STOP **KIT**
Karlsruhe Institute of Technology

Residential
171.000 m² / 48,8 %

Parking
3.000 m² / 9,3 %

Hotel
7.000 m² / 20,1 %

Office
4.000 m² / 11,9 %

Retail, Gastro, Services
3.000 m² / 9,9 %

Delhi

Ahmedabad

Mumbai

Hyderabad

Bengaluru

IESL - Research Seminar Winter Term 2024/25

Urban India

Spatial Structures and Typologies in Metropolitan Areas

Approx. 118 m²

Approx. 209 m²

KIT Karlsruhe // Institute for Urban and Landscape Design // Prof. Markus Neppl

IESL - Research Seminar Winter Term 2024/25

Urban India

Spatial Structures and Typologies in Metropolitan Areas

STOP

"Urban development in India [...] will be the biggest sunrise industry that any countryhas seen in any part of the world."

(Kushal Pal Singh, CEO of Real Estate Developer, DLF Limited)

Content

Introduction

Prof. Markus Neppl, Dr. Manuel Giralt

Urban development in India today is at a critical juncture, characterized by rapid growth and significant challenges. As the country continues to urbanize, the demand for sustainable, livable cities has become more urgent. Only about 35% of India's population resides in urban areas today. This pecentage is expected to increase to over 50 % or another 400 million urban residents by 2050. With this dynamic development, cities across the country are grappling with a range of challenges that hinder the development of infrastructure, social cohesion, and environmental sustainability.

One of the most significant challenges in urban development is the rapid pace of urbanization. With the rural-to-urban migration steadily increasing, many cities are experiencing overcrowding. This leads to increasing segregation: On the one hand it adds to the expansion of informal settlements , where millions of people live without access to basic services such as clean water, sanitation, and electricity. On the other hand, private sector real estate developers create gated communities for the rising middle and upper class.

The overwhelming strain on existing infrastructure, coupled with limited urban planning, results in inadequate housing, transportation systems, and public services. Many urban areas still depend on outdated infrastructure, which cannot

South Mumbai skyline with Bandra-Worli Sea Link Bridge

Photo: © r/indiaspeaks

keep pace with the growing population. The lack of sustainable public transport networks, such as metro systems and bus services, contributes to traffic congestion and air pollution, affecting the quality of life for millions of residents. At the same time, water scarcity is a looming issue in many urban areas, where resources are over-exploited.

Rapid urbanization has also led to significant environmental degradation. Green spaces are being lost to urban sprawl, and air and water pollution levels in cities like Delhi have reached alarming levels. The growing demand for land has contributed to the encroachment on wetlands, forests, and other ecologically sensitive areas, further exacerbating environmental problems. Furthermore, climate change poses an additional challenge, with cities vulnerable to floods, heatwaves, and other extreme weather events.
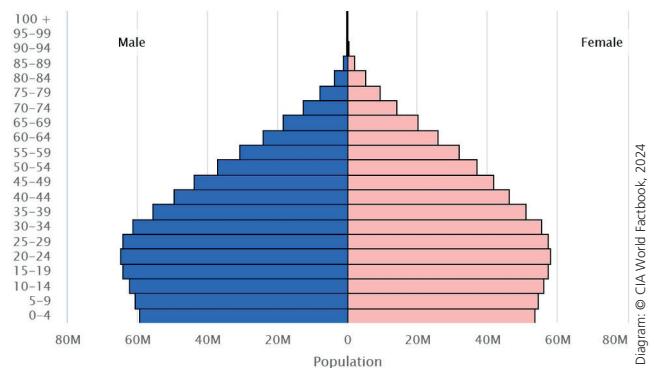
Another challenge facing urban India is social inequality. The benefits of urban growth are not evenly distributed, and the gap between the wealthy and the poor continues to widen. Access to quality education, healthcare, and other essential services often depends on one's socioeconomic status, creating significant disparities within cities. Disadvantaged communities, including migrants and lower-income groups, are often relegated to overcrowded informal settlements with limited access to resources and opportunities. This social divide leads to issues of exclusion and inequality, making it more difficult to achieve inclusive and equitable urban development.

In summary, urban development in India faces a multitude of challenges, ranging from overcrowded cities and inadequate infrastructure to environmental sustainability and social inequality. Addressing these issues requires a concerted effort from both the government and the private sector, along with a focus on long-term, sustainable solutions that prioritize inclusivity and resilience to create a livable future urban India.
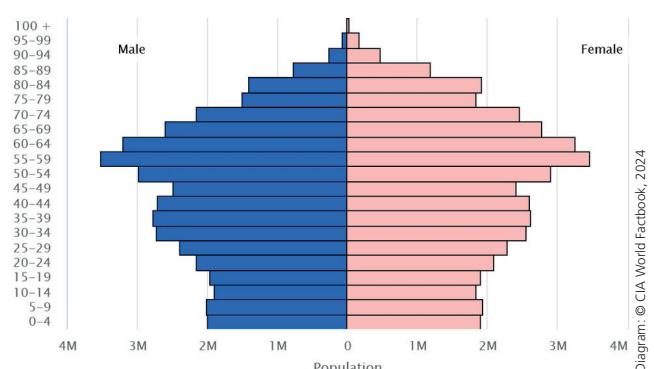
As can be deduced from the above overview, India is currently experiencing one of the largest waves of urbanisation, which will continue for the decades to come. The question on how these challenges are being solved forms the point of departure for this research project. The aim is to examine the currently prevailing trends and solutions in the field of urban design with a comparative analysis of various contemporary projects across India.

Aerial shot of Bangalore city of Nagawara area, 2019

Age Structure India, 2024

Age Structure Germany, 2024

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Task and Results of the Research Project

Prof. Markus Neppl, Dr. Manuel Giralt

DEPARTURE
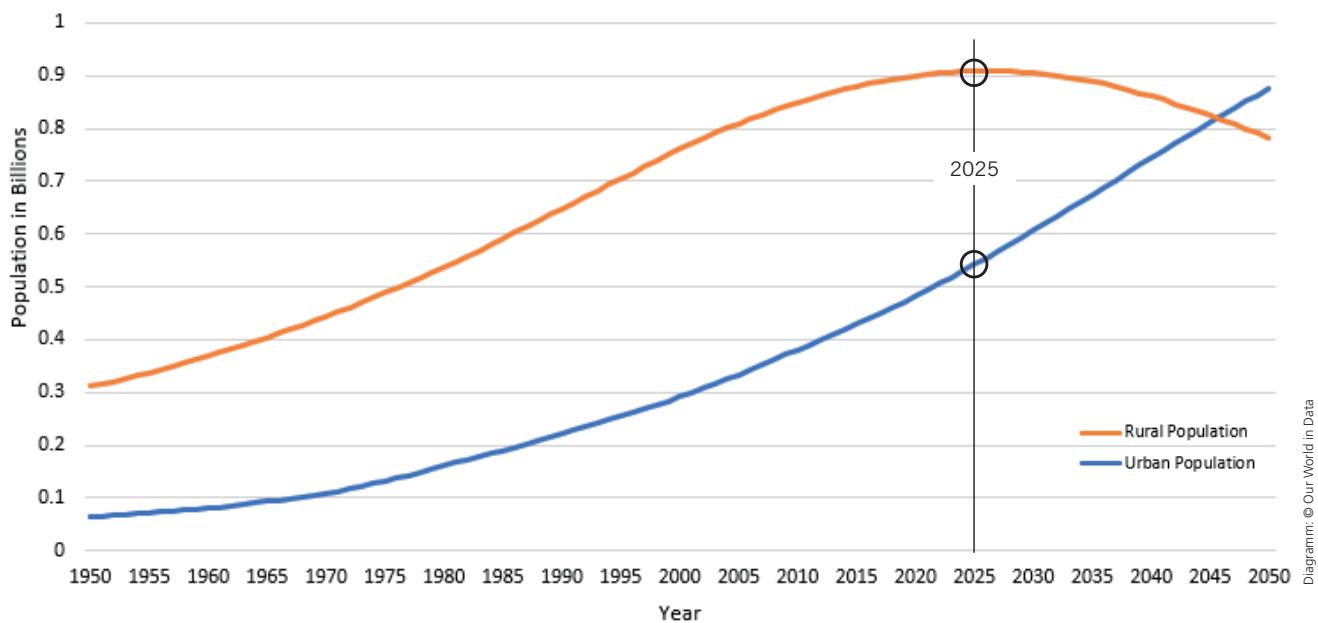
India surpassed China in terms of population size in April 2023, due to its rapid population growth. With an urban population well below 40%, India is experiencing one of the most dynamic urbanization processes globally. We take this as a starting point to examine current urban development in South Asia with a focus on urban growth patterns and prevailing building typologies in metropolitan areas like Mumbai, Delhi, Mumbai, Bengaluru, Hyderabad and Ahmedabad.

After a dive into the history and current trajectories of urban development of these fascinating cities, this study focuses on individual projects, their urban structures, mobility networks and open spaces. In order to achieve comparable results, in each city three representative areas are selected for detailed analysis.

This brings us to a series of overarching central questions that have accompanied us throughout this study and were part of the programme's cross-project discussion. The objective is to gain insights into current urban patterns and typologies by compiling information on the following topics for each case study:

• What are the main charateristics? (total area, share of public open space, public transit area, net building land, total gross floor area (GFA), plot coverage and floor area ratio)

• What is the overarching idea or project vision?

• Which open space and mobility concepts are applied?

• Which mix of functions and typologies are used?

• What makes this project unique? Which positive and negative aspects can be identified?

• Which additional topics are specific to the indiviudal project?

Urban and rural polpulation growth of India (1951-2050)

RESULTS

This publication presents the work of five student teams, each of which examined one of the five largest agglomerations in India. After examining the specific urban morphology and characteristics of the chosen city, each team identified three current urban development projects and analysed them in detail as case studies in accordance with the questions on the previous page.

With regard to the selection of case studies, it should be emphasised that this represents a biased view from Europe. A key factor in the selection of case studies was the available background information, which generally favours larger and commercial projects that have a stronger presence on the internet.

The results address questions regarding the prevailing urban form, urban design, typologies and mix of functions in fast growing cities across India. In many case studies we observe the lack of urban design in the sense of using building volumes to create attractive and inspiring urban spaces that support vibrant and livable neighbourhoods on a human scale.

Often they form gated communities that are comprised of series of uniform high-rise clusters. These towers show frequently exactly the same volume and architecture, repeated multiple times. Nevertheless, there are also some exceptions that follow a different urban design approach, like the ´The Trees´ in Mumbai (p. 18 ff.) or ´TSCUE-Campus´ in Hyderabad (p. 120 ff.). Both of which we recommend for further study.

With an expected urban growth of more than 400 million new inhabitants within the next 25 to 30 years, India now has the historic chance to shape the future of its cities today and for the years to come.

Against this backdrop, the results of this study can be seen from a different perspective and raise further questions:

Is the gated community high-rise scheme the inevitable predominant form of urban development in India?
Or are there other conceptual urban design solutions that might guide Indian cities to a more favourable, livable, sustainable and socially just urban future?

Top five urban agglomerations in India, 2025

MUMBAI

THE TREES PROJECT, HIRANANDANI GARDENS, LODHA WORLD TOWERS

Lea Großmann, Niklas Walz, Anna Ferreira Becker

Mumbai by Night

INTRODUCTION

Mumbai the "City of Dreams," is a sprawling metropolis on the western coast of India. As the capital of Maharashtra, it stands as the country's financial, commercial, and entertainment hub. From a population of around 1 million in the early 1900s, the city has transformed into a urban agglomeration. Home to over 20 million residents, Mumbai epitomizes diversity, blending ancient traditions with modern innovation. Looking ahead, Mumbai's population is projected to continue growing, albeit at a slower rate. By 2035, the population is expected to reach approximately 25 million.

As the population swelled, the city expanded its footprint through suburban development and reclamation projects. However, this rapid growth has placed immense pressure on housing, infrastructure, and resources, leading to challenges such as overcrowded transportation, housing shortages, and the proliferation of informal settlements like Dharavi, one of Asia's largest slums. The city's skyline is a striking mix of colonial-era architecture, sleek skyscrapers, and informal settlements.Landmarks like the Gateway of India, Chhatrapati Shivaji Maharaj

Terminus, and Marine Drive reflect its rich history and vibrant present. Mumbai's energy is palpable, driven by its bustling local trains, crowded markets, and an ever-moving population.

Famed for Bollywood, India's prolific film industry, Mumbai attracts dreamers from across the nation. It is also the headquarters of major corporations and the Bombay Stock Exchange, making it a magnet for business and career opportunities.

HISTORIC DEVELOPMENT

Mumbai's transformation from a group of seven sparsely populated islands to a bustling metropolis is a fascinating tale of urban and spatial development. Originally inhabited by the Koli fishing community, the islands were under various rulers, including the Mauryas, the Portuguese, and eventually the British. The city's modern history began in 1661 when the islands were handed to the British Crown as part of Catherine of Braganza's dowry. Shortly after, the British East India Com-

pany took control and began shaping Mumbai into a significant trading hub. The first major urban milestone came with the reclamation of land to connect the seven islands into a single contiguous landmass. Beginning in the 18th century, projects such as the Hornby Vellard (1784) tackled flooding issues and created more usable land for development. By the mid-19th century, large-scale reclamation efforts in areas like Colaba, Worli, and Back Bay expanded the city's footprint significantly. These pro-jects were crucial for supporting the growing population and enabling the construction of infrastructure such as roads, por-ts, and public buildings.

Mumbai's spatial development continued with the construction of docks and railways. The Great Indian Peninsula Railway's terminus, completed in 1853, made the city a key point of access for goods and people, fostering migration and trade. The rapid industrialization of the late 19th century further drove the need for expanded urban space, leading to additional reclamation projects.

In the 20th century, the city's spatial expansion faced new challenges due to land scarcity. This resulted in the planned development of suburbs like Dadar, Bandra, and Andheri. By the 1970s, the creation of Navi Mumbai, a satellite city across the harbor, marked one of the most ambitious efforts to decentralize growth and alleviate overcrowding in the core city.

Today, Mumbai spans approximately 1300 square kilometers, with ongoing land reclamation and infrastructure projects reshaping its geography. The Bandra-Worli Sea Link and coastal road projects have added significant new areas, while high-density developments in areas like Lower Parel and Bandra-Kurla Complex (BKC) reflect the city's vertical expansion. Despite these advancements, the city's topography and const-raints, such as the surrounding sea and mangrove ecosystems, continue to challenge Mumbai's spatial growth. Mumbai's history of spatial development is a testament to its resilience and adaptability. From connecting islands to becoming a sp-rawling metropolis, the city's growth reflects its ability to overcome geographic and demographic challenges.
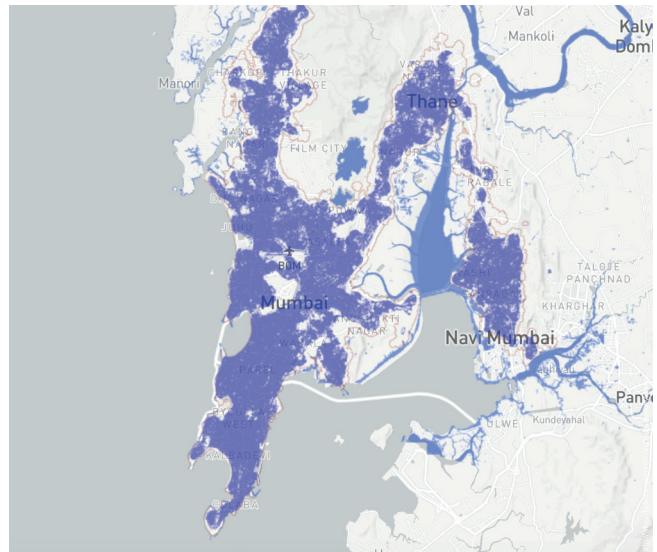

Figure-Ground Diagram 1991

Figure-Ground Diagram 2014

Growth of Population and Territory 1900 - 2050
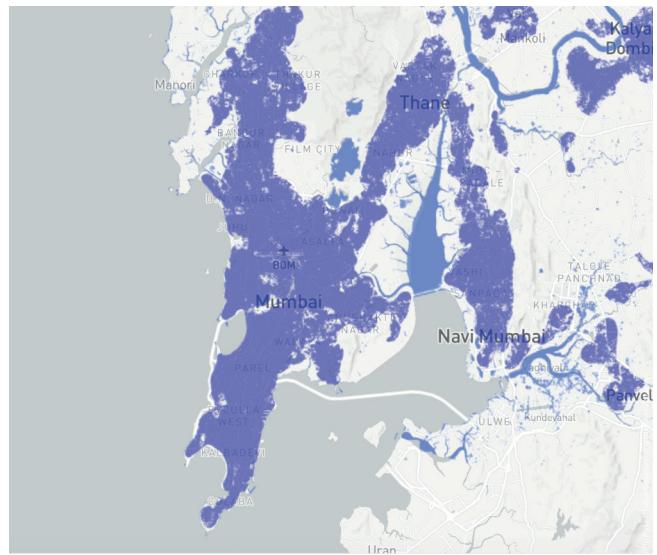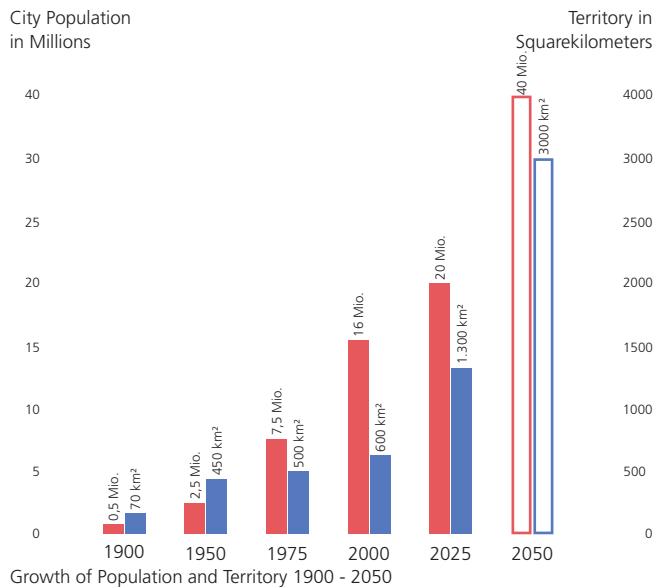
URBAN MUMBAI TODAY

Mumbai is a vibrant city but one that faces significant urban challenges. Rapid population growth has placed immense pressure on the city's infrastructure, housing, and resources. These challenges are compounded by Mumbai's geographical constraints, with the Arabian Sea limiting outward expansion, leaving the city to rely heavily on vertical development and land reclamation.

One of Mumbai's most pressing issues is the housing crisis. The city's exorbitant property prices have driven millions to live in informal settlements like Dharavi, where basic services such as water, sanitation, and electricity are often inadequate. Housing initiatives like the Slum Rehabilitation Authority (SRA) aim to replace informal settlements with modern housing complexes, providing better living conditions for residents.

Another major challenge is the city's overstretched transportation network and transportation, the Mumbai Metro expansion is a game-changer, providing an efficient and environmentally friendly alternative to local trains and buses. The Coastal Road project and the Trans-Harbor Link aim to improve connectivity while reducing congestion in core areas.

Furthermore rising sea levels and frequent flooding, exacerbated by climate change, threaten the city's infrastructure, particularly in low-lying areas. Environmental resilience is becoming a core focus. Projects to restore mangroves and create flood-resistant infrastructure are underway to mitigate the impact of climate change. Efforts to modernize waste management systems, including waste segregation and recycling, are gaining momentum.

Mumbai's challenges are immense, but its response reflects a city determined to adapt and evolve. By focusing on sustainable development, improved infrastructure, and inclusivity, Mumbai is charting a path toward becoming a more resilient and livable urban center.

Mumbai's development was guided by the vision of becoming a major trading and administrative hub under British rule. The first master plans focused on land reclamation projects like the Hornby Vellard to unify the city's seven islands, enabling the establishment of ports, railways, and industrial zones. These plans laid the foundation for Mumbai as a colonial economic center.
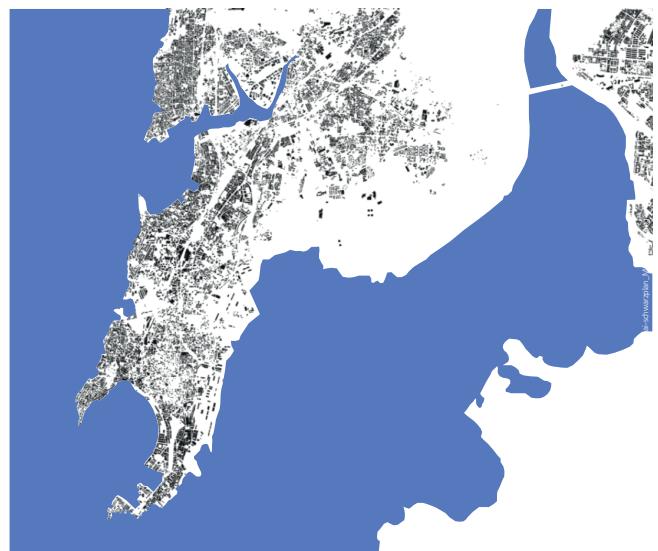
Figure-Ground Diagram

Recent master plans aim to address these gaps by prioritizing public transit, housing, and sustainability. Projects like the Mumbai Metro and coastal road initiatives reflect a shift toward modern, integrated urban systems. While Mumbai retains its role as India's financial capital, the challenges of overcrowding and environmental risks reveal inconsistencies in following the original vision.

Mumbai's future is defined by ambitious plans to address its challenges and ensure sustainable growth. Key developments include the expansion of the Mumbai, the Coastal Road Project, and the Mumbai Trans-Harbor Link, which aim to enhance connectivity, reduce congestion, and decentralize economic activity. Affordable housing initiatives, such as slum rehabilitation and vertical redevelopment, seek to tackle the housing crisis, while the upcoming Navi Mumbai International Airport is expected to drive economic growth. Sustainability is a central focus, with efforts to restore mangroves, improve flood resilience, modernize waste management, and adopt renewable energy. These projects reflect a vision of transforming Mumbai into a resilient, inclusive, and globally connected metropolis, balancing economic progress with environmental stewardship.
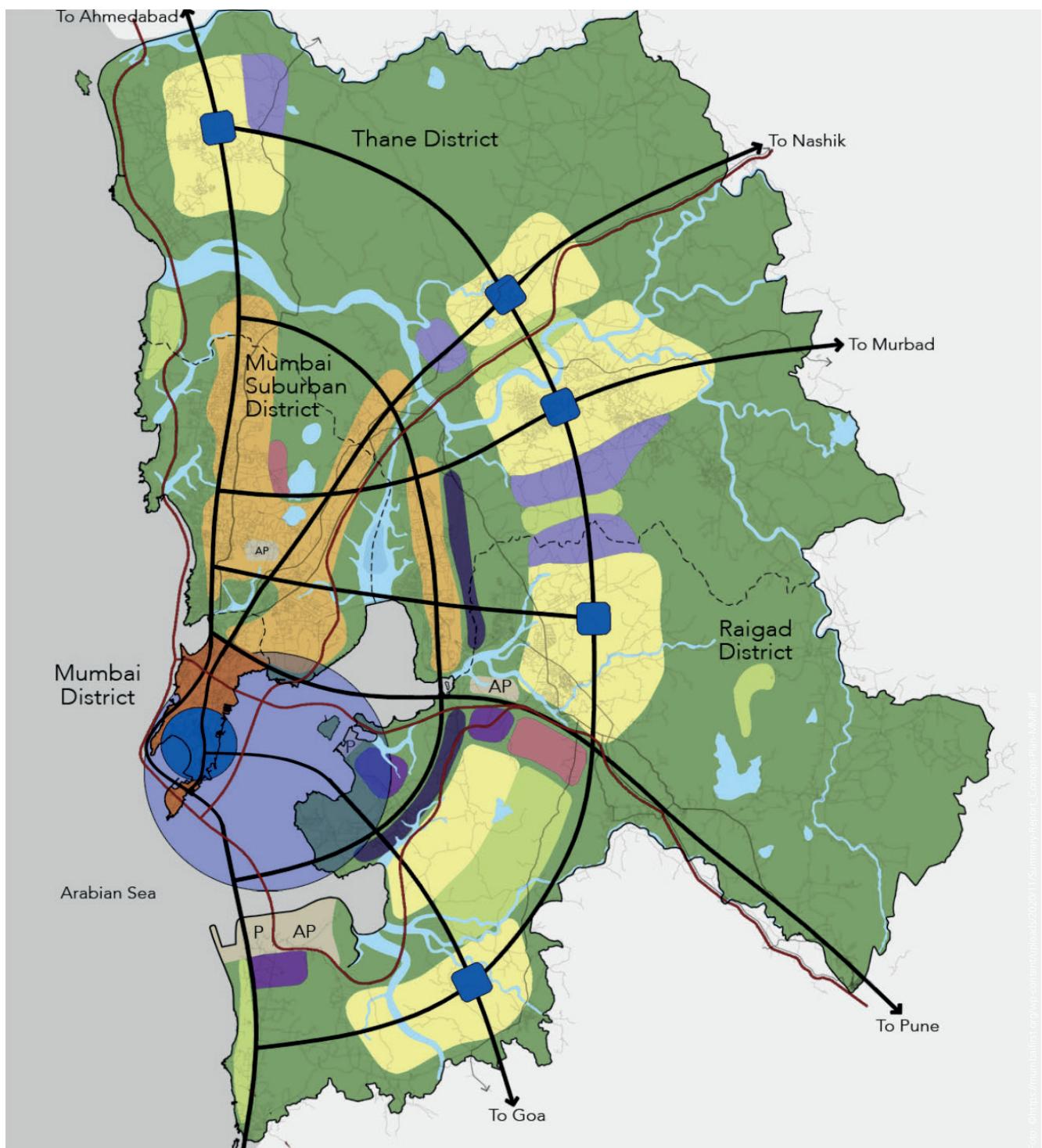
To Ahmedabad

Thane District

To Nashik

Mumbai
Suburban
District

To Murbad

AP

Mumbai
District

Raigad
District

AP

Arabian Sea

P   AP

To Pune

To Goa

- ● EXISTING CBD REJEUVENTATION
- ● POTENTIAL AREA FOR CBD EXPANSION
- P/AP NEW PORT AND AIPORT
- EXISTING INNER CITY AREAS REVITALIZATION
- EXISTING SUBURBAN AREAS REVITALIZATION
- CITY EXPANSION AND NEW TOWNSHIPS
- HIGH-TECH INDUSTRIAL CORRIDOR

- RESEARCH & EDUCATIONAL INSTITUTIONS '
- WELL DISTRIBUTED BUSINESS AND EMPLOYMENT OPPORTUNITIES
- INTERNATIONAL/REGIONAL LEVEL RECREATIONAL
- EXTENSIVE TRANSPORTATION NETWORK AND LINKAGES
- HIGH SPEED LINKAGES CONNECTING MUMBAI TO MAJOR METROS OF INDIA
- ENVIROMENTAL PRESERVATION AND MANAGEMENT

N

Urban Development Concept Mumbai, Master Plan 2050

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DHARAVI DEVELOPMENT PROJECT

The Dharavi Redevelopment Project is a large-scale urban renewal initiative aimed at transforming Mumbai's densely populated Dharavi neighbourhood. Covering around 2.1 square kilometres, the project focuses on providing better housing, improved infrastructure, and upgraded amenities for Dharavi's residents while maintaining the area's economic and cultural identity.

Key features of the project includes slum rehabilitation with new, modern housing for residents. As well as public spaces, healthcare facilities, and educational institutions. Sustainable urban design and eco-friendly infrastructure. Economic zones to support local businesses, artisans, and industries. Improved connectivity through roads, public transport, and pedestrian pathways. By addressing issues like overcrowding, poor infrastructure, and lack of sanitation, the project aims to turn Dharavi into a model of urban regeneration.

The project is planned in multiple phases, with the first phase focused on providing temporary housing, demolition of old structures, and basic infrastructure development. Subsequent phases will involve the construction of residential buildings, industrial zones, and the development of public amenities. The project is expected to take several decades to complete, given the scale and complexity of the work involved.

The Project has faced criticism and challenges related to land acquisition, resident resistance, and implementation delays. Many residents fear displacement, and there are concerns about the loss of the informal economy that provides livelihoods to thousands. Local opposition, some residents and businesses wanting to preserve their existing livelihoods and cultural practices. There have been significant issues with the project's financing, governance, and the complexity of managing a redevelopment of such magnitude in one of the world's most densely populated urban areas.

Ultimately, the Project seeks to balance the competing demands of preserving the area's cultural heritage and modernising its infrastructure.

Photo of the Dharavi Area

Visualization of the Bhendi Bazaar Project

BHENDI BAZAAR PROJECT

The Saifee Burhani Upliftment Project (SBUP) is a large-scale urban redevelopment initiative in Bhendi Bazaar, Mumbai, aimed at improving the living conditions, infrastructure, and socio-economic conditions of one of the city's oldest and most densely populated areas. The project is being led by the Burhani Foundation and involves the complete renewal of Bhendi Bazaar, focusing on residential, commercial, and community spaces.

The development tries to integrate these spaces, while trying to preserve Bhendi Bazaar's cultural heritage. The project focuses on sustainability with green spaces, energy-efficient buildings, and rainwater harvesting. With community participation and a focus on socio-economic upliftment, the SBUP aims to improve the quality of life for residents, create new business opportunities, and address urban challenges.
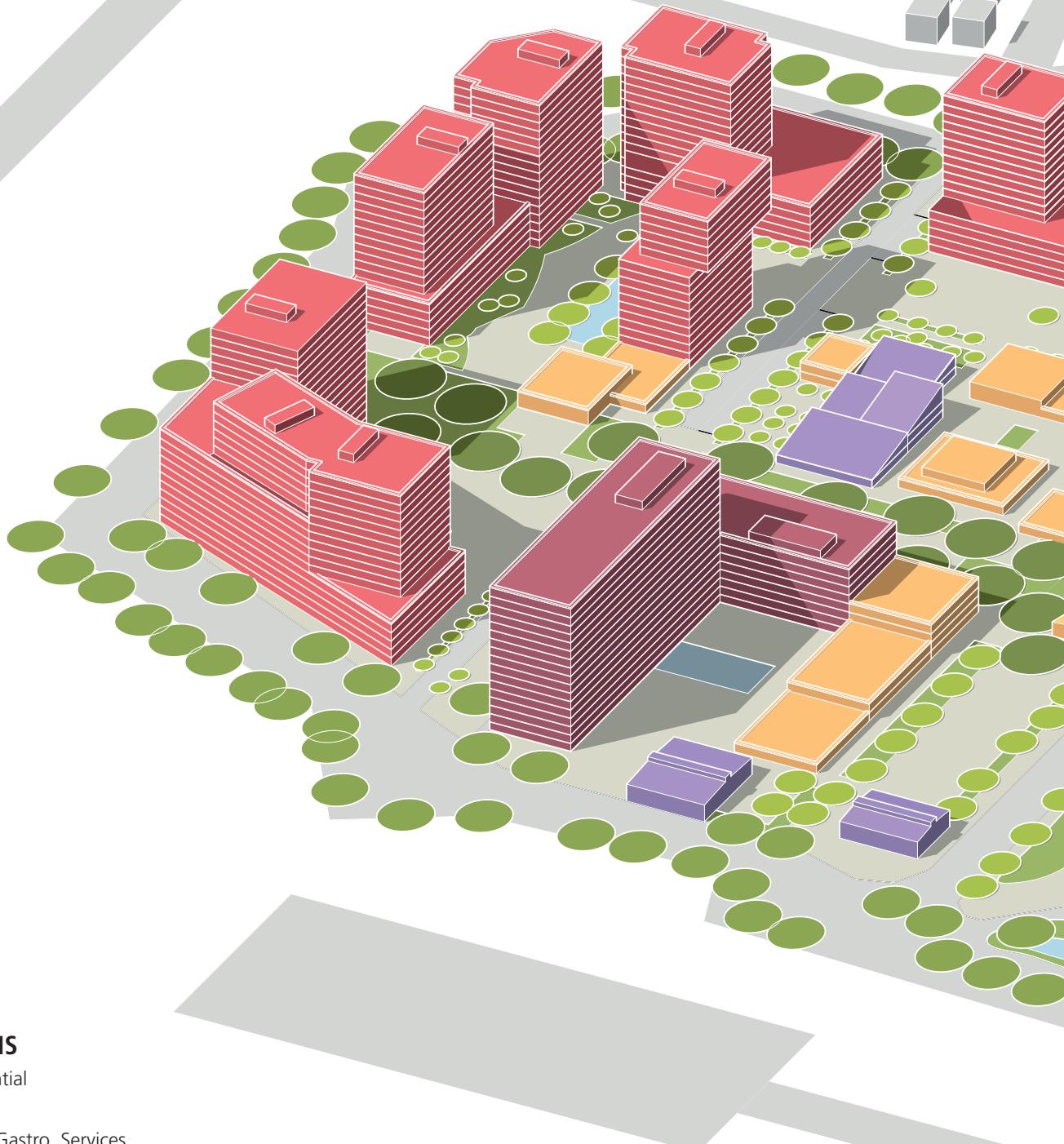
The Project aims to create a modern, well-integrated urban environment in Bhendi Bazaar, transforming the area from a congested slum into a thriving, sustainable neighborhood. By focusing on housing, infrastructure, commercial develop-

ment, and community well-being, the project not only seeks to improve living conditions but also contribute to the socio-economic and cultural revival of the area. Through careful planning, sustainable practices, and strong community engagement, the SBUP aims to set a benchmark for urban renewal in Mumbai.

Although the project is intended to uplift the community, some argue that the extent of community consultation has been insufficient. Also despite the slum rehabilitation focus, there are concerns that the new homes may not be affordable enough for all residents. The promise of larger homes may still result in rising rents or costs that current residents may not be able to bear, particularly in the long term.

While the project promises to provide new housing for those displaced, many residents fear being uprooted from their communities. Critics argue that the process of temporarily relocating residents during construction could lead to loss of social ties and disrupt livelihoods.

THE TREES
- A NEW MIXED-USE URBAN DISTRICT
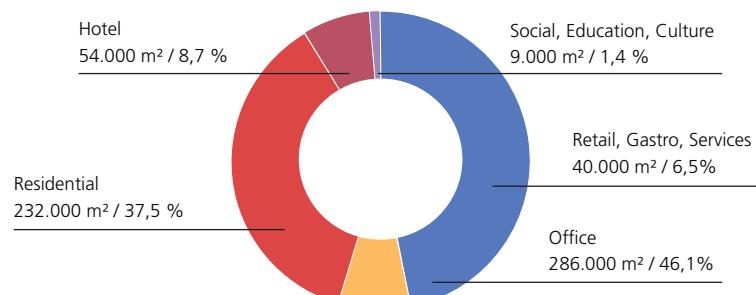
FUNCTIONS

- 🟥 Residential
- 🟥 Hotel
- 🟧 Retail, Gastro, Services
- 🟦 Office
- 🟦 Production
- 🟪 Social, Education, Culture
- 🟦 Parking
- 🟪 Transit

KEY DATA

Total Area	18 ha /	100,0 %
Public Open Space	8,3 ha /	46,2 %
Public Transit Area	4,4 ha /	24,4 %
Net Builduing Land	5,3 ha /	29,4 %
Total GFA		620.000 m²
Total Plot Coverage		0,29
Floor Area Ratio (FAR)		3,42

Hotel
54.000 m² / 8,7 %

Social, Education, Culture
9.000 m² / 1,4 %

Retail, Gastro, Services
40.000 m² / 6,5%

Residential
232.000 m² / 37,5 %

Office
286.000 m² / 46,1%

CASE STUDY 1:
THE TREES PROJECT

PROJECT DESCRIPTION
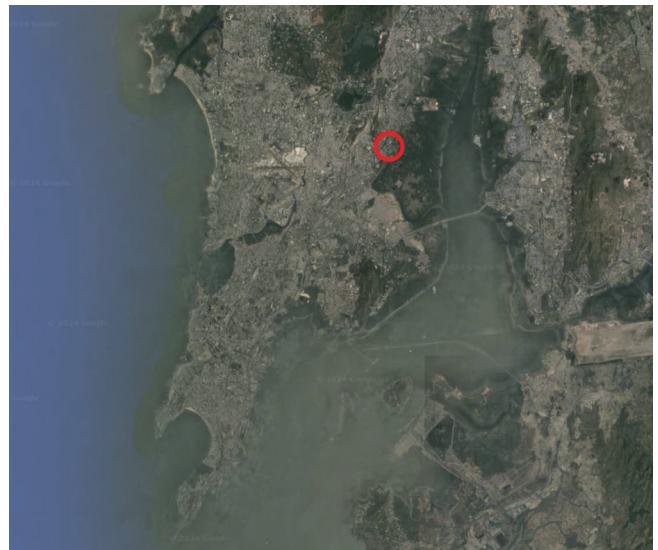
The Trees is a transformative urban development project designed by Sasaki Architects, located on the expanding eastern edge of Mumbai, the site is part of the city's expanding urban district, an area that has seen significant growth in recent years.

The location of The Trees benefits from its proximity to key transportation routes, including major highways, as well as Mumbai's central business districts. Spanning 18 ha, the project repurposes an existing Godrej soap manufacturing complex and reimagines it as a dynamic mixed-use district. The development integrates residential, retail, hotel, and commercial spaces while honoring the site's industrial past and natural heritage.

The site's industrial roots trace back to the Godrej soap manufacturing complex, which has been a prominent feature of Mumbai's industrial landscape for many decades. Godrej, founded in 1897, has long been a symbol of Indian manufacturing and innovation, known for its diverse range of products, including soaps, furniture, and security solutions. The company's legacy of craftsmanship and quality is deeply embedded in the site, and The Trees seeks to honor this history while transforming the area into a modern urban district.

The Godrej complex, with its large-scale factory buildings and industrial remnants, provided a unique opportunity for adaptive reuse and creative urban regeneration. Sasaki Architects, was tasked with reimagining the site in a way that would preserve its historical heritage while meeting the needs of a contemporary, sustainable, and vibrant community.

The Trees project seamlessly blends modernity with history, offering a vision of sustainable urban living. The development not only transforms the old industrial site into a thriving mixed-use district but also prioritizes green spaces, pedestrian-friendly pathways, and environmental sustainability.

Project Location in Mumbai

PROJECT VISION

In the context of this rich history and strategic location, The Trees project is designed to bring together the best of both the past and the future. The project's design incorporates key elements of the site's industrial legacy, such as the preservation of key factory buildings and a central green spine of mature trees, while also introducing new, modern infrastructure to meet the needs of a growing city.

The master plan integrates a mix of residential, commercial, and cultural spaces, with an emphasis on creating a pedestrian-friendly environment that fosters interaction and community. Sustainable design principles are central to the project, including a comprehensive stormwater management system and strategies for reducing energy consumption, all while honoring the site's historical and ecological context.

Ultimately, The Trees is intended to be a future-facing community that celebrates Mumbai's industrial past while working with the opportunities of modern urban living. The project seeks to serve as a model for sustainable, culturally-aware urban regeneration, with a focus on blending heritage, nature, and cutting-edge design to create a vibrant, cohesive space for residents and visitors alike.

OPEN SPACE CONCEPT

At the heart of The Trees is a commitment to sustainability and community. The design preserves key elements of the existing industrial structures and heritage landscape, including a central green spine of mature Samanea saman (Rain trees), which are a defining feature of the site. The plan incorporates these trees into the overall layout, not only as environmental assets but also as an organizing element for the development.

This green spine, a robust pedestrian corridor, serves as a protected "retail garden", surrounded by small courtyards, pathways, and public spaces. These areas are designed to encourage interaction and connection, with references to traditional Indian landscape architecture that prioritize layered, sequential experiences.

The green spaces will be equipped with features that help mitigate the impacts of flooding, heatwaves, and other climate change-related challenges. By creating sustainable and adaptable landscapes, the project aims to future-proof the city's open spaces against changing environmental conditions.

MOBILITY CONCEPT

Sasaki's mobility concept aligns with the broader sustainability goals of The Trees. By reducing car dependency, encouraging active transportation, and supporting shared mobility, the development aims to lower its carbon footprint and contribute to improved air quality in the surrounding area. The well-planned mobility network also enhances the quality of life for residents and visitors by reducing traffic congestion and promoting a healthier, more connected urban environment.
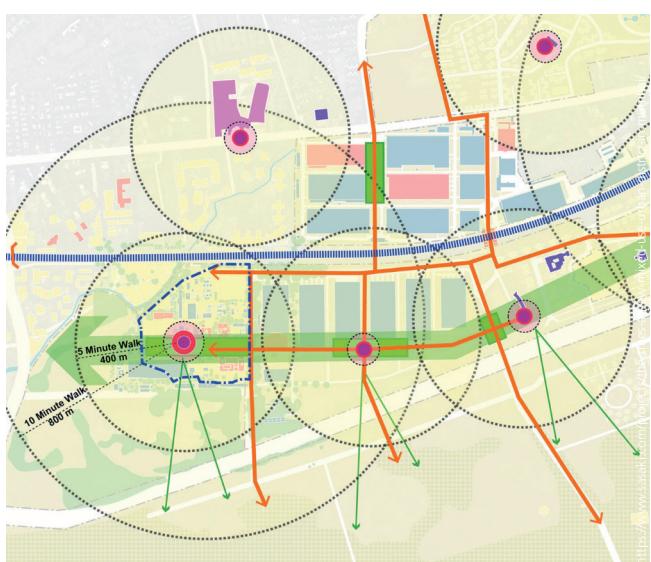
The mobility concept of The Trees reflects a forward-thinking approach to urban transportation, prioritizing sustainability, accessibility, and connectivity. By focusing on pedestrian-friendly design, integrated public transportation, and eco-friendly mobility options like cycling and electric vehicles, the project aims to set a new standard for mixed-use urban developments in Mumbai. The goal is to create a seamless, efficient, and environmentally responsible movement system that enhances the overall experience of living, working, and visiting The Trees.

Location

Open Space Diagram

Mobility Diagram

Siteplan 1:3000
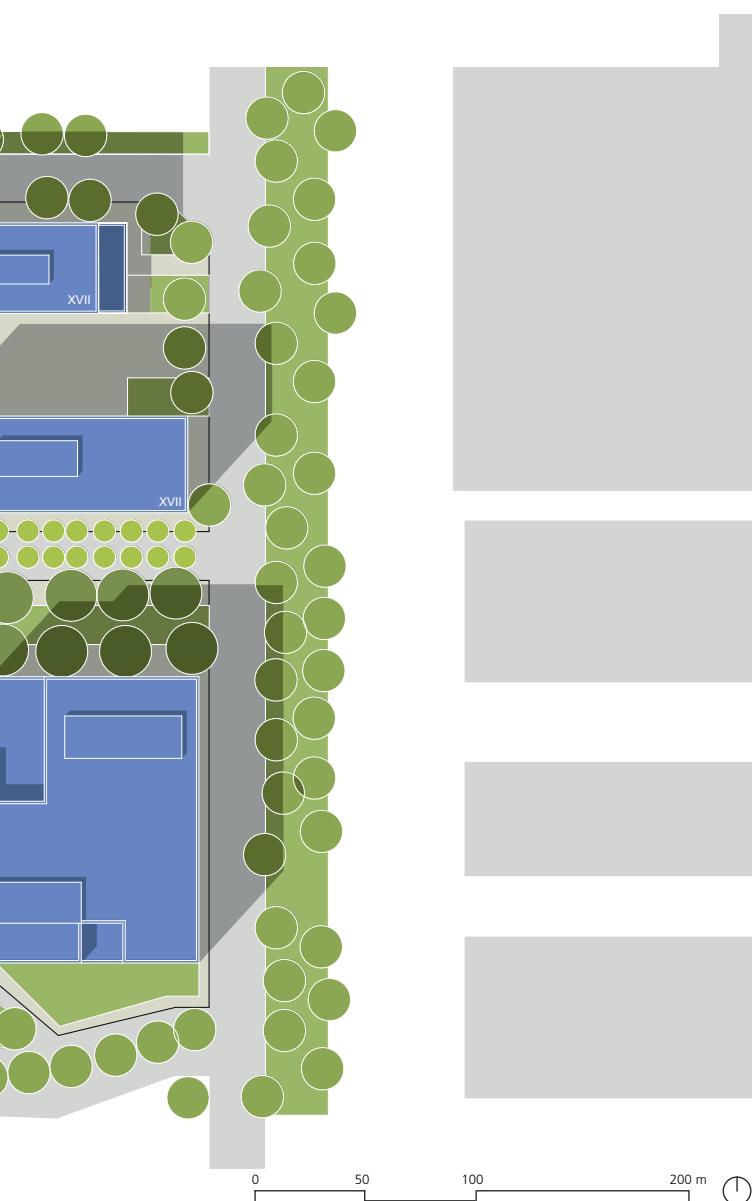
MIX OF FUNCTIONS AND TYPOLOGIES

The Trees project is a mixed-use development designed to bring together a wide range of functions that support both the working and living needs of the community. The goal is to create a self-sustained urban ecosystem where residents, workers, and visitors can live, work, and play within the same environment.

The Trees features a mix of residential high-rise towers, alongside lower-rise commercial buildings. This variety creates an engaging urban landscape with a balance of density and open spaces.

A key component of the Trees project is a diverse range of residential typologies. These residential spaces are designed for various demographic groups, ensuring that there is a mix of affordable, market-rate, and premium housing options.

The development includes office buildings, co-working spaces, and business hubs that cater to both large corporations and small enterprises. The mix of commercial spaces supports Mumbai's rapidly growing tech and creative industries, providing flexible workspaces that encourage innovation and collaboration.

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0        50      100              200 m
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WHAT MAKES THE TREES PROJECT UNIQUE?

The Trees project stands out as a unique urban regeneration initiative for several reasons, blending history, sustainability, cultural sensitivity, and forward-thinking design.

This transformation of a historically industrial site into a contemporary, mixed-use urban development preserves the site's legacy while reimagining it for the future. The integration of past and present — from the site's industrial roots to its new, sustainable urban identity — creates a unique contrast that respects history while pushing for modernity.

Instead of demolishing the old structures, the project seeks to preserve and reinterpret the industrial character of the site, integrating the historical identity of the location into a vibrant, mixed-use, and contemporary urban development.

This project is designed as a self-contained, mixed-use community, offering a blend of residential, commercial, retail, and cultural spaces. It allows people to live, work, and play within the same environment, fostering a sense of community while reducing the need for long commutes. This creates a seamless connection between the private, public, and work domains, promoting a sustainable and balanced lifestyle. The mix of uses includes affordable housing, luxury apartments, workspaces, and creative hubs, all woven into a single, cohesive urban fabric.

The site is designed to be climate-resilient, with flood management features, adaptable building structures, and sustainable water management systems that help mitigate the effects of extreme weather events.

The design prioritises pedestrian movement with wide, tree-lined streets, safe walkways, and public plazas that encourage social interaction and community engagement. By reducing car dependency, the development fosters healthier, more active lifestyles.

The integration of spaces like the Imagine Studio, a creative hub, and cultural centers not only offer places for innovation and artistry but also encourage collaboration and cultural exchange, making the development an incubator for Mumbai's evolving creative economy.

The Trees project integrates retail spaces, including shops, restaurants, cafes, and entertainment venues, allowing a vibrant street life and offering amenities for residents and visitors.

Sasakis philosophy of creating human-centred environments, the Trees development emphasises community engagement and cultural exchange. The project features spaces that encourage social interaction and creativity, like public plazas, open spaces, cultural and art spaces, as well as community hubs.

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SUSTAINABILITY AT THE TREES

Sasaki Architects devised a comprehensive strategy for storm-water management at the site. With ambitious goals of reducing stormwater runoff by 50% and achieving a 50% net energy reduction, the design resulted in a fully integrated landscape solution. This solution maximizes surface permeability to enhance water absorption and focuses on the re-use of rainwater and graywater to create a sustainable, resource-efficient urban environment. By addressing both water management and energy efficiency, the strategy significantly contributes to the overall sustainability and resilience of the development.

Passive design focuses on maximizing the natural environmental conditions (such as sunlight, wind, and rain) to create energy-efficient and comfortable spaces without relying heavily on mechanical systems. These strategies are energy-saving and environmentally friendly.

Active design involves the use of mechanical systems, technology, and infrastructure to actively manage energy use, water, and comfort. These strategies complement the passive design elements by enhancing the performance of the overall building system.

The combination of both approaches contributes to the project's overall sustainability and resilience. By incorporating innovative technologies and leveraging the natural environment, Sasaki Architects has created a development that not only enhances the quality of life for its residents but also sets a high standard for sustainable urban design in Mumbai and beyond.

This dual approach helps achieve the 50% energy reduction goal and significantly reduces stormwater runoff, ensuring that the development aligns with both environmental sustainability and the specific climatic challenges of Mumbai's monsoon season.

Active and Passive Design Strategies for Water an Energy Management

Section: Mix of Functions and Typologies

IMAGINE STUDIO AT THE TREES

The Imagine Studio, designed by Studio Lotus in collaboration with GPL Design Studio, is a remarkable example of adaptive reuse, transforming the remnants of industrial architecture within The Trees development into a vibrant creative hub. By retaining key elements such as the original steel frameworks, exposed brick walls, and expansive factory-style windows, the design preserves the character of the site's industrial heritage while reimagining it for contemporary use.

Central to the project is a commitment to sustainability, with reclaimed materials like salvaged wood and metal from the original structures carefully restored and reintegrated into the new design. These authentic elements are juxtaposed with modern interventions, including glass panels, concrete finishes, and open layouts, creating a harmonious balance between past and present. This sensitive approach highlights the raw, utilitarian beauty of the industrial framework while enhancing the space's functionality as a hub for creativity and cultural exchange.

Beyond its aesthetic appeal, the Imagine Studio serves as a bridge between Mumbai's industrial history and its innovative future. As a key part of The Trees development, it embodies the principles of sustainability, community building, and urban renewal, offering a space where heritage and modernity coexist to inspire collaboration and creativity.

The design also emphasizes the integration of indoor and outdoor spaces, creating a seamless connection between the industrial structures and the surrounding natural environment of The Trees. Courtyards, landscaped pockets, and open-air zones are carefully incorporated into the layout, allowing the once-industrial site to feel vibrant and inviting. This blending of architecture and nature not only enhances the aesthetic quality of the space but also aligns with the overarching vision of The Trees as a sustainable, mixed-use urban development. The Imagine Studio stands as a symbol of thoughtful regeneration, demonstrating how architecture can honor history while fostering innovation and community engagement.

Areal View Before Renovation
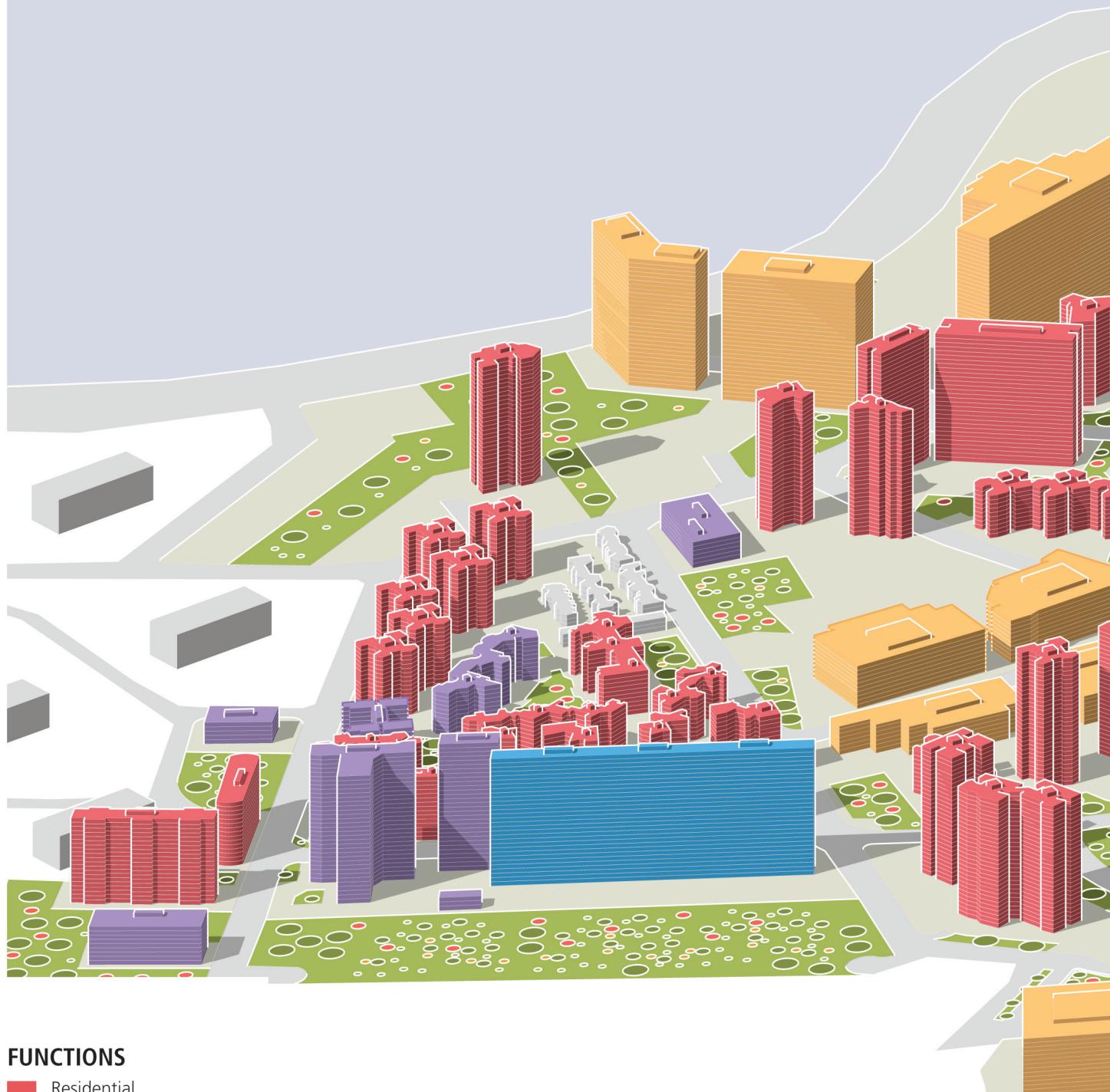
Areal View After Renovation

Areal View After Renovation

HIRANANDANI GARDENS

FUNCTIONS

- Residential
- Hotel
- Retail, Gastro, Services
- Office
- Production
- Social, Education, Culture

KEY DATA

Total Area	250 ha /	100,0 %
Public Open Space	120,7 ha /	48,3 %
Public Transit Area	37,2 ha /	14,9 %
Net Building Land	92,1 ha /	36,8 %
Total GFA	2.760.000 m²	
Total Plot Coverage	1,12	
Floor Area Ratio (FAR)	4,32	
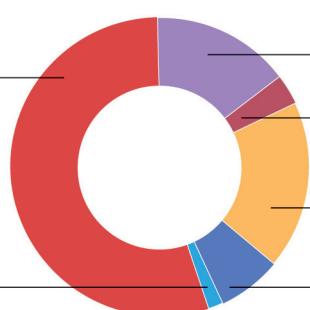
Residential
1.463.000 m² / 52,8 %

Social, Education, Culture
414.000 m² / 14,7 %

Hotel
83.000 m² / 2,9 %

Retail, Gastro, Services
469.000 m² / 16,8 %

Office
276.000 m² / 9,9 %

Production
55.000 m² / 1,9 %

CASE STUDY 2:
HIRANANDANI GARDENS
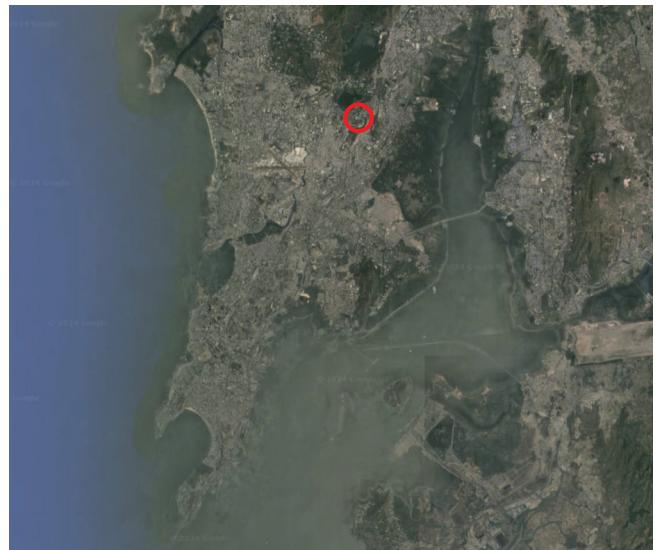
PROJECT DESCRIPTION

Hiranandani Gardens, located in Powai, Mumbai is developed by the Hiranandani Group. This expansive residential and commercial development is known for its neo-classical architecture and urban planning, which tries to blend modern infrastructure with natural surroundings. Spanning a vast area, the project aims to create a balanced and self-sustained community that integrates residential, commercial, and recreational spaces.

The township offers a spectrum of housing options, from 1-, 2-, 3-, to 4-BHK apartments, all designed to provide living spaces that cater to the diverse spectrum of residents. Each apartment is built with th attempt to combine aesthetics, functionality, and comfort. These homes are planned for families, working professionals, and investors seeking a dynamic, vibrant lifestyle in one of Mumbai's desirable locations.

In addition to housing, Hiranandani Gardens offers a range of amenities that enhance the quality of life for its residents. The township is equipped with essential infrastructure such as schools, hospitals, shopping centers, and retail outlets, making it a completely self-service community. Residents can also enjoy a variety of leisure and recreational facilities, including fitness centers, swimming pools, clubhouses, and sports complexes. The focus on wellness is evident, with dedicated spaces for relaxation and outdoor activities.

Hiranandani Gardens is also strategically located with a good connectivity to major business hubs and educational institutions across Mumbai. It offers easy access to major highways and transportation routes, facilitates smooth connectivity to other parts of the city.

Project Location in Mumbai

PROJECT VISION

The vision behind Hiranandani Gardens in Powai, Mumbai, is to create a self-sustained urban community that integrates modern living, sustainability, and nature.

The Hiranandani Group envisions the township as a comprehensive ecosystem, where residential, commercial, and recreational spaces coexist seamlessly, ensuring that all essential services and amenities are within close proximity. This integrated approach aims to foster a sense of community and wellbeing, creating a place where people can live, work, and play in an environment that promotes both personal and collective growth.

In addition, the vision includes setting new benchmarks for sustainable urban development in India, using innovative design, advanced technology, and environmentally conscious construction practices. The overall aim is for Hiranandani Gardens to not only be a place to live but a model for future urban communities, creating a lasting impact on both the local environment and the future of Indian real estate.

OPEN SPACE CONCEPT

The open space concept in Hiranandani Gardens, Powai, Mumbai, is thoughtfully designed to provide residents with a harmonious balance of nature and urban living. The township features over 20 ha of open green spaces, offering ample room for relaxation and recreation. Key highlights include four themed gardens, including a man-made forest, each offering unique landscapes and experiences. Among these, Nirvana Park, spanning 2 ha, draws inspiration from Japanese landscape design, incorporating stone paths and foot reflexology zones to promote wellness.

The development also includes wide, tree-lined roads and pedestrian-friendly pathways, encouraging walking and outdoor activities. Additionally, residents benefit from various recreational facilities nestled within lush green surroundings, creating a serene and community-oriented environment. This meticulous integration of open spaces significantly enhances the quality of life, fostering well-being and a sense of connection within the urban landscape.
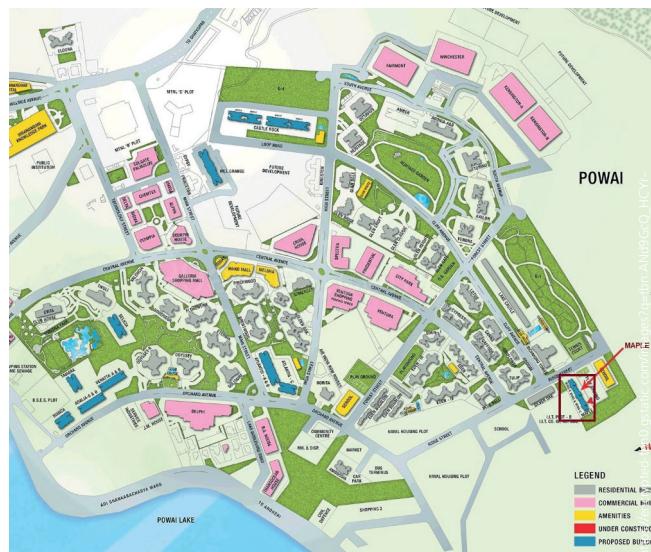
MOBILITY CONCEPT

The mobility system in Hiranandani Gardens, Powai, Mumbai, is well-developed and provides residents with a variety of transportation options. The township is strategically located near major highways, such as the Western Express Highway and the Eastern Express Highway, ensuring easy access to other parts of the city. Regular bus services and auto-rickshaws are readily available, offering convenient travel within and outside the township.

Moreover, the planned opening of the Mumbai Metro Line 6 (Pink Line) will further enhance connectivity, with stations like Rambaug, Powai Lake, and IIT Powai serving the area. These diverse transportation options ensure seamless access to key destinations in Mumbai, making Hiranandani Gardens an attractive and well-connected place to live.

Location

Master Plan

Mumbai Metro Line 6

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Siteplan 1:10.000

MIX OF FUNCTIONS AND TYPOLOGIES

The mix of functions and typologies within Hiranandani Gardens, Powai, Mumbai, is central to the project's uniqueness and self-sustaining nature. The development seamlessly integrates residential, commercial, and recreational spaces, creating a vibrant, well-rounded community that meets all the needs of its residents.

The residential offerings range from 1- to 4-BHK apartments, designed for comfort and luxury with spacious layouts, modern amenities, and high-quality finishes. These homes cater to families, professionals, and individuals, offering a lifestyle that balances privacy and community. Alongside the residences,

Hiranandani Gardens features commercial spaces, including office buildings and retail outlets, fostering a self-sustained environment where residents can work, shop, and socialize without needing to leave the township.

Recreational facilities such as swimming pools, sports complexes, and clubhouses encourage an active lifestyle, while green spaces, themed gardens, and pedestrian-friendly walkways provide peaceful areas for relaxation and social interaction. The development also offers essential services, including schools and hospitals, ensuring that residents have convenient access to healthcare and education.

The integration of public and private spaces creates a sense of community while maintaining privacy. This thoughtful blend of diverse functions and typologies makes Hiranandani Gardens a dynamic, sustainable township, where everything residents need is within close proximity. By offering a comprehensive lifestyle with modern conveniences, the project creates a truly self-sustained living environment.

WHAT MAKES HIRANANDI PROJECT UNIQUE?

Hiranandani Gardens in Powai, Mumbai, is a truly unique project that distinguishes itself through its holistic approach to urban living, seamlessly integrating modern infrastructure, sustainability, and community-oriented design. The development is renowned for its neo-classical architectural style, giving it a timeless, elegant charm while incorporating contemporary urban elements, making it stand out in the bustling cityscape.

What sets this project apart is its self-sustained ecosystem, offering a blend of residential, commercial, and recreational spaces within the same community. This integrated design ensures that essential amenities such as schools, hospitals, retail outlets, and fitness centers are easily accessible to residents, enhancing the overall convenience and quality of life. Moreover, the development places a strong emphasis on sustainability, with over 20 ha of green spaces, themed gardens, and pedestrian-friendly walkways, creating a peaceful and eco-conscious environment where nature and urban life harmonize.

The township also features world-class amenities, including swimming pools, sports complexes, clubhouses, and wellness parks, catering to a variety of recreational and health needs. Located in Powai, one of Mumbai's most desirable neighborhoods, Hiranandani Gardens benefits from excellent connectivity to major business hubs, educational institutions, and entertainment zones, ensuring both accessibility and convenience.

With the upcoming Mumbai Metro Line 6, the area will only become more connected, positioning Hiranandani Gardens for long-term growth and sustainability. These features, combined with its focus on modern, comfortable living and its emphasis on community and nature, make Hiranandani Gardens not just a place to live, but a vibrant, sustainable community that offers a balanced and elevated lifestyle in the heart of Mumbai.

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ART AND CULTURE AT HIRANANDANI GARDENS

In the Hiranandani Project Powai, art and culture are not merely decorative elements but integral parts of the development's identity, contributing to the creation of a dynamic and engaged community. The project integrates a wide array of artistic expressions throughout its public spaces, with sculptures, murals, and installations that reflect a blend of modern design and traditional Indian influences. These art pieces serve as focal points, enhancing the visual appeal of the surroundings while sparking conversations and connections among residents.

The commitment to culture extends beyond static art; the development regularly hosts cultural events such as music festivals, dance performances, theater productions, and art exhibitions. These events not only offer entertainment but also provide platforms for local artists and performers, contributing to the vibrant cultural life of the area. Additionally, the spaces within the project are designed to encourage creativity, with community centers and galleries where residents can engage with art, learn new skills, and participate in workshops.

This emphasis on art and culture helps create a strong sense of belonging and pride among residents. It also makes the Hiranandani Project Powai more than just a residential space—it becomes a place where people of different backgrounds and interests can come together, fostering a sense of community and enhancing the overall quality of life. The thoughtful integration of art and culture into the development not only enriches the aesthetic landscape but also nurtures social bonds, making it a cultural destination in the heart of Mumbai.

LEGEND
1. THE PIER
   (ENTRY/ EXIT GATE AND PORTAL)
2. THE RIPPLE
3. LAWN 'GREEN CONCOURSE'
4. MANICURED WALKWAY
5. CASCADING GRASS GLADES
   (AMPHITHEATRE)
6. PERFORMANCE SQUARE
7. CHILDREN'S PLAY AREA
8. PARENT'S PAVILION
9. "THE RETREAT" SITTING ALCOVE
10. "THE SHADE" SITTING PAVILION
11. MEDITATION PARK
12. SCULPTURE GARDEN
13. MULTI PURPOSE COURT
14. CRICKET PITCH
15. WALKWAY PATH
16. WIFI GARDEN
17. "THE COURTYARD" GARDEN
18. REFLEXOLOGY AREA
19. PALM MEADOWS
20. "THE WAVE CREST" (LAP POOL)
21. POOL DECK WALKWAY
22. INTERACTIVE WAVE BRIDGE
23. GREEN WALL
24. TIMBERLAND FALLS
25. ADVENTURE WALL PLAY
26. PATHWALK
27. DROP-OFF
28. GREEN BUFFER
29. LOOKOUT SQUARE
30. SPECTATORS SEATING
31. JOGGING/BICYCLE TRACK
32. PARKING

Landscape Plan

CULTURAL AND HISTORICAL INFLUENCES

The architecture of the Hiranandani projects in Mumbai represents a unique fusion of cultural diversity, historical influences, and modern design principles. Iconic developments like Hiranandani Gardens in Powai have created a distinctive architectural identity that combines functionality with visual elegance and cultural depth.

A key feature of Hiranandani architecture is the incorporation of classical European design elements, such as Corinthian columns, domes, and symmetrical facades, which convey a sense of luxury and timeless elegance. These elements help distinguish the projects from the utilitarian structures commonly found in Mumbai. At the same time, the architecture is adapted to the local climate, using materials like granite and sandstone, and features like large windows, shaded balconies, and pastel-colored facades, which enhance ventilation and thermal comfort.

The landscape design is inspired by English gardens, incorporating geometric green spaces, fountains, and ponds that blend beauty with ecological balance. Native plant species further support biodiversity, ensuring that the development complements its natural environment. Additionally, traditional Indian design elements, such as mandala patterns and temple-like structures, are reinterpreted in a contemporary way, creating spaces that foster cultural and social connections.
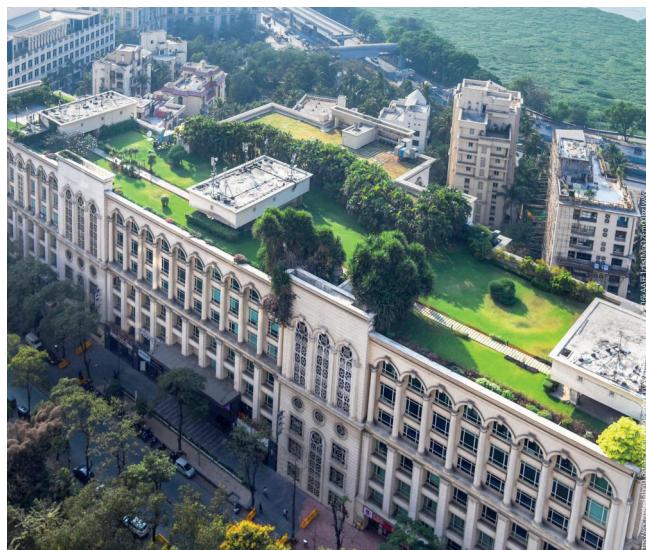
The distinctive skyline, with its domes and spires, symbolizes both historical grandeur and modern ambition. By merging European elegance with local adaptations and Indian traditions, Hiranandani projects set new standards for sustainable, culturally rich, and aesthetically refined urban architecture.emplifies a masterful integration of global influences, local adaptations, and traditional Indian elements. By blending European elegance with practical and cultural considerations, these developments create a unique style that is both timeless and forward-looking. As a result, Hiranandani projects set a benchmark for sustainable, aesthetically refined, and culturally rich urban development, redefining the possibilities of modern architecture in India.

Picture of public and residental buildings

Public green area
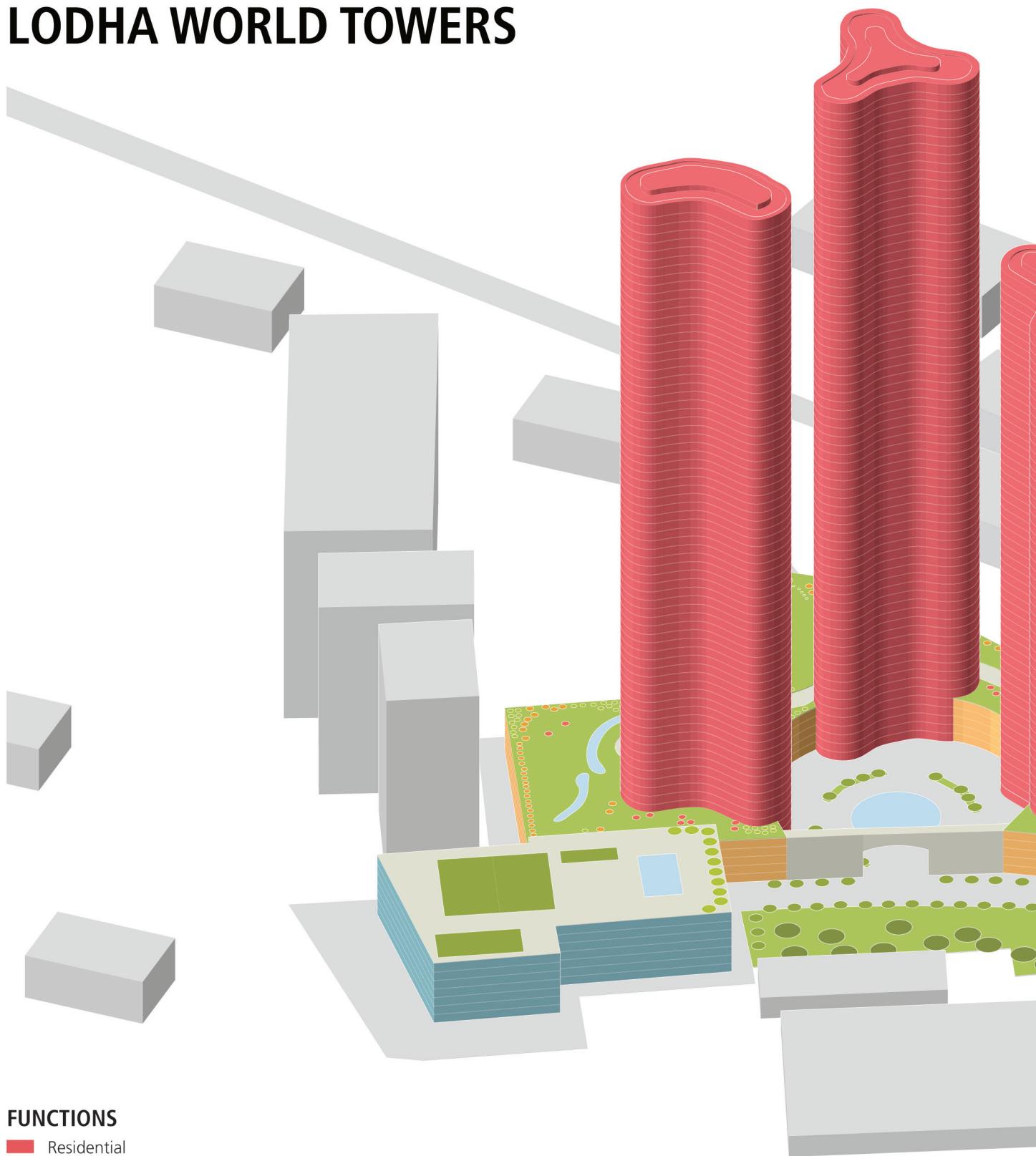
Rooftop
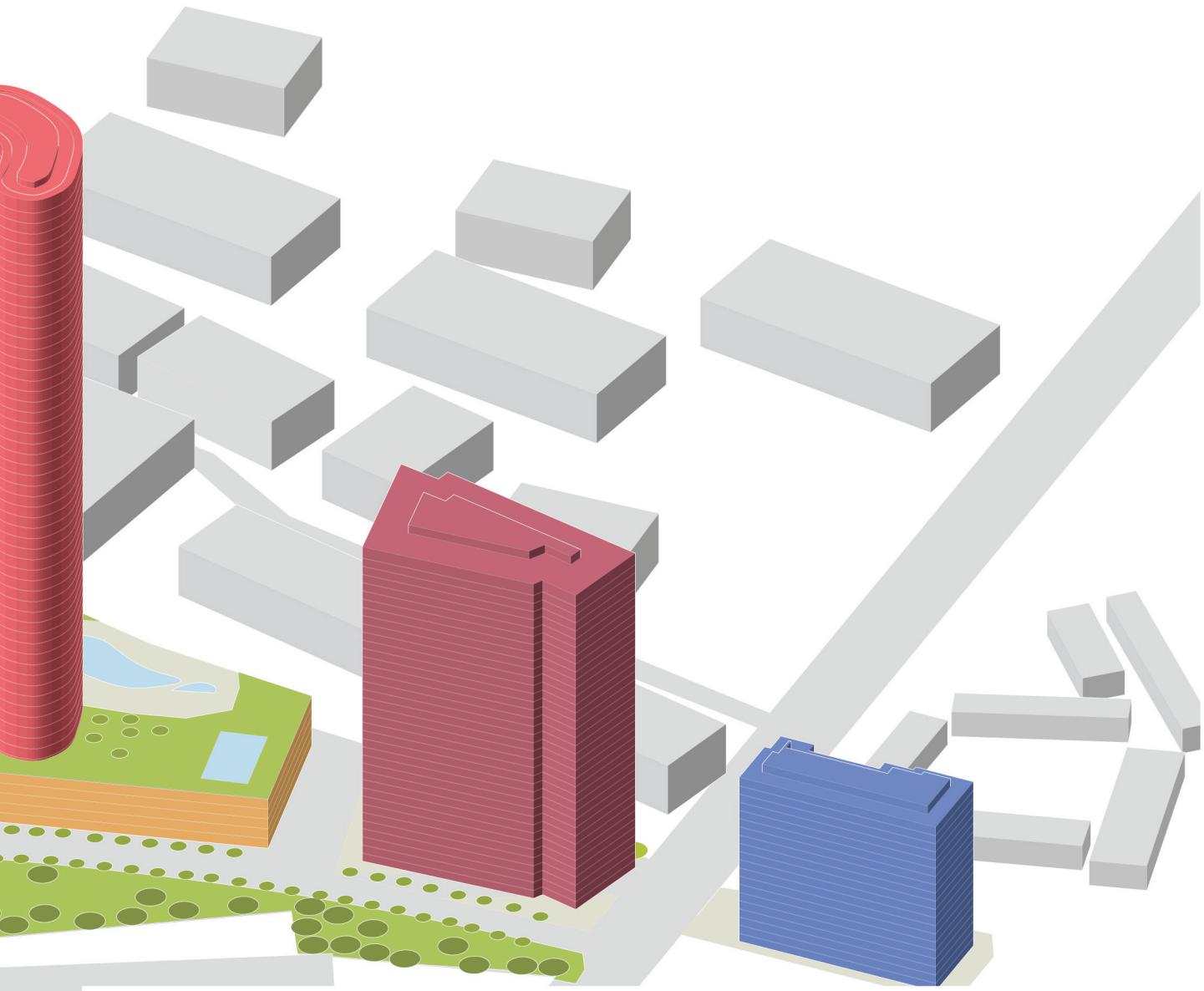
LODHA WORLD TOWERS
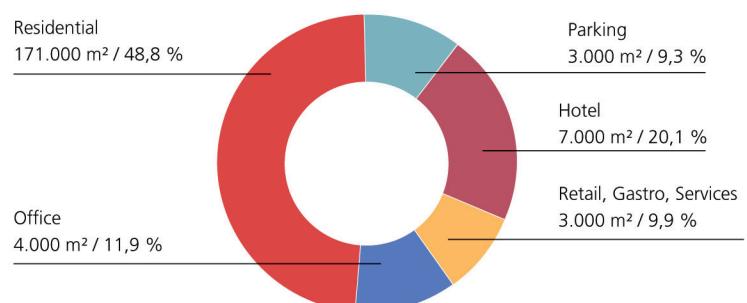
FUNCTIONS
- Residential
- Hotel
- Retail, Gastro, Services
- Office
- Parking

KEY DATA

Total Area	7,0 ha /	100,0 %
Public Open Space	3,5 ha /	49,8 %
Public Transit Area	0,7 ha /	9,7 %
Net Builduing Land	2,8 ha /	39,5 %
Total GFA	350.000 m²	
Total Plot Coverage	0,23	
Floor Area Ratio (FAR)	5,1	

Residential
171.000 m² / 48,8 %

Office
4.000 m² / 11,9 %

Parking
3.000 m² / 9,3 %

Hotel
7.000 m² / 20,1 %

Retail, Gastro, Services
3.000 m² / 9,9 %

CASE STUDY 3:
LODHA WORLD TOWERS

PROJECT DESCRIPTION
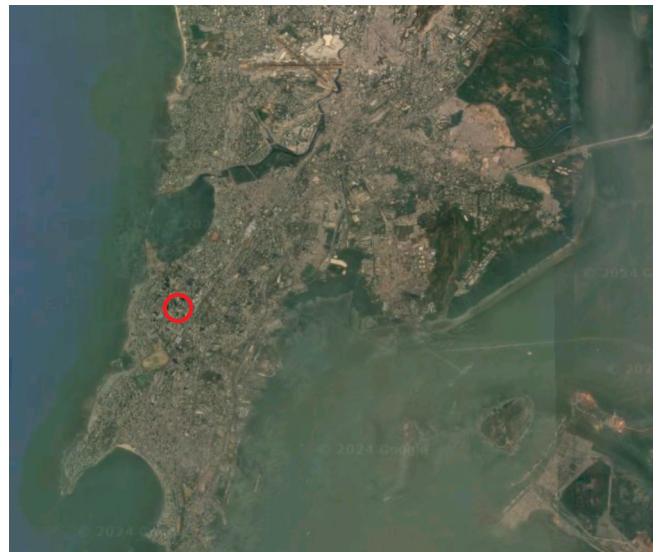
Lodha World Towers is a luxury residential complex in the heart of Mumbai, developed by the Lodha Group. The project comprises three main towers: World One, World View and World Crest. World One, with a height of 280 metres and 76 floors, was the tallest residential building in India when it was completed in 2020. World View, with 73 storeys and a height of 277.6 metres, was completed in 2020, while World Crest, with 57 storeys and a height of 222.5 metres, was completed in 2017.

The renowned architects from Pei Cobb Freed & Partners were responsible for the design of the towers. The company is internationally renowned for its outstanding architectural achievements and brought its expertise to this project to create modern and elegant structures.

The land on which the Lodha World Towers stand was previously the site of Shrinivas Mill, a disused textile factory. The Lodha Group acquired the 17.5-acre site in 2005.

The towers offer luxury 3, 4 and 5-bedroom flats with interiors designed by Armani/Casa. First-class amenities include the exclusive Club W, which offers five levels of entertainment, sports and leisure facilities, including a state-of-the-art gym, spa, private cinema rooms and swimming pools.

Lodha World Towers is located in the prestigious 'Mumbai Mile', a stretch known for its world-class residential and commercial developments and luxurious hotels. The location offers excellent connectivity to major transport routes, including the Bandra-Worli Sea Link, and is just minutes away from major destinations such as Mumbai International Airport and the Palladium & High Street Phoenix shopping centre.

Project Location in Mumbai

PROJECT VISION

The original plan was to make the World One Tower the tallest residential building in the world at a height of over 442 metres. However, due to regulations from the Civil Aviation Authority, the height had to be reduced to 280 metres.

Another focus during the development was on creating a comprehensive lifestyle. Numerous amenities were added to the design, including private lounges, swimming pools, modern gyms, luxury clubs and a private landscaped park. At the same time, increasing emphasis was placed on sustainability, for example through energy-efficient design and the use of environmentally friendly materials.

The final project combines innovative architecture, maximum living comfort and environmental awareness and has established itself as a milestone for luxury living and urban development in India.

OPEN SPACE CONCEPT

The design of the open-space areas of the Lodha World Towers follows a holistic approach that combines functionality, aesthetics and sustainability. At the centre are spacious green areas that serve as the heart of the open space and are divided into various themed gardens. These include meditation gardens with calming planting and water installations, butterfly gardens and areas specially designed for aromatherapy. These zones not only create space for relaxation, but also improve the microclimate.

Terraced communal areas, defined by platforms and seating areas, offer a variety of uses. Here, residents can work, read or hold informal meetings while enjoying the view of the surrounding gardens. These are complemented by roof gardens on lower parts of the building, which offer additional green open spaces with panoramic views of the city.
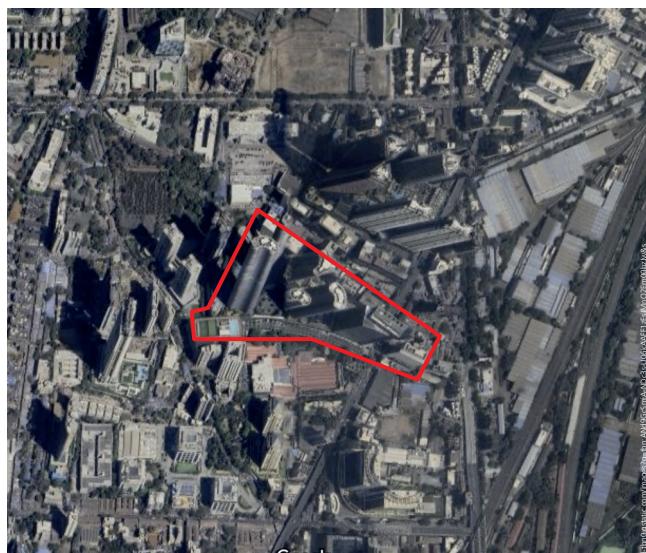
Finally, pavilions and shady retreats round off the concept. These multifunctional structures, which are placed along the paths, offer space for both private relaxation and smaller social events. The well thought-out design of the open spaces creates a harmonious connection between nature, community and urban lifestyle.

MOBILITY CONCEPT

The location of the Lodha World Towers in the Worli district offers ideal connections to the urban infrastructure. The proximity to the Bandra-Worli Sea Link ensures a fast connection to Bandra and the international airport.

The project also benefits from its proximity to major roads such as Dr Annie Besant Road and the well-developed public transport system, including metro and bus lines. Within the residential complex, a well thought-out layout ensures a pedestrian-friendly environment with clearly signposted paths and bicycle parking facilities to promote sustainable mobility. For motorists, generous underground parking facilities have been created to provide ample space for both residents and guests.
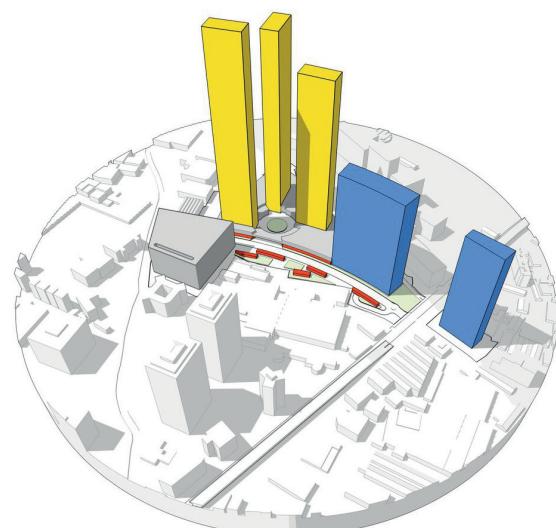
The mobility concept has been designed to strengthen connectivity to the surrounding area and facilitate access to key destinations such as the High Street Phoenix and Palladium shopping centres. By combining luxurious design, strategic

Location

Master Plan

Volumetric Study

Siteplan 1:2000
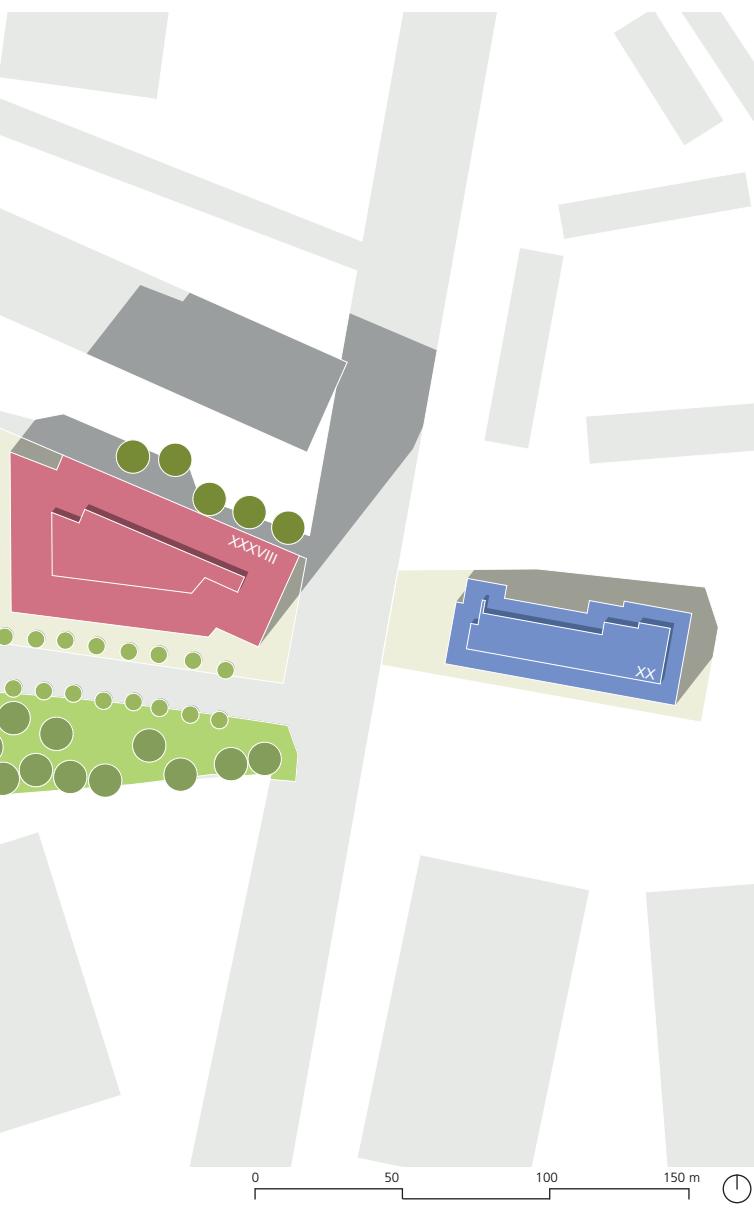
MIX OF FUNCTIONS AND TYPOLOGIES

The buildings are designed to offer various living, leisure and communal areas, with the vertical arrangement creating a clear functional structure.

The lower section of the towers is primarily used for public and semi-public uses. These include spacious reception areas with an impressive design, offering residents and visitors a luxurious entrance. These floors also house communal spaces such as clubhouses, lounges and co-working spaces that promote social and professional activities. Wellness areas such as spas, gyms and pools are also integrated into the lower and middle levels to ensure easy accessibility. The middle heights of

the towers are reserved for exclusive residential areas. This is where spacious flats are located, which are available in various sizes and layouts to suit both families and individuals.

The staggered height development of the buildings was deliberately chosen to ensure optimal utilisation of the views and sunlight. While the lower areas are dedicated more to interaction and community, the upper areas offer maximum privacy and luxury. As a result, the project creates a diverse mix of uses that meets the demands of modern urban lifestyles. Car parking is accommodated in spacious, multi-storey underground car parks that extend over several underground

WHAT MAKES LODHA TOWERS UNIQUE?

The Lodha World Towers project is characterised by several unique features that make it an iconic symbol of modern, luxury living. They were designed by renowned architects Pei Cobb Freed & Partners, who are known worldwide for their pioneering designs. The buildings combine clean, elegant lines with modern functionality, setting them apart from other residential projects in India and beyond. The World One Tower in particular, which at 2802 metres high is one of the tallest residential buildings in the world, dominates the Mumbai skyline.

The project is located in Worli, one of Mumbai's sought-after neighbourhoods, which is considered the intersection between South and Central Mumbai. Due to its proximity to the Bandra-Worli Sea Link and major business and shopping centres such as High Street Phoenix and Palladium, the project is excellently connected to the city's infrastructure.

The Lodha World Towers offer a variety of exclusive amenities, including private lounges and clubhouses with first-class services, infinity pools, spa areas and state-of-the-art fitness centres. In addition, a private landscaped park has been created as an oasis of tranquillity in the midst of the urban hustle and bustle. The exclusive living areas have been equipped with the highest quality materials and state-of-the-art technology.

The project places great emphasis on sustainable construction. This includes energy-efficient designs, the use of environmentally friendly materials and the integration of green spaces that create a pleasant microclimate. In addition, a pedestrian-friendly layout has been implemented, offering residents modern mobility as well as recreational spaces.

The public areas have been designed to encourage encounters and social interaction without sacrificing privacy. Communal areas such as playgrounds, lounges and event spaces create a harmonious living environment for families and individuals.

The Lodha World Towers are not just a residential project, but a status symbol that epitomises modern living with a global flair. The towers attract both national and international attention with their architectural presence and exceptional quality of life.

levels. This solution makes efficient use of the limited space in Mumbai's densely populated area and keeps the above-ground spaces free for green and communal areas. Residents have access to private, allocated car parking spaces, while guests have separate parking facilities near the entrances.

ONE GREEN MILE - CONCEPT
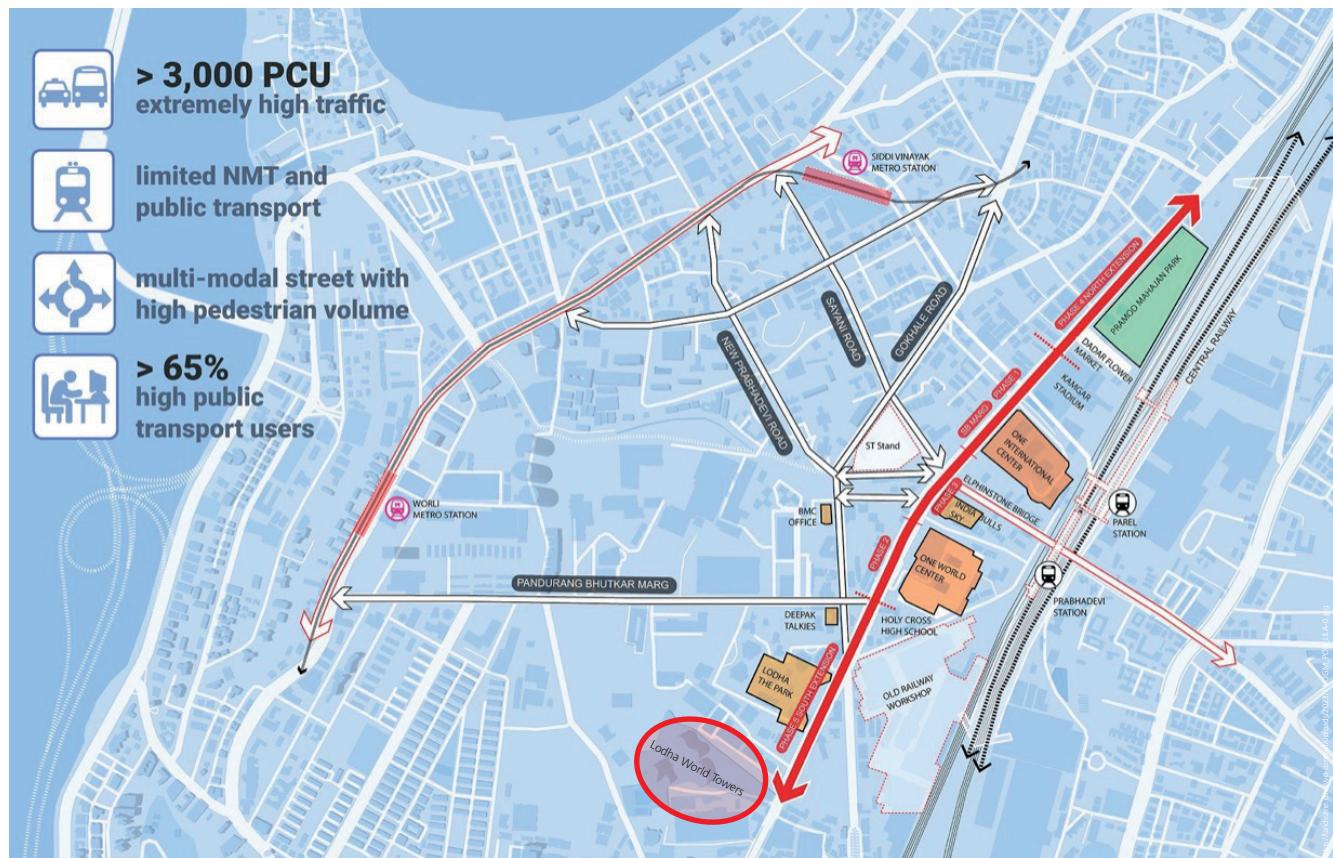
The 'One Green Mile' project in Mumbai represents a transformative redesign of a 1.8-kilometre section of Senapati Bapat Marg in the Lower Parel district. The goal of the initiative was to create a 'Complete Street' that prioritizes the needs of pedestrians and cyclists, while simultaneously enhancing the quality of life for local residents and promoting sustainable urban development.

A standout feature of the project is the repurposing of the often-neglected space beneath the Senapati Bapat Marg flyover bridge. What was once an underutilized and uninspiring area has been transformed into a vibrant and multifunctional community space. The design incorporates a variety of amenities, including playgrounds for children, lounge areas, fitness zones, an event space, and even a reading room.

This new space fosters social interaction, encouraging residents to come together, relax, and engage in different activities in a safe and welcoming environment.

The overall design also focuses on improving accessibility and comfort for all users. Wide pavements, a dedicated cycle lane, and robust street furniture contribute to a more pedestrian- and cyclist-friendly environment. A particularly innovative feature of the project is the rainwater harvesting system, which collects and filters seasonal monsoon water for plant irriga-. tion, underscoring the project's commitment to sustainability and responsible resource management.

Designed by the architecture firms StudioPOD and MVRDV, the 'One Green Mile' project has been widely recognized as a model for sustainable urban development in Mumbai and beyond. It was honoured with the prestigious Ammodo Architecture Award for Social Engagement, reflecting its success in reclaiming and revitalizing urban spaces for pedestrians. Through the transformation of neglected areas under bridges into vibrant, multifunctional community spaces, the project has set a benchmark for urban renewal, sustainability, and social integration.

One Green Mile Concept

COMMUNITY AND CULTURE

The Lodha World Towers in Mumbai not only represent a feat of modern architectural design but also embody a unique approach to integrating social and cultural elements within a luxurious urban environment. As part of one of the most prestigious developments in the city, the towers aim to foster a sense of community while offering residents an elevated lifestyle experience.

A key aspect of the social fabric of the Lodha World Towers is its emphasis on community engagement and interaction. The development is designed to be more than just a collection of residential spaces; it is a vibrant, self-contained ecosystem where social and cultural exchanges can thrive. The project features an array of shared amenities, such as exclusive fitness centers, wellness spas, art galleries, and gourmet restaurants, all of which encourage residents to interact, socialize, and enjoy a high standard of living. These spaces not only cater to the physical and recreational needs of the community but also provide cultural touchpoints, such as curated art exhibitions and live events, further enriching the social landscape.

Additionally, the design of the towers promotes inclusivity by offering diverse spaces that can accommodate a variety of lifestyles and interests. The blend of luxury and functionality in the design ensures that people from different walks of lif whether young professionals, families, or retireescan find common ground in the shared spaces. The high-end retail outlets, cafes, and communal gardens create opportunities for spontaneous encounters and interactions, fostering a sense of belonging and connection.

The project also contributes to the wider cultural ecosystem of Mumbai, with the Lodha World Towers standing as an iconic landmark in the city's skyline. By attracting a cosmopolitan community, it brings together people from various cultural and professional backgrounds, adding to the rich tapestry of Mumbai's social dynamics. The development's location in the Worli area, a hub for business and culture, further facilitates cultural exchange and collaboration, making it a focal point for those seeking both a luxurious living experience and a connection to the vibrant life of the city.

Lodha World Towers

Perspective Terrace

Open Space Concept

The Trees - A New Mixed-Use Urban District

Hiranandani Gardens

Lodha World Towers

CONCLUSION

The Hiranandani Project in Powai, the Lodha World Towers, and Sasaki's The Trees project each offer distinct architectural approaches that significantly influence Mumbai's urban environment, while highlighting key challenges of modern urban development.

Sasaki's The Trees project presents an environmentally conscious approach, emphasizing green spaces and sustainability. Its low-rise design promotes healthier lifestyles and integrates nature into the urban fabric, which is crucial for Mumbai's growth. However, while The Trees offers a sustainable vision, it may not meet the demands of the city's growing population, where high-density development is essential.

The Hiranandani Project in Powai blends classical European design with local adaptations, creating an iconic skyline that combines grandeur with a sense of community. Its green spaces and pedestrian-friendly areas contribute positively to the urban fabric, but its luxury nature and gated communities could reinforce social stratification, creating a divide between affluent residents and surrounding underdeveloped areas.

The Lodha World Towers with their modern design, push the boundaries of Mumbai's skyline. While they symbolize economic progress and global ambition, they raise concerns about the implications of large-scale, high-rise developments on infrastructure, culture, and social equity. The towers address space limitations but could exacerbate overcrowding and strain urban resources.

In conclusion, these projects contribute significantly to Mumbai's skyline and identity but also highlight challenges of modern urban development. Luxury high-rises and exclusive residential complexes could deepen social divides by creating separate living spaces. While such developments offer economic benefits, they raise questions about accessibility and social justice. In contrast, The Trees offers a more sustainable approach, focusing on nature and integration, yet may not fully address the need for high-density housing. Ultimately, future architecture in Mumbai must balance innovation, social needs, and environmental responsibility to create a livable, just, and sustainable city for all.

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HIRANANDANI GARDENS

Websites
https://www.hiranandani.com

https://www.hiranandanicommunities.com

Photography
https://www.hiranandani.com

https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcQ_HCYrcVfZXXd8R4ddh14dlRg6DkYS4dQyBQ&s

https://www.deviantart.com/tinadatta95/art/hiranandani-gardens-1073698342jpzZXJ2aWNlOmltYWdlLm9wZXJhdGlvbn-MiXX0.vTm1NzHwhbHPCZB7FVYKnHyLhn2H7QSUsKt-SP0i4fpg

LODHA WORLD TOWERS

Websites
https://www.lodhagroup.com/projects/residential-property-in-worli/lodha-world-towers

https://www.pcf-p.com/projects/the-world-towers/

Photography
https://pcfandtypecodewebstuff.s3.amazonaws.com/images/2.lin.PCF.0907_Site-plan_towers-highlighte.max-1600x1200.jpg

https://landezine.com/wp-content/uploads/2023/11/OGM_POD_LILA-0.jpg

https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9Gc-S6Y783AZsYgtZOT1N8nYbmfYqi3qhMizHsFw&s

https://i.guim.co.uk/img/static/sys-images/Guardian/Pix/pictures/2015/2/16/1424082496225/58232dfe-bd52-4b50-bf4e-2d4748569c56-1020x612.jpeg?width=700&quality=85&auto=format&fit=max&s=a40d-f9efe9657510a6a50ae223dc2179

https://miro.medium.com/v2/resize:fit:1400/1*U9HPQb-c7hkICpcPtHqQV_g.jpeg

DELHI

EAST KIDWAI NAGAR, CANDOR TECHSPACE, VAIBHAV KHAND

Maximilian Hummel, Crispina Pschera

Main Bazar area of Delhi

INTRODUCTION

Delhi, the capital of India, is a vibrant and multifaceted metropolis that represents the nation's rich history and dynamic present. Home to over 20 million people, Delhi serves as the political, cultural and economic heart of India. Delhi's urban landscape blends old heritage with modern ambitions, where Mughal-era monuments like the Red Fort and Humayun's Tomb stand next to large shopping malls, big office buildings and fast-growing residential areas. This diversity highlights Delhi's unique character, but it also underscores the challenges of urban growth, resource management and social equity.

Delhi's rapid urbanization has given rise to a variety of living and working spaces that reflect the city's socioeconomic complexities. On the one hand, the city is characterized by luxurious residential complexes for the wealthy population, while on the other hand millions of people live in crowded informal settlements, struggling to earn a living. At the same time business districts and industrial areas play a key role in driving economic growth, making Delhi one of India's largest urban economies.

The following pages are a detailed analysis of of three different urban settings within Delhi's metropolitan area: East Kidwai Nagar, Vaibhav Khand, and Candor Tech Space (Sector 48). These case studies highlight the diverse ways in which Delhi's urban fabric is evolving. East Kidwai Nagar represents a government-led redevelopment initiative aimed at modernizing existing residential colonies. Vaibhav Khand reflects the rise of gated communities for the growing Indian middle class. Meanwhile, Candor Tech Space is an example of the emerging trend of integrated business centers targeting global companies and the Indian IT sector.

Through these examples, this study explores the interplay between urban planning, socioeconomic dynamics and Delhi's broader transformation.

Delhi is an old city with a rich history, founded in 1193. Over the centuries, Delhi has evolved through several eras and has served as the center of power for several dynasties, each of which has had a profound impact on the city's culture, architecture and identity.

During the early medieval period, Delhi became a strategic and political center with the establishment of the Delhi Sultanate in the 12th century. The rule of the Slave Dynasty, followed by the Khaljis, Tughlaqs, Sayyids and Lodis, transformed the city into a hub of Islamic culture and architecture. Iconic buildings such as the Qutub Minar and the tombs of the Lodis are a lasting legacy of this era.

In the 16th century, the rise of the Mughal Empire marked the beginning of a golden age for Delhi. Under Emperor Shah Jahan, the city, which was renamed Shahjahanabad, became the capital of the empire. Great sights such as the Red Fort and the Jama Masjid as well as the Chandni Chowk market, which is still a lively business district today, were built during this time. The Mughal era shaped Delhi's identity as a city of greatness, blending Persian, Indian, and Islamic influences.

With the decline of the Mughals in the 18th century, Delhi experienced a turbulent period characterized by invasions and political instability. With the arrival of the British in the 19th century, a new chapter in the city's history began. After the revolt of 1857, Delhi came under direct British control and was declared the capital of British India in 1911. The British built New Delhi, designed by Sir Edwin Lutyens, as a grand administrative center, defined by its wide boulevards and iconic structures such as India Gate and the Rashtrapati Bhavan.

After India gained independence in 1947, Delhi became the capital of the Republic of India. It transformed into a vibrant metropolis, that welcomed waves of migrants, especially after the partition of India and Pakistan. Today, Delhi reflects its multi-layered history, where ancient monuments coexist with modern infrastructure, symbolizing its journey through time as a city that has continually reinvented itself.

From the ancient Indraprastha to the modern capital of India, Delhi's historical evolution underlines its resilience and adaptability, making it a city unlike any other in the world.
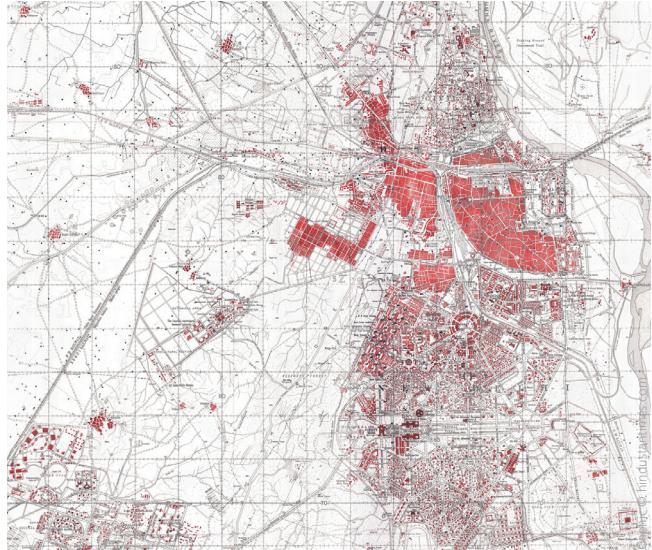

Figure-Ground Diagram 1942

Figure-Ground Diagram 1956

City Population in Millions

Territory in Squarekilometers

Growth of Population and Territory 1900 - 2025
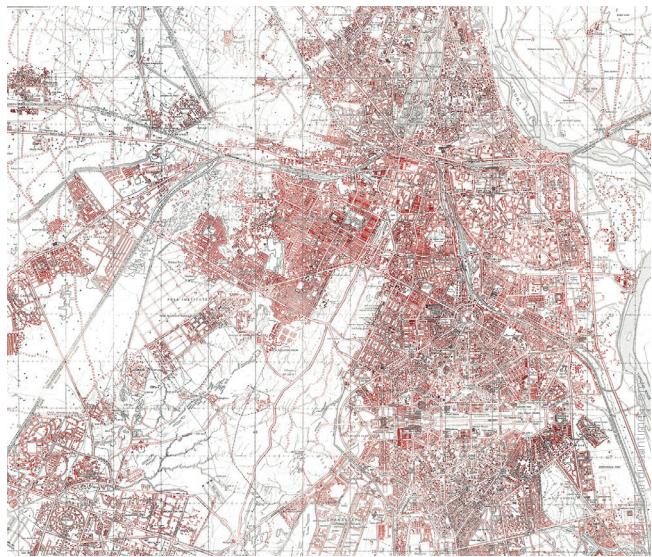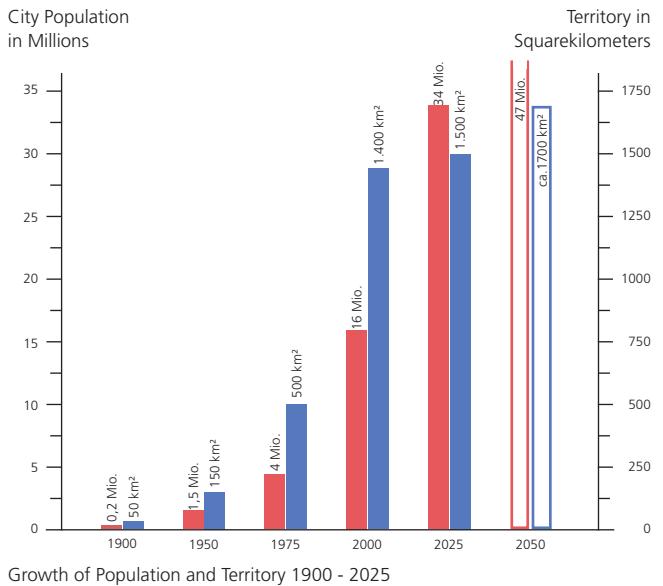
The city of Delhi today is a complex and dynamic megacity, reflecting the immense challenges and opportunities of urbanization in the Global South. The city faces numerous difficulties, including severe air pollution, making it one of the most polluted cities in the world. This problem is caused by factors such as dependence on fossil fuels, industrial emissions, and unregulated construction activities. Rapid population growth has further strained Delhi's infrastructure, leading to overcrowded public services, housing shortages, and the expansion of informal settlements. Traffic congestion remains a permanent problem, made worse by increasing vehicle ownership and inadequate public transportation systems. Additionally, water scarcity, inefficient waste management and the urban heat island effect add to the city's multifaceted challenges.

In response to these challenges, Delhi is working on transformative urban initiatives. The use of clean energy sources, particularly solar energy, and policies to promote electric vehicles are steps towards reducing pollution. The expansion of the Delhi Metro has been instrumental in the accessibility of public transportation and reducing traffic congestion. Efforts to address the urban heat island effect include promoting green building practices and rooftop gardens. Redevelopment programmes for informal settlements aim to create better housing and living conditions for the city's socially marginalized groups.

Measures to reduce air pollution, such as the Graded Response Action Plan and vehicle rationing schemes, have shown some impact. Improved waste management systems, including recycling projects and waste-to-energy plants, are beginning to address the problem of unmanaged waste. Water conservation strategies, such as rainwater harvesting and the revitalization of urban water bodies, are essential steps towards alleviating water shortages. In addition, collaboration between government agencies, NGOs, and citizen groups has become a critical element in transforming cities.

Despite these efforts, Delhi's urban challenges remain huge. The future of the city depends on integrated planning, innovative technologies and collaborative governance to create a sustainable, inclusive and resilient urban environment. At the heart of these efforts is the Delhi 2041 Master Plan, which sets out a comprehensive framework for addressing the city's challenges and shaping its growth in the coming decades.
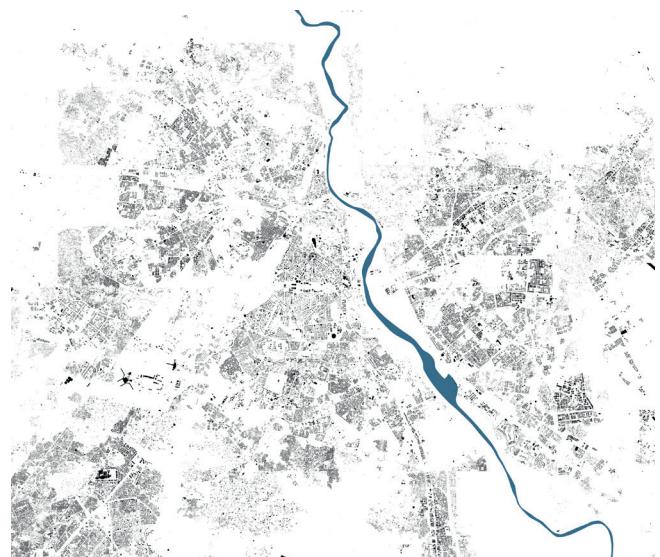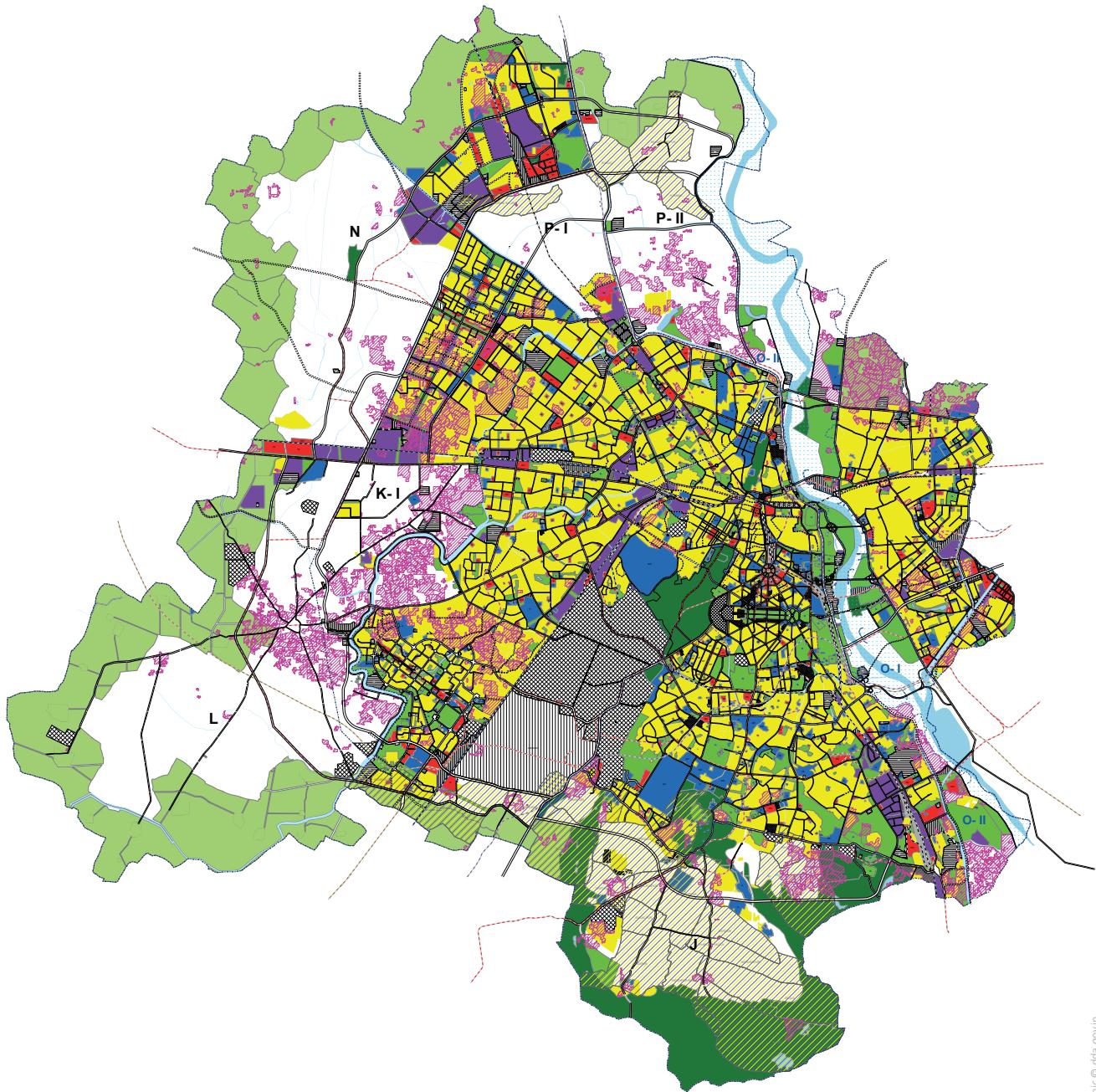
Figure-Ground Diagram

The Delhi 2041 Master Plan is designed to create a sustainable, inclusive and resilient city that absorbs the rapidly growing population while addressing urgent urban challenges. Originally conceived as a blueprint for fair development, the plan focuses on improving living conditions, reducing environmental degradation and increasing economic opportunities. Key priorities include affordable housing, efficient public transport, environmental sustainability and the integration of green spaces into urban design.

However, the journey from concept to realization has been difficult. While the plan sets ambitious goals such as creating a "walkable city" and minimizing the urban heat island effect, its implementation has faced roadblocks. Rapid urbanization and competing interests have often led to delays and partial fulfillment of the initial vision. While significant progress has been made in expanding the metro network and revitalizing green spaces, problems such as informal settlements and air pollution remain.

The Delhi 2041 master plan is both a guideline and a challenge for Delhi and reflects the complexity of urban change.

RESIDENTIAL

RD RESIDENTIAL AREA

RF RF FOREIGN MISSION

COMMERCIAL

C1 RETAIL SHOPPING, GENERAL BUSINESS AND COMMERCE

DC DISTRICT CENTRE

C COMMUNITY CENTRE

NC NON-HIERARCHIAL COMMERCIAL CENTRE

W WH C2 WHOLESALE & WAREHOUSING

D COLD STORAGE AND OIL DEPOT

H C3 HOTEL

INDUSTRIAL

M1 MANUFACTURING, SERVICE INDUSTRY AND REPAIR INDUSTRY

RECREATIONAL

P1 REGIONAL PARK

P2 CITY PARK, DISTRICT PARK, COMMUNITY PARK, MULTI-PURPOSE GROUND

P3 HISTORICAL MONUMENT / ARCHAEOLOGICAL PARK

P4 GREEN BUFFERS

P5 SPORTS FACILITIES / COMPLEX / STADIUM / SPORTS CENTRE

GREEN BELT AND WATER BODY

A1 GREEN BELT

A2 RIVER / FLOODPLAIN AND WATER BODY

A3 L.D.R.A. VILLAGES

TRANSPORTATION

T1 AIRPORT

T2 TERMINAL / DEPOT / YARD - RAIL / MRTS / BUS / TRUCK

T3 CIRCULATION - RAIL / MRTS / ROAD / RRTS / HIGH SPEED RAIL

UTILITY

W U1 WATER (TREATMENT PLANT ETC.)

S U2 SEWERAGE (TREATMENT PLANT ETC.)

E U3 ELECTRICITY (POWER HOUSE, SUB-STATION ETC.)

SW U4 SOLID WASTE (SANITARY LANDFILL ETC.)

U5 DRAIN

U6 OTHER UTILITIES

GOVERNMENT

G1 PRESIDENT ESTATE AND PARLIAMENT HOUSE

G2 GOVERNMENT OFFICE COMPLEX / COURTS / PSU

G3 GOVERNMENT LAND (USE UNDETERMINED)

PUBLIC & SEMI PUBLIC FACILITIES

H PS1 HOSPITAL

ER U C EDUCATION AND RESEARCH / UNIVERSITY / COLLEGE

SC SOCIAL- CULTURAL, SOCIO-CULTURAL COMPLEX / CENTRE

P F DM POLICE / POLICE HEADQUARTER / POLICE LINES, FIRE STATION /DISASTER MANAGEMENT CENTRE

R RELIGIOUS

BG CG CE BURIAL GROUND / CREMATION GROUND / CEMETERY

TS TC PS2 TRANSMISSION SITE/ CENTRE

LAND POOLING AREA

OTHERS

FACILITY CORRIDOR

PLANNING ZONE BOUNDARY

UNAUTHORIZED COLONIES

Draft Masterplan for Delhi - MPD 2041
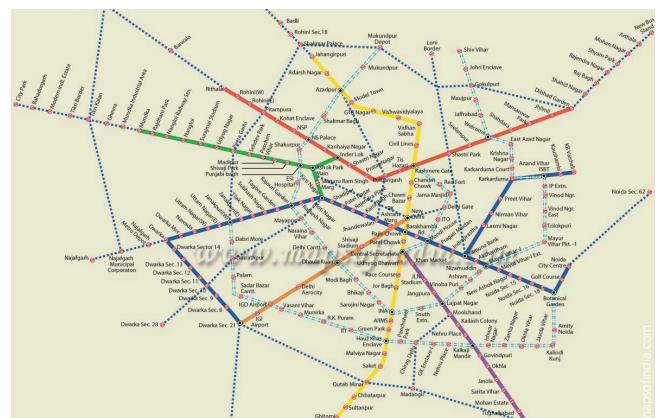
The New Delhi Railway Station Redevelopment Project and the Delhi Metro Development Project intend to modernize Delhi's infrastructure by 2026 and improve connectivity, sustainability and urban mobility.

The New Delhi Railway Station Redevelopment project intends to transform India's busiest rail hub into a world-class transportation and commercial center. It will include a futuristic terminal building with expanded hallways, improved platforms and modern facilities for passengers to optimize travel efficiency. Multimodal integration with metro lines, buses and taxis, as well as facilities such as pedestrian bridges and high-capacity parking lots, will provide better urban transportation. Sustainability is a key focus, with green building concepts, solar energy usage and rainwater harvesting systems. Additionally, the creation of a vibrant commercial district with retail spaces, offices and hotels, will boost economic activity and provide new opportunities for growth. Despite its INR 72.3 billion cost raising concerns about social priorities and ecological impact, the project promises a modernized gateway to the capital city.

The Delhi Metro Development Project will add 65 kilometers of new lines. Key corridors such as Aerocity-Tughlakabad will connect neglected areas, reducing congestion and improving accessibility. Infrastructure upgrades include energy-efficient trains and green initiatives.The integrated last-mile connectivity confirms their role in Delhi's green mobility strategy. Although the INR 30,000 billion cost may raise doubts, the project's ambition is to accommodate 2 million additional daily passengers, transform urban transportation and reduce the carbon footprint.
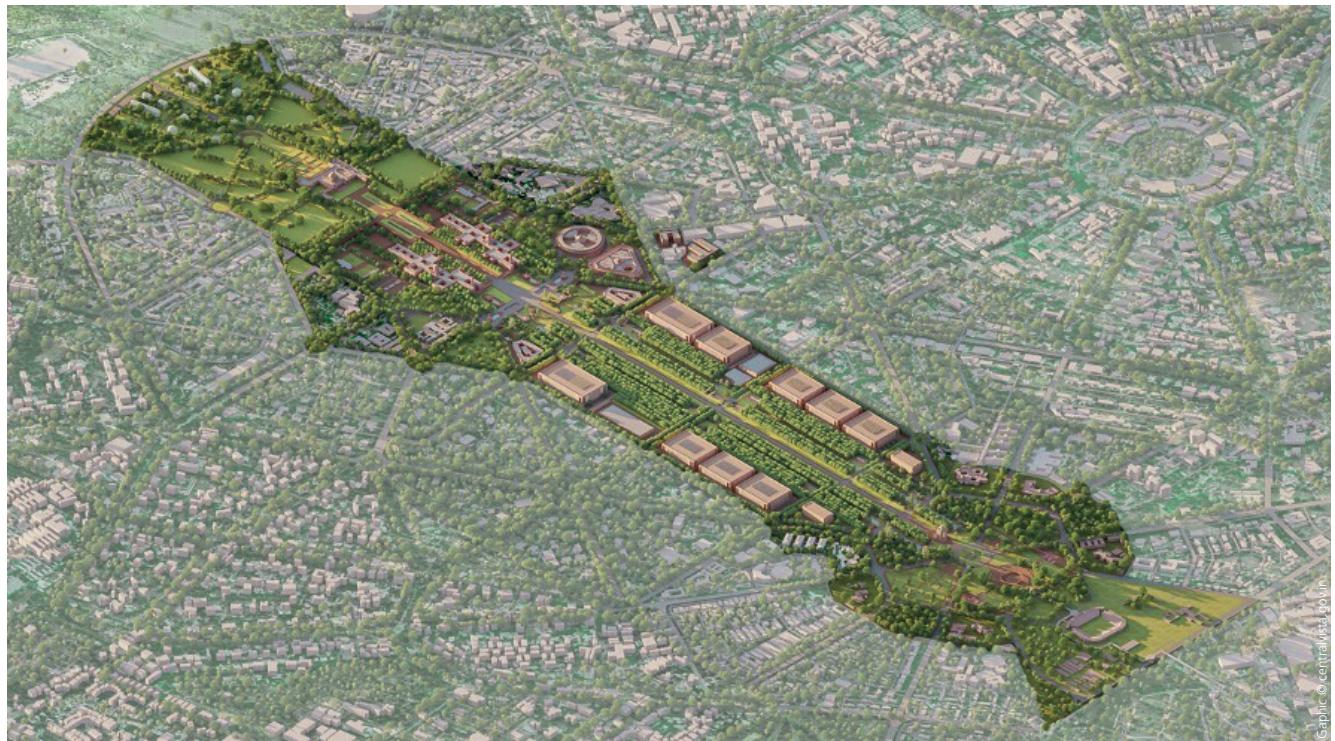
Together, these projects represent a bold vision for Delhi's future to create a more inclusive urban infrastructure.

Delhi Metro Map

Delhi Railway Station

Central Vista Overview

The Central Vista Redevelopment Project will modernize the government district of New Delhi by 2026, improving infrastructure, administrative efficiency and public spaces. The centerpiece is the new triangular Parliament House, unveiled on May 28, 2023, with expanded capacity to meet future needs. Kartavya Path, the central boulevard, was renovated to improve public access and recreation, featuring pedestrian underpasses, green spaces, parking and shaded walkways, completed on September 8, 2022. The project also includes a planned central secretariat that will combine all government departments into ten buildings to simplify administration, as well as new residences and offices for the prime minister and vice president. Historic buildings like the old parliament and north and south blocks will be converted into museums to preserve the cultural heritage.

The innovative urban planning prioritizes sustainability and integrates energy-efficient construction methods and an automated passenger transport system to improve mobility. The vision is to modernize governance while creating vibrant public spaces and a symbol of national pride. Despite its ambitious goals, the project has faced criticism. With a cost of INR 205.8 billion (USD 2.4 billion), critics argue the funds could be directed to urgent social needs like healthcare and education. The lack of public dialogue and transparency has also been questioned. Activists point to potential environmental harm from the clearing of green space, while architects and historians fear the loss of the area's cultural character, originally designed by British architects like Edwin Lutyens.

The Central Vista Redevelopment Project represents a blend of modernization and heritage preservation. It's success depends on addressing ecological, cultural and financial concerns while delivering a modernized and inclusive urban landscape.

Kartavya Path

East Kidwai Nagar

Residential
Hotel
Retail, Gastro, Services
Office
Production
Social, Education, Culture
Parking
Transit
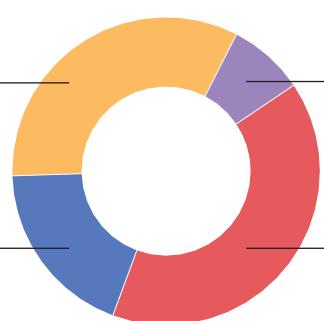
|		
Total Area	36,1ha /	100,0 %
Public Open Space	10,5ha /	29,1 %
Public Transit Area	4,9ha /	13,6 %
Net Builduing Land	20,7 ha /	57,3 %
Total GFA	744.200m²	
Total Plot Coverage	0,23	
Floor Area Ratio (FAR)	2,06	

Retail, Gastro, Service
68.000m² / 32,9%

Social, Education, Culture
17.000m² / 8,2%

Office
39.500m² / 19,1%

Residential
82.000m² / 39,8%

CASE STUDY 1:
EAST KIDWAI NAGAR

Project Location in Delhi

The East Kidwai Nagar Redevelopment Project is a pioneering urban renewal initiative located in South Delhi. It is located on the site of the former East Kidwai Nagar, a government housing estate built in the mid-20th century to accommodate government employees. Over the years, the area fell into ruin, which motivated the government to redevelop it as a model of sustainable urban living.

The project is situated in a prime location, bordering well-known neighborhoods in southern Delhi such as Safdarjung Enclave and South Extension. Being close to major commercial hubs, educational institutions and main transportation corridors such as the Ring Road and Aurobindo Marg makes it an extremely strategic location. The area benefits from excellent connectivity to major parts of Delhi, including the airport, central business districts and New Delhi Railway Station, making it a prime location for modern urban development.

Initiated by the National Buildings Construction Corporation (NBCC), the redevelopment of East Kidwai Nagar was intended to replace the aging low-density government housing units with a modern, high-density mixed-use development. The project was launched with an emphasis on sustainability, energy efficiency and environmental responsibility in order to create a self-sufficient urban ecosystem.

The redeveloped East Kidwai Nagar now features state-of-the-art residential complexes, primarily for government employees, alongside commercial spaces and amenities. A total of 4,608 modern housing units have been built, complemented by green building features such as rainwater harvesting systems, energy-efficient technologies, and extensive landscaping.

The redevelopment also integrates smart infrastructure, including advanced waste management systems, solar energy solutions and pedestrian-friendly zones, which promote sustainable mobility. East Kidwai Nagar is a significant example of how aging urban spaces can be revitalized to meet the demands of a growing population. Its strategic location, modern facilities and emphasis on sustainability make it a pioneering effort in redefining urban living in Delhi while setting a benchmark for future urban renewal projects across India.

The initial vision for the East Kidwai Nagar Redevelopment Project was to transform an outdated government housing colony into a high-density, self-sustained and environmentally friendly urban hub. The project was intended to meet the urgent need for modern housing and infrastructure for government employees while being a pioneering model for sustainable urban development in India. Designed as a mixed-use development, it introduces the integrating residential, commercial, and community facilities to create a balanced and inclusive urban environment.

A core aspect of the concept was sustainability. The project included features such as green buildings, energy-efficient designs, solar panels, rainwater harvesting systems, and advanced waste management solutions. The idea was to create a modern living environment that meets international standards of urban planning while respecting Delhi's environmental and social context.

While the project has successfully realized many aspects of its initial vision, its long-term impact on urban living standards and sustainability in Delhi will continue to develop as it adapts to the city's growing demands.

The public areas within the development are designed to be barrier-free and inclusive, with wide pedestrian walkways, green parks and communal plazas. These spaces are designed to encourage movement and connectivity across the site, ensuring that all parts of the development are easily reachable. The layout prioritizes pedestrian access, with streets designed to be used by both vehicles and people, reducing traffic congestion and encouraging walkability..

A key feature of the public realm in East Kidwai Nagar is its focus on green space and environmental consciousness. Open spaces are planted with native vegetation and rainwater harvesting systems are integrated into the landscape to support sustainability. Parks and green areas are designed not only for aesthetically pleasing but also to improve air quality and create a cooler, more pleasant environment in the densely built-up area.
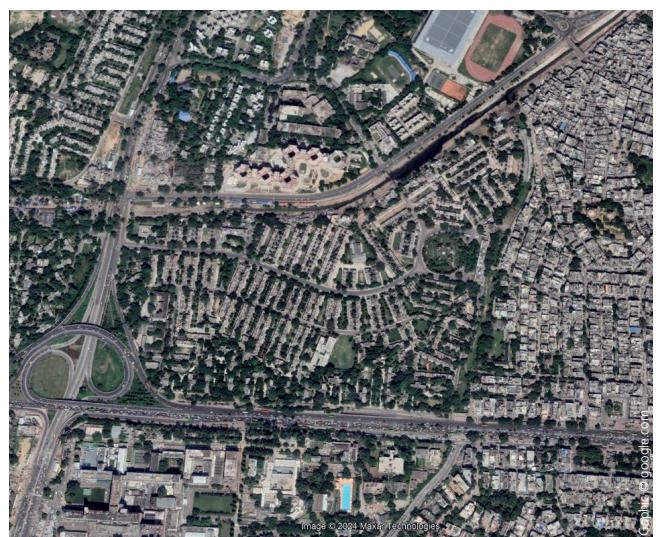
Public transport is an important component, with the project benefitting from its close proximity to major bus routes and metro stations, providing easy access to the entire city. The nearby Metro stations, particularly the INA and AIIMS stations, connect residents to important commercial and residential areas across Delhi, while also allowing for seamless transfers to other local transit lines.

For pedestrians, the development offers wide, well-maintained sidewalks and pedestrian-friendly streets, promoting walkability and reducing reliance on cars. Bike lanes are incorporated into the layout, encouraging environmentally-friendly commuting options. The project also includes generous green spaces for pedestrians, upgrading the overall experience of walking through the area and providing shaded paths to battling Delhi's heat. Public seating areas were created to encourage outdoor interaction and create a sense of community.
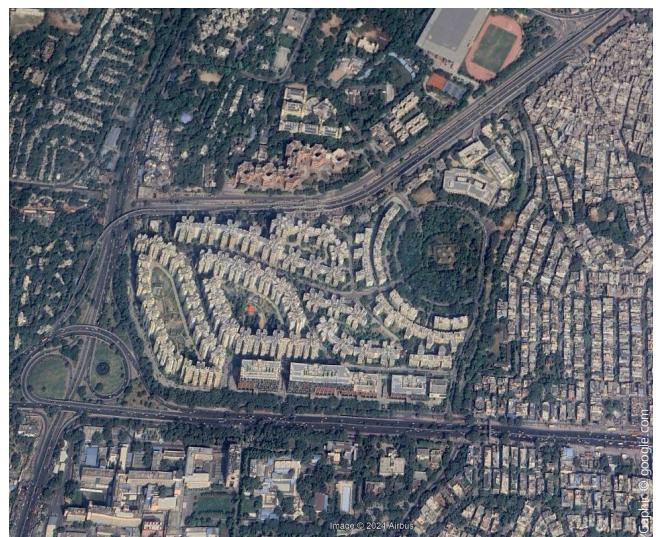
The mobility concept also takes cars into consideration. Multiple parking facilities are provided, both underground and surface-level, to meet the needs of residents and visitors. These parking spaces are strategically placed to minimize congestion and ensure smooth traffic flow, while also including designated zones for electric vehicle charging stations, clearing the way for a sustainable future.

Residential Courtyard East Kidwai Nagar

East Kidwai Nagar 2012

East Kidwai Nagar 2024

Siteplan 1:5.000

East Kidwai Nagar is a residential area that also offers a variety of public facilities, including retail outlets, restaurants and other essential services to meet the diverse needs of its residents. In addition, the development includes office buildings, often combined with other public facilities such as schools, healthcare facilities and social infrastructure, creating a mixed-use environment.

The area of East Kidwai Nagar is designed to provide for all daily needs. At the center of the development are residential buildings, which come in three types of districts with varying heights ranging from 8 to 16 floors. These residential buildings are organized around public squares that include green and open areas and prvide opportunities for leisure, recreation and community interaction. Complementing the green spaces in the courtyard-like sections, a broad green belt surrounds the historic Darya Khan Tomb, which has been repurposed as a park for public use. This park highlights the cultural and historical significance of the development project.

The edges of the development, especially along the busy main roads, primarily hosts non-residential buildings. A bigger complex, with a very deep building depth, in the southern section of East Kidwai Nagar is primarily dedicated to office

The East Kidwai Nagar Redevelopment Project is characterized by its innovative approach to urban planning, combining modern infrastructure with sustainability and community-focused design. One of the key factors that make this project unique is its focus on sustainability. The development integrates green building practices, including energy-efficient designs, solar panels and rainwater harvesting systems. These features not only reduce the environmental impact but also help create a self-sustained urban environment, which is increasingly important in densely populated cities like Delhi. Additionally, advanced waste management systems and electric vehicle charging stations have been incorporated to further enhance the project's eco-friendly footprint.

Another aspect of note is the mixed-use layout. The project combines residential, commercial and relaxation spaces in a way that encourages a balanced, vibrant community. The development includes over 4,600 modern housing units, alongside parks, schools, healthcare facilities and shopping areas, all within walking distance. This integration not only reduces reliance on cars but also promotes a sense of convenience and accessibility. Furthermore, the seamless blend of private and public spaces encourages community interaction, supporting a socially connected urban lifestyle that prioritizes human well-being.

The focus on open spaces is also significnt. Nearly 30% of the site is dedicated to green areas, parks and public spaces. These areas serve as gathering places for residents and provide much-needed recreational spaces in a bustling city like Delhi. This focus on open space helps mitigate the effects of urban heat islands and improves air quality.

and commercial purposes, with additional facilities such as an exhibition hall in the block on the far right of the complex. The northeastern section of the development is home to schools and a hospital, further improving its self-sufficiency.

The entire area is accessible via two main entrances located in the north and south. While cars can reach all areas, most parking spaces are located underground, prioritizing pedestrian movement and encouraging social interaction in the open spaces.

In terms of mobility, the project offers excellent connectivity to nearby metro stations and bus routes. Additionally, pedestrian pathways and bicycle lanes encourage sustainable commuting, reducing traffic congestion and make the development more environmentally-friendly. The well-designed parking facilities also minimize traffic issues while meeting the needs of car users.

Ultimately, East Kidwai Nagar is unique because it combines modern urban living with a commitment to sustainability, community well-being and efficient mobility, setting a benchmark for future urban developments in India.

East Kidwai Nagar in Delhi is a redevelopment project that aimed at transforming an aging residential colony into a model urban space. The planning of this project focused on creating a sustainable, environmentally friendly and community-oriented neighborhood. By integrating smart city principles and green infrastructure, East Kidwai Nagar was designed to set a benchmark for urban redevelopment in India.

The primary goals of the redevelopment were centered around sustainability, open green spaces, and innovation. Sustainability was a cornerstone of the project, with a strong emphasis on renewable energy and water conservation. Grid-connected rooftop solar systems, connecting several buildings were planned to power key facilities, including the shopping center, with clean, green energy. Rainwater harvesting systems were introduced to ensure efficient water management, addressing the pressing issue of water scarcity in urban areas. The project also prioritized the development of open green spaces, with a detailed plan to preserve existing trees while planting 18,000

new ones. These efforts aimed to create an environment that enhances air quality, provides shade, and contributes to the overall well-being of residents. Public spaces were designed with natural light and ventilation to encourage community interactions and foster a sense of connection between the residents.

Innovation was another main topic of the project, with the redevelopment conceived as a smart city model that could serve as a template for similar initiatives across the country. The project's innovative design and sustainable approach gained international recognition and were showcased at the COP21 climate change conference as an example of environmentally conscious urban development.

During the realization of the project, some goals were achieved. Smaller rooftop solar panels were installed on residential and commercial buildings, providing renewable energy and reducing the carbon footprint. Rainwater harvesting sys-

East Kidai Nagar Visualization including Sustainability Concept

tems were also integrated into the infrastructure, ensuring the conservation and reuse of water. Landscaping efforts not only preserved the existing greenery but significantly enhanced it, transforming the area into a, compared to surrounding areas, green space with expansive parks and green belts. The smart city framework introduced energy-efficient systems, improved waste management, and digitized urban services, enhancing the quality of life for residents.

Despite these successes, some goals have not been fully realized. Although renewable energy systems contribute significantly to the area's power needs, achieving a fully self-sufficient energy model remains a challenge due to the high demand for electricity in residential and commercial spaces. While the green spaces have added ecological value, maintaining them consistently has been a challenge, leading to occasional neglect in certain areas. Additionally, the public spaces, although thoughtfully designed, have not yet reached their full potential. Also, e.g. the public spaces and streets, seem to have less quality than planned, especially if the height of the buildings is compared with the dimension of open space between them. The streets appeal narrow in some parts of the project, whilst lacking the promised green. A lack of vibrant social and cultural programming has limited their ability to bring residents together in a meaningful way.
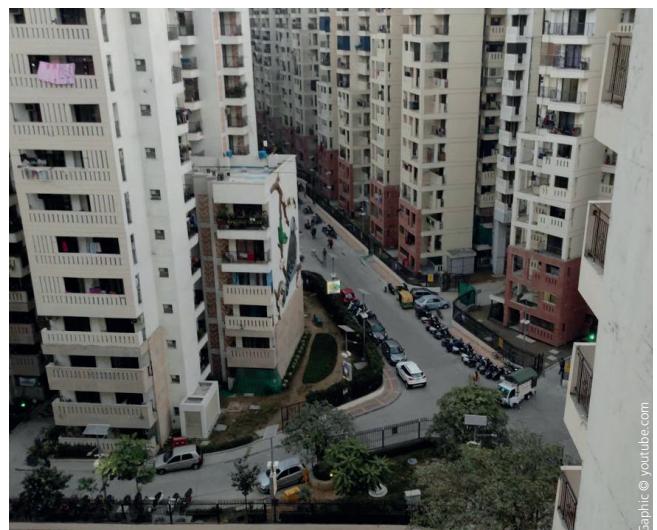
All in all, from the perspective of an external perspective, the living quality of East Kidwai Nagar seems pretty high, compared to other residential areas of Delhi. The streets are clean, there is less traffic inside the area and there are a lot of open spaces, even though they might be relatively small, compared to the number of residents using them. Also, there is still the problem of social segregation, as it is still seen as some kind of privilege to be able to afford housing in an urban residential project such as this one. This is particularly obvious at the project's boundaries, where two worlds collide. One example of this difference is the roads. On the one hand, there are the clean and well-maintained roads and on the other hand, just outside the gates of East Kidwai Nagar, there are the public roads only roughly maintained by the city.

Exhibition Center
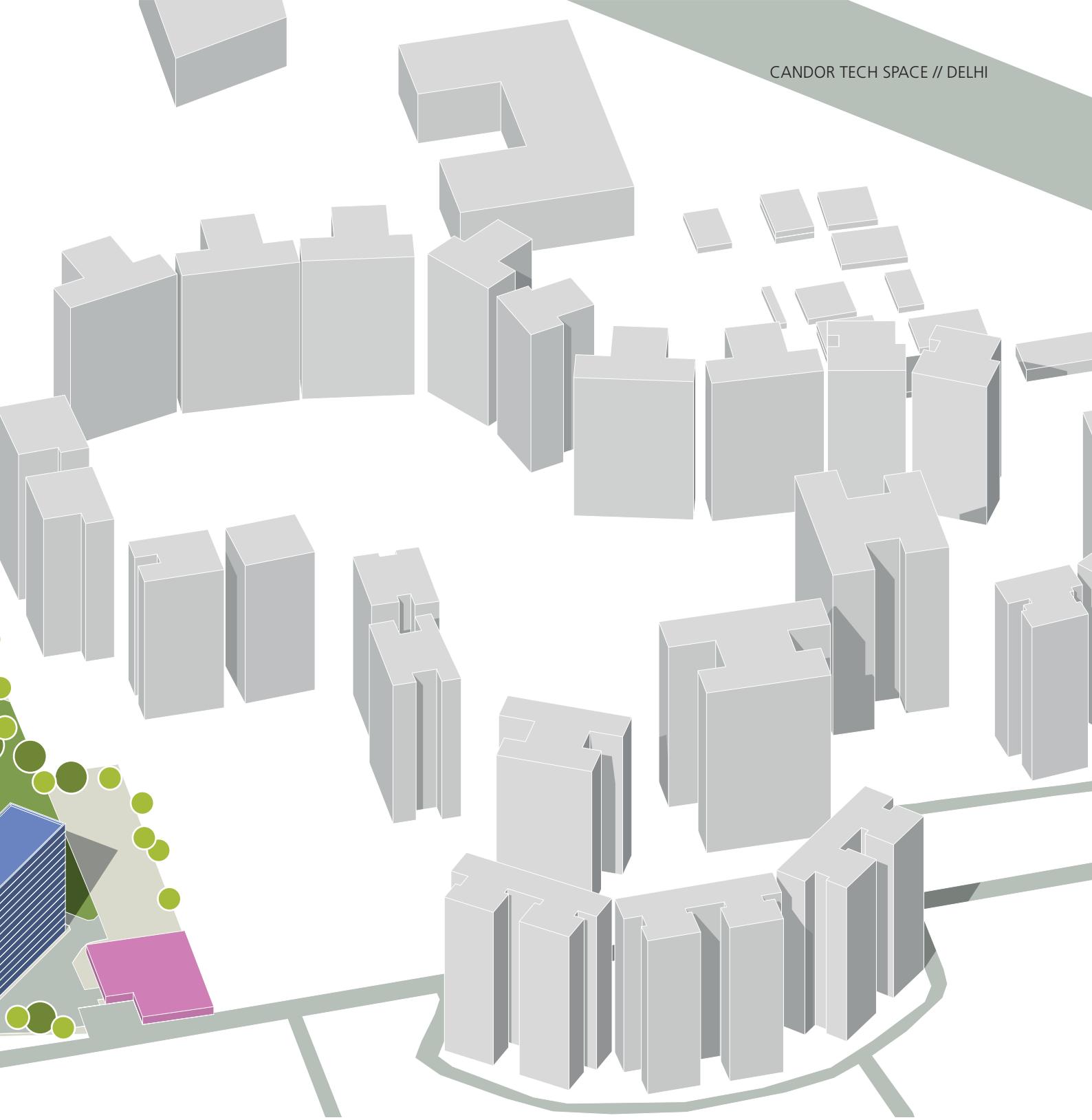
Park Facility around Darya Khan's Tomb
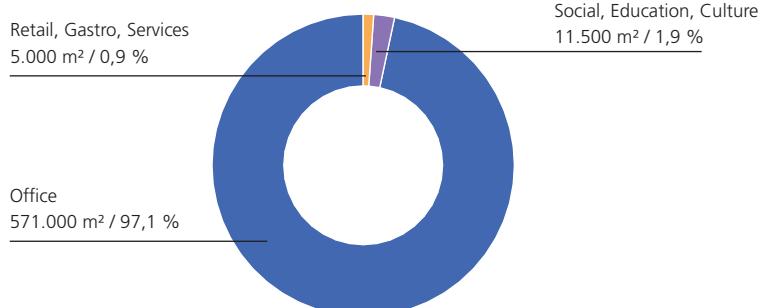
Traffic junction East Kidwai Nagar

Candor TechSpace

Residential

Hotel

Retail, Gastro, Services

Office

Production

Social, Education, Culture

Parking

Transit

Total Area   10,1 ha / 100,0 %
Public Open Space   1,6 ha / 16,2 %
Public Transit Area 2,2 ha / 22,0 %
Net Builduing Land   6,3 ha / 63,6 %

Total GFA   353.000 m²
Total Plot Coverage   0,27
Floor Area Ratio (FAR)   3,49

Retail, Gastro, Services
5.000 m² / 0,9 %

Social, Education, Culture
11.500 m² / 1,9 %

Office
571.000 m² / 97,1 %
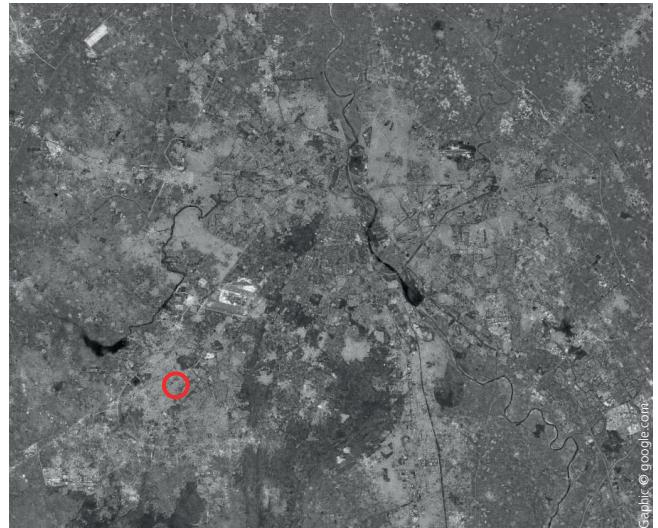
CASE STUDY 3:
CANDOR TECHSPACE

Project Location in Delhi

Candor Tech Space, located in Sector 48, Gurgaon, is a state-of-the-art commercial development designed to meet the growing demand for high-quality office spaces in the National Capital Region (NCR). Strategically located in one of Gurgaon's prominent business districts, this project is targeted at a wide range of corporate clients, including global technology companies, startups, and multinational corporations. The project covers a large area and consists of modern office buildings equipped with advanced facilities and services, offering a flexible working environment that supports collaboration, innovation, and productivity.

The history of the location goes back to the growing needs of Gurgaon as a commercial and technological hub. The development of Candor Tech Space began with the vision to create a world-class business environment that could support India's booming tech industry and attract global business players. Over the years, Gurgaon has become synonymous with modern infrastructure and a prosperous corporate ecosystem, and Candor Tech Space has played a significant role in this transformation.

Candor Tech Space has a range of high-quality office buildings with flexible space options. These include open-plan offices, larger corporate headquarters and coworking spaces, offering flexibility for businesses of all sizes. The development focuses on delivering high-quality infrastructure with buildings designed to international standards of architecture, energy efficiency and sustainability. The use of green building technologies, including LEED certification, highlights the commitment to environmental sustainability. Amenities like high-speed elevators, advanced HVAC systems, and 24/7 power supply further enhance the functionality of the office spaces.

Overall, Candor Tech Space in Sector 48 reflects the rapid evolution of Gurgaon's commercial real estate sector by combining modern design, strategic location and sustainable development principles to create a prime destination for businesses in the NCR. By offering a mix of innovation-driven spaces, world-class features and a focus on sustainability, it continues to attract some of the most influential companies and talented professionals from across the globe.

The original vision behind Candor Tech Space was to create a world-class hub that aligns with the evolving needs of modern enterprises. The project aimed to provide cutting-edge infrastructure, a collaborative work environment, and sustainable solutions while ensuring employee satisfaction and productivity. The goal was to design a development that supports global business and fosters innovation in a dynamic and eco-friendly campus.

This vision has largely been realized through its adherence to international standards in building design and operations. From its inception, the project focused on creating a balance between functionality and aesthetics, incorporating open spaces, advanced technology and green building principles. Features such as flexible office layouts, a robust IT infrastructure, and employee-oriented facilities have made it a workplace of choice for global enterprises.

Although the project has achieved its main goals, some challenges remain in balancing rapid urban development with environmental sustainability. Nevertheless, Candor Tech Space has successfully implemented its vision and set a new benchmark for commercial real estate in Gurgaon.

The open space concept at Candor Tech Space is centered around creating a balanced environment that supports both work and relaxation. The development features well-maintained green areas, parks and rest areas designed for employees to relax and enjoy outdoor activities. About 40% of the campus is dedicated to open spaces, including landscaped gardens, courtyards, and water features. These open spaces serve as informal meeting areas, promoting collaboration and improve the overall working environment.

The layout of these open spaces is planned so that they are easily accessible from all office buildings, with pedestrian walkways and squares connecting different zones of the campus. Recreational spaces such as amphitheaters and fitness areas offer employees opportunitiesto relax and exercise on campus. The formal concept of integrating green space with built environments helps reduce the urban heat island effect while contributing a healthier work atmosphere.

Overall, the open space design encourages an active and appealing work-life balance and increases employee productivity and well-being.

Candor TechSpace in Gurgaon

Candor TechsSpace 2012
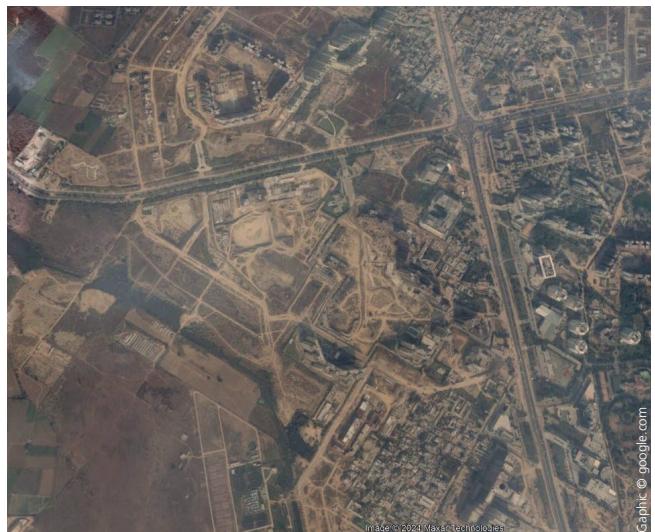
Candor Tech Space is designed with excellent mobility and connectivity to ensure smooth access for its users. Its location near the Delhi-Gurgaon Expressway (NH-48) allows easy vehicular access from Delhi, Gurgaon and surrounding cities. The campus is also well connected by public transport, with several bus routes running through the area and the upcoming expansion of the metro system that will further eimprove accessibility.

Pedestrian-friendly pathways and dedicated cycle tracks encourage eco-friendly commuting options and reducing reliance on cars. Secure bicycle parking is available to support employees who prefer cycling to work. The development also includes plenty of parking options, with multi-level parking structures designed to handle the large volume of vehicles efficiently.
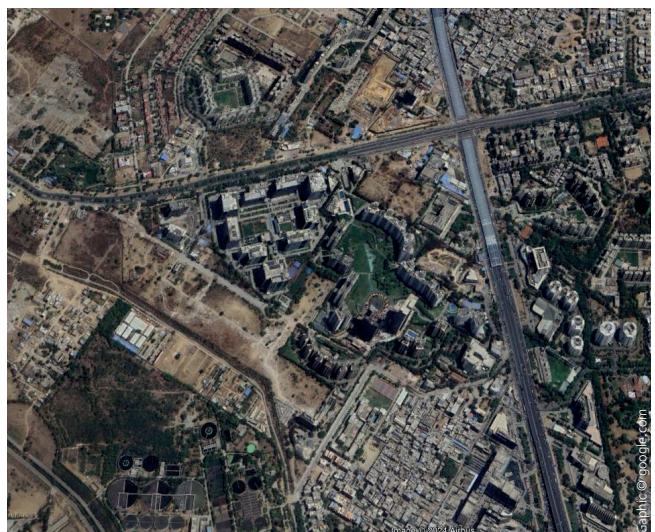
Internally, the layout prioritizes walkability, with shaded pathways and clearly marked crossings, keeping pedestrians safe and comfortable. Campus shuttle services further facilitate movement, making the large campus easy to navigate.

Candor TechSpace 2024
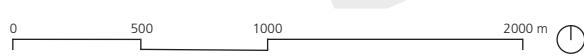
Siteplan 1:3.000

Candor TechSpace is a dynamic business park with a mix of functions and architectural typologies, adjusted to the diverse needs of modern corporate environments. This huge campus accommodates a range of functions, primarily focusing on office spaces, but also includes retail areas, recreational facilities, and other essential services.

The core function of Candor TechSpace is to provide high-quality office spaces designed for IT and IT-enabled services (ITeS) companies. These office blocks are strategically placed throughout the campus to optimize accessibility and workflow efficiency. In addition to office spaces, the park incorporates

retail zones offering food courts, cafes, and convenience stores, which are usually concentrated near the central areas to serve employees and visitors alike.

Furthermore, Candor TechSpace also integrates recreational and wellness facilities, such as fitness centers and green spaces, promoting a balanced work-life environment. These are often located at the peripheries or near major office blocks, allowing easy access without interrupting the primary workspaces.

Candor Tech Space is unique in its holistic approach to modern office space design, combining functionality with sustainability and employee well-being. One of its outstading features is its focus on sustainability. The development incorporates green building principles, such as energy-efficient systems, water conservation measures and the use of renewable energy sources, ensuring it meets global standards for environmentally responsible construction.

Another distinctive aspect is the promotion of a healthy work-life balance. The open-plan design, with its extensive green areas, recreational spaces and amenities, encourages employees to take breaks and socialize, which boosts both productivity and employee satisfaction. This focus on well-being is complemented by the integration of high-tech amenities such as smart lighting systems, advanced security and high-speed internet connectivity, making it an ideal destination for tech-focused companies.

The project also excels providing in flexible office spaces that are suitable for businesses of various sizes, from startups to large enterprises. With customizable office configurations, Candor Tech Space can meet the needs of diverse tenants, offering flexibility in space planning and usage.

Furthermore, Candor Tech Space's location in the heart of Gurgaon's IT and business district offers a competitive advantage in terms of easy access to talent, services and global connectivity. This strategic positioning makes it an attractive option for multinational companies looking to establish a presence in the NCR.

Ultimately, Candor Tech Space is distinguished as one of the leading commercial areas in Gurgaon due to its unique blend of modern infrastructure, sustainability, employee well-being and strategic location.

0   500   1000   2000 m

The campus emphasizes sustainability, equipped with a 469 kWp rooftop solar installation, 100% organic waste management through composting, water-efficient landscaping with drip irrigation systems, an ultra-filtration sewage treatment plant, and electric vehicle charging stations. Additionally, the site is designed as a zero-water discharge campus.

The strategic location of the campus offers easy access to National Highway NH 8, quick connections to Delhi, and proximity to the international airport. Nearby facilities include hotels, shopping malls, and hospitals, further enhancing the appeal of the site.

Three decades ago, Gurgaon was mainly farmland and hardly any different from the rural surroundings of the Indian capital. Today, it's a booming metropolis that stands for the rapid economic development of India. Located southwest of New Delhi, this city has developed as a symbol of the country's aspirations and achievements and ability to adapt to the demands of globalization. Gurgaon's journey from aggriculture to a global tech hub reflects India's transition into a modern economy.

The economic metamorphosis of Gurgaon began in the 1980s, started by liberalization policies and infrastructural developments that opened up India's markets to foreign investment. These changes brought global corporations to India's shores, many of which established their base in Gurgaon due to its proximity to Delhi. The establishment of the Maruti Suzuki manufacturing site marked the city's first significant industrial investment. Over the next decades, Gurgaon attracted multinational corporations across various sectors, including information technology, finance, and pharmaceuticals. The city's

proximity to New Delhi and improved connectivity through the Delhi - Gurgaon Expressway further fueled this transformation. Today, Gurgaon is home to more than 500 companies. The growth of sectors like IT and BPO services has turned Gurgaon into a leading outsourcing destination globally.

Shift in Occupational Preference
The shift from an agrarian to an urban, service-oriented economy has altered the occupational landscape in Gurgaon. Once dominated by farmers and rural workers, the city now sees a majority of its population employed in white-collar jobs. This shift emphasizes the economic changes in India, where service sectors are outpacing traditional industries.

Education has played a critical role in this transition. With the rise of educational institutions and training centers in and around Gurgaon, the workforce had to adjust to the demands of a globalized job market. The emphasis on skills such as IT, management, and customer service has prepared the local population for high-paying jobs in multinational corporations.

aerial view of gurugram

Private Sector Growth

Gurgaon's growth is dominated by the flourishing private sector. Unlike other Indian cities where the public sector played a significant role in urban development, Gurgaon's expansion has been driven by private enterprises. Real estate developers have been instrumental in creating the city's skyline, characterized by modern office spaces, luxury apartments, and shopping malls.

The rise of business parks and IT hubs such as DLF Cyber City and Udyog Vihar, illustrates the city's dependence on private investment. These zones not only provide infrastructure to companies but also create jobs and promote economic growth. The model of private-public partnerships in Gurgaon has served as an example for other emerging cities in India.

Rapid Urbanization

With economic growth came rapid urbanization, transforming Gurgaon into a city of skyscrapers and high-rise buildings. However, this rapid development has brought challenges including traffic congestion, inadequate public transport and a tight supply situation. The city's population explosion from a few thousand to over a million within a few decades, has put immense pressure on its infrastructure.

Parallels with Silicon Valley
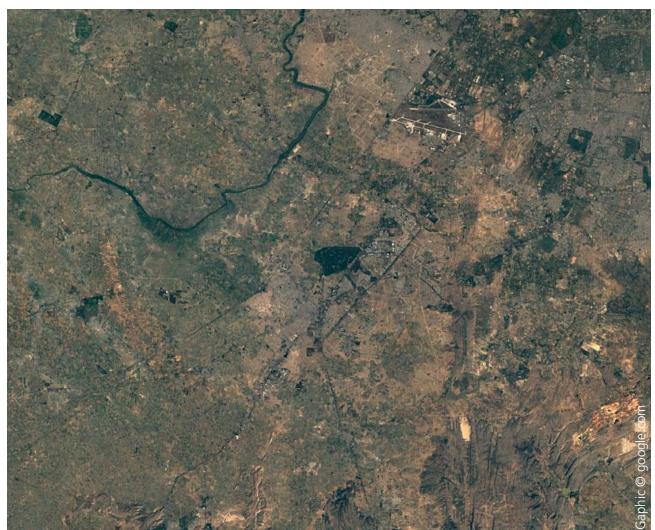
Gurgaon's deveeloopment has parallels with Silicon Valley in the United States of America. Both regions experienced rapid economic growth that was driven by technology and innovation. Like Silicon Valley, Gurgaon has become a magnet for startups and entrepreneurs and fosters a culture of innovation and enterprise.

Conclusion
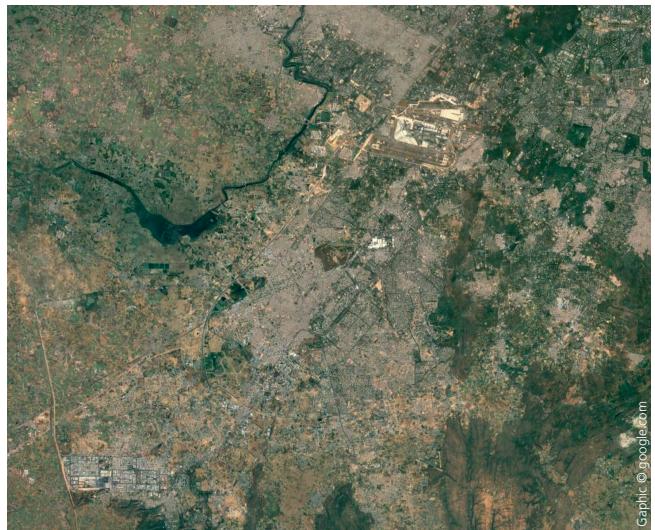
The city's transformation is a testament to the potential of market-driven growth, innovation, and strategic investments. As Gurgaon continues to evolve, it represents both the opportunities and challenges of modern urbanization in India. In its journey, Gurgaon exemplifies how a combination of favorable policies, private sector dynamism, and strategic location can turn a city into a global hub. However, fueling this growth while addressing infrastructural and social challenges will be key to ensuring that Gurgaon remains a mirror of India's progress in the decades to come.

Dwarka Expressway

Gurgaon 1995

Gurgaon 2025

Vaibhav Khand

Residential

Hotel

Retail, Gastro, Services

Office

Production

Social, Education, Culture

Parking
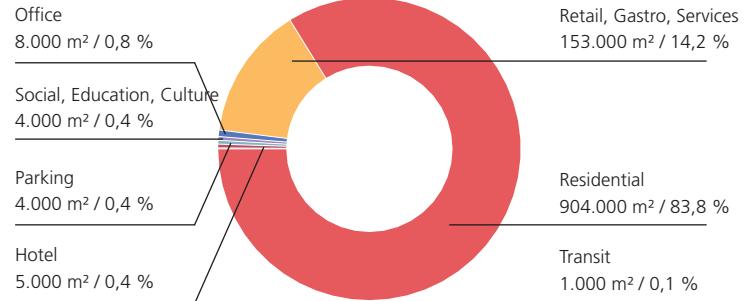
Transit

Total Area	67,5 ha / 100,0 %
Public Open Space	17,0 ha / 25,2 %
Public Transit Area	7,4 ha / 11,0 %
Net Builuing Land	43,1 ha / 63,8 %
Total GFA	1.079.000 m²
Total Plot Coverage	0,22
Floor Area Ratio (FAR)	1,60

Office
8.000 m² / 0,8 %

Social, Education, Culture
4.000 m² / 0,4 %

Parking
4.000 m² / 0,4 %

Hotel
5.000 m² / 0,4 %

Retail, Gastro, Services
153.000 m² / 14,2 %

Residential
904.000 m² / 83,8 %

Transit
1.000 m² / 0,1 %

CASE STUDY 3:
VAIBHAV KHAND

Project Location in Delhi

Vaibhav Khand is a residential and mixed-use development located in the heart of Indirapuram, Ghaziabad, a satellite city of Delhi. Strategically located at the Delhi-Meerut Expressway and near NH-24, Vaibhav Khand offers excellent connectivity to major urban centers, including Delhi, Noida and Greater Noida. This project has become as a thriving residential and commercial hub that adressesresponds to the growing demand for well-designed urban spaces in the National Capital Region (NCR).

The area was originally developed as part of the planned city expansion of Indirapuram in the early 2000s, when Ghaziabad began to transform into a modern extension of Delhi. The main goal was to provide modern housing solutions to meet the needs of the growing middle and upper-middle-class working in Delhi and Noida. Today, Vaibhav Khand is a dynamic place comprising a mix of high-rise apartment complexes, retail spaces, educational institutions and recreational facilities.

Known for its planned infrastructure, Vaibhav Khand offers a mix of residential and commercial spaces, making it a self-contained urban locality. Residential units range from compact apartments to spacious luxury apartments and are tailored to different income groups and lifestyles. Commercial facilities, including malls, local markets, and office spaces, contribute to the economic dynamism of the area.

The neighborhood is also characterized by its focus on community living. Parks, playgrounds and landscaped gardens are integrated into the design, promoting a green and calm environment. Educational institutions, healthcare facilities and shopping centers are all within walking distance, making it a convenient place for families.

In addition, Vaibhav Khand benefits from solid infrastructure development in the surrounding region. It has become one of the most sought-after addresses in Ghaziabad, offering a balanced mix of affordability, accessibility and modern amenities. Its proximity to major employment hubs and infrastructure development projects further enhance its appeal. Vaibhav Khand is well-positioned to remain a key residential and business destination.

The initial vision for Vaibhav Khand was to create a modern, self-sufficient neighborhood that could absorb the growing population of NCR in a planned and organized manner. The project intended to provide high-quality residential spaces that are well integrated with commercial and social infrastructure to ensure comfort and a high standard of living.

The concept was based in the idea of "walk-to-everything" urban design, where residents have access to essential services, recreational spaces and employment opportunities within close distance. Sustainability and community well-being were also important aspects of the vision, with an focus on green spaces, efficient infrastructure and social integration.

This vision has been mostly realized and Vaibhav Khand now serves as a model for planned urban development. While there are still some challenges due to rapid urbanization, such as traffic congestion and overburdened infrastructure, the project has succeeded in creating a vibrant and livable community. The neighborhood continues to evolve and adapt to the needs of its growing population.

Vaibhav Khand's open space concept prioritizes community interaction and environmental sustainability. About 20-30% of the area is dedicated to green spaces, including parks, playgrounds and landscaped gardens. These open spaces serve as meeting places for residents and offer opportunities for recovery, relaxation and also social interaction.

The design includes multiple small parks throughout the neighborhood, ensuring that green spaces are easily accessible from all residential areas. Larger parks, equipped with jogging trails, fitness zones and seating areas, serve as central meeting points for community activities. Playgrounds and open spaces are specifically designed for children, promoting a family-friendly environment.

The formal concept of these spaces highlights sustainability, with native trees and plants reducing water consumption. Rainwater harvesting systems are integrated into park designs to support groundwater recharge. The open spaces also work as natural buffers, improving air quality and reducing the urban heat island effect.

The mobility concept at Vaibhav Khand is designed to offer seamless connectivity while promoting sustainable commuting options. Its strategic location near NH-24 and the Delhi-Meerut Expressway ensures excellent road connectivity to major urban centers such as Delhi, Noida, and Greater Noida. Public transport options, including buses and shared auto services, are easily available, further increasing accessibility.

Pedestrian mobility is prioritized through well-maintained sidewalks and pedestrian-friendly streets. The design of the environment invites walking, with shaded paths connecting apartment blocks to parks, shopping malls and other facilities Cycling is also supported, with designated bike lanes integrated into the neighborhood design.

Parking in Vaibhav Khand is designed to meet the needs of residents and visitors. Residential complexes typically provide underground parking or designated parking spaces, reducing congestion at street level. The commercial areas have ample parking for customers.

Krishna Apra Gardens

Vaibhav Khand 2010

Vaibhav Khand 2025

Siteplan 1:5.000

Vaibhav Khand is a residential area that also includes a variety of public facilities, including shopping centers, restaurants and essential services to meet the diverse needs of its residents. Additionally, the development offers a mix of commercial space and community infrastructure such as schools, health centers, and recreational areas, creating a balanced mixed-use environment that supports a self-sufficient urban lifestyle.

The area of Vaibhav Khand is carefully planned to fulfill all daily needs within its boundaries. At the heart of the development are residential buildings that come in various typologies, ranging from mid-rise apartment complexes to high-rise tow-

ers. These residential clusters are centered around landscaped courtyards and open areas, which provide multiple opportunities for leisure, social interaction and community engagement. These green spaces, carefully designed to include walking paths, seating areas and play zones for children, enhance the residents' quality of life and encourage outdoor activities.

The edges of the settlement are mainly reserved for non-residential uses. Along the busy main roads, the area offers a mix of retail outlets, office spaces and small-scale industrial complexes that address the needs of residents and visitors alike. A prominent commercial hub within the development serves as

Vaibhav Khand is characterized by its well-thought-out urban planning that combines residential comfort with modern infrastructure and community-oriented amenities. Its unique combination of affordability, accessibility and sustainability makes it a preferred choice for families and young professionals in NCR. With its intelligent design and focus on comfort, the neighborhood meets the diverse needs of its residents.

One key feature that sets Vaibhav Khand apart is its self-contained design. The neighborhood offers a mix of housing options, commercial spaces and essential services like schools, healthcare centers and retail outlets, all within close proximity. This integrated approach reduces the need for long commutes, promotes a "walk-to-everything" lifestyle, providing residents with both convenience and a better quality of life.

The green infrastructure at Vaibhav Khand is another highlight. A significant percentage of the area is dedicated to parks and open spaces, enabling the neighborhood to promote a healthy, environmentally friendly and calm environment These spaces not only provide recreational benefits but also contribute to better air quality, reduced heat islands and an overall sense of well-being.

Accessibility is also a crutial aspect. The project's strategic location near major highways and public transport hubs ensures seamless access to employment centers and city amenities. Internally, the pedestrian-friendly design and cycling infrastructure further increased mobility, encouraging sustainable transportation.

The community-focused amenities, such as parks, playgrounds, and cultural spaces, foster a sense of belonging and encourage social interaction among residents. Regular community events and initiatives strengthen this spirit and make Vaibhav Khand more than just a residential area - it is a thriving community.

Ultimately, Vaibhav Khand's unique appeal lies in its ability to balance modern urban living with sustainability and community well-being. Its thoughtful planning, strategic location and focus on quality of life create a model neighborhood that sets a benchmark for urban development in the rapidly growing NCR region.

a center for business and retail activity, with facilities such as coworking spaces and banquet halls for community events. Educational and healthcare facilities are located within walking distance, supporting the area's self-sufficiency and appeal to families.

Vaibhav Khand is a model project with its mix of residential, commercial and public spaces, as well as its attention to green infrastructure and accessibility. It combines modern urban living with environmental sustainability and community well-being, setting a high standard for integrated neighborhoods in the region.

The Developer's Perspective

For developers, gated communities like Vaibhav Khand in Ghaziabad are a strategic response to the growing demand for secure, well-planned urban housing. Vaibhav Khand was designed to be more than just a residential development - it is a self-contained neighborhood offering a holistic lifestyle. The developers built multilevel residential towers to ensure that residents have access to everything they need within walking distance.

Vaibhav Khand's strategic location near commercial hubs, schools and public transportation is a major selling point. Developers have recognized that urban buyers value close proximity to jobs and connectivity to the entire city. Therefore, the project's design prioritized good transportation links, such as easy access to metro lines and highways.

From an economic perspective, gated communities are highly lucrative projects. The combination of first-class facilities and exclusivity allows developers to target families in the middle and upper-middle classes who are willing to pay for comfort and security. Features like energy-efficient construction, rainwater harvesting systems and green certifications align with modern expectations of sustainability while boosting the market value of the development. However, developers face challenges in balancing high-density housing with maintaining quality of life. Excessive population density can reduce attractiveness and requires careful planning to ensure adequate open space and infrastructure.

The User's Perspective

For residents, Vaibhav Khand is more than a housing complex- it's a sanctuary from the chaotic urban environment. Buyers are attracted by the promise of safety, delivered through features like controlled access gates, closed-circuit television and 24-hour security guards. Families with children are especially grateful for the safe, enclosed environment, where children can play freely without having to worry about traffic.

courtyard krishna apra gardens

The amenities offered within the community are a significant draw. Residents can use jogging trails, gyms, swimming pools and club houses without ever leaving the premises. Shops for daily needs are often located within or near the community, minimizing long journeys. For working people, these conveniences mean time savings and higher quality of life.

Social interaction is also made easier by carefully designed community spaces. Parks, community halls and events organized within the gated community help to foster a sense of unity among residents and create a strong neighborhood. However, this island-like lifestyle can sometimes have an isolating effect, as residents remain cut off from the larger city and its cultural diversity. Furthermore, the high costs associated with gated communities can make them unaffordable for lower-income families, raising concerns about exclusivity.

The Perspective of Indian Urban Society
In the broader context of Indian urban society, gated communities like Vaibhav Khand are both a reflection of progress and a reminder of socio-economic differences. These developments address the growing demand for safe, high-quality living spaces in rapidly urbanizing regions. With their primary focus on modern infrastructure, green spaces and efficient utilities, they serve as models for urban design in an era of population growth and environmental challenges.

However, the exclusivity of gated communities also highlights the socio-economic imbalances that exist in Indian cities. The privatized infrastructure, including private water supply, waste management and security services, demonstrates the limitations of public urban systems. Residents of gated communities are often unaware of the challenges faced by neighboring areas, such as water scarcity, poor sanitation, and traffic congestion, creating a physical and psychological divide between the privileged and the rest of the city.

Despite these divides, gated communities contribute to local economies by creating employment opportunities in construction, maintenance, and security services. They also increase the value of surrounding areas, attracting further investment and development. Although concerns about inclusivity remain, the growing popularity of gated communities reflects the desire of India's urban middle class for a better standard of living.

Gate of Krishna Apra Gardens

aerial view of Ghaziabad

appartment complex in detail

East Kidwai Nagar

Candor TechSpace

Vaibhav Khand, Krishna Apra Gardens

Compared with each other, the three projects East Kidwai Nagar, Candor Tech Space and Vaibhav Khand are very different in terms of both size and use. Nevertheless, there are some similarities between the projects. On the one hand in terms of planning and implementation within the projects, but also in the urban context and the overall planning with regard to the surroundings.

Vaibhav Khand brings together several similar developments that may work well on their own. However, the projects do not relate to each other; they make little reference to the context or surrounding buildings. Nevertheless, most of them function according to the same principle, a gated community with large residential buildings and smaller buildings with public uses such as facilities that provide for daily needs, and in some cases also schools or hospitals.

East Kidwai Nagar is very similar to the other developments in Vaibhav Khand in this aspect. The project hardly takes up the context and, planned like this, it could be located anywhere else in the city and would probably work just as well. This is because the planning only relates to the users of the development and is geared towards achieving a high quality of life. This is also largely successful, even if not all of the original planning objectives, such as the aim of complete self-sufficiency, are achieved.

Similar planning can be observed at Candor Tech Space. Even though the focus here is less on residential construction and more on office use, similar patterns can be seen in the planning of the project. However, the rapidly growing technology sector is another driving force here. As a result of this veritable boom, the demand for such projects is increasing dramatically and, like this example, is often planned by the private sector or driven by larger companies and investors, such as Brookfield India Real Estate Trust in this case, rather than at government level like East Kidwai Nagar.

Despite their differences, all three projects are very comparable and provide a good first impression of current developments of larger projects for living and working space in the greater Delhi area. They show clear strengths as far as the projects themselves are concerned, but also exhibit strong deficits, especially with regard to the overall urban design.

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BENGALURU

MANTRI SERENITY, WIPRO BGL CAMPUS, KARLE TOWN CENTRE

Aaron Liebl, Tansu Simsek

Bengaluru by Sunset

INTRODUCTION

The city of Bengaluru is known by many names. It is called the "Garden City" of India for its many parks and lakes, "Indian Silicon Valley" for the IT centres that have been sprouting since the 2000s and "Boom Town" because the city grew faster than many other cities in India in the last decades. In recent developments, the city and state officials have decided that the former colonial name "Bangalore" should change to a name that is closer to the historical records, thus "Bengaluru" was decided on in 2014.

With 13.2 million inhabitants by 2022, the capital of the southern state Karnataka is the forth biggest city in India. The population number is predicted to increase to 20.3 million by 2050 and so will the urban area expand further. In order to control the increasing number of housing and industrial construction which pressure further to the peripheries of Bengaluru, the city officials created a master plan for 2031. In this plan they follow the guiding principles called "Mobility",

"Streamlined Governance", "Ecological Sustainability" and "Inclusive Growth". These will help them form a strategy to ensure efficient mobility, housing for all, safe drinking water, access to large green open spaces and balanced integrated development for companies and industries. In this way, the necessary urbanization of its land is not only about new housing for the increasing number of inhabitants, it also mirrors the social transformation as in restructuring of economies and different livelihoods.

Bengaluru's elevated location offers mild temperatures but distinct wet and dry seasons can be perceived as well. This means that the dry season lasts from December till February and summer last from March till May. This is followed by the monsoon season from June till September and post-monsoon season from October till November. Artificial lakes and overhead tanks filled with rainwater help provide citizens with fresh water for six months at a time.

Bengaluru was founded as a fort by the governor of the Vijayanagara Empire, Kempe Gowda I in 1537. It is supposedly at the location of a former village that was called "Place of Boiled Beans" or "Benda Kalu Ooru" by an hungry king. The mud-brick fort was constructed in a design that allowed passage from East to West and North to South. These streets as well as its old market street structures are still seen and used today. Kempe Gowda I envisioned woodlands and a place of wealth, commerce and culture, so that the construction of lakes, water tanks, temples and housing was heavily supported.
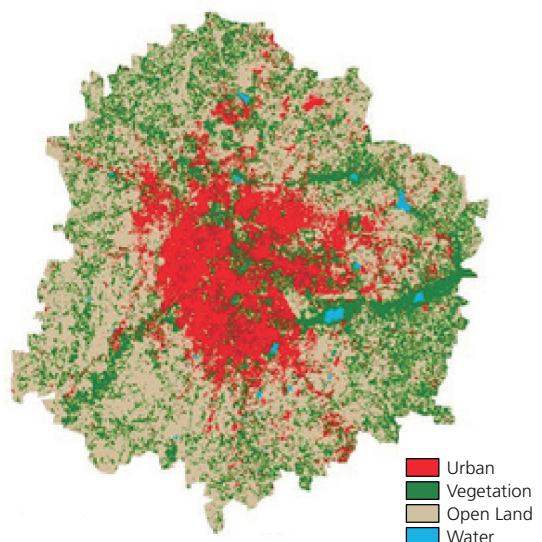
The "Garden City" of India was styled with this title at last when the King of Mysore, Hyder Ali commissioned the Lal Bagh Park adjacent to the Lal Bagh Lake in 1760. The construction of this botanical garden was completed by his son Tipu Sultan. In following years and decades it has become a garden of great wealth since it inhabitated many plants from Asia and Africa.

Under British rule Bengaluru was transformed into a prominent military and administrative center, earning the nickname "Pensioners' Paradise" for its serene environment. Colonial influence is evident in the city's architecture such as Cubbon Park, the Bengaluru Palace and the grid-like planning of areas such as M.G. Road and Brigade Road.
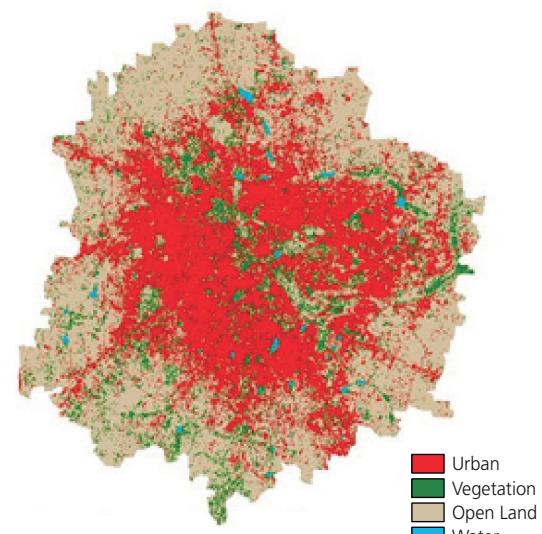
After India's independence in 1947, Bengaluru changed as a city in a way that it influenced its identity in the 21st Century. The establishment of research and educational institutions like the Indian Institute of Science (IISc), National Aerospace Laboratories (NAL), and Hindustan Aeronautics Limited (HAL) in Bengaluru allowed the city to emerge as a hub for science, technology, and innovation.

The success of Bengaluru's aerospace and defense industries during the mid-20th century, began attracting highly skilled workers. Thus, its reputation as a city of learning and progress earned it the other nickname "Science City."

The 1980s and 1990s marked a moment of height for Bengaluru, with the global IT revolution positioning the city as India's technological powerhouse and "Silicon Valley".
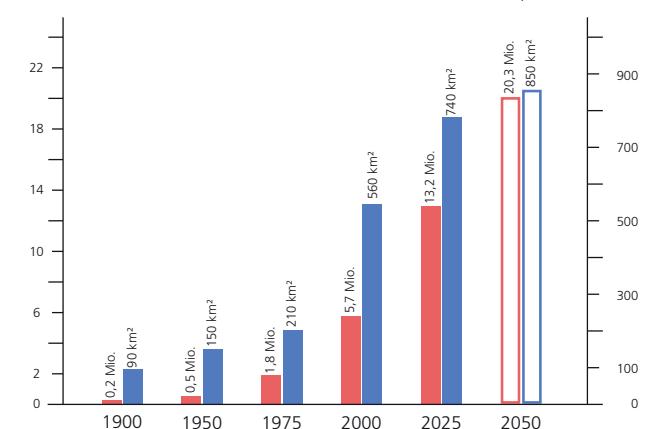
Urban Areas in 2003

Urban Area in 2021

Growth of Population and Territory 1900 - 2025

The establishment of technology parks like Electronics City and the International Tech Park Bangalore (ITPB) attracted multinational companies, including Infosys, Wipro, and later IBM, Microsoft and Google. Now, modern tech parks like Manyata Tech Park and RMZ Ecospace house the headquarters and offices of global technology firms, reflecting Bengaluru's worldwide appeal. This development in the economy and land use has enabled the way for entrepreneurial spirit and a startup culture.

The consequential rapid urbanization has strained the city's former identity as the "Garden City". Now skyscrapers, luxury apartments, gated communities and traffic overwhelm the cityscape. While the construction of the Kempegowda International Airport, the Namma Metro and elevated expressways have helped Bengaluru traffic-wise there are a lot of possibilities for improvement. Also in regard to environmental pollution the city has to act, so that well-known lakes like Bellandur and Varthur can be free of toxic matter and safe to use for all visitors.

Combating rising temperatures and water scarcity correlate with growing population. While Bengaluru and its citizens need more housing it needs a development program in which among others green spaces can florish and tree shades can offer coolness.

In recent years, Bengaluru has made strides in addressing its environmental challenges. Citizen-led movements and non-governmental organizations have taken up the cause of lake rejuvenation, waste segregation, and urban afforestation. Initiatives like cycling lanes, electric vehicle adoption, and solar energy installations are gaining momentum as the city strives to balance growth with sustainability. Programs like the Master Plan for 2031 show strategies to create a better lifestyle in this fast changing metropolis. Bengaluru is not a "city of slums" since only 10% of its population can be called "slum population" but there is concern about its current developments.

The government's efforts to promote smart city initiatives, including improved public transportation, digital governance, and energy-efficient infrastructure, reflect a commitment to building a more sustainable urban environment.
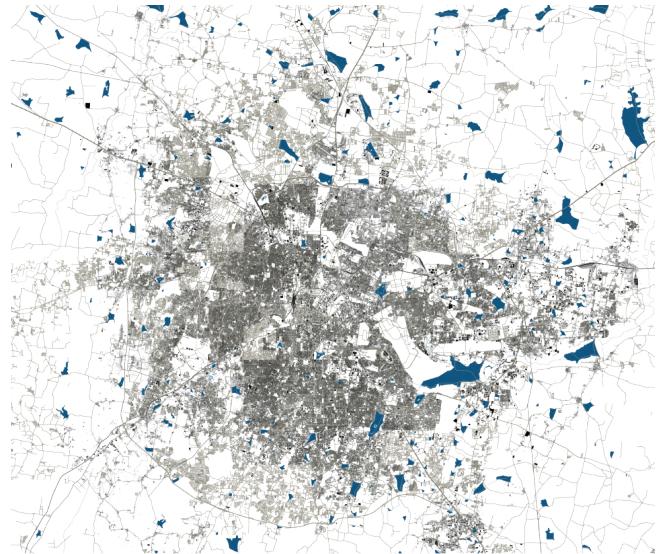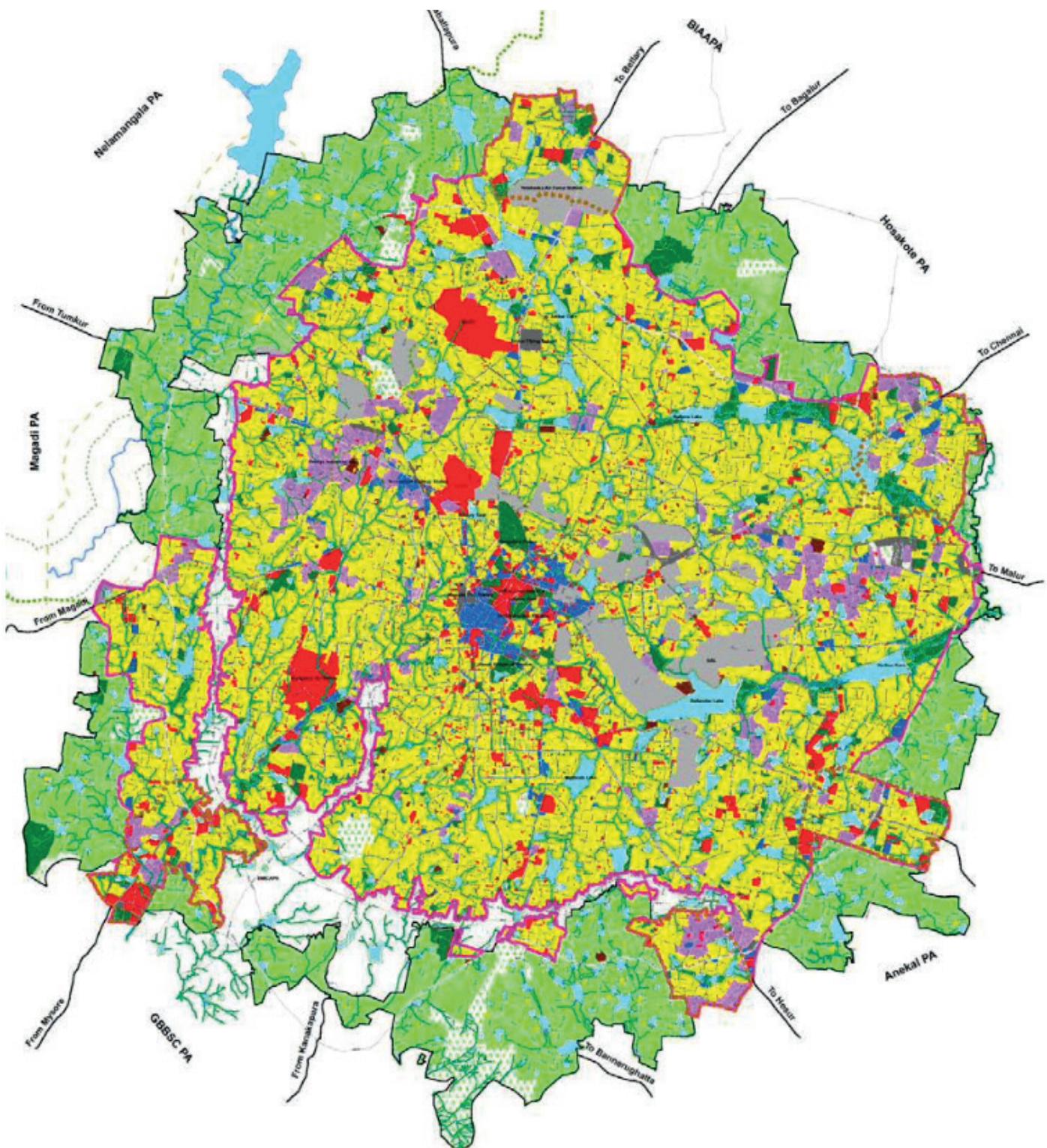

Figure-Ground Diagram of Bengaluru

Despite these challenges, Bengaluru's cultural vibrancy attracts people from across India and the world. Kannada, the official language, coexists harmoniously with a multitude of other languages, including Tamil, Telugu, Hindi, and English.

This vibrancy is reflected especially in the arts and cultural scene. Venues like Ranga Shankara and Chowdiah Memorial Hall host theatrical performances, classical concerts, and contemporary art exhibitions. The city is also known for its thriving music and nightlife scenes, with numerous pubs, cafes, and live music venues catering to diverse tastes. In culinary aspects, Bengaluru offers a great variety of South Indian to international dishes. All this shows that it has cosmopolitan spirit in a country that is divisioned by a class system.

There are a quite few challenges for Bengaluru's government but it has a rich foundation on which the city was built on and a thriving economy to counteract the problems that arise.
The city thrives on innovation, collaboration, and inclusivity. Its residents, known for their entrepreneurial mindset and cultural openness, have played a pivotal role in shaping its identity as a metropolis.

Residential
Commercial
Industrial
Public and Semi Public
Defense
Public Utilities
Parks and Open Spaces
Transport and Communication

Forest
Water Bodies
Streams
Agriculture
Railway Line
Road Network
LPD BDA Boundary
Conurbation Boundary 2031

Urban Development Concept Bengaluru, Master Plan 2031

India's Silicon Valley continues to expand its technological and infrastructural footprint with cutting-edge developments. Among the prominent projects shaping the city's future, the Manyata Tech Park stands out as a flagship development. Located in the North, Manyata is one of the largest tech hubs in the region, offering a vast expanse of office spaces integrated with modern amenities.
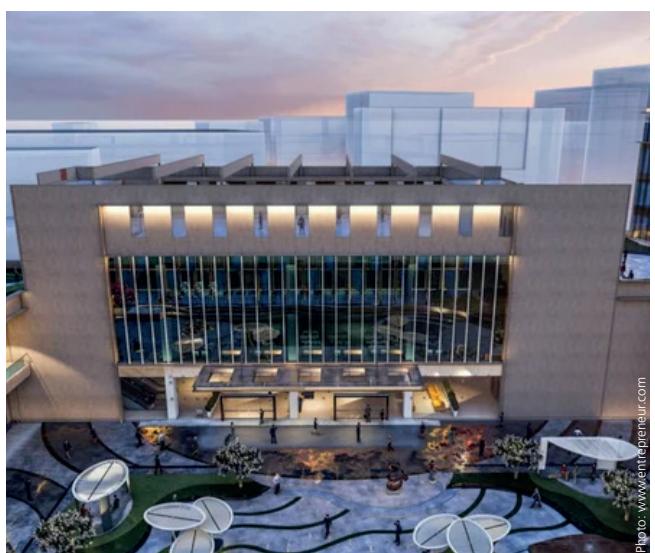
In addition to Manyata, the Bagmane Tech Park is another significant project that highlights Bengaluru's growth as a tech-driven metropolis. This development emphasizes sustainability while providing advanced office spaces to meet the needs of multinational companies. Its strategic location in the heart of the city enhances accessibility and positions it as a key player in the technology ecosystem.

Another noteworthy project is the Vaishnavi Tech Park. Envisioned as a futuristic workspace, this park aims to balance architecture with environmental responsibility. With features like energy-efficient buildings and ample green spaces, Vaishnavi Tech Park reflects a shift towards sustainable urban development while supporting the demands of the expanding IT sector. These tech parks not only contribute to Bengaluru's economic growth but also reshape its urban landscape.

Bagmane Tech Park
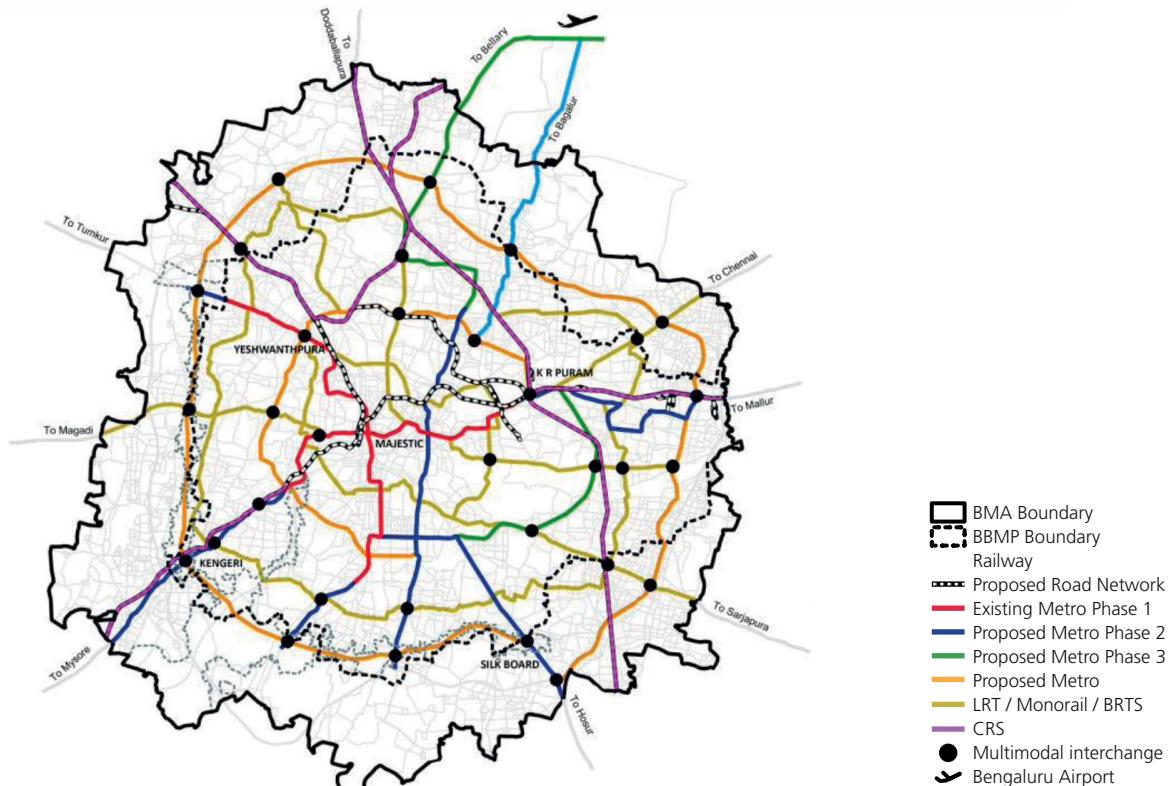
Vaishnavi Tech Park

Manyata Tech Park

Map of the Proposed Public Transport Network of RMP 2031

Bengaluru is undergoing significant enhancements to its mobility infrastructure to address urban congestion and bolster connectivity. At the heart of this transformation is the ambitious expansion of the Namma Metro network. Phase 2A and 2B, currently under construction, will connect key parts of the city, including the IT corridor between Silk Board and KR Puram, and extend further to the Kempegowda International Airport via Hebbal.

These extensions aim to drastically reduce travel times for daily commuters, especially for the tech workforce.The Union Cabinet approved Phase 3 in August 2024, introducing two new lines and 31 stations at an estimated cost of 15,6 million rupees, whats about 1,66 billion €. Notably, the 35 km Red Line, connecting Hebbal to Sarjapura, received approval from the Karnataka state finance department in November 2024.

Further augmenting the metro's reach, the Karnataka government is contemplating extensions to peripheral towns, including Hoskote in the east, Nelamangala in the west, and Bidadi in the southwest. These expansions aim to integrate suburban areas more seamlessly with the city's core, promoting balanced regional development.

Complementing the metro developments, Bengaluru introduced the AI-powered Bengaluru Adaptive Traffic Control System in May 2024, currently operational at 60 junctions. This system dynamically adjusts traffic signals based on real-time conditions, enhancing traffic flow and reducing commute times.

Despite these advancements, experts advocate for a holistic approach to urban mobility. They caution against an overemphasis on road infrastructure projects, such as tunnel roads and flyovers, which may inadvertently encourage car usage and exacerbate congestion. Instead, there's a call for prioritizing sustainable public transport solutions and implementing policies like high parking fees to dissuade car usage.

MANTRI SERENITY
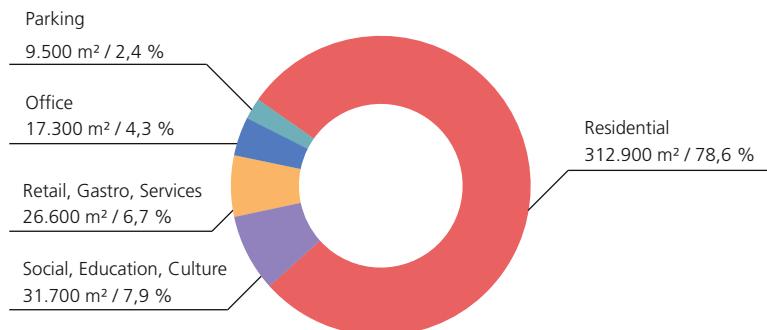
Residential
Hotel
Retail, Gastro, Services
Office
Social, Education, Culture
Parking

KEY DATA

Total Area	6,7 ha /	100,0 %
Public Open Space	3,2 ha /	47,0 %
Public Transit Area	0,8 ha /	11,2 %
Net Builduing Land	2,8 ha /	41,8 %
Total GFA		398.000 m²
Total Plot Coverage		0,25
Floor Area Ratio (FAR)		5,92

Parking
9.500 m² / 2,4 %

Office
17.300 m² / 4,3 %

Retail, Gastro, Services
26.600 m² / 6,7 %

Social, Education, Culture
31.700 m² / 7,9 %

Residential
312.900 m² / 78,6 %
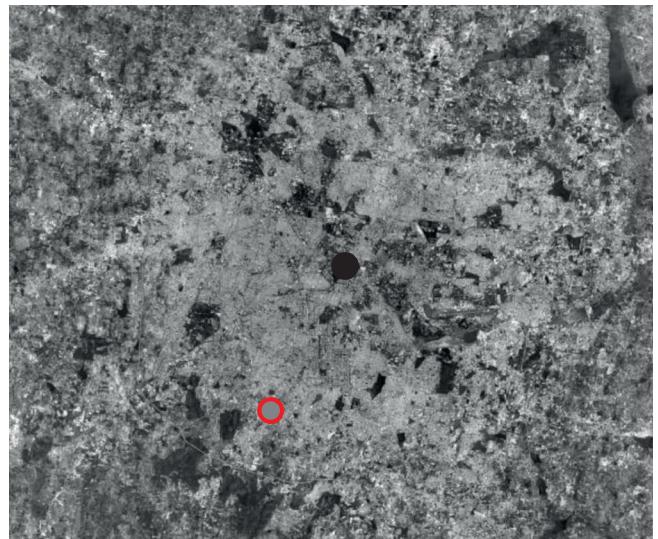
CASE STUDY 1: MANTRI SERENITY

Mantri Serenity, located along the bustling Kanakapura Road in Subramanyapura, Bengaluru, stands as a prime example of India's ongoing urban transformation. Developed by the Mantri Group, this expansive residential and mixed-use project underscores the increasing demand for modern housing solutions in one of India's fastest-growing metropolitan areas. The project offers a compelling study in how large-scale developments can integrate architectural innovation with the diverse socio-economic realities of a rapidly urbanizing city.

This ambitious development spans a substantial area and is carefully designed to cater to the multifaceted needs of its residents. Beyond providing housing, Mantri Serenity distinguishes itself with an extensive array of recreational, sporting, and entertainment facilities. Dedicated sports areas such as indoor squash courts and outdoor fields encourage an active lifestyle, while recreational lounges featuring billiard tables and other amenities offer spaces for social interaction and relaxation. A state-of-the-art clubhouse further enriches the community experience by serving as a hub for various activities.

The contrast between the five aesthetically similar high rise building and the modern smaller clubhouse building is very interesting combined with a playful space inbetween. For families and individuals alike, the project includes thoughtfully planned spaces for leisure and entertainment. Children can enjoy safe and engaging playgrounds, while a private cinema offers a unique setting for movie enthusiasts. These features are complemented by a holistic design approach that prioritizes comfort and community, ensuring that residents have access to a wide range of experiences within a single, integrated environment.

Strategically situated along Kanakapura Road, a vital arterial corridor that connects various parts of Bengaluru, Mantri Serenity benefits from excellent connectivity and accessibility. Its location within this evolving suburban area highlights the project's relevance in shaping the city's growing residential landscape and its contribution to redefining the concept of urban living in India.

Mantri Serenity

The vision behind Mantri Serenity is to create a residential community that seamlessly integrates modern urban living with comfort, convenience, and sustainability. At its core, the project aspires to redefine the concept of home by offering a lifestyle-oriented environment that caters to diverse needs, from individual relaxation to family recreation and community engagement.

Targeted primarily at urban professionals, growing families, and upwardly mobile individuals, Mantri Serenity is designed to meet the expectations of those seeking a balance between the dynamic pace of city life and the tranquility of a private, secure environment. The project's gated community model plays a central role in achieving this vision. By providing controlled access, 24/7 security, and carefully curated shared spaces, Mantri Serenity ensures a safe, inclusive, and cohesive residential experience. This focus on exclusivity and security appeals to residents who prioritize privacy while still valuing the benefits of a close-knit neighborhood.

By prioritizing accessibility, inclusivity, and holistic design principles, the project envisions a thriving residential hub that not only supports the aspirations of its residents but also sets a benchmark for urban development in Bengaluru. Mantri Serenity serves as a model for the future of gated communities, where thoughtful planning and modern amenities create a harmonious balance between safety, community, and contemporary living.

The open spaces within Mantri Serenity are a defining feature of the project, showcasing a diverse range of meticulously maintained green areas and thoughtfully integrated water features. These spaces are designed not only for aesthetic appeal but also to provide functional and recreational value. Residents can enjoy a variety of amenities, including well-maintained tennis courts, a multipurpose sports field, a serene green amphitheater for gatherings and performances, and a luxurious swimming pool for relaxation and fitness. Together, these features create a harmonious environment that promotes both active lifestyles and peaceful retreats, enhancing the overall quality of life within the community.

In contrast, the surrounding area's green spaces are predominantly used for schools, plantations, or agricultural purposes, making them semi-public and less accessible for recreational activities. Public green spaces in the vicinity are often undeveloped plots of land, lacking thoughtful design and maintenance. Against this backdrop, the carefully planned open spaces within Mantri Serenity stand out as a private oasis, offering a superior level of functionality, beauty, and exclusivity for its residents.

Semi-Public Space	Wasteland	Plantage
Public Space	Street	

Open Space Diagram

The mobility concept of Mantri Serenity has been strategically developed to ensure excellent accessibility and connectivity for its residents. A key feature is the newly developed Doddakallasandra Metro Station, located parallel to the project on Kanakapura Road, which provides a seamless connection to Bengaluru's expanding metro network. Additionally, the frequent bus services along Kanakapura Road further enhance public transportation options, making it convenient for residents to commute within the city.

The project features four distinct entrances, strategically designed to optimize traffic flow and ensure easy access for both residents and visitors. Adjacent to the development, the Mantri Arena Mall, also built by the same developer, offers not only retail and entertainment options but also ample parking spaces. This proximity minimizes the need for long-distance travel for daily needs and leisure activities, supporting a well-integrated urban living experience.


Entrances	Metro-Station & -Line
Parking	Bus Station & -Line

Mobility Diagram

Siteplan 1:2.500
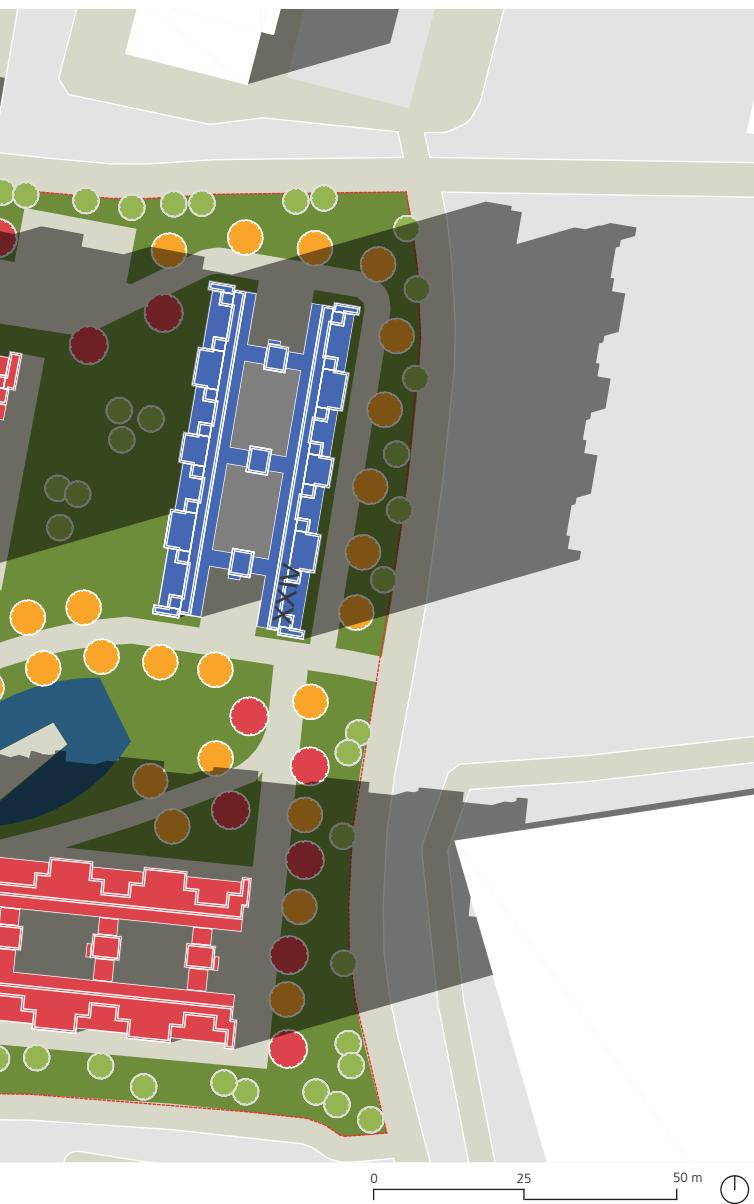
The project's primary focus is residential use, with nearly 80% of the total floor area dedicated to 2- and 3-bedroom apartments. These units are tailored to suit the lifestyles of families, urban professionals, and individuals seeking modern, functional living spaces. This emphasis on housing ensures that the development serves as a vibrant residential hub, fostering a sense of community within the gated environment.

Complementing the residential spaces, approximately 7% of the floor area is allocated to gastronomy, providing residents with a variety of dining options that add convenience and enhance the overall lifestyle offering.

An additional 8% is dedicated to cultural and recreational amenities, including a private cinema, indoor sports facilities, and a clubhouse. These spaces are designed to promote relaxation, social interaction, and physical well-being, enriching the quality of life within the community. Furthermore, the project includes a small office space exclusively for the administrative management of the gated community.

Typologically, the clubhouse is one of the project's most distinctive features. Elevated on the third floor, it creates an open space beneath, offering a unique architectural expression that contrasts with the surrounding structures. This design enhanc-

Mantri Serenity stands out as a distinctive and well-rounded development in Bengaluru, combining innovative design, a comprehensive range of amenities, and a prime location to create a unique living experience. One of its defining features is the variety of residential options available, with spacious 2- and 3-bedroom apartments designed to accommodate diverse lifestyles. The inclusion of penthouses further enhances the range of housing choices.

The project offers a wide array of amenities that set it apart from other developments in the area. At the heart of the community is a vast 70,000-square-foot clubhouse, "The Lotus," which houses an range of facilities. These include a heated indoor swimming pool, a fitness center, indoor sports areas, a gaming zone, and several event spaces.

Strategically located along Kanakapura Road, the development benefits from excellent connectivity. The proximity to the newly built Doddakallasandra Metro Station and access to major roads ensures that residents are well-connected to the city's infrastructure, making commuting easy and convenient. Public transport, including bus routes along Kanakapura Road, further enhances mobility options for residents.

Mantri Serenity's open spaces are also a standout feature, offering an extensive range of recreational facilities. In addition to well-maintained green areas and water features, the development includes sports amenities like tennis courts, a multipurpose sports field, and a swimming pool. The design also incorporates an outdoor amphitheater, providing an ideal space for cultural events and community gatherings.

The development is also noteworthy for its focus on safety and sustainability. The buildings are earthquake-resistant and comply with the seismic standards of Zone II. The overall architecture of the project is designed to promote both comfort and functionality.

es the spatial variety within the development and adds a sense of openness to the otherwise dense arrangement.

In comparison, the five surrounding residential buildings are taller and exhibit a uniform design, with their elongated forms divided into two wings separated by elevator and staircase cores. These cores are connected by open air spaces, allowing for natural ventilation and light penetration while maintaining the structural continuity of the buildings.

The outdoor areas are central to the development, offering residents a variety of environments to foster both active lifestyles and communal bonding. Expansive green spaces, including a serene stroll garden and the palm court at the entrance, create inviting spaces for peaceful walks, informal gatherings, or moments of reflection. The presence of water features enhances these spaces, providing a calming atmosphere and a perfect backdrop for residents to relax, socialize, or enjoy the natural surroundings.

A key element of the social outdoor experience at Mantri Serenity is the multipurpose sports field, which accommodates various activities such as football matches and group workouts. It encourages residents to engage in physical activity while interacting with neighbors. Additionally, the tennis courts and swimming pool offer even more opportunities for active recreation.

The outdoor amphitheatre offers residents a place to come together and celebrate shared experiences, reinforcing the sense of connection within the community. Throughout the development, comfortable seating areas, walking paths, and various community zones create further opportunities for spontaneous social interactions.

The social outdoor spaces at Mantri Serenity are integral to creating a sense of community and well-being. By offering a diverse range of well-maintained areas for recreation, socializing, and relaxation the development fosters an environment where residents can thrive both individually and collectively. These spaces not only contribute to a vibrant, active lifestyle but also support the development of close-knit relationships within the community.

Rendering of Perspective with Outdoor Focus

Swimming Pool

Playground

Green Amphitheater

Multi Purpose Lawn / Football Field

Stroll Garden

Arrival Palm Court

Mantri Serenity is a well-planned, upscale residential development that integrates seamlessly into the broader urban fabric of Bengaluru. Strategically located along the rapidly developing Kanakapura Road, it benefits from excellent connectivity to the city's growing infrastructure, including the Doddakallasandra Metro Station and major roads. The development's modern design and comprehensive amenities make it a standout feature in the area, contributing to the ongoing urbanization of the region. However, while the project is well-integrated into the urban network, it also stands in sharp contrast to the surrounding environment.

The immediate surroundings of Mantri Serenity include a mix of residential, commercial, and industrial zones, with many areas still in the process of development. While the project itself is characterized by luxury, modern amenities, and a focus on community engagement, the nearby areas are more modest in terms of infrastructure and living standards. In particular, many of the local residents live in lower-income neighborhoods with limited access to quality public services and amenities. These areas often feature older, less-maintained housing, informal settlements, and undeveloped land that reflects the socio-economic disparities in the region.

This contrast is particularly striking when viewed in terms of the gated community's exclusivity, privacy, and wealth-oriented lifestyle, compared to the surrounding communities where residents may face economic challenges. The development's high-end offerings—such as the clubhouse, sports facilities, and large green spaces—are in stark contrast to the semi-public green areas and undeveloped open spaces nearby, which are often used for schools, plantations, or serve as unplanned vacant lots.

While Mantri Serenity contributes positively to the urban growth of the region by providing modern housing and fostering development in the area, it also highlights the disparity between the wealthier residents within the gated community and the lower-income populations in the surrounding neighborhoods. This division is visible not only in the physical infrastructure but also in the lifestyles and opportunities available to different groups of people living in close proximity.

Rendering of the Clubhouse and Park

Rendering of the Sportsfield

Rendering of Pool and Playgrounds
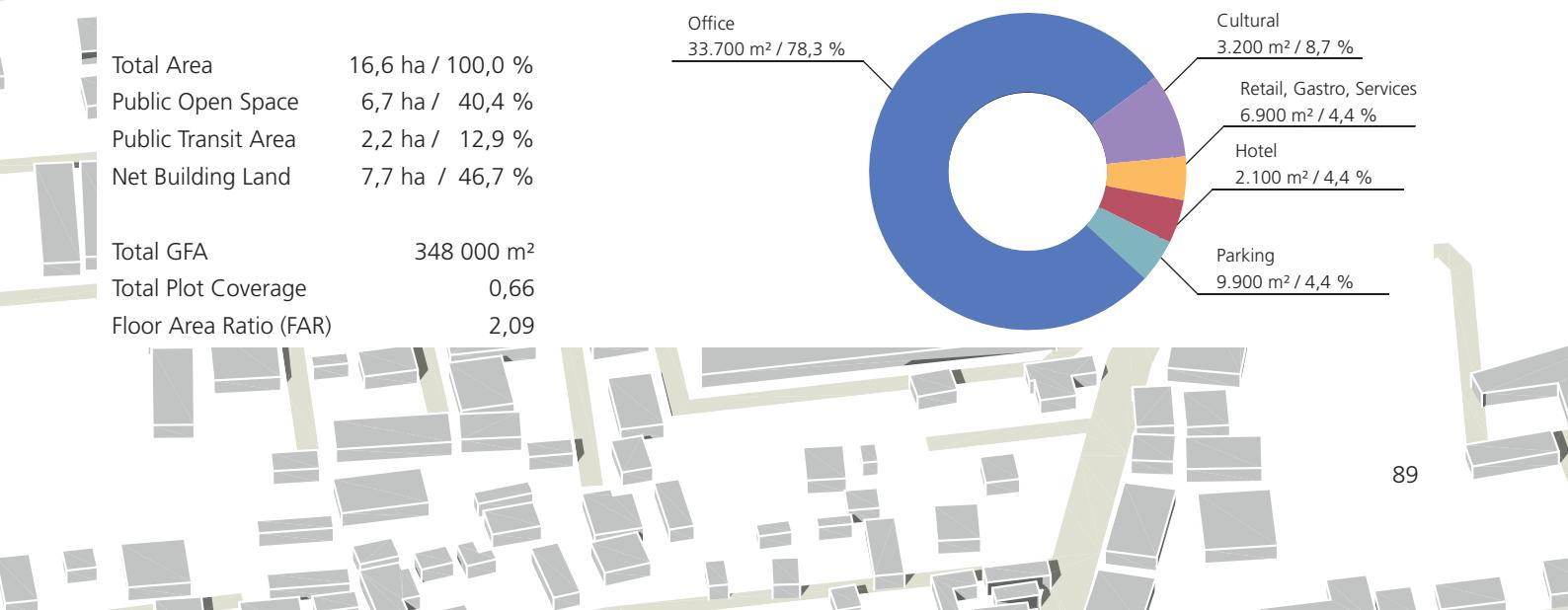
WIPRO BGL CAMPUS

Hotel
Retail, Gastro, Services
Office
Social, Education, Culture
Parking

Total Area	16,6 ha /	100,0 %
Public Open Space	6,7 ha /	40,4 %
Public Transit Area	2,2 ha /	12,9 %
Net Building Land	7,7 ha /	46,7 %
Total GFA	348 000 m²	
Total Plot Coverage	0,66	
Floor Area Ratio (FAR)	2,09	

Office
33.700 m² / 78,3 %

Cultural
3.200 m² / 8,7 %

Retail, Gastro, Services
6.900 m² / 4,4 %

Hotel
2.100 m² / 4,4 %

Parking
9.900 m² / 4,4 %

CASE STUDY 2:
WIPRO BGL CAMPUS
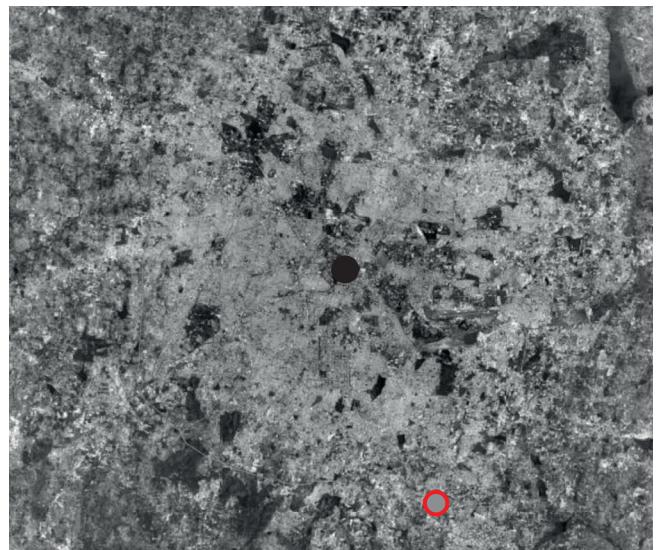
The Wipro BGL Campus, completed in July 2008 by the office of C. R. Narayana Rao, is situated in Electronic City. The campus spans 16 hectares and accommodates approximately 17,000 employees within a built-up area of 348.000 m². Designed as a self-sufficient campus, it houses software development blocks (SDB), a learning centre, a customer care centre, a cafeteria, and a guest block.

The project is a significant addition to the urban and architectural landscape of the region and plays a crucial role in shaping the development of Electronic City, an area known for its transformation into a major global IT hub. By integrating contemporary urban planning principles with a structured master plan, the campus contributes to the region's growing reputation as a dynamic technological and economic center.

The district of Electronic City, located in the southern periphery of Bengaluru, is one of India's largest IT and industrial parks, spanning over 324 hectares. Developed in the early 1980s by the Karnataka State Electronics Development Corporation Limited (KEONICS), the area was envisioned as a hub for technological innovation and industrial growth. Over the decades, it has emerged as a symbol of Bengaluru's rise as the "Silicon Valley of India," housing over 200 IT/ITES companies, including global giants like Infosys, TCS, and Wipro.

The establishment of Electronic City catalyzed urban development in its surrounding areas, leading to improved infrastructure, residential projects, and enhanced connectivity to the central city. Notably, the construction of the Elevated Expressway in 2010 reduced travel time to Bengaluru's central business district.

The campus features a interplay between built spaces and open areas. The arrival forecourt leads to a central plaza, serving as the focal point for movement and orientation within the campus. The spatial organization encourages an interactive and walkable environment, prioritizing pedestrian accessibility and connectivity.
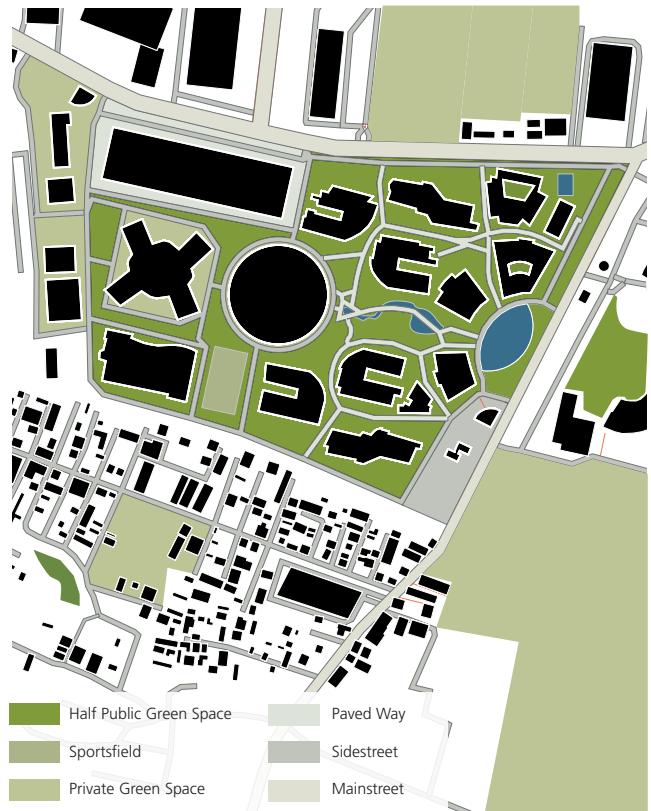
Wipro BGL Campus

The Campus was conceived as a self-contained development that not only meets the functional needs of a large workforce but is able to foster a sense of community and well-being, too. The design prioritizes the integration of open and built environments within as there are many entrances to the campus. In this way the inward-focused design caters to the employees needs, satisfaction and productivity while maintaining a clear separation from external urban surroundings. The segragation is argumented with security reasons and operational efficiency.

The project's vision is to seamlessly blend with the broader urban concept of Electronic City while setting a benchmark for corporate architecture. The master plan emphasizes connectivity, accessibility, and sustainability and it intends to incorporate progressive architectural and environmental strategies.

The project employs a hierarchical approach to spatial organ-ization, with varying levels of built and open spaces. With the welcoming water fountain the eastern plaza serves as a communal, gathering space. Smaller courtyards enclosed by low-rise office blocks create secondary interaction zones, supporting engagement among employees. At the same time these large and small plazas with strategically planted trees contribute to a cooler climate within the campus.
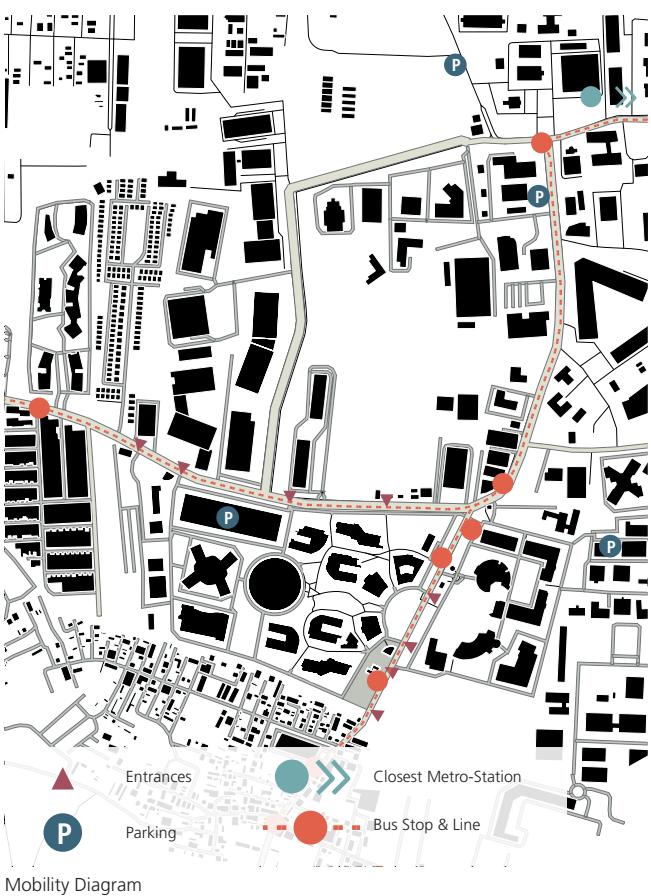
The several green courtyards and meadows are not the only spaces to provide relaxation. A tennis courtyard next to the highest office buildings offers opportunites to unwind and connect with colleagues. But while the company priotizes itself the surrounding is neglegted. Existing green spaces with a high potential to become open parks are kept private and closed off.

Half Public Green Space | Paved Way
Sportsfield | Sidestreet
Private Green Space | Mainstreet

Open Space Diagram
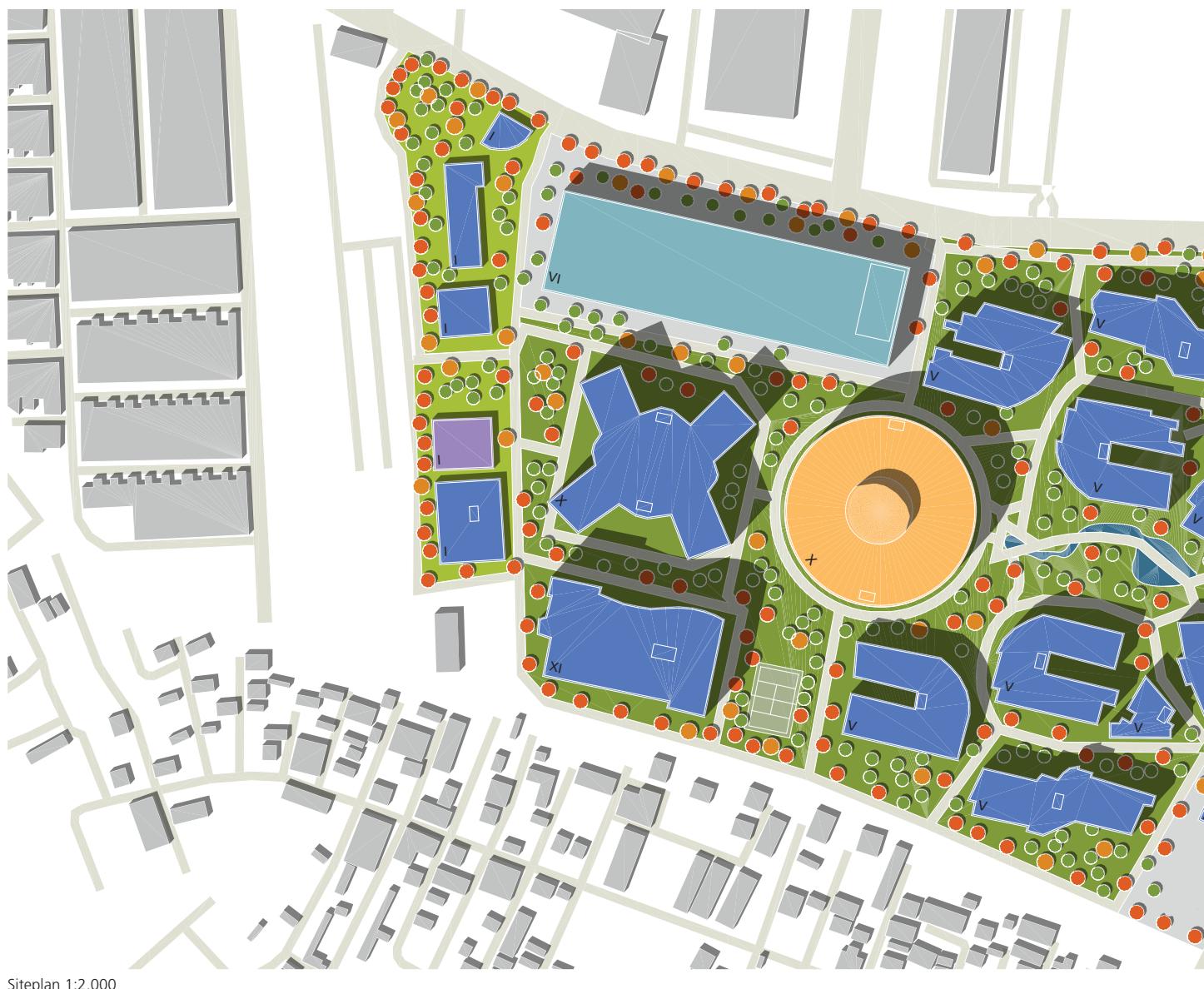
As transportation by car is strategically limited with the park-ing garage to the North, a pedestrian-friendly core is possible. Car entries and bus stops are positioned at the periphery and are easily reachable for the workers. This "car-less" strategy within the campus enhances the safety of the employees, reduces noise polution and promotes a more sustainable mobility.

Around the campus are several bus stops and bus lines that run at intervals of 15 and 30 minutes. There are additional shuttle busses at Wipro Gate No.10 that connect the campus with Silk Institute. The nearest metro station "Electronic City Metro Station" is 2 kilometres away which means a walk there is 20-30 minutes and a car ride 5-10 minutes.

The vicinity to the Expressway Bangaluru - Mysuru ensure that employees and visitors outside of Bengaluru and on the other end of the city are well connected.

Entrances | Closest Metro-Station
Parking | Bus Stop & Line

Mobility Diagram

Siteplan 1:2.000

The master plan is designed to accommodate a workforce of 17.000 employees and to support their work-life balance. While there is a high percentage of office buildings (78%) on the campus, workers can also find by two learning centres and one building each for an guest housing, a retail-gastro establishment and car parking.

What stands out is the building for the gastronomy, retail and other services such as a fitness studio. It is centered between office buildings and is close to entrances to the plot and the parking garage. Being able to leave the office to have lunch in a different environment goes along with the overall design and vision of the project. Social interaction and well-earned rest is encouraged when concentrating the lunch spots away from the offices.

There are three buildings which are important for the overall face of the company and campus. They are situated at the eastern entrance clearly distanced from the office buildings in general. The learning centre focuses on employee development, offering training and educational facilities and is easy to find for newcomers. The customer care center is able to support client-facing service, leading to an overall better business to client connection. The Guest Block is placed away from

The project's architecture and master plan is not just a response to the site's topography but also to the evolving needs of a technology-driven workforce. They focus primarily on integrating seamless pedestrian movement, green spaces, and a variety of functional zones.

One of the most notable aspects of the Wipro BGL Campus is its use of the site's natural gradient, which gently slopes from northeast to southwest. This site condition informs the entire layout, ensuring a gradual transition from the lower, more public spaces to the elevated, more private zones. The architecture capitalizes on the slope, creating a sense of dynamism as one moves through the campus, while maintaining a harmonious relationship between the built environment and the natural terrain.

The master plan conceptually connects with the adjacent Wipro developments, linking the new campus visually and spatially. The semicircular arrival forecourt, which serves as the primary point of entry, extends the arrival experience from the neighboring campus. This approach to integration demonstrates a masterful understanding of continuity and urban context, while the design creates a clear focal point for visitors and employees alike. The arrival plaza also acts as an axis that leads into the campus, culminating in the multi-story office blocks and punctuated by central amenities like the cafeteria. This helps to create a fluid and cohesive spatial journey through the site.

The campus' design also prioritizes sustainability. The abundance of green spaces, courtyards, and water bodies contributes to both the aesthetic appeal and the ecological functionality of the site. These spaces create a comfortable microclimate and contribute to the environmental sustainability of the development. Furthermore, the lack of cars and larger pedestrian zone add to the healthy environment.

the main workspaces to offer privacy for visitors but also keep important company operations more private.

The position of the parking garage is ideal for those who work at the campus and need their own parking spot. The northern road of the campus is less dense and the parking garage itself is not to prominent in the campus' landscape.

The open design emphasizes transparency and accessibility and is committed to establishing a modern, collaborative work environment balancing functionality with aesthetic harmony.

0   25   50   100 m

At the beginning of 2025 the company Wipro moves out of the campus which it has helped to shape. While it was a big part of the Electronic City's development, Wipro's decision to relocate its operations from Electronic City stems from a strategic shift in its real estate and operational strategies. Already in 2016, Wipro began moving offices from its campus due to fact that the expiration of tax incentives, 10-year tax holiday ended, which in turn lead to increased operational costs. To mitigate these expenses, Wipro chose to relocate these offices to its Whitefield campus, where the tax benefits were still applicable. The other reason is the optimization of its real estate portfolio by selling portions of its campuses.

The last reason is that a decision was made to consolidate its workforce into a new 50-acre campus in Kodathi, near Sarjapur Road, approximately six kilometers from its existing headquarters. This move aimed to create an "agile workspace" tailored for digital workers, accommodating over 30,000 employees. The new campus was designed to support modern work practices and enhance operational efficiency.

Regardless of its reasons, it will leave an vacancy in the district, even though the company Broadcom still operates on that campus. The question forms whether the campus could open up to new functions. Electronic City plays an important role Bengaluru's economy so tax incentives are essential tools to attract companies but to follow the Revisioned Master Plan for 2031 green open spaces for all need to be created. The campus itself can provide an sufficient park, especially if it loses most of its workers to digital, remote work.

Following the city's master plan guide lines, another scenario would be to design new affordable housing for low-income citizens on the campus. Since the contrast between those who live outside of the campus and those who work inside is very strong, many opportunities for re-invention are created.

Google Street View in front of Gate 9 (South East)

As one of the largest IT companies in India, Wipro's presence in Electronic City has played a key role in shaping the area into a major IT hub. Electronic City, once primarily an industrial area, has undergone a major transformation since Wipro set up its campus in the region. By moving into this area, Wipro was a pioneer in establishing the region as an IT corridor.

Wipro's presence has also shaped the architectural landscape of Electronic City. The company's campuses are known for their modern, innovative designs, with Wipro being a key player in setting the benchmark for corporate campus architecture in the region. With buildings designed to accommodate thousands of employees and features such as vast green spaces, open courtyards, and energy-efficient systems, Wipro has contributed to creating a well-planned, aesthetically pleasing environment. The development of its campuses in Electronic City has influenced other companies and real estate developers to follow suit in building sustainable, employee-centric office spaces.

The establishment of the large IT campuses has led to the development of better road networks, improved public transport, and more modern amenities in the area. As Wipro expanded its campus, there was a natural growth in supporting infrastructure, such as residential complexes, commercial spaces, retail outlets, and dining options for employees, all of which helped boost the local economy.

Wipro's approach to sustainability and green building practices has set a precedent for other businesses in Electronic City. For instance, Wipro's own facilities, like the "Wipro Campus," are designed with energy-efficient systems, rainwater harvesting, and the use of sustainable materials. This commitment to sustainability has influenced many other companies in the area to incorporate eco-friendly practices into their designs, thereby helping improve the environmental quality of Electronic City.

Campus in January 2013 via Google Earth

Campus in February 2024 via Google Earth

Entry near Police Station

KARLE TOWN CENTRE

FUNCTIONS

- Residential
- Retail, Gastro, Services
- Office
- Social, Education, Culture
- Parking

KEY DATA

Total Area	29,7 ha /	100,0 %
Public Open Space	15,3 ha /	51,6 %
Public Transit Area	4,6 ha /	15,4%
Net Building Land	9,8 ha /	33,0 %
Total GFA	946.000 m²	
Total Plot Coverage	0,23	
Floor Area Ratio (FAR)	3,19	

Retail, Gastro, Services
64.300 m² / 6,8 %

Social, Education, Culture
42.000 m² / 4,4 %
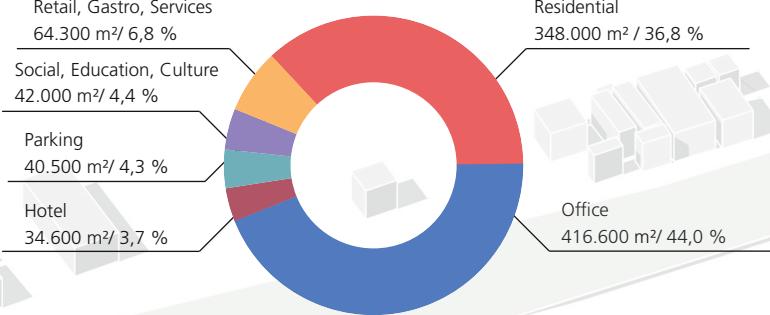
Parking
40.500 m² / 4,3 %

Hotel
34.600 m² / 3,7 %

Residential
348.000 m² / 36,8 %

Office
416.600 m²/ 44,0 %
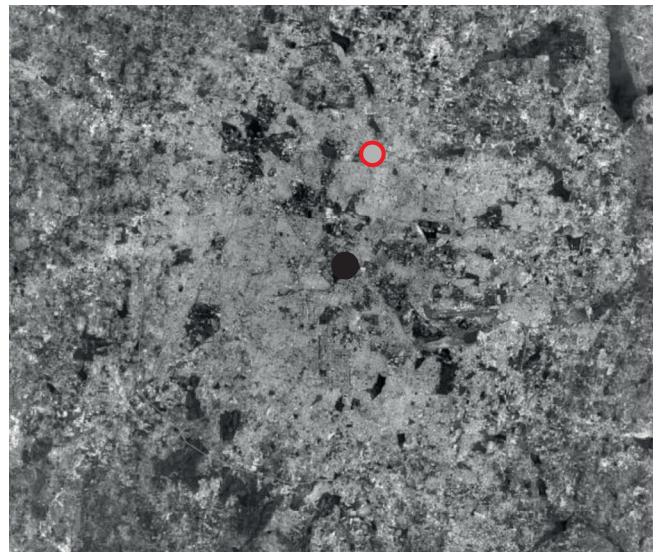
CASE STUDY 3:
KARLE TOWN CENTRE

The Karle Town Centre is an ongoing project since 2016 by the architecture office UNStudio for the city of Bengaluru. It is planned to be an open community with mixed-use buildings ranging from residential spaces, office buildings, and retail spaces to a theatre, a cinema, and a hotel. The project is positioned north of the city centre and is located adjacent to the eastern side of Nagavara Lake. The site encompasses an area of 25 hectares, which was previously undeveloped land, and is now being transformed into a vibrant urban hub.

Nagavara is a popular area for both tourists and residents and is considered one of Bengaluru's many rapidly developing suburbs. The district is well connected by public transportation, with a metro station under construction to improve accessibility further. In addition, numerous buslines connect the area with the city centre and surrounding regions. The statistics to traffic jams emphasize the urgent need for faster and more efficient infrastructure.

Nagavara also provides easy connectivity to essential facilities, e.g. schools, colleges, hospitals, markets and banks. This way the district is an attractive location for development. Its primary landmark, the Nagavara Lake is accompanied by the public park Lumbini Gardens, which reflects Bengaluru's historical identity as "The Garden City". The park offers various recreational activities, including swimming, pedal boating, and jet skiing that allow visitors to find relaxation in a busy city.

Bengaluru, like many parts of India, faces a pressing shortage of quality housing. Nagavara, being in close proximity to the city centre, plays an important role in addressing this issue by offering modern, high-quality and inclusive residential spaces. These developments aim to set new benchmarks for urban living, particularly as the district continues to attract an increasing number of IT companies.

Karle Town Centre

The Dutch architecture office UNStudio has created the Urban Branding Manual specifically for the Karle Town Centre. The manual is supposed to help improve the communication between all participants of the project's development, including the client, engineers, architects and urban planners. Thus the design should keep its integrity which will lead to its proper execution. The manual describes three components as its defining pillars. One, "Garden" wants to draw back Bengaluru to its origins as "The Garden City". Second, "Health" focuses on the inhabitants well-being and wants to stand out as model for India's future. The last pillar, "Culture" emphasizes the importance of embracing and living out culture for social and economic benefits.

In earlier versions of the masterplan empty lots can be read as spaces for greenery and parks but later versions changed those lots into grounds for more residential and officel buildings. The designated space for hotel became smaller with later masterplans and more office spaces and apartments were created instead. As UNstudiospredicted that the lengthy construction would threaten the social and financial development of this big project, they planned methods of prevention by developing each building and plot as an microcosm of its own with a mix of entertainment, leisure activities, business and commerce. The success of this strategy can be seen on the official instagram profile of Karle Town Centre where glimpses of social life and activity on the finished plots are shown.

The open space concept is designed to enhance urban life quality while preserving and amplifying Bengaluru's green character. The landscape design strategically complements the building functions, creating a harmonious balance between green and paved areas. Office and residential buildings are surrounded by lush greenery, providing serene environments that promote well-being and productivity. In contrast, public buildings dedicated to culture and gastronomy are encircled by more paved areas, facilitating events, gatherings, and easy pedestrian movement. This deliberate interplay ensures that each area is tailored to its specific use, enhancing functionality and user experience.
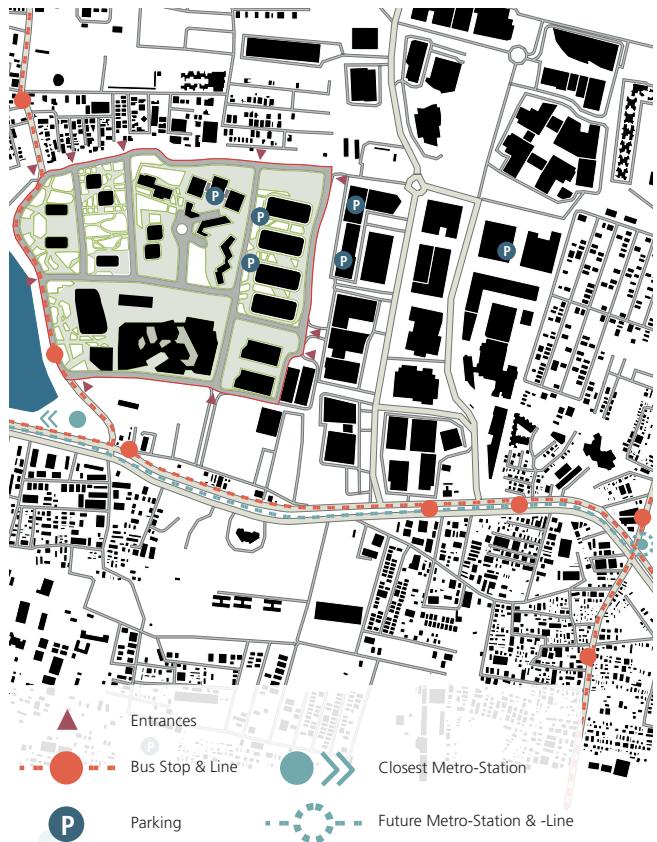
Furthermore, KTC's design emphasizes pedestrian-friendly environments. A network of streets transitions smoothly into designated drop-off points, while underground roads reduce congestion and noise. This approach minimizes vehicular interference and encourages walking, contributing to a healthier urban lifestyle. The integration of nature within the architecture is evident through semi-public sky gardens and green pockets that blend seamlessly with building facades.

Private Space (Plantage)   Plaster Stone
Public Space   Mainstreet

Open Space Diagram

The city centre of Bengaluru and Karle Town Centre have a distance that is an equal length of time for a car drive and train ride of about one hour. The closest train stations Hebbal train station and Thanisandra train station have a distance of 10 to 40 minutes by car or by bus to the project site. Following the city's master plan for 2031, a new metro station will be operational by Decembre 2026 that is only one kilometre further down the main road. The new metro station is positioned at a junction where several busses depart every twenty minutes at the busiest times. This new mobility hub will make Karle Town Centre into a more attractive location for residents and companies.

Transportation within Karle Town Centre focuses on the comfort of pedestrians. Several drop-off points create a system of calm co-existence between vehicles and pedestrians. While green paths exist that offer shade and calmness and connect many destinations within the complex.

Entrances
Bus Stop & Line   Closest Metro-Station
P Parking   Future Metro-Station & -Line

Mobility Diagram

Siteplan 1:3.500
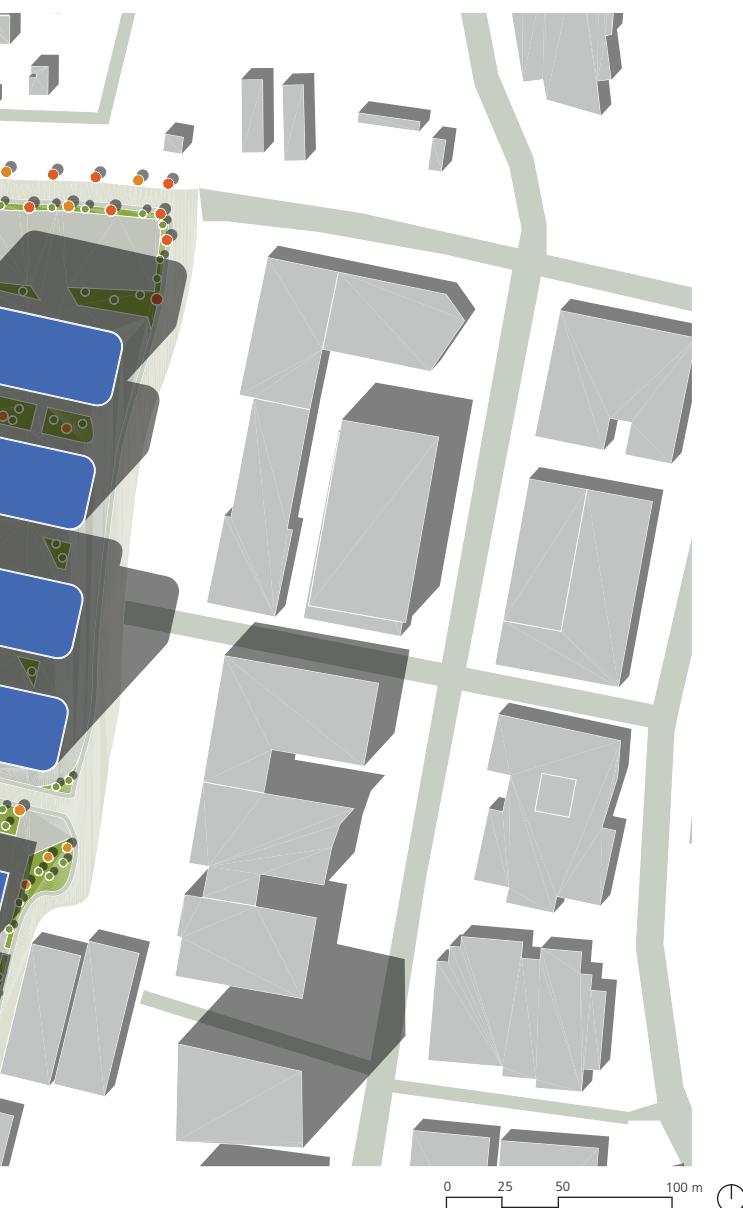
Karle Town Centre (KTC) in Bengaluru exemplifies a comprehensive mixed-use development, meticulously allocating its floor space to various functions: approximately 37% for residential purposes, 44% for office spaces, 7% for gastronomy, 4% for theater and cinema, and an additional 4% dedicated to hotel accommodations. This deliberate distribution ensures a vibrant urban environment that caters to diverse user needs.

The architectural typologies within KTC are thoughtfully designed to reflect and support these varied functions. Residential areas feature modern high-rise apartments, offering residents panoramic views of the city and Nagavara Lake.

These living spaces are complemented by amenities such as landscaped sky gardens on select floors, fostering a sense of community and providing green retreats amidst urban living. Office spaces are housed in contemporary structures equipped with state-of-the-art facilities to meet the demands of modern businesses. The design emphasizes flexibility and innovation, creating environments that enhance productivity and collaboration.

Cultural and entertainment venues, including theaters and cinemas, are strategically positioned to serve as focal points for social interaction. These spaces are designed to accommodate

It distinguishes itself as a forward-thinking urban development by combining innovative design principles, sustainability, and a focus on community-oriented spaces. One of its most notable features is the Urban Branding Manual developed by UNStudio, which ensures a cohesive vision throughout the project's lengthy construction period. This manual outlines three core pillars: Garden, which reimagines Bengaluru's identity as the "Garden City"; Health, emphasizing the well-being of its inhabitants; and Culture, fostering creativity and economic vibrancy through cultural integration.

Another defining aspect is its holistic mix of functions and the balance between green and built spaces. Unlike many urban mega-projects that prioritize singular uses or rigid zoning, KTC integrates residential, commercial, cultural, and recreational functions within the same area. This approach creates a "city within a city" where residents can live, work, and relax without needing to commute long distances. Each building is designed as a microcosm, combining elements such as entertainment, business, and leisure.

Sustainability also plays a crucial role in setting KTC apart. The masterplan incorporates pedestrian-first infrastructure. Additionally, the seamless integration of sky gardens, green roofs, and urban parks helps combat the urban heat island effect and ensures a connection to nature. This focus on environmental design aligns with global urban sustainability trends, placing KTC at the forefront of eco-conscious developments in India.Moreover, KTC's adaptive masterplan is a response to the challenges of a long construction timeline. By building each phase as a self-contained unit, UNStudio ensures that the project generates economic and social value even before its completion. This phased approach reduces financial risks and maintains momentum, an innovative strategy that many large-scale developments overlook.

Finally, its location adds another layer of uniqueness. Positioned adjacent to Nagavara Lake, KTC leverages its natural surroundings to create a destination that blends urban energy with natural beauty. Its proximity to essential infrastructure, such as schools, hospitals, and the planned metro station, further enhances its appeal as a modern urban hub.

In essence, KTC is not just a large-scale construction project but a visionary model for future urban developments, emphasizing sustainability, inclusivity, and cultural integration while addressing the growing needs of a rapidly urbanizing India.

0   25   50   100 m

a variety of events, contributing to the cultural vibrancy of the community. The hospitality component features a hotel designed to offer guests a luxurious experience, with amenities that cater to both business and leisure travelers. Its proximity to office spaces and cultural venues makes it an ideal choice for visitors seeking convenience and comfort.

Gastronomic establishments are interspersed throughout the development, ranging from casual cafes to fine dining restaurants. These venues not only provide diverse culinary experiences but also serve as social hubs, enhancing the overall liveliness of the town center.

Initially, KTC's masterplan focused on creating a self-contained community with residential, office, and leisure spaces. The design emphasized green urbanism, incorporating local flora and sustainable practices to enhance livability.

Since then, the masterplan has changed at least three times. In 2019, UNStudio reimagined KTC's masterplan, introducing the concept of a "smart city". This vision integrated advanced technologies to create responsive and healthy environments. Sensorial technologies were introduced throughout the development, tailoring environmental controls to users' physical, mental, and social well-being.

The current masterplan leaves out a whole plot of the building land where one plan from 2019 shows a "Business Park" and another plan from 2021 a " Green Park". The questions arise how much of the original plan of this magnitude can be followed to its completion and whether it will keep its principles of maintaining open, green and healthy space for everyone.

Building Development on 21/02/2022

Rendering from the View of the Waterfront at Day

UNStudios' Urban Branding Manual was created to have guideline for large-scale urban development while being sensitive to the project's context. The manual is grounded in three core pillars: Garden, Health, and Culture. These pillars guide design decisions, helping to shape a development that integrates environmental sustainability, supports well-being, and nurtures a sense of community.

The manual's emphasis on design guidelines and cohesive visual elements want to ensure a unified identity. According to UNStudio this consistency needs to be balanced by flexibility and adaptability in approaches. Ecological and community benefits are created by following the manual's guide to integrate sustainability and to keep social impact in mind. The last point the manual makes is that by incorporating local culture in urban spaces leads to stronger community engagement and a more successful project outcome.

The success of UNStudio's urban branding approach can be seen in other global projects that have employed similar principles. For example, Zuidas in Amsterdam, a large-scale urban development project which focuses on a cohesive aesthetic and sustainable urban design, demonstrates how a strong urban branding framework can unify a district while responding to evolving needs. Zuidas incorporates mixed-use spaces, office buildings, and recreational areas, while maintaining consistency through design guidelines. The approach has allowed the district to grow and adapt over time without losing its identity, a hallmark of successful urban branding.

Another project for comparison is the Bilbao Ria 2000 Project in Spain that similarly benefited from urban branding principles. The regeneration of the Bilbao riverfront transformed a former industrial area into a thriving cultural and residential space. By combining contemporary design with respect for local heritage, the project created a vibrant, mixed-use development. Its success demonstrates the usefulness of urban branding in blending modernity with cultural identity, a concept that is central to KTC's manual.

While the urban branding principles have worked on projects before, it is interesting to observe how Karle Town Centre can stay true to its principles and fit into the current Indian culture as its favours gated communities more than open spaces.

Rendering of the Theatre and Shopping Centre at Day

Rendering of the Sportsfield at Day

Rendering of a Performance at the Plaza at Night

Mantri Serenity

WiPro BGL Campus

Karle Town Centre

After this analysis of three projects of different forms and types, several questions arise around the topic of how the city of Bengaluru can be an Indian role model for the development of cities with fast increasing populations. The sustainability of its urban border expansion and changes of existing structures need to meet the demands and individual needs of its people. These needs include having affordable - yet luxurious- housing, security, a warm community or neighbourhood and parks for relaxation in a vibrant city.

The first project "Mantri Serenity" in Subramanyapura is a classic example of a scheme in which buyers need to be found for homes before construction. On the one hand it can be understood, that people sought the luxury and the security of the gated community in order to gain a status symbol or stay in the same societal class. On the other hand, it can be concluded, that home owners are attracted by the project's location that is close to the metro station, the motorway and thus close to the district Electronic City, where a lot of companies are located. The latter does not explain why it is necessary to put a fence between yourself and your surrounding neighbourhoods. The class differences are accentuated and inclusivity in a city is difficult to achieve.

A different kind of gated community is seen at the "Wipro BGL Campus" in Electronic City. While there are green, shadowy spaces and water fountains all year long, outside the campus' borders inhabitants can only profit from greenery in seasons where there is enough water for plants. The Wipro owned "park" is closed off to outsiders. How could the community around the campus change, if its gates were open all day long? Would it help non-employees to have access to a park? Or is the need for security and control too high to allow the interaction of two groups?

The last project "Karle Town Centre" in Nagavara is conceptually a stark contrast to the other projects. Its goal is to connect to Bengaluru's past as the Garden City. As they prioritize community and inclusivity there are no fences and security check points to the plot. Despite apartments for the upper-class other facilities like the theatre are supposed to draw people in. As the construction is not finished yet and the master plan keeps changing, the future will show whether KTC's concept of micro-communities connecting with each other and being open to outsiders in India will be successful.

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HYDERABAD

HITEC CITY, TSCUE CAMPUS, AVATAR GATED COMMUNITY

Yuting Han, Aimée Issaka, Diana Genjieva

Hyderabad Old Town Market

INTRODUCTION

Hyderabad, the capital of Telangana, is a major metropolis in southern India with a rich historical legacy and a dynamic, modern economy. Located at the crossroads of India's southern and central regions, it is one of the fastest-growing cities in the country, with a population exceeding 10 million people. Known for its blend of heritage and innovation, Hyderabad is often called the "City of Pearls" for its role in the historic pearl and diamond trade. It was once the seat of the Golconda Sultanate and later the princely state of Hyderabad under the Nizams, which has left a lasting influence on its cultural fabric, particularly in terms of architecture, language, and cuisine.

In the modern era, Hyderabad has emerged as a global hub for information technology and biotechnology, earning the moniker "Cyberabad." Its tech parks like Hitec City, Mindspace, and Genome Valley host leading multinational corporations, innovative startups, and educational institutions. The city's economy also boasts strong sectors in pharmaceuticals, finance, and aerospace, making it one of India's key economic engines.

Despite its rapid modernization, Hyderabad retains much of its historic charm. The old city is home to iconic monuments such as the Charminar and Golconda Fort, while the modern downtown is lined with glass skyscrapers and high-tech office parks. The city is a melting pot of cultures, languages, and religions, with a mix of traditional bazaars, like Laad Bazaar, and cutting-edge retail spaces. The diverse population enjoys a high standard of living, and the city's cosmopolitan nature is reflected in its thriving art scene, film industry (Tollywood), and its global cuisine, particularly the famous Hyderabadi Biryani. The city's infrastructure, including a growing metro system, state-of-the-art healthcare, and educational institutions, contributes to its status as a desirable destination for both business and leisure.

Hyderabad's strategic location has also made it a hub for technology and innovation, attracting global corporations and start-ups alike. In addition, the city's commitment to sustainability is reflected in its green initiatives, such as urban parks, eco-friendly transportation, and renewable energy projects.

Hyderabad's history spans more than four centuries, evolving from a small settlement into a major cultural and economic center in India. The city was founded in 1591 by Sultan Muhammad Quli Qutb Shah, the fifth ruler of the Qutb Shahi dynasty, on the banks of the Musi River. The Qutb Shahis, who ruled the region from the late 1500s to the early 1600s, were responsible for the city's early architectural and cultural development. During this time, Hyderabad became a thriving center of Persian and Indo-Islamic culture, evident in its majestic monuments, including the Charminar and the Macca Masjid.

The city's significance increased further in the 18th century when it became the seat of the Nizams of Hyderabad, a dynasty that ruled the Deccan region for over 200 years. Under the Nizams, Hyderabad flourished as one of the wealthiest and most sophisticated princely states in India. The Nizams were known for their patronage of art, architecture, and education, and the city grew to become a major hub of trade, commerce, and culture. They also introduced notable infrastructure projects, such as the construction of roads, bridges, and the iconic Osmania University. During this period, Hyderabad became a prominent center for the diamond trade, earning its reputation as a global "City of Pearls."

Following India's independence in 1947, Hyderabad was initially an independent princely state but was annexed into the Indian Union in 1948 after the police action known as Operation Polo. After its integration, Hyderabad became the capital of the newly formed state of Andhra Pradesh, and its economy began to shift towards industrialization. However, it was not until the 1990s that the city experienced a significant transformation. The economic reforms of the early 1990s, along with liberalization policies in India, paved the way for Hyderabad's modern growth.

The establishment of Hitec City in 1998, a state-of-the-art IT park, marked the beginning of the city's emergence as a global IT and technology hub.

Today, Hyderabad is a vibrant metropolis, balancing its historic legacy with modern progress. The city's evolution into a major global hub, particularly in technology and biotechnology, reflects both its rich past and its forward-looking future, positioning it as one of India's most dynamic cities.
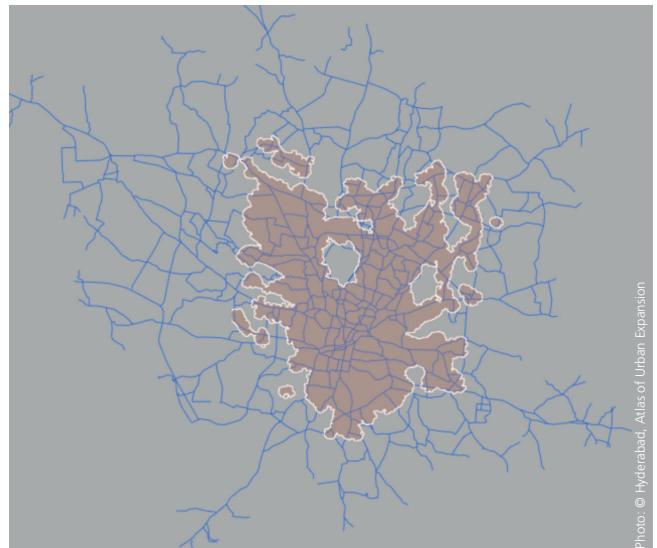

Figure-Ground Diagram 1990
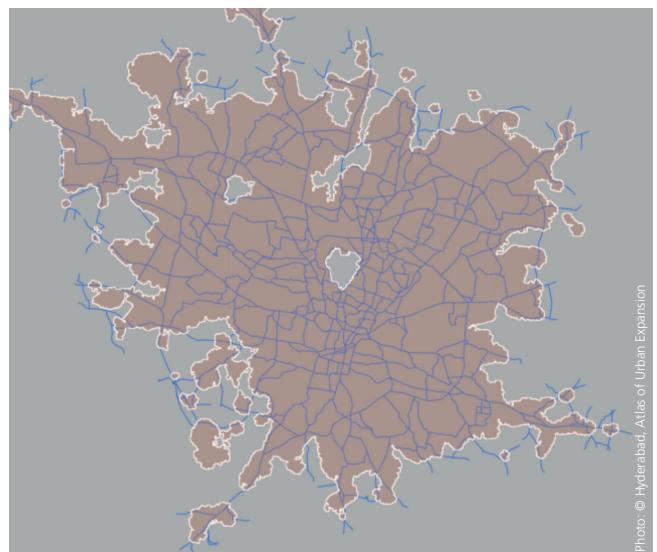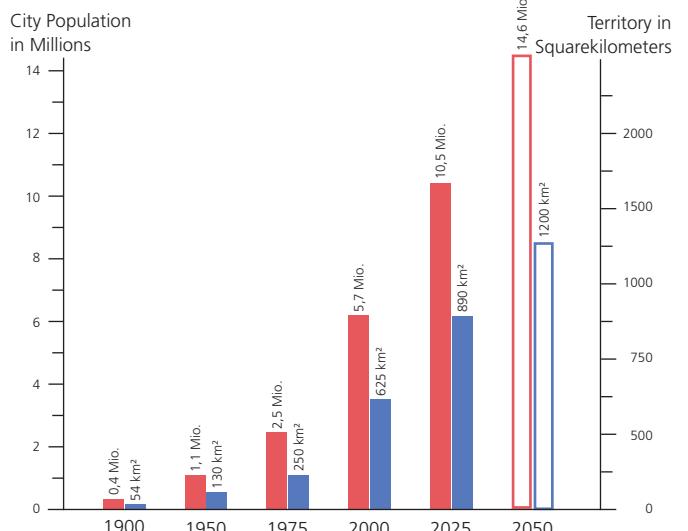
Figure-Ground Diagram 2014

Population and city growth 1900 - 2050

Hyderabad, like many rapidly growing urban centers in India, faces a range of challenges as it continues to expand both economically and demographically. The city's growth, particularly due to its emergence as a global IT and business hub, has introduced complex urban issues that require strategic intervention. One of the major challenges Hyderabad faces is urbanization and the resulting strain on its infrastructure.

As the city's population continues to grow, the demand for housing, transportation, and essential services such as water, power, and waste management has escalated. The infrastructure built for a smaller population is struggling to keep pace with this rapid expansion.

To address this, the city has embarked on several initiatives, such as the development of Hyderabad Metro, which is designed to alleviate traffic congestion, reduce pollution, and provide a more sustainable public transport system. Additionally, the city is working on expanding its public transport network, including bus systems, and improving road networks to handle the increasing number of vehicles.

The city's traffic congestion is one of the most visible challenges, exacerbated by the increasing number of vehicles on the road. Rapid urban sprawl has created traffic bottlenecks in key areas like the Hitec City, Gachibowli, and Banjara Hills, leading to long commute times and air pollution.

Efforts to combat these problems include the construction of flyovers, traffic management systems, and dedicated lanes for buses and non-motorized transport like bicycles. The Hyderabad Traffic Management Center (HTMC) is working towards improving real-time traffic monitoring and management. Additionally, the city is promoting electric vehicles (EVs) and sustainable transport options, like bike-sharing programs, to reduce pollution levels.

Hyderabad is adapting to the challenges of urban growth by investing in technology-driven solutions, integrating sustainability into its development, and making conscious efforts to balance modern infrastructure with its environmental and social needs.

Figure-Ground Diagram Central Hyderabad

The initial vision for Hyderabad's development, particularly with the creation of Hitec City, was to position the city as a global Information Technology hub while preserving its cultural identity and heritage. The vision, articulated in the late 1990s under the leadership of N. Chandrababu Naidu, the then Chief Minister of Andhra Pradesh, sought to transform Hyderabad into an attractive destination for international business and a thriving knowledge economy.

The vision was clear: to establish a state-of-the-art IT infrastructure that would foster economic growth through technology, innovation, and outsourcing. The creation of Hitec City was part of this broader strategy to make Hyderabad a leading player in the global IT landscape, alongside cities like Bengaluru and Pune. The goal was to attract multinational corporations, provide employment opportunities, and create an ecosystem that supported high-tech industries, startups, and research institutions. The idea was to craft an urban environment that would offer both quality of life and opportunities for socioeconomic mobility.

Overall, while the core elements of the original vision for Hyderabad - economic growth through technology and a vibrant urban environment—have largely been followed, the city must continue to adapt to its expanding needs and challenges in order to maintain a sustainable and inclusive growth trajectory.

Photo: ©Hyderabad Metropolitan Development Authority (HMDA)

LEGEND
REFERENCE
— HMDA BOUNDARY
— ERSTWHILE HUDA BOUNDARY
— ERSTWHILE HADA BOUNDARY
— ORR GC BOUNDARY
— DISTRICT BOUNDARY
— MANDAL BOUNDARY
— VILLAGE BOUNDARY
— RAILWAY LINE
— NATIONAL HIGHWAYS
— STATE HIGHWAYS
— OUTER RING ROAD
— MAJOR ROADS
— RURAL ROADS

I.RESIDENTIAL USE ZONE
- RESIDENTAIL USE ZONE-1 (R1)
- RESIDENTAIL USE ZONE-2 (R2)
- RESIDENTAIL USE ZONE-3 (R3)
- RESIDENTAIL USE ZONE-4 (R4)
- SETTLEMENTS

II.PERI-URBAN USE ZONE
- PERI-URBAN USE ZONE

III.COMMERCIAL USE ZONE
- COMMERCIAL USE ZONE

IV.MANUFACTURING USE ZONE
- MANUFACTURING USE ZONE
- WORK CENTERS

V.PUBLIC AND SEMI-PUBLIC USE ZONE
- PUBLIC, SEMI-PUBLIC FACILITIES AND UTILITIES USE ZONE
- PUBLIC UTILITIES
- AMENITIES

VI.MULTIPLE USE ZONE
- MULTIPLE USE ZONE
- SPECIAL DEVELOPMENT ZONE (MULTIPURPOSE USE ZONE)
- CENTRAL SQUARE
- GENERAL DEVELOPMENT PROMOTION ZONE (GDPZ)

VII.RECREATION AND OPEN SPACE USE ZONE
- RECREATIONAL USE ZONE
- OPEN SPACE BUFFER (AROUND FORESHORE OF WATERBODIES)
- HIMAYATH SAGAR AFFORESTATION ZONE

VIII.WATER BODIES
- WATER BODIES (RIVERS, NALAS, RESERVOIRS AND KUNT

IX.FOREST
- FOREST ZONE

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- HERITAGE BUILDINGS AND PRECINCTS (S1)
- DEFENSE / MILITARY LANDS (S2)
- BIO CONSERVATION ZONE (S3)
- OTHERS (S5)

XI.CONSERVATION (AGRICULTURE)
- CONSERVATION USE ZONE

XII.TRAFFIC AND TRANSPORTATION
- ROADS
- RAILWAYS / RAILWAY STATIONS
- BUS DEPOTS, PASSENGER / FREIGHT TERMINALS
- AIRPORTS

Urban Development Concept Hyderabad, Master Plan 2050

The mixed-use complex in Hyderabad, designed by Blocher Partners, is a remarkable example of forward-thinking urban architecture. Encompassing a total built-up area of 320,000 square meters on a 60,000-square-meter sloping site, the project blends residential, commercial, and green spaces to create a vibrant and self-sustained community in one of India's most dynamic urban centers.

The office spaces are strategically positioned in a linear block facing the main road, presenting a visually striking facade and creating a clear division between the public-facing commercial zone and the residential areas. The U-shaped residential buildings, located further inside the site, house compact and efficient apartments sized between 60 and 90 square meters.

The project's green courtyards are not just decorative but play a vital role in enhancing the livability of the complex. These spaces act as natural buffers, improve air quality, and provide areas for relaxation and community interaction. The central boulevard, designed as a lively axis, connects the various elements of the complex while allowing pedestrians to navigate the site with ease.

Sustainability is a cornerstone of the project's design philosophy. The natural slope of the site is skillfully integrated into the planning, reducing the need for extensive land modification and enabling efficient drainage systems. The choice of materials and design strategies prioritizes energy efficiency, passive cooling, and the use of renewable resources where possible.

Axonometrie mixed-used complex

Green roofs and other eco-friendly elements further enhance the project's environmental credentials. This innovative project is being developed by the Phoenix Group, a leading player in Hyderabad's real estate market known for its focus on quality and forward-thinking developments.

By creating a harmonious balance between urban density and green living, the mixed-use complex is more than just a functional space, it is a blueprint for sustainable, community-oriented urban development.

This project not only enhances Hyderabad's urban fabric but also contributes to the global discourse on sustainable city planning. Its thoughtful integration of diverse functions and green infrastructure.

Integration into the urban context


Open spaces in the district

Visualization of the fourth city
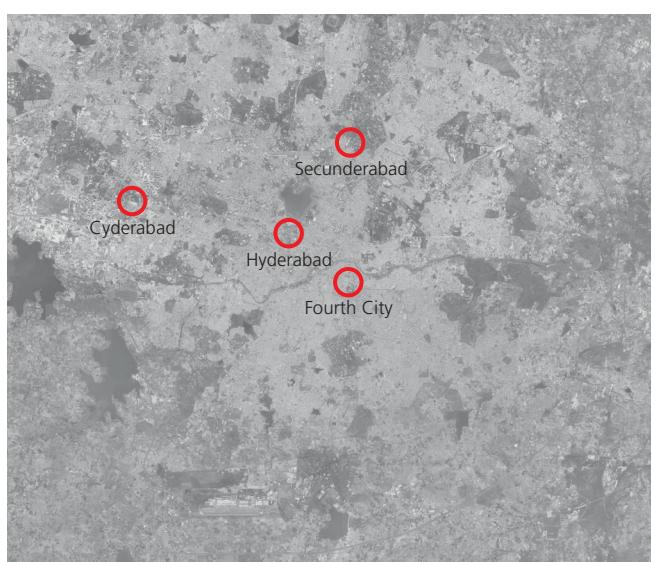
The development of Hyderabad's Fourth City is a bold and transformative initiative aimed at addressing the challenges of urban expansion and fostering regional growth in Telangana. This project envisions the creation of a new urban center that complements the existing triad of Hyderabad, Secunderabad, and Cyberabad, marking a significant milestone in the state's urban planning efforts.

The Fourth City is designed to act as a hub for economic activity, residential development, and cultural vibrancy. It will feature cutting-edge infrastructure, including state-of-the-art industrial parks, IT corridors, and sustainable residential neighborhoods. With a focus on smart city principles, the new urban center will integrate advanced technologies for efficient resource management, enhanced connectivity, and improved quality of life for residents.

Strategically planned with sustainability at its core, the Fourth City will incorporate green spaces, renewable energy systems, and eco-friendly public transportation options. In addition to economic opportunities, the Fourth City will host education-al institutions, healthcare facilities, and recreational zones, fostering a well-rounded urban environment. Its development is expected to attract investments, generate employment, and alleviate pressure on Hyderabad's existing infrastructure.
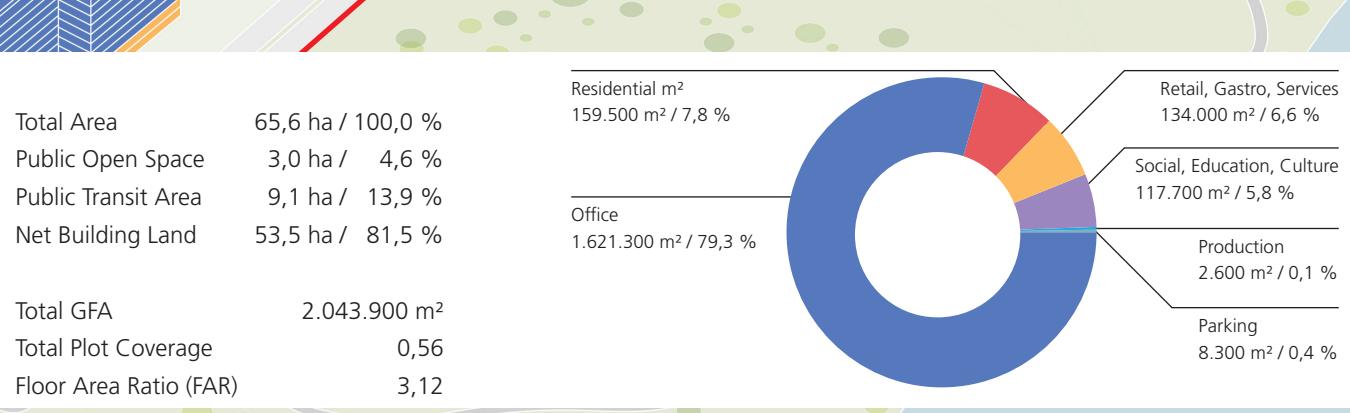

Location of the four cities

HITEC CITY

Residential
Hotel
Retail, Gastro, Services
Office
Production
Social, Education, Culture
Parking
Transit

Total Area	65,6 ha /	100,0 %	
Public Open Space	3,0 ha /	4,6 %	
Public Transit Area	9,1 ha /	13,9 %	
Net Building Land	53,5 ha /	81,5 %	
Total GFA	2.043.900 m²		
Total Plot Coverage	0,56		
Floor Area Ratio (FAR)	3,12		

Residential m²
159.500 m² / 7,8 %

Office
1.621.300 m² / 79,3 %

Retail, Gastro, Services
134.000 m² / 6,6 %

Social, Education, Culture
117.700 m² / 5,8 %

Production
2.600 m² / 0,1 %

Parking
8.300 m² / 0,4 %

CASE STUDY 1:
HITEC CITY

Hitec City is located in the western region of Hyderabad, one of India's fastest-growing metropolitan cities and the capital of the state of Telangana. Geographically, it is nestled within the Madhapur area, extending towards Kondapur, Raidurg, and parts of Gachibowli. This region benefits from its location on the Hyderabad Outer Ring Road (ORR), which ensures excellent connectivity to the Rajiv Gandhi International Airport, about 30 kilometers away, and the city's key business areas. This connectivity positioned it as a natural choice for IT hubs.

The idea for Hitec City emerged in the early 1990s when the state government, under N. Chandrababu Naidu, envisioned transforming Hyderabad into an IT powerhouse. During this time, India was experiencing rapid liberalization, and the government sought to attract multinational corporations to set up operations locally. Hyderabad's relatively low cost of living, large pool of English-speaking graduates, and infrastructure potential made it an ideal candidate for IT investment.

The project began in 1998 with the construction of Cyber Towers, a 10-story building designed as the nucleus of the IT hub. Its architectural design reflected efficiency, with wide, open floor plans to accommodate the needs of IT firms. Over the years, the city expanded to include Cyber Gateway and Cyber Pearl, each adding modern office spaces. Today, Hitec City is synonymous with global tech giants like Microsoft, Google, Amazon, Facebook, and Dell, alongside Indian IT leaders like Infosys, TCS, and Wipro.

Beyond IT, the area has diversified into biotechnology, finance, and startups. The establishment of Genome Valley and T-Hub has further cemented Hyderabad's position as a center for innovation. Hitec City's profile today extends beyond being an economic driver—it's a modern urban district that blends business with culture, entertainment, and living.

Hitec City is often described as the face of modern Hyderabad, combining global innovation with local culture. Landmarks like Cyber Towers, Inorbit Mall, and the cultural hub Shilparamam define its physical and cultural identity. Today, Hitec City is not only an IT powerhouse but also a symbol of Hyderabad's transformation from a traditional trade city to a global metropolis.

Project Location in Hyderabad

The concept of Hitec City was driven by the vision of creating an integrated IT and business ecosystem to attract global tech companies and provide high-end infrastructure. Inspired by global IT hubs, such as Silicon Valley, the goal was to combine technology, business, and modern urban living within a single area. The project was developed in a public-private partnership between the Andhra Pradesh Industrial Infrastructure Corporation (APIIC) and private developers like L&T.

The initial focus was on creating state-of-the-art office spaces with high-speed internet, modern utilities, and robust security systems. Over time, the area evolved to include residential complexes, retail malls, entertainment hubs, and public amenities, ensuring a work-life balance for its residents and employees.

The phased development of Hitec City, starting with Cyber Towers, reflects meticulous planning, adaptability, and a focus on sustainable growth. The introduction of T-Hub, an innovation hub for startups, further positioned Hitec City as a center of innovation.

While the original concept heavily prioritized IT and business needs, subsequent phases addressed urban challenges like traffic congestion and demand for affordable housing. The introduction of the Hyderabad Metro Rail and increased pedestrian-friendly designs are examples of how the project adapted to growing demands.

Hitec City offers a well-planned blend of commercial, residential, and recreational spaces, ensuring functionality and aesthetic appeal. Key features include:

Public Spaces: Landscaped gardens, and pedestrian-friendly areas enhance the quality of public life. Spaces like Shilparamam, a cultural village within Hitec City, offer a platform for art and handicrafts, creating a connection to local culture.

The formal concept emphasizes a mix of sleek, futuristic architecture for corporate spaces, balanced with traditional elements in cultural areas like Shilparamam.

Open Space Diagramm

Hitec City is well-connected and emphasizes multimodal transport systems:

The Hyderabad Metro Rail connects Hitec City to key areas, such as Ameerpet, Secunderabad, and Raidurg. The Hitec City Metro Station is a major node. Well-maintained roads and flyovers, including the Outer Ring Road (ORR) and Gachibowli-Miyapur Road, ensure smooth vehicular movement.
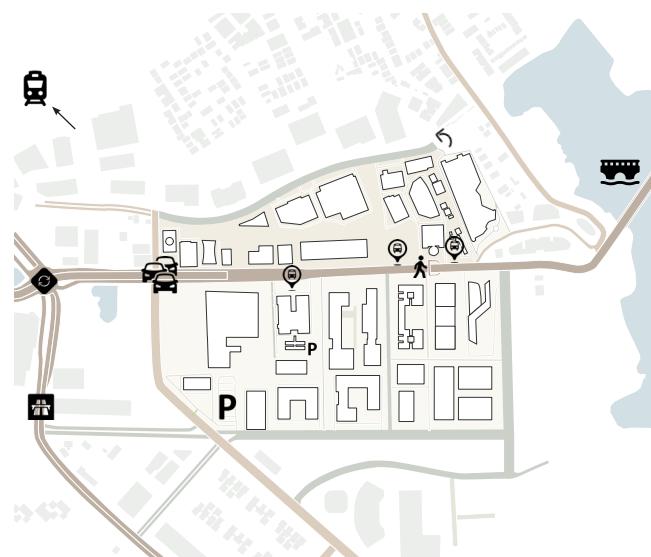
Efforts to improve last-mile connectivity include electric auto-rickshaws and shuttle services from metro stations to offices and and a well-developed bus network.

Mobility Diagram

Hitec City encompasses a variety of uses. In addition to the well-known office complexes, there are shopping centers and various leisure options. This ensures that everything is conveniently within walking distance for employees.

Amenities: Retail outlets, restaurants, and entertainment options such as movie theaters and gaming zones are strategically located within and around office spaces, offering employees and residents convenient access. Several buildings in Hitec City are LEED-certified, incorporating green building techniques and energy-efficient designs.

Usage Distribution Diagramm

Siteplan 1:6.000

Hitec City is known for its thoughtfully planned blend of commercial, residential, and recreational spaces, each placed strategically to optimize functionality and accessibility. At the heart of the district are major IT hubs like Cyber Towers, Mindspace IT Park, and WaveRock, where the buildings typically range from 10 to 30 stories. Surrounding these commercial areas are residential neighborhoods like Madhapur and Kondapur, offering a mix of mid-rise apartment complexes, gated communities, and mixed-use developments, catering to the professionals working in the area.

In our analysis, we focused on a newer section of Hitec City, which was added later to the district. This area follows the overall planning principles of the city but introduces modern features and spaces to meet the growing demands of the district. The expansion further reflects the city's ability to adapt and innovate, maintaining a harmonious balance between its business and residential sectors.

Alongside the workspaces and residences, Hitec City integrates recreational and cultural areas. Shilparamam, a cultural village celebrating traditional arts and crafts, adds a local touch to the otherwise modern environment. Retail and entertainment hubs like Inorbit Mall and various dining options are strategically placed, often within walking distance of both

Hitec City's uniqueness lies in its combination of strategic planning, integrated urban development, and global appeal:

Integrated Ecosystem:
It seamlessly combines business, residential, and recreational functions into a compact, well-connected district. This integration reduces travel time and fosters a vibrant work-life balance, making it a model for urban IT hubs globally.

Global-Local Blend:
While Hitec City boasts ultra-modern infrastructure comparable to global IT hubs, it preserves local identity through spaces like Shilparamam and architecture that respects the cultural and climatic context of Hyderabad.

Public-Private Collaboration:
Its development through public-private partnerships ensured rapid execution with high standards, setting an example for similar projects in India.

Innovation and Sustainability:
Features such as T-Hub, India's largest startup incubator, position Hitec City as a driver of innovation. Green building certifications, energy-efficient designs, and pedestrian-friendly planning emphasize long-term sustainability.
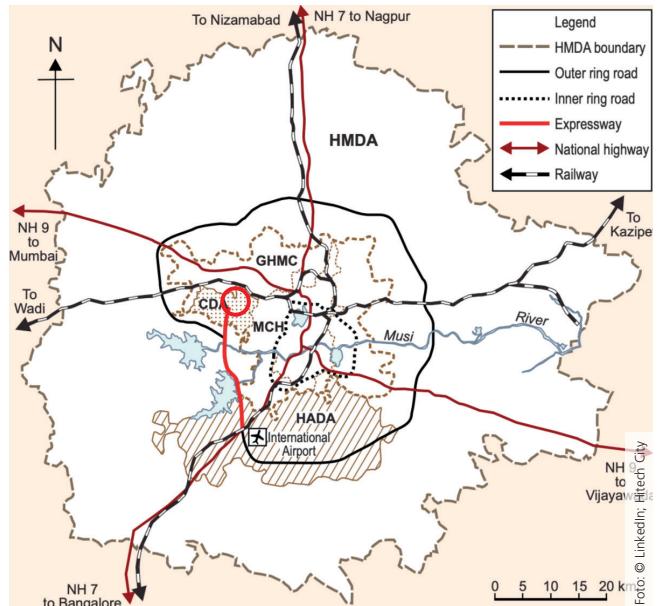
Connectivity:
The district's connectivity—via the Hyderabad Metro, ORR, and proximity to the airport—makes it highly accessible. Efforts to integrate public transport, walkways, and cycling paths enhance mobility for all.

In essence, Hitec City is unique for its ability to merge technology, urban planning, and cultural identity, creating a forward-thinking and livable urban district that continues to evolve with global trends.

The success of Hitec City lies not just in its infrastructure but in its people and community. The district has become a magnet for talent from across India and the world, fostering a diverse and dynamic workforce that drives innovation and creativity. Additionally, community-focused initiatives, such as cultural festivals, tech meetups, and green campaigns, ensure that Hitec City is not just a place to work, but a thriving urban environment where people can connect, grow, and thrive.

offices and residential zones. Furthermore, mixed-use developments are becoming more common, particularly near metro stations and major intersections. These developments combine retail, dining, and residential spaces, enhancing convenience and reducing the need for long commutes.

Overall, Hitec City's urban layout offers a well-integrated environment that balances work, life, and leisure, creating an efficient and compact urban district. The strategic planning and adaptability of Hitec City ensure that it remains a dynamic space capable of supporting both present and future needs.

0   90   180   360 m

117

The development of Hitec City is a striking example of how rapid urbanization has transformed Hyderabad into a global economic and technological hub. Over the last two decades, the area has evolved from a sparsely developed suburban region to one of the most sought-after business districts in India. This transformation was largely driven by the city's strategic vision to capitalize on the global shift towards information technology and innovation-based economies.
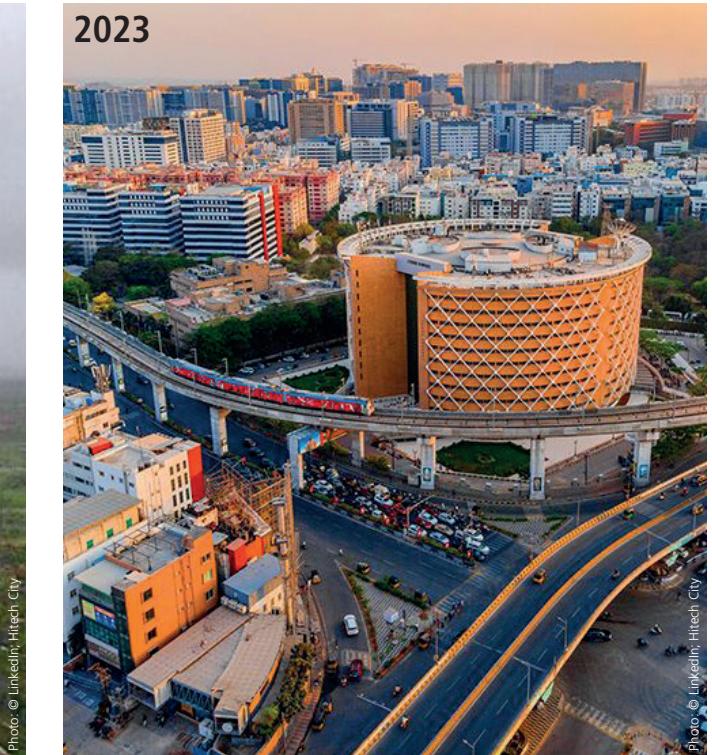
Hitec City, short for Hyderabad Information Technology and Engineering Consultancy City, began as a state-led initiative in the late 1990s. The initial goal was to create a high-tech park that would attract multinational corporations, generate employment, and position Hyderabad as a global IT hub. The launch of Cyber Towers in 1998 marked the beginning of this journey, signaling Hyderabad's readiness to compete with other IT cities like Bengaluru. The area quickly gained traction, with major corporations such as Microsoft, Google, and Infosys establishing operations in Hitec City, sparking a domino effect of urban growth.

Transport Network Map of Greater Hyderabad

2001

Change in Urban Landscape, HiTEC CITY 2001

2023

Change in Urban Landscape, HiTEC CITY 2023

The first image captures the impressive skyline of Hitec City, dominated by its towering office complexes, a hallmark of Hyderabad's transformation into a global tech hub. These modern, glass-clad buildings reflect the city's forward-looking economic ambitions and house some of the world's leading technology companies. Surrounding the skyscrapers are meticulously planned green zones, which serve as pleasant forecourts and provide a touch of nature amidst the dense urban environment. The contrast between the sleek symbolizes the balance Hyderabad strives to maintain between rapid urbanization and livability.

The second image focuses on the main thoroughfare running through Hitec City, bustling with activity and lined with vehicles in constant motion. The heavy traffic characterized by a mix of cars, buses, and motorbikes highlights the transportation challenges that come with such a densely developed urban area. Above the chaos of the roadway, a pedestrian bridge spans across the street, offering a safe and practical solution for foot traffic to navigate the busy streets below. This footbridge, likely adorned with modern railings and signage, reflects the city's efforts to improve pedestrian safety and manage congestion. The scene vividly illustrates the dynamism of Hitec City, where urban infrastructure and movement are in constant interplay, revealing both the opportunities and challenges of modern urban planning.

The third image shifts the focus to the outskirts of Hitec City, revealing a striking contrast to the polished urban core. Here, undeveloped plots of land and informal street vendors dominate the scene, showing areas where urbanization has yet to fully take hold. These vacant lots are often dotted with makeshift stalls or temporary structures, where local vendors sell everything from snacks to small goods, catering to nearby workers or commuters. The roads in these areas may appear less developed, with uneven surfaces and limited infrastructure. This image portrays the transitional nature of Hitec City's expansion—an area still grappling with the coexistence of high-tech modernity and the realities of informal, grassroots economies. It serves as a reminder of the uneven pace of urbanization and the socioeconomic diversity that continues to shape Hyderabad's growth.

Diverse typologies in Hyderabad

Road crossing for pedestrians
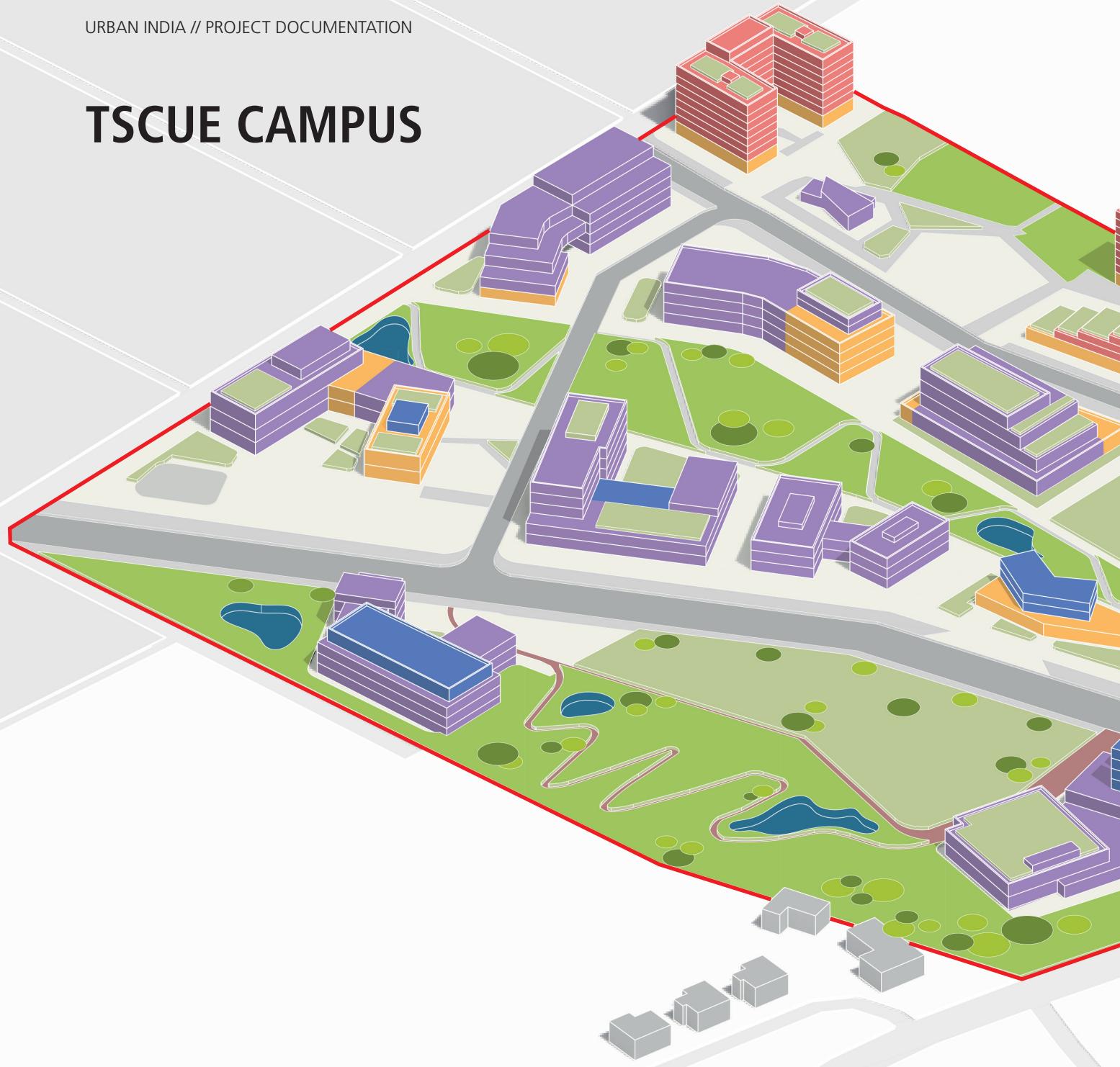
Informal uses on the edge of Hyderabad
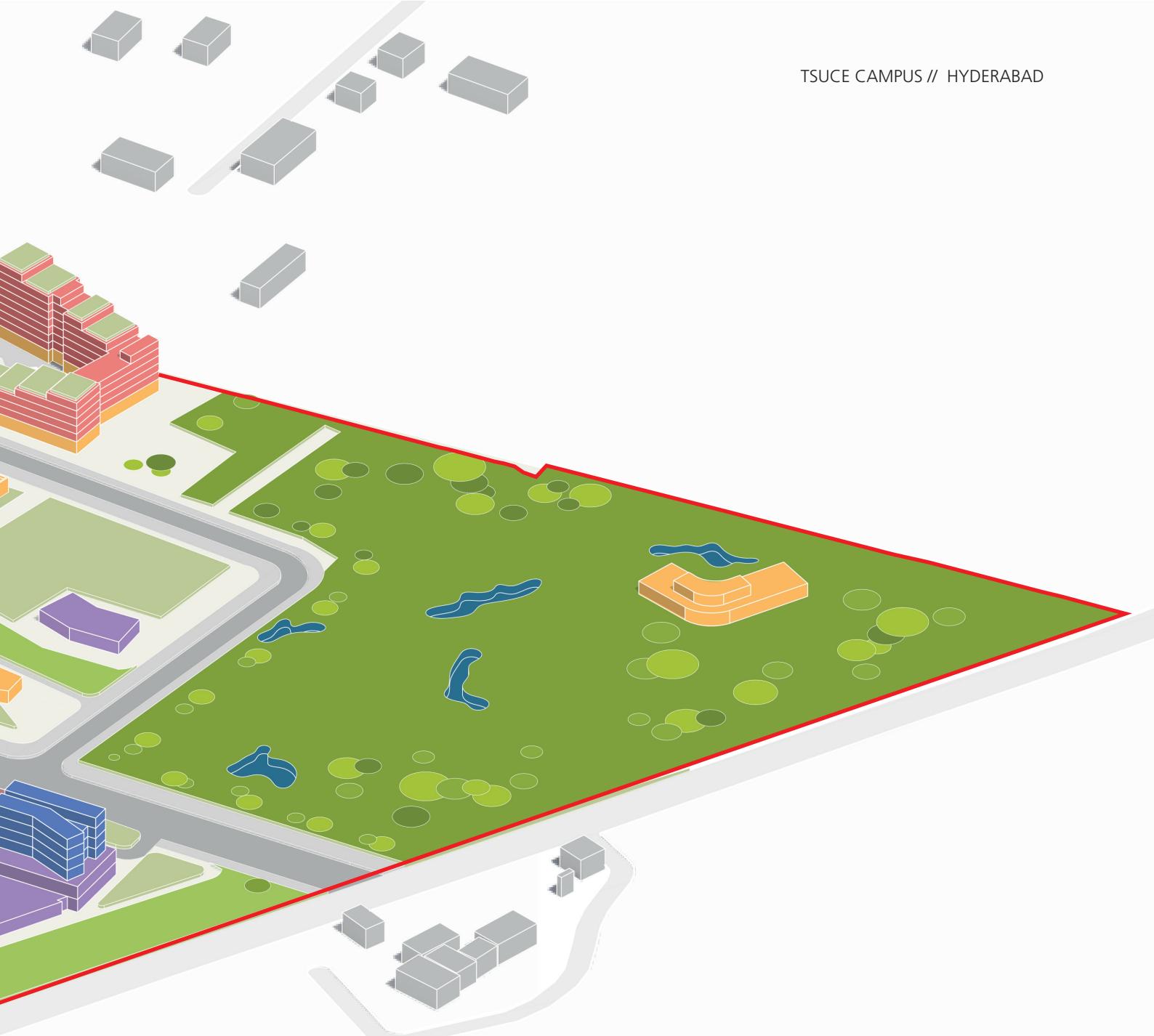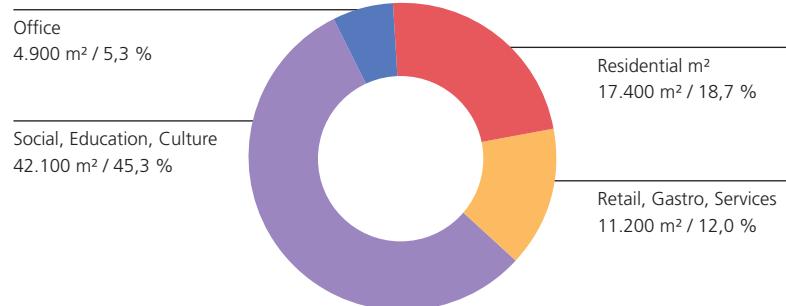
TSCUE CAMPUS

Residential
Hotel
Retail, Gastro, Services
Office
Production
Social, Education, Culture
Parking
Transit

Total Area	18,2 ha /	100,0 %
Public Open Space	7,7 ha /	42,5 %
Public Transit Area	0,8 ha /	0,4 %
Net Builduing Land	9,7 ha /	53,2 %
Total GFA	75.600 m²	
Total Plot Coverage	0,14	
Floor Area Ratio (FAR)	0,41	

Office
4.900 m² / 5,3 %

Residential m²
17.400 m² / 18,7 %

Social, Education, Culture
42.100 m² / 45,3 %

Retail, Gastro, Services
11.200 m² / 12,0 %

CASE STUDY 2:
THE TELANGANA STATE CAMPUS OF URBAN EXCELLENCE (TSCUE) CAMPUS
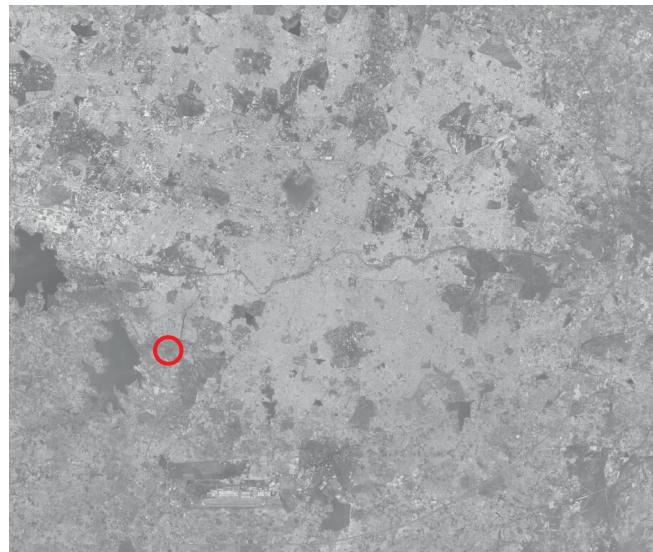
The Telangana State Campus for Urban Excellence (TSCUE) is a groundbreaking initiative proposed by the Metropolitan Development Authority (HMDA) and the National Institute of Urban Management (NIUM) in 2021. It is envisioned as a first-of-its-kind national think tank dedicated to addressing India's most pressing urban challenges. As India is on track to add 400 million urban residents by 2050, with Telangana poised to become a majority-urban state within the next decade, the TSCUE campus emerges as a pivotal hub for research, innovation, and capacity building.

This project represents a bold response to the complexities of urbanization. It aims to provide a space where urban planners, policymakers, designers, and innovators converge to co-create inclusive, sustainable, and resilient solutions. TSCUE is not merely a campus but a "living laboratory," demonstrating integrated urban planning principles through its architecture, infrastructure, and operations.

The campus will host state-of-the-art facilities for education, research, and policy development, including learning spaces, research labs, incubators, and demonstration areas. These facilities are strategically designed to support a multidisciplinary and hands-on curriculum that equips future urban leaders with the tools to guide India's urbanization holistically and sustainably.

Furthermore, TSCUE aims to be a global benchmark for smart urban development. It will showcase best practices in affordable housing, sustainable mobility, blue-green infrastructure, and vibrant public spaces. Through its integrated systems for energy, water, waste, and food, the campus will achieve self-sufficiency and resilience while fostering innovation.

By combining cutting-edge urban design, landscape architecture, and ecological planning, TSCUE is set to become a light-house for urban excellence, advancing India's journey toward sustainable and inclusive urban growth.

Project Location in Hyderabad

The Telangana State Campus for Urban Excellence (TSCUE) envisions becoming a transformative platform that redefines how India approaches urbanization in the 21st century. As a dynamic hub for research, education, and policy development, the TSCUE campus is designed to lead the discourse on sustainable and inclusive urban development, setting new benchmarks for innovation and collaboration across disciplines.

The campus aspires to serve as a testing ground for forward-thinking strategies in urban planning, policy reform, and sustainable design. It will foster an environment where experts, practitioners, and students from diverse fields converge to collaboratively address complex urban issues, ensuring that solutions are not only theoretically sound but also practically viable.

In realizing this vision, TSCUE will play a critical role in shaping India's urban future. It will not only address current challenges but also anticipate emerging trends, ensuring that the solutions developed today remain relevant for decades to come. By creating a space for collaboration, innovation, and inspiration, the campus aspires to be a beacon of excellence, demonstrating how urbanization can drive prosperity, inclusivity, and resilience in an ever-evolving world.
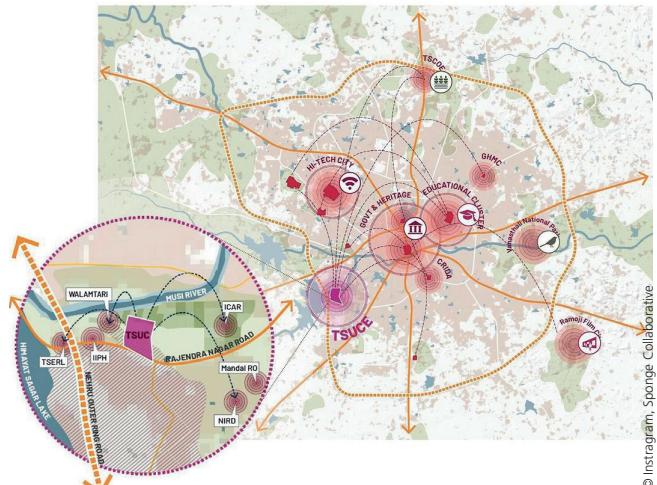
The TSCUE campus open spaces are designed as vibrant, multifunctional areas that integrate green landscapes and blue infrastructure to create an inclusive and sustainable environment. Key features include shaded walkways, bioswales, community gardens, and recreational plazas that foster collaboration and interaction.

Blue-green infrastructure such as rain gardens and retention ponds ensures effective water management while supporting biodiversity and creating serene, functional spaces. These open spaces encourage walkability and active engagement, seamlessly connecting all campus areas while serving as living laboratories for sustainable urban systems.
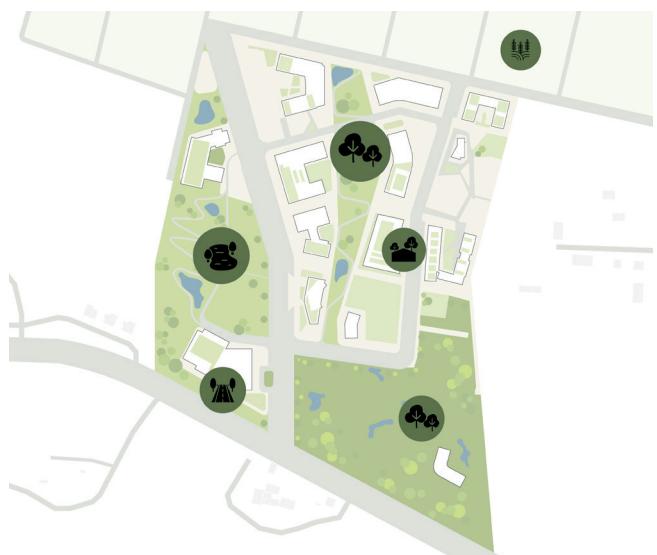
In addition, the open spaces are designed to accommodate a range of activities, from informal gatherings to organized events. Flexible layouts allow for adaptability, ensuring the spaces remain dynamic and responsive to the evolving needs of the campus community. This holistic approach promotes a balance between ecological stewardship and human well-being, making the TSCUE campus a model for future urban developments.

The TSCUE campus prioritizes sustainable, active, and inclusive mobility, setting a new standard for eco-friendly transportation. A key feature, the Campus Loop, connects major facilities via pedestrian pathways and bike lanes, ensuring seamless, safe, and low-impact movement. This walkable and bikeable design encourages active lifestyles while reducing reliance on motorized vehicles and lowering the campus's carbon footprint.
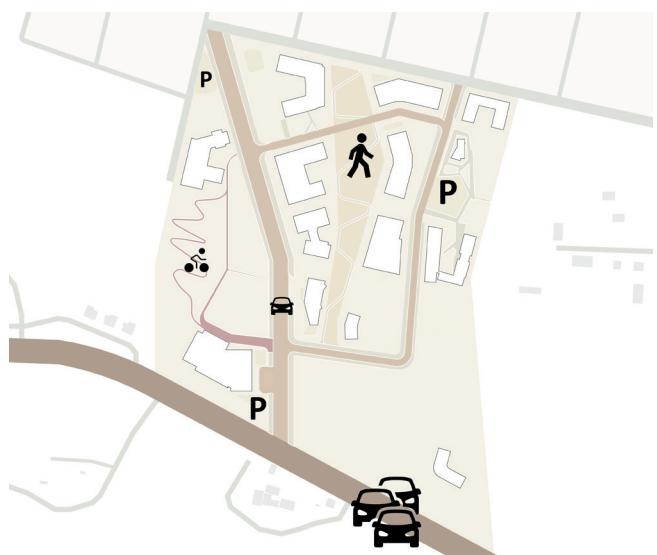
To enhance sustainability, the campus integrates electric shuttles and shared mobility services, offering convenient, low-carbon transit. These solutions provide reliable alternatives to gas-powered transport while ensuring easy campus access. Additionally, connections to nearby public transit hubs improve access to urban areas, reinforcing the campus as a model for integrated, low-carbon mobility. Through the integration of active transportation, electric mobility, and public transit access, TSCUE fosters a progressive, accessible, and eco-friendly environment for everyone.

Concept Plan: Linking with the city

Photo: © Instragram, Sponge Collaborative

Open Space Diagram

Mobility Diagram

123

Siteplan 1:1.500

The Telangana State Urban Centre of Excellence (TSCUE) campus is meticulously designed to balance diverse uses through thoughtful functional zoning and innovative building typologies. The functional zones are strategically organized to create synergies between academic, public, and commercial spaces.

At the core of the campus lie the Academic and Research Areas, which are centrally located to facilitate collaboration and innovation. These spaces house classrooms, laboratories, and research facilities, forming the intellectual heart of the campus. Surrounding these are Public Spaces, including plazas, parks, and recreational areas, which are spread across the site to encourage social interaction, cultural engagement, and relaxation. These areas are designed to foster inclusivity and build a sense of community among students, faculty, and visitors. Near the campus entrances are the Commercial Spaces, offering cafes, retail shops, and other essential services. This strategic placement creates vibrant interfaces with the surrounding urban fabric, enabling interaction between the campus and its neighboring communities.

This symbiotic relationship strengthens the campus's role as an integral part of the broader urban ecosystem. The building typologies across the campus emphasize adaptability, sustain-

0   25   50   100 m

The Telangana State Campus for Urban Excellence (TSCUE) sets itself apart as a pioneering project that reimagines urban development, education, and sustainability. Designed to be much more than a conventional campus, it embodies a bold vision of integrated urban solutions, making it a lighthouse for sustainable urbanization in India and beyond.

1. A Living Laboratory for Urban Innovation
TSCUE is conceived as a "living lab" where the campus itself becomes an active participant in learning and experimentation. From energy-efficient buildings and climate-responsive architecture to circular systems for waste, water, and energy, every element of the campus demonstrates scalable, real-world solutions for sustainable cities.

2. Holistic Approach to Smart Urbanization
Unlike narrow definitions of "smart" cities, TSCUE promotes a holistic vision that integrates technology with inclusivity, sustainability, and resilience. The campus features innovative models for affordable housing, sustainable mobility, and blue-green infrastructure, addressing India's urban challenges in a comprehensive manner.

3. Interdisciplinary Collaboration
The campus is designed to foster cross-sector collaboration, breaking silos among urban planners, architects, policymakers, and technologists. Its integrated research, learning, and incubator spaces create an environment where specialists from diverse disciplines can collectively work on addressing urban challenges at multiple scales.

4. Global Benchmark for Sustainable Design
TSCUE exemplifies global best practices in urban design and planning. The campus integrates ecological principles, advanced technologies, and community-driven approaches, making it a model for resilient and adaptable urban systems that can inspire similar projects worldwide.

By uniting innovation, sustainability, and education, TSCUE is uniquely positioned to address India's urgent urban challenges while setting a visionary example for the world. This transformative campus is not only a space for ideas but a generator of impactful, scalable solutions for cities of the future.

ability, and innovation. Flexible, mixed-use designs dominate the architectural approach, featuring modular structures that allow for easy reconfiguration to meet evolving needs. Sustainability is a key focus, with features such as green roofs, natural ventilation, and energy-efficient systems integrated throughout the buildings.

The seamless integration of form and function allows the campus to support a wide range of activities while creating an environment that is welcoming, inclusive, and conducive to learning, research, and innovation.

The project follows a carefully layered design approach that harmonizes natural features, green infrastructure, and distinct functional districts to create a sustainable and innovative campus.The design begins with the preservation of natural site assets, such as existing boulders, steep terrain, and drainage systems. These features are seamlessly integrated into the layout to maintain the ecological integrity of the site.

Green corridors and a central green spine are introduced to enhance biodiversity, manage water flow, and provide recreational spaces, making these natural systems an essential part of campus life. A campus loop connects the various districts, integrating pedestrian and cycling pathways to promote walk-ability and sustainable mobility. This loop also serves as a unifying element, linking regenerative systems across the campus. The campus is organized into distinct urban districts, including the Mixed-Use Innovation District, the Cultural District, and the Ecology District, each fulfilling specific roles. These districts are designed to support collaboration, cultural exchange, and ecological preservation.

Mixed-use programming combines academic, residential, recreational, and commercial spaces within the districts, creating a vibrant and dynamic environment. The flexibility of spaces ensures adaptability to evolving needs, fostering collaboration and a sense of community.

① Identifying and preserving the natural features and assets in site

② Introducing green corridors in response to site's drainage

③ Loops to integrate districts and regenerative systems

④ Characterizing the site into exemplar urban development districts.

⑤ Establishing key institutes that propel innovation in urban sector

⑥ Mixed-use programming within the institutes
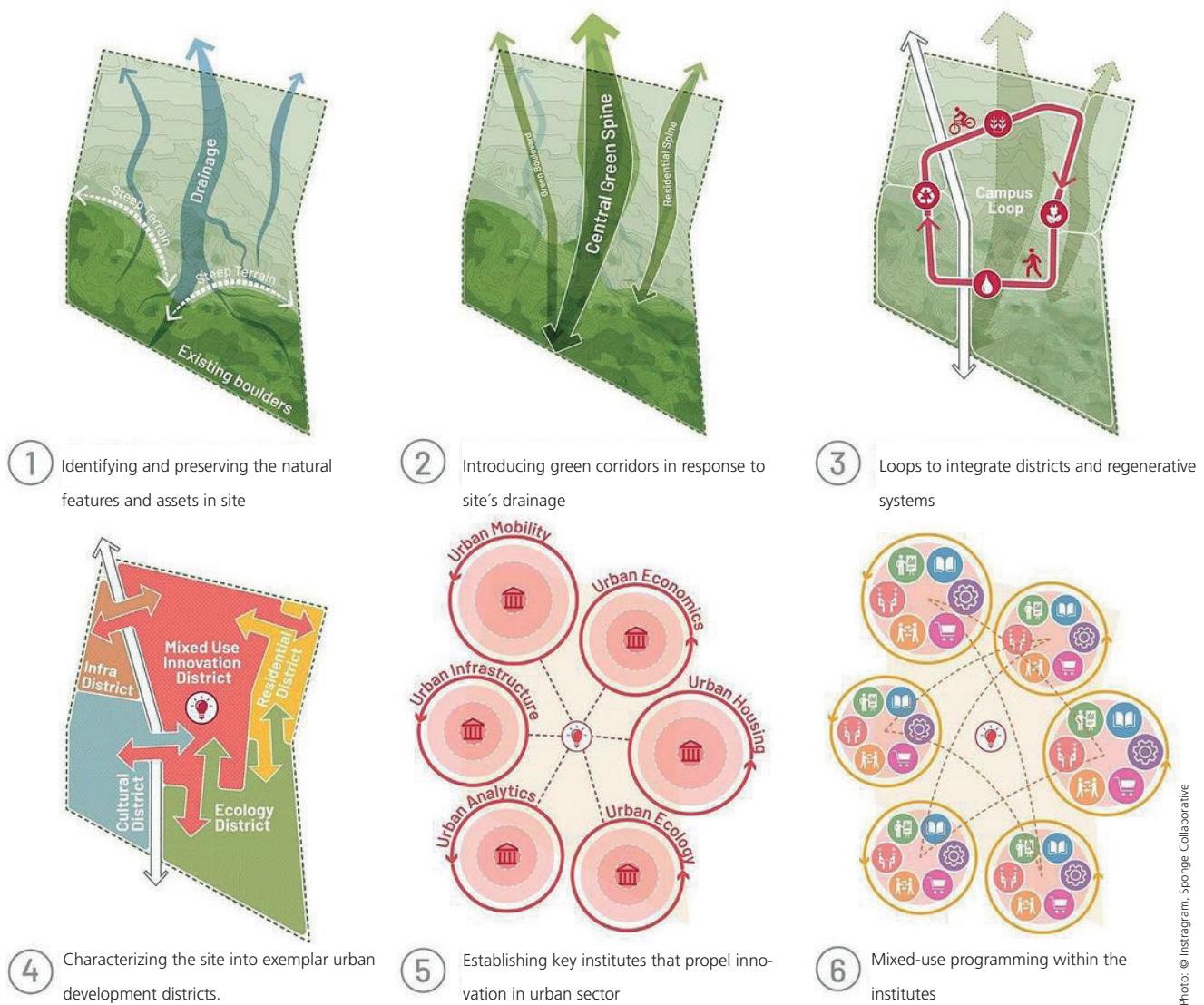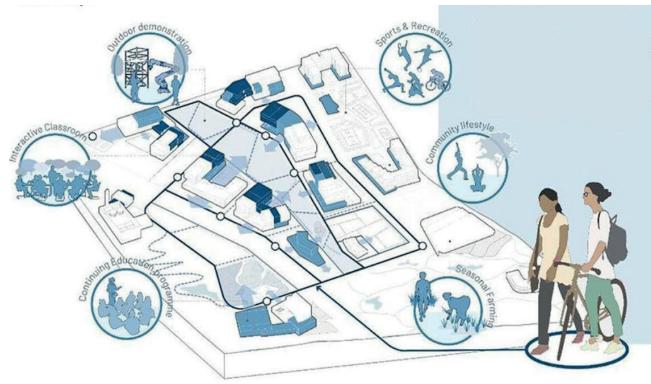
Photo: © Instragram, Sponge Collaborative

Student & Capacity Building Participants
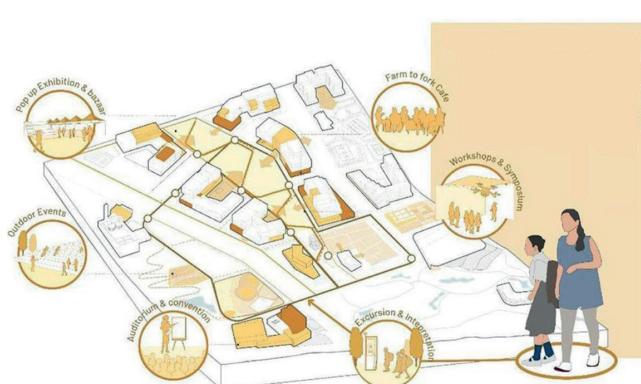
Students and capacity-building participants can take part in a range of continuing education programs offered by the key institutes on campus. Throughout the day, they can engage in interactive classroom learning or hands-on outdoor demonstrations. Additionally, they can participate in various recreational activities, including sports, leisure programs, and interactions with the campus community.

Daily visitors & convention participants

The campus is open year-round and welcomes visitors to explore its diverse on-campus facilities, including restaurants, cafés, cultural events, workshops, and seminars. Daily visitors may include school or college students on excursions, eager to explore key institutes or visit the library at the visitor center. With a variety of engaging activities, the campus offers ample opportunities for exploration and learning throughout the day.

StartUp & Visiting Entrepreneurs
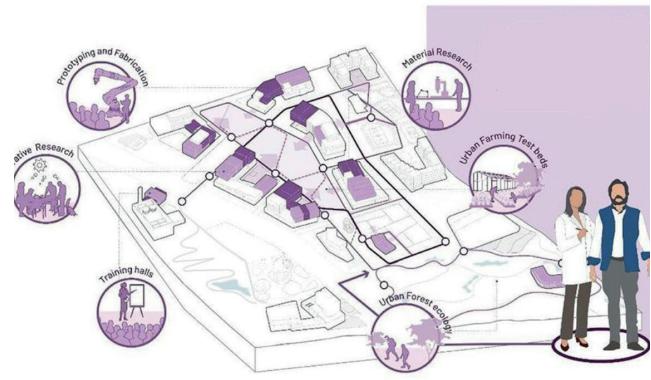
Startups and entrepreneurs can access various collaborative spaces designed to foster innovation and idea exchange. The central spine hosts exhibitions and product demonstrations, while the convention center provides opportunities for networking and engagement with the campus community.
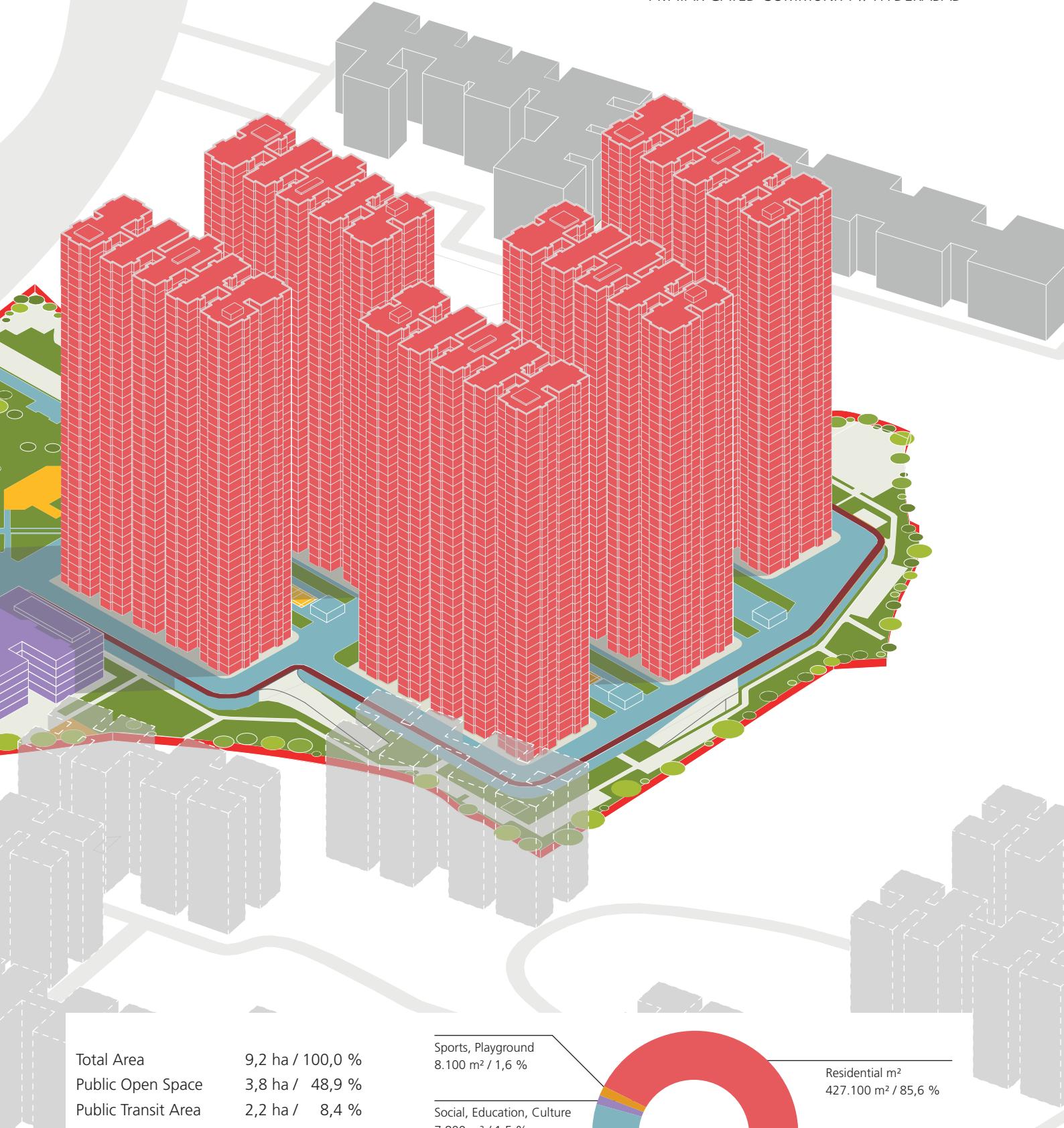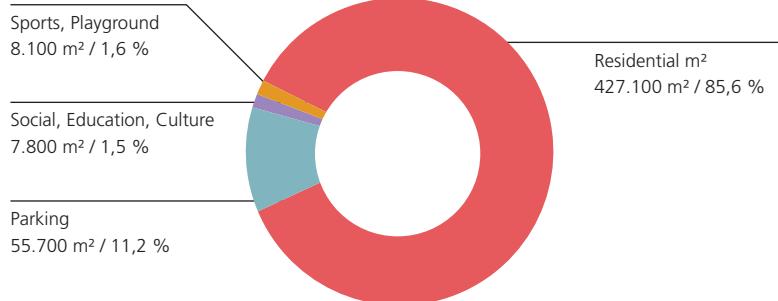
Faculty & Fellows

Faculty and fellows are key members of the campus community, alongside entrepreneurs. The institutes feature diverse urban research labs and training halls, while prototyping and fabrication labs are integrated with startup incubators to foster collaboration and innovation.

Photo: © Instragram, Sponge Collaborative

AVATAR GATED COMMUNITY

- ▮ Residential
- ▮ Hotel
- ▮ Sport
- ▮ Office
- ▮ Production
- ▮ Social, Education, Culture
- ▮ Parking
- ▮ Transit

Total Area	9,2 ha /	100,0 %
Public Open Space	3,8 ha /	48,9 %
Public Transit Area	2,2 ha /	8,4 %
Net Builduing Land	3,2 ha /	15,4 %
Total GFA		498.700 m²
Total Plot Coverage		0,61
Floor Area Ratio (FAR)		5,42

Sports, Playground
8.100 m² / 1,6 %

Social, Education, Culture
7.800 m² / 1,5 %

Parking
55.700 m² / 11,2 %

Residential m²
427.100 m² / 85,6 %
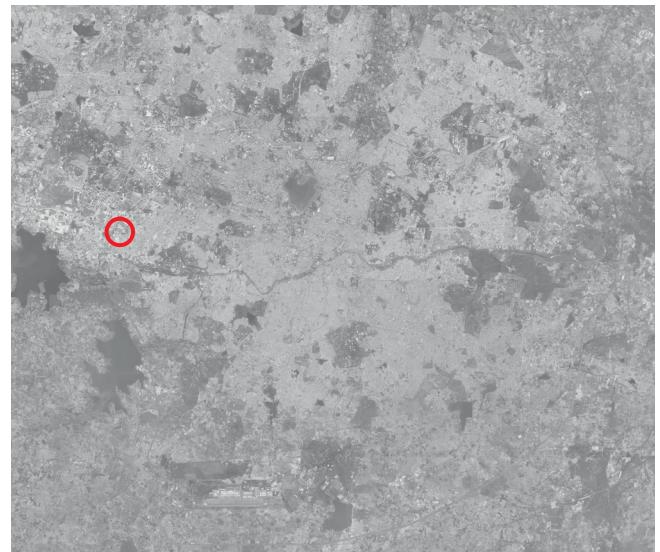
CASE STUDY 2:
AVATAR GATED COMMUNITY

My Home Avatar, located in Puppalaguda, Gachibowli, Hyderabad, is a flagship residential project by My Home Constructions, designed to offer a modern and luxurious lifestyle. Spanning 9,2 ha, the project consists of premium 2 and 3 BHK apartments across multiple high-rise towers, each meticulously planned to ensure functionality, aesthetics, and comfort. With over 80% of the area dedicated to open spaces, the community provides a serene environment amid the bustling city.

The integration of green spaces and thoughtfully planned recreational zones ensures that residents can enjoy a balanced lifestyle. The gated community also emphasizes safety, with 24/7 security and CCTV surveillance ensuring peace of mind for all residents. My Home Avatar's location is a significant advantage, offering unparalleled connectivity to Hyderabad's major commercial and IT hubs.It is also well-connected to reputed educational institutions, healthcare facilities, and shopping centers, ensuring convenience for families.
The apartments are designed to optimize space utilization and natural light, with modern interiors that cater to contemporary tastes. High-quality construction materials and finishes further enhance the living experience.

The financial success and popularity of My Home Avatar have led to the initiation of an ambitious expansion project. Recognizing the high demand for this type of housing in this prime location, My Home Constructions is now developing an extension of the community. This new phase will add 11 more residential towers, modeled after the existing ones, to accommodate even more families seeking a luxurious and well-connected lifestyle. These additional towers will follow the same architectural standards and design principles that made the original development so successful, ensuring consistency in quality and aesthetic appeal.

The extended community will feature enhanced infrastructure and additional amenities to support the increased number of residents while maintaining the same commitment to open spaces and sustainability. This expansion solidifies My Home Avatar's reputation as a landmark development in Hyderabad, offering a thriving and inclusive community that continues to set new benchmarks in modern urban living.

Project Location in Hyderabad

The My Home Avatar community represents a forward-thinking approach to modern urban living, embodying a vision of creating a self-contained and harmonious residential environment. At the core of the project's vision is the commitment to enhancing residents' quality of life by offering a balanced blend of state-of-the-art housing and recreational amenities. In addition to a physical expansion, the project's long-term vision includes enhancing its sustainability features.

By integrating eco-friendly technologies and infrastructure, such as rainwater harvesting systems, solar power installations, and efficient waste management solutions, the community aims to reduce its environmental footprint while promoting sustainable living among residents.

My Home Avatar also envisions fostering a sense of community and belonging among its residents through organized events, social initiatives, and shared spaces designed to encourage interaction. By creating an inclusive and vibrant neighborhood, the project aims to go beyond mere housing to build a connected and thriving residential ecosystem.

As the community evolves, My Home Avatar is poised to remain a symbol of modern, aspirational living, blending innovative design with thoughtful planning. Its future plans reflect an unwavering commitment to meeting the needs of its residents while setting new standards for residential developments in India's growing cities.

The "My Home Avatar" project implements the open space concept efficiently by dedicating 83,5% of its 9,2 ha area to open and recreational spaces, with only 16,5% occupied by the 10 residential towers, which rise up to 30 floors. This vertical architectural approach minimizes the footprint of the buildings, maximizing the availability of open and green areas.

A unique feature of the project is the elevated platform on which the residential towers are constructed. Beneath this platform lies an expansive parking facility, ensuring that vehicle storage does not encroach on the usable green and recreational spaces. This design choice preserves the open landscape for residents while providing essential infrastructure discreetly below. The open spaces include landscaped gardens, jogging and cycling tracks, yoga and meditation zones, and various sports facilities such as badminton, tennis, and basketball courts. Additional amenities, such as swimming pools and an amphitheater, are strategically placed within these open areas, ensuring functionality without overcrowdin

Open Space Diagram

The community benefits from a well-connected transport infrastructure, being situated right off the Outer Ring Road (ORR), which provides seamless access to major parts of Hyderabad. The ORR ensures smooth travel to various city hubs without significant traffic congestion. Residents also have access to public and private transportation options, which are expected to improve further in the coming years.

The location offers excellent access to the city's international airport, making domestic and international travel highly convenient. Additionally, its proximity to the PV Narasimha Rao Expressway enhances connectivity to different parts of Hyderabad, further easing daily commutes. Being situated close to Hyderabad's major IT hubs is one of the standout features of My Home Avatar. It is near prominent IT corridors such as the Financial District, Khajaguda/Rayadurgam SEZ, Gachibowli, and HITEC City. This proximity significantly reduces commute times for IT professionals, improving their work-life balance. The community's strategic location has also turned Puppalaguda into a premium rental area, especially popular among professionals working in the IT sector. This demand for rentals highlights the convenience and desirability of the location.

Mobility Diagram

Siteplan 1: 3.500

The My Home Avatar community is a prime example of a development with a singular focus on high-rise residential buildings, supplemented by facilities exclusively dedicated to leisure and recreation. While the layout prioritizes residential living, the repetition in design and function across the development creates a homogeneous environment with limited variation in building typologies.

Every other structure within the community revolves around residential use, with towering apartment complexes forming the backbone of the development. These buildings are complemented by a range of recreational facilities such as swimming pools, gymnasiums, jogging tracks, landscaped gardens,

and clubhouses. The entire community is designed to foster a serene and insulated lifestyle, with an emphasis on relaxation and physical activity.

Notably absent, however, are other functional elements typically found in mixed-use developments. There are no office spaces, coworking hubs, or retail centers within the gated enclave. This omission means that residents must travel outside the community for work, shopping, and other essential services. While this ensures that the neighborhood remains peaceful and undisturbed by the hustle of commercial or professional activities, it also results in a clear separation between living spaces and the broader urban infrastructure.

Gated communities have become a defining feature of India's urban growth, particularly in cities like Hyderabad, where economic expansion and a rising middle class have transformed residential preferences. These enclaves, exemplified by projects like My Home Avatar, cater to urban aspirations by offering exclusive amenities, security, and modern living standards. India's growing middle class, fueled by economic liberalization and higher disposable incomes, has driven demand for such developments. Gated communities provide facilities like landscaped gardens, clubhouses, and jogging tracks, offering a lifestyle that blends comfort and convenience.

Cultural and religious factors further contribute to their appeal, as many residents seek homogeneity in their living environments. These communities provide a sense of familiarity and cultural alignment, which is especially valuable in a diverse city like Hyderabad, home to professionals from across the country. This desire for a controlled environment also often leads residents to choose gated communities over more diverse, mixed neighborhoods.

Safety is another key driver, with gated communities addressing urban crime concerns through controlled access, private security, and surveillance. This makes them particularly attractive to families and professionals seeking peace of mind. Many residents feel that such communities offer a reprieve from the perceived risks of urban living.

Financially, gated communities reduce the burden on municipal resources, as residents fund their own infrastructure through maintenance fees. While these residents also pay municipal taxes, they require less from public infrastructure, easing strain on city budgets. This financial arrangement, however, raises questions about equitable resource distribution, as it may leave lower-income areas in need of more public investment.

As more and more gated communities emerge, their impact on urban planning and resource allocation will continue to shape the future of India's cities. While these enclaves cater to the aspirations of a growing middle class, they also risk deepening socio-spatial divides by creating pockets of exclusivity that contrast starkly with the underdeveloped areas outside their walls.

The repetitive layout of residential towers interspersed with leisure-oriented facilities underscores the community's primary focus on providing a comfortable and self-contained living environment. However, this singular emphasis on residential and recreational use can limit the vibrancy and adaptability of the neighborhood, as the absence of diverse building types restricts opportunities for spontaneous interactions and a more dynamic urban experience.

The lack of mixed-use spaces also curtails the potential for fostering a sense of community that extends beyond residential boundaries, as residents are less likely to encounter a variety of activities or engage with a broader network of people.

Hyderabad's hot and humid climate poses significant challenges for residential architecture. This complex has been designed to adapt to these conditions, incorporating features that mitigate heat and enhance thermal comfort. The orientation of the building allows for open balconies and strategically placed windows, optimizing cross-ventilation and reducing the need for artificial cooling. Wide passageways, further promote airflow through shared spaces, preventing stagnant hot air from accumulating in these areas.

In contrast to countries with milder climates, where architectural strategies often aim to minimize the building envelope relative to the volume to reduce heat loss through the exterior, this design emphasizes the maximization of the building envelope. By expanding the building's external surface, the building remains thermally comfortable without excessive reliance on energy-intensive cooling systems.

The balconies not only enhance ventilation but also act as shading devices, reducing direct sunlight exposure on interior spaces. This passive cooling strategy helps maintain a comfortable indoor temperature throughout the year. Additionally, the likely use of heat-reflective tiles and lighter construction materials contributes to minimizing heat absorption, ensuring the structure remains cool even during the peak summer months. Natural light is an essential design element in this complex. The careful placement of windows in key rooms, prioritizing bedrooms over living areas, ensures that all units receive ample daylight from 3 sides.

The layout of the residential units is meticulously planned to enhance natural air circulation. With openings and balconies on opposite ends of the apartments, the design enables effective cross-ventilation. This is particularly crucial in Hyderabad's warm climate, where stagnant air can exacerbate discomfort. The separation between the building blocks ensures free airflow around the structure, preventing the heat buildup that often occurs in densely packed urban environments.

The design of the complex reflects the cultural preferences and lifestyle of its residents. Larger 3BHK units are particularly suited to joint families, a living arrangement that remains common in Indian society.

Typical Floorplan

Photo: © my home constructions brochure

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Gated communities have become a prominent feature of India's urban landscape, reflecting a growing desire for security, exclusivity, and modern / western living standards among the urban middle and upper classes. Hyderabad exemplifies this trend. Developments such as My Home Avatar showcase the appeal of gated communities, offering residents state-of-the-art amenities, a controlled environment, and proximity to workplaces. However, these communities also bring about significant negative social consequences that shape the urban and social fabric of Indian cities.

One of the most notable social consequences of gated communities is the reinforcement of social stratification. By their very nature, these enclaves are designed for specific income groups, often excluding lower-income households. In Hyderabad, where My Home Avatar caters primarily to IT professionals and the upper middle class, the disparity becomes evident. While residents enjoy a high standard of living, complete with landscaped gardens, those in surrounding areas may lack access to basic amenities such as clean water and reliable public infrastructure.

Gated communities can also dissolve traditional forms of social interaction. Historically, Indian neighborhoods were known for their communal ethos, where residents of different socioeconomic backgrounds coexisted, shared public spaces, and participated in festivals together. Gated communities disrupt this dynamic by creating insular environments. In the case of My Home Avatar, residents have little incentive to interact with people outside their community.

This lack of interaction can lead to a reduced sense of empathy and solidarity with those outside the gates. Over time, it risks creating a divided society, where mutual understanding and collaboration between different social groups diminish. Gated communities such as highlight the dual-edged nature of urban development in India. While they cater to the aspirations of a rising middle class, they also risk deepening social divides of Indian cities. Addressing these challenges requires a balanced approach that combines the benefits of modern housing with a commitment to inclusivity and equity, ensuring that cities like Hyderabad grow not only economically but also socially cohesive.
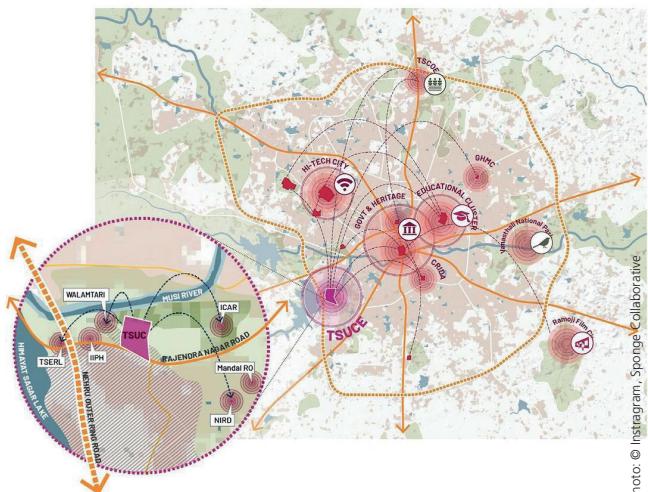
Dirty Outskirts Of Avatar Gated Community

Photo: © Google Earth, Street View

Hitec City

TSCUE Campus

The Avatar Gate Community

The analysis of Hyderabad reveals a city characterized by dynamic development, marked equally by modern urbanism and significant social as well as environmental challenges. Hitec City shines as a technological and economic hub, boasting modern architecture, advanced infrastructure, and innovative mobility solutions. However, at the edges of these highly developed zones, the shortcomings of the urban fabric become especially apparent. These peripheries are often dominated by informal settlements, inadequate infrastructure, waste accumulation, and parched landscapes, reflecting the social and spatial inequalities that persist in Hyderabad despite its economic progress.

Hitec City and gated communities like "My Home Avatar" exemplify how technological advancement and economic strength can be prioritized. The luxurious living conditions within gated communities starkly contrast with the realities of informal settlements nearby, where residents often lack access to basic services such as water and waste management. This polarization underscores the urgent need to align economic progress with social inclusion to foster sustainable and equitable urban development.

A promising step in this direction is the Telangana State Campus for Urban Excellence (TSCUE). This visionary project adopts an inclusive approach, placing sustainability, innovation, and social participation at its core. By incorporating blue-green infrastructure, energy-efficient buildings, sustainable mobility, and interdisciplinary research, the campus sets new benchmarks for future-ready urban planning. The campus is envisioned not just as an isolated development project but as a model whose principles can be applied to the entire city and beyond. Nonetheless, even the TSCUE campus faces the challenge of bridging the social and spatial inequalities in Hyderabad and building genuine connections between the city's diverse realities.

Overall, Hyderabad showcases both the strengths and weaknesses of a modern urbanization process. On one hand, it boasts technological progress, economic growth, and innovative projects like the TSCUE campus that position the city as a global hub for technology and sustainable urban development. On the other hand, challenges of social inclusion, environmental sustainability, and the integration of informal settlements into the urban fabric remain.

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AHMEDABAD

GODREJ GARDEN CITY, GIFT CITY

Julia Rauch, Nils Benkeser, Chiara Satriano

Sabarmati River Ahmedabad

INTRODUCTION

With a population of almost nine million, Ahmedabad is the sixth-largest city in India and the economic hub of the state of Gujarat. Strategically located along the banks of the Sabarmati River, Ahmedabad is a bustling metropolis with a rich historical and cultural legacy. It is not only a world Heritage City, but also the largest commercial center of western India. The economy is dominated by textiles, manufacturing, and service sectors. It contributes significantly to the state's GDP and is a crucial node in India's urban network.

However, what makes Ahmedabad so special is its rich history and architectural heritage. Many Indo-Islamic monuments from the 15th to 17th century, like the Swaminarayan Temple or Jama Masjid Mosque, play a major role in the identity of Ahmedabad. On the smaller scale, the historic city is defined by a maze of traditional neighborhoods called "pols". Modern Ahmedabad is defined by rapid urbanization and a growing population, which pose challenges such as air pollution, traffic

congestion, and uneven resource distribution. Additionally, the city is very vulnerable to climate risks like urban flooding, or extreme heat events. The Urban Development of the city is facing many challenges in managing the symptoms of urban growth efficiently without losing their deeply rooted tradition and heritage.

As the government strives to elevate Ahmedabad to a world-class city, substantial resources are being allocated to housing developments, economic infrastructure, and transport systems. Yet, informal housing settlements, which continue to house a significant portion of the population, persist.

A closer look at three current projects, will give us an understanding of how Ahmedabad deals with its rapid population growth.

HISTORIC DEVELOPMENT

Ahmedabad's history reflects its architectural and urban evolution over centuries. Founded in 1411 by Sultan Ahmed Shah of the Gujarat Sultanate, the city was planned along the Sabarmati River. One of its most iconic features was a fortified wall encompassing 12 gates, built to protect the city. This era also saw the construction of remarkable structures in an Indo-Islamic architectural style.

The city's strategic location made it a commercial hub under the Mughals, particularly for textile trade. This prosperity fueled population growth, with Ahmedabad becoming essential for Gujarat's urban network. By the 17th century, it was one of India's most populous cities.

Under British rule in the 19th century, Ahmedabad's population expanded as industrialization, particularly in textiles, attracted rural migrants. Infrastructure improvements like the 1864 railway link to Mumbai further facilitated economic and demographic growth. The city's population grew from approximately 148,000 in 1871 to over 600,000 by the mid-20th century.

After the creation of the state of Gujarat in 1960, Ahmedabad was designated as the state capital. This role marked a new phase in its development, focusing on administration and infrastructure to support its position as a regional hub. Already being known for its robust textile industry, the city earned its nickname "Manchester of India." Population grew significantly during this period, fueled by rural migration and industrial expansion.

In 1970, Gujarat's capital was relocated to Gandhinagar, a newly planned city. This transition caused a brief period of stagnation for Ahmedabad. However, Ahmedabad continued to thrive as a commercial and cultural center, supported by its industrial base and educational institutions.

Urban challenges emerged in the late 20th century, particularly during the 1980s, with caste-based and religious violence impacting the city's social fabric. Despite these challenges, the city maintained its significance in Gujarat's economy and culture, adapting to the growing demands of its population, which had reached over 4.5 million by the late 1990s.
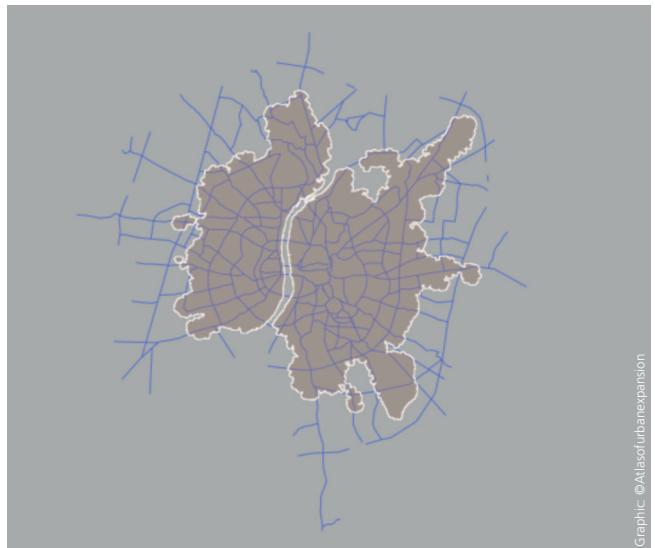

Figure-Ground Diagram 1989
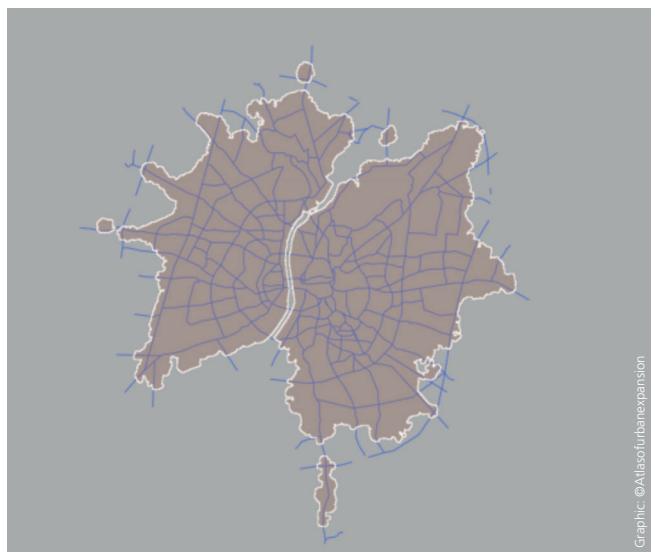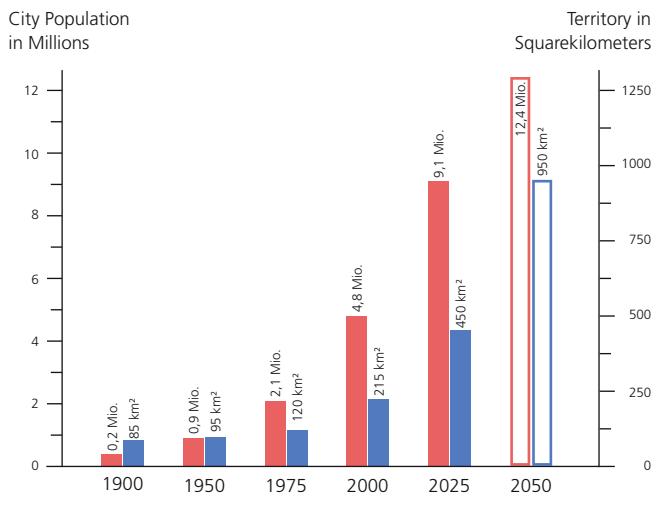
Figure-Ground Diagram 2013

City Population in Millions — Territory in Squarekilometers

Growth of Population and Territory 1900 - 2025

URBAN AHMEDABDAD TODAY
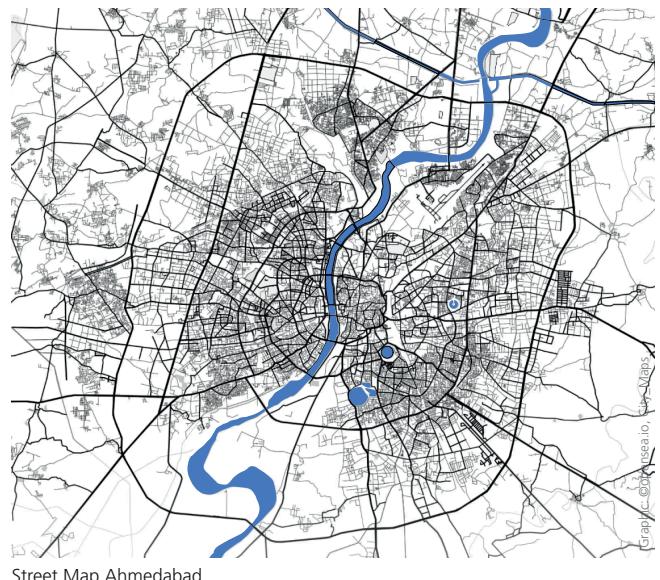
Ahmedabad, today faces numerous challenges related to its rapid growth and historical heritage. The city is experiencing rapid urbanization, leading to uncontrolled land growth and urban sprawl in the peri-urban areas.

Heavy rural-urban migration in Indian cities is exacerbating the existing problems of unplanned urbanization, informal housing and provision of basic services, especially for low-income populations. Increasing urban sprawl is also hampering many public utilities, including the transportation sector, which is facing major challenges. To address these challenges, Ahmedabad has introduced various measures and strategies.

An example of this is the Town Planning Scheme, which aims to facilitate the difficult provision of public land, which is difficult in India's privatized land system. The Town Planning Scheme of Gujarat (TPS), implemented in Ahmedabad, is a land distribution and adjustment mechanism that allows the city to expropriate land from private landowners for public purposes, such as roads, open spaces, social housing, etc., benefiting both private landowners and public authorities. This paves the way for the rapid and equitable provision of planned developed land for rapid urban growth. The transformative potential of TPS in Indian cities is limited by the challenges of reconciling public land use with private land ownership and accommodating large sections of the population who cannot afford formal land.

The TPS is the central tool to implement the objectives set out in a development plan. The Revised Development Plan 2021 of the Ahmedabad Urban Development Authority (AUDA) is a comprehensive urban planning concept that promotes the development of the Ahmedabad metropolitan region. It serves as a guideline for the future urban development of Ahmedabad and contains several mechanisms to curb urban sprawl and form a compact, high-density urban structure in zones with accessible public transportation.

The plan is characterized by zoning, which divides the urban area into different zones, including residential, commercial, industrial and green areas.

Street Map Ahmedabad
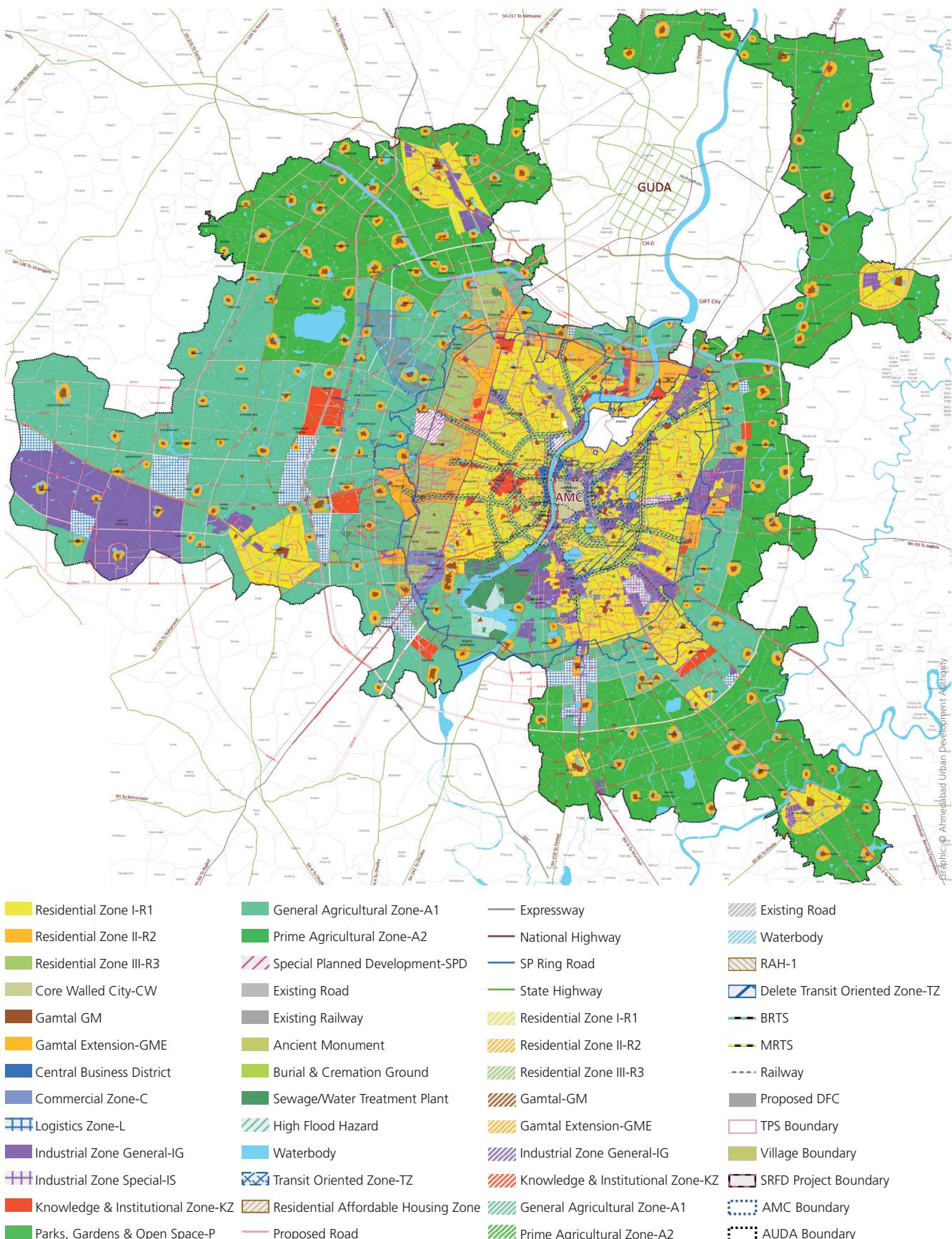
Particular emphasis is put on the creation of affordable housing for low-income groups in order to reduce informal settlements and improve the quality of life. However, the plan focuses on land use allocation while neglecting socio-economic inequalities.

Ahmedabad is pursuing sustainable urban planning approaches, such as the promotion of mixed-use areas and an increased focus on public transportation. The expansion of the Bus Rapid Transit System (BRTS) and the development of the metro project are intended to relieve traffic congestion and reduce dependence on private vehicles.

The city is also responding to environmental problems with various initiatives, including the revitalization of the Sabarmati riverbank, which aims to both improve environmental quality and create public recreational areas. At the same time, NGOs and citizens' initiatives are actively working to preserve cultural heritage and improve living conditions in informal settlements.

Today, Ahmedabad is at a crossroads between preserving its historical identity and adapting to the demands of a modern metropolis. While the city has developed innovative approaches, sustainable and inclusive urban development requires long-term efforts that take equal account of social, economic and environmental aspects.

Residential Zone I-R1	General Agricultural Zone-A1	Expressway	Existing Road
Residential Zone II-R2	Prime Agricultural Zone-A2	National Highway	Waterbody
Residential Zone III-R3	Special Planned Development-SPD	SP Ring Road	RAH-1
Core Walled City-CW	Existing Road	State Highway	Delete Transit Oriented Zone-TZ
Gamtal GM	Existing Railway	Residential Zone I-R1	BRTS
Gamtal Extension-GME	Ancient Monument	Residential Zone II-R2	MRTS
Central Business District	Burial & Cremation Ground	Residential Zone III-R3	Railway
Commercial Zone-C	Sewage/Water Treatment Plant	Gamtal-GM	Proposed DFC
Logistics Zone-L	High Flood Hazard	Gamtal Extension-GME	TPS Boundary
Industrial Zone General-IG	Waterbody	Industrial Zone General-IG	Village Boundary
Industrial Zone Special-IS	Transit Oriented Zone-TZ	Knowledge & Institutional Zone-KZ	SRFD Project Boundary
Knowledge & Institutional Zone-KZ	Residential Affordable Housing Zone	General Agricultural Zone-A1	AMC Boundary
Parks, Gardens & Open Space-P	Proposed Road	Prime Agricultural Zone-A2	AUDA Boundary

Urban Development Plan Ahmedabad, Master Plan 2021

SABARMATI RIVERFRONT DEVELOPMENT

The Sabarmati River has long been central to Ahmedabad's history, serving as a vital source of drinking water and offering spaces for informal recreation. However, rapid urban growth by the late 20th century led to the river's neglect. Pollution and inaccessibility became major issues as the city expanded. The potential of the river as a social hub and point of interaction has not been utilized during the past decades.

1997 the Sabarmati Riverfront Development Project was initiated. This ambitious, multi-faceted vision aims to reclaim the riverbanks from private use and convert them into public spaces.The project sought to reconnect the city with its river through the creation of parks, promenades, and civic amenities, fostering a vibrant and inclusive urban environment.

Inspired by successful riverfront projects in cities like London and San Francisco, the goal is to enhance the city's global appeal and functionality.

Sabarmati Riverfront Development

Phase I has already been completed - revitalizing 11.5 km along the river with promenades, parks, and essential infrastructure upgrades such as sewage interception systems.Phase II, currently underway, aims to expand the riverfront by 12.2 km while focusing on sustainable features like green promenades and improved urban water management.

Reclaimed Land
Sewahge Interceptor Line
Pumping Station

Reclaiming Land, Building Flood Protection Walls, Laying Sewage Interceptors

City Street
Riverfront Access Street

Improving the Access to the River

Mulit-Modal Transport Hub, Kalupur Railway Station

KALUPUR RAILWAY STATION REDEVELOPMENT

As the city grows rapidly, so does the need for public transportation on both the regional level and within Ahmedabad. To be able to manage that need for millions of people, the expansion of transportation infrastructure is essential.

The new station is designed to handle an expected 300.000 passengers daily, with improvements to connectivity through elevated roads and facilities for the metro and local train services. A significant addition to the station's redevelopment is the creation of a Multi-Modal Transport Hub (MMTH) located on the Kalupur side of the station. This 16-story structure will include two basements for parking, five floors dedicated to railway offices and administrative spaces, and upper floors for passenger amenities.

The redevelopment of Kalupur Railway Station is not only focused on improving transportation efficiency but also aims to foster social interaction and serve public interests through various multi-functional spaces. Large green spaces and public parks, enhance the social and recreational experience for visitors and locals.

Additionally, the project includes commercial spaces, retail outlets, and dining options, creating an environment where passengers and the general public can engage in social activities while also fulfilling their daily needs.

The project also requires significant changes to traffic patterns and road infrastructure. New elevated roads and revised access points are being created to reduce congestion and improve connectivity between the station and surrounding areas. Additionally, the project will introduce dedicated transport lanes to streamline traffic flow for buses, taxis, and private vehicles. These modifications aim to improve the station's integration with the city's transportation network and enhance accessibility.
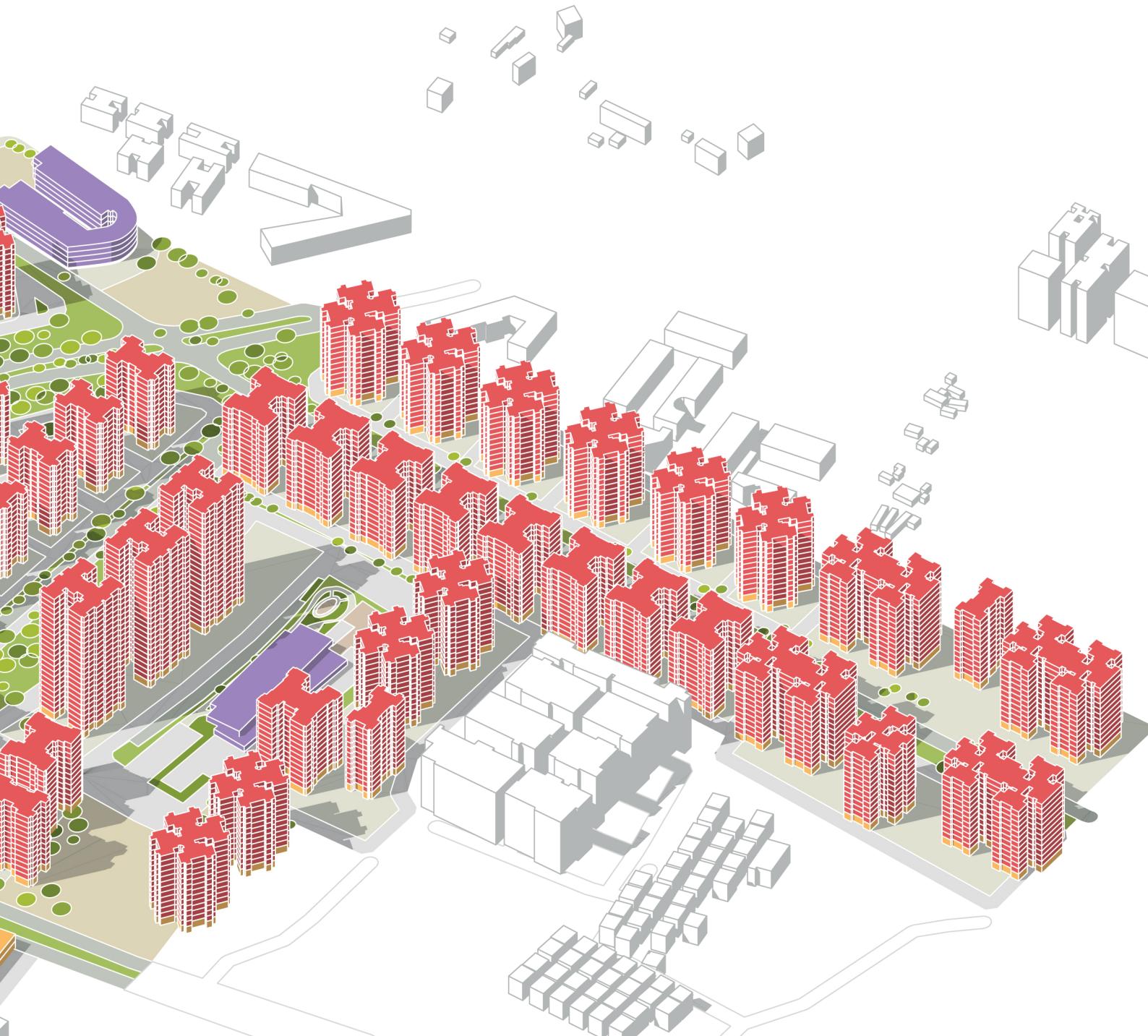
By combining transportation with commerce, and social spaces, the Kalupur Railway Station redevelopment aligns with global trends in urban planning, similar to successful models in other world-class cities.

GODREJ GARDEN CITY

FUNCTIONS
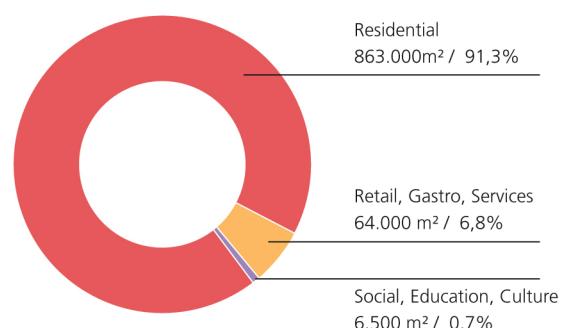
- Residential
- Hotel
- Retail, Gastro, Services
- Office
- Production
- Social, Education, Culture
- Parking
- Transit

KEY DATA

Total Area	50 ha / 100,0 %
Public Open Space	8,6 ha / 17,2%
Public Transit Area	13,3 ha / 26,6%
Net Building Land	28,1 ha / 56,2%
Total GFA	945.000 m²
Total Plot Coverage	0,18
Floor Area Ratio	1,89

Residential
863.000m² / 91,3%

Retail, Gastro, Services
64.000 m² / 6,8%

Social, Education, Culture
6.500 m² / 0,7%

CASE STUDY 1:
GODREJ GARDEN CITY

PROJECT DESCRIPTION

Before the development of Godrej Garden City (GGC), the area was characterised by a mosaic of agricultural land and unused wasteland. Godrej Garden City is strategically located between Jagatpur village and Chandkheda area in the northwest of Ahmedabad, Gujarat.

Chandkheda is a developed area known for its modern infrastructure, proximity to IT parks, educational institutions and residential areas. It is a preferred destination for professionals and families looking to live in an urban environment.

Jagatpur, reflects the rapid urbanization of the suburbs. It is emerging as a major residential and commercial centre, attracting both residents and investors. The region is currently experiencing an economic boom as more and more commercial projects take advantage of the growing urbanity and contribute to development.

The project reflects the development of the region, combining modern city life with a tranquil environment. Godrej Garden City is a master-planned residential community being built on an area of approximately 240 ha. The masterplan was designed by architects Skidmore, Owings & Merrill (SOM). Since development began in 2009, the project has aimed to create a self-sufficient community of 13,000 homes and around 40 hectares of open space.

These open spaces have a variety of functional designs, ranging from larger event areas that can be used by non-residents to smaller, enclosed green spaces within the residential neighbourhoods. Leisure facilities are varied and include a clubhouse with gym, library, sports hall, swimming pool, basketball court, footpaths, jogging tracks, ice rink and football pitch. The infrastructure also includes a supermarket and a school, where most of the community's children are enrolled. A hospital is also planned. Across the road is a commercial area that will house offices and markets.
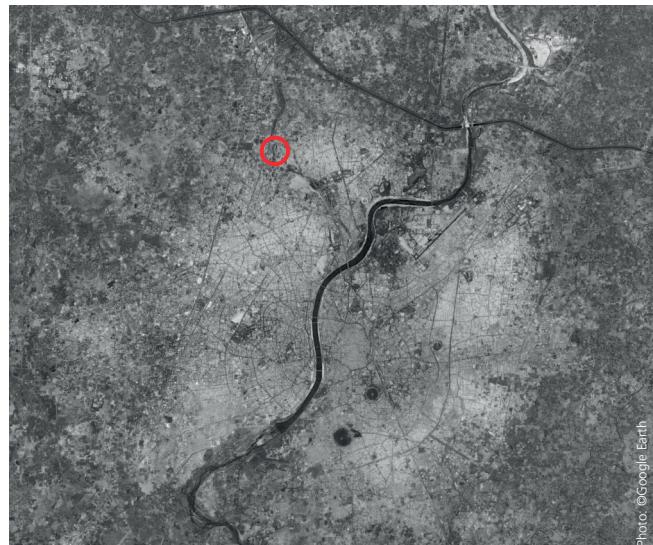
Project Location in Ahmedabad

PROJECT VISION

With its combination of housing, generous open spaces and extensive infrastructure, Godrej Garden City is pursuing the concept of a modern, sustainable and liveable neighbourhood that fully meets the needs of its residents.

The vision of the project is to create green, versatile and well-connected living space with efficient infrastructure, creating a kind of self-sufficient "city within a city". A central aspect of the project is the planning of generous green spaces and energy-efficient construction methods to ensure environmentally friendly and sustainable development.
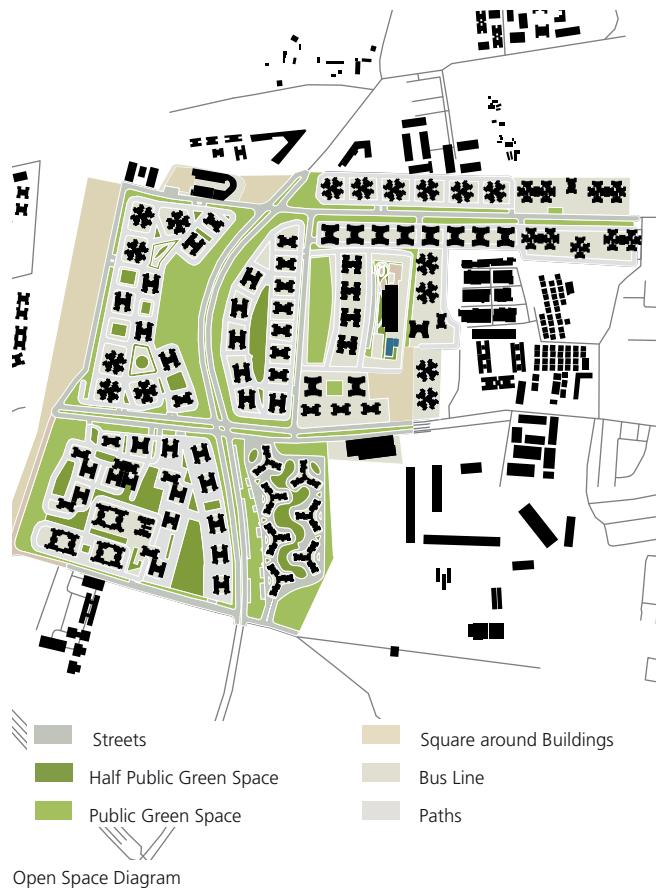
Public spaces such as parks are intended to create space for social encounters and are complemented by communal facilities such as community centers to promote interaction between the residents.

In addition, the project aims to foster a diverse community by offering a wide range of housing in different price categories, appealing to income groups from affordable units to luxury apartments.

OPEN SPACE CONCEPT

Public space plays a central role in Godrej Garden City. The master plan of the community has been designed to offer residents not only living space, but also open spaces that serve different functions and uses.

The public realm within Godrej Garden City includes a variety of open spaces that vary in size and function depending on the location. Large, multi-functional areas are designed for community events and leisure activities, and are made accessible to non-residents to promote integration with the surrounding city. Smaller, private green spaces within the residential areas serve as protected retreats for the gated areas. The design aims to provide wide walkways, shady trees and lighting for comfort and safety.

Streets	Square around Buildings
Half Public Green Space	Bus Line
Public Green Space	Paths

Open Space Diagram
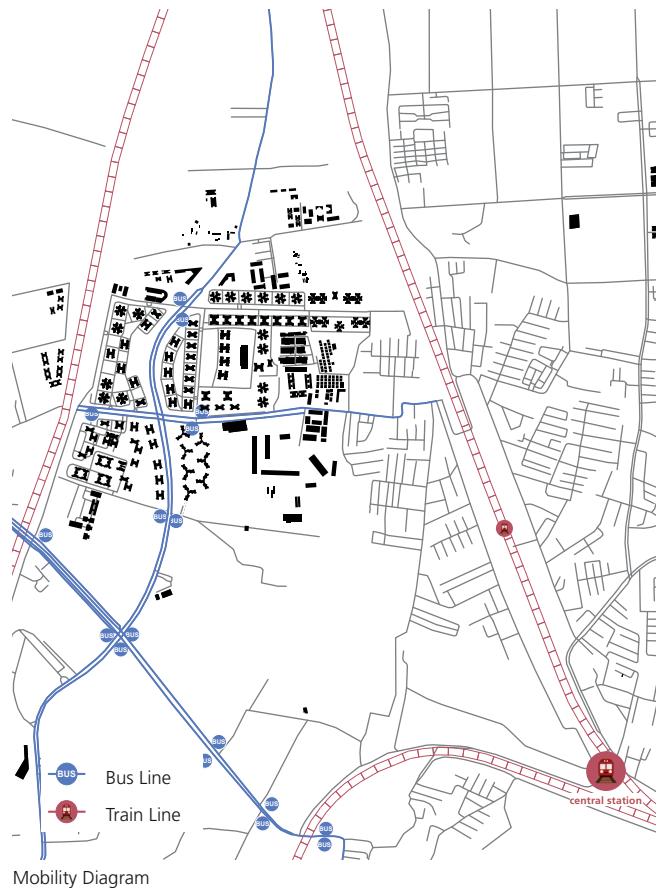
MOBILITY CONCEPT

Godrej Garden City's mobility concept is based on a combination of internal accessibility and connectivity to Ahmedabad's urban transport network.

The township is strategically planned to be well connected to major arteries, including proximity to the S.G. Highway and access to the international airport (22 minutes). This is by car or bus.

Within the area, roads are designed to separate pedestrians, cyclists and motorised traffic. There are footpaths and jogging routes that link residents to public facilities. This is achieved through wide pathways and a pedestrian friendly environment. The concept aims to minimize the need to travel out of the area and to rely on the provision of services in the area.

Bus Line
Train Line

Mobility Diagram

Siteplan 1:5.000

MIX OF FUNCTIONS AND TYPOLOGIES

Godrej Garden City in Ahmebabad is a mixed-use urban development project that seamlessly blends residential, commercial and leisure. Residential use forms the major part of the site and is zoned into different residential neighborhoods such as Tivoli, Pinecrest, Orchard, Celeste and Carmel, which are differentiated by their respective locations, typologies and special features.

The different residential blocks offer a wide range from compact, affordable units to luxury apartments to appeal to different target groups. The apartment blocks in the Orchard district, for example, which are arranged in an ellipse around a

green area, are characterized by their proximity to green spaces and parks, making them ideal for families with children. Here you will find apartments at medium heights, with an emphasis on an environmentally friendly and quiet lifestyle. The Pinecrest neighborhood to the east, for example, is characterized by its luxurious apartments that integrate amenities such as clubhouses, playgrounds and landscaped gardens.

Building heights throughout the area vary between mid-rise and taller buildings to create both high density and ample open space for green areas. The residential buildings are mainly located in central and quiet areas of the township, sur-

WHAT MAKES GODREJ GARDEN CITY UNIQUE?

What is special about the project is the attempt to create a well-mixed combination of residential, commercial and leisure uses in one area, offering a wide range of different housing typologies from luxury to more affordable residential quarters.

As a planned township, Godrej Garden is intended to offer infrastructure and generous green spaces in addition to residential and commercial space in the sense of a "city within a city" concept. By integrating schools, hospitals, shopping centers and parks into the planning of the area, the project is intended to function like a self-sufficient city.

Moreover, the residential buildings have a very distinct footprint that is rather uncommon compared to central european countries. Every building typology is characterized by many offsets within the exterior wall. This approach aims to provide daylight in every room. Looking closer, one can question whether this approach is successful as the view out of many windows might just be an opposite exterior wall. The distinct shape of the buildings becomes more reasonable, considering that heatloss through the building envelope is no concern in the local climate.
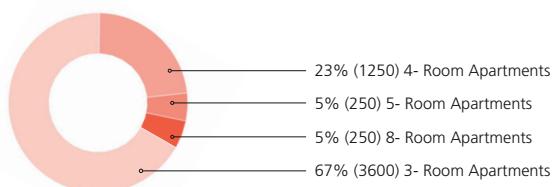
A distinct feature of Godrej Garden City is the strict copying of building typologies in a very pragmatic manner. While it speeds
up the planning and construction process it causes a monotonous and colossal appearance that can feel unpleasant, walking through the streets. While the central traffic avenue is wide and full of trees, smaller roads and spaces between buildings of one typology are narrow, adding towards their massiveness.

Being a Gated community, Godrej Garden City clearly stands out from its surrounding undeveloped area. The assembly of unique building footprints creates a distinctive look that clearly communicates the housing demand of Ahmedabad.

0   75   150   300

rounded by parks, playgrounds and green spaces. The commercial uses are strategically positioned on easily accessible main roads and near the main entrances of the project. These buildings are mostly low to mid-rise and tend to be located towards the interior of the site. Towards the outside, the project follows a graduated height concept so that the medium to taller residential and commercial buildings are located on the outer edges. Noticeable are undefined open spaces in the eastern and western areas along the railroad tracks. As of now, that land does not have a dedicated function and it remains unknown whether they will transform into public green spaces or be covered with additional (residential) buildings.

BUILDING AND APARTMENT TYPOLOGIES

The distribution of apartment typologies as shown in the figure below, reflects an apparent focus on catering to families or larger households. However, this raises some questions in the context of India's rapid urbanization and population growth. The absence of smaller apartment options, such as studio or 1-bedroom units, is particularly notable, as it leaves limited choices for single individuals, young professionals, or smaller households, a demographic that is growing due to urban migration and changing lifestyles. An explanation might be found in cultural ideals and traditions joint-family living , where multiple generations reside under one roof.

However, this approach seems misaligned with the broader trends in urban India, where single-person households are becoming more common, especially in cities like Ahmedabad, which are experiencing a significant influx of working professionals.

Another striking feature is the relatively large size of the apartments. While these spacious floorplans offer comfort and appeal to affluent buyers, they also highlight a potential inefficiency in land utilization during a period of pressing demand for urban housing. With India's urban population projected to grow rapidly in the coming decades, developments like Godrej Garden City may need to strike a balance between luxury and density. Compact housing solutions could allow the project to accommodate a broader range of residents, better addressing the city's housing shortage.

On the other hand, the emphasis on larger apartments might align with Godrej Garden City's vision as a premium township. Designed to provide a holistic living experience, it offers amenities like schools, healthcare centers, shopping complexes, and green spaces, targeting families who seek not only a home but a lifestyle upgrade. The self-contained nature of the township likely appeals to well-to-do families who prioritize spacious living with access to modern conveniences.

In conclusion, while the current typology mix in Godrej Garden City reflects cultural preferences and a premium positioning, it also underscores a missed opportunity to adapt to changing urban housing needs. Incorporating smaller apartments in future phases could make the township more inclusive and responsive to Ahmedabad's evolving demographics, optimizing land use while addressing the challenges of urbanization.

23% (1250) 4- Room Apartments
5% (250) 5- Room Apartments
5% (250) 8- Room Apartments
67% (3600) 3- Room Apartments

Distribution of the Apartment Types

Orchard
Carmel
Tivoli
Pinecrest
Vrindavan
Eden
Belverde

Overview of the Building Types

DIFFERENT TYPOLOGIES OF APARTMENTS

The different types of apartments in Godrej Garden City, from luxurious options like Belvedere to more affordable neighborhoods like Carmel, also reflect the social inequality in the Indian housing market.

The example floor plans shown here are from the Carmel, Tivoli and Belvedere neighborhoods. Carmel is a quieter neighborhood with modern apartments that are intended to be suitable for families and professionals alike and offer good value for money. The Tivoli district is primarily aimed at families and offers spacious apartments with 2 or 3 bedrooms. Belvedere has spacious luxury apartments with an additional room for staff. In contrast to the other apartment types, they are open on three sides and therefore optimally ventilated and illuminated. The neighborhood offers 24/7 security services, CCTV surveillance and is designed as a gated community.

While the spacious apartments are aimed at more affluent sections of the population, they remain unaffordable for the majority of people affected by poverty or low income. Even the units marketed as affordable are mostly aimed at the lower middle class, ignoring the enormous need for social housing for low-income families.
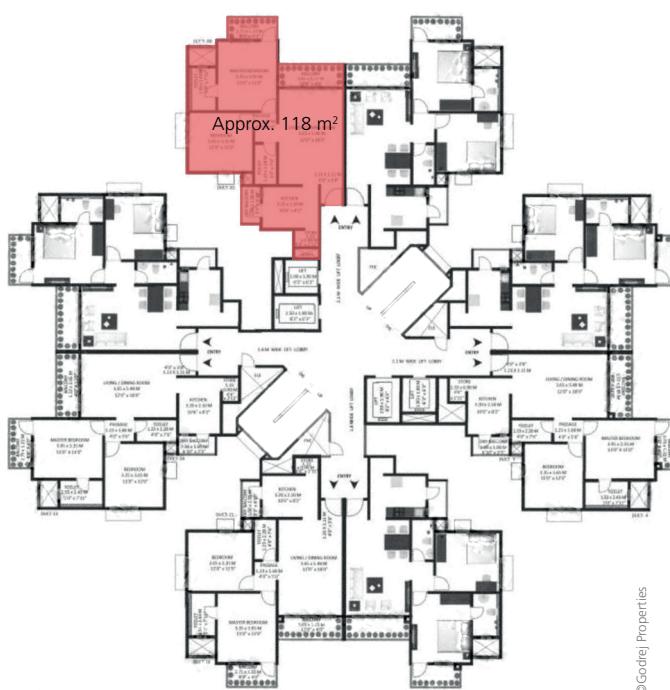
Approx. 107 m²

2 BHK Apartment (Carmel) 1:500

Graphic: ©Godrej Properties

Approx. 144 m²

3 BHK Apartment (Carmel) 1:500

Graphic: ©Godrej Properties

Approx. 118 m²
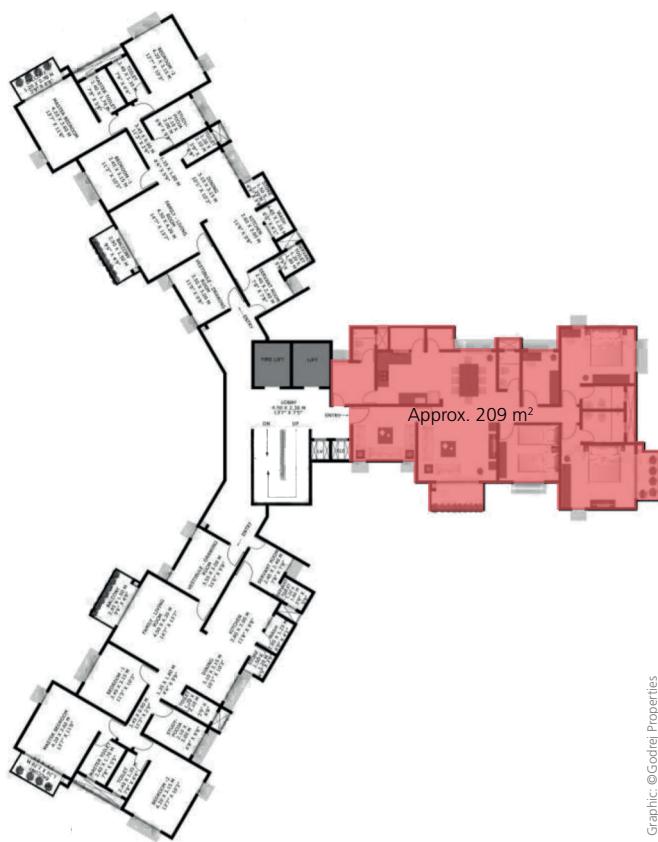
2 BHK Apartment (Tivoli) 1:500

Graphic: ©Godrej Properties

Approx. 209 m²

3 BHK Premium Apartment (Belvedere) 1:500

Graphic: ©Godrej Properties

GIFT CITY - 2.1 NON-DOMESTIC (SEZ) ZONE

FUNCTIONS

- Residential
- Hotel
- Retail, Gastro, Services
- Office
- Production
- Social, Education, Culture
- Parking
- Transit
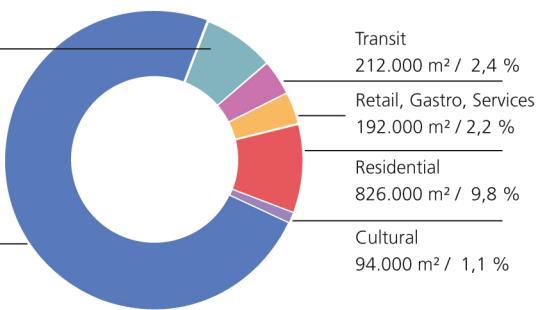
KEY DATA

Total Area	219,8 ha /	100,0 %
Public Open Space	63,2 ha /	28,8%
Public Transit Area	63,1 ha /	28,7 %
Net Building Land	93,5 ha /	42,5 %
Total GFA		8.600.000 m²
Total Plot Coverage		0,35
Floor Area Ratio (FAR)		3,91

Parking
780.000 m² / 9,1 %

Office
6.482.000 m² / 75,4 %

Transit
212.000 m² / 2,4 %

Retail, Gastro, Services
192.000 m² / 2,2 %

Residential
826.000 m² / 9,8 %

Cultural
94.000 m² / 1,1 %

GIFT CITY - 2.2 RESIDENTIAL ZONE

FUNCTIONS

- Residential
- Hotel
- Retail, Gastro, Services
- Office
- Production
- Social, Education, Culture
- Parking
- Transit
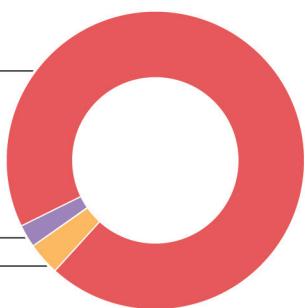
KEY DATA

Total Area	151,1 ha /	100,0 %
Public Open Space	57,8 ha /	38,3%
Public Transit Area	28,6 ha /	18,9 %
Net Builduing Land	64,6 ha /	42,8 %
Total GFA		3.200.000 m²
Total Plot Coverage		0,22
Floor Area Ratio (FAR)		2,11

Residential
3.012.000 m² / 94,1

Social, Education, Culture
67.000 m² / 2,1%

Retail, Gastro, Services
122.000 m² / 3,8 %

CASE STUDY 2: GIFT CITY

PROJECT DESCRIPTION

Gujarat International Finance Tec-City (GIFT City) is India's first operational smart city and international financial services center, strategically located between Ahmedabad and Gandhinagar in Gujarat. The city's development is being executed in multiple phases. The initial phases have focused on establishing essential infrastructure, high-rise office spaces, and residential complexes, with many commercial zones already operational. Future phases aim to expand the city's capacity, introducing more mixed-use developments, recreational amenities, and green spaces to enhance its appeal as a holistic urban destination.

Fully approved and already sold out, the project addresses the urgent need for modern infrastructure. The lack of globally competitive infrastructure, including financial systems, office space, connectivity and lifestyle amenities, has prevented India from competing with international centres such as London or New York. By offering a conducive environment with regulatory efficiencies, tax incentives, and modern amenities, GIFT City aspires to become a preferred destination for businesses and investors worldwide.

GIFT City is uniquely positioned to support the growing trend of onshoring, where Indian startups and businesses relocate their operations back to India. The local benefits makes it an ideal destination for businesses seeking to align with India's evolving economic policies and leverage local opportunities without compromising on access to global markets.

The city is characterized by a planned mix of functions and building typologies, integrating commercial, residential, institutional, and recreational spaces. High-rise office towers house financial and IT firms, while residential complexes provide quality housing. Retail spaces, healthcare facilities, and educational institutions contribute to a vibrant urban ecosystem that supports work-life balance. The following pages will show how those functions are planned out within different zones of GIFT City.
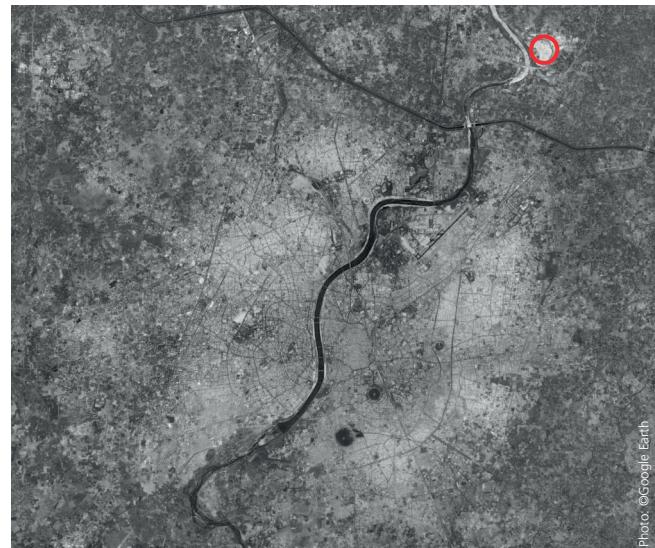
Project Location in Ahmedabad

PROJECT VISION
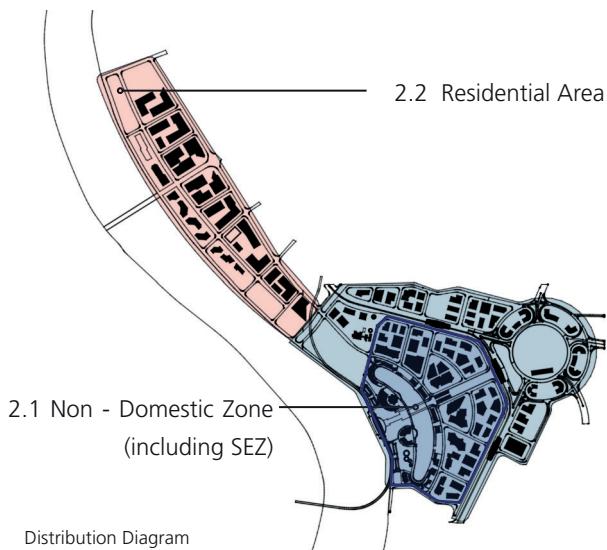
"Creating a globally benchmarked financial hub with smart urban infrastructure and a sustainable environment, driving India's position as a global financial leader" Gujarat International Finance Tec-City (GIFT City) envisions establishing a world-class financial and technological hub that positions India prominently on the global economic stage. GIFT City aims to integrate India's economy into the international financial system, fostering seamless capital flows and enhancing connectivity with global markets.

At its core, GIFT City is designed as an eco-city that aims to maintain environmental integrity through sustainable practices. Its goals include promoting low energy consumption, prudent use of resources, waste reduction and environmental education. The city actively protects various natural species and ecosystems and plans development in harmony with environmental conservation.

The project embodies businessed growth. It aims to be a benchmark for India's emergence as a global leader in urban and financial innovation.

ZONING

Gift City can be divided two zones, both in their building typologies and functions. The Center is the non-domestic zone, which is characterized by high-rise office buildings. Within that area is the SEZ zone, a very special part of GIFT City because of its specific tax regulations. The contrast to the business-focussed area are the two wings to the east and west. They serve primarily residential and cultural purposes to complete the full spectrum of GIFT City.

2.2 Residential Area

2.1 Non - Domestic Zone
(including SEZ)

Distribution Diagram

SPECIAL BUILDING

To live up to the ambitious prestige of the Gift City project, the architecture has to match. The focus is on buildings that stand out for their shape and height.

Building Location in GIFT City

1. GIFT Two Towers
The first completed skyscrapers in GIFT City symbolise the start of the project. They house offices, international companies and major financial institutions.

2. World Trade Center at GIFT City
Part of the global WTC network, it serves as a platform for trade, international cooperation and investment.

3. Diamond Tower
The Diamond Tower is in the planning stage and will symbolise India's growth and innovation. It will house offices, conference centres and exhibition space for financial institutions.

CASE STUDY 2: GIFT CITY

OPEN SPACE CONCEPT
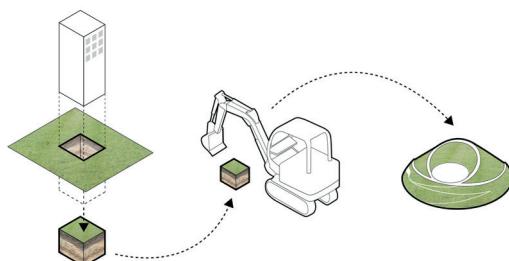
GIFT City emphasises community engagement through publicly designed spaces, including green boulevards, pedestrian-friendly zones and recreational parks. The ongoing Riverfront Development Project emphasises this vision by creating numerous public spaces and recreational areas along the riverfront, providing spaces for residents and visitors to interact and relax.

The landscape design of GIFT City is characterized by a 70-metre high, multi-level hilltop that creates a smooth transition between the flat surroundings and the striking skyline of the city.

Visionary Landscape

This landmark is created from the excavated earth produced during the construction phases of the buildings and its shape is dynamically evolving.

Recycling excavated earth

- Streets
- Half public green space
- Public green space
- Square around buildings
- Water
- Paths

Open Space Diagram
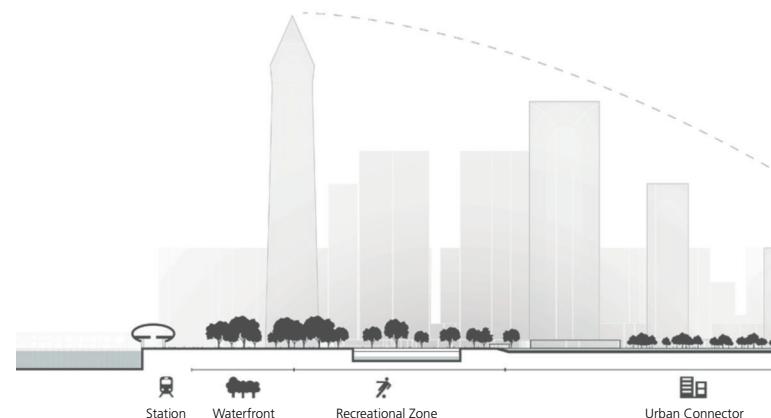
Open Space, Non Domestic Zone

The hill offers numerous public sports and leisure facilities on three levels, including hiking trails, climbing areas, playgrounds and viewing points. A large, green stepped meadow functions as an amphitheater and creates space for open-air cultural events. A public urban forest park extends along the Sabarmati River and serves as a recreational zone. This park is connected to the central green space by a green boulevard.

This network is supplemented by green pedestrian connections that create more private, quiet spaces between the blocks. Spacious green squares with shaded seating areas also open up within the building blocks, which are suitable both for lunch breaks and for outdoor workplaces with power supplies. The city's streetscape is divided into two main character zones: The streets near the forest park and the waterfront are characterized by a densely planted, nature-oriented aesthetic, while the streets running along the central axes maintain a clear and urban, yet elegant character.

Station   Waterfront   Recreational Zone   Urban Connector

Section

MOBILITY CONCEPT
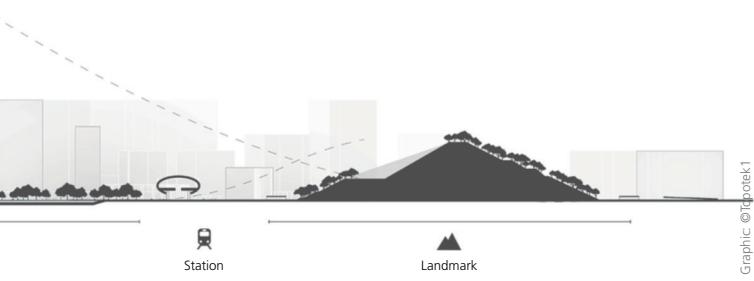
The GIFT area is regionally connected to important locations that will further drive the city's development. For example, the city is accessible via the National Highway NH-8, which connects Delhi to Mumbai. Railroad lines also run past the site to Delhi in the west and Himmatnagar in the east.

Due to the creation of a large number of new jobs, GIFT City faces the challenge of an enormous demand for transportation. The mobility concept in GIFT City is based on transit-oriented development (TOD). This planning and design strategy promotes compact, mixed-use, pedestrian- and bicycle-friendly urban development that is closely linked to public transit by locating jobs, housing, services and amenities around public transit stations.

In GIFT City, TOD focuses on four transit stations located in well-distributed locations. They are designed to encourage the use of public transportation by making all parts of the central business district accessible to pedestrians. The aim is to achieve a "walk to work concept" and envisage a modal split of 10:90 between private and public transport with a 25% buffer for private vehicles.

The government of Gujarat is planning a public Bus Rapid Transit System (BRTS) and a metro that will connect the capital and Ahmedabad with a dense road network. The vision for transportation within GIFT City is an integrated urban connectivity system to reduce the area used for traffic. GIFT City's mobility focus is on an automated people mover system (PMS) and strategic connectivity to major motorways and airports, including Mumbai.

Multi-level parking (MLP) with 50,000 parking spaces is positioned close to key access points, while separate routes for vehicles and pedestrians increase safety and efficiency. The aim of the project is to become a 'city without fatal accidents' and to achieve future-oriented urban planning.

GIFT CITY Station

Mobility Diagram

Station   Landmark

Plan: India's first state-of-the-art Personal Rapid Transit (PRT) System

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Siteplan 1:12.500

MIX OF FUNCTIONS AND TYPOLOGIES

The Special Economic Zone (SEZ) presented here is to become an attractive location for international companies. Both spatially, through innovative, well-connected commercial buildings, and also economically, through tax exemptions, duty-free imports and exports, etc. The SEZ is the heart of GIFT City and is intended to offer various financial institutions, banks and other companies a modern infrastructure. Buildings with various uses such as commercial buildings, residential towers, a convention center and a recreational area can be found here. This part of GIFT City is aimed at companies that require special infrastructure, tax incentives and other benefits granted by the SEZ Act.

The core area of the SEZ houses the International Financial Services Centre (IFSC) , which is the main focal point of GIFT City and India's first IFSC. The surrounding buildings are also geared towards the financial services industry and offer a first-class business environment. Here, mainly commercial uses such as offices, international banks, financial institutions and IT service providers are concentrated. The development is characterized by modern high-rise typologies that meet the requirements of international smart city standards. The building heights in this area are correspondingly high and contribute to the striking skyline of the city.

WHAT MAKES GIFT CITY UNIQUE?

GIFT City (Gujarat International Finance Tec-City) is a landmark development that stands out as a global hub for finance, technology and urban innovation. It is home to India's first International Financial Services Centre (IFSC), which facilitates seamless global financial transactions, and is home to pioneering initiatives such as the India International Exchange (India INX), which is driving innovation in international finance.

As an integrated smart city, GIFT City combines advanced technologies such as IT, IoT and AI to efficiently manage its infrastructure. This technological integration ensures smooth operations, enhances the city's living standards, and supports sustainable development. The city's advanced ICT framework further leverages IoT devices and data analytics to optimise city operations, reduce resource waste, and enable smart city management practices.

Economically, GIFT City acts as a vital bridge for global investment in India, driving economic growth and creating vast employment opportunities. It is expected to create jobs for many people and, due to its geographical proximity, will play an important role in the development of Mumbai, fostering regional cooperation and growth.

In addition, GIFT City is designed as a mixed-use urban space that will offer residential opportunities for GIFT City's working community. It will also offer a variety of recreational activities and vibrant community spaces, creating a balanced environment where work, life and leisure come together.

With its unique combination of global financial services, cutting-edge technology and sustainable urban planning, GIFT City is setting a new standard for future cities and contributing significantly to national and international growth.

0   100   200   500 m

Isolated, supporting service uses are then located around these buildings. These include apartments, hotels, hospitals, schools and other support facilities. The building typologies here range from medium-height buildings to smaller, free-standing structures.

The height development of the buildings here thus decreases from the high-rise skyline on the banks of the Sabarmati towards the circular green area in the north-east, but the terrain rises at this point and forms the multi-level hill, the scenic landmark of GIFT city.

Siteplan 1:12.500

MIX OF FUNCTIONS AND TYPOLOGIES

The Residential Area of GIFT City stretches along the banks of the Sabarmati River and forms a green link to the planned urban forest as well as pedestrian and bicycle corridors. Unlike the SEZ, this area is primarily targeted at domestic companies that are subject to Indian laws and regulations. These companies serve the domestic market and benefit from government tax incentives.

The development of the residential area combines various uses, with the focus on providing housing for the people working in GIFT City. In addition, social and civic infrastructure such as schools, hospitals, shopping centers and restaurants

are planned to enrich the everyday lives of residents and employees. The building typologies vary according to function, with the planning being strongly geared towards residential use. Residential complexes, which often consist of several blocks and are arranged as open, permeable blocks, create green, more private inner courtyards. This design promotes a sense of community among residents while also providing recreational spaces.

The height development in the residential area is deliberately kept low in order to create a pleasant and livable living environment. Mixed-use buildings with restaurants, retail outlets

WHAT MAKES GIFT CITY UNIQUE?

The residential area stands out for its unique location along the Sabarmati River, which not only offers a picturesque scenic backdrop, but also provides direct access to a planned urban forest and a green corridor for pedestrians and cyclists. The proximity to reforested areas and the well thought-out axial planning combine living and nature in a harmonious way and create a balance between urban life and recreation.

With the integration of social and cultural facilities, schools, shopping facilities and restaurants, the residential area will become a lively, self-sufficient district that comprehensively meets the needs of its residents.

The low-rise buildings deliberately stand out from the striking skyline of the SEZ and give the district a homely and inviting ambience. There are also a wide range of leisure facilities, such as spacious sports fields, which promote an active lifestyle close to nature. The proximity to the riverside with mixed-use buildings - including gastronomic, cultural and social facilities - also creates space for relaxation and socializing, making the residential area an ideal combination of quality of life, nature and urban comfort.

and social and cultural facilities are planned along the riverbank. In contrast to the SEZ, the building heights decrease significantly towards the riverbank in order to emphasize the view and proximity to the water. Large sports fields are planned above the residential complexes, offering additional leisure opportunities.

Overall, the residential area creates well-connected living space in GIFT City, which offers a high quality of life thanks to its proximity to the riverside, the urban forest and a wide range of infrastructure.

INFRASTRUCTURE

GIFT is a Smart City in every sense with various first in the country initiatives in the field of Urban Infrastructure. GIFT is being developed as a state-of-the-art financial hub which shall require huge infrastructure with excellent planning, designing and engineering with latest technologies.

Water
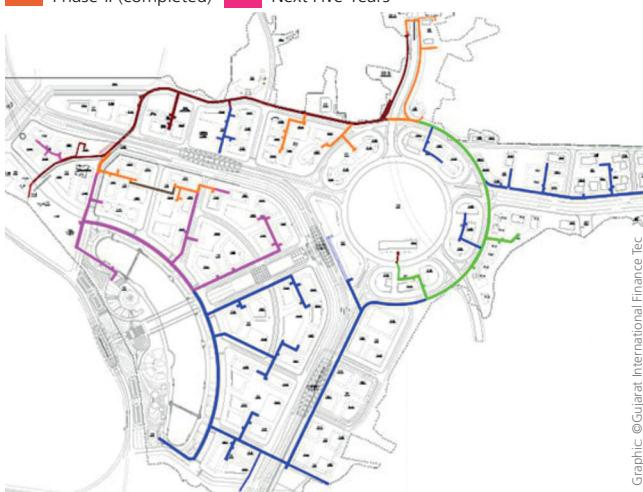
GIFT City has a centralized water supply system to ensure that clean and safe drinking water is available to all areas of the city at all times. The source for this is the Narmada main canal. In addition, a Concept of Zero Discharge City will recycle treated wastewater or rainwater for irrigation, cooling and other secondary purposes.

There are also plans to build three dams and a landscaped promenade along the banks of the Sabarmati River. The dam lake „Samruddhi Sarovar", translated as „Lake of Progress", which stores water from the Narmada dam and can meet the city's water needs for up to 15 days, enhances aesthetics and can be used for water sports activity.
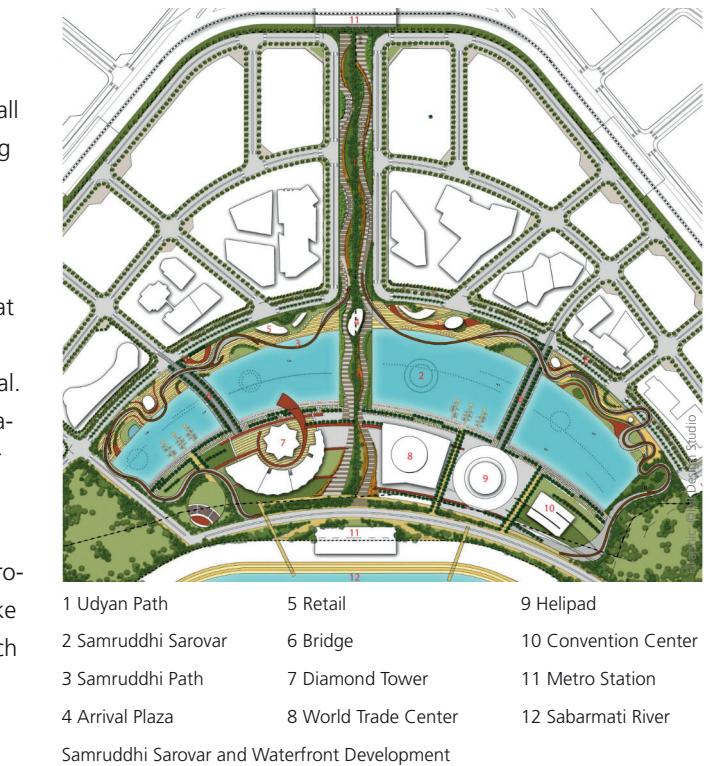
Utility Tunnel

GIFT developed the vision of „digging free city" by placing all the utilities in a underground supply tunnel across the city that centralises the infrastructure. This reduces the need for aboveground infrastructure and simplifies access, separation of utilities, proper drainage, lighting, and other long-term concerns, such as maintenance and security.

1 Udyan Path	5 Retail	9 Helipad
2 Samruddhi Sarovar	6 Bridge	10 Convention Center
3 Samruddhi Path	7 Diamond Tower	11 Metro Station
4 Arrival Plaza	8 World Trade Center	12 Sabarmati River

Samruddhi Sarovar and Waterfront Development
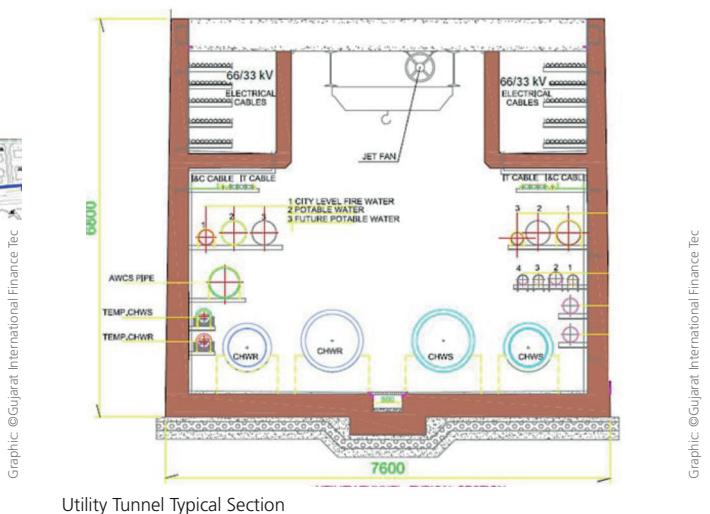
Utility Tunnel

Phase-I (completed)   Phase-II (under progress)   Rest
Phase-II (completed)   Next Five Years

Utility Tunnel Detail

Utility Tunnel Typical Section

Solid Waste Management

Waste management is provided by an Automated Waste Collection System (AWCS), that collects waste directly at the buildings. The waste is extracted through a underground pipe system, which requires minimal human intervention, saves space and reduces the negative impact on health. The waste management concept focuses on waste separation and recycling to promote sustainable waste management and to recycle or compost as much waste as possible.

Automated Waste Collection System (AWS) through chute system

District Cooling System

The city's district cooling system provides a centralised solution for air conditioning for its residents. This air conditioning system saves up to 30% energy compared to conventional air conditioning systems and is more energy efficient and sustainable. The piping network for distributing the chilled water also runs through the underground supply tunnel and the system can be flexibly expanded as the city grows. The district cooling system is designed to reduce CO_2 emissions, the heat island effect and operating/maintenance costs compared to conventional systems.

Cooling System

Power

The energy supply is based on renewable energy sources and smart grids to ensure uninterrupted power supply 24 hours a day. GIFT City has an underground power supply system with a central emergency power supply. State-of-the-art automation equipment for the substation, distribution, lighting and distribution network with real-time monitoring and control enables efficient real time monitoring and control of energy consumption.

Transformer Station

ICT

GIFT city uses advance of ICT (Information and Communication Technology) in form of unique IoT (Internet of Things) based to monitor and manage city Infrastructure. For example, the city offers smart city services such as intelligent parking, networked buildings and a real-time monitoring system.

Data Centre

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LANDSCAPE MASTERPLAN

The landscape design in GIFT City is closely linked to the regional context of Gujarat. As the city is located in a hot and dry climate zone, the landscape master plan aims to create a balance between blue and green landscape elements. Planning is not only done at the neighborhood level, but also includes regional contexts.

A central component of the planning is the proximity to the Sabarmati River, whose ecological significance has been integrated into the design. The redesigned riverside promenade is to become a green meeting place that offers space for encounters, recreation and exchange.

The "Samruddhi Sarovar" reservoir, which serves both as a water reservoir and enables leisure activities such as water sports, is connected to the business district via the "Samruddhi Path". This path creates a symbolic and functional link and invites the working community to escape the fast-paced working day and find relaxation.
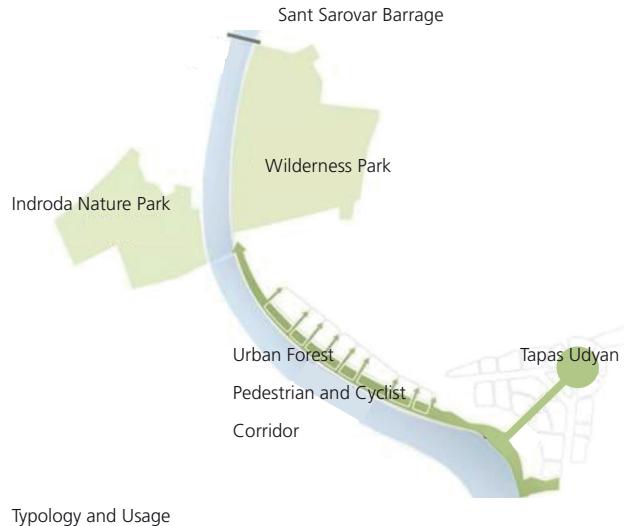
On an urban level, the city park "Tapas Udyan" offers a green oasis of relaxation. It is connected to both the reservoir and the Sabarmati River by a renaturalized riverbank. In addition, the Tapas Udyan creates a direct connection to the reforested forest areas in the north, including the Wilderness Park and the Indroda Nature Park, via a green boulevard.

ECOLOGICAL CORRIDOR:
A long street that connects north to south and creates a vibrant retail district. kiosks, seating, shade and shared spaces should make this a vibrant and exciting urban space.

SAMRUDDHI SAROVAR:
Provides entertainment and recreation to office workers and visitors within the controlled SEZ zone i.e. high end museums, restaurants, festival grounds.

CITY PARK RIVERFRONT:
Provides recreational opportunities along the river edge. It allows citizen to connect to their river and local ecology.

CENTRAL SPINE:
Connents Tapas Udyan to the lake and the river. It porvides a movement corridor through the SEZ zone, with art, food, fitness and fountains alonge the way.

BLOCKS PARKS:
Provide entertainment, recreation and microclimate modification at each block level, extending the forest and water amenities to the entire GIFT environment.

ECOLOGICAL CORRIDOR:
Create biking, walking trails along the storm water drains of the entire future city culminating in two wetland parks. The storm water of the entire three thousand acres is resupplied to the Sabarmati river to rejuvenate it as an ecological Park.

Landscape Masterplan

These green corridors not only promote access to surrounding natural areas for cyclists and pedestrians, but also serve as ecological crossings that increase permeability for wildlife and connect natural habitats.

Innovative measures such as thoughtful stormwater management and the use of retention ponds further help to prevent flooding during the monsoon season by working in harmony with the natural features of the region. Overall, the landscape design of GIFT City strives for a harmonious connection between urban space, nature and the regional context to create a sustainable and livable environment.

Sant Sarovar Barrage

Wilderness Park

Indroda Nature Park

Urban Forest

Pedestrian and Cyclist
Corridor

Tapas Udyan
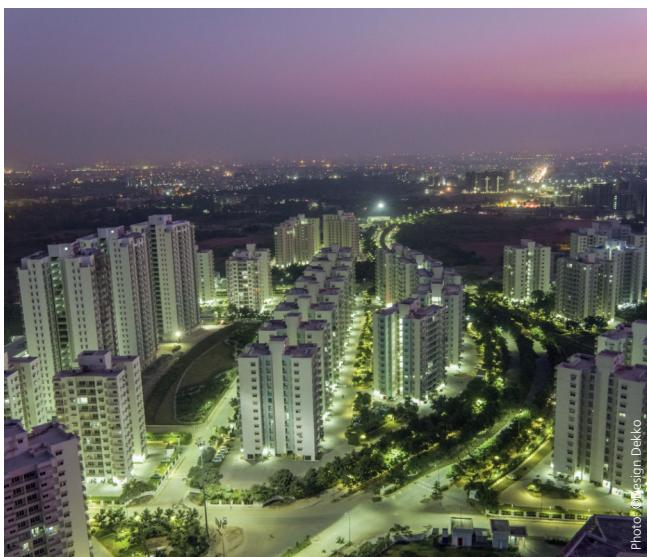
Graphic: © GIFT City Company Limited

Typology and Usage

CITY PARK TAPAS UDYAN:
Provides recreational opportunities for different ages, abilities and classes.

GREAT STREET:
A long street that connects north to south and creates a vibrant retail district. Kiosks, seating, shade and shared spaces should make this a vibrant and exciting urban space.

AGRICULTURAL FIELDS:
A belt of agricultural fields rings the entire city to make it food self-sufficient.

Graphic: ©Design Accord

In order to realize this vision of a harmonious connection, there are numerous environmental initiatives to translate the plans into action. The GIFT Green Fort Zone is an example for a major environmental initiative within GIFT City that aims to create an urban forest and a green pedestrian axis. These are intended to complement the region's natural forests and at the same time make a sustainable contribution to ecological and urban development. The project is based on the Miyawaki method, which promotes rapid growth and a high level of biodiversity.

As part of a pilot project, a forest park has already been created on an area of 730 square meters, on which a total of 2,020 seedlings from 41 native tree species have been planted. The focus here is on using local plant species that are adapted to the hot and dry climate. These not only promote biodiversity, but also help to significantly reduce water consumption.

The initiative relies on ecological and urban planning measures to achieve its goals. These include planting dense vegetation along roadsides to improve air quality and reduce noise pollution. In addition, multi-layered, shady trees along footpaths and cycle paths create a more pleasant microclimate and increase the quality of life in urban areas. Efficient irrigation systems that use grey water also help to minimize the consumption of fresh water.

Residential Neighborhoods Orchard and Pinecrest by Night, Godrej Garden City

Two Towers by Night, GIFT City

Future Waterfront Skyline, Gift City

CONCLUSION

The Godrej Garden City and Gift City projects in Ahmedabad exemplify the profound inequality of the Indian housing market and the huge discrepancy between the development of prestigious financial and business districts and the simultaneous lack of housing for low-income sections of the population.

While Godrej Garden City attempts to appeal to different target groups with a wide range of affordable units to luxury apartments, Gift City represents an ambitious vision of a smart city according to international standards. As a flagship project, Gift City aims to attract highly qualified professionals, investors and companies from the financial and technology sectors. Although it is seen as a symbol of economic progress, Gift City remains an exclusive location with little connection to the real housing needs of the local population. The focus on luxury apartments, high-rise buildings and state-of-the-art infrastructure makes it inaccessible to the masses and accessible only to a privileged minority.

Godrej Garden City, which advertises a range of supposedly affordable housing units, is also aimed at the lower middle class at most and ignores the considerable need for social housing for low-income families. Similar to Gift City, gated neighborhoods with luxury apartments are being created that are aimed exclusively at the wealthy elite. This reinforces the formation of gated communities and segregation within a project that was actually intended to address the needs of broad sections of the population.

On the one hand, projects like these show how cities can be transformed into global business and innovation hubs through ambitious visions and modern infrastructure. On the other hand, they reveal the growing social and economic divide in the Indian housing market. The rapid growth of gated communities and exclusive business districts contrasts sharply with the reality that a large proportion of the population continues to live in informal settlements. Even projects that aim to provide a diverse range of housing promote the segregation of wealthy minorities within their areas and completely neglect social housing.

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URBAN INDIA - Spatial Structures and Typologies in Metropolitan Areas

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LAYOUT

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Karlsruhe, 15.09.2025

With an urban population well below 40%, India is experiencing one of the most dynamic urbanization processes globally. We take this as a starting point to examine current urban development in South Asia with a focus on urban growth patterns and prevailing building typologies in metropolitan areas like Mumbai, Delhi, Mumbai, Bengaluru, Hyderabad and Ahmedabad.

After a dive into the history and current trajectories of urban development of these fascinating cities, this study focuses on individual projects, their urban structures, mobility networks and open spaces. In order to achieve comparable results, in each city three representative areas are selected for detailed analysis.

The results of this study address questions regarding the prevailing urban form, urban design, typologies and mix of functions in contemporary urban development projects in fast growing cities across India.

With an expected urban growth of more than 400 million new inhabitants within the next 25 to 30 years, India now has the historic chance to shape the future of its cities today and for the years to come.

Against this backdrop, the results of this study can be seen from a different perspective and raise further questions:
Is the gated community high-rise scheme the inevitable predominant form of urban development in India?
Or are there other conceptual urban design solutions that might guide Indian cities to a more favourable, livable, sustainable and socially just urban future?

2 BHK Apartment (Carmel) 1:500

Approx. 107 m²

Approx. 144 m²

3 BHK Apartment (Carmel) 1:500

KEY DATA

Total Area	7,0 ha /	100,0 %
Public Open Space	3,5 ha /	49,8 %
Public Transit Area	0,7 ha /	9,7 %
Net Builduing Land	2,8 ha /	39,5 %
Total GFA		350.000 m²
Total Plot Coverage		0,23
Floor Area Ratio (FAR)		5,1

Overview of the Building Types

- Orchard
- Carmel
- Tivoli
- Pinecrest
- Vrindavan
- Eden
- Belverde

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