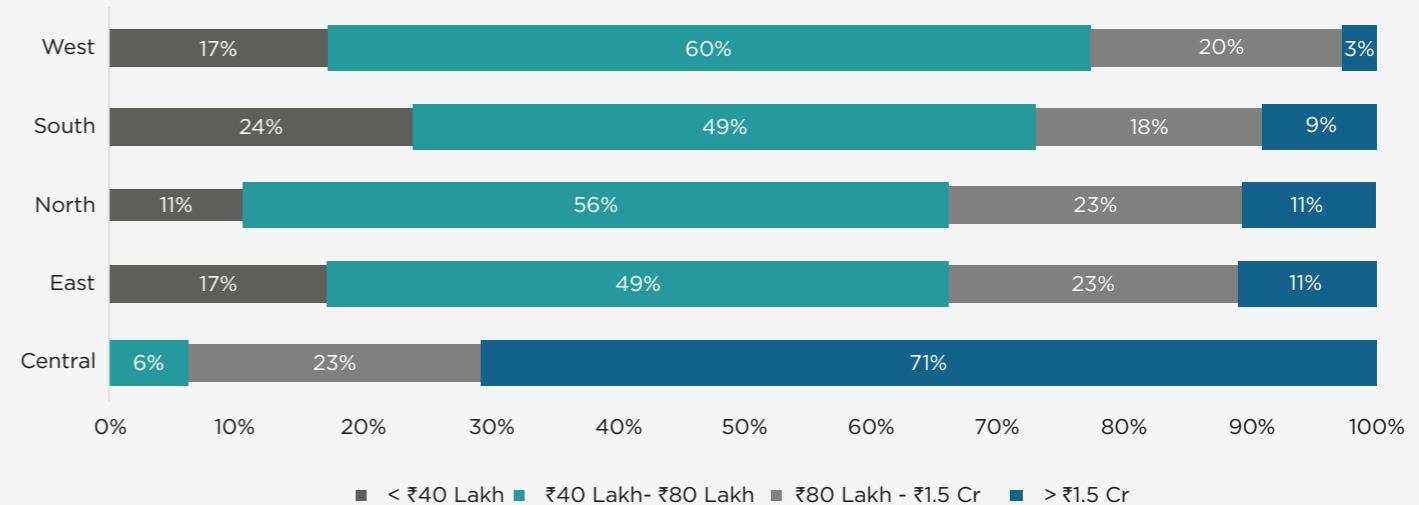


Figure 2: Region-wise budget segment supply (2013-2017)



Figure 3: Region-wise budget segment supply (2013- Q2 2018)



Central Bengaluru has the highest launches in the ultra-luxury segment (₹>1.5Cr), as the region is an established one with limited land availability for new developments. East, North, West and South have the highest launches in the mid segment between ₹ 40Lakh - ₹ 80Lakh. Ample land availability at affordable prices and concentration of major economic hubs within it promote requirement of housing for junior-to-mid-level employees.



City Zoning

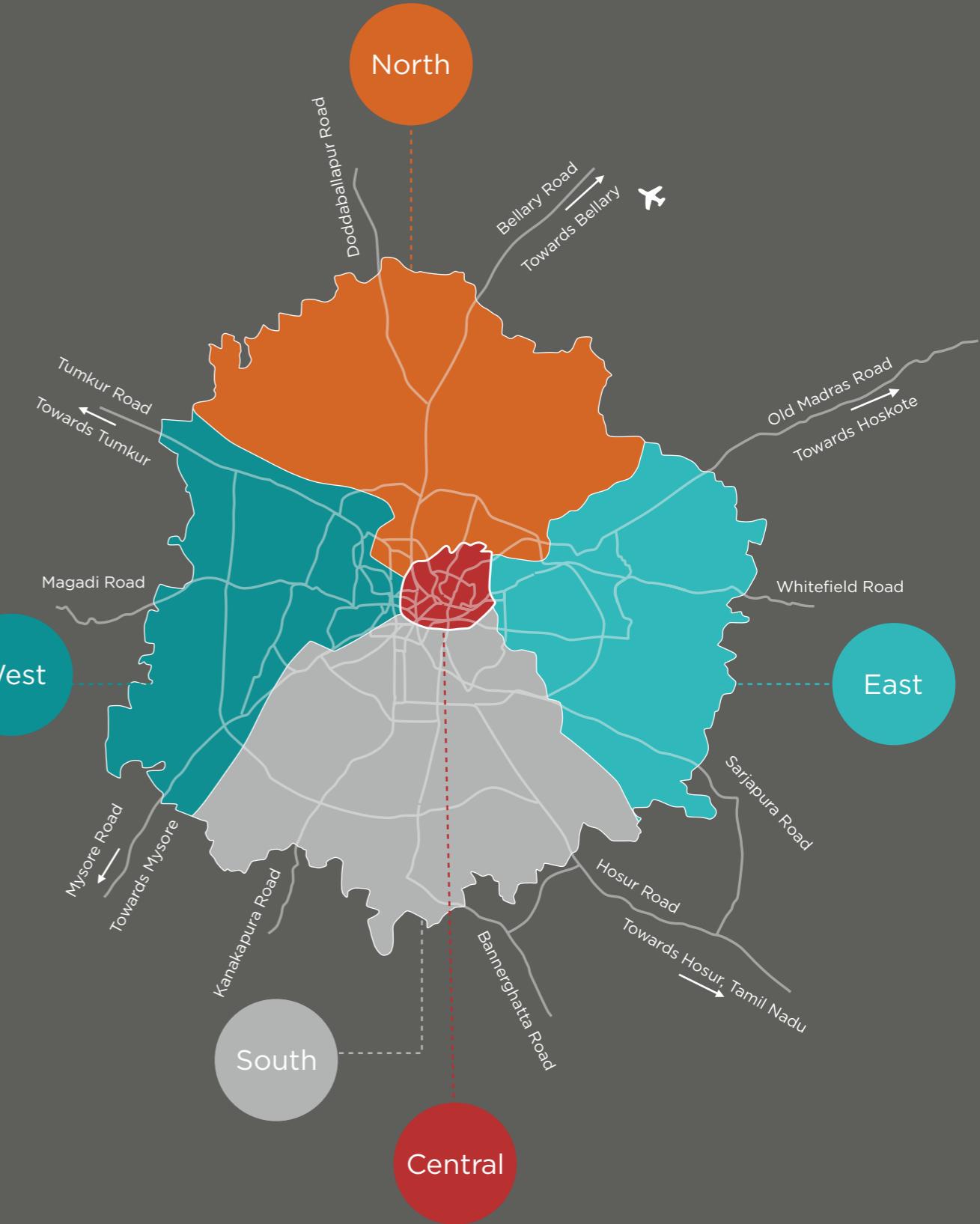
With the IT-ITeS sectors gaining grounds in the city post 1990s, Bengaluru started growing and establishing itself as a global city. Anticipating future growth, the government of Karnataka announced favourable IT policies in 1997 and Millennium IT policy in 2011 so as to attract global IT-ITeS companies. The vision of the IT policy was to position Bengaluru as the IT hub of India and ensure availability of highest skilled IT workforce not just in the state but the entire country. The objective of the Millennium IT policy was to empower women, eradicate poverty and unemployment by employing the youth population in the IT industry.



Soon, the city transformed to be known as the “Silicon Valley of India” and with space constraints in the city centre, traffic congestion, high rental and land values, development of large-scale economic establishments in the city centre was not possible. As a result, the IT-ITeS growth spread towards the external fringes mainly towards Whitefield (East), Electronic City (South) and recently in North Bengaluru - towards the Kempegowda International Airport (located in Devanahalli). This is largely due to availability of large land parcels, modern infrastructure, better connectivity and low land values compared to other saturated parts of the city.

Map 3: Micro markets of Bengaluru

● Central Bengaluru ● South Bengaluru ● West Bengaluru ● North Bengaluru ● East Bengaluru
□ City Boundary — Bengalu Main Roads

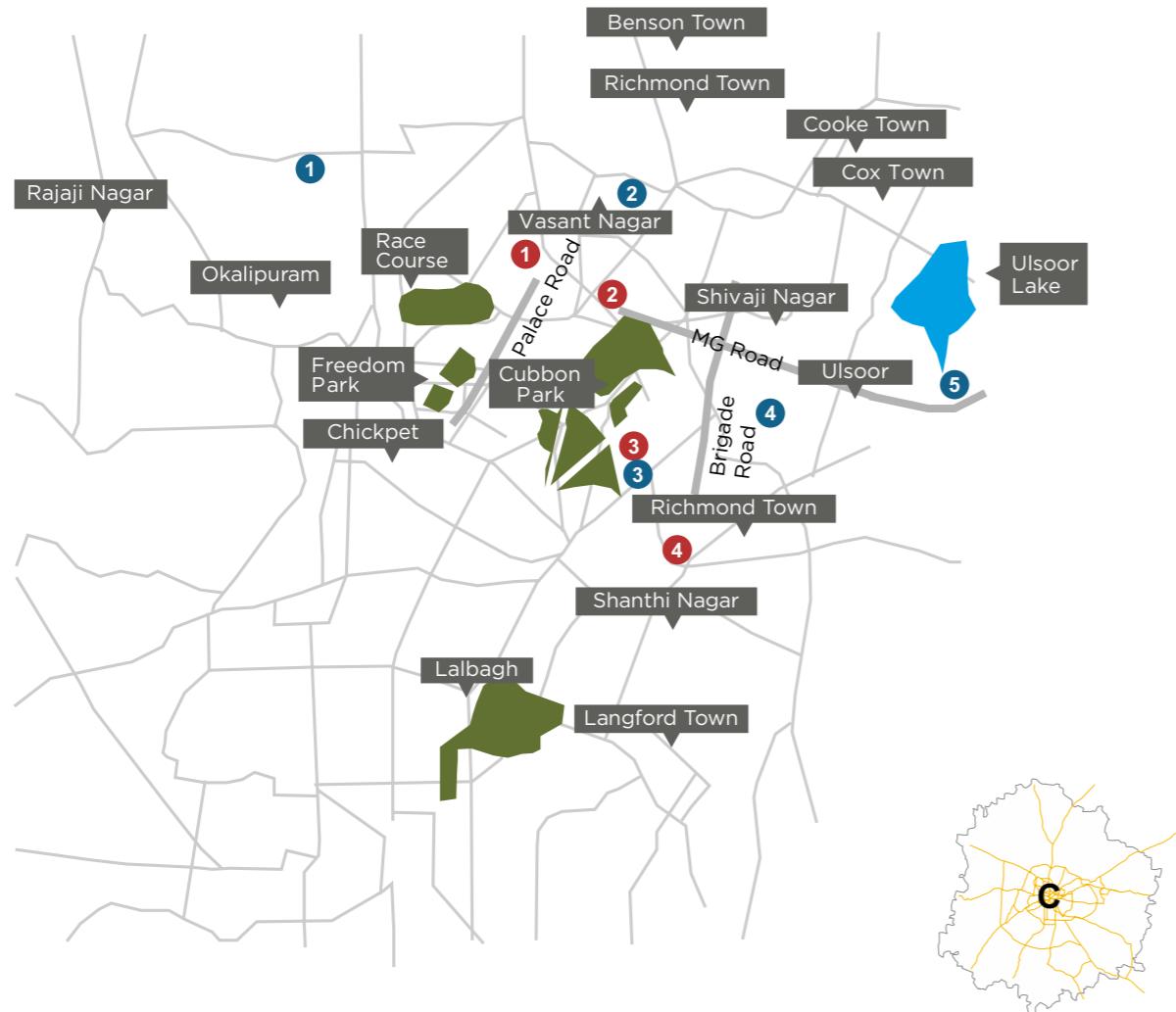




Central Bengaluru

The city core and its surrounding areas largely have presence of public sector establishments, administrative offices, market areas and old residential localities. The region boasts of excellent connectivity to other parts of the city due to the presence of cantonment railway station, majestic bus station and metro connectivity.

Map 4: Zone - Central Bengaluru



Major Office Establishments

- 1 Prestige Trade Tower
- 2 Prestige Khoday Tower
- 3 UB City
- 4 Divyasree Chambers



Malls

- 1 Mantri Square Mall
- 2 Sigma Central Mall
- 3 UB City
- 4 Garuda Mall
- 5 1 MG Lido Mall

Residential Overview - Central Bengaluru

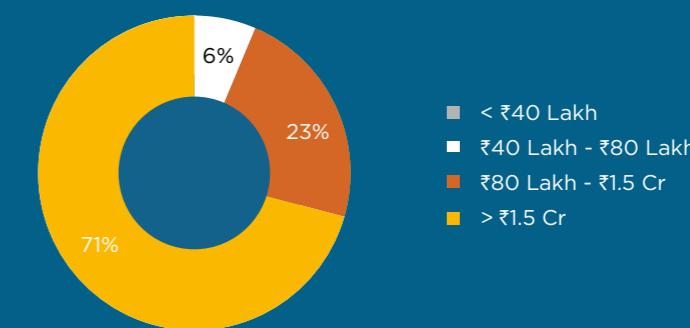
The new unit supply in the central zone of the city is low as compared to other zones of the city. This is largely due to high land values and paucity of land in the city centre. Most areas are already well-developed and saturated with limited scope for further developments. However, few redevelopment projects by prominent builders are creating some residential activity in the region. As per data, the new supply was highest during the year 2014-15, which dropped drastically post DeMo in 2016.

The supply of new units is limited in CBD with highest launches in the ultra-luxury category, followed by the mid segment. Limited land parcels for new developments, well-developed physical and social infrastructure facilities, better connectivity via varied transport networks and workspaces nearby have upped the ante of the region over the years and thus being dominated by expensive housing units.

Fig. 4: Supply and absorption scenario of Central Bengaluru



Figure 5: Budget-wise supply trend (2013 to Q2 2018) in Central Bengaluru



East Bengaluru

Eastern part of the city largely became prominent post 2000 due to the IT-ITeS boom, SEZ act in 2005 and the formation of the EPIP zone in Whitefield. The increased commercial activity triggered residential growth across several micro markets in the eastern zone. Development of infrastructure facilities further aided the growth. The upcoming metro rail project in Whitefield is likely to ease traffic and minimize commute time to workspaces within Whitefield and nearby areas.

East Bengaluru largely comprises of IT-ITeS hubs and high-end corporate establishments in areas including C V Raman Nagar, Old Madras Road (OMR), Outer Ring Road (ORR), Whitefield Main Road, ITPL Road, Hoodi Main Road and Sarjapur Road.



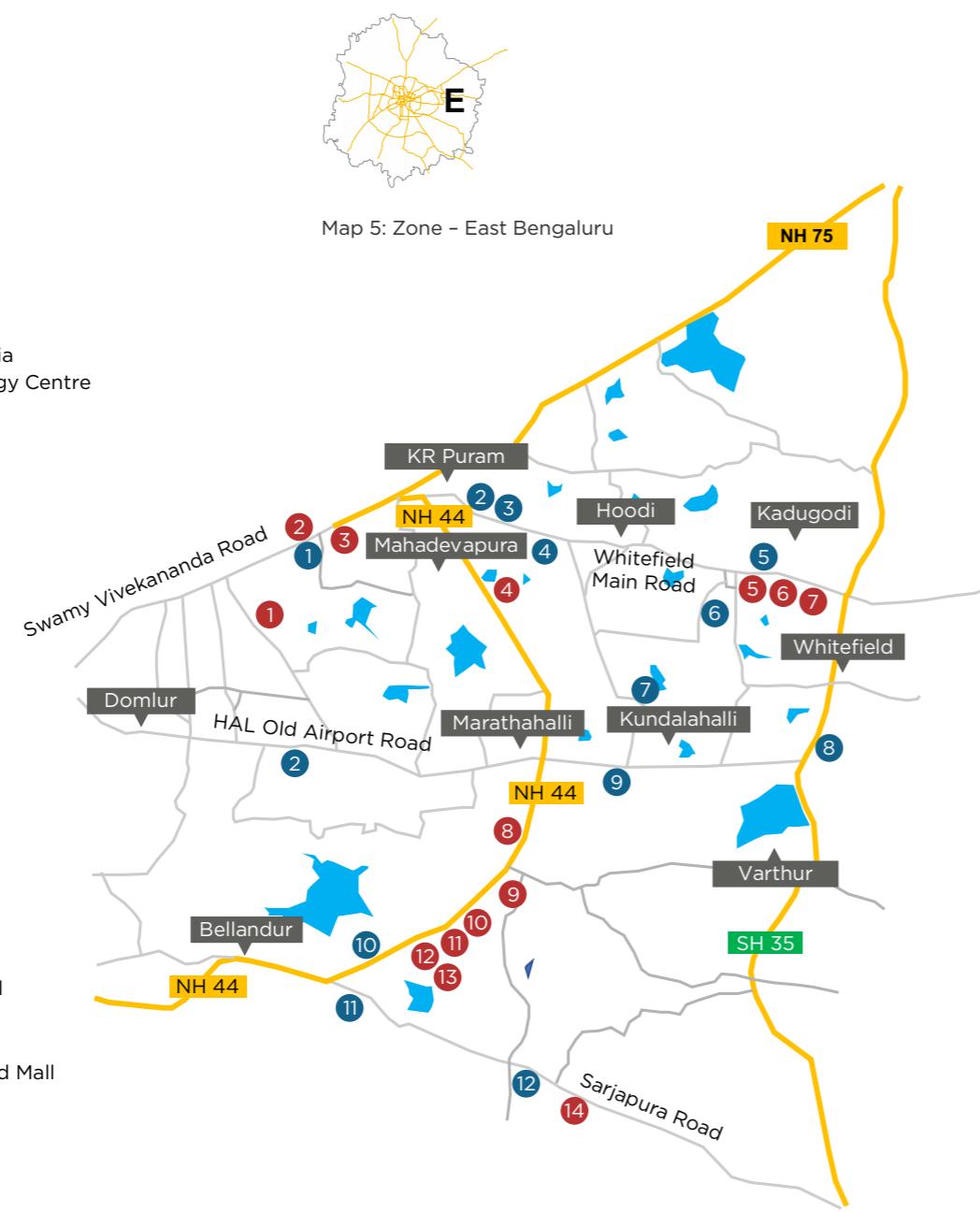
Major Office Establishments

- 1 Bagmane Tech Park
- 2 RMZ Infinity
- 3 Salarpuria Sattva Magnifica
- 4 Bagmane World Technology Centre
- 5 International Tech Park
- 6 Brigade Tech Park
- 7 GR Tech Park
- 8 Divyasree Technopolis
- 9 Prestige Tech Park
- 10 Cessna Tech Park
- 11 Embassy Tech Park
- 12 Global Technology Park
- 13 RMZ Eco world
- 14 RGA Tech Park



Malls

- 1 Gopalan Signature Mall
- 2 VR Mall
- 3 Phoenix Marketcity
- 4 Brigade Arcade
- 5 Ascendas Park Square Mall
- 6 Inorbit Mall
- 7 Brookefield Mall
- 8 The Forum Neighbourhood Mall
- 9 Family Mall
- 10 Central
- 11 Market Square
- 12 MGR Complex



The major office establishments include Bagmane Tech Park in C V Raman Nagar, RMZ Infinity and Salarpuria Sattva Magnifica in Old Madras Road, Bagmane World Technology Centre, Prestige Tech Park, Cessna Business Park, Embassy Tech Village, Global Technology Park, RMZ Ecoworld etc., along Outer Ring Road and International Tech Park Bengaluru (ITPB), Brigade Tech Park, Salarpuria G R Tech Park etc. in Whitefield and RGA Tech Park along Sarjapur Road.

Residential Overview - East Bengaluru

East Bengaluru has seen maximum new unit supply over the last five years in comparison to other zones of the city. This is mainly due to high concentration of IT-ITeS companies and easy availability of land parcels for new developments.

Buoyed by the booming IT-ITeS sectors over the years and high demand from professionals working in IT parks, Whitefield and ORR saw maximum new supply between 2013-2015. However, due to the overall reformatory changes in the Indian real estate sector including DeMo in 2016 and RERA and GST in 2017, new launches

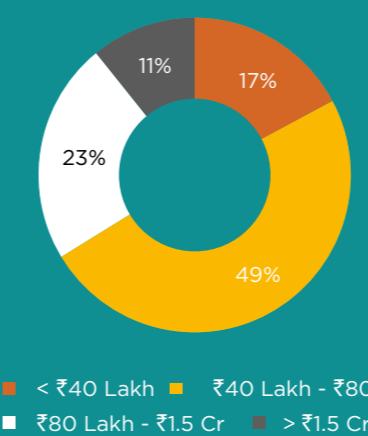
saw a major decline. Least launches were recorded in 2017 as the market was overall impacted by DeMo and RERA.

The segment that dominates the property spectrum here is the mid category (₹40L- ₹80L), followed closely by the luxury segment (₹80L- ₹1.5Cr). Being a major IT hub, the micro markets here are dominated by junior-to-mid level employees who seek housing in these price brackets. Thus, East Bengaluru is one of the most prominent real estate zones in the city with high scope for future developments.

Fig. 6: Supply and absorption scenario of East Bengaluru



Figure 7: Budget-wise supply trend (2013 to Q2 2018) in East Bengaluru



Growth Driver

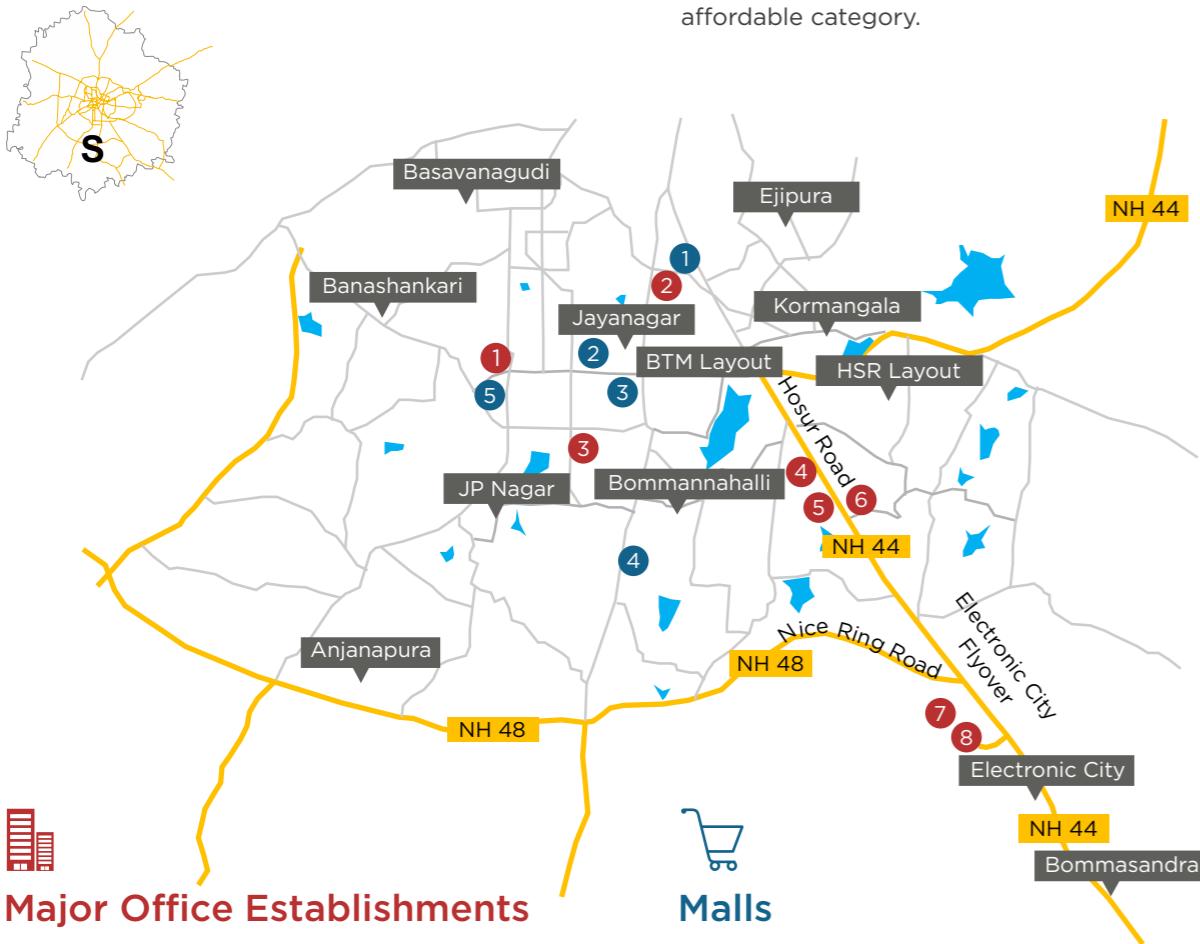
Residential growth in East Bengaluru is driven by the presence of large IT hubs and several key infrastructure upgrades in recent times. The under-construction Purple Line extension of metro rail corridor up to Whitefield will ease traffic in the region and has caused an upsurge in homebuyer interest in this part of Bengaluru.



South Bengaluru

The southern part of the city largely comprises of developed areas such as Koramangala, J P Nagar, Banashankari, Bannerghatta Road etc. and spreads towards Hosur road, extending all the way up to Electronic City. The key factor driving real estate growth here is the presence of IT-ITeS companies along Hosur road and in Electronic City. Besides IT-ITeS, the industrial areas along Kanakapura Road have also led to high residential growth in micro markets along the road. Moreover, the southern region has always been at the forefront of city's real estate largely due to presence of robust infrastructure, good connectivity and the developing IT/ITeS. The upcoming metro project towards Bommasandra is an added advantage.

Map 6: Zone - South Bengaluru



Relatively lower property prices as compared to its eastern counterparts like Whitefield and Marathahalli-Sarjapur Road ORR, more options in the mid and affordable category and increased connectivity via metro is a boon for the south region, leading to high residential demand.

Hosur road consists of many tech parks such as Novel Tech park, Ozone Manay Technology Park, Velankani Tech Park, AMR Tech Park etc, IBC Knowledge Park, Kalyani magnum near Bannerghatta Road and Brigade Software Tech Park near Banashankari. Electronic City has major IT-ITeS establishments with companies such as Infosys, Wipro, Siemens etc. There are many noted companies in Bommasandra such as MTR Foods, Biocon Ltd, RNS Motors Ltd and HCL, Biocon Park, Sansera Engineering, Cipla, etc in Jigani. Bommasandra and Jigani are industrial areas with majorly affordable housing supply while Electronic City has options both in the mid-segment and affordable category.

Residential Overview - South Bengaluru

South Bengaluru has seen the second highest new supply of housing units in Bengaluru. This is mainly due to the availability of large land parcels, IT sector concentration in Electronic City, industrial area development in Bommasandra, Jigani and other areas, infrastructure facilities and proposed metro rail corridor development.

As per data, maximum supply was seen in the year 2014 while it drastically dropped in 2017 due to structural changes and policy reforms including DeMo, RERA and GST. Southern Bengaluru flourished and witnessed highest absorption during 2014. As per the market segmentation, mid segment dominated the property spectrum, followed by the affordable category. Areas beyond Electronic City towards Chandapura and Attibele is seeing the development of several plotted layouts.

Fig. 8: Supply and absorption scenario of South Bengaluru

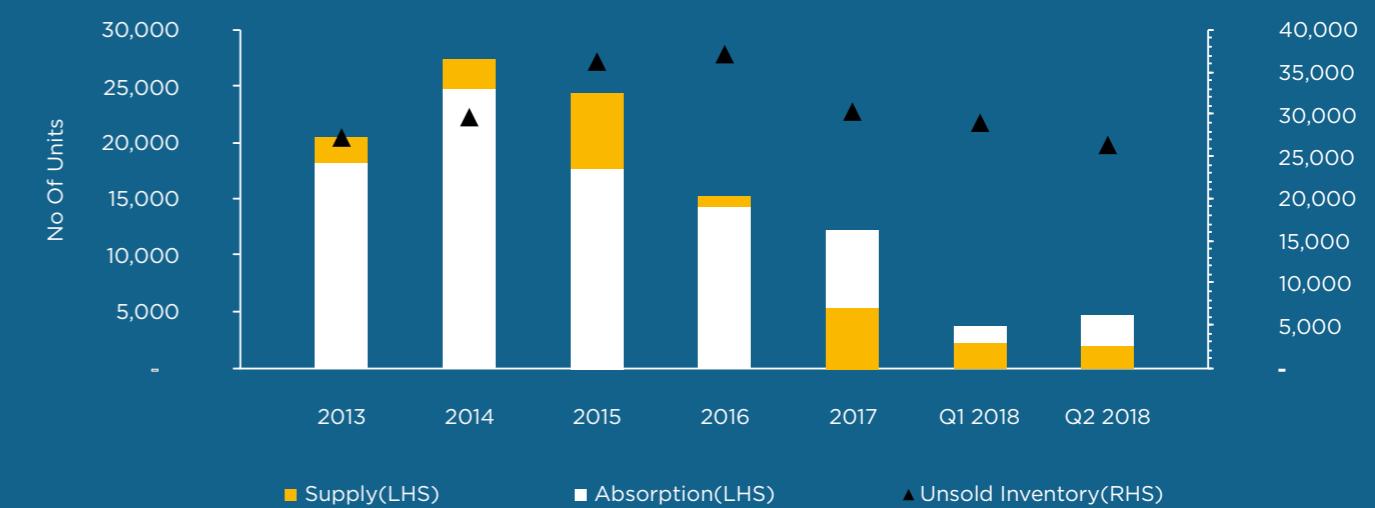
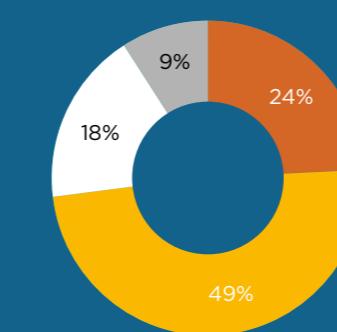
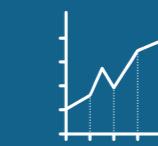


Figure 9: Budget-wise supply trend (2013 to Q2 2018) in South Bengaluru



- < ₹40 Lakh ■ ₹40 Lakh - ₹80 Lakh
- ₹80 Lakh - ₹1.5 Cr ■ > ₹1.5 Cr



Growth Driver

South Bengaluru is largely driven by demand from the IT hub of Electronic City and various infrastructure upgrades, including the under-construction metro project (proposed yellow line from RV road to Bommasandra). South Bengaluru is seeing a spurt in residential activity, particularly in the mid segment category.



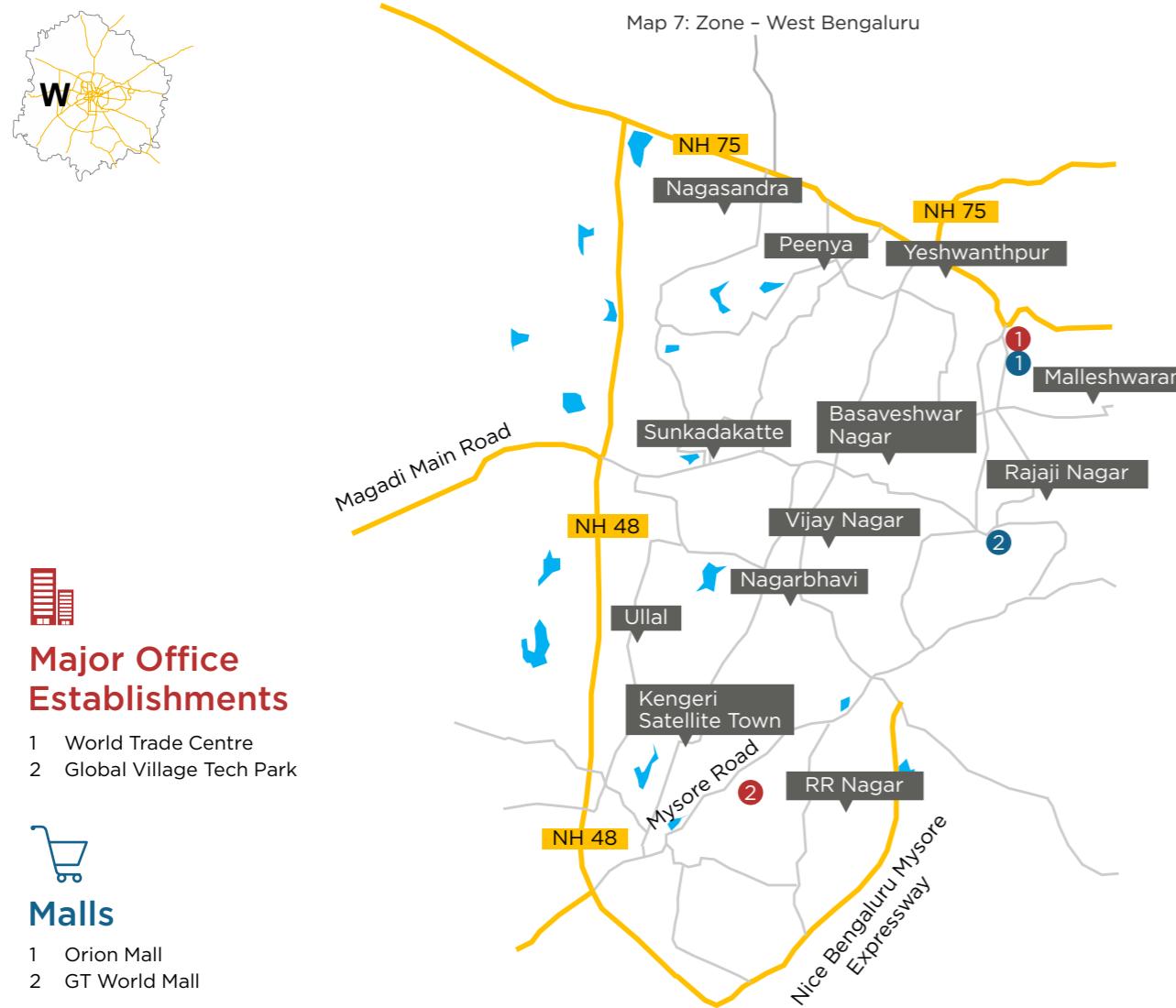
West Bengaluru

The western zone of Bengaluru, one of the posh areas in the city, mainly comprised of large independent bungalows owned by the elite or very small-size apartments. But lately, this trend is changing. In the last three to four years, the region has witnessed the launch of several high-end apartments, a change of trend wherein the elite now prefer to stay in apartments rather than independent bungalows.

Moreover, the region boasts of good physical and social infrastructure facilities. It is considered as Old Bengaluru with presence of prominent educational and research institutes. Moreover, ample availability of land, the industrial areas and

metro rail corridor development have been the major boosters for residential demand. This region is likely to see a major infusion of residential developments in the future.

The most noted office space establishments in West Bengaluru are World Trade Centre in Rajajinagar and Global Village Tech Park along Mysore Road. Peenya industrial area is another prominent industrial hub of the region. Besides easing connectivity issues, the existing and upcoming metro rail development is likely to enhance residential demand in the area. Availability of large land parcels at affordable prices holds an opportunity for future growth of real estate sector in this region.



Residential Overview - West Bengaluru

The new supply in West Bengaluru is low as compared to other zones of the city. However, large independent bungalows are seen to be giving way to high-end apartment societies over the last few years. This region was initially inhabited by the elite who settled in Bengaluru several years back. Also, the micro market does not have a high concentration of IT-ITeS companies but it mainly houses educational institutes and industries. As per data, the supply was maximum in 2013, which drastically dropped

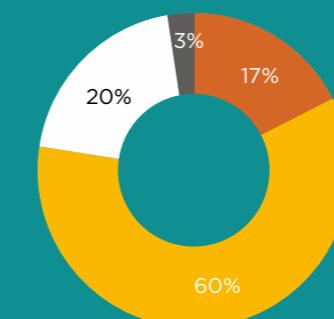
in 2017 due to the impact of DeMo, RERA and GST. Although new launches were low in 2017, but in the last quarters of the year absorption increased and the unsold inventory declined.

The supply is highest in the budget segment of ₹40L-₹80L considering that the residential demand arises mainly from the mid-scale employees working in the nearby industries and educational institutions.

Fig. 10: Supply and absorption scenario of West Bengaluru



Figure 11: Budget-wise supply trend (2013 to Q2 2018) in West Bengaluru



- < ₹40 Lakh
- ₹40 Lakh - ₹80 Lakh
- ₹80 Lakh - ₹1.5 Cr
- > ₹1.5 Cr



Growth Driver

In West Bengaluru, availability of large land parcels, industrial areas and metro rail corridor development have been the main residential market boosters. This region will see a major infusion of residential developments in the future.

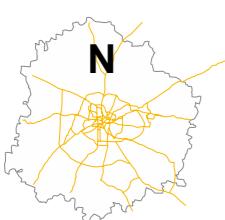


North Bengaluru

Popularly referred as 'Greater Bangalore' by industry experts, North Bengaluru has seen massive real estate activity post the establishment of Kempegowda International Airport in Devanahalli in 2008. The region has the potential to develop into a self-sustained satellite town of Bengaluru similar to Navi Mumbai, Gurgaon and Noida. Availability of large land parcels at affordable prices, infrastructure development and proposed metro project has boosted the growth prospects in the region. Moreover, it enjoys excellent connectivity to other prominent areas of the city via NH 44 and the signal-free corridor from Hebbal to the airport. The proposed Peripheral Ring Road (PRR), metro project and high-speed rail-link to airport are likely to propel

growth in the future. Besides connectivity, various industrial parks including the Karnataka Industrial Areas Development Board's 3,000-acre Hardware park, 980-acre Aerospace park, and the 12,000-acre Information Technology Investment Region (ITIR) have given a major push to residential development in this region over the last few years.

Major office space establishments in the region include Kirloskar Tech Park, Hinduja Ecopolis and Brigade Magnum near Bellary Road, RMZ Galleria in Yelahanka, Karle Town Centre and Manyata Embassy Business Park near Kempapura Main Road and Bhartiya Centre of Information Technology near Thanisandra Main Road.



Map 8: Zone - North Bengaluru

Major Office Establishments

- 1 Hinduja Ecopolis
- 2 RMZ Galleria
- 3 Brigade Magnum
- 4 Kirloskar Tech Park
- 5 Karle Town Centre
- 6 Embassy Manyata Business Park
- 7 Bhartiya Centre of Information Technology



Malls

- 1 Vaishnavi Sapphire Centre
- 2 Esteem Mall
- 3 Elements Mall



Residential Overview - North Bengaluru

The residential real estate development in North Bengaluru has gained significant momentum over the last few years. This is mainly due to the Kempegowda International Airport in Devanahalli, high potential for economic growth, industrial parks, SEZ and infrastructure development. The supply was highest in the year 2014 which drastically dropped in 2017 due to the impact of DeMo, RERA and GST. Absorption was highest in the year 2015 which dropped in 2016 and then started improving in 2017 as the impact of DeMo began to recede.

The supply is highest in the mid segment between ₹40L - ₹80L. Currently, North Bengaluru is one of the most active micro markets in the city. Proposed metro rail connectivity towards the airport will be a value add to the growth of the region.

Fig. 12: Supply and absorption scenario of North Bengaluru

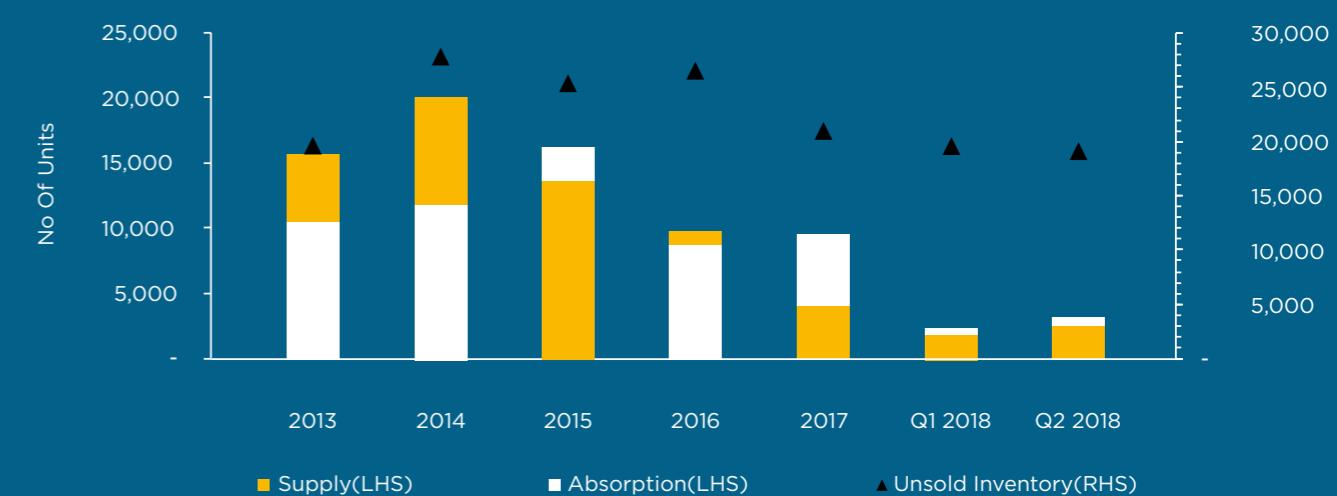
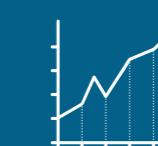
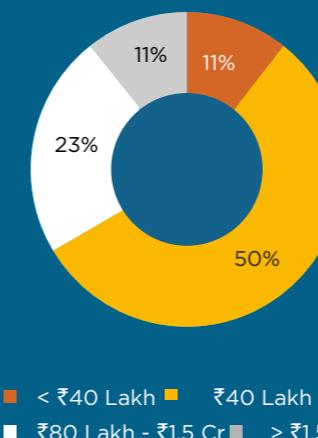
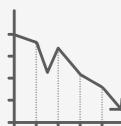


Figure 13: Budget-wise supply trend (2013 to Q2 2018) in North Bengaluru



Growth Driver

In North Bengaluru, the proposed developments including the Information Technology Investment Region (ITIR), aerospace SEZ, Devanahalli Business Park, Global Financial District, etc. are driving growth. Proximity to the airport, the elevated expressway and metro rail corridor development have also upped the game for North Bengaluru.



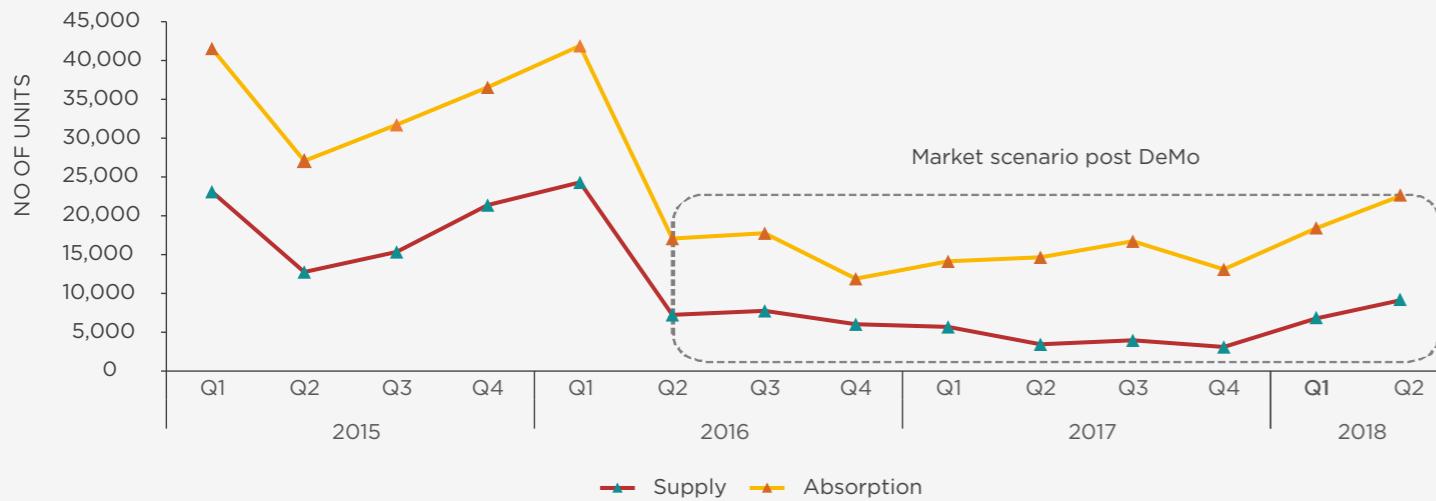
Survival During the Downturn

Reformatory changes including DeMo, RERA and GST by the central government led to large-scale economic transformation in 2016-17. In the short-term, these policy changes impacted the overall residential real estate through the length and breadth of the country and most of all brought the sector to a screeching halt like never before. However, implementation of these initiatives brought in the much-needed transparency, accountability, efficiency and financial discipline within the real estate sector.

While DeMo impacted the real estate sector by restricting the movement of cash, among the major teething issues of GST there was lack of clarity which ultimately kept home buyers away from the property market. Moreover, buyers went in a wait-and-watch mode in anticipation of price corrections. Meanwhile, RERA brought in the much-needed respite for several home buyers who had been suffering due to the unscrupulous activities of few developers. Thus, similar to other sectors where a policy-change brings in confusion at the beginning and gradually begins to settle once clarity seeps in, the realty sector too witnessed the same. There was enough panic in the market for sometime with massive unsold stock piled up across the country. Finally, from H2 2017 the scenario began to change with buyers/end users beginning to take the plunge in the backdrop of attractive prices and myriad property options.

During this upheaval, Bengaluru, primarily an end-user driven market, stood resilient with only a little impact. Property prices remained stagnant for most locations with a wide range of residential options from ultra-luxury to affordable suiting all income groups. Though, similar to most cities, launches dropped drastically from Q3 2016 onwards as builders became more cautious. Interestingly, the scenario is seen to be improving in Q1 2018 with increased new launches. As for market segmentation, luxury sector saw a major setback during the period while affordable category gained immense prominence. Mid segment category (₹40L - ₹80L) saw maximum launches. Today, favourable macroeconomic environment, rise in commercial activity, increased interest of foreign investors, start-up hub evolution, and development of infrastructure facilities such as metro rail are factors driving real estate activity in the city.

Fig. 13: Supply and absorption scenario of Bengaluru highlighting DeMo period

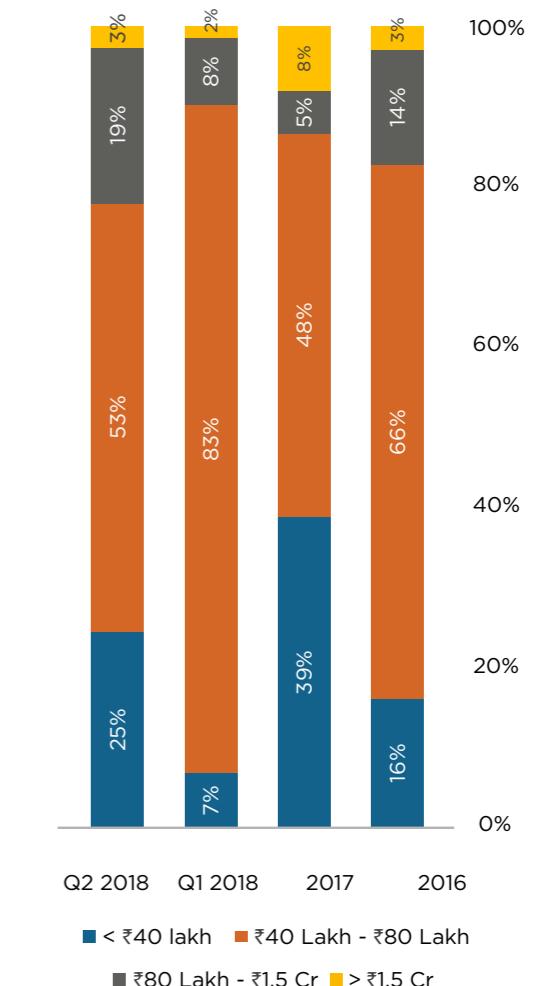


Popularly known as the 'Silicon Valley of India,' Bengaluru has attracted major investments into the city while global IT companies created ample job opportunities, which has increased white collar jobs. Thus, the residential demand by actual users is significantly high in the city. But the growing woes of infrastructure has led to the emergence of a significant trend in recent times. Walk-to-work is one trend that has caught the fancy of several buyers in recent time. Lack of proper physical infrastructure facilities at all the locations of the city and the traffic congestions have prompted buyers to live close to their work places. Following the demand, builders are also developing large townships with this concept as there is ample land available in the sub urbans and peripheries.

While the proposed metro construction will take a few years to complete, buyers today prefer to walk-to-work.

Many such large townships have been developed or under construction in different regions across the city.

Figure 15: Supply as per the budget segment during and post DeMo



RMZ Galleria



Promoting “Walk-to-Work”

Commuting to work places is one of the major challenges faced by working professionals in Bengaluru today as physical infrastructure has not kept pace with the burgeoning population. With several professionals travelling to workplaces daily, there is traffic congestion in most areas during peak hours which adds to the discomfort of commuters. To cater to this issue, builders are seen to be promoting the “walk-to-work” concept which is proving to be a boon to several professionals. Moreover, the added advantage of large land parcels is prompting developers to build mixed-use developments that incorporate clusters of housing, commercial office spaces, hotels, retail etc. Some of the prominent townships include Prestige Shantiniketan, Brigade Gateway, Adarsh Palm Retreat, RMZ Galleria, amongst others. However, despite being widely accepted, few of these integrated developments that are located in the peripheries often grapple with multiple issues including lack of proper public transport facilities outside the community, lack connectivity issues with major areas of the city and also lack physical infrastructure. As a result, the occupancy in many projects is abysmally low.

As per data, more than 20 large-size projects are either operational or under various stages of construction in the city. Many of these large projects incorporate residential, office spaces, malls, etc. so that home buyers don't really have to move out of the community. As expected, out of all the regions, East and South Bengaluru have maximum projects that promote walk-to-work concept.

East and South Bengaluru

In the eastern zone, IT sector is mainly concentrated in micro markets like Whitefield, Outer Ring Road and Sarjapur Road while in the southern zone it is essentially concentrated along Hosur Road and Electronic city. These localities have several residential projects that promote walk-to-work concept. Developers are also identifying major IT parks and developing residential projects near to these economic hubs. The residential developments in these zones are typically large-scale townships with a variety of configurations available across budget segments so as to cater to all income groups.



Prestige Shantiniketan



Brigade Gateway

Some of the prominent townships include Prestige Shantiniketan, Brigade Gateway, Adarsh Palm Retreat, RMZ Galleria, amongst others

East Bengaluru

31,000 units have been launched in East Bengaluru since 2013, with the highest IT company establishments in the zone housing the highest set of IT professionals – knowledge based professionals. The zone offers 62% of the units in the budget segment of ₹40 Lakh - ₹80 Lakh, catering largely to MIG. ₹80 Lakhs - ₹1.5 Cr budget segment has 22% of the units in the zone.

South Bengaluru

29,000 units have been launched in South Bengaluru since 2013. With the electronic city (IT hub of the city) being housed in south-eastern part of the city and many other high end IT company establishments in south, this zone houses higher MIG and HIG, knowledge based population. 59% of the units are in the budget segment of ₹80 Lakh - ₹1.5 Cr.

North and West Bengaluru

Ample land availability at affordable rates is attracting builders to build large mixed-use developments projects in North Bengaluru. The prominent projects include Bhartiya City, Ozone Urbana, among others. Once completed, these projects will be more like a city within a city. On the other hand, the west zone which lacks IT developments has more of industrial developments and hence and walk to work concept does not seem to be a prominent option here.

Central Bengaluru

The city centre has mainly corporate offices, public sector industries, administrative establishments with no large land parcels available for large scale residential development. Also, expensive properties in this location does not really promote walk-to-work concept for a large-scale junior-to-mid level employees working in Central Bengaluru.

Figure 16: East Bangalore : Units launched as per budget segment (since 2013)

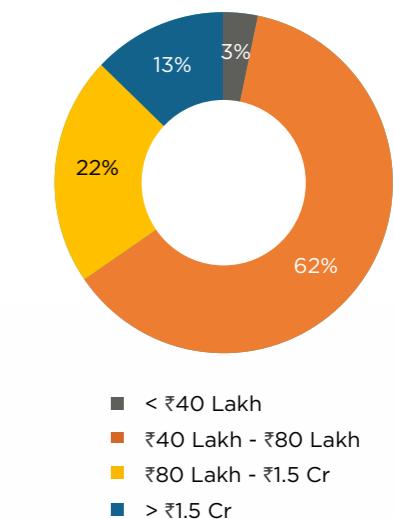
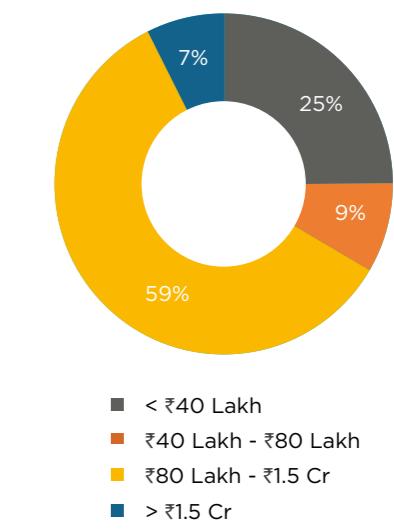


Figure 17: South Bangalore : Units launched as per budget segment (since 2013)





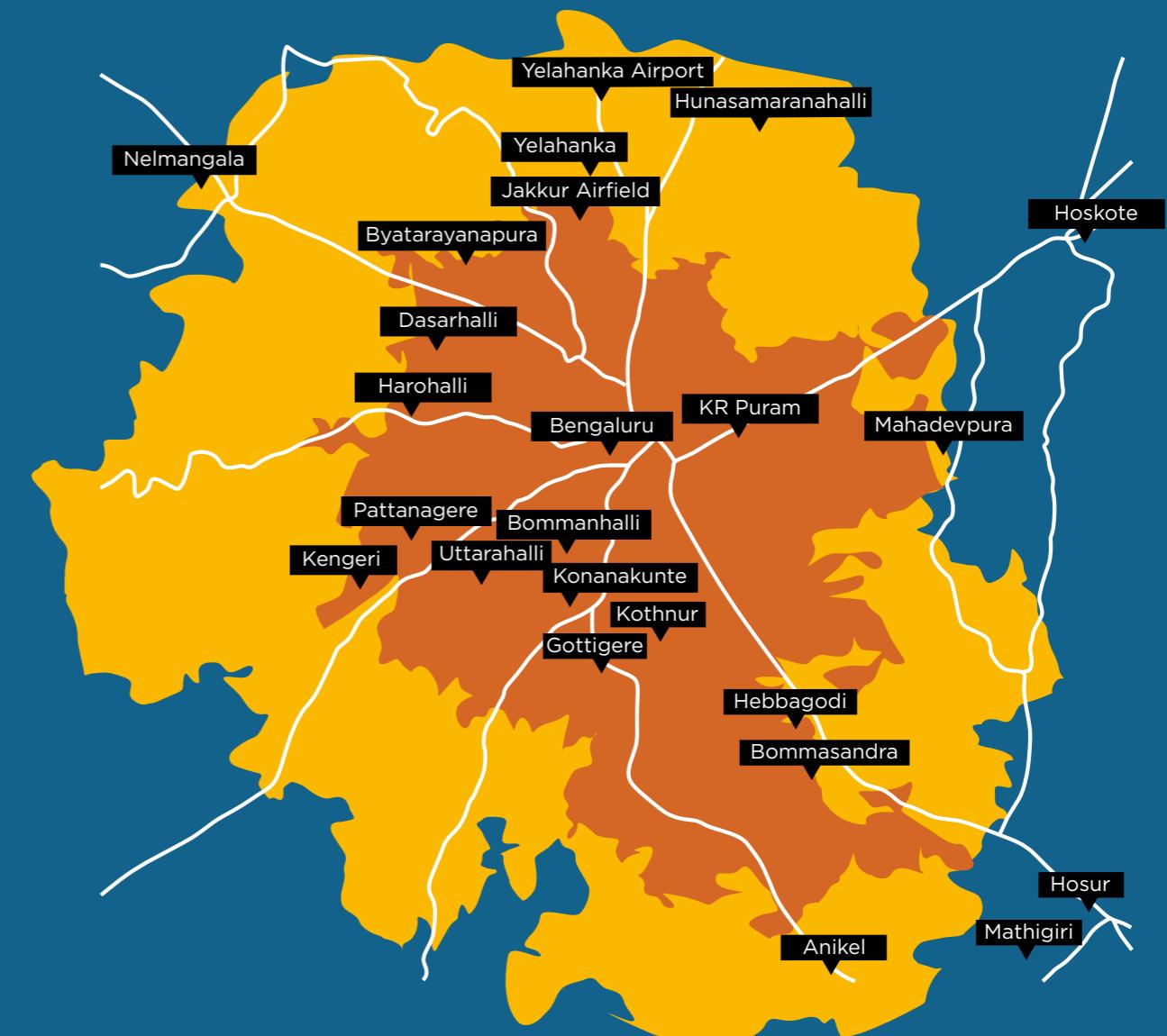
Issues & Challenges



Excellent economic growth, ample employment opportunities and salubrious weather led to an unprecedented trajectory of urbanization in Bengaluru. In addition, the presence of eminent educational institutes in the city have produced high quality talent, thereby increasing skilled man power and knowledge-based population.

However, with this unprecedented growth came in an unanticipated rapid urbanization in the city that gave rise to many issues and posed challenges on the urban management. The scale at which the city and its population is rapidly burgeoning, urban management needs to thus have inclusive growth with active participation from both the governing bodies as well the citizens living in the city. This will be an inclusive, sustainable and appropriate management approach for the urban challenges and issues raised.

Map 9: Growth of Bengaluru



Source: <http://catalyst.nationalinterest.in/2014/01/04/the-growth-of-bangalore/>

Major issues and challenges faced by the city



Solid Waste Management

Unanticipated rapid growth in the urban population of the city coupled with economic growth and high living community standards contributed to the increase in the amount of waste generation. The solid waste management has become a major challenge which is negatively hampering the city profile and also impacting its ecological balance.



Mobility

With rising employment opportunities focused in major economic hubs of the city in selected locations, mobility plan of the city needs to be rethought and developed. The connectivity, quality of roads, mode of transport, mobility pattern should be analysed and innovative proposals should be added to ease citizen mobility.



Water and Lakes of the City

With extensive unforeseen expansion of the city, rising population and massive residential development across the city, it is facing major water crisis. Popularly known as the city of lakes, there are many that have either dried up and turned to ghost lakes or are contaminated. A few of the lakes have also turned toxic due to the unplanned waste disposal by several factories along its peripheries, which leaves a hazardous impact on the region.



Physical Infrastructure Developments

With extensive expansion of the city that saw key economic hubs developing in the secondary and peripheral business districts with residential developments, fast-paced physical infrastructure developments became a challenge. The demand for transport network and connectivity, electricity & water supply, waste management has risen and it is a challenge to meet the expectations of the residents.



Agara Lake



Proposed Initiatives & Current Status



Solid waste management

The city generates approximately 5,000 tonnes of waste on a daily basis. The governing authority - BBMP has taken initiatives such as Kasa Muktha Bengaluru in 2014 with a moto to make the city garbage free after the success of Wake-Up Clean-Up campaign in 2013. Two different dustbins were earmarked to segregate the dry and wet waste and 25,000 rag pickers were employed too for Kasa Muktha Bengaluru. Wake-Up Clean-Up campaign was conceptualised to bring together the multiple stakeholders for waste management including govt. agencies, bulk generators, corporate houses, NGOs and environmental organizations, solid waste experts, service providers and citizens to develop large-scale sustainable waste management practice.

Although the governing authorities are totally committed to efficiently carry out the solid waste management practice by creating awareness, decentralised waste management practices as waste dumping in outskirts of the city led to contamination of ground water, but more than 20% of the waste still remains unpicked.

Bengaluru also records the highest generation of e-waste accounting to 18,000 tonnes/year. In this regard, IT companies have to play a key role by encouraging organised disposal of e-waste.

Currently, BBMP is keen on getting citizen participation, investing in technology and infrastructure as well as having a keen eye to innovative methods to help in effective solid waste management.



Mobility

As the city started expanding the demand for excellent road network, connectivity and mobility began to rise. The ratio to the spatial spread of the city to the road network is not appropriate. As a result of city reaching peripheral limits, connectivity started getting enhanced with metro facility being extended and mobility plan revised keeping the floating traffic directions in mind. Extension of green and purple line of Namma Metro, planning and proposal of other lines in the city is already in progress. The details of the metro line is provided in detail in the connectivity section of the report.



Water and Lakes of the city

As the city started growing extensively towards the peripheral areas, secondary business districts were created and became densely populated. The issues related to water supply began to arise. Slum-dwellers are the major victims of this problem which hampers their health intensely. With the dispute of Cauvery river between Karnataka and Tamil Nadu and non-efficient ways, providing clean drinking water facilities became a major concern. As a result, BWSSB planned and provided drinking water through tankers which worked out costly and will not be cost-efficient in the long term. Hence, there is dire need to develop an innovative decentralised system of drinking water provision. The city was once known to have hundreds of lakes which turned to ghost lakes eventually due to extensive urbanisation and garden city turning to concrete jungle. There have been many initiatives taken by BBMP, BWSSB and BDA to restore these lakes and a few more are in the pipeline. Lake Development Authority, a registered society under the Karnataka Society Act, is set with a purpose to protect, maintain and develop lakes. There were various other committees formed such as Lakshman Rao Committee, Ramaswamy Committee, Balsubramanyam Committee etc. to preserve and restore the lakes.



Hazardous incidents such as Bellandur and Varthur lakes letting out harmful froth and gases to the surroundings is necessitating a need for proper maintenance of the area. The former lake is planned to be rejuvenated with a project cost of ₹50 Cr. Although there is active citizen participation coupled with the governing bodies' efforts to repair and revive the water bodies, there is a need for immediate innovative solutions which could be served by public-private participation mode.

Physical Infrastructure Developments

As evident and widely known, majority of the population is knowledge-based professionals employed in the IT sector. Economic hubs are widely developed in the eastern and south-eastern side of the city. As a result, the connectivity, mobility and road network has been the core focus area of the government. Multiple schemes for infrastructure development are announced to address the gridlocks caused by traffic, bad road conditions, metro rail network and toxic lakes.



In Peenya industrial zone, a chemical treatment unit worth ₹10 Cr has been allotted by the govt.



Six interconnected elevated corridors with a project cost of ₹15,825 Cr will be built in the city over the next four years.



Development initiatives are planned for the ambitious 66-km long Peripheral Ring Road connecting Hosur Road and Tumkur. It will be a 20-lane transit system with 10 lanes above and 10 below with metro line aligned in between, extending the metro services till the periphery making it an integrated system. The total project cost is expected to be ₹13,000 Cr.

To enhance the road network and resolve the gridlocks, defence land is being transferred for the road projects. Few such projects are stated below:

- Road connecting Ejipura Inner Ring Road to Sarjapura Main Road
- Road connecting NH 7 up to Sanjivanagara in Byatarayanaoura
- Road connecting NH 7 up to Hebbal Sarovara Layout via Amco Layout in Kodigenhalli
- Widening the Hosur-Lashkar road
- Slip road for elevated corridor/flyover in Kormangala
- Widening Lower Agaram Road from Hosmat Hospital to IST Main Road, Viveknagar
- Alternate road from Kavalbyrasandra Main Road to Modi Garden in D.J Halli



NHAI plans to widen the NH 7 which connects to Bengaluru International Airport from 6-lane presently to 8-lane to sustain higher traffic as a result of airport expansion.



A high-speed rail link from the city centre to the international airport is under development which will enable the passengers reach the destination in 20-30 minutes.



To serve the metro rail network, monorail is planned to act as a feeder line.



A connect from Devanahalli with Yeshvantpur via Yelahanka is enabled by a commuter rail system.



BMIC (Bengaluru-Mysore Infrastructure Corridor) which comprises 6-lane expressway which is toll road Bengaluru to Mysore is under development and is being implemented under PPP basis. The development also comprises of power plant, commercial development between the two cities, integrated townships, ring road ensuring fast and easy connectivity.



Devanahalli Business Park on a land parcel of 414 acres adjacent to BIA is planned by KSIIDC. KIADB plans to develop IT/BT park in Bagalur village on a land parcel of more than 1,000 acres.



Outlook

Bengaluru has, thus, evolved over the years from being called a 'Garden City' to be popularly known as the 'Silicon Valley of India.' The city has made its mark on the global map with several multinationals wanting to set up their base here. This, in a way, has given rise to the western realty trends being replicated here. Besides theme-based residences, quite popular in the western world, walk-to-work concept has also gained prominence where the globe-trotters now prefer to keep daily commute to the minimum.

Furthermore, the city is home to well-recognised and prominent educational and research institutes with high knowledge-based population, making it culturally and demographically a diverse city. It attracts migrants from inside and outside the state due to large employment opportunities being generated, thus leading to high real estate activity in the city.

Being primarily end-user driven market, it has withstood the severe impact of the triple tsunami of economic reforms in 2016 and 2017.

Considering the population growth of the city and buyers' requirements of having residence near workplaces, developers are building projects near office destinations and promoting walk-to-work culture in the city. This is majorly noticed in eastern, northern and southern parts of the city. Meanwhile, infrastructure upgrading initiatives by the Government such as metro rail project along the IT corridors will further enhance the connectivity and ease commute in the future.

Availability of large land parcels in East, North and South Bengaluru has given rise to mixed-use developments that incorporate residences, office spaces, malls, schools etc. Also, several IT parks have mushroomed in these regions over the years which have invariably created a demand for residential around it. While few mixed-use developments have become operational as on date, there are many under various stages of construction. Thus, with increasing traffic woes daily due to improper infrastructure facilities, the concept of walk-to-work looks here to stay in the future.



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