



Emerging technology hubs of India

August 2023

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Foreword



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The past decade has been a phenomenal time for the technology industry in India. With a higher focus on digitisation than ever before, the ‘techade’ is the time for Indian tech to shine brighter in terms of not just our growth rate but also our roles in solving large-scale world problems using technology.

Although the industry was growing rapidly, the COVID-19 pandemic came as an inflection point—in not only how the demand shifted but also how the industry shifted to an immensely distributed model. This model has continued to function even when the fear of COVID-19 has significantly subsided. The key reason is that the model has been able to provide many positives, which were probably not valued or realised before this.

The opportunity and possibility to develop several more hubs are now very real and almost essential. Based on location, industry segment, and nature of work, the journey each organisation may take to be successful adopters of this model may vary, but the journey has only begun for all.

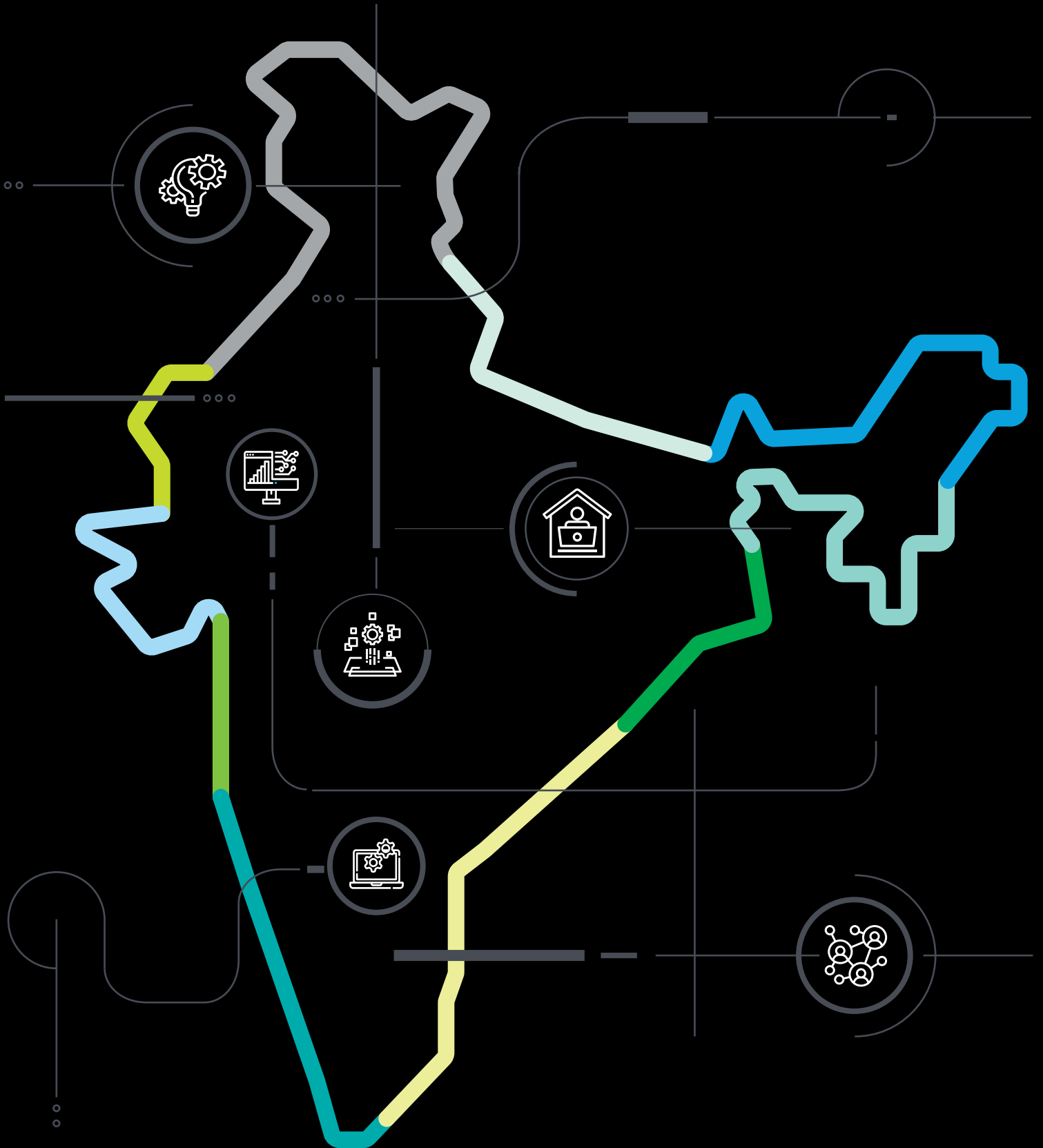
The state governments and local ecosystems have also realised the economic and long-term benefits of creating opportunities for the sector. There is eagerness and a strong commitment to invest in skilling, infrastructure building, and improving the ease of doing business in various parts of the country. With a resourceful approach and a pool of skilled workforce—paired with emerging technologies—the industry is well-positioned to expand its footprint across the country. These locations provide various opportunities for enterprises but need careful strategising and execution.

Currently, the industry has an established talent of 5.4 million,¹ with a constant influx of fresh talent. Through research and conversations with industry leaders, we have compiled a comprehensive report that presents insights into 26 such locations that could emerge as significant opportunities for enterprises. The report digs deep into understanding the current landscape and talent potential and touches upon possible models and success factors that enterprises should keep in mind while creating their strategy.

We aim to provide information required by technology businesses at all levels and the maturity to set up or expand operations in emerging cities. We hope to inspire and encourage businesses to explore these locations with the assurance of access to the highest-quality essential resources. The emerging cities can be the backbone of the tier 2 economy. This report aims to develop and strengthen this sector, that is, help businesses take informed decisions about operating in emerging cities and thus contribute to the overall growth and success of the industry while sharpening their competitive edge.



Executive summary

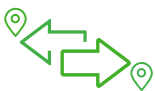




Decentralised work is here to stay and will come in many flavours—from people working independently from their homes to multinational companies setting up centres outside metro cities to tap into its burgeoning talent pool.



Majority of the **5.4 million people employed in the technology industry** in India have clustered around seven major cities.²



About **30 percent of India residing in non-metro cities relocates to tier 1 cities for employment** after graduation.³



Globally, **companies are actively revisiting their ways of working, with an eye on optimising outcomes and costs**, and the **emerging hubs** amongst India's tier 2 cities **offer the best of both worlds.**



Emerging hubs of competence in many tier 2 cities across India offer a lucrative path for companies struggling with talent availability and retention on one side, and the drive to do more with less on the other, thereby incentivising them to pursue a multi-tier location strategy.



The **rapid development of infrastructure, skill diversity, start-up presence, and governmental initiatives** such as smart cities, tech parks, and incubation centres are accelerating these emerging hubs' move towards a potential tier 1 status



Today, several tier 2 cities have a **risk and regulatory environment** and **social** and **living standards comparable with tier 1 cities.**



Attracted by a promise of a **good quality of life**, workers are incentivised to explore working out of these emerging hubs, and as has been true since the First Industrial Revolution, work always follows the workers!

² <https://www.nasscom.in/knowledge-center/publications/technology-sector-india-2023-strategic-review>

³ nasscom Data



Approximately 100,000 people (in the target talent pool) residing within these emerging hubs are highly proficient in the latest digital technologies.⁴



Today, **11-15 percent of the tech talent is based in tier 2 and tier 3 cities** and is expected to increase as more people choose to operate from non-metro cities.⁵



Smaller towns produce 60 percent of India's overall graduates from their engineering, arts, and science colleges,⁶ offering companies a significant competitive advantage by identifying roles to be delivered out of these towns.



India will be the only country expected to have a skilled talent surplus by 2030. It is thus strategically placed to meet growing digital talent requirements of companies.



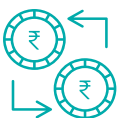
'Build it and they will come': India has departed from the chicken-and-egg cycle of hesitating to build infrastructure in small towns without companies and organisations being unsure about moving to a town without sufficient infrastructure. Today, we see a development boom in tier 2 cities, bringing them on par with many tier 1 cities.



Overall, **83 of 242 SEZs⁷** and **15 of 60 STPI centres⁸** in India are **in emerging hubs**.



With **strong inter- and intra-city connectivity between these hubs** and metros along with fast Internet connections becoming omnipresent across India, many jobs are now being delivered out of all corners of the country.



Despite a spike in rental costs over the past five years ranging from 60 to 80 percent, **emerging hubs offer almost 50 percent cost arbitrage in real estate and allied service costs** compared to matured locations.

⁴Deloitte Research

⁵Deloitte Research

⁶All India Survey on Higher Education, Ministry of Education, India

⁷<http://sezindia.nic.in/>

⁸<https://stpi.in/en/about-stpi#stpiCenters>



In many ways, the growing proliferation of start-ups and incubators in emerging hubs has played a pivotal role in the flourishing of larger and more mature companies in these places.



More than 7,000 start-ups are operating from emerging hubs and in fields from DeepTech to BPM services, having grown by 50 percent from 2014 to 2018 and are **expected to grow 2.2× by 2025**.



About 39 percent of tech start-ups established in 2022 are **from emerging hubs**.⁹



13 percent of the funding that year went to start-ups from tier 2 cities in India indicating that investors are now comfortable looking beyond urban settings for prospective unicorns.¹⁰



At 42 percent and a 10-year CAGR, the DeepTech start-up pool is growing faster than the overall ecosystem.¹¹ Here too, **DeepTech AI start-ups founded in emerging hubs have grown from 13 percent in 2019 to 26 percent in 2021**.¹²



Beyond work, a major benefit offered by emerging hubs is a high quality of life in terms of indices such as risk, regulatory, social, and living environments. Although most emerging hubs already rank moderate to high on many of these metrics, they are further improving their ranks through curated government policy interventions and investments, making them an attractive destination for the workforce and leading to better employee retention.



Emerging cities have a **low-to-moderate risk of business disruption**, mostly moderate-to-high stability of financial environment, and a high-to-moderate regulatory environment.



The presence of **high-quality educational infrastructure**, comprehensive healthcare facilities, relatively **low cost of living** which is **25-35 percent lower than tier 1 cities**, and overall superior quality of life are the general characteristics of these cities.

⁹ <https://www.nasscom.in/knowledge-center/publications/nasscom-tech-start-report-2022-rising-above-uncertainty-2022-saga>

¹⁰ <https://www.entrepreneur.com/en-in/news-and-trends/what-early-stage-investors-are-looking-for-in-entrepreneurs/445085>

¹¹ <https://www.nasscom.in/knowledge-center/publications/nasscom-tech-start-report-2022-rising-above-uncertainty-2022-saga>

¹² <https://www.nasscom.in/knowledge-center/publications/indias-deeptech-start-ups-poised-impact>

Assessment of emerging hubs in India





Technology landscape in India

India is ranked #1 in the world for talent and sourcing within the technology sector globally and has consistently enjoyed a leadership position in its ability to establish technology operations around the world.¹³ It has a robust supply of experienced and fresh talent to cater to both core and new-age digital technologies.

India, with its matured technology ecosystem, continues to be the preferred location to set up and scale business operations.



India has the lowest demand-supply gap for tech talent amongst all countries in the world.¹⁴

India will be the only country expected to have a skilled talent surplus by 2030 and is strategically placed to meet the growing digital talent requirements.

Source: Deloitte Research

¹³<https://nasscom.in/knowledge-center/publications/technology-sector-india-2023-strategic-review>

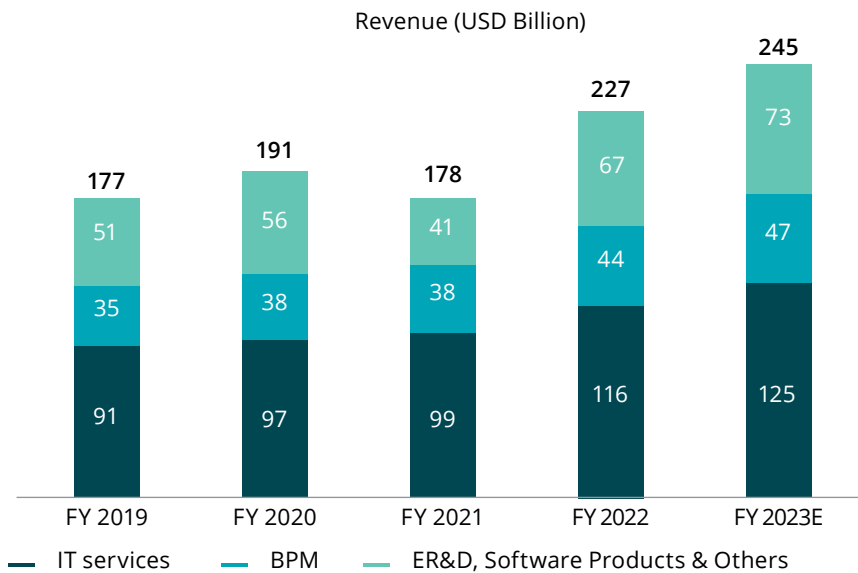
¹⁴<https://nasscom.in/knowledge-center/publications/indias-tech-industry-talent-demand-supply-analysis>

¹⁵nasscom

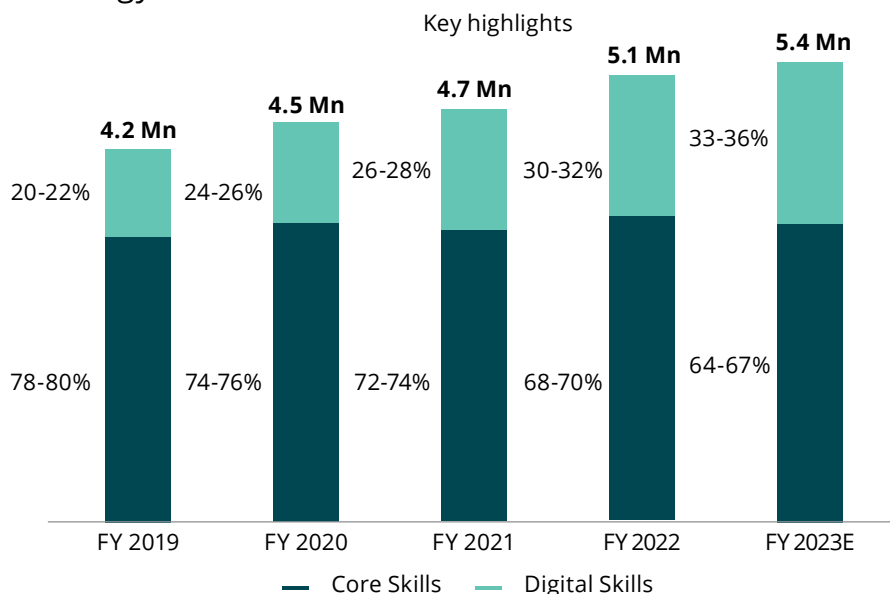
The technology industry in India has shown tremendous growth and has been growing at a CAGR of 9 percent since fiscal year 2019.

The technology industry has played a pivotal role in propelling India's services sector and substantially contributed to the country's gross domestic product (GDP). In the fiscal year 2018, the technology sector accounted for 7.9 percent of India's GDP and has since been projected to make a 10 percent contribution to the GDP by 2025.¹⁶ This is attributed to the opportunities in research and development and the provision of high-end engineering services. Furthermore, the government's emphasis on e-governance and the availability of a cost-effective, skilled workforce also contribute to the sector's growth.

In the fiscal year 2022, the technology sector's total revenue was approximately US\$ 227 billion and expected to reach US\$ 245 billion by 2023, representing a CAGR of 9 percent since the fiscal year 2019.¹⁷ The portfolio of services offered by the industry has experienced both vertical and horizontal growth, with the engineering, research, and development (ER&D) and software product segments showing robust growth alongside traditional information technology and BPM services.



India has emerged as a leading 'Digital Talent Nation' and is leading the race to become the global digital technology hub.



¹⁶Deloitte Research

¹⁷nasscom

India has a bountiful annual supply of science, technology, engineering, and mathematics (STEM) graduates, with the number being approximately 4–4.5 times that of US graduates. This abundance of qualified professionals has positioned India as a leader in the field and lays a strong foundation for the country's thriving STEM industries.

The digital talent pool in India is expected to reach about 2.6 million by 2024.¹⁸ This pool of professionals will be a valuable resource for companies desiring to leverage digital technologies and drive innovation in the digital realm.

The **pool of digital talent** with expertise in areas of cloud computing, artificial intelligence (AI), big data, and Internet of things (IoT) has **grown at a CAGR of more than 35 percent over the past four years.**¹⁹ This increase in the number of professionals with these in-demand skills reflects the growing importance of digital technologies in today's economy and the increasing demand for professionals with the knowledge and expertise to use them.

Operating models

Success in the technology industry depends on the key attributes of efficiency and flexibility, which can be facilitated using effective operating models. This report delves into the intricacies of the four prevalent operating models within the industry, providing an understanding of their distinctive features, as well as their corresponding advantages and disadvantages. With this knowledge, organisations can select the optimal model that aligns with their unique requirements and objectives. By adopting the appropriate operating model, companies can increase their operational efficacy and adroitly adapt to dynamic market circumstances.



Description: Independent centre aligned with global business strategy working directly with the HQ



Benefits: Access to a wider talent pool
Increased efficiency
Access to new markets
Innovation



Challenges: Potential for scalability becomes constrained beyond a certain point



Description: Subsidiary centre of the regional/national hub aligned with the hub's business strategy



Benefits: Access to remote talent
Improved brand recognition
Increased flexibility



Challenges: Disseminating organisational culture is challenging at times

¹⁸nasscom

¹⁹Deloitte Research



Outsourced Centres



Description: Local partners set up offices and execute work, owning delivery responsibility for the company



Benefits: OPEX model for client
Flexibility to manage variability
30%-40% lower costs of operations



Challenges: The client's consent is required to proceed with additional subcontracting.



**Outpost/
Cluster offices**



Description: Extended satellite office with very less physical space and workforce largely working from home



Benefits: Increased local market knowledge
Greater scalability

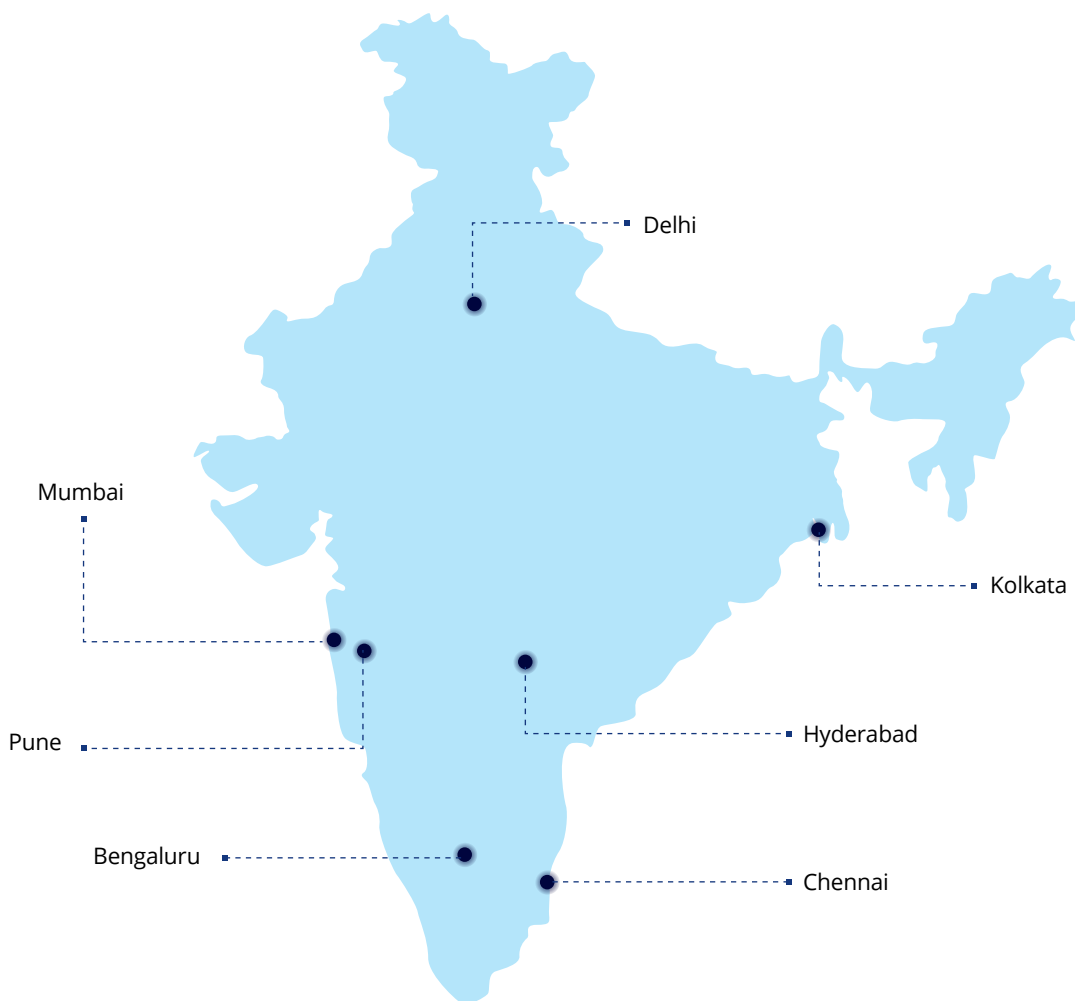


Challenges: Infrastructure and support
Data privacy and security



Why is a multi-tier location strategy essential?

As of January 2020, there were seven primary hubs in India for this industry.



- Delhi National Capital Region (NCR), Bengaluru, Chennai, Hyderabad, Kolkata, Mumbai, and Pune, with their thriving technology industries and the presence of domestic and international companies, are the well-established and mature technology hubs of India.
- Favourable government policies, access to a quality talent pool, and the presence of similar hubs have played a major role in developing these locations. These hubs have matured over the past two decades and are now the powerhouses of the technology sector in India.
- These locations have also benefited from good infrastructure and connectivity to both global and other hubs in India.
- Recently, the growth of matured hubs has started tapering due to multiple factors. With remote work, the opportunity for tech sector employees to work outside these locations became a reality. At the same time, the pressure on the infrastructure of these locations continues to be a challenge. The costs of talent and operations are also increasing. Consequently, companies must explore alternative locations for setting up or expanding their operations in India.

Challenges faced by established hubs and benefits of emerging hubs

Rising cost of operations



Current market scenario (matured hubs)

- 30-40 percent increase in talent pool cost in the past five years
- 60-80 percent increase in real estate costs in the past five years

Benefits provided by emerging hubs

- Talent pool costs are 25-30 percent lower than those in matured hubs
- ~50 percent cost arbitrage in real estate rental costs than in matured hubs

Talent acquisition and retention



Current market scenario (matured hubs)

- Saturated talent market with high degree of competition
- High attrition rates of 25-30 percent impacting client delivery

Benefits provided by emerging hubs

- Limited competition offering better access to talent pool
- Relatively lower attrition rates compared to that in matured hubs

Highly stressed Infrastructure



Current market scenario (matured hubs)

- Limited availability of real estate for expansion
- Increase in traffic and over-extended power and water infrastructure

Benefits provided by emerging hubs

- New and upcoming real estate development available close to city centres
- Easier commute and new infrastructure development initiatives by state governments

Limited incentives offered by governments



Current market scenario (matured hubs)

- Limited incentives offered for setting up centres in matured hubs
- Discontinuation of tax exemptions in Special Economic Zones (SEZs) and Software Technology Parks of India (STPIs)

Benefits provided by emerging hubs

- Incentives to companies for establishing operations in emerging hubs
- Policies focused on development of emerging hubs

Numerous organisations have successfully set up and scaled their operations in many of these emerging cities, with third-party service providers being at the forefront of capitalising on the benefits of these locations.

Case study

Company name

AGS Health



Industry segment

Healthcare Insurance
and Revenue Cycle
Management



Journey and derived benefits

AGS Health is a leading organisation in the healthcare industry, providing innovative and effective solutions to support the operations of some of the world's largest healthcare organisations. Its core offerings include billing, coding, and analytics services, utilising cutting-edge technology and analytics to drive business outcomes and improve operational efficiencies.

The company's first centre in India was established in Chennai in 2011 and has grown significantly since then; its current workforce comprises nearly 10,000 employees across multiple locations in India. AGS Health has a strong presence in the major metropolitan cities of Chennai and Hyderabad with nearly 3,500 and 2,000 employees, respectively. Hence, AGS was searching for highly efficient cost-effective and premium-grade solutions.



To address the growing demand for high-quality talent in medical coding and billing,

- AGS Health has expanded its operations to centres in cities such as Ahmedabad, Tirupati, Vellore, and most recently, Jaipur.
- These centres can accommodate more than 2,000 individuals and have been instrumental in sourcing the vital talent required to drive the company's growth and success.
- The company's focus on leveraging technology and analytics, along with its commitment to developing talent, has positioned AGS Health as a leader in the healthcare industry, delivering innovative and effective solutions to satisfy clients' needs.



Key benefits:

- Access to a larger pool of talented individuals
- Cost-effectiveness
- Increased geographical reach
- Better employee retention
- Positive impact on the local economy

Company name

Conneqt



Industry segment

Digital Technology
Service Provider

Journey and derived benefits

Conneqt Business Solutions is a leading provider of customer relationship management (CRM) and BPM services in India, with a presence in 15 states and more than 22 delivery centres. With a workforce of 37,000 employees, the company offers a several services, including business process solutions, AI-based services, and end-to-end digital services, in areas such as digital engineering, cyber security, data and analytics, data automation, enterprise modernisation, and automation.

The company faced the challenge of providing cost-effective and high-quality services while ensuring customer satisfaction.



To address this challenge,

- Conneqt focused on tier 2 and tier 3 cities, such as Indore, Chandigarh, and Guwahati.
- By hiring locally, they were able to expand their operations and hire more than 15,000 employees, accounting for over one-third of their workforce.
- The company recognises the importance of maintaining strong relationships with local authorities, nearby colleges, and socio-political organisations to effectively expand its presence to new cities, thereby achieving its guiding principle of cost-effectiveness and customer satisfaction while delivering high-quality services.



Key benefits:

- Employment generation: 15,000+ direct employment in tier 2 locations
- Social and economic impact: 30 percent employees are women and from the backward community
- Low-cost delivery centres
- Reduction in attrition: <5 percent

Company name

—
Firstsource



Industry segment

Digital Technology
Service Provider



Journey and derived benefits

Firstsource Solutions Limited is a service provider with a significant presence in India, boasting a workforce of over 44,000 full-time equivalents (FTEs) spread across seven cities, five of which are tier 2 cities. The company provides services to a wide range of clients, including large US-based healthcare and services firms and Indian public sector undertaking (PSU) banks.

Challenges faced by a Firstsource centre in Tiruchirappalli:

- Providing opportunities to candidates from socio-economically disadvantaged communities with limited exposure or experience
- Identifying graduates from tier 2 and tier 3 cities with no experience working for corporates
- Training graduates in multiple areas and providing financial support for their higher education while on the job



Solutions implemented:

- Identified graduates from families with no corporate job background and trained them in multiple areas
- Provided financial support to pursue higher education while on the job
- Connected with academic institutions for support and built an extended team for automation talent
- Leveraged infrastructure and environment for learning
- Recruited graduates through technical discussions and provided 360-degree empowerment.
- Deployed resources based on need, organised team events, and implemented skill improvement plans.



Key benefits:

- Diversity and inclusion: 40 percent of employees in tier 2 locations are women
- Onboarded more than 2,000 employees across tier 2 locations during the COVID-19 pandemic
- Low-cost delivery centres

Exploring the presence of technology organisations in tier 2 emerging locations

Several technology enterprises have strategically established their operational centres in emerging locations to fully capitalise on the diverse opportunities available to them. The following list serves as an illustrative compilation of such organisations that have proactively ventured into these emerging locations, highlighting how service providers have effectively leveraged them to their fullest potential.

Organisations	Ahmedabad	Chandigarh	Indore	Jaipur	Kochi	Mysuru	Visakhapatnam
AGS Health	✓			✓			
Concentrix		✓					✓
Conneqt		✓	✓				
Eclerx		✓					
EXL	✓			✓	✓		
Firstsource	✓		✓				
Genpact				✓			
HCL Tech	✓			✓	✓		
HGS			✓			✓	✓
Infosys		✓	✓	✓		✓	
Nextwealth						✓	
Sutherland					✓		
Technotask						✓	
Wipro	✓			✓	✓	✓	✓
WNS			✓				✓

Note: The list of organizations is illustrative and not exhaustive

Rise of the next wave of technology hubs

The observed trends, discussions with industry leaders, and sector promotion agencies show that a few locations have emerged to represent the 'next wave of technology hubs', providing an opportunity for sustainable and scalable growth for the technology industry.



First wave of emerging technology hubs

State	Location
Andhra Pradesh	Tirupati Vijaywada Visakhapatnam
Assam	Guwahati
Chattisgarh	Raipur
Gujarat	Ahmedabad
Jharkhand	Ranchi
Karnataka	Hubbali Mangaluru Mysuru
Kerala	Kochi Thiruvananthapuram
Madhya Pradesh	Bhopal Indore
Maharashtra	Nagpur Nashik
Odisha	Bhubaneswar
Punjab & Haryana	Chandigarh
Rajasthan	Jaipur
Tamil Nadu	Coimbatore Madurai Tiruchirappalli Vellore
Telangana	Warangal
Uttar Pradesh	Kanpur Lucknow

These locations can potentially establish themselves as emerging hubs of technological growth and innovation. A large and highly skilled workforce, advanced infrastructure, and a supportive business environment have helped set up a wide range of technology and operations companies. Recently, the government has also invested heavily in education and training programmes to ensure that the talent in these locations is well-equipped to meet the demands of the modern economy.

One of the key advantages of emerging cities is their cost-to-value ratio. **Companies can access good-quality talent at 25–30 percent lower cost than the major centres**, making these locations an attractive option for businesses looking

to reduce costs while maintaining high levels of productivity. Moreover, emerging cities often have a strong start-up ecosystem, with many incubators and accelerators providing support and resources to help businesses start operations.

Another advantage of some emerging cities is their proximity to major hubs in several centres. Many of these locations are within easy commuting distance of major cities, making them accessible to a wide range of businesses and employees.

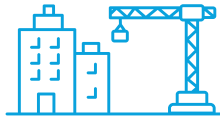
With proper support and resources, these locations can become major hubs of economic growth and development, driving the success of the technology sector in India

The shortlisted cities have been analysed on five key pillars for establishing technology hubs across any location.

Key pillars for establishing technology hubs



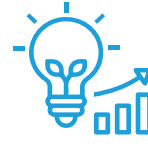
Talent



Infrastructure



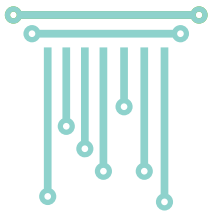
Risk and regulatory environment



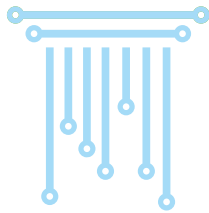
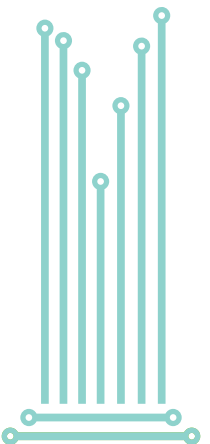
Start-up ecosystem



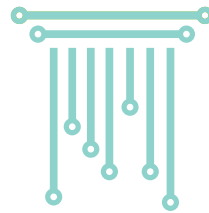
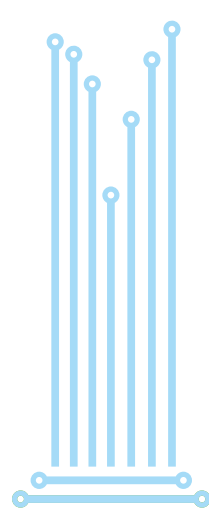
Social and living environment



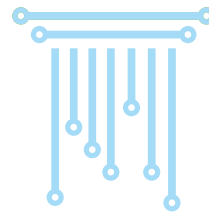
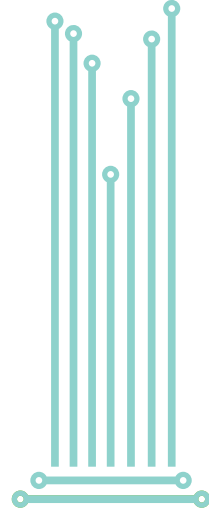
Talent is the primary input for the services sector; hence, the availability of experienced talent and a strong pipeline of fresh talent is key for ensuring the long-term scalability and growth of any company.



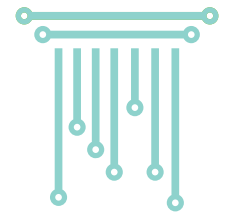
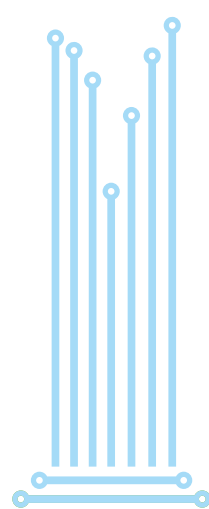
Availability of good-quality real estate at competitive costs, seamless inter- and intra-city connectivity, and telecom infrastructure is important for ensuring seamless delivery.



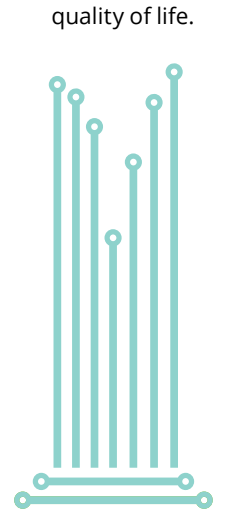
Conducive government policies and incentives for investments coupled with limited business disruptions encourage organisations in setting up operations in new locations.



The presence of start-ups and incubators is critical for the technology business ecosystem as it creates a culture of creativity and innovation, which is important for organisational growth.



It is essential for any organisation to choose a location that offers access to quality education and medical infrastructure along with a low cost of living and improved quality of life.





Introduction

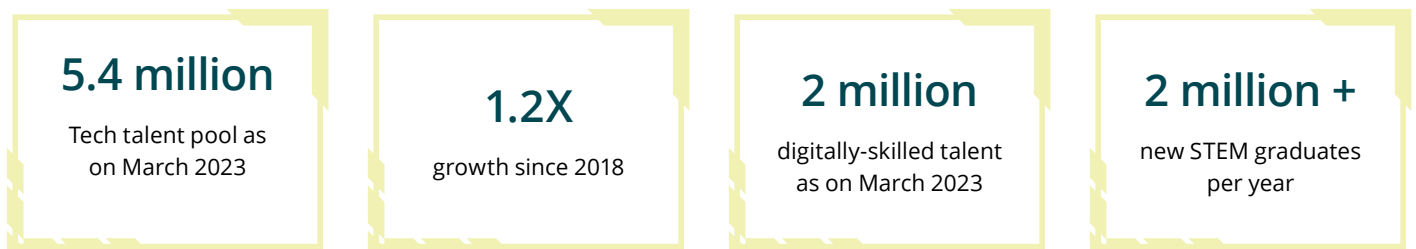
Talent has always been a key driver of economic growth and innovation, and India has long been recognised as a global talent hub. Given its large and highly educated workforce, the country has been able to attract a wide range of companies and industries, from tech giants to financial services firms. In recent years, India has emerged as not only a source of large numbers of highly skilled workers but also a location where top-quality talent can be found.

This shift has been driven by several factors, including increased investment in education and training, a growing focus on research and development, and the emergence of new industries and sectors that require advanced skills and expertise.

Despite these efforts, there is a significant untapped talent pool in emerging cities across the country. These locations have traditionally been considered less developed or less attractive for businesses but that is rapidly changing.

As the nature of work becomes increasingly decentralised, many new opportunities open up for people in emerging cities. With the right skills and expertise, individuals at these locations can complement and support their peers located at the matured hubs. This shift is already beginning as companies are increasingly looking beyond the matured hubs and searching for individuals with the right skills and experience, regardless of their location.

For almost four decades, India has proven to be a powerhouse of technology talent due to the large pool of resources and diversity of skills available across the value chain.



Key Skills

Core Skills

- Application development & maintenance
- Software testing
- Infrastructure and Database Management
- Web development

Digital Skills

- Blockchain
- Augmented reality (AR)/ Virtual reality (VR)
- Cloud computing
- AI/ML
- Big dataybersecurity
- IOT

Source: nasscom Annual Strategic Review Report, Deloitte Research
 Note: List is illustrative and not exhaustive



India has continued to maintain its position as the top sourcing destination in the world, garnering a majority share of Global Capability Centres (GCCs).



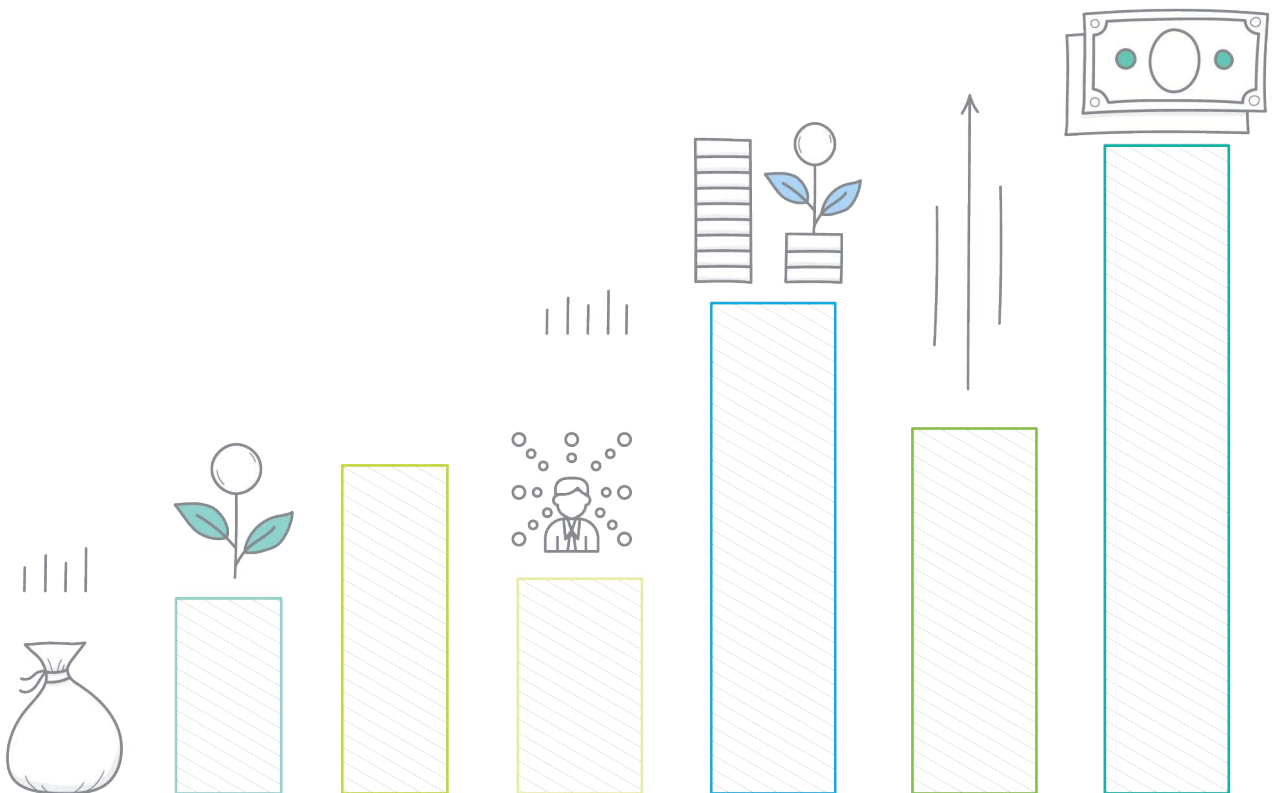
The industry continues to grow significantly owing to the abundant availability of STEM talent pool with good English-speaking capabilities and skill in delivering processes across the value chain.



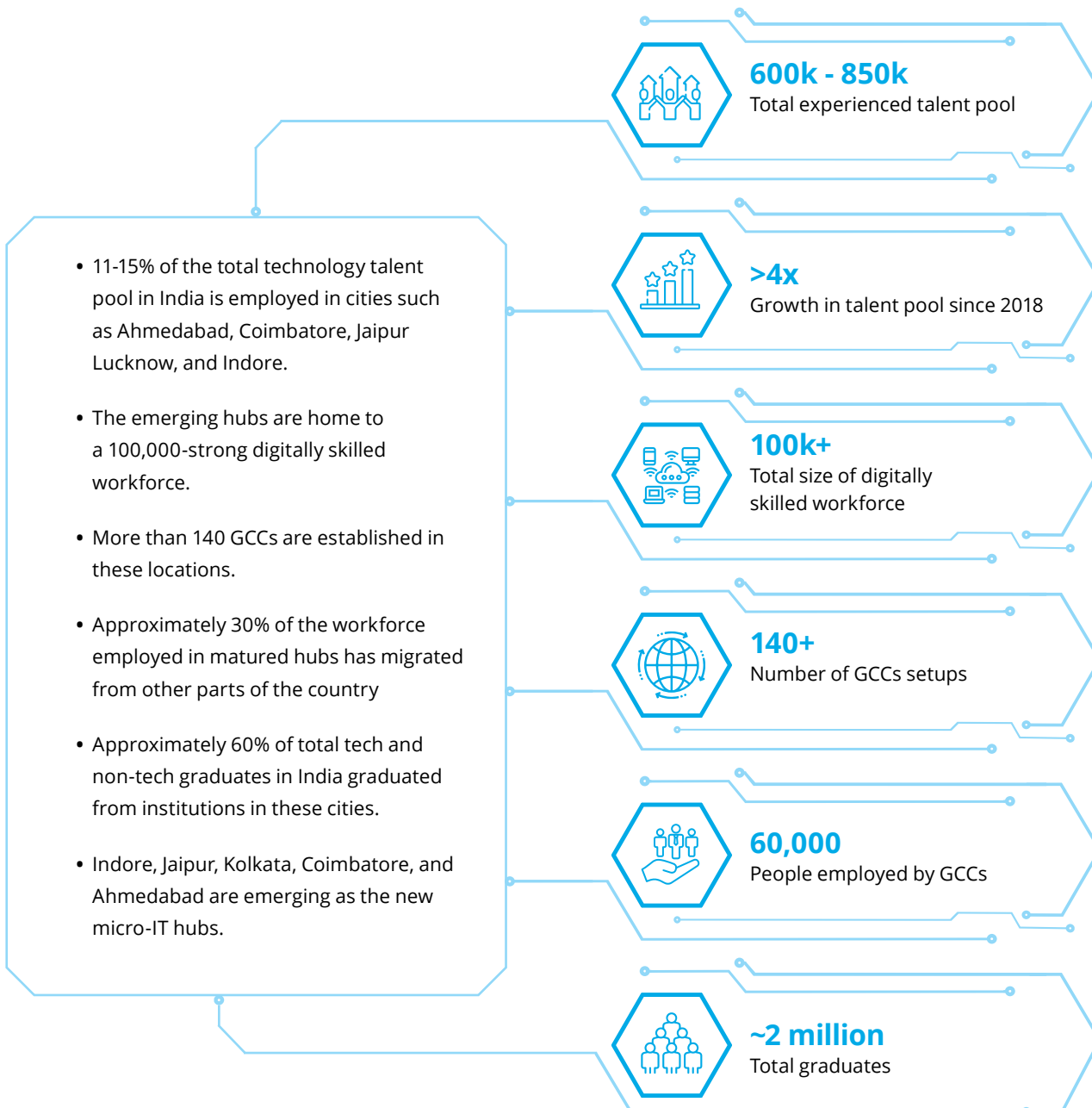
Every year, there is growing number of people working in the sector, and the installed talent pool has grown at an average CAGR of 7 percent since the past five years.



The workforce is upskilled, and as of fiscal year 2023, approximately 30 percent of the established industry talent is skilled in new-age digital capabilities



Several factors such as the growing acceptance of remote working and reverse migration due to the pandemic have boosted the desirability and size of the talent pool available within India's emerging hubs.



Source: Deloitte Research

The talent landscape in emerging hubs across India is evolving and going beyond merely offering scale. It is recognised as a source of high-quality workforce trained in the latest technologies.

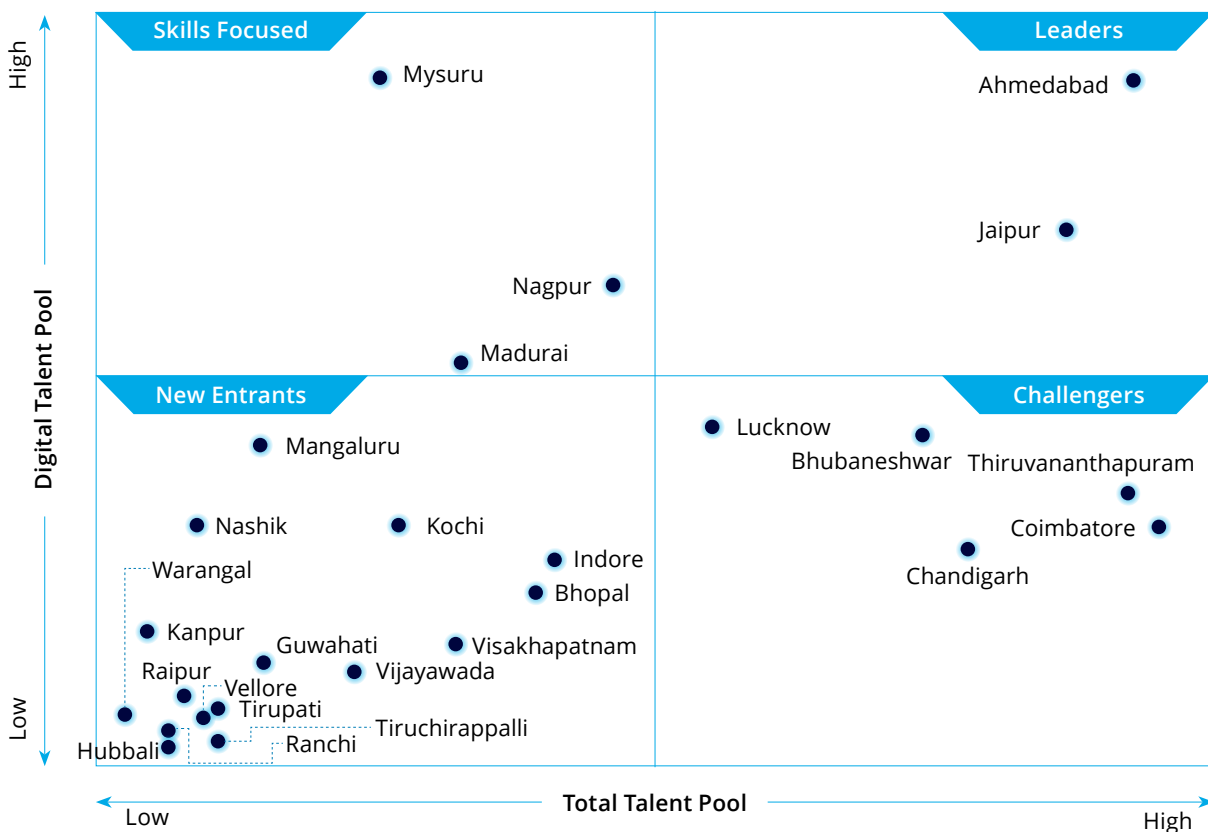
India is emerging as a volume + value destination for organisations. The availability of highly skilled talent (i.e. volume), significant value-to-cost ratio, strong technology network effects, a burgeoning start-up ecosystem, and an ever-developing infrastructure (i.e. value) are all essential for the development of a high-quality tech ecosystem in the country.

The volume speaks about the various skills that exist in the ever-increasing talent pool combined with arbitrage, start-ups,

and established networks of technology set-ups that both competes with each other and co-create value. Emerging cities add both volume and value to the established technology sector in the country.

Talent in emerging cities have made significant contributions to the organisations in metro cities. Lower utilisation of talent in matured hubs due to limited opportunities can be mitigated by exploring emerging hubs and facilitating the creation of value in abundance.

Total talent pool vs. digital talent pool in emerging hubs



Source: Deloitte Research

- Ahmedabad stands out for its rich pool of technology talent, in both core and digital skills, and Jaipur is a close second. Both cities have benefited by the virtue of being state capitals and the large talent pool from the education ecosystem developed here.
- Mysuru, Madurai, and Nagpur are witnessing talent skilled in emerging technologies of blockchain and cyber security driven

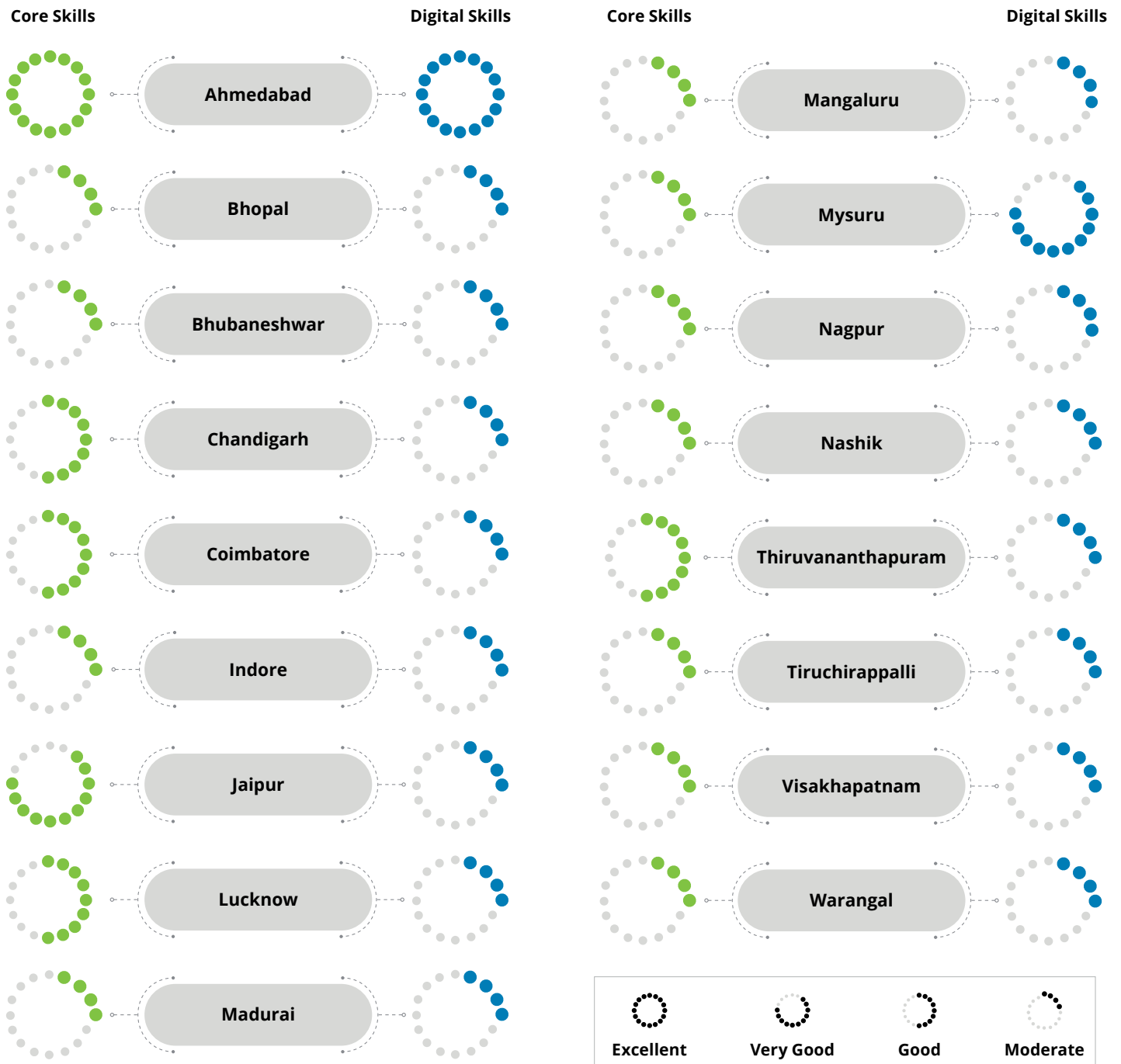
by state government policies and its focus on developing infrastructure to support these skills.

- Overall, emerging cities offer a unique blend of traditional and modern skills, making them attractive to businesses seeking a diverse and well-rounded talent pool.

Skill availability 

The era of digitisation has led to an increasing number of talents opting for skilling in digital technologies.

Distribution of core and digital skills amongst emerging locations



Source: Deloitte Research

Note:

- Core skills include Java/C++/.NET, Test/Automation, Application Maintenance, SQL DBA/DBMS, Hardware Networking, ERP, and Web Development/HTML.
- Digital skills include data science and analytics, blockchain, Web 3.0, cloud, automation (IoT, robotics, Industry 4.0), and Cybersecurity.

Core skills

- Java/C++/.NET and SQL DBA/DBMS are amongst the most in-demand traditional skills in emerging hubs.
- Math, analytical reasoning, and programming in Java, node.js, and clutter are demanded by a significant number of companies.
- IT hardware and networking are amongst the skills that are Easy to acquire.
- Core skills such as SQL and DBA/DBMS continue to dominate the IT market.

Digital skills

- Digital skills such as Data science, Cloud, Python, and app development (iOS and Android) are in demand.
- Blockchain is rapidly gaining momentum across industries and is expected to grow in demand.
- Technologies such as IoT have the potential to support multiple sectors and are a crucial element for Industry 4.0 operations.
- Talent with skills in automation are increasingly in demand for IoT, Industry 4.0, and robotic process automation (RPA).
- With increasing awareness about security, cyber security has become an essential skill for budding talent.

In the post-COVID-19 period, Coimbatore has also started attracting R&D organizations from these cities because of its proximity to Chennai and Bengaluru and ample availability of a technically skilled talent pool from the colleges in the area.

Key demand and city trends

- Jaipur, Lucknow, Nashik, Tiruchirappalli, and Bhopal are leading locations with workforce skilled in web development.
- Mangaluru and Mysuru are witnessing a rise in cyber security talent. With the establishment of the Cyber Security Centre of Excellence by the Indian government in Mysuru in 2022, it may become the next cyber security hub.
- The trends show that emerging skills across Blockchain and Web 3.0 are gaining significance in Mangaluru, Tiruchirappalli, and Visakhapatnam.

The BPM industry has also seen a significant shift in its talent pool, in terms of both skills and scale, over the past decade.

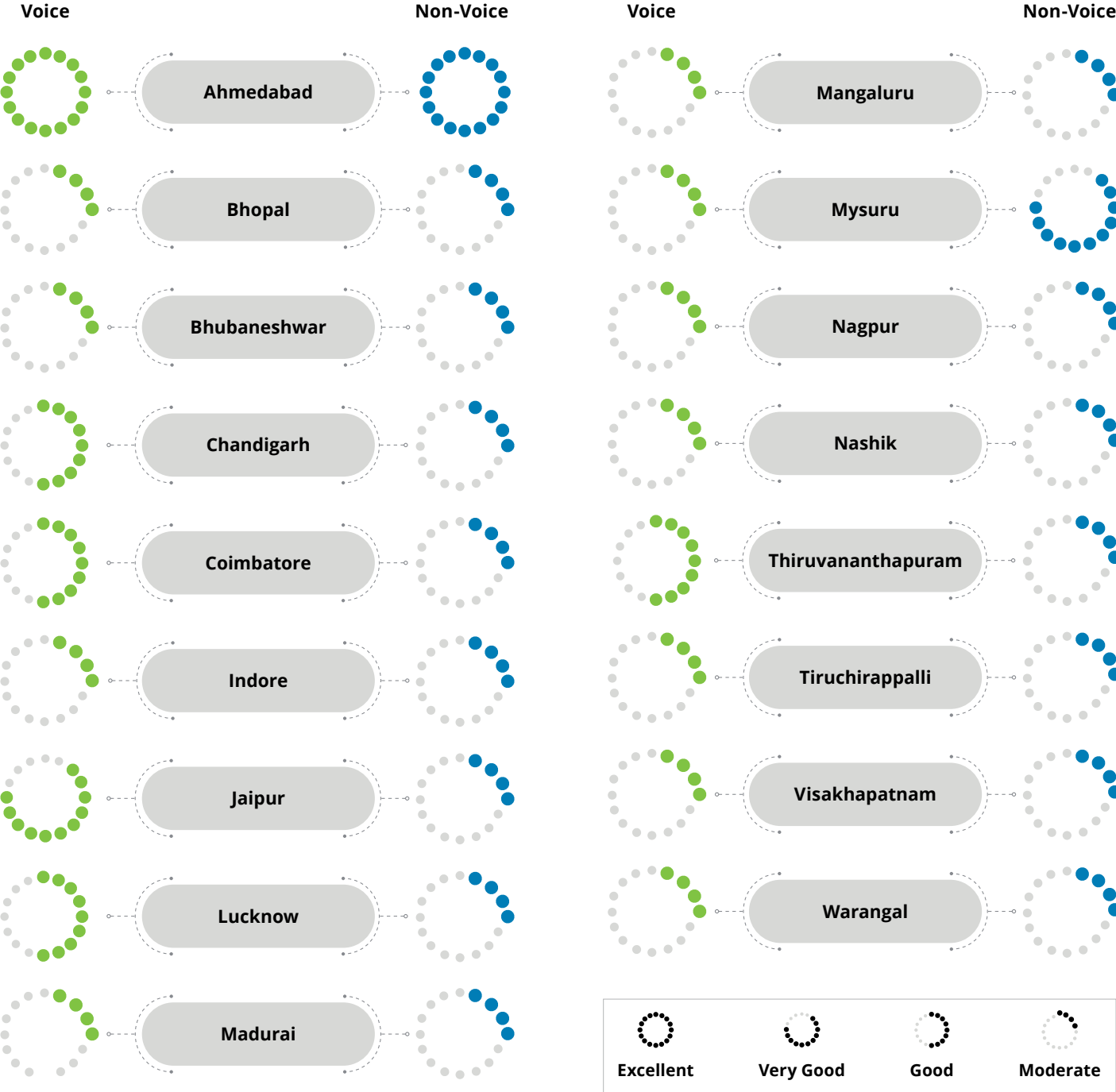
Customer interaction services across telecom, product-based, and service industries constitute a significant portion of voice operations in BPM companies, for both international and domestic clients.

The presence of many business/knowledge process outsourcing (BPO/KPO) centres in emerging cities has facilitated the development of a service-oriented culture in these areas. Although international voice operations in some emerging cities may still be in the early stages of development due to language

challenges, efforts are ongoing to gradually implement reforms to address these issues.

Flourishing operations include finance and accounting, logistics, HR functions, payroll, telecom, market research, data analytics, telemarketing services, tech support, and helpdesk services. These domains have witnessed stable growth over the past two decades in metropolitan cities and over the last decade in emerging cities.

Presence of BPM skills among emerging locations



Source: Deloitte Research

Note:

- Voice Operations: Inbound and outbound customer interaction services, sales, etc.
- Non-Voice operations: Activities across finance and accounting, knowledge services, HR operations, and other vertical-specific operations.

Key trends in emerging cities

- Coimbatore, Jaipur, Chandigarh, and Indore are amongst the leading locations in the BPM sector.
- Driven by a good educational ecosystem, Coimbatore has a talent pool of 30,000+ individuals skilled in both voice and non-voice processes. This makes it an attractive destination for setting up voice-based BPM operations.
- Lucknow has emerged as a promising destination for BPM in the post-COVID era, where 40 percent of the talent consists of fresh graduates.
- Healthcare BPMs have mushroomed around Madurai, Chandigarh, Indore, and Ahmedabad.
- Mysuru is home to institutes that train candidates in semiconductor technology and is well suited for this purpose. It has become one of the preferred emerging cities for the Electronics System Design and Manufacturing (ESDM) industry.

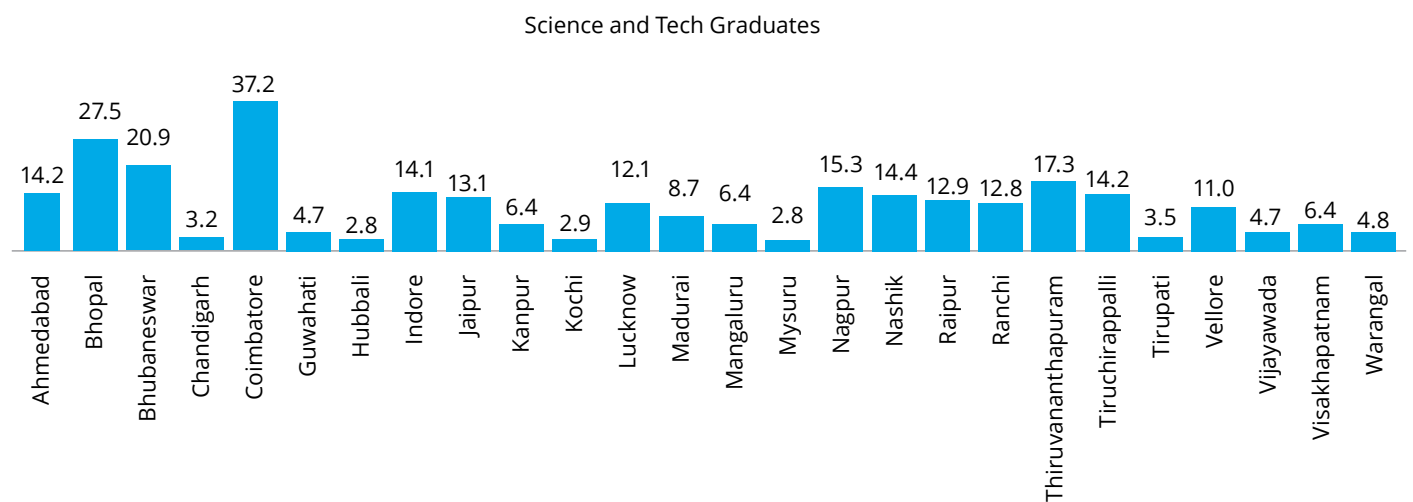
Fresh talent pipeline 

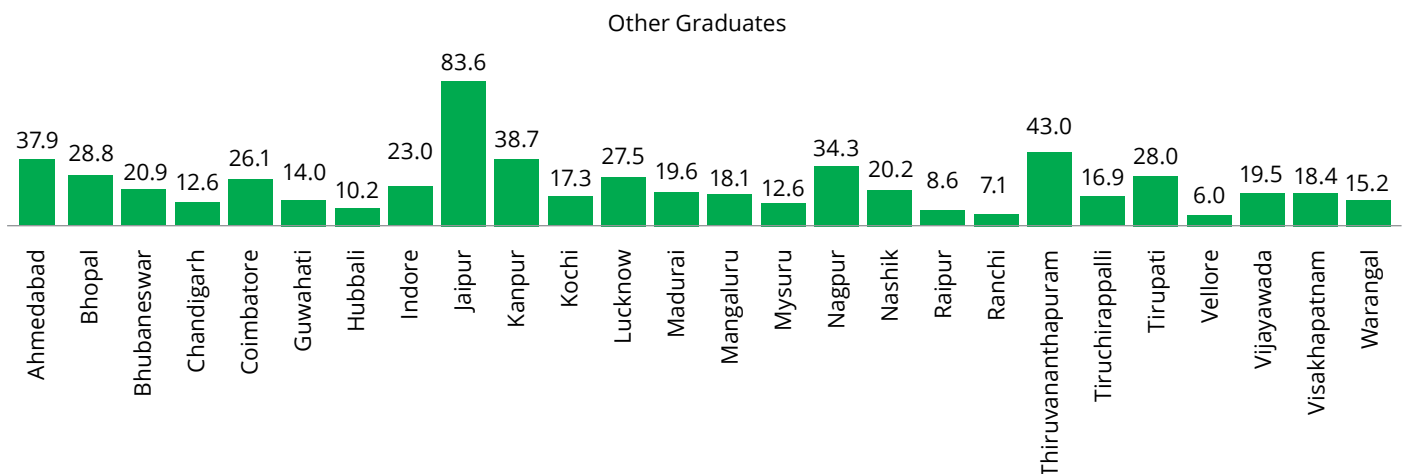
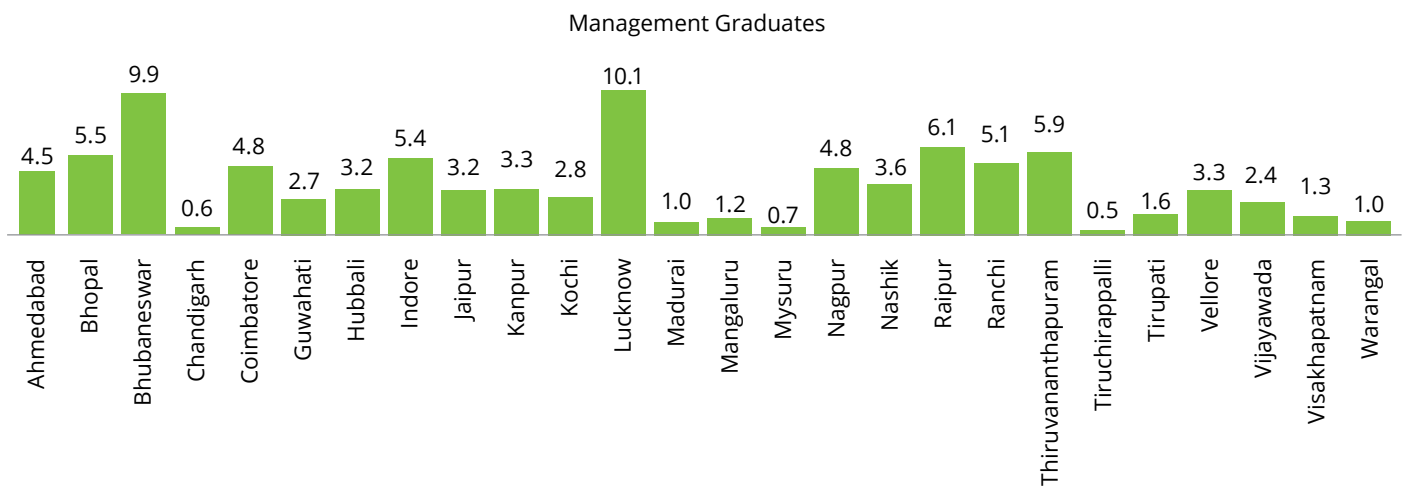
An abundance of fresh STEM graduates is expected to boost the technology sector in emerging cities

As academia in emerging hubs continues to advance and evolve, it has become a reliable source of highly skilled and proficient talent for the technology industry. Representing nearly 60

percent of the national talent pool,²⁰ emerging cities have abundant fresh talent available to them. They are home to some of the best educational institutes (both government and private).

Distribution of STEM and other graduates amongst emerging hubs





Source: All India Survey on Higher Education (AISHE) 2022, Deloitte Research

Note: Talent pool numbers are in multiples of '000

Other graduates includes graduates in the field of arts, commerce, humanities etc.

Jaipur produces the highest number of STEM graduates amongst the cities studied. It constitutes a significant center of learning within the state, boasting a substantial student population. Jaipur also produces a large number of Chartered Accountants in the country. Owing to the large finance talent pool, there are a number of organizations in the facilities and administrative (F&A) space in the city.

Coimbatore has the highest number of science and technology graduates.

More than 10,000+ Science and Technology graduates (STEM) graduate from Bhopal, Bhubaneswar, Nagpur, Nashik, Tiruchirappalli, Ahmedabad, and Indore every year.

Educational institutions are increasingly cognizant of the needs and expectations of different sectors within the industry and have incorporated BPM and Re-engineering into their undergraduate curricula to ensure that students are fully conversed with industry benchmarks and standards. Additionally, the implementation of sector-specific curricula across various fields of education remains a key focus to ensure that students are well-equipped to succeed in their chosen careers.

Corporates have significantly contributed to the development of skills and expertise in the workforce.

Emerging locations in India have long served as a reliable source of highly skilled talent for the technology industry. However, the quality of training in these emerging cities is often insufficient, resulting in knowledge deficit and lack of expertise amongst the local workforce.

The Government of India has also recognised the value of skill development in emerging cities and launched the Skill India initiative. This initiative collaborates with corporates to include innovative technical training into its curriculum, with over 50 companies actively collaborating on this effort. Many of these companies have integrated skills development as a component of their corporate social responsibility (CSR) efforts, thereby benefitting both society and the organisation.

To enhance the individuals' skills and domain knowledge in emerging cities, many companies (domestic and multinational) have initiated skill development and technical training programmes in these regions. This makes the talent pool more competitive in the job market. Technology firms, in particular, have played a key role in this effort, investing substantial capital in training programmes with a long-term perspective.

Overall, the combination of corporate investment in skill development and the government's Skill India initiative has the potential to significantly improve the quality of technical training and the expertise of the workforce in emerging cities, which could boost the growth and prosperity of the technology sector in these areas.



Case study: Corporate skill development

Company name

**HCL
Technologies**



Industry segment

Technology and Service
Provider and Training Centre
for Development of IT Skills



Programme

Training Centre for
Skills Development



Journey and derived benefits

HCL Technologies provides training and hiring programmes to cultivate a talent pool with the necessary expertise for its highly specialised workforce.



Programme overview:

- **The company created a new business vertical** to bridge the skill gap between educational curriculum and the industry needs.
- **The Training and Staffing Services vertical** offers skill-based training for entry-level IT jobs for individuals across the nation.
- The company offers two types of programmes under this initiative:
 - **First Careers programme:** Job training programme for new graduates seeking a global career in technology and IT services. It provides practical training for essential skills to succeed in the first job in the industry.
 - **TechBee programme:** Full-time employment initiative for Class XII graduates. It is a 12-month IT training programme with options to pursue higher education.
- The individuals who can complete these programmes successfully are offered employment opportunities within the company itself.



Key benefits:

- Allows the company to have an early outreach with their future talent pool
- Industry-relevant training to candidates at an early stage has allowed the company to develop a healthy pipeline for industry-relevant digital skills
- The TechBee initiative has allowed HCL Technologies to hire more than 8,000 candidates in 2022

Infrastructure

In the past decade, India has witnessed significant improvements in its physical and digital infrastructure



The Government of India has announced a plan to invest US\$ 1.4 trillion in infrastructure development over the next five years through the National Infrastructure Pipeline, with a focus on expanding and modernising rail, road, and waterway connectivity systems.



The government is actively striving to complete the construction of a national highway network totalling 200,000 kilometres by 2025.



The Smart Cities Mission aims to cultivate urban centres that offer essential infrastructure, improve the citizen's standard of living, and promote a clean and sustainable environment through the use of 'Smart' solutions. A selection of non-metro cities is being transformed as part of this initiative



The swift dissemination of the Internet throughout the country is stimulating a digital revolution at an unimaginable pace. The planned roll-out of 5G mobile services in the coming years is expected to create value through hyper-connectivity and act as a catalyst for digital transformation.

Source: Smart Cities Mission (Government of India), Deloitte Research



Comparison of Infrastructure amongst emerging hubs



■ Excellent
 ■ Very Good
 ■ Good

Source: Ministry of Housing & Urban Affairs, Ministry of Road Transport, Deloitte Research

Note:

- Real Estate Attractiveness refers to a function of cost and availability of both Grades A and B offices.
- Inter- and intra-city connectivity includes air, rail, and road connectivity with other cities and transport infrastructure within the cities

- Ahmedabad and Kochi have emerged as thriving commercial centres within their respective states, boasting a formidable infrastructure in terms of both real estate and connectivity. These cities have well-established transportation networks, including highways, airports, and public transportation, making them easily accessible for both residents and businesses. The real estate market in these cities is robust, offering a diverse range of residential and commercial properties at affordable prices. Both cities have excellent connectivity with Western and Gulf countries.

- Other cities also have a favourable infrastructure, making them attractive options for both investors and residents. These cities have a well-balanced offering of real estate, transportation, and other facilities.
- Cities such as Mysuru, Vijayawada, Tiruchirappalli, Hubballi, Tirupati, Warangal, and Vellore have relatively nascent infrastructure; however, several projects are being developed to improve the infrastructure quality. These developments are expected to help these cities gain a better footing soon.

Real estate 

As one of the key requirements enabling a city’s urbanisation and economic development, commercial and residential real estate has seen a great improvement over the years in all emerging cities.

The ongoing process of urbanisation has led to the development of modern and efficient infrastructure that can accommodate the needs of a rapidly urbanising population.

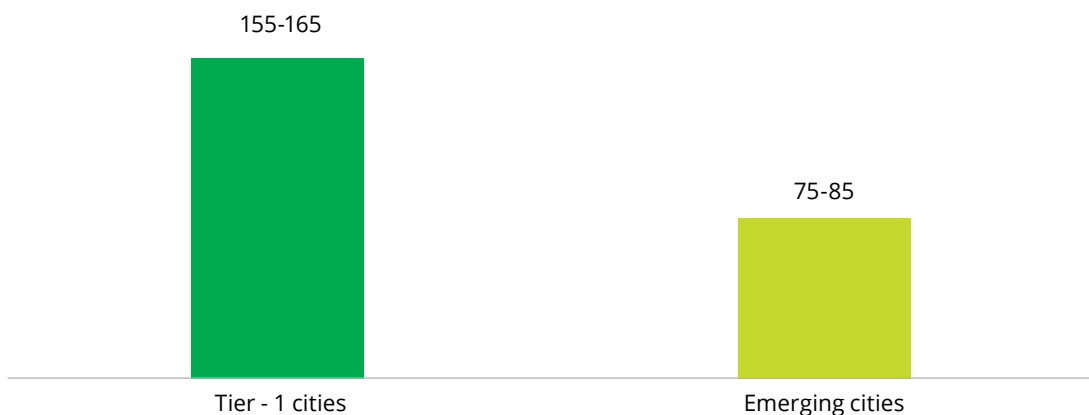
Emerging hubs have experienced significant growth in real estate development in recent years, and the real estate market in these cities has been thriving, in part due to several infrastructure initiatives by both state and central governments.

There has been a marked increase in the demand for Grade A office spaces in the emerging cities of India, and these cities

are poised for many new developments. Grade A office spaces for technology companies are becoming increasingly available in emerging cities, driven by the growing trend of technology companies setting up operations in these regions.

Due to the increasing demand for commercial real estate and the proliferation of new offices, emerging cities are experiencing a spike in rental costs over the past five years, with increases in the range of 60–80 percent.

Grade A office space rental costs (INR/Sq.ft./month)



Source: Deloitte Research

Note: Rental cost pertains to Grade A properties only. These are considered of the highest quality and are the most desirable commercial real estate available in the market.

Emerging hubs offer a cost arbitrage of nearly 50 percent compared to that in tier 1 cities. These hubs also offer better cost optimisation in terms of overhead expenses.

Indore, Jaipur, Lucknow, and Visakhapatnam provide the most affordable rental options, making them an attractive destination for businesses seeking to minimize real estate costs.

Comparison of real estate cost and availability across emerging hubs

Real Estate Cost		Real Estate Availability	Real Estate Cost		Real Estate Availability
	Ahmedabad			Mangaluru	
	Bhopal			Mysuru	
	Bhubaneswar			Nagpur	
	Chandigarh			Nashik	
	Coimbatore			Raipur	
	Guwahati			Ranchi	
	Hubbali			Thiruvananthapuram	
	Indore			Tiruchirappalli	
	Jaipur			Tirupati	
	Kanpur			Vellore	
	Kochi			Vijayawada	
	Lucknow			Visakhapatnam	
	Madurai			Warangal	

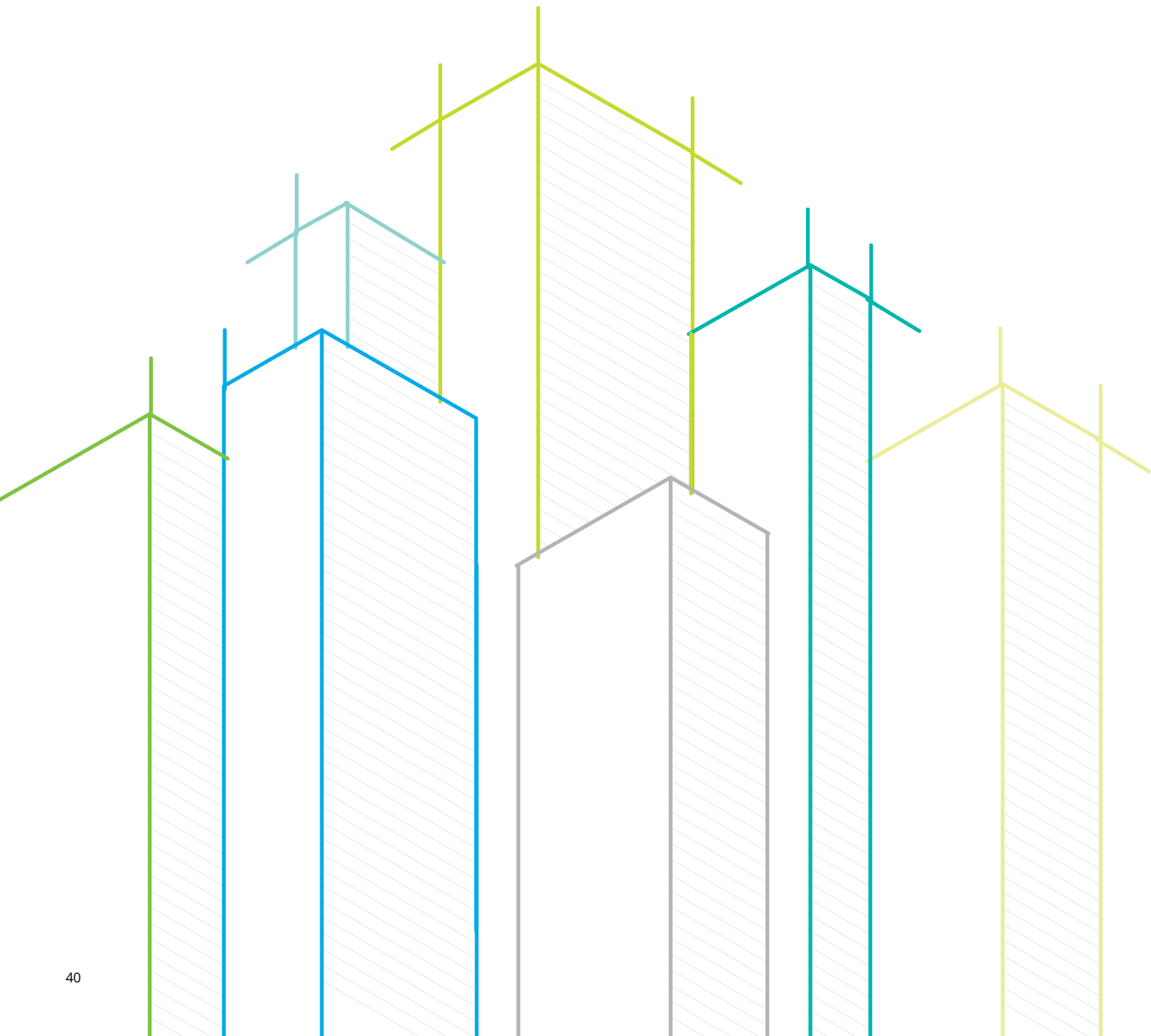
■ Excellent
 ■ Very Good
 ■ Good

Source: Deloitte Research

Note:

- Real estate cost refers to the rental cost of commercial property in rupees per sq.ft. per month.
- Real estate availability refers to the availability of ready-to-move-in commercial property on lease or purchase.

- Ahmedabad, Bhopal, and Coimbatore are amongst the leading locations in terms of real estate availability and excellent infrastructure characterised by affordability, property availability, and the presence of dedicated SEZs.
- Chandigarh, Lucknow, Madurai, Kanpur, and Nagpur are some of the significant and upcoming challenger locations with considerable investments towards upgrading their infrastructure and connectivity to other cities across the country.
- Mysuru, Vijayawada, and Tiruchirappalli are showing a steady increase in real estate activity and good growth prospect in the near future. However, they may have some shortcomings compared to the other cities.
- These cities have also benefited from the development of SEZs and STPIs.
- One of the largest SEZs amongst emerging hubs, Mahindra World City in Jaipur, covers 3,000 acres of land. Another noteworthy project is the Multi-modal International Hub Airport of Nagpur (MIHAN) SEZ on the outskirts of Nagpur, which covers a similar expanse of land and caters to the logistics, pharmaceutical, aviation, and technology sectors.



Smart cities

The National Smart Cities Mission has promoted the development and modernisation of cities in India, driving economic growth and improving the citizens' quality of life through local development initiatives and incorporation of advanced technologies.



E-Governance and Citizen Services

- Public Information, Grievance Redressal
- Electronic Service Delivery
- Citizen Engagement
- Citizen - City's Eyes and Ears
- Video Crime Monitoring



Energy Management

- Smart Meters & Management
- Renewable Sources of Energy
- Energy Efficient & Green Buildings



Water Management

- Smart Meters & Management
- Leakage Identification, Preventive Maint.
- Water Quality Monitoring



Urban Mobility

- Smart Parking
- Intelligent Traffic Management
- Integrated Multi-Modal Transport



Waste Management

- Waste to energy and fuel
- Waste to compost
- Waster water to be treated
- Recycling and reduction of C&D waste



Others

- Tele-Medicine & Tele Education
- Incubation/Trade Facilitation Centers
- Skill Development Centers

Source: Ministry of Housing & Urban Affairs, Smart Cities Mission

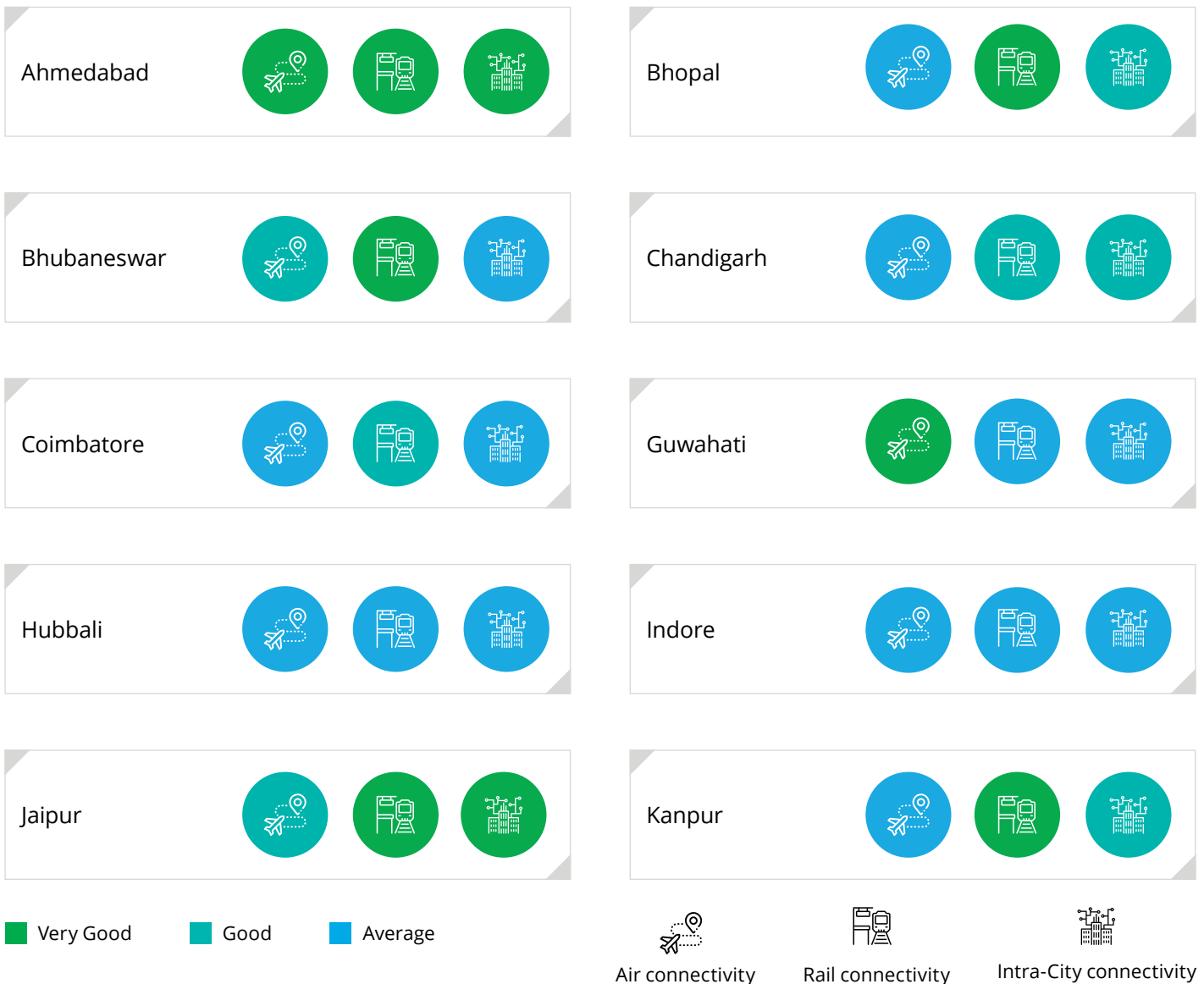
Note:

- Smart Solutions refer to the technology solutions to be implemented in the nominated cities under the smart city mission

- The government’s Smart Cities Mission initiatives have focused on improving connectivity, infrastructure, and quality of life in urban areas and made significant progress in these areas through their push for digital infrastructure.
- The central government and metropolitan area development bodies have added new establishments and revamped existing infrastructure to connect these hubs with metropolitan areas.
- Investment in public transport has increased its efficiency, convenience, and accessibility and played a key role in improving connectivity and accessibility in urban areas.
- Ahmedabad, Bhopal, Bhubaneswar, Coimbatore, Indore, Jaipur, and Visakhapatnam are included in the initial phase of smart cities.

Inter- and intra-city connectivity

With the government strongly focusing on infrastructure development, connectivity with emerging cities has improved significantly in recent years.





Source: Flight Radar, Metrorail guy, Metrorail today, IRCTC, Deloitte Research

■ Very Good
 ■ Good
 ■ Average

Note:

- Air connectivity: Based on the total number of flights from the region (Domestic + International)
- Rail connectivity: Based on the number of trains passing through and terminating at the locations
- Intra-city connectivity is a combination of the transport infrastructure within the city, in essence, buses, taxis, rickshaws, cabs, metros, etc.

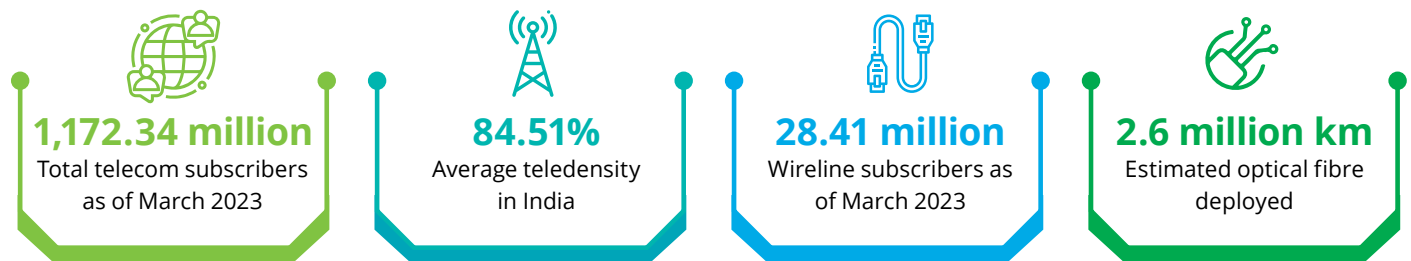
 Air connectivity
  Rail connectivity
  Intra-City connectivity

Emerging technology hubs of India

- As the state or commercial capitals of their respective states, Ahmedabad, Kochi, Guwahati, Lucknow, and Jaipur enjoy good connectivity to other locations in India.
- Owing to good local business presence, Bhubaneswar, Chandigarh, and Indore have good air connectivity with other major hubs in the country.
- The air connectivity of emerging hubs with established hubs largely vary, with some offering between 4 and 20 flights per day.
- Ahmedabad, Chandigarh, Coimbatore, Kochi, and Lucknow offer one-stop flight to the United States. Additionally, all 25 cities enjoy good rail and road connectivity, which is continually improving.
- The launch of metro rail projects has also boosted the infrastructure in these tier 2 cities. Kochi was the first tier 2 city to launch metro rail services in 2017, and the service has since been successfully implemented in Ahmedabad, Bhubaneswar, Jaipur, and Nagpur.
- The bullet train project between Ahmedabad and Mumbai will result in significant developments, including increased connectivity and economic growth and reduced travel time between the two commercial hubs.
- Road infrastructure development in India has increased significantly and the development of expressways has improved the connectivity between established and emerging hubs (e.g. Samruddhi Mahamarg, connecting Mumbai to Nagpur via Nashik and Lucknow–Agra Expressway).

Telecom and internet

Internet penetration in India has advanced faster than in other countries in the past and is poised to grow significantly higher in the future.

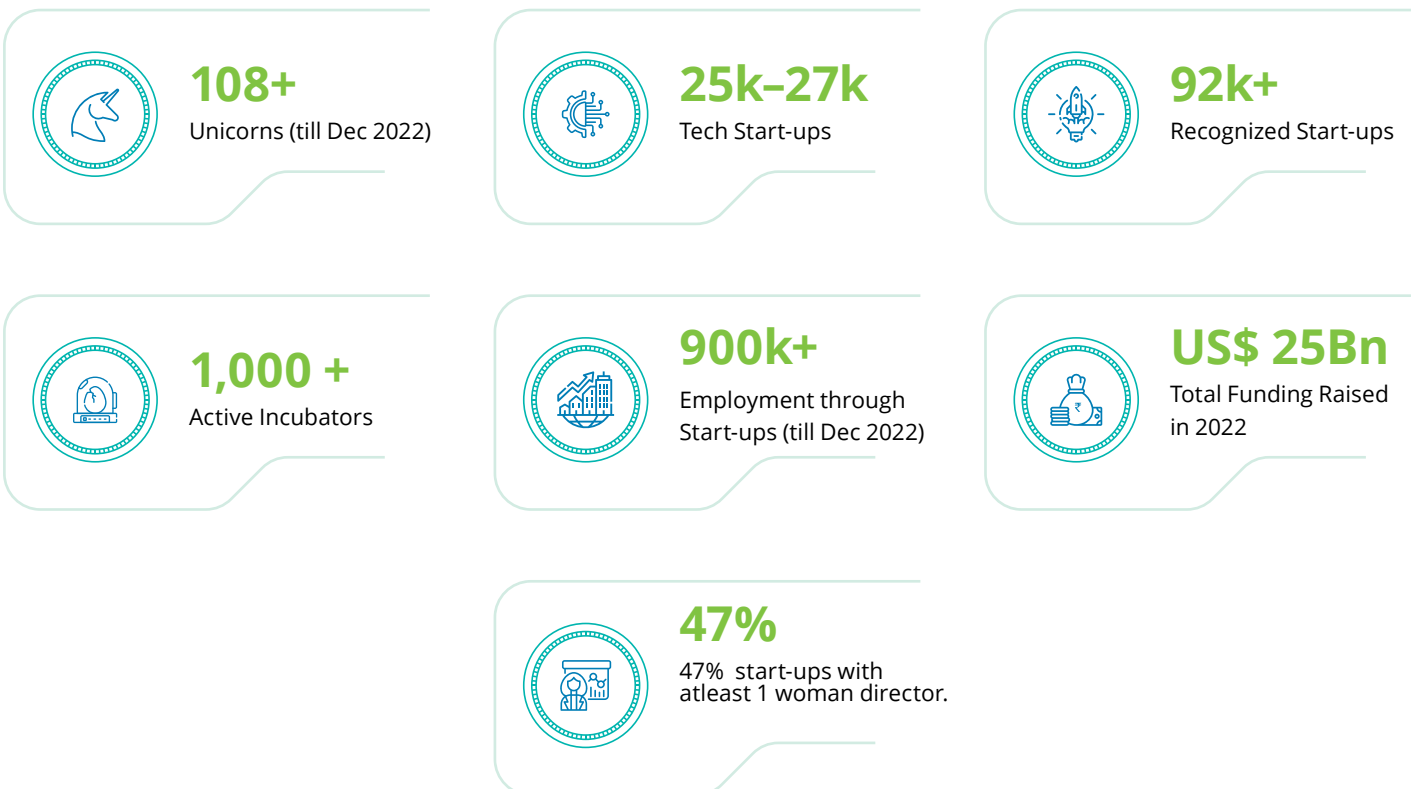


Source: Department of Telecom, Telecom Regulatory Authority of India, Deloitte Research

- The pandemic-induced lockdown, coupled with better availability of high-speed Internet service, has increased Internet penetration in emerging cities. This will further boost the digitalisation of these cities, providing new opportunities for businesses and individuals alike.
- The roll-out of 5G technology across major cities is expected to increase network capacity and data speed, which will further equip these emerging cities to become technology destinations. 5G technology is expected to offer higher speeds and lower latency than previous generations of mobile networks, making it possible to transmit large amounts of data more quickly and efficiently. This will be particularly beneficial for businesses and individuals relying on high-speed Internet to work remotely.
- Overall, the advancement of high-speed Internet and the roll-out of 5G technology are expected to have a major impact on the digitalisation of these locations, providing new opportunities for businesses and individuals and helping drive economic growth and innovation.

Start-up ecosystem overview

India has a well-established and matured start-up ecosystem.



Source: Start-up India, Deloitte Research

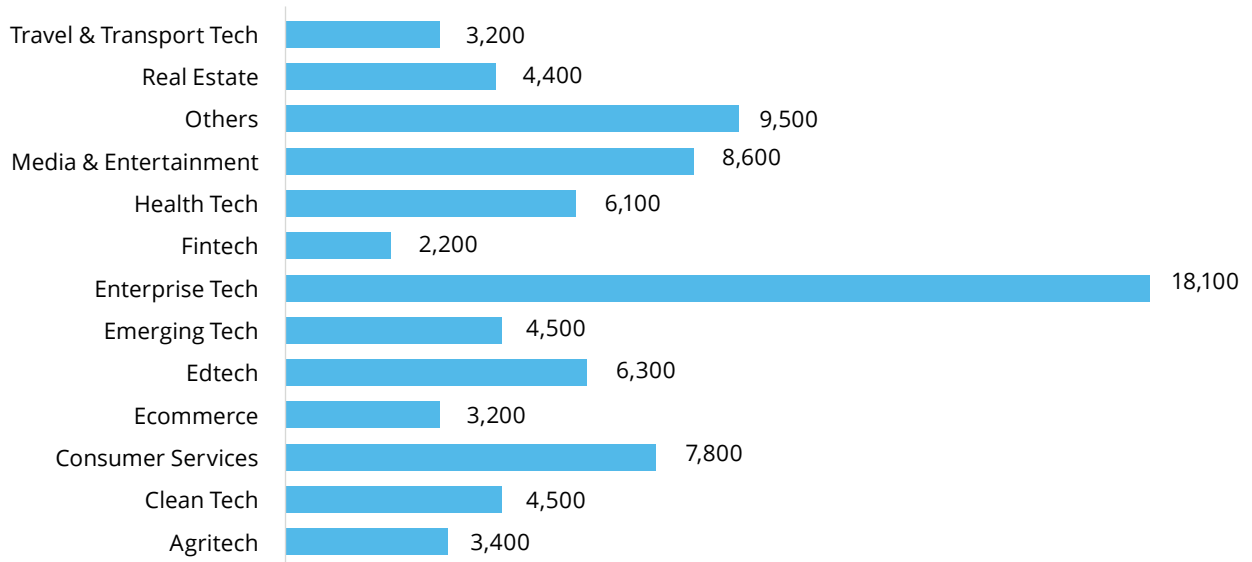
- India is a thriving start-up hub, consistently ranking as the world's third-largest and amongst the top countries for adding new unicorns.
- The Government of India launched the Start-up India Plan in 2015 with the aim of building a robust ecosystem and nurture innovation, supporting the growth of start-ups and creating large-scale employment opportunities.
- Since 2016, the number of start-ups in India has skyrocketed, with a 400 percent increase in their proliferation.²¹
- These start-ups have had a significant impact on employment, creating over 900,000 direct jobs²² and more than 300,000 indirect jobs in the past decade.²³
- Enterprise technology, consumer services, edtech, media and entertainment, and health tech sectors account for a high number of start-ups.

²¹<https://pib.gov.in/PressReleasePage.aspx?PRID=1881495>

²²<https://www.indiabudget.gov.in/economicsurvey/doc/echapter.pdf>

²³Deloitte Research

Distribution of technology start-ups by sector



Source: Start-up India, Deloitte Research

Note:
Number of tech start-ups rounded to the nearest 100 (as of Dec 2022)

India is home to a rapidly growing start-up ecosystem, with 39 percent of the country’s start-ups being based in emerging cities as of 2022²⁴

Cities	Edtech	Healthtech	Fintech	Emerging tech (AI/IOT/Robotics)
Ahmedabad	Green	Green	Green	Green
Bhopal	Light Green	Light Green	Light Green	Yellow
Bhubaneswar	Orange	Orange	Yellow	Orange
Chandigarh	Yellow	Yellow	Yellow	Yellow
Coimbatore	Light Green	Light Green	Light Green	Light Green
Guwahati	Yellow	Yellow	Orange	Orange
Hubbali	Red	Red	Orange	Orange
Indore	Light Green	Light Green	Light Green	Light Green
Jaipur	Green	Light Green	Green	Light Green
Kanpur	Yellow	Yellow	Orange	Orange
Kochi	Orange	Orange	Yellow	Yellow
Lucknow	Green	Light Green	Light Green	Light Green
Madurai	Orange	Orange	Orange	Orange
Mangaluru	Orange	Orange	Orange	Orange
Mysuru	Orange	Orange	Orange	Yellow
Nagpur	Light Green	Light Green	Light Green	Yellow
Nashik	Yellow	Yellow	Yellow	Yellow
Raipur	Light Green	Light Green	Light Green	Yellow
Ranchi	Light Green	Yellow	Orange	Orange
Thiruvananthapuram	Light Green	Yellow	Light Green	Light Green
Tiruchirappalli	Orange	Orange	Orange	Orange
Tirupati	Red	Red	Orange	Orange
Vellore	Red	Red	Orange	Orange
Vijayawada	Orange	Orange	Orange	Orange
Visakhapatnam	Yellow	Yellow	Light Green	Yellow
Warangal	Orange	Red	Red	Red

Source: Start-up India, Deloitte Research

Start-up Density:



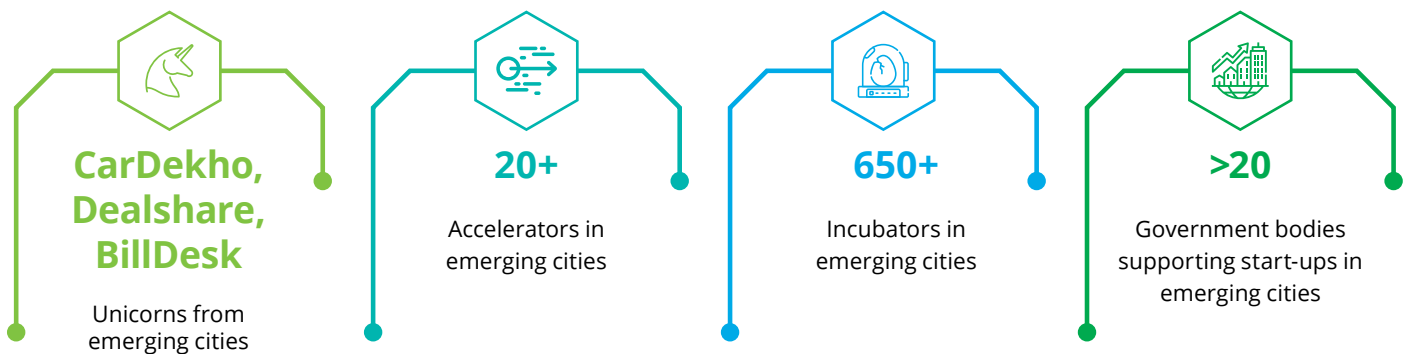
Note:

- Edtech: Technology-enabled education start-ups
- Healthvtech: Technology-enabled healthcare start-ups
- Fintech: Technology-enabled finance start-ups
- Emerging tech: Digital technology-enabled start-ups in the domains of AI, IoT, and robotics

Disclaimer: Start-up industry categories mentioned in the table are illustrative and not exhaustive.

- Ahmedabad, Jaipur, and Lucknow have a very high density of start-ups due to better infrastructure, government support, and a talent ecosystem. Ahmedabad has emerged as a leader in the finance, pharmaceutical, and Internet sectors over the past five years.
- Jaipur has a diverse array of start-ups offering solutions in sectors such as technology, education technology, and e-commerce. It is home to some unicorns (e.g., CarDekho and Dealshare).
- Lucknow is gradually embracing the high-tech culture, with approximately 400 technology start-ups operating in sectors such as edtech, health tech, and e-commerce, supported by private and government institutions.²⁵
- Indore and Coimbatore are in the early stages of start-up incubation and are adopting digital technologies such as software as a service, AI/machine learning, IoT, and blockchain.

Incubators, accelerators, and corporates are encouraging and partnering with start-ups in emerging cities across the country. Some of the leading start-ups were founded in these locations.



Source: Start-up Blink, Start-up India, Deloitte Research

- India ranks 19th on the global start-up scale,²⁶ with 37 Indian cities making it to the list of cities with a thriving start-up ecosystem.²⁷ The country also has its own start-up ecosystem rankings based on factors such as funding availability, the regulatory environment, and the quality of the talent pool.
- About 28 percent of technology start-ups are located in emerging urban centres.²⁸
- Emerging locations have been instrumental in creating more than 10 unicorns and soonicorns.
- The start-up ecosystem in emerging cities has experienced a significant 2.4 times surge in investment deals since 2019.²⁹
- The start-up ecosystem in emerging cities is supported by various factors, including incubators, accelerators, investors, mentors, and government bodies.
- Premier institutes have recognised the importance of fostering entrepreneurship and have established their in-house incubators to support the development of start-ups (e.g., SIIC at Indian Institute of Technology (IIT) Kanpur, the P. S. Govindasamy Science & Technology Entrepreneurial Park (PSG-STEP) incubator in Coimbatore, and the Sri Jayachamarajendra College of Engineering Science & Technology Entrepreneurial Park (SJCE-STEP) in Mysuru).
- Start-ups in emerging cities have played a crucial role in driving the technology revolution and helping the nation position itself as a leading destination for start-ups.
- Tech giants, such as Microsoft have shown interest in exploring India's start-up ecosystem and partnered with local governments to strengthen it further.
- Additionally, unicorns and 'soonicorn' (start-ups that are on track to become unicorns) have begun to appear in emerging cities.

²⁵<https://tracxn.com/explore/Startups-in-Lucknow>

²⁶<https://inc42.com/buzz/india-ranks-19th-among-top-global-startup-hubs-bengaluru-delhi-ncr-mumbai-in-top-20-cities-report/>

²⁷<https://www.startupblink.com/startup-ecosystem/india>

²⁸<https://www.nasscom.in/knowledge-center/publications/nasscom-tech-start-report-2022-rising-above-uncertainty-2022-saga>

²⁹<https://www.nasscom.in/knowledge-center/publications/nasscom-tech-start-report-2022-rising-above-uncertainty-2022-saga>

Case study: Start-up ecosystem and development in emerging hubs

Organisation name

Deshpande Foundation



Industry segment

NGO: Promoting entrepreneurship and innovation as catalysts for change

Journey and derived benefits

Deshpande Start-ups aspires to unlock the vast untapped market potential of 70 percent of tier 2 and tier 3 regions through its innovative platform. The organisation boasts state-of-the-art facilities, providing budding product start-ups with the resources required for growth, including access to a makers lab and an ESDM cluster.

The foundation started in Hubballi in 2011 with 900 employees. They focused on providing technical skills training to students in rural north Karnataka, mainly in IT with an emphasis on AI and machine learning. Students with commerce and arts backgrounds also receive training in logistics, documentation, banking, and non-voice back-office operations.

Key programme offerings:

- **Market access:** The organisation offers access to a vast network, including over 100,000 farmers, 200 small and medium-sized enterprises (SMEs), 10,000 students, and 2,000 micro-entrepreneurs.
- **Mentorship and industry connections:** The start-up ecosystem includes experienced domain mentors and early adopters who can provide valuable guidance and support.
- **Makers and ESDM lab:** It is a state-of-the-art facility featuring advanced technology, including IoT, electronics, 3D printing machines, and automated ESDM labs.
- **Networking opportunities:** The ecosystem provides various opportunities for start-ups to connect and collaborate with peers, including events, meetups, HNI visits, and start-up dialogues.
- **Funding:** It involves access to investors and in-house seed funding, as well as connections with banking systems to help start-ups secure the necessary funding for growth and expansion.

Key achievements:

- 300+ start-ups supported through investments and grants
- Creation of more than 3,500 jobs
- INR 250 crore added to the local economy
- The incubator has helped commercialise more than 127 products developed by these start-ups
- 69+ patents and 44+ trademarks have been filed and registered

Risk and regulatory environment

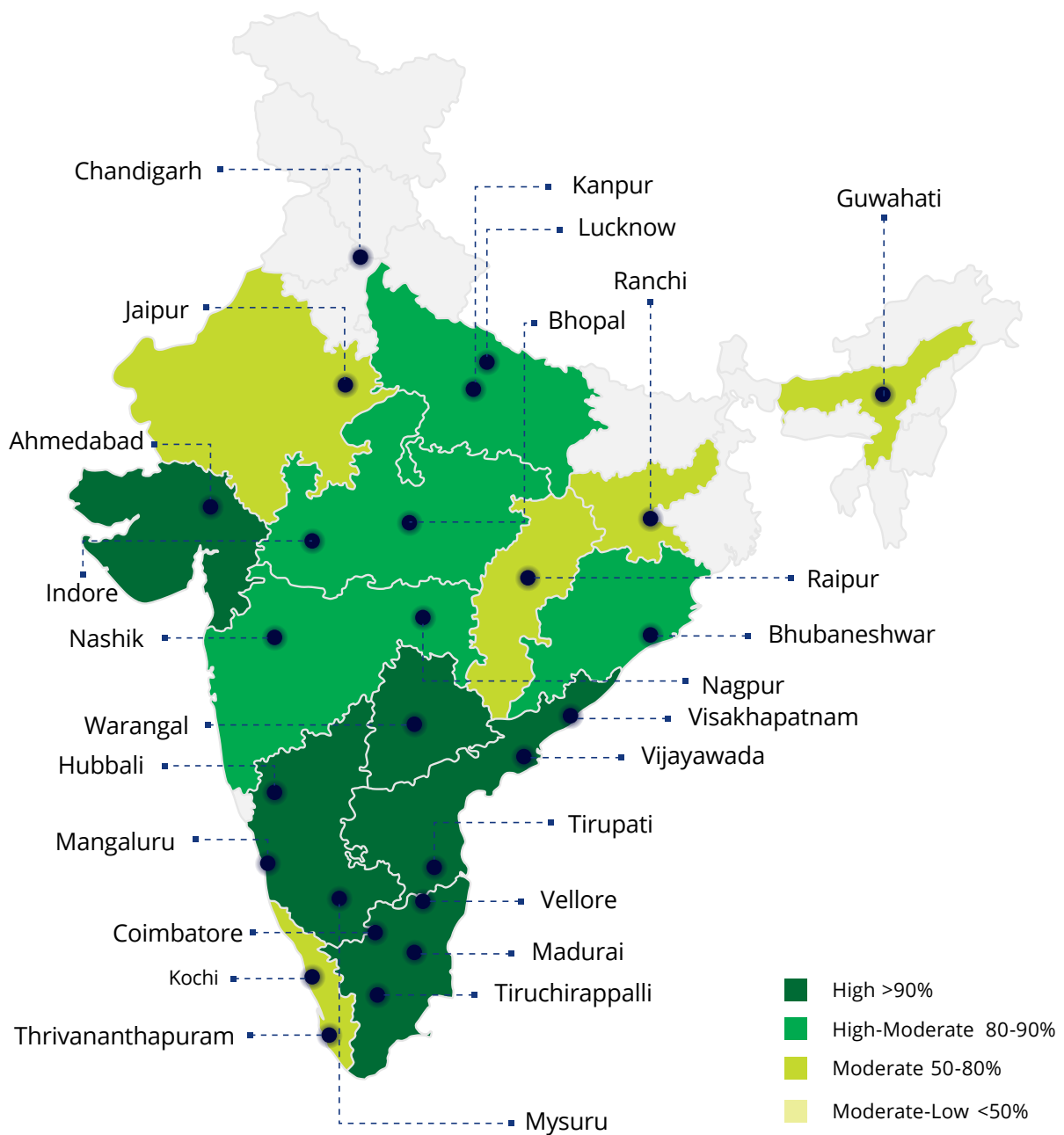


Regulatory environment



Most Indian states score favourably in the Ease of Doing Business (EODB) ranking.

Ease of Doing Business (EODB) amongst emerging locations



Source: Department for Promotion of Industry and Internal Trade, Deloitte Research

State	City	Score
Andhra Pradesh	Tirupati, Visakhapatnam, Vijayawada	>90%
Gujarat	Ahmedabad	>90%
Karnataka	Hubbali, Mangaluru, Mysuru	>90%
Tamil Nadu	Coimbatore, Madurai, Tiruchirappalli, Vellore	>90%
Telangana	Warangal	>90%
Madhya Pradesh	Bhopal, [ndore	80-90%
Maharashtra	Nagpur, Nashik	80-90%
Odisha	Bhubaneswar	80-90%
Uttar Pradesh	Lucknow, Kanpur	80-90%
Assam	Guwahati	50-80%
Chhattisgarh	Raipur	50-80%
Jharkhand	Ranchi	50-80%
Kerala	Kochi, Thiruvananthapuram	50-80%
Rajasthan	Jaipur	50-80%
Chandigarh	Chandigarh	<50%

- Visakhapatnam, Vijayawada, Tirupati, Hubbali, Mangaluru, Mysuru, Ahmedabad, Warangal, Coimbatore, Tiruchirappalli, Madurai and Vellore have high scores of EODB.
- The Business Reforms Action Plan 2020 aims to promote investor confidence and create a business-friendly environment through a system of assessing states and fostering competition.
- State governments have established investment promotion agencies to expedite expansion in the technology sector (e.g. Karnataka Digital Economy Mission (KDEM) and Guidance Tamil Nadu) and play a crucial role in developing the technology sector within the state.
- In addition to the central government incentives, various states offer incentives through state industrial policies and sector policies as part of their development journey. Through these incentives, the government aims to reduce manufacturing costs and improve EODB.
- Some of the key incentives extended by state governments include stamp duty concession, land benefits, power tariff subsidies, electricity duty benefits, capital subsidy, interest subsidy, and related to state goods and services tax.
- Further, given the state governments' sector focus initiatives, apart from industrial policies, governments have sector-specific policies covering aerospace and defence, fintech, electronics, biotechnology, textile, and agricultural food processing. Benefits under each policy and for each state vary according to the objective set by the state governments. The policies are usually revised every three to five years.

Risk environment 

Cities	Natural Disaster Risk	Financial Stability Risk
Ahmedabad	High	Low
Bhopal	Low	High
Bhubaneshwar	Low	Low
Chandigarh	High	Low
Coimbatore	Low	High
Guwahati	High	High
Hubbali	Low	Low
Indore	Low	High
Jaipur	Low	High
Kanpur	Low	Low
Kochi	High	Low
Lucknow	Low	Low
Madurai	Low	High
Mangaluru	Low	Low
Mysuru	Low	Low
Nagpur	Low	Low
Nashik	Low	Low
Raipur	Low	High
Ranchi	Low	Low
Thiruvananthapuram	Low	Low
Tiruchirappalli	Low	High
Tirupati	Low	High
Vellore	Low	High
Vijayawada	High	High
Vishakhapatnam	Low	High
Warangal	Low	Low

Natural disaster risk

Cities situated in seismically active regions, such as Guwahati and Chandigarh, are at a higher risk of experiencing earthquakes.

Coastal cities, such as Bhubaneshwar, are susceptible to cyclonic storms and resultant flooding, whereas cities such as Kochi and Nashik experience regular flooding due to their proximity to water bodies.

In contrast, inland cities, such as Jaipur, situated in desert plains, are relatively insulated from the effects of natural calamities.

Financial stability risk

Most emerging hubs are located in states with low-to-moderate financial stability risks and offer conducive environments for organisations to explore and grow in.

Degree of Risk



Note:

- Natural disaster risk indicates the risk of business disruption due to natural calamities such as earthquakes, floods, and cyclones.
- Financial stability risk refers to potential systemic failures in the financial system that can lead to significant economic disruption (e.g. bank runs, credit crunches, and market crashes).

Social and living environment

Social and living environment plays a major role in the growth of the technology ecosystem for any location. The presence of infrastructure for quality education, access to comprehensive healthcare facilities, low cost of living, and overall good quality of life are equally important for the sector to flourish.

Cities	Education Infrastructure	Medical Infrastructure	Cost of living	Pollution index
Ahmedabad	Green	Green	Green	Green
Bhopal	Light Green	Light Green	Light Green	Yellow
Bhubaneswar	Orange	Orange	Yellow	Orange
Chandigarh	Yellow	Yellow	Yellow	Yellow
Coimbatore	Light Green	Light Green	Light Green	Light Green
Guwahati	Yellow	Orange	Red	Red
Hubbali	Red	Red	Orange	Red
Indore	Light Green	Light Green	Light Green	Light Green
Jaipur	Green	Light Green	Green	Light Green
Kanpur	Yellow	Yellow	Orange	Orange
Kochi	Orange	Orange	Yellow	Yellow
Lucknow	Light Green	Light Green	Light Green	Light Green
Madurai	Orange	Orange	Orange	Orange
Mangaluru	Red	Red	Red	Red
Mysuru	Orange	Orange	Orange	Yellow
Nagpur	Light Green	Light Green	Light Green	Yellow
Nashik	Yellow	Yellow	Yellow	Yellow
Raipur	Light Green	Light Green	Light Green	Yellow
Ranchi	Light Green	Orange	Orange	Orange
Thiruvananthapuram	Light Green	Light Green	Light Green	Light Green
Tiruchirappalli	Red	Orange	Orange	Orange
Tirupati	Red	Red	Orange	Red
Vellore	Red	Red	Orange	Orange
Vijayawada	Orange	Orange	Orange	Orange
Visakhapatnam	Yellow	Yellow	Light Green	Yellow
Warangal	Red	Red	Red	Red

Source: Deloitte Research



Note:

- Education infrastructure indicates the presence of schools across primary and secondary education levels.
- Medical infrastructure indicates the presence of adequate medical facilities required for primary and tertiary care.
- Cost of Living is a measure of the expenditure required to live and work in a location and includes components such as rent, transportation costs, and cost of food and groceries.
- Pollution index is an indication of the average pollution levels in the region (air, water, and ground).

- In the past few years, tier 2 cities have played a vital role in raising the standards of living. These municipalities are often smaller and less congested than their metropolitan counterparts, and they often boast lower costs of living and lower pollution levels.
- Southern cities, such as Warangal, Visakhapatnam, Vijayawada, Vellore, Tiruchirappalli, and Tirupati and the north-eastern city of Guwahati have a good education ecosystem with a favourable ratio of schools to population.
- Ahmedabad, Chandigarh, Coimbatore, Raipur, Vijayawada, Visakhapatnam, and Warangal stand out in the health index for having a healthy ratio of population to healthcare centres. The availability of both government and private healthcare facilities in these regions is commendable.
- The cost of living index in tier 2 cities, such as Bhopal, Indore, Kanpur, Coimbatore, Mangaluru, Raipur, Ranchi, Thiruvananthapuram, Tiruchirappalli, Tirupati, and Warangal has demonstrated a significant disparity in consumer costs and proven to be favourable destinations for those considering cost of living as a fundamental requirement, along with a superior quality of life.
- Non-manufacturing hubs, such as Hubballi, Mysuru, and Warangal, which do not engage in heavy chemical processing, have consistently shown low Air Quality Index (AQI) levels throughout the year, indicating good air quality.

Considerations while choosing an emerging hub

Risk and risk mitigation

When first exploring these emerging hubs, the technology industry faces several challenges with regards to talent management, infrastructure, start-up ecosystem, regulatory environment, and social and living environment. These limitations and risks may adversely affect the industry's

operations, growth, and profitability. Therefore, the industry and authorities must adopt an approach that includes measures to better address these issues, thereby achieving sustainable growth. On this front, several shortcomings and their potential mitigation strategies are illustrated as follows:



Limited availability of skilled talent

Emerging cities lack certain skills compared with larger cities.

Mitigation approach

- Create technology training and education programmes for local talent
- Incentivise companies to invest in the region's workforce and promote cross-industry collaboration

Case in point

- Training programmes by corporates such as HCL Tech are already in place in some emerging locations.



Talent hiring and retention

Local talent may migrate for better opportunities in larger cities or abroad.

Mitigation approach

- Create an innovation-conducive business environment
- Collaborate with local universities to create a skilled talent pipeline

Case in point

- KSIDC is using the public-private partnership model to establish a business zone in Kochi. The zone will house engineering companies specialising in electronics, biotechnology, and more.



Limited industry exposure

The technology industry in emerging cities may have less exposure than centres in larger cities.

Mitigation approach

- Promote industry potential by organising events and conferences to unite industry leaders, investors, and policymakers
- Partner with other regions to facilitate cross-regional collaboration and knowledge exchange

Case in point

- The IndUS Entrepreneurs (TiE) chapters in emerging locations, such as Lucknow bring together entrepreneurs, investors, and industry experts from different sectors to discuss opportunities and collaborations.



Lack of access to training and development opportunities

Limited training opportunities create a skill gap and hurt technology competitiveness in emerging cities.

Mitigation approach

- Provide training programmes that align with industry needs by subsidising, creating public-private partnerships, and providing online resources

Case in point

- Deshpande Foundation has setup its centre in Hubballi for training candidates and making them industry-ready



Limited infrastructure and connectivity

Poor connectivity affects talent retention and quality in emerging cities.

Mitigation approach

- Invest in transportation, housing, and healthcare infrastructure and partner with private sector for funding

Case in point

- Urban Development Authority Acts of respective states facilitated the setup of urban development bodies to improve infrastructure.



Real estate availability

Lack of office space for the technology industry in emerging cities.

Mitigation approach

- Incentivise business park and building development.

Case in point

- SEZ Act for rural areas; for example, Tamil Nadu Enhanced Rural BPO policy 2012



Regulatory challenges and uncertainties

Start-ups and the technology industry in emerging cities can face regulatory challenges and uncertainties, leading to delays in project execution, higher compliance costs, and hampered growth.

Mitigation approach

- Establishing clear and consistent regulations in line with global standards, including tax policies, labour laws, and data privacy regulations
- Developing guidelines and frameworks for compliance and establishing connections between start-ups and government officials to streamline regulatory processes

Case in point

The following bodies provide facilitation to the technology industry in their respective states:

- APISC in Andhra Pradesh
- iNDEXTb in Gujarat
- MAITRI in Maharashtra
- IGEPB in Tamil Nadu (Guidance TN)



Intellectual property protection

The technology industry relies on intellectual property protection to safeguard its proprietary technology and innovations.

Mitigation approach

- Enforce intellectual property laws and provide dispute resolution to protect intellectual property

Case in point

- DPIIT legislates the laws and acts to enforce intellectual property rights.



Cyber security risks

The technology industry is vulnerable to cyber threats.

Mitigation approach

- Promote cyber security awareness and data protection through training, expert access, legal frameworks, and quick redressal mechanism
- Compliance with necessary certifications from relevant bodies such as ISO

Case in point

- National Cyber Security Strategy 2020



Limited healthcare facilities

Inadequate healthcare facilities can lead to a reduced quality of life and increased costs.

Mitigation approach

- Investing in the development of healthcare infrastructure
- This includes building medical colleges and hospitals, as well as funding research and development, and promoting public-private partnerships for innovative solutions

Case in point

- The Tamilnadu Health Policy 2003 facilitated the Tamil Nadu Health Systems Project, which ensured quality healthcare for everyone.



Limited education facilities

Lack of quality education can impact skilled labour availability and discourage people from migrating to these locations.

Mitigation approach

- Investing in the development of educational infrastructure
- This includes building schools, colleges, vocational training centres, medical colleges, and hospitals, as well as funding research and development and promoting public-private partnerships for innovative solutions.
- Additionally, providing access to scholarships, financial aid, and training programmes can help support these initiatives.

Case in point

- The 'MO School' initiative by Odisha government to promote school education

Although emerging cities offer many advantages and opportunities for growth and scalability, the onus is on the industry to capitalise and leverage on these oft-untapped opportunities

Companies must answer some important questions across the three pillars of 'work', 'workforce', and 'workplace' to ensure that they can meet their long-term goals and vision for centres located in emerging hubs. This will also enable them to align the centre strategy with the needs of their business and customers.



Work



Workforce



Workplace

- What is the vision and plan for the nature of work to be delivered from the centre located in these emerging hubs?
- How can the existing client relationships be used to deliver projects aligned with the local business ecosystem and talent skills?
- Based on the maturity, availability of mid-level and senior talent pool, nature of work, and size of operations, which operating model (e.g. satellite office, independent hub, and outsourced centre) best suits the centre?
- What should be done to establish a robust governance model for the centre?

- What will be the most appropriate hiring strategy to attract and retain the right talent to meet long-term business objectives?
- Is there ample availability of senior management roles (both internally and in the local market) to set up, manage, and run operations?
- What policies and activities are required to align the workforce in the emerging hubs with the broader organisation culture?
- How to invest in training the local talent pool and benefit from a first-mover advantage in such markets?

- What is the quality of the existing infrastructure and can it meet the company's future growth requirements?
- What is the core philosophy for workplace infrastructure to align it with the operating model, attract talent, and showcase the organisation culture?
- How to upgrade the infrastructure for better productivity and employee experience?
- What collaborations with state governments and local infrastructure development bodies can help in the ideation, development, and/or improvement of infrastructure around the workplace (e.g. better traffic management, public transport routes, and commercial setups such as restaurants and shops)?

Navigating the future: best practices for work, workforce, and workplace in the technology industry



Best work practices

- **Choosing an optimal operating model:** The most suitable operating model should be selected for the company, considering factors such as company size, structure, and resources.
- **Defining the vision and plan:** The centre should have a vision and plan for the nature of work to be delivered, considering the local business ecosystem and talent skills.
- **Using existing client relationships:** The centre should leverage its existing client relationships to deliver projects aligned with the local business ecosystem and talent skills.
- **Evaluating client contracts and skill availability:** Existing client contracts should be carefully evaluated to determine the feasibility of transitioning work to tier 2 centres and work that can be undertaken by the skills available in the local workforce should be accepted.
- **Training for soft skills:** Focused training on improving soft skills aspects, such as customer serviceability and professional email writing etiquette, should be provided.
- **Effective performance management:** The performance management framework should be customized considering the differences in skill and talent pool quality of tier 2 locations.
- **Governance framework:** A robust governance framework should be developed to manage operations and ensure compliance with industry regulations.



Best workforce practices

- **Dissemination of organisational policies and cultural integration:** Adequately represent senior and mid-level management from established hubs to effectively communicate and enforce organisational policies and promotion of cultural integration to foster a sense of belonging amongst the workforce located in emerging hubs
- **Investment in training and development:** Invest in training and development programmes for employees to facilitate acquisition of the skills and knowledge necessary to excel in their roles
- **Enhanced referral policies:** Incentivise employees through bonuses or rewards to refer friends and colleagues with clear communication and an easy referral process
- **Branding:** Focus on building a brand by participating in local events, sponsoring sports teams, partnering with universities, and showcasing commitment to diversity to attract candidates with the right skill set
- **Diversified recruitment channels:** Use online job boards, social media, and local newspapers to expand their influence and reach a wider range of candidates
- **Employee engagement and attrition control:** Organise regular employee engagement programmes to enhance job satisfaction and reduce attrition rates
- **Collaboration with local academic ecosystem:** Collaborate with local educational institutions and recruitment agencies to improve candidate outreach and identify the potential talent at an early stage of their professional journey
- **Foster collaboration and knowledge sharing:** Foster collaboration and knowledge sharing amongst employees to create a dynamic and innovative work environment
- **Offer internships and apprenticeships:** Offer internships and apprenticeships to fresh graduates to give them hands-on experience and exposure to the industry
- **Offer mentorship and coaching:** Offer mentorship and coaching opportunities to help fresh graduates transition from the academic to professional life and meet the challenges of the technology industry



Best workplace practices

- **Office location:** Set up offices in easily accessible locations for employees across the city with minimal travel time.
- **Office set-up:** Provide ergonomic and comfortable workspaces, including appropriate lighting and air conditioning, to ensure employee comfort and productivity and provide ample parking space and EV charging infrastructure, if feasible.
- **Network and IT infrastructure:** Ensure that the IT infrastructure and network are robust, secure, and reliable with regular maintenance and upgrades to ensure smooth operations and minimise downtime.
- **Remote work capabilities:** Provide employees with the tools and resources needed for effective work from home or other remote locations, including a reliable and secure Internet access, video conferencing tools, and virtual collaboration platforms.
- **Employee well-being:** Promote employee well-being by providing access to resources such as gym memberships, healthy food options, creche facility, and healthcare support services.
- **Travel:** Develop and implement a system for easier commute for employees by providing company transport facilities such as buses or cabs.

Methodology for choosing the emerging hubs

The methodology used to shortlist the emerging locations is detailed below.

India is a large, diversified nation with an expansive urban landscape, comprising 77 tier 1 and tier 2 cities. However, to find the next wave of emerging IT hubs, a meticulous and exacting process was employed. A group of 26 cities was selected for profiling based on specific parameters. These critical

parameters were rigorously applied to show that the selected cities had the necessary resources and conducive business environment to foster the growth of the technology industry. The following parameters were selected:



Case studies of organisations with centres in emerging hubs



Genpact

Industry segment

Digital Technology Service Provider

Journey and derived benefits

Genpact is a global professional services firm. With a workforce of more than 100,000 and a presence in more than 30 countries with Genpact offers various services including finance and accounting, collections and customer service, insurance, supply chain and procurement, analytics, enterprise application, IT infrastructure, and management.

Despite its success, Genpact faced several challenges in its operations, particularly in Jaipur. It faced intense competition to retain and attract talent because of many organisations relocating their operations to the city. Additionally, Genpact found it difficult to maintain its standard of communication and customer service due to the limited pool of English speakers in the region.

To overcome these challenges,

- Genpact implemented several strategies.
- The company partnered with local colleges and universities to nurture local talent and address the skill gap.
- Genpact also launched programmes to improve its employees' English communication skills and increase awareness about the services it offers.
- These efforts have helped Genpact successfully overcome the challenges in Jaipur, allowing the company to continue delivering high-quality services to its clients.

Key benefits:

- Government incentives and subsidies
- Availability of a large and affordable talent pool

Wipro

Industry segment

Digital Technology Service Provider

Journey and derived benefits

Wipro is a reputed and established global service provider, with a strong presence in more than 55 countries. With a substantial workforce of 200,000 employees, the company has strategically placed centres in major metropolitan cities and in tier 2 cities across India, including Guwahati, Bhubaneswar, Jaipur, Visakhapatnam, Coimbatore, Mysuru, Kochi, Vijayawada, Ahmedabad, and Vadodara.

Wipro's Coimbatore centre serves as a prime example of the company's commitment to using tier 2 cities to support its operations. With a headcount of more than 3,000 employees, this centre caters to a UK telecom company, demonstrating the company's ability to serve clients in a highly professional and efficient manner.

To further strengthen their presence in Coimbatore and support local economic development with

- Wipro has made a conscious effort to nurture local talent.
- The company draws from the large pool of 200,000 graduates from 65 engineering colleges and 49 arts and science colleges in the region.
- This not only supports the growth of the local economy but also ensures that the company has a steady supply of skilled and talented employees to support its operations in Coimbatore.
- In summary, Wipro's approach to leveraging tier 2 cities and developing local talent underscores the company's commitment to responsible business practices and sustainable economic growth.
- The success of the Coimbatore centre is a testament to Wipro's ability to deliver high-quality services to clients while contributing to the growth of local communities.

Key benefits:

- Reduced operational costs by 39 percent and increased CSAT score by 25 percent
- Economic and social impact: Training talent from local colleges

Infosys (Case 1)

Industry segment

Digital Technology Service Provider

Journey and derived benefits

Infosys Limited is a leading Indian multinational IT company that offers various services, including business consulting, IT, and outsourcing services. Headquartered in Bengaluru and founded in Pune, Infosys has a significant presence in India, with offices in tier 2 cities such as Bhubaneswar, Chandigarh, Hubballi, Indore, Jaipur, Mangaluru, Mohali, Mysuru, Nagpur, and Thiruvananthapuram.

Challenges faced:

- Unsatisfactory English communication skills
- A high percentage of non-domicile students
- Inadequate written and verbal aptitude abilities
- Low awareness about the IT/ITES industry

Mitigation steps:

- Launched training programmes to enhance its employees' English communication skills and improve their written and verbal aptitude abilities
- Formed partnerships with local colleges and universities to nurture local talent and address the skill gap
- Implemented programmes to raise awareness about the sector and offered incentives for employees to stay in these regions.

Key benefits:

- Largest number of employment opportunities
- The past decade has witnessed a boom in the technology sector in Jaipur
- Infosys is considered a leading technology brand in Rajasthan
- Excellent fit for handling financial and F&A services
- Observed high customer satisfaction scores
- Simplicity, a sense of responsibility, and self-motivation are the innate qualities of the talent pool

Infosys (Case 2)

Industry segment

Digital Technology Service Provider

Journey and derived benefits

Infosys Limited is a leading Indian multinational IT company that offers various services, including business consulting, IT, and outsourcing services. Infosys has a significant presence in India, with offices in tier 2 cities such as Bhubaneshwar, Chandigarh, Hubballi, Indore, Jaipur, Mangaluru, and Mysuru.

This case study focuses on Mysuru and Mangaluru.

Challenges faced:

- The availability of skilled talent in the region is not consistent for all skills
- Identification of opportunities to achieve the desired cost optimisation
- Attrition of employees due to limited growth opportunities in the location

Solutions implemented:

- Hired a mix of freshers, experienced resources, and campus hires
- Established a shared services team to migrate non-core and over-the-counter activities to a centralised team
- Streamlined operational processes and implemented the 'First Time Right' concept

Key benefits:

- Better availability of skilled talent and reduced attrition
- Cost optimisation by avoiding expensive lateral hiring in metro cities
- Improved customer satisfaction and reduced errors through the 'First Time Right' concept
- Enhanced diversity, equity, inclusion, and gender mix with 55 percent women employees
- Saved ~30,000 person-hours annually and achieved US\$ 11 million in benefits through the shared services model

Infosys (Case 3)

Industry segment

Digital Technology Service Provider

Journey and derived benefits

Infosys Limited is a leading Indian multinational IT company that offers various services, including business consulting, IT, and outsourcing services. Headquartered in Bengaluru and founded in Pune, Infosys has a significant presence in India, with offices in tier 2 cities such as Bhubaneshwar, Chandigarh, Hubballi, Indore, Jaipur, Mangaluru, Mohali, Mysuru, Nagpur, and Thiruvananthapuram. This case study focuses on the Jaipur centre.

Challenges faced:

- Inefficient and manual F&A processes
- Delayed payments and cash flow management issues
- Limited visibility due to disparate systems

Solutions implemented:

- Leveraged talent pool of F&A resources in Jaipur
- Conducted design thinking workshops and analysed the IT landscape
- Defined an implementation roadmap and provided change communication
- Enabled subject matter experts to drive the transformation

Key benefits:

- Increase in working capital by US\$ 800 million
- Reduced overdue invoices by 30 percent and faster processing
- 100% automated posting of invoices and real-time reports
- Consolidated financial reports from 70+ countries
- Improved F&A efficiency, cycle times, and cash flow management
- Improved visibility, reduced discrepancies, and higher contribution to local employment opportunities

Payoda Technologies

Industry segment

Software Services

Journey and derived benefits

Payoda is a software services provider with offices in Chennai, Hyderabad, and Coimbatore. This case study focuses on the Coimbatore centre.

Challenges faced:

- Limited opportunities for learning and development in tier 2 cities
- Higher hiring costs and limited access to diverse skill sets
- Lack of innovation and academic collaboration

Solutions implemented:

- Synergy programme for early engagement with talents and a platform to work on live use cases
- Delivering world-class services from untapped tier 2 cities to provide employment opportunities and upliftment of communities

Key benefits:

- Access to a larger talent pool that has potential and is seeking opportunities but is yet to be tapped
- Lower operational costs, affordable personnel, and significantly lower attrition rates
- Lower investment costs for training and development for required industry skills
- Eager candidates driven to collaborate on global requirements
- Provide employment opportunities leading to socio-economic upliftment
- Development of technological strength in tier 2 cities
- Deliver advanced technology, services, and workforce solutions designed to maximize opportunities existing at the intersection of data, technology, and innovation

Parameter Software Pvt Ltd.

Industry segment

Software Services

Journey and derived benefits

Parameter Software is a software services provider. This case study focuses on the Bhubaneswar centre.

Challenges faced:

- Maintaining numerous renewable energy assets spread over a wide geographical area
- Coordinating with multiple departments, vendors, and technicians
- Ensuring high asset uptime, user satisfaction, and longevity

Solutions implemented:

- Provided a solution platform for all stakeholders to collaborate and work towards achieving organisational goals
- Improved maintenance and repair situation to extend asset life
- Increased efficiency in terms of productivity and cost
- Offered better service to society and reduced impact on natural resources by extending asset life, thereby reducing waste and emissions

Key benefits

- Improvement in asset uptime, user satisfaction, and longevity
- Increase in efficiency in terms of productivity and cost
- Reduction in the stress on natural resources by extending asset life
- Regained primacy in the market segment and respect of clients
- Contribution to the organisational goal of climate action, user satisfaction, and growth

WNS

Industry segment

Digital Technology Service Provider

Journey and derived benefits

WNS (Holdings) Limited is a global BPM company providing services in finance and accounting, human resources, research and analytics, and customer service.

Challenges faced:

- Talent migration to matured hubs
- Poor communication skills and significant effort required to upskill talent
- Lack of talent in senior- and mid-level leadership
- Weak alignment between educational and training institutes and the BPM industry
- Poor connectivity with matured hubs

Solutions implemented:

- Implemented strategies to invest in the training and development of local talent
- Conducted awareness programmes about the BPM industry
- Offered incentives to employees to stay in tier 2 locations

Key benefits:

- Higher productivity and quality performance
- Soft-spokenness, trainability, a non-confrontational nature, and a strong sense of responsibility amongst the talent pool
- Strong support from the state government for the IT/ITES sector.

Sutherland

Industry segment

Digital Technology Service Provider

Journey and derived benefits

Sutherland Global Services is a renowned business process and technology management services Provider.

Sutherland has a strong presence in India, with offices in tier 2 cities such as Bhopal and Kochi. However, the company initially faced the challenges of raising awareness about the industry and work environment in these locations, which posed a major concern for the quality of work.

Challenges faced:

- Sutherland was able to benefit from several positive factors.
- The company could leverage the business-friendly policies for BPOs in the region and work with a friendly, knowledgeable, and supportive team from the government.
- These factors allowed Sutherland to overcome the initial challenges and establish a strong presence in these tier 2 cities, providing high-quality services to its clients while supporting the local economy.
- Overall, Sutherland's success in establishing a strong presence in Bhopal and Kochi highlights the company's commitment to delivering exceptional service to its clients while contributing to the development of the local communities.

Key benefits

- Low cost of operations
- A higher commitment from employees
- A stable workforce base
- A business-friendly policy for BPOs
- Friendly, knowledgeable, and helpful team from the government to collaborate

EXL


Industry segment

Digital Technology Service Provider


Journey and derived benefits

EXL is a world-renowned company that provides BPO services to some of the largest corporations in the world. It offers various services, including finance and accounting, legal processes, transactions, bill collections, and customer services. With centres in major cities such as Delhi-NCR, Bengaluru, Pune, Hyderabad, and Chennai, EXL has a strong presence in India and serves clients from around the world. Additionally, the company has established centres in the following tier 2 cities: Jaipur, Kochi, and Ahmedabad.

- EXL's Jaipur centre is a prime example of the company's efforts to tap into the available talent pool and make its back-office operations more cost-effective.
- Jaipur was identified as an alternative site to the Philippines, and the centre was established in 2015 with 45 seats as a business continuity site. Over the years, the centre grew, and by 2018, it had become a full-fledged service delivery centre.
- The Jaipur centre provided services in the domains of order-to-cash and finance and accounting, and the company leveraged its expertise in these areas to help its clients improve their operations and drive business outcomes.


Key benefits:

- The headcount rate is 33 percent year-on-year
- The average tenure of executives and senior executives is 2.5 years
- The average tenure of leaders in Jaipur is 8.5 years
- More than 300 hires in Jaipur in 2021-2022
- The diversity index is 21 percent
- Approximately 90 percent of the employees are freshers
- About 80 percent are graduates
- Conducted more than 20 interviews per day

Technotask



Industry segment

Digital Technology Service Provider



Journey and derived benefits

Technotask Business Solution (TTBS) is a service provider that offers BPM services. The company has 5000 employees and provides services to the start-up industry in India and globally. TTBS caters to the e-commerce, financial technology, food technology, education technology, and apparel fashion sectors, providing flexible and innovative solutions.

TTBS offers contact centre solutions including voice, email, and chat support aimed at providing seamless customer experiences and maximising efficiency. Additionally, the company offers inbound and outbound project management and human resource outsourcing.

TTBS has 11 centres across India, 7 of which are located in tier 2 cities—Bhopal, Lucknow, Mysuru, Raipur, and Vijayawada—showing the company's commitment to providing quality services in areas often ignored by larger service providers. This helps TTBS serve clients both locally and globally.



Key benefits

- Direct employment to more than 4,000 people in tier 2 locations with a target to hire 3,000 more in the pipeline
- Low-cost delivery centres
- Low attrition amongst centres
- Upliftment of backward regions surrounding the tier 2 city of Raipur

Concentrix

Industry segment

Digital Technology Service Provider

Journey and derived benefits

Concentrix is a global business services company focused on customer engagement and business performance. With a strong presence in major cities such as Bengaluru, Chennai, Hyderabad, Kolkata, Mumbai, Delhi-NCR, and Pune, as well as in tier 2 locations such as Vadodara, Chandigarh, Visakhapatnam, and Ranchi, Concentrix provides quality services to clients worldwide.

Despite its successful operations, Concentrix faced several challenges in its tier 2 locations. Talent migration was one of the biggest challenges, as many skilled workers moved to Hyderabad. Moreover, there was a lack of talent at the senior and middle-level leadership, and the education and training institutes in these regions were not aligned with the BPM industry's language and soft skill requirements. Furthermore, a shortage of high-quality English-speaking talent and the low flight frequency from major cities such as Mumbai and Delhi made it difficult to attract new talent. Finally, the continuous supply of raw electricity hindered work from home in Ranchi.

Solutions implemented:

- The company invested in training programmes to enhance its employees' language and soft skill abilities and established partnerships with local colleges and universities to nurture local talent.
- Additionally, Concentrix launched programmes to increase awareness about the BPM industry and offered incentives for employees to stay in these regions.
- Through these efforts, Concentrix successfully overcame the challenges it faced in its tier 2 locations, enabling the company to continue delivering quality services and driving growth.

Key benefits:

- Availability of a decent pool of talent
- Lower operational cost
- Opportunity to work with local education institutions to attract the right talent
- Higher productivity and quality performance
- Soft-spoken, trainable, non-confrontational, and responsible individuals in the talent pool
- Strong support from the state government

eClerx

Industry segment

Digital Technology Service Provider

Journey and derived benefits

eClerx is a leading provider of BPM, automation, and analytics services, serving a diverse range of Fortune 2000 enterprises across multiple industries, including finance, communications, retail, fashion, media and entertainment, manufacturing, travel and leisure, and technology.

This case study focuses on the Coimbatore centre.

Challenges faced:

- Lack of English-speaking talent in the region made it difficult to implement a voice-based setup
- High turnover rates with many employees leaving the company after just 2-3 years

Solutions:

- Comprehensive training and development programmes
- Competitive compensation and benefit packages to incentivise employees to stay with the company for the long term

Key benefits

- Improved language and communication skills for the workforce
- Comparatively low cost of labour with lower attrition rates

HGS

Industry segment

Digital Technology Service Provider

Journey and derived benefits

HGS is an India-based service provider in consumer engagement, digital customer experience, and BPM. The company offers innovative solutions to help businesses improve customer engagement, streamline operations, and drive growth by leveraging its extensive expertise and experience. Despite its success, HGS encountered several challenges in its tier 2 locations.

Challenges faced:

- Providing opportunities to local talent from educational institutions in and around Visakhapatnam
- Retention and motivation of employees in tier 2 cities compared to tier 1 cities
- Hiring niche skilled resources who can quickly learn required technologies and implement projects
- Streamlining the recruitment process and reducing time to hire

Solutions implemented:

- Campus interviews and employee referrals for hiring freshers and mid- and senior-level resources
- Collaborating with local engineering and post-graduate colleges for curriculum updates and hiring the right resources
- Developing recruitment and HR bots to automate the initial screening process and streamline recruitment workflows
- Using various modes of communication including SMS, web, email, APIs, and live chat to provide easy access to the recruitment process

Key benefits:

- Lower lead-time to higher resources and better conversion rates
- Increased retention and motivation of employees in tier 2 cities
- Workload re-alignment for the HR teams

ZNET

Industry segment

Digital Technology Service Provider

Journey and derived benefits

ZNET is a small- and medium-enterprise founded in 2009 in Jaipur.

Challenges faced:

- The tier 2 location may not be attractive for hiring and retaining non-technical staff
- Need to build a strong network and gain customer trust and loyalty

Solutions:

- Leveraged Jaipur's strategic location, skilled workforce, and supportive policies to attract and retain employees.
- Recruited fresh tech talent from Rajasthan's IT engineering colleges and groomed them for long-term careers.
- Connected with local businesses and encouraged entrepreneurship to create jobs and contribute to economic development.
- Provided world-class IT services, quick access to support, and cloud solutions for cost efficiency and digital transformation.

Key benefits

- Ability to attract and retain employees, access affordable manpower, and improve work-life balance in Jaipur
- Access to fresh tech talent from Rajasthan's IT engineering colleges
- Opportunities for job creation and economic development through entrepreneurship
- Ability to gain customer trust and loyalty with quality IT services and support
- Quick access to IT support and cloud solutions for cost efficiency and digital transformation
- Opportunity for employees to build long-term careers and reside locally

MetLife Global Operations Support Centre

Industry segment

Global Capability Centre (GCC)

Journey and derived benefits

About the company:

- Metlife operates in the insurance, IT, and finance sectors and has approximately 3,500 employees in India.
- It has established its location in Jaipur due to its cost efficiency as a tier 2 city.

Challenges:

- Building IT capabilities at the centre in Jaipur due to the lack of mature processes and experienced capability leaders

Solutions:

- Moved mature processes from the tier 1 centre to Jaipur
- Brought in experienced and capable leaders as beach heads to set up processes and hire and develop talent
- Initially hired a mix of resources from both local and NCR regions
- Created a learning plan and career path to develop capabilities
- Implemented an employee referral programme to establish a network and improve engagement

Key benefits:

- Successfully built IT capability in Jaipur
- Achieved cost efficiency due to in-house capability build-out
- Better employee satisfaction due to structured career path
- No impact on service delivery or business as usual for stakeholders because of the staged approach
- Engaged with the local ecosystem through employee referral programme to tap into local talent

Wipro

Industry segment

Digital Technology Service Provider

Journey and derived benefits

About the company:

- Wipro is a global IT, consulting, and business process services company.
- The company has a significant presence in India and operates in various cities.

Challenges:

- Wipro faced difficulties sourcing cost-efficient talent and retaining employees in tier 1 cities due to high attrition rates.

Solutions:

- Wipro implemented a talent strategy that involved leveraging tier 2 cities, such as Coimbatore in Tamil Nadu, to address the challenges.
- The talent strategy included internal mobility initiatives such as InternalFirst, employee referrals, and top technical campus hiring.
- Wipro's leadership team engaged with the local ecosystem and developed talent strategies branded to both internal and external customers.
- They planted saplings to give back to the community and encourage growth.

Key benefits

- The talent strategy helped Wipro address the challenge of the Great Indian Attrition and attract cost-efficient talent from tier 2 cities such as Coimbatore, which offered a safer haven with lower attrition rates than tier 1 cities.
- The talent mix of NextGen diversified talent, highly skilled internal and external talent, and the delivery of shared services have nurtured this talent.
- Implementing the talent strategy led to low attrition rates, stability in service delivery, and effective talent supply, thereby positively affecting the clients' businesses.
- Wipro's services remained stable, with zero customer escalation, resulting in profitable growth and continuous service improvement through business value addition.

Antier Solutions Private Limited

Industry segment

Digital Technology Service Provider

Journey and derived benefits

About the company:

Antier Solutions Private Limited is a blockchain-focused company based in Mohali, Punjab. The company employs 600 people in India and is primarily active in the blockchain domain.

Challenges:

- Antier Solutions Private Limited faced difficulties recruiting and retaining local talent in Mohali.
- The company also had to develop innovative solutions to meet the demands of the examination platform for government job recruitment.

Solutions:

- Established the Antier School of Blockchain to address the talent shortage and enhance the local talent pool
- Launched the 'F60Day' programme to train over 500 team members in blockchain technology
- Engaged with local chapters of nasscom and TiE to foster networking and mentoring opportunities
- Designed a robust cryptography-based solution using blockchain technology to solve the issue of the examination platform for government job recruitment.

Key benefits:

- The solutions implemented by Antier Solutions Private Limited resulted in a skilled workforce in the region, adding value to the local talent pool.
- The establishment of Antier School of Blockchain and the F60Day programme helped the company recruit and retain employees with the necessary skills.
- Engagement with local chapters of nasscom and TiE created a strong local ecosystem.
- The cryptography-based solution for the examination platform has reduced corruption and provided data immutability and security to the question pool. Engaged with the local ecosystem through employee referral programme to tap into local talent

Genpact

Industry segment

Digital Technology Service Provider

Journey and derived benefits

Genpact has begun expanding and penetrating into emerging cities. It has a new upcoming site at Madikonda in Warangal (SEZ).

Challenges:

- The challenge was to plan and set up a new delivery centre in Warangal, creating job opportunities for 500 people in the city.
- The company had to secure fast approvals for setting up the site.
- Genpact also had to ensure proper infrastructure was developed and maintained for a smooth operation, such as adequate power back-up, safety, and security systems.
- The company had to source talent from the city to work in the new delivery centre.

Solutions:

- Genpact worked closely with the Telangana government to plan the set-up of a new delivery centre in Warangal. The company got single-window approvals from the government, and the government extended their help and recommendations to secure fast approvals for setting up the site. The Telangana government facilitated lesser rental for office space in their IT Incubation Centre in Warangal.
- The company conducted extensive market mapping on local talent and talent catchment areas. Multiple proofs of concepts were run to test hypotheses on talent availability and quality before hiring numbers were established. An immersion programme was crafted for smooth onboarding, covering organisation and client onboarding and fun sessions.

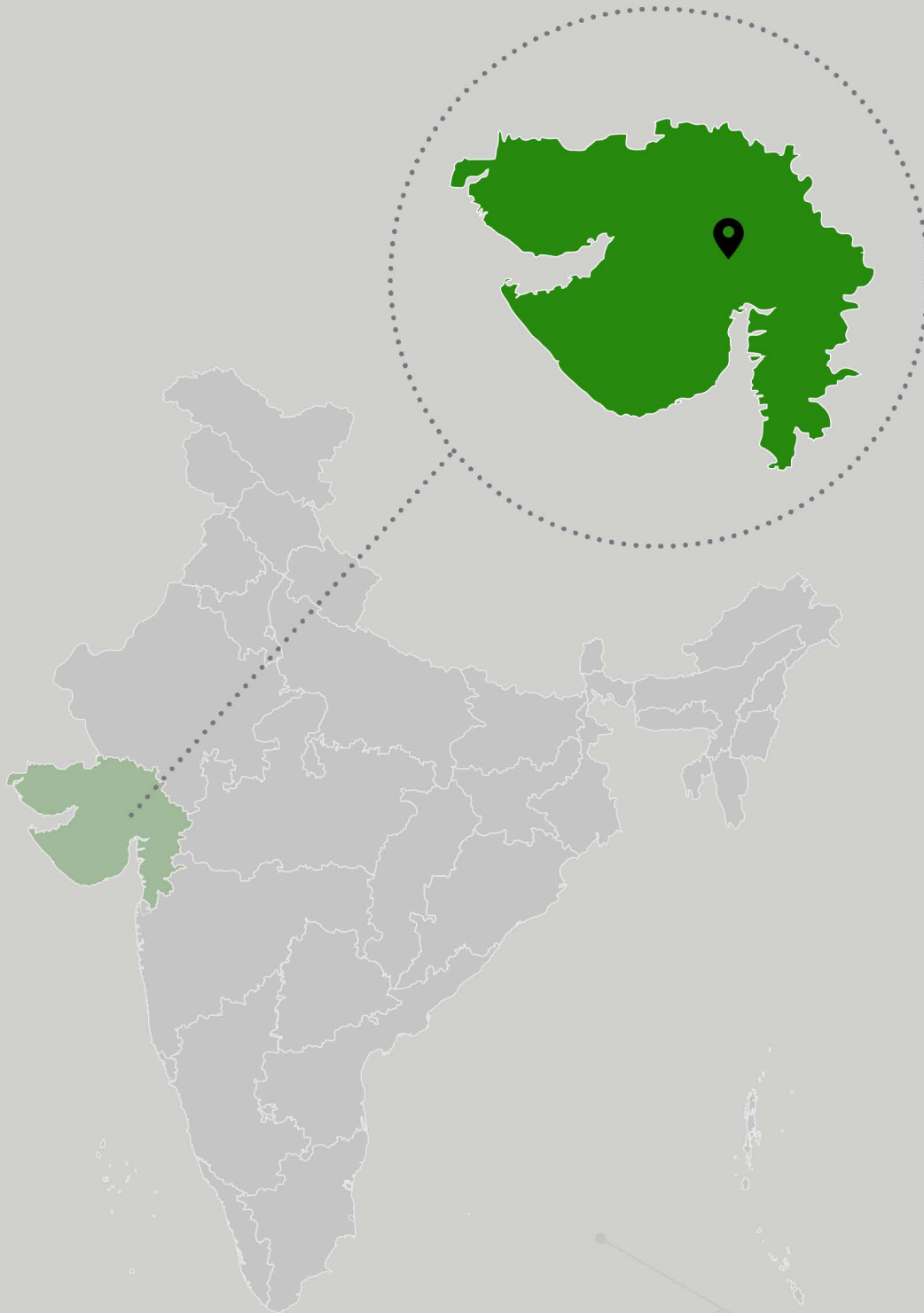
Key benefits

- The move to Warangal will create employment for 500 people in the city.
- The rentals offered by the Telangana government were almost one-fourth of the rentals quoted by property aggregators across Warangal.
- The Telangana government committed to fiscal incentives for Genpact, including investment subsidies on fixed capital investment, land allotment, and reimbursement of stamp duty, transfer duty, and registration fee.
- The company can draw on the local talent pool and expand its operations in the city.

Emerging hub profiles



Ahmedabad



Ahmedabad



Population
8.4 million



Adult literacy
88.16 %



Languages spoken
Gujarati, Hindi, English

Summary

- A strong presence of the technology sector; high availability of employed and trained talent pool.
- Host to 30+ GCCs and ~3,700 technology companies, including some major MNCs such as GE Healthcare.
- Home to premier institutes such as IIT Gandhinagar, Indian Institute of Management (IIM) Ahmedabad, and Nirma University.
- Start-up ecosystem promoted by launches such as the iHub-Gujarat initiative to encourage innovators.
- More than 30 incubators, along with government-supported Centre for Innovation Incubation and Entrepreneurship.
- High availability of Grade A office infrastructure-dedicated SEZ, e.g. Gujarat International Finance & Technology (GIFT) City operational in an area of 4 sq.km.
- High score on the infrastructure index due to the development of the metro system and a vast network of roads.
- Good connectivity to major technology hubs of India; upcoming Delhi-Mumbai Expressway to boost connectivity further.



90,000-95,000
experienced talent available



US\$ 300 million
Avg. investment in leading start-ups



30+
Incubators for start-ups



~3,700
tech-related businesses



4 sq.km.
area under GIFT City Special Economic Zone

Note:

- All Installed talent in tech and tech-related businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.
- Tech businesses include GCCs, BPM centers, IT service providers, and IT services vendors.

Talent availability



Fresh graduates in the city per year	⇒	55,000–60,000
STEM graduates	⇒	19,000–21,000
Other graduates	⇒	38,000–40,000
Talent pool in tech companies	⇒	90,000–95,000
No. of colleges	⇒	~550
Premier institutes (not exhaustive)	⇒	IIM Ahmedabad, National Institute of Pharmaceutical Education and Research
Avg. salary of a software developer (5–8 yrs exp)	⇒	INR 8–12 lakh per annum

- The city has an experienced talent pool of ~95,000 working in the technology industry.
- Highly qualified coders and developers, and finance/commerce graduates are available for technology services. Advanced skills such as robotics, machine learning, data science and DevOps are present to a limited extent.
- More than 500 colleges, of which 80 percent offer specialisation in commerce, management, and arts, are conducive to the technology industry.
- ~75,000 students graduate every year, but most of them migrate to other locations because of limited opportunities.
- Colleges such as the Indian Institute of Management Ahmedabad, St. Xavier’s College, and National Institute of Pharmaceutical Education and Research, Ahmedabad provide high-quality talent.

Note: Talent pool in tech companies refers to installed talent in tech businesses (including GCCs, IT, BPM, and others); data from FY 2022-23

Infrastructure attractiveness



Availability of metro (operational/planned)	⇒	Yes (74 km)
No. of flights to major cities per day	⇒	~94
Airport connectivity	⇒	International flights to Iraq, Kenya, Kuwait, Oman, Qatar, Saudi Arabia, Singapore, UAE, UK
Average download speed	⇒	43.86 Mbps
Office rental (Grade A office space)	⇒	INR 40–45/sq.ft./month

- Gujarat International Finance & Technology (GIFT) City, India’s first international finance service centre, has been developed on ~900 acres of land consisting of an SEZ and an exclusive domestic area.
- GIFT City is expected to create ~600,000 jobs directly and indirectly in finance, IT, commodity trading, and other functions.
- ~130 sq.km. area of the industrial zone is developed by Ahmedabad Urban Development Authority.
- It is well connected to other Indian cities through road, rail, and air transport. Intra-city metro connectivity is developing.
- The city offers attractive real estate options at approximately 30 percent of the cost compared with mature locations.

Note: Major cities refer to metropolitan cities of India.

Technology ecosystem



No. of tech and BPM companies	⇒	~3,700
No. of GCCs	⇒	~30
No. of tech and tech-enabled start-ups	⇒	~1,000
Major industries	⇒	Textile, pharmaceuticals, gems and jewellery, and banking financial services insurance (BFSI)

- Traditionally a manufacturing and trading hub, Ahmedabad has seen rapid industrialisation in the past two decades (since the early 2000s).
- Home to many technology companies, Ahmedabad is proving to be a promising location for technology and allied services.
- Ahmedabad is an emerging start-up ecosystem for the BFSI, pharmaceutical, and agriculture-based industries, and internet start-ups (accounting for 40 percent of the start-up ecosystem).
- It is a hub for the fintech, pharmaceutical, and allied industries.

Note: Tech and tech-enabled start-ups refer to setups with computer and software applications

Risk and regulatory environment



Rank in EODB	⇒	2/37 (very good)
Developed space/SEZ	⇒	~2.4 sq.km.
Seismic zone	⇒	3 (Moderate)
Probability of flooding	⇒	Medium
Power disruption risk	⇒	Low

- In terms of crime, Ahmedabad scores well and is considered a very safe city to live in.
- Due to the government's efforts to improve infrastructure and promote local businesses, Ahmedabad scores very high in the EODB ranking.

Note:

- Developed space/SEZ refers to areas dedicated to tech industry
- Seismic zone risk scale: 1 = low; 5 = high
- Power disruption risk refers to instances of power failure

Social and living environment



Education ecosystem index	➔	6.08 (moderate)
Medical ecosystem index	➔	13.11 (good)
Cost of living index	➔	24.42 (moderate)
Crime Index	➔	39.04 (good)
Pollution index	➔	55.90 (moderate)

- Ahmedabad, a bustling metropolis in Gujarat, offers a diverse social and living environment with a robust education and medical ecosystem, low cost of living, and low crime index.
- The city has ~ 4,381 schools and ~ 945 hospitals catering to the population's needs.
- The cost of living index, at 24.42, is 5 percent lower than other IT hubs, offering an affordable yet high-quality standard of living.
- However, the pollution index at 55.90 is moderate, but the city is taking steps to address the issue and maintain a healthy living environment for its citizens.

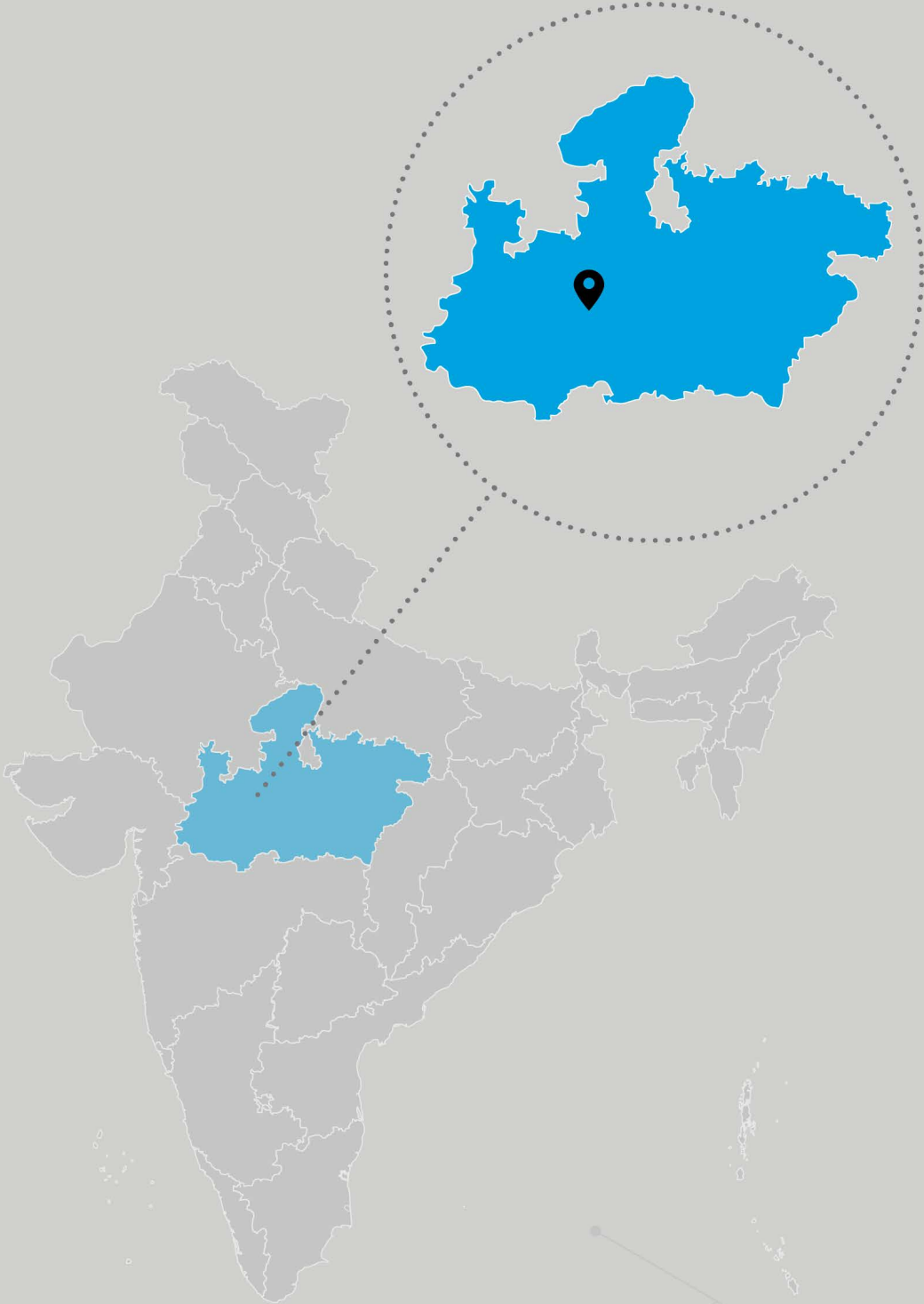
Note:

- Education ecosystem index refers to the number of schools per 1000 children.
- Medical ecosystem refers to the presence of medical facilities proportional to population.
- Cost of living index infers to the consumer prices and rent.
- Crime index refers to the safety of the citizens affected by criminal acts.
- Pollution index refers to the combination of parameters such as AQI and particulate matter.

What's next?

- Ahmedabad is a major hub of the BPM industry with a focus on providing finance and IT support services. Moreover, the city has the potential to extend its reach towards fulfilling the requirements of procurement and logistics functions, specifically for the manufacturing industries located in the Surat-Vadodara-Ahmedabad corridor.
- Ahmedabad, as a hub for manufacturing and host to distinguished institutions such as the Physical Research Laboratory and ATIRA, can emerge as a prominent centre for material technology research. This could facilitate the advancement of ER&D and innovation in this domain.

Bhopal



Bhopal



Population
2.6 million



Adult literacy
83.47 %



Languages spoken
Hindi, English

Summary

- Madhya Pradesh Start-up Policy was renewed in year 2022, and the new Madhya Pradesh Start-up Portal was unveiled to encourage innovators.
- Presence of 14+ incubation centres to promote innovation.
- Moderate presence of the technology sector. Moderate availability of employed and trained talent pool but high availability of graduates.
- Presence of premier institutes, such as National Institute of Technology and Indian Institutes of Science Education and Research.
- Presence of more than ~ 400 technology and BPM-related businesses, such as Firstsource.
- Moderate availability of Grade A office infrastructure; dedicated technology SEZ Mandideep Industrial area.
- Good connectivity to major technology hubs, such as Delhi-NCR, Mumbai, and Pune by road and other cities of India by air with a domestic airport.
- High EODB; INVEST a single-window portal to avail various services/approvals required for setting up business in place.



40,000–50,000
Experienced talent availability



29th rank
Amongst start-up destinations in India



~400
Tech-related businesses



27th rank
Least polluted city in India

Note:

- All established talent in tech and tech-related businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.
- Tech businesses include GCCs, BPM centers, IT service providers, and IT services vendors.

Talent availability



Fresh graduates in the city per year	⇒	60,000–67,000
STEM graduates	⇒	33,000–35,000
Other graduates	⇒	28,000–30,000
Talent pool in tech companies	⇒	40,000–50,000
No. of colleges	⇒	~450
Premier institutes	⇒	AIIMS, Maulana Azad National Institute of Technology, National Law Academy, School of Planning and Architecture, and Indian Institutes of Science Education and Research
Avg. salary of a software developer (5–8 yrs exp)	⇒	INR 7–10 lakh per annum

- Installed experienced talent strength of ~40,000 in the technology sector.
- Home to some nationally renowned research facilities and academic institutions: ISRO's Master Control Facility, AIIMS, Maulana Azad National Institute of Technology, Rajiv Gandhi Proudyogiki Vishwavidyalaya, National Law Academy, School of Planning and Architecture, and Indian Institutes of Science Education and Research, along with 200+ engineering, management, and medical institutions.
- ~60,000 students graduate per year; significant brain drain due to limited opportunities.

Note: Talent pool in tech companies refers to installed talent in tech businesses (including GCCs, IT/ITes, BPM, and others); data from FY 2022-23.

Infrastructure attractiveness



Availability of metro (operational/planned)	⇒	Yes (105 km)
No. of flights to major cities per day	⇒	~16
Airport connectivity	⇒	Domestic airport
Average download speed	⇒	47.61 Mbps
Office rental (Grade A office space)	⇒	INR 30–50/sq.ft./month

- Madhya Pradesh State Electronics Development Corporation Ltd. plans to develop a software and hardware technology park in Bhopal. MNCs such as Taurus Microsystems and Fujitsu plan to set up their centres here as well.
- Madhya Pradesh Industrial Development Corporation Limited (MPIDC) provides many incentives, such as fee exemption, interest subsidies, electricity duty exemption, rebate on power tariff, green industrialisation assistance, assistance to industrial parks, and infrastructure development assistance.
- MPIDC has also initiated the Integrated New Venture Establishment (INVEST) portal, which is a single-window portal to obtain various services/approvals.
- Bhopal has good connection to other Indian cities through road, rail, and air transport.

Note: Major cities refers to metropolitan cities of India.

Technology ecosystem



No. of tech and BPM set-ups	⇒	~400
No. of GCCs	⇒	NA
No. of tech and tech-enabled start-ups	⇒	~150
Major industries	⇒	Mining, Refining, Agricultural Products; Fast Growing BPO sector

- There are ~15,000 medium, small, and micro service units and ~21,000 medium, small, and micro manufacturing units.
- High investments exist in the electrical machinery and transport equipment business.
- Industrial suburb of Mandideep houses companies such as Eicher, Crompton Greaves, Fujitsu, and HEG.
- Recent council meetups are expected to analyse the state regarding Bhopal's IT investment climate to deliberate on the new proposed state IT policy.
- New policies, such as Animation Promotion Policy, Cloud Computing/Data Centre Policy, and Inclusion of Data Security and Data Theft clause in the latest state IT policy are some efforts made to promote the set-up of new technology and allied services.

Note: Tech and tech-enabled start-ups refer to set-ups with computer and software applications

Risk and regulatory environment



Rank in EODB	⇒	9/37 (Good)
Developed space/SEZ	⇒	~0.75 sq.km.
Seismic zone	⇒	2 (Low)
Probability of flooding	⇒	Medium
Power disruption risk	⇒	Low

- Moderate risk of natural disasters as the city lies in Seismic Zone 2, which makes it least prone to earthquakes.

Note:

- Developed space/SEZ refers to areas dedicated to tech industry
- Seismic zone risk scale: 1 = low; 5 = high
- Power disruption risk refers to instances of power failure

Social and living environment



Education ecosystem index	↻	15.35 (Good)
Medical ecosystem index	↻	6.12 (Moderate)
Cost of living index	↻	18.25 (Good)
Crime Index	↻	39.04 (Good)
Pollution index	↻	55.90 (Moderate)

- Bhopal offers a well-established education ecosystem with ~3,635 schools and a healthcare ecosystem with ~145 hospitals.
- The cost of living in Bhopal is relatively compared to established IT hubs.
- Bhopal is relatively safe (with fewer instances of major crimes).
- The pollution index in Bhopal is moderate (55.90).

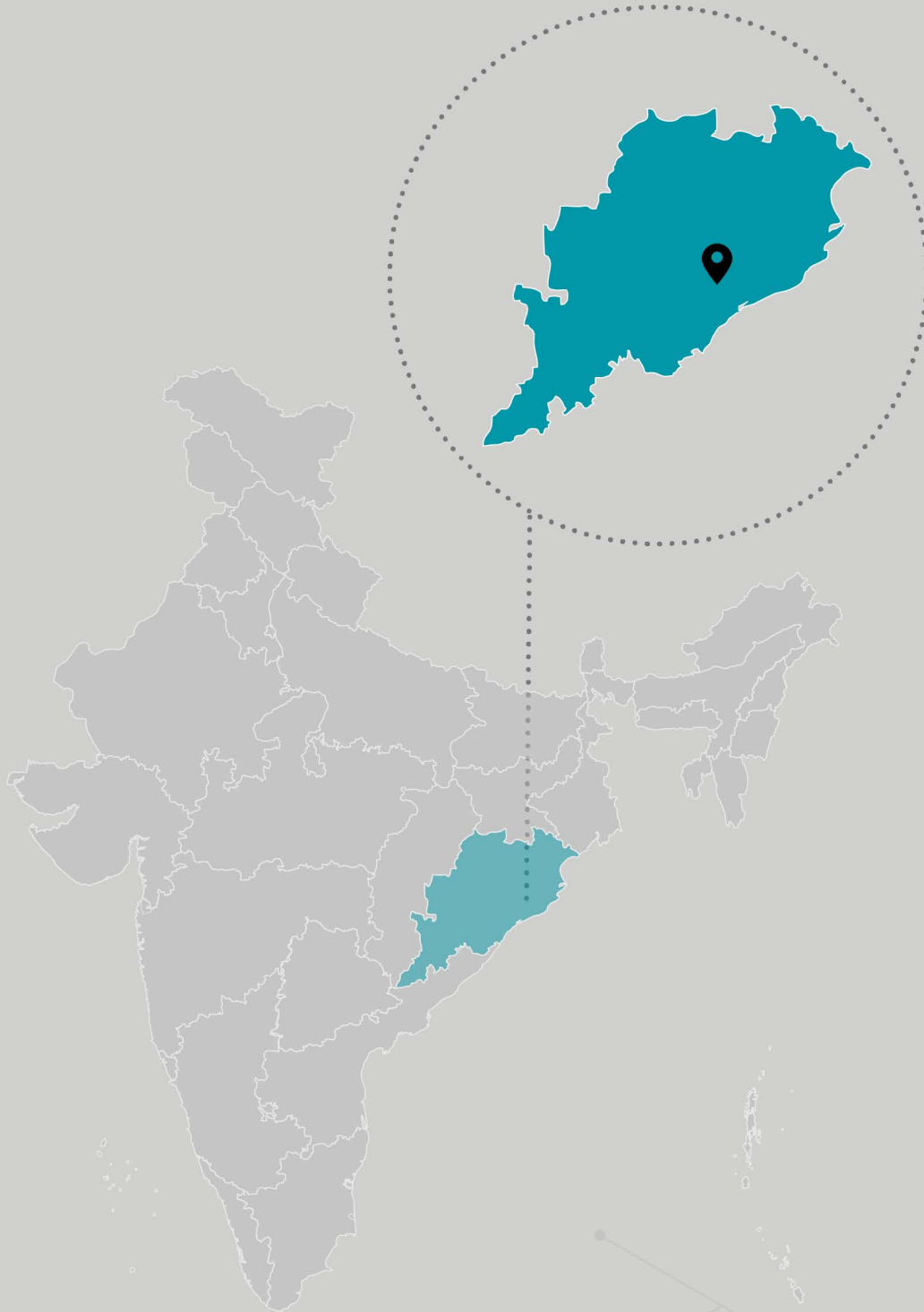
Note:

- The education ecosystem index refers to the number of schools per 1,000 children.
- The medical ecosystem refers to the presence of medical facilities proportional to population.
- The cost of living index refers to the consumer prices and rent.
- The crime index refers to the safety of the citizens affected by criminal acts.
- The pollution index refers to the combination of parameters such as AQI and particulate matter.

What's next?

- Local BPM firms predominantly occupy the technological landscape in Bhopal, while global service providers are establishing a presence in the area. However, the city's potential to become an international BPM hub can be realised with further investment in upskilling and language training, thereby instilling greater confidence in the local talent pool.
- Bhopal is home to many engineering colleges and has premier institutions, such as the Indian Institutes of Science Education and Research (IISER). The city is well-equipped to emerge as a leading technology hub of central India.

Bhubaneswar



Bhubaneswar



Population
1.22 million



Adult literacy
93.15 %



Languages spoken
**Odia, Hindi,
English, Bengali**

Summary

- Amongst the top performers in state/Union Territory (UT) Start-up Ranking 2021. Start-up Bhubaneswar is Odisha's premier and online platform for start-ups.
- Presence of 20+ incubators ensuring that the city is competitive in the innovation index.
- Host to 200+ technology- and BPM-related businesses.
- Availability of employed and trained talent pool is high and rate of unemployment is the lowest.
- Home to premier institutes, such as IIT Bhubaneswar, Kalinga University, and C.V. Raman Global University.
- Availability of Grade A office infrastructure, dedicated technology SEZ (i.e. Infocity, Infovalley, and IDCO Knowledge Park) is high.
- Provisions for tax holidays, subsidy reimbursement, subsidy for utilities, and single window clearance under Odisha IT policy 2019.
- Good connectivity to the major technology hub Hyderabad by road and other cities of India by air (with a domestic airport).



60,000–65,000

Experienced talent availability



Top performer

In developing a strong start-up ecosystem



~200

Tech-related businesses



1 lakh acres

Land bank to be made available by year 2025

Note:

- All Installed talent in tech and tech-related businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.
- Tech businesses include GCCs, BPM centers, IT service providers, and IT services vendors.

Talent availability



Fresh graduates in the city per year	⇒ 49,000–52,000
STEM graduates	⇒ 30,000–31,000
Other graduates	⇒ 20,000–21,000
Talent pool in tech companies	⇒ 60,000–65,000
No. of colleges	⇒ ~330
Premier institutes	⇒ IIT Bhubaneswar, Kalinga Institute of Industrial Technology, C. V. Raman Global University, and XIM University are some of the prominent colleges
Avg. salary of a software developer (5–8 yrs exp)	⇒ INR 8–12 lakh per annum

- About 65,000 experienced talent are recruited in the technology sector.
- About 96 percent of the workforce is employed in the service sector, where technology forms a major part.
- It has the lowest unemployment rates amongst tier 2 locations. According to the CMIE report, it stands at 1.47 percent in the last quarter of FY 2021–2022.
- Skilled personnel suitable for technology industry usually migrate to cities such as Bengaluru and Hyderabad in search of higher-paying jobs.
- Premier institutes, such as Kalinga University, IIT Bhubaneswar, C.V. Raman Global University, and other tier 2 institutes, ensure supply of ~49,000 fresh graduates per year.

Note: Talent pool in tech companies refers to installed talent in tech businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.

Infrastructure attractiveness



Availability of metro (operational/planned)	⇒ Yes (30 km)
No. of flights to major cities per day	⇒ ~45
Airport connectivity	⇒ Domestic airport
Average download speed	⇒ 43.76 Mbps
Office rental (Grade A office space)	⇒ INR 60–80/sq.ft./month

- The state government plans to create a land bank of 1 lakh acres by year 2025–2026 to avoid local resistance against land acquisition.
- The government has fostered growth through several IT parks, such as Infocity-1, InfoValley, STPI, and JSS STP, and state-of-the-art infrastructure facilities equipped with plug-n-play facilities and abundant power supply to ensure smooth operation of the IT sector.
- Ministry of Electronics and IT (MEITY) launched Next-Generation Incubation Scheme, Virtual and Augmented Centre of Entrepreneurship (VARCoE), and Electropreneur Park in Bhubaneswar. Its Export Promotion Industrial Parks scheme provides special incentives and facilitates for setting up IT parks and zones.
- An international airport is being developed and is expected to be operational by year 2023.

Note: Major cities refer to metropolitan cities of India.

Technology ecosystem



No. of tech and BPM set-ups	↔	~200
No. of GCCs	↔	NA
No. of tech and tech-enabled start-ups	↔	~200
Major industries	↔	Mining, Agri-based manufacturing

- Industries supporting the economy range from agriculture, horticulture, engineering, and agriculture-based industries to IT-enabled services, handloom, and tourism.
- The technology sector forms a major part of the service industry.
- Home to ~200 technology set-ups in various categories; of them, First Source, a major Indian IT set-up, is based in Bhubaneswar.
- Bhubaneswar has constantly recorded double-digit growth in software exports since year 2012–2013.
- Start-ups are dominated by technology, enterprise software, e-commerce, healthcare technology, and other technology allied services.
- Start-up Bhubaneswar is Odisha's premier and definitive online platform aimed at helping aspiring entrepreneurs and budding innovators.

Note: Tech and Tech-enabled start-ups refer to setups with computer and software applications.

Risk and regulatory environment



Rank in EODB	↔	11/37 (Moderate)
Developed space/SEZ	↔	~2.03 sq.km.
Seismic zone	↔	3 (Moderate)
Probability of flooding	↔	Medium
Power disruption risk	↔	Low

- Bhubaneswar lies in Seismic Zone 3 with a moderate risk of earthquakes but a high risk of torrential cyclones every monsoon.

Note:

- Developed space/SEZ refers to areas dedicated to the tech industry
- Seismic zone risk scale: 1 = low; 5 = high
- Power disruption risk refers to instances of power failure

Social and living environment



Education ecosystem index	➔	11.44 (Moderate)
Medical ecosystem index	➔	3.15 (Moderate)
Cost of living index	➔	20.56 (Good)
Crime Index	➔	39.04 (Good)
Pollution index	➔	55.90 (Moderate)

- The city has a thriving education ecosystem, with more than 2,500 schools catering to the diverse needs of the student population. The quality of education is exemplary, and schools are well-equipped with modern facilities to provide a conducive learning environment.
- Furthermore, the city has a robust medical ecosystem, with ~71 hospitals providing quality medical care to citizens. Hospitals are equipped with state-of-the-art facilities and staffed by highly qualified and skilled medical professionals.
- The city also boasts of a relatively low cost of living index of 20.56 (~20 percent less expensive than other IT hubs).
- The city also has fewer instances of crime and moderate pollution levels.

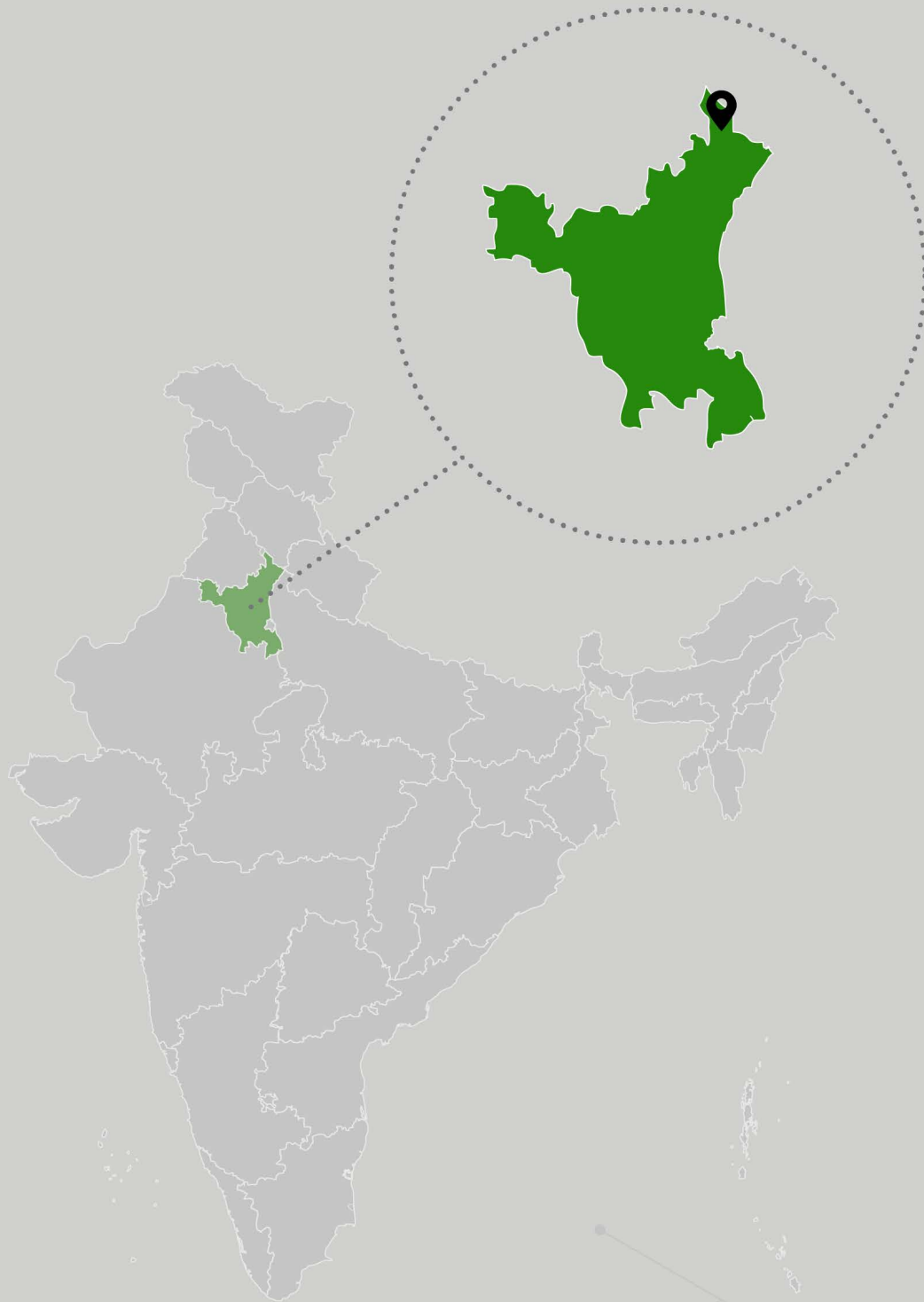
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- The cost of living index infers to consumer prices and rent.
- The crime index refers to the safety of the citizens affected by criminal acts.
- The pollution index refers to the combination of parameters such as AQI and particulate matter.

What's next?

- Although Bhubaneswar is a relatively discreet player in the tech domain, it is soon poised for significant growth due to its service industry, including the tech sector, which employs nearly 96 percent of the total working population.
- The city is home to a dominant cluster of ESDM industries, which, along with prestigious institutions, such as the Institute of Life Sciences, Bhubaneswar, Regional Medical Research Centre, Regional Plant Resource Centre, and National Institute of Science Education and Research, places it in a promising position to emerge as a leading biotechnology hub in the future.

Chandigarh



Chandigarh



Population
1.19 million



Adult literacy
86.05%



Languages spoken
Punjabi, Hindi, English

Summary

- Host to select GCCs and more than 600+ technology- and BPM-related business set-ups, with the major ones being XEROX and Siemens.
- Moderate presence of the technology sector; high availability of employed and trained talent pool.
- Home to premier institutes, such as Punjab Engineering College (PEC), Panjab University, and Chandigarh University.
- Ranked 12th amongst top start-up destinations in India; the Chandigarh Start-up Policy 2021 has special provisions for technology start-ups.
- Developing as an innovation hub with the help of more than four incubation centres focusing on innovation in various fields.
- Highest per capita income in the country; high English proficiency due to the presence of advanced language institutes.
- Infra projects are streamlined with the formation of a common development authority for the Chandigarh Interstate Capital Region.
- Moderate availability of Grade A office infrastructure, dedicated Technology SEZ, i.e. Rajiv Gandhi Chandigarh Technology Park.
- Good connectivity to the major technology hub Delhi-NCR by road and other cities of India by air with an international airport.



55,000–65,000
experienced talent available



12th rank
Amongst start-up destinations
in India



~600
Tech-related businesses



1st rank
Per capita income

Note:

- All Installed talent in tech and tech-related businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.
- Tech businesses include GCCs, BPM centers, IT service providers, and IT services vendors.

Talent availability



Fresh graduates in the city per year	⇒	16,000–20,000
STEM graduates	⇒	4,000–4,500
Other graduates	⇒	12,000–12,500
Talent pool in tech companies	⇒	55,000–60,000
No. of colleges	⇒	~70–75
Premier institutes	⇒	PEC, Panjab University, DAV College, Chandigarh University
Avg. salary of a software developer (5–8 yrs exp)	⇒	INR 8–13 lakh per annum

- More than 50,000 experienced individuals employed in several technology set-ups in the city, with more than two-thirds of this talent working in technology functions.
- Proximity to NCR and the emergence of the tri-city of Mohali, Panchkula, and Chandigarh facilitates access to talent for technology companies in Chandigarh.
- Presence of over 10 AICTE-approved engineering colleges, such as PEC and Panjab University, provides a pool of fresh talent.
- English proficiency is high due to proximity to NCR and the presence of advanced English language institutes.

Note: Talent pool in tech companies refers to installed talent in tech businesses (including GCCs, IT/ITes, BPM, and Others); data from FY 2022-23.

Infrastructure attractiveness



Availability of metro (operational/planned)	⇒	No
No. of flights to major cities per day	⇒	~36
Airport connectivity	⇒	International with direct flight to Sharjah and Dubai
Average download speed	⇒	48.14 Mbps
Office rental (Grade A office space)	⇒	INR 60–80/sq.ft./month

- The lack of land availability is a major concern when new industries/factories are to be established or expanded.
- Floor Area Ratio of 0.75 is also lower than that in other similar cities, such as Mohali, leading to underutilised infrastructure.
- Rajiv Gandhi Chandigarh Technology Park (RGCTP) is a 140 hectare SEZ with the presence of leading companies such as Reliance.
- The city has good connection to other cities in India through road, rail, and air transport.

Note: Major cities refer to metropolitan cities of India.

Technology ecosystem



No. of tech and BPM companies	➔	600-650
No. of GCCs	➔	~11
No. of tech and tech-enabled start-ups	➔	~300
Major industries	➔	Automobile equipment manufacturing, metals and alloys

- It is host to some USA-based GCCs, such as XEROX.
- Chandigarh has the potential to act as the spoke for the technology hub of the Delhi-NCR region.
- Most of the industries are small- and mid-size, with a focus on ancillary units for manufacturing tractor components.
- Establishment of RGCTP boosted the growth of IT, creating ~25,000 jobs between year 2005 and year 2010.
- The city ranks 12th amongst top start-up destinations in India, one up from last year. The ecosystem supports blockchain, agriculture technology, AI, and healthcare technology domains.
- The start-ups that emerged in the tri-city region are in varied industries, such as on-demand transportation (Jugnoo), brewery (Simba Beer), and software (Trigma, Viprasoft, and iVERTDi).

Note: Tech and tech-enabled start-ups refer to set-ups with computer and software applications.

Risk and regulatory environment



Rank in EODB	➔	23/37 (Low)
Developed space/SEZ	➔	~1.5 sq.km.
Seismic zone	➔	4
Probability of flooding	➔	Low
Power disruption risk	➔	Low

- There is a high risk of earthquakes but a moderate risk of other natural calamities.

Note:

- Developed space/SEZ refers to areas dedicated to the tech industry
- Seismic zone risk scale: 1 = low; 5 = high
- Power disruption risk refers to instances of power failure

Social and living environment



Education ecosystem index	↔	9.13 (Moderate)
Medical ecosystem index	↔	11.45 (Good)
Cost of living index	↔	22.51 (Moderate)
Crime Index	↔	43.46 (Moderate)
Pollution index	↔	51.41 (Moderate)

- Chandigarh has a well-developed education ecosystem, with over ~1,400 schools catering to the diverse needs of the student population. The quality of education in the city is exemplary, and schools are well-equipped with modern facilities to provide a conducive learning environment.
- The city has a robust medical ecosystem with ~177 hospitals providing quality medical care to citizens.
- The cost of living in Chandigarh is ~15 percent less than in other IT hubs.
- The city fares well in terms of crime and pollution and is making continuous efforts to improve the environment and safety of its citizens.

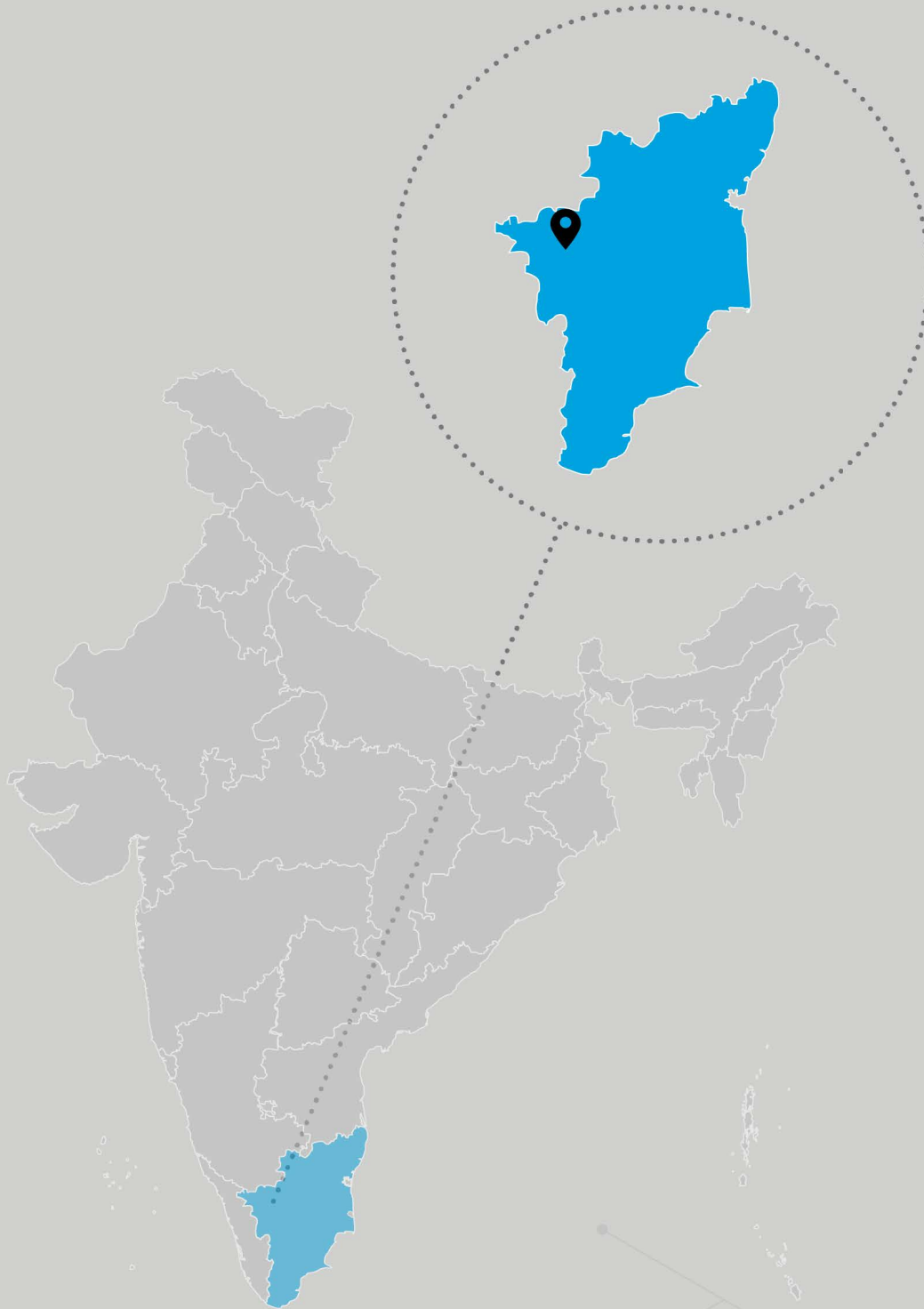
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- Medical ecosystem refers to the presence of medical facilities proportional to population.
- The cost of living index infers to consumer prices and rent.
- The crime index refers to the safety of the citizens affected by criminal acts.
- The pollution index refers to the combination of parameters such as AQI and particulate matter.

What's next?

- The start-up ecosystem in the region is diverse and caters to blockchain, agriculture technology, AI, and healthcare technology, amongst others.
- Chandigarh is an ideal location for start-ups in education, marketing and sales, and software and data sectors because of its supportive infrastructure and conducive environment.
- More co-working spaces can promote entrepreneurship and innovation to boost start-up growth in the area, while more technology parks in the suburban areas of Mohali and Panchkula can pave the way for significant tech progress in the next few decades.

Coimbatore



Coimbatore



Population
2.86 million



Adult literacy
91.30%



Languages spoken
Tamil, Malayalam, English

Summary

- Host to 1,000+ technology- and BPM-related business set-ups.
- Moderate presence of the technology sector; high availability of employed and trained talent pool.
- Home to premier institutes, such as PSG College and Coimbatore Institute of Technology, which ensure quality talent supply.
- Ranked 13th amongst the best Start-up destinations in India; the initiative launched by the government of Tamil Nadu to encourage start-ups in the city.
- As many as 13 incubators established in the city to ensure that the innovation quotient of the human resource is developed and encouraged.
- High availability of Grade A office infrastructure, dedicated technology SEZ, i.e. STPI and ELCOT.
- The proposed five-line Kovai Metro is to be operational from 2027, along with four major internal road projects to ease congestion.
- Easy access to the major technology hubs of Bengaluru and Chennai by road and other cities in India by air via an international airport.



100,000–120,000
Experienced talent availability



250+
Start-ups



~1,000
Tech-related businesses



13th rank
Best start-up destination in India

Note:

- All installed talent in tech and tech-related businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.
- Tech businesses include GCCs, BPM centres, IT service providers, and IT services vendors.

Talent availability



Fresh graduates in the city per year	⇒	68,000-70,000
STEM graduates	⇒	41,000-43,000
Other graduates	⇒	26,000-28,000
Talent pool in tech companies	⇒	100,000-120,000
No. of colleges	⇒	~300
Premier institutes	⇒	Tamil Nadu Agricultural University, PSG College of Arts and Science, and Coimbatore Institute of Technology
Avg. salary of a software developer (5-8 yrs exp)	⇒	INR 8.5-12 lakh per annum

- It has about ~100,000- 120,000 experienced talent, of which ~65 percent of the talent being in IT functions.
- It showed maximum year-on-year growth of ~60 percent in hiring across non-metro cities in June 2022.
- The cost of living in Coimbatore is about 22 percent lower than that in metro cities, such as Gurugram and Bengaluru; this is a crucial factor for talent migrating towards it for the same remuneration.
- Saravanampatti is one of the fastest-growing localities in the neighbourhood. It is termed as the educational hub of Coimbatore and has a total of ~300 colleges across multiple specialisations with ~95,000 graduates every year.

Note: Talent pool in tech companies refers to installed talent in tech businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.

Infrastructure attractiveness



Availability of metro (operational/planned)	⇒	Yes (147 km)
No. of flights to major cities per day	⇒	~25
Airport connectivity	⇒	International with direct flights to Singapore, and the UAE
Average download speed	⇒	50.4 Mbps
Office rental (Grade A office space)	⇒	INR 80-90/sq.ft./month

- ~160,000 sq.ft. trade fair ground built in 1999. It was called COINTEC because it hosts INTEC (Small Industries Exhibition), along with a well-developed textile industry and other industrial bases.
- Tamil Nadu Industrial Development Corporation is in the process of acquiring an additional ~3,800 acres of land on the city outskirts to develop industrial parks.
- In year 2021-2022, as part of the digitalisation of entire records of the secretariat under the e-office programme, Electronics Corporation of Tamil Nadu (ELCOT) procured IT hardware worth INR 121.32 crore with a projected procurement for Year 2022-2023 of INR 300 crore.

Note: Major cities refer to metropolitan cities of India.

Technology ecosystem



No. of tech and BPM set-ups	↪	~1000
No. of GCCs	↪	NA
No. of tech and tech-enabled start-ups	↪	~250
Major industries	↪	Mining, Refining, Agricultural Products, Fast Growing BPO sector

- A large number of small and medium-size textile mills, along with manufacturing, engineering, and application development industries, comprise ~20 percent of the market share.
- It is home to ~1,000 technology set-ups serving functions in the domains of healthcare, IT support, analytics, research, and voice and non-voice processes.
- Coimbatore can act as the technology hub for Bengaluru and Chennai and offer cost arbitrage with equal quality of service delivery. Being a manufacturing hub, it can be developed as a hub for manufacturing-related GCCs.
- More than 40 percent of tech-related start-ups are involved in software as a service (SaaS), Internet, AI/ machine learning, IoT, blockchain, and digital technology.
- It is home to technology start-ups, such as matrimony.com and sulekha.com, even before the current start-up boom that started a decade ago.
- A turf for wannabe unicorns, start-ups in Coimbatore have nurtured talent with advanced IT skills, which has been considered as a potential talent pool by the technology industry.
- Start-up TN is a government initiative for start-ups in major sectors with different fund options for different entities. Tamil Nadu announced a slew of measures to promote start-ups and plans to support ~10,000 start-ups in the next four years.

Note: Tech and tech-enabled start-ups refer to setups with computer and software applications

Risk and regulatory environment



Rank in EODB	↪	6/37 (Moderate)
Developed space/SEZ	↪	~0.75 sq.km
Seismic zone	↪	3 (Moderate)
Probability of flooding	↪	Medium
Power disruption risk	↪	Low

- It has a moderate risk of earthquakes (as it lies in Seismic Zone 3), cyclones and other natural calamities.
- No major protests or riots have been recorded.

Note:

- Developed space/SEZ refers to areas dedicated to tech industry
- Seismic zone risk scale: 1 = low; 5 = high
- Power disruption risk refers to instances of power failure

Social and living environment



Education ecosystem index	↻	5.78 (Moderate)
Medical ecosystem index	↻	7.54 (Good)
Cost of living index	↻	20.10 (Moderate)
Crime Index	↻	39.04 (Good)
Pollution index	↻	55.90 (Moderate)

- The social and living environment in Coimbatore is characterised by a moderate education ecosystem with a score of 5.78. The cost of living is ~25 percent lower than that in matured metropolitan hubs.
- It has a good medical ecosystem with a score of 7.54, a moderate cost of living index with a score of 20.10, a good crime index with a score of 39.04, and a moderate pollution index with a score of 55.90.
- Coimbatore offers a balance of good and moderate social and living conditions, with a well-developed medical ecosystem and a low crime rate as its strong points, whereas the education ecosystem and pollution levels may need some improvement.

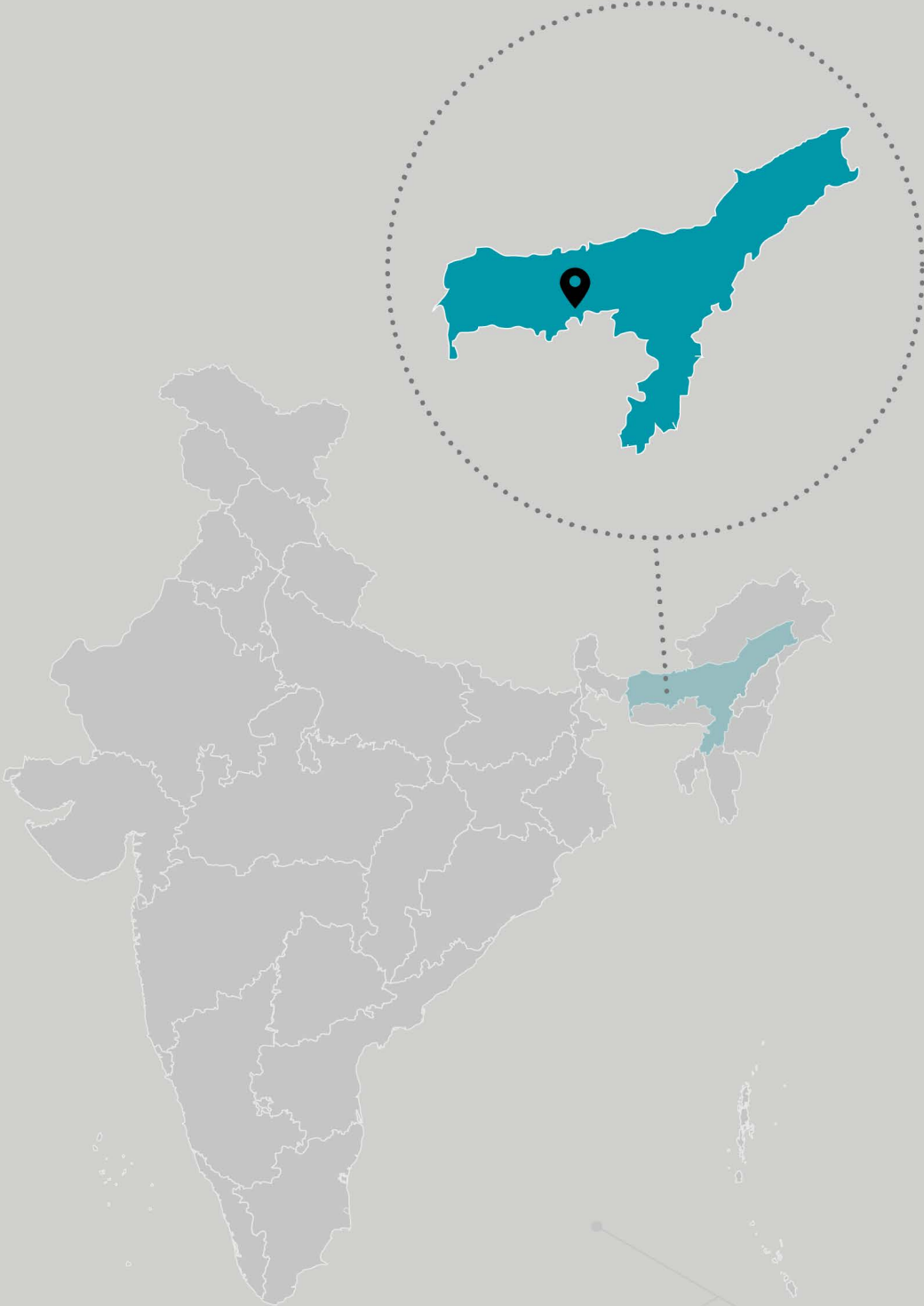
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- The cost of living index infers to the consumer prices and rent.
- The crime index refers to the safety of the citizens affected by criminal acts.
- The pollution index refers to the combination of parameters such as AQI and particulate matter.

What's next?

- Prominent engineering organisations have relocated their ER&D operations to Coimbatore. The presence of premier institutes and research facilities has made Coimbatore a preferred destination for their ER&D operations.
- Coimbatore has been successful in offering an ideal location for start-ups in the e-commerce and retail, software and data, and health sectors, making it an ideal destination for companies in this sector.
- The city's established educational and research institutions can support incubators and training centres to offer a steady talent pipeline and develop into a favourable location for innovative start-ups.

Guwahati



Guwahati



Population
1.15 Mn



Adult literacy
91.47%



Languages spoken
Assamese, Bodo, Rabha, Karbi, Hindi, English

Summary

- Presence of ~500 technology- and BPM-related business set-ups.
- Moderate presence of the technology sector and average availability of employed and trained talent pool in the city.
- Premier institutes, such as IIT Guwahati have ensured quality technology and associated fresh talent that are essential for the budding tech industry.
- The establishment of seven incubators has set pace for the city to enter the technology innovation space.
- Tourism-based industries form an important cluster and generate a considerable number of jobs.
- STPIs promoted by the Government of India, along with the availability of Grade A office space, makes it a cost-effective option for office set-up.
- The proposed construction of a ring road around the city is bound to boost commercial activities in the city outskirts as well.
- The airport is fully operational as it is the most important airport in the northeast region that connects to major technology hubs.



~20,000
Experienced talent availability



~250
Start-ups



~500
Tech-related businesses



7
Incubators

Note:

- All Installed talent in tech and tech-related businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.
- Tech businesses include GCCs, BPM centers, IT service providers, and IT services vendors.

Talent availability



Fresh graduates in the city per year	⇒	21,000–22,000
STEM graduates	⇒	7,000–7,500
Other graduates	⇒	14,000–14,500
Talent pool in tech companies	⇒	18,000–20,000
No. of colleges	⇒	~116
Premier institutes	⇒	IIT Guwahati, Guwahati College of Architecture & Planning, and NEF Law College are some of the prominent institutes
Avg. salary of a software developer (5–8 yrs exp)	⇒	INR 7–8.5 lakh per annum

- The talent pool working in IT profiles accounts for ~6,000 employees, followed by 2,500 in engineering/R&D.
- The average cost of hiring a talent having 5–8 years of experience of core IT/tech skills is INR 8.1 lakh, digital skills is INR 5.2 lakh, and customer support is INR 3.5 lakh.
- IIT Guwahati, Guwahati College of Architecture & Planning, and NEF Law College are some of the premium institutes located in the city.
- For FY 2021–2022, IIT-G's overall placement for B.Tech and B.Des students was 89.14 percent and average salary of INR 25.88 lakh, whereas it was 70.64 percent for M.Tech and M.Des students with an average salary of INR 17.16 lakh. Most students were placed in tier 1 cities in IT/ software, finance, non-tech profiles, analyst, and core engineering and design.

Note: Talent pool in tech companies refers to installed talent in tech businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23

Infrastructure attractiveness



No. of modes of local transport	⇒	Roadways, railways, and inland waterways
No. of flights to major cities per day	⇒	~25
Airport connectivity	⇒	Domestic + International
Average download speed	⇒	47.78 Mbps
Office rental (Grade A office space)	⇒	INR 30–40/sq.ft./month

- Considered a growing hub for commercial real estate in year 2021.
- NHAI will upgrade the existing four-lane national highway to a six-lane and the estimated project cost is INR 356.02 crore.
- The ongoing development projects include Guwahati Metro Rail, a park at Hengrabari, two bridges over the Brahmaputra and Games Village II. There are around 15–20 upcoming residential projects in the pipeline as well.
- The new proposed road network comprises a radial-cum-ring system and three ring roads: inner ring road (CBD Orbital), ring road, and the peripheral ring road (ROW of 60 m).

Note: Major cities refers to metropolitan cities of India.

Technology ecosystem



No. of tech and BPM set-ups	➔	~500
No. of GCCs	➔	NA
No. of tech and tech-enabled start-ups	➔	~250
Major industries	➔	Oil, Tea, Tourism, Hospitality, Banking & Financial Services, Pharmaceuticals, Electronics, Print and Electronic Media, Real Estate, Assam Handicraft

- Known for the trade, transportation, and services industries and an important trade hub in northeast India.
- STPI Guwahati is one of the 11 STPI jurisdictions having its main centre in Assam.
- Lohra (Jalukbari-Khanapara) is an upcoming IT hub of Guwahati that will attract real estate investors as it is close to NH27 and the stadium.
- In all, ~250 start-ups are incorporated in Guwahati, with 9 tech start-ups and ~7,901 MSMEs in Kamrup district.
- Some unicorns such as Clear, Tipalti, MyGate, and MindTickle are from IIT Guwahati.

Note: Tech and tech-enabled start-ups refer to setups with computer and software applications.

Risk and regulatory environment



Rank in EODB	➔	14/37 (Moderate)
Developed space/SEZ	➔	Proposed a plan in 2017, construction not commenced
Seismic zone	➔	5 (High risk)
Probability of flooding	➔	Medium
Power disruption risk	➔	Medium

- Guwahati has a high risk of earthquakes; the latest one was recorded in year 2021. It was mild on the Richter scale with no significant damages.
- Crime is in control with no major protests or demonstrations recorded over recent years.
- The state government is stable, and new policies are favourable to the technology sector and have minimal expected impact in case of a change of government.

Note:

- Developed space/SEZ refers to areas dedicated to tech industry
- Seismic zone risk scale: 1 = low; 5 = high
- Power disruption risk refers to instances of power failure

Social and living environment



Education ecosystem index	➔	37.93 (Good)
Medical ecosystem index	➔	4.52 (Moderate)
Cost of living index	➔	21.43 (Moderate)
Crime Index	➔	44.59 (Moderate)
Pollution index	➔	37 (Good)

- Guwahati's social and living environment is characterised by a good education ecosystem.
- A moderate cost of living index is ~16 percent lower than other IT hubs, a moderate crime index is ensured due to good governance and law enforcement and a good pollution index with less AQI.
- The location offers a balance of good and moderate social and living conditions, with a good education ecosystem and low pollution levels as its strengths, whereas the medical ecosystem and crime rate may require some improvement.

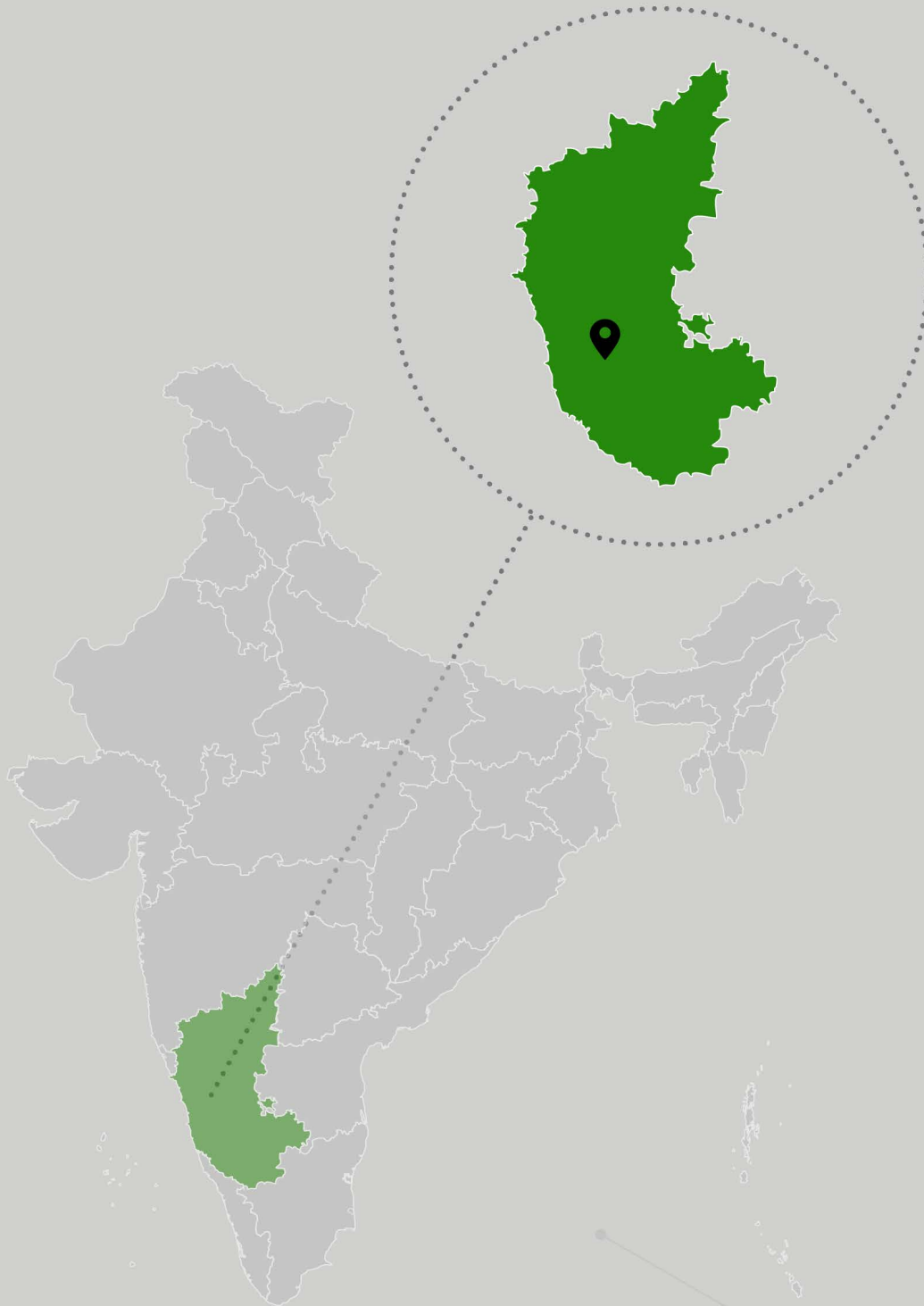
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- The cost of living index infers to the consumer prices and rent.
- The crime index refers to the safety of the citizens affected by criminal acts.
- The pollution index refers to the combination of parameters, such as AQI and particulate matter.

What's next?

- The emergence of Guwahati as a BPM hub has been facilitated by the presence of STPI, which continues to provide a platform for the growth and development of the IT industry in the city.
- Guwahati has seven incubation centres that offer support and resources for start-ups, helping foster a thriving entrepreneurial ecosystem in the city. Guwahati is an ideal location for start-ups in the foodtech, fintech, and software and data sectors.
- Educational institutes, along with government skills and training institutes offering BPM courses, can promote the industry in the region.

Hubbali



Hubbali



Population
1.15 million



Adult literacy
86.79%



Languages spoken
Kannada, Hindi, English

Summary

- Presence of more than 36 technology- and BPM-related business set-ups, the major one being Infoedge.
- Extremely low presence of the technology sector. Very limited availability of employed and trained talent pool in the city.
- Home to premier institutes, such as IIT, Indian Institute of Information Technology (IIIT), KLE Technological University, and Karnataka University; These institutes ensured quality tech and allied fresh talent essential for the budding tech industry.
- Setting up of two Incubators has set the pace for the city to enter the technology innovation space.
- Part of the Mumbai–Bengaluru industrial corridor and home to agro-based, manufacturing and logistic companies.
- Lower prices of land compared to nearby Technology hub Bengaluru; some tech giants have setup their standalone SEZs in the region.
- Construction of smart roads to decongest the city roads is undertaken under the smart city initiative.
- Airport operational and flights connecting to major cities Mumbai, Bengaluru, Kochi, Goa, and Hyderabad.



~6000
Experienced talent available



~50
Start-ups



~36
Tech-related businesses



~38,000
Fresh graduates every year

Note:

- All Installed talent in tech and tech related businesses (including GCCs, IT/Ites, BPM, Others); data from FY 2022-23.
- Tech business: GCC, BPM centers, IT service providers, IT services vendors

Talent availability



Fresh graduates in the city per year	⇒ 16,000–20,000
STEM graduates	⇒ 6,000–7,000
Other graduates	⇒ 10,000–12,000
Talent pool in tech companies	⇒ 5,000–6,000
No. of colleges	⇒ ~176
Premier institutes (not exhaustive)	⇒ IIT, IIIT, KLE Technological University, Karnataka University, Karnataka Institute of Medical Sciences (KIMS)
Avg. salary of a software developer (5–8 yrs exp)	⇒ INR 5.5L–7.6 lakh per annum

- Popularly known as 'Shikshana Kaashi' or 'Vidya Kaashi', Hubballi is the education hub of the north Karnataka region. It hosts IIT, IIIT, and other prestigious educational institutions. Hubballi-Dharwad has five engineering colleges, four medical colleges, nearly 150 PU colleges, 27 degree colleges, and 13 polytechnic colleges.
- Of the 6000+ IT-BPM talent pool of professionals, 3,000+ are IT professionals and ~1,500 are engineers/R&D; skills such as the cloud have ~200 and AI/ML have 111 people.
- Companies such as Techjini, Global Mergers, and Huawei join the placements drive. In year 2022, two CSE students were selected with a salary package of INR 43 LPA. An IT service management company selected 40 students (CSE, ECE) with a salary package of INR 21.5 LPA and Mercedes Benz R&D India selected 40 students (CSE, ECE) with a salary package of INR 10 LPA.

Note: Talent pool in tech companies refers to installed talent in tech businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.

Infrastructure attractiveness



Modes of local transport	⇒ Bus, Taxi, Train, Auto rickshaws
No. of flights to major cities per day	⇒ ~15
Airport connectivity	⇒ Domestic
Average download speed	⇒ 38.61 Mbps
Office rental (Grade A office space)	⇒ INR 40–60/sq.ft./month

- The development of smart roads in Hubballi is underway, and the first road is almost operational.
- Ongoing projects include the beautification of nine key traffic circles with the installation of CCTV cameras and signals.
- A truck terminal is set to be built in PPP mode, with parking for over 2,000 trucks and various facilities such as warehouses, cold storage, and health clinics.
- The Hubballi–Ankola rail line project is in its final stages of clearance.
- The state government plans to establish a branch of Jayadeva Cardiac Hospital and an FMCG cluster in the nearby Dharwad region, which will generate more than 100,000 jobs.

Note: Major cities refer to metropolitan cities of India.

Technology ecosystem



No. of tech & BPM set-ups	⇒	~36
No. of GCCs	⇒	NA
No. of tech and tech-enabled start-ups	⇒	~50
Major industries	⇒	IT, petroleum, textile, pharma, steel furniture, food products, electrical, rubber and leather

- The city has ~64 acres of industrial estate and is home to India's largest diesel locomotive shed operated by Indian Railways. One of the largest logistic companies, VRL Logistics, is located here, as well as several manufacturing units of well-known brands such as Tata Motors, Hindustan Petroleum, JMT Auto, Murdeshwar Ceramics, Sankalp Semiconductor, Spicer India, Tata Marcopolo, Telcon, and Weir-BDK.
- The city is part of the Bengaluru–Mumbai Economic Corridor and is expected to be globally competitive in heavy engineering, automobiles, aerospace, and defence sectors. The Government of India has established an STPI in the city, which houses seven IT and IT-related firms.
- iMerit has opened a new Centre of Excellence for AI training data, and the SEZ is expected to employ around 5000 employees in the IT/ITES sector. The city also houses a unique incubation centre for start-ups, the Hubballi ESDM (Indian Electronic System Design Manufacturing) Exchange (HEX), established by the government of Karnataka, India Electronics and Semiconductors (IESA), and KLE Technological University. The centre aims to incubate and nurture 1,000 ESDM start-ups, build a business worth INR 1 lakh crore, and generate ~10 lakh jobs.

Note: Tech and tech-enabled start-ups refer to set-ups with computer and software applications.

Risk and regulatory environment



Rank in EODB	⇒	4/37 (Good)
Developed space/SEZ	⇒	~0.20 sq.km.
Seismic zone	⇒	3 (Moderate)
Probability of flooding	⇒	Medium
Power disruption risk	⇒	Medium

- Low risk of natural calamities such as flooding and earthquake as it lies in Seismic Zone 2.

Note:

- Developed space/SEZ refers to areas dedicated to tech industry
- Seismic zone risk scale: 1 = low; 5 = high
- Power disruption risk refers to instances of power failure

Social and living environment



Education ecosystem index	➔	9.58 (Moderate)
Medical ecosystem index	➔	4.87 (Moderate)
Cost of living index	➔	22.08 (Moderate)
Crime Index	➔	62.52 (Low)
Pollution index	➔	32 (Low)

- Hubballi's social and living environment is characterised by a moderate education ecosystem index, indicating the availability of a respectable array of educational resources and opportunities within the community.
- Similarly, the medical ecosystem index is also moderate, indicating a sufficient level of healthcare facilities and services.
- The cost of living is also considered moderate, making it an attractive option for those seeking an affordable yet comfortable lifestyle.
- The crime index is low, but the authorities enforce law to improve the situation. The pollution index is also low, but the municipality is making efforts to reduce it further.

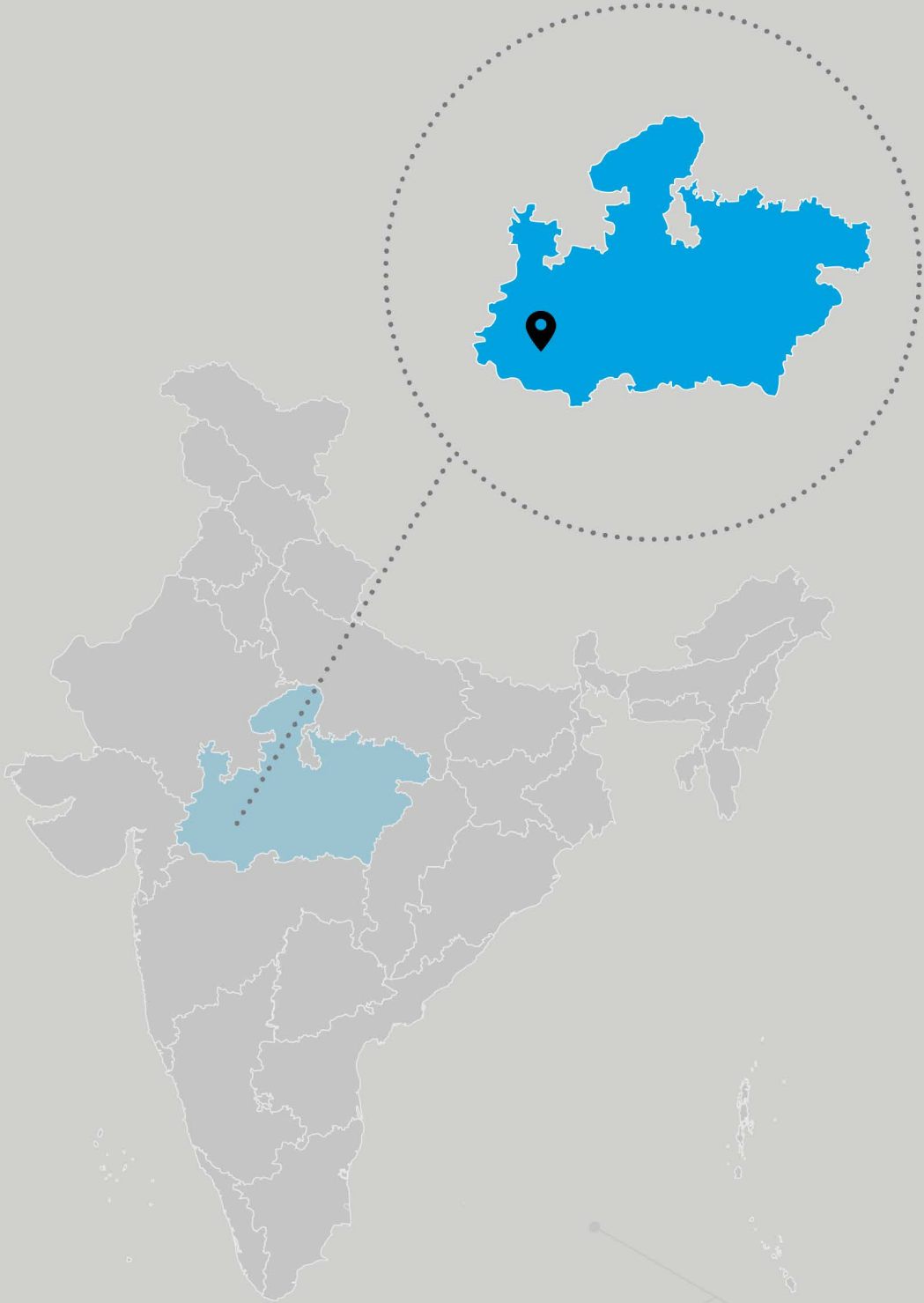
Note:

- The education ecosystem index refers to the number of schools per 1000 children.
- The medical ecosystem index refers to the presence of medical facilities proportional to population.
- The cost of living index infers to the consumer prices and rent.
- The crime index refers to the safety of the citizens affected by criminal acts.
- The pollution index refers to the combination of parameters such as AQI and particulate matter.

What's next?

- The presence of renowned educational institutions, such as IIT, IIIT, KLE Technological University, and Karnataka University has ensured a steady supply of high-quality fresh talent in the tech and allied sectors, which is essential for the growth and sustainability of the burgeoning tech industry in the region.
- Private players, such as Deshpande Foundation and KLE University Incubator, have been instrumental in fostering a conducive ecosystem for technology and start-ups in the location. By providing mentorship, funding, infrastructure support, and increased collaboration with the government, these entities can play a crucial role in nurturing the entrepreneurial spirit and promoting innovation in the region's tech industry.

Indore



Indore



Population
3.2 Mn



Adult literacy
85.87%



Languages spoken
**Hindi, Marathi,
Sindhi, English**

Summary

- Home to 1000+ technology and BPM-related business set-ups, the major ones are Firstsource and HGS.
- With a strong presence of the technology sector, there is high availability of employed and trained talent pool.
- Home to premier institutes, such as IIM Indore and IIT Indore, which ensures quality talent for the industry.
- Ranked 14th amongst top start-up destinations in India; hosted the Start-up Conclave 2022 and successfully attracted many start-up ideas.
- 7+ incubation centres including those supported by premier institutes are driving innovation in the city.
- High availability of Grade A office infrastructure, dedicated technology SEZ, i.e. Crystal IT Park, Indore SEZ, and Pithampur Industrial Region.
- The 12 km Super Corridor Industrial project planned to promote green industries, data centres, finance technology cities, and other projects.
- Good connectivity to the major technology hubs Delhi-NCR and Mumbai by road and other cities of India by air with an international airport.



~70,000

Experienced talent availability



14th Rank

Amongst start-up destinations
in India



~1000

Tech-related businesses



~10 sq.km

SEZ

Note:

- All installed talent in tech and tech-related businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.
- Tech businesses include GCCs, BPM centres, IT service providers, and IT services vendors.

Talent availability



Fresh graduates in the city per year	↻	42,000–45,000
STEM graduates	↻	19,000–20,000
Other graduates	↻	23,000–25,000
Talent pool in tech companies	↻	65,000–70,000
No. of colleges	↻	~300+
Premier institutes	↻	IIT, IIM, The Institute of Engineering & Technology Devi Ahilya Vishwavidyalaya
Avg. salary of a software developer (5–8 yrs exp)	↻	INR 7.5–12 lakh per annum

- Nearly 70,000 in the technology sector; ~50 percent of them into BPM services.
- The city has both IIT and IIM and several other prominent colleges with over ~ 20,000 STEM graduates per year.
- Indore has several national and regional colleges featuring in the government's NIRF ranking. As the regional colleges are mostly preferred by the residents of the same region, the quality of talent graduating and willing to take up a job in Indore is also expected to be relatively high.
- The presence of top-tier institutions such as IIT and IIM is a boon for the companies as they have tied up with these institutions for upskilling/training their workforce.

Note: Talent pool in tech companies refers to installed talent in tech businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.

Infrastructure attractiveness



Availability of metro (operational/planned)	↻	Yes (125 km)
No. of flights to major cities per day	↻	~ 45
Airport connectivity	↻	International with direct flight to Dubai
Average download speed	↻	43.76 Mbps
Office rental (Grade A office space)	↻	INR 30–50/sq.ft./month

- The Madhya Pradesh Industrial Development Corporation has allotted ~2,300 hectare land bank for the development of industry in Indore.
- Pithampur Industrial Region spread across 1,140 hectares near Indore houses nearly 1,200 industrial units.
- The commercial space market is expected to grow by 200 percent. This is evident from the recent deals signed by companies such as Persistent Systems, E-infochips, and Civica to acquire spaces in Indore.
- Indore Smart City is emerging as an urban ecosystem that aims to improve city services. The city is well connected to all parts of India.

Note: Major cities refer to metropolitan cities of India.

Technology ecosystem



No. of tech and BPM set-ups	↔	1,000–1,100
No. of GCCs	↔	~2
No. of tech and tech-enabled start-ups	↔	~400
Major industries	↔	Textile, Pharmaceuticals, and Automobile

- Madhya Pradesh has a favourable business environment, as evidenced by its 4th position in the EODB index.
- The state’s traditional industries, such as textile, iron, steel, and chemical, have been joined by a thriving technology sector, with Japanese telecom giant Rakuten’s presence in the state.
- This has helped establish Indore as a potential destination for Technology Ecosystem development.
- The state has also hosted several national and international business events, such as the Global Investors’ Summit and Start-up Conclave, which have attracted the attention of MNCs.
- Indore ranks 14th amongst the top destinations in India for start-ups, and the government launched its Incubation and Start-up policy in year 2016 to boost the growth of start-ups in the state. Furthermore, leading colleges, such as IIT and IIM, provide incubation centres and launchpads for start-ups in the region.

Note: Tech and tech-enabled start-ups refer to setups with computer and software applications.

Risk and regulatory environment



Developed space/SEZ	↔	~11.5 sq.km.
Seismic zone	↔	2 (Low)
Probability of flooding	↔	Low
Power disruption risk	↔	Medium

- It has a moderate risk of natural disasters. The city lies in Seismic Zone 2, which makes it least prone to earthquakes.

Note:

- Developed space/SEZ refers to areas dedicated to tech industry
- Seismic zone risk scale: 1 = low; 5 = high
- Power disruption risk refers to instances of power failure

Social and living environment



Education ecosystem index	↻	14.33 (Moderate)
Medical ecosystem index	↻	6.72 (Moderate)
Cost of living index	↻	20.02 (Moderate)
Crime Index	↻	48.61 (Moderate)
Pollution index	↻	57 (Moderate)

- Indore's social and living environment is characterised by a moderate education ecosystem index, indicating the availability of an adequate array of educational resources and opportunities within the community.
- Similarly, the medical ecosystem index is also moderate, indicating a satisfactory level of healthcare facilities and services.
- The cost of living in Indore is also considered moderate, making it an attractive option for those seeking an affordable yet comfortable lifestyle.
- The crime index is also moderate, implying that although there are some safety concerns, it is still a relatively safe place to live.
- The pollution index is also moderate, indicating that though the environment may not be completely pristine, it is not excessively polluted either.

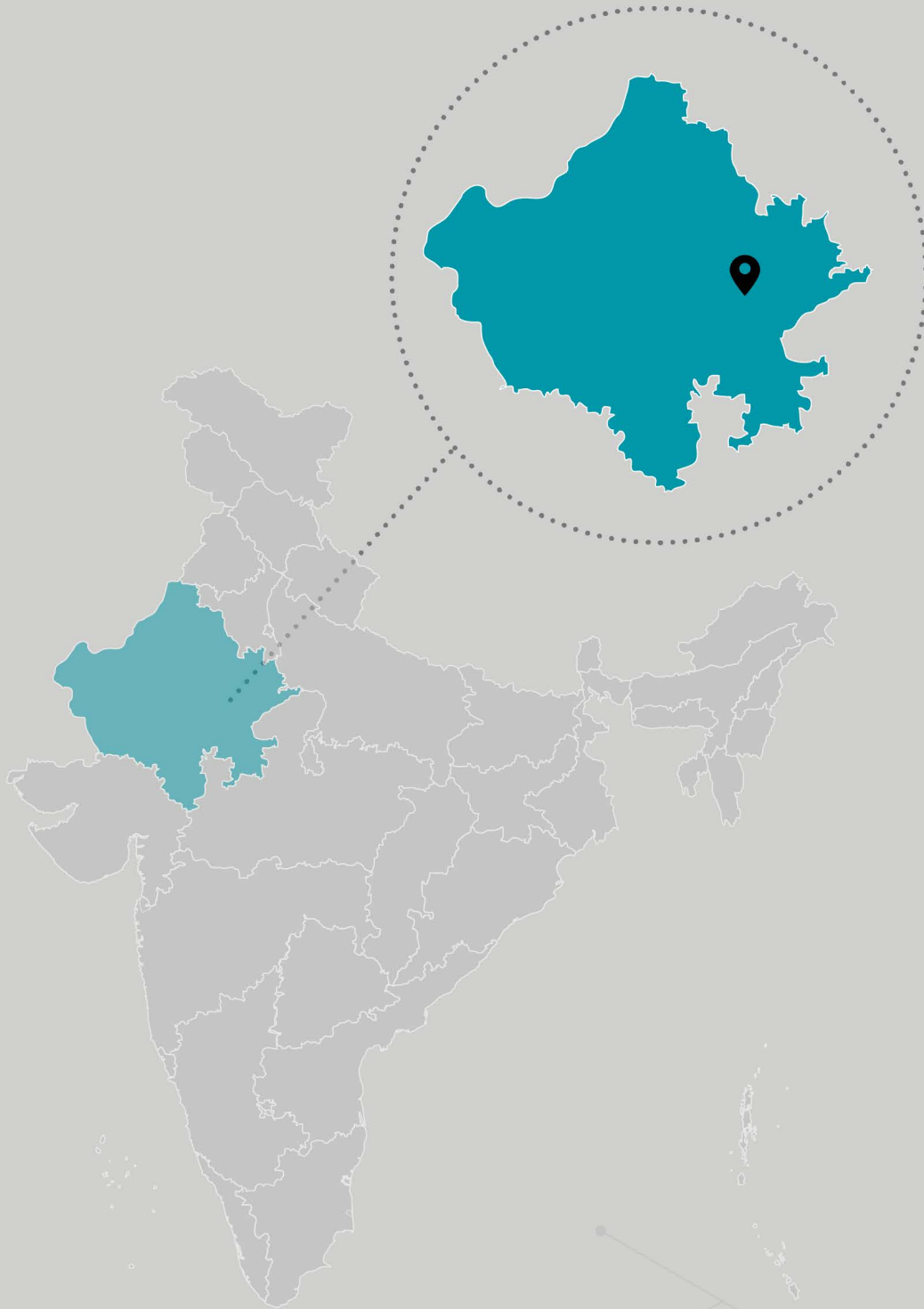
Note:

- The education ecosystem index refers to the number of schools per 1,000 children.
- The medical ecosystem index refers to the presence of medical facilities proportional to population.
- The cost of living index infers to the consumer prices and rent.
- The crime index refers to the safety of the citizens affected by criminal acts.
- The pollution index refers to the combination of parameters such as AQI and particulate matter.

What's next?

- Indore is a leading BPM hub in central India, and its BPM companies lead the domestic BPO market, specialising in back-office and IT operations services.
- Indore houses the prestigious IIT and IIM, providing a start-up launchpad for tech entrepreneurs, transportation, foodtech, and fintech start-ups.
- A greater infusion of public-private investments towards developing SEZs in the outskirts of Indore can potentially facilitate the city in cementing its position as a dominant technological hub in the central region of India.

Jaipur



Jaipur



Population
4.1 Mn



Adult literacy
83.33%



Languages spoken
Hindi, Marwadi, English

Summary

- Presence of 12+ GCCs and 1000+ technology- and BPM-related business set-ups.
- A strong presence of the technology sector; relatively higher availability of employed talent pool.
- The presence of premier institutes such as National Institute of Technology and Manipal University has ensured quality talent to the industry.
- Ranked 14th amongst start-up destinations in India with a favourable ecosystem for start-ups and home to two unicorns, DealShare and CarDekho.
- 22+ incubators present in the city have ensured it to be amongst the top leagues in terms of innovation.
- Good public infrastructure; the development of metro has led to lowering the congestion on roads.
- High availability of Grade A office infrastructure, dedicated SEZ and STPI zones for the technology industry and a huge Mahindra World City SEZ for tech establishments.
- Being a tourist city, there is good connectivity to other major cities of India with an international airport and a developed railway junction.



~95,000
Experienced talent availability



2
Unicorns (DealShare & CarDekho)



~1,000
Tech-related businesses



~30 sq. km.
SEZ, Mahindra World City

Note:

- All installed talent in tech and tech-related businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.
- Tech businesses include GCCs, BPM centers, IT service providers, and IT services vendors.

Talent availability



Fresh graduates in the city per year	⇒	99,000–105,000
STEM graduates	⇒	16,000–17,000
Other graduates	⇒	83,000–85,000
Talent pool in tech companies	⇒	90,000–95,000
No. of colleges	⇒	~750
Premier institutes	⇒	Malviya National Institute of Technology, Arya College, Manipal university
Avg. salary of a software developer (5–8 yrs exp)	⇒	INR 8.5–12.5 lakh per annum

- The availability of a highly skilled talent pool of approximately 95,000 individuals is facilitated by various technology-oriented establishments in the city.
- Proficiency in English language, a crucial requirement within the BPM sector, is also relatively high due to the proximity and influence of major metropolitan areas such as the Delhi-NCR.
- Historically, the conventional technology industry has primarily recruited technology and management graduates and individuals with expertise in finance and communications. However, the emergence of technology start-ups, e-commerce, education technology, and finance technology start-ups has expanded the pool of potential hires.
- The presence of premier educational institutions and top-tier colleges, such as the Malviya National Institute of Technology, Arya College of Technology, College of Engineering-Manipal University, and Jaipur University, ensures a steady supply of approximately 125,000 fresh graduates to the booming technology sector.
- The establishment of upcoming SEZs and industrial parks will continue to drive the scalability of the technology sector, potentially providing employment opportunities for up to 200,000 individuals over the next five years.

Note: Talent pool in tech companies refers to installed talent in tech businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.

Infrastructure attractiveness



Availability of metro (operational/planned)	⇒	Yes (12 km)
No. of flights to major cities per day	⇒	~65
Airport connectivity	⇒	International directs flights: Oman, Thailand, and UAE
Average download speed	⇒	48.9 Mbps
Office rental (Grade A office space)	⇒	INR 50–60/sq.ft./month

- The Mahindra World City is one of the biggest SEZs in India, which spans over 600 hectares accommodating technology and export-oriented units. Plans are in place to expand it to 3,000 hectares in the next phase.
- Good road connectivity to Delhi-NCR.
- Poor metro connectivity due to suboptimal route and penetration.
- Well connected by air with other cities in India.

Note: Major cities refer to metropolitan cities of India.

Technology ecosystem



No. of tech and BPM set-ups	↷	~1,000
No. of GCCs	↷	~9-12
No. of tech and tech-enabled start-ups	↷	~600
Major industries	↷	Tourism, textile and garments, gems, and jewellery

- Jaipur is home to both manufacturing and services industries. It is a city with a diversified economy, with tourism, gems and jewellery, metal and mining, and handicrafts being the prominent industries, along with a growing construction sector and small to medium sized technology companies.
- It has emerged as a spoke for hubs concentrated in the Delhi–Gurugram–Noida–NCR region, providing cost arbitrage and a competent service level. The city also houses a cluster of BPMs and service providers in the healthcare, BFSI, and IT sectors, with a mix of innovative start-ups across sectors, including technology, education technology, and e-commerce.
- With funding from venture capitalists and angel investors, it has also been the foundation for some unicorns and scalable start-ups. Giant corporates such as Google are trying to reach out to start-ups via Start-up School India to integrate knowledge into a structured curriculum and deliver it across a wide footprint.
- With a promotional fund worth US\$ 77.3 million, the inauguration of India's largest start-up incubation centre in Jaipur and the state-wide favourable operational environment, it is preparing to become north India's newest start-up hub. iStart-Rajasthan, an integrated start-up platform initiated by the Rajasthan government, aims to attract investors and innovators.

Note: Tech and tech-enabled start-ups refer to set-ups with computer and software applications.

Risk and regulatory environment



Rank in EODB	↷	19/37 (Good)
Developed space/SEZ	↷	~6 sq.km.
Seismic zone	↷	2 (Low)
Probability of flooding	↷	Low
Power disruption risk	↷	Low

- Moderate risk of natural calamities such as cyclones as it lies in the plains, whereas it has low risk of earthquakes as it lies in Seismic Zone 2.

Note:

- Developed space/SEZ refers to areas dedicated to tech industry
- Seismic zone risk scale: 1 = low; 5 = high
- Power disruption risk refers to instances of power failure

Social and living environment



Education ecosystem index	➔	6.15 (Moderate)
Medical ecosystem index	➔	6.01 (Moderate)
Cost of living index	➔	21.51 (Moderate)
Crime Index	➔	35.32 (Good)
Pollution index	➔	61.97 (Poor)

- Jaipur's social and living environment is characterised by a moderate education ecosystem index.
- The medical ecosystem index is also moderate, indicating a satisfactory level of healthcare facilities and services.
- The cost of living in Jaipur is considered moderate, making it an attractive option for those seeking an affordable yet comfortable lifestyle.
- The crime index is good, which means that the city is relatively safe and secure for its inhabitants. However, the pollution index is low, indicating that air quality in the city is not optimal.

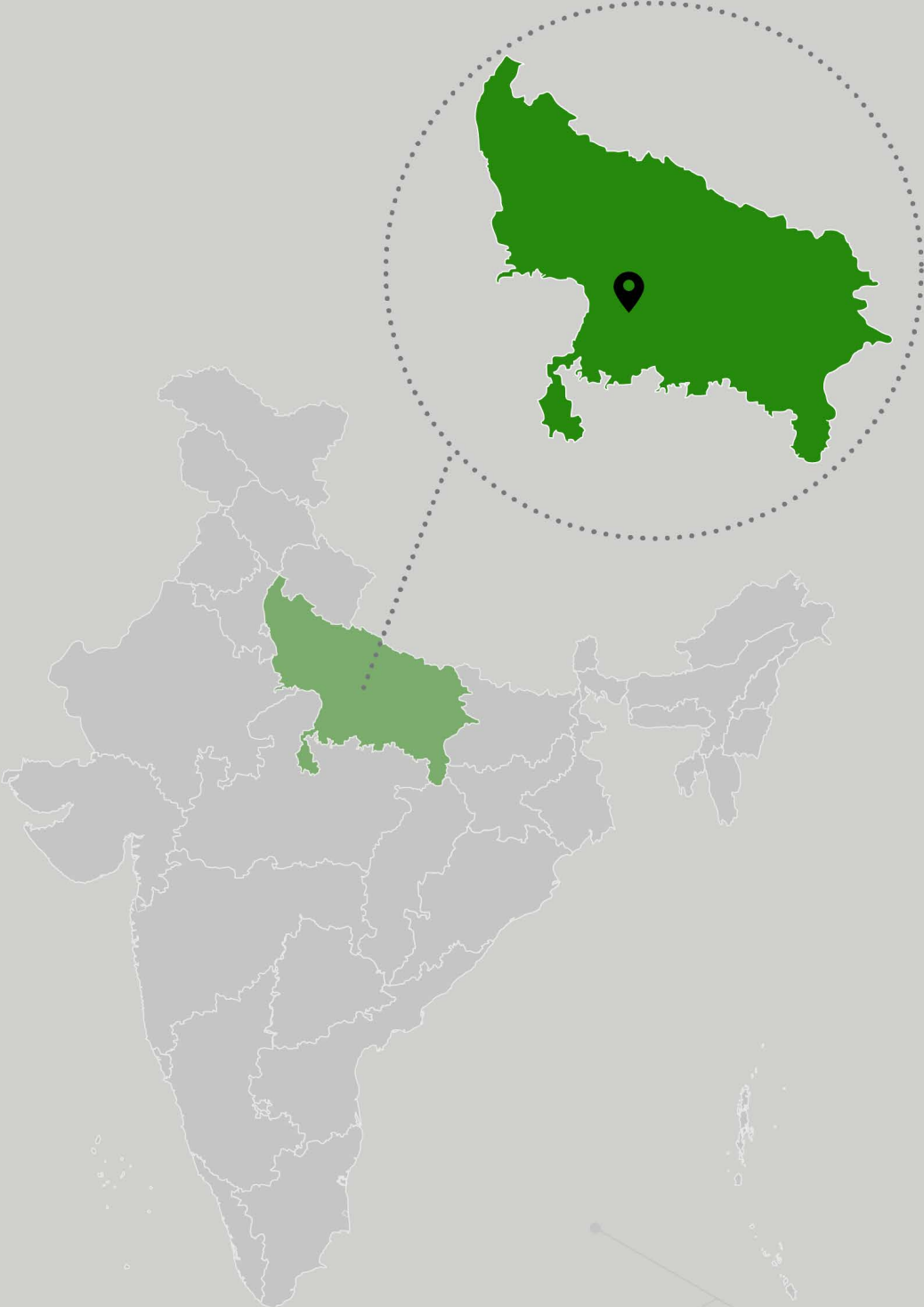
Note:

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- The medical ecosystem index refers to the presence of medical facilities proportional to population.
- The cost of living index infers to the consumer prices and rent.
- The crime index refers to the safety of the citizens affected by criminal acts.
- The pollution index refers to the combination of parameters such as AQI and particulate matter.

What's next?

- Jaipur is now just 2.5 hours from Delhi-NCR by road, thanks to the new Delhi–Mumbai expressway.
- Jaipur has emerged as a crucial spoke for the Delhi-NCR technology hub and thus become a critical technology hub in north India, attracting numerous international service providers to set up large centres in the area.
- Educational institutions can play a pivotal role in the dissemination of soft skills and BPM training, similar to technology incubators in technical institutes, thereby boosting Jaipur's stature as a hub for service provision.
- SEZs on the city's outskirts with good connectivity with the city are set to catalyse a technological revolution. Privately developed SEZs in Jaipur can bring significant advancements and growth to the region, further solidifying its position as a key player in the technology industry.

Kanpur



Kanpur



Population
3.2 million



Adult literacy
82.0%



Languages spoken
Hindi, Urdu, English

Summary

- Presence of 250+ technology- and BPM-related business setups, the major ones being Campus hat and Enution.
- Moderate presence of the technology sector and moderate availability of employed and trained talent pool in the city.
- Premier institutes IIT Kanpur, Kanpur Institute of Technology, and Chhatrapati Shahu Ji Maharaj University has ensured quality tech and associated fresh talent essential for the tech industry.
- The establishment of four Incubators has set the pace for the city to enter the technology innovation space.
- Tanneries and agri-based industries form a major cluster in the location, and cottage industry is the biggest employer in the city.
- Real estate projects worth INR 3500 crore are in the pipeline, including 32 residential and 4 commercial projects.
- Greenfield expressways with a budget of INR 14,000 crore and a 92-km ring road is planned to decongest traffic.
- Airport with connectivity to major technology hubs in the country and a full-fledged railway junction connecting major cities of India.



~6,000
Experienced talent available



~200
Technology start-ups



~250
Tech-related businesses



32nd
Most preferred start-up destination in the country

Note:

- All installed talent in tech and tech-related businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.
- Tech businesses include GCCs, BPM centres, IT service providers, and IT services vendors.

Talent availability



Fresh graduates in the city per year	⇒ 48,000–50,000
STEM graduates	⇒ 9,500–10,000
Other graduates	⇒ 38,000–40,000
Talent pool in tech companies	⇒ 6,000–7,000
No. of colleges	⇒ ~300
Premier institutes (not exhaustive)	⇒ IIT Kanpur, Kanpur Institute of Technology, Chhatrapati Shahu Ji Maharaj University
Avg. salary of a software developer (5–8 yrs exp)	⇒ INR 8–11 lakh per annum

- Besides being an industrial hub, Kanpur is famous for the presence of world-class institutions, namely, IIT, HBTU, CSA University of Agriculture, National Sugar Institute, GSVM Medical College, and Indian Institute of Pulses Research.
- More than 48,000 freshers with tech and finance backgrounds are available in the city; there are about 6,000 skilled professionals in technology.
- Kanpur is seeing an increase in the hiring of gig workers, with ~13 percent growth in hiring in June 2022.
- IIT-K and Association of Infrastructure Industry will jointly launch an executive excellence programme for upskilling the practising engineers and architects in the country, equipping them with diverse tools and enabling them to better deal with challenges.

Note: Talent pool in tech companies refers to installed talent in tech businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.

Infrastructure attractiveness



Availability of metro (operational/planned)	⇒ Yes (8.7 km operational)
No. of flights to major cities per day	⇒ ~3
Airport connectivity	⇒ Domestic
Average download speed	⇒ 86.02 Mbps
Office rental (Grade A office space)	⇒ INR 75/sq.ft./month

- Mid-level cities such as Kanpur are currently seeing mega-level housing projects with optimum facilities. Nearly 36 real estate projects worth INR 3,648 crore have been registered with the Uttar Pradesh Real Estate Regulatory Authority (UP RERA). Of these, 32 are residential and 4 commercial.
- The Transport Ministry has announced the construction of seven greenfield expressways worth INR 14,199 crore for Kanpur. A 93.2-km outer ring road project is also under construction.
- A multi-modal logistics park is being set up in the city by the Dedicated Freight Corridor Corporation of India (DFCCIL) to boost exports and provide logistical support to industries operating in the region.

Note: Major cities refer to metropolitan cities of India.

Technology ecosystem



No. of tech & BPM set-ups	➔	~250
No. of GCCs	➔	NA
No. of tech and tech-enabled start-ups	➔	~201
Major industries	➔	Retail and trade, manufacturing, professional and business services, financial activities, construction

- The economy of Kanpur depends heavily on defence establishments such as OEF, SAF, and Ordinance Factory, tanneries, coaching industry for IIT, JEE, IAS/IPS, and trading activities.
- The state government is actively working on developing the ambitious Defence Corridor project, spanning six nodes: Agra, Aligarh, Lucknow, Kanpur, Chitrakoot, and Jhansi. The project, worth INR 20,000 crore, is planned over 5,071 hectares of land across the western, central, and Bundelkhand regions of the state.
- A sum of INR 25 crore has been proposed for the development of a software technology park in the Pankhi Industrial area at the UPTRON estate. IIT-K has been approached to establish the IT Park to meet the demands of potential entrepreneurs, start-ups, and BPM and technology businesses.
- RHD Limited is the first and only large-scale BPO in Kanpur to provide international and domestic voice process services and employ about 1,000 employees.
- Notable start-ups hailing from Kanpur include Phool.co, Shabd nagri, and Nutspace.
- Nirman Accelerator Program, supported by the Department of Science and Technology, Government of India, was launched by IIT Kanpur's start-up incubation and innovation centre. The programme aims to assist manufacturing start-ups engaged in healthcare and agriculture domains to overcome the challenges from their prototype to market journey.

Note: Tech and tech-enabled start-ups refer to setups with computer and software applications.

Risk and regulatory environment



Rank in EODB	➔	13/37 (Moderate)
Developed space/SEZ	➔	NA
Seismic zone	➔	3 (Moderate)
Probability of flooding	➔	Moderate
Power disruption risk	➔	Medium

- The risk of natural calamities is low in the city as it lies on the plains of the Ganges, which does not flood the area, and there is moderate risk of earthquakes as it lies in Seismic Zone 3.

Note:

- Developed space/SEZ refers to areas dedicated to tech industry
- Seismic zone risk scale: 1 = low; 5 = high
- Power disruption risk refers to instances of power failure

Social and living environment



Education ecosystem index	➔	6.56 (Moderate)
Medical ecosystem index	➔	3.76 (Moderate)
Cost of living index	➔	21.70 (Moderate)
Crime Index	➔	47.54 (Moderate)
Pollution index	➔	89.20 (Low)

- Kanpur's social and living environment can be described as having moderate education ecosystem, medical ecosystem, and cost of living indices.
- These indices reflect the overall level of development and accessibility of education and healthcare facilities, as well as the general cost of living in the city.
- High crime is recorded in the city, but the government of Uttar Pradesh is committed to lowering the crime to attract investments.
- However, Kanpur's pollution index is considered low, indicating that the level of pollution in the city is relatively higher than other cities, but the authorities have initiated several control measures.

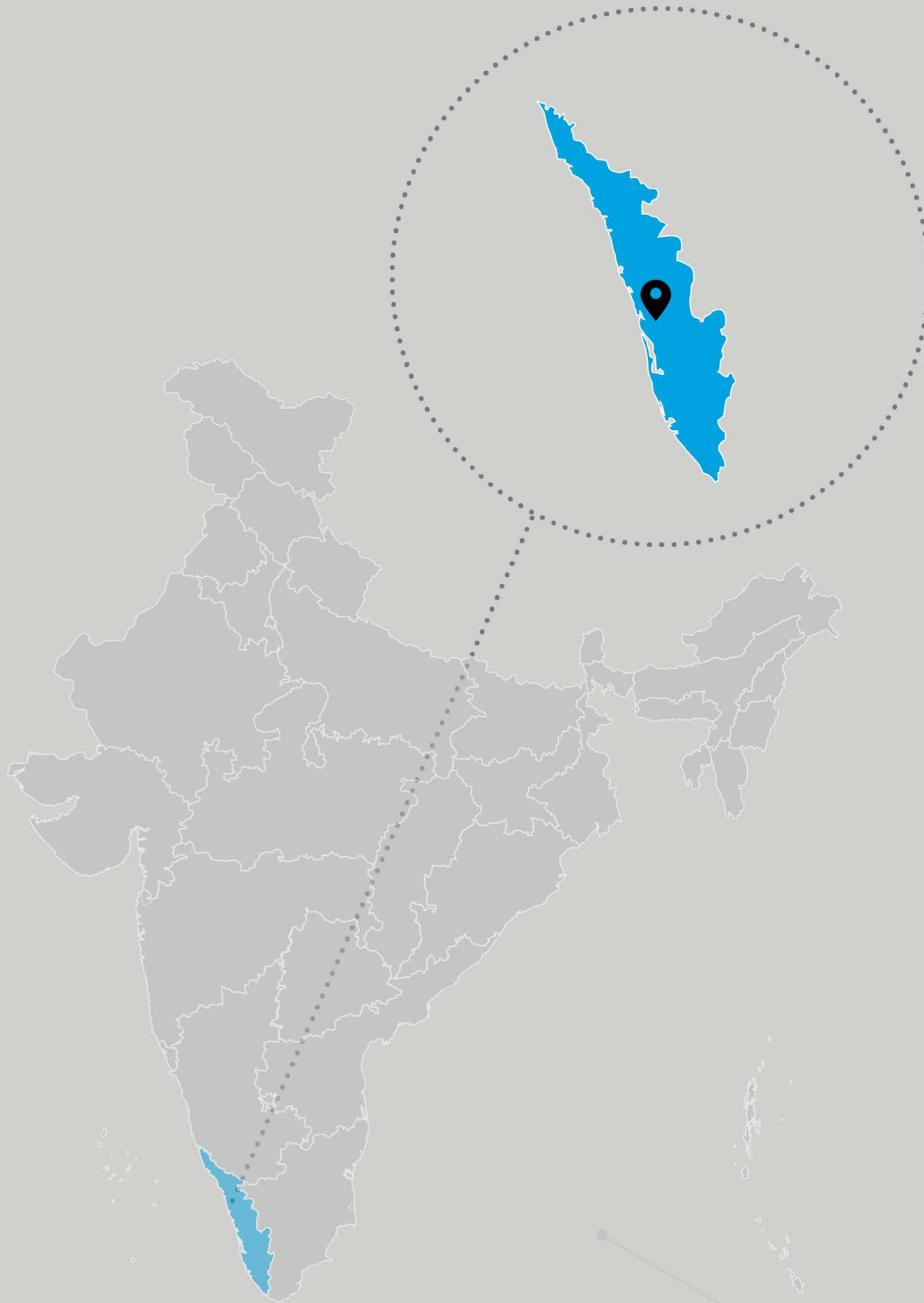
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- The cost of living index infers to the consumer prices and rent.
- The crime index refers to the safety of the citizens affected by criminal acts.
- The pollution index refers to the combination of parameters such as AQI and particulate matter.

What's next?

- Kanpur, known as the leather capital of India, is transitioning into a chemical R&D centre, with several organisations setting up their R&D centres and centres of excellence to control the release of hazardous chemicals into the Ganga.
- IIT Kanpur's incubator plays a key role in driving the start-up ecosystem in Kanpur, where start-ups excel in education, hardware and IoT, and energy and environment. There have been some notable success stories that have contributed to the city's growing education industry.
- Kanpur is just 60 km from the emerging technology hub of Lucknow. Connected by the Kanpur–Lucknow Expressway, Kanpur can emerge as a significant technology hub as part of the state's mission to become a US\$ 1 trillion economy by year 2027.

Kochi



Kochi



Population
3.3 million



Adult literacy
97.36%



Languages spoken
Malayalam, Tamil, Hindi English

Summary

- Moderate presence of technology- and BPM-related business set-ups, the major ones being Cognizant and HCL.
- High availability of employed and trained talent pool in the city, along with a good supply of fresh talent owing to the high literacy of the location.
- Premier institutes, such as IIM Kozhikode, XIME, SCMS Cochin, and Government Law College, has ensured quality tech and associated fresh talent essential for the budding tech industry.
- Kochi is the 11th most preferable start-up destination amongst Indian cities, with establishment of a few incubators and accelerators.
- Agriculture-based industries, especially spices, form an important small- and medium-sized cluster.
- Kochi is the financial and commercial capital of Kerala and also has highest per capita income in the state.
- Projects worth ~1,740 crore are planned as part of the smart city mission, along with a smart card system for inter-city commuting.
- Kochi has a state-of-the-art airport powered by solar energy with frequent international flights to the Middle East.



~45,000
Experienced talent availability



~200
Technology start-ups



~600
Tech-related businesses



97%
Literacy is the highest amongst tier 2 locations

Note:

- All installed talent in tech and tech-related businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.
- Tech businesses include GCCs, BPM centres, IT service providers, and IT services vendors.

Talent availability



Fresh graduates in the city per year	↔	22,000–25,000
STEM graduates	↔	5,700–6,300
Other graduates	↔	17,500–18,500
Talent pool in tech companies	↔	40,000–45,000
No. of colleges	↔	~247
Premier institutes	↔	IIM Kozhikode, XIME, SCMS Cochin, Government Law College-Ernakulam
Avg. salary of a software developer (5–8 yrs exp)	↔	INR 8–13 lakh per annum

- Kochi has a healthy technology talent pool of about 40,000 to 45,000.
- Kochi has some of the leading B-Schools in the region. The Indian Institute of Management Kozhikode has set up its first satellite campus in InfoPark, Kochi. Cochin University's School of Management Studies (SMS) is the first and oldest managerial education institution in south India. SCMS Cochin is one of the emerging B-Schools in the country. Further, another major B-School, XIME, is opening a new campus here.
- Being the seat of the High Court of Kerala, several top legal education institutes are located here. The Government Law College-Ernakulam is one of the oldest law schools in Kerala. The National University of Advanced Legal Studies in Kochi is a premier law university in India and the only law college listed in CLAT in Kerala.

Note: Talent pool in tech companies refers to installed talent in tech businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.

Infrastructure attractiveness



Availability of metro (operational/planned)	↔	Metro, Buses, Taxis, Ferries
No. of flights to major cities per day	↔	~ 97
Airport connectivity	↔	38 International flights to Doha, Abu Dhabi, Dubai, and Colombo
Average download speed	↔	45.83 Mbps
Office rental (Grade A office space)	↔	INR 35–45/sq.ft./month

- Availability of electricity, fresh water, a long coastline, backwaters, good banking facilities, presence of a major port, container trans-shipment terminal, harbour terminal, and an international air terminal are some of the factors that have accelerated its industrial growth. Kochi has recently been attracting heavy investment in the reconstruction of Palarivattom flyover, a metro project, a water metro project, rooftop solar panel projects, and intelligent traffic management system.
- Kochi is under the Smart City Mission with planned projects worth INR 1,754 crore. The project, valued at INR 594 crore, has been completed, but the rest is fraught with challenges. Various projects under the mission include Integrated Command and Control Centre (worth INR 64.50 crore), Safety and Security Surveillance System (INR 42.61 crore), 24/7 water supply, and Kochi One Smart Card, amongst others.

Note: Major cities refer to metropolitan cities of India.

Technology ecosystem



No. of tech and BPM set-ups → ~600

No. of GCCs → NA

No. of tech and tech-enabled start-ups → ~202

Major industries → **Natural resources and mining, professional and business services, trade and transportation**

- Kochi boasts a diverse array of major business sectors, including construction, manufacturing, shipbuilding, transportation/shipping, seafood and spices exports, chemical industries, IT, tourism, health services, and banking.
- The city's IT and ITES industries are expanding due to low-cost bandwidth via undersea cables, and operational costs are lower than other Indian cities.
- Notable IT companies, such as Cognizant and HCL Technology, have a presence in Kochi.
- The city also houses various technology campuses, including InfoPark, Smart City (Kakkanad), Cochin SEZ, and KINFRA Export Promotion Industrial Park.
- An Indian IT company is investing INR 700 crore to establish an 'Innovation Park' in KINFRA Electronics Manufacturing Cluster at Kakkanad, which is expected to generate 10,000 jobs.
- Kochi has a thriving start-up ecosystem, ranked amongst the Top 20 globally in year 2021 (Global Start-up Ecosystem Report), and is amongst the top performers in India. The ecosystem has generated US\$ 13.3 billion between July 2019 and Dec 2021. The state aims to promote the sector and create 15,000 start-ups and 200,000 jobs in emerging technologies over the next five years.
- Kochi houses 37 percent of Kerala's start-ups, and the city has a robust network of incubators, accelerators, mentors, and investors.
- The Global Shapers Community, an initiative by the World Economic Forum, opened a hub in Kochi. Cochin University of Science and Technology has incubated about 120 companies since year 2016, and the Kerala Start-up Mission (KSUM) is also located in the city. The government has proposed a venture capital fund of INR 100 crore for the city's start-up ecosystem and recently inaugurated a 'Digital Hub' at the Technology Innovation Zone.
- Notable start-ups in the city include Entri (with over US\$ 10 million in funding), Livve Homes (US\$ 7 million funding), PNB Vesper (a pharmaceutical research company), Agrima Infotech (first specialised food vision API), Greeniee, Verteil Technologies, and many others.

Note: Tech and tech-enabled start-ups refer to set-ups with computer and software applications.

Risk and regulatory environment



Rank in EODB	➔	18/37 (Moderate)
Developed space/SEZ	➔	0.417 sq.km.
Seismic zone	➔	3 (Moderate)
Probability of flooding	➔	Moderate
Power disruption risk	➔	Low

- Less risk of natural disasters such as floods but occasionally prone to cyclones from the Arabian Sea. Moderate risk of earthquake as it lies in Seismic Zone 3.
- Crime is under control in Kochi. It is known for the most modernised police force in the country to enforce law and order. No major riots and protests have been recorded over recent years.

Note:

- Developed space/SEZ refers to areas dedicated to tech industry
- Seismic zone risk scale: 1 = low; 5 = high
- Power disruption risk refers to instances of power failure

Social and living environment



Education ecosystem index	➔	4.24 (Moderate)
Medical ecosystem index	➔	5.18 (Moderate)
Cost of living index	➔	20.41 (Moderate)
Crime Index	➔	41.21 (Good)
Pollution index	➔	25 (Good)

- Kochi, a cosmopolitan city located in the southern state of Kerala boasts a moderate education ecosystem index, with various educational institutions catering to the needs of its residents. The city offers both public and private schools, as well as several higher education institutions, including universities and colleges. The medical ecosystem index in Kochi is also moderate, with the city having a mix of public and private hospitals and clinics, providing access to healthcare services for all.
- The cost of living index in Kochi is moderate, offering a good balance between affordability and a high standard of living.
- The crime index in Kochi is considered good, safe, and secure for its residents. The city's police force is well-equipped to maintain law and order, and its residents can feel safe in their daily lives.
- The pollution index in Kochi is also considered good, with relatively low levels of pollution than other Indian cities. The city's government has implemented several measures to further reduce pollution and maintain a clean environment.

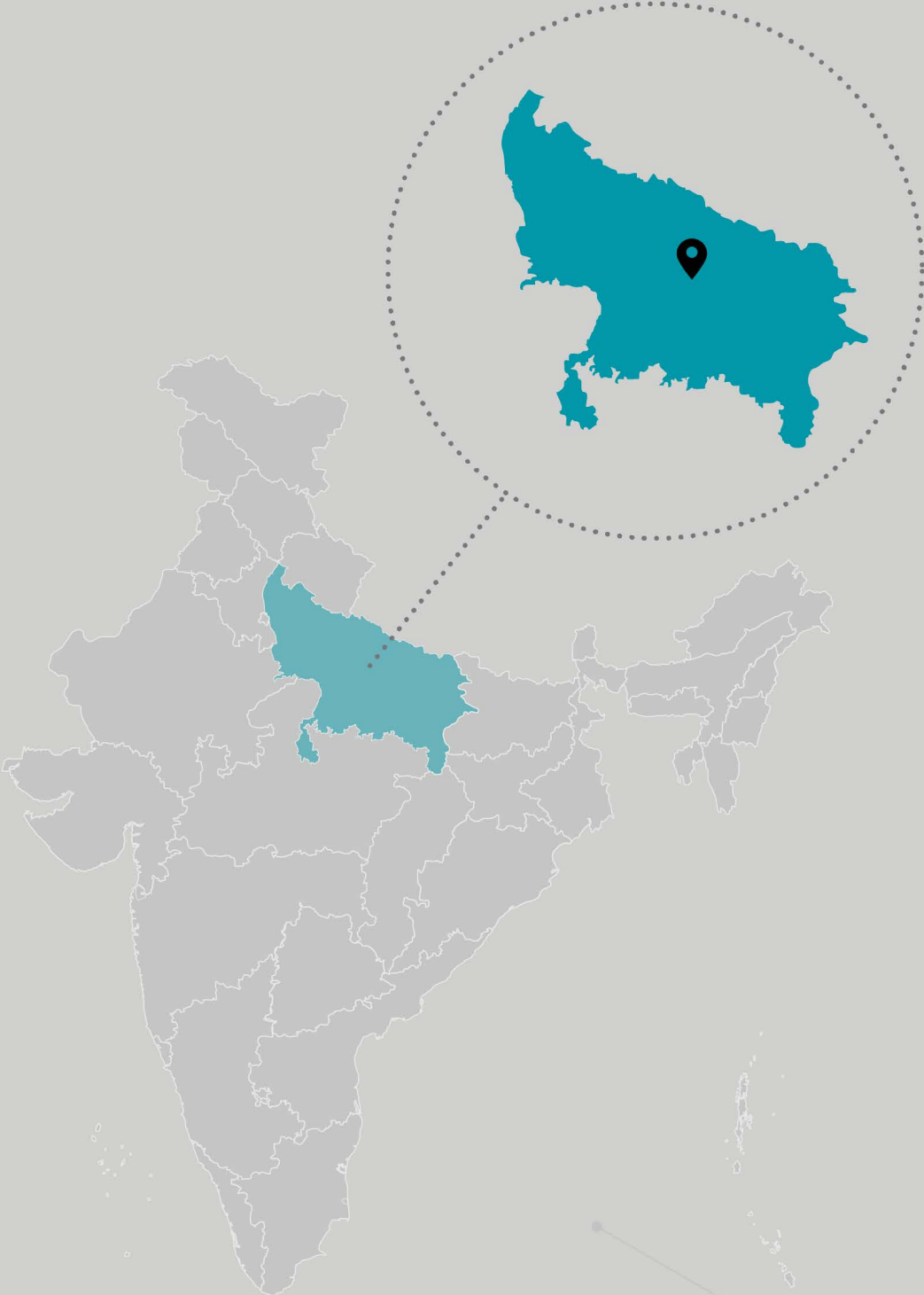
Note:

- The education ecosystem index refers to the number of schools per 1000 children.
- The medical ecosystem index refers to the presence of medical facilities proportional to population.
- The cost of living index infers to the consumer prices and rent.
- The crime index refers to the safety of the citizens affected by criminal acts.
- The pollution index refers to the combination of parameters such as AQI and particulate matter.

What's next?

- Kochi, the commercial capital of Kerala, is working towards mitigating the brain drain by focusing on the evolution of the technology sector in the region through the construction of new tech parks.
- With 37 percent of all start-ups in Kerala based in Kochi, the city has emerged as an ideal location for fintech, e-commerce, retail, and social and leisure start-ups.
- Given a more enabling ecosystem that includes co-working spaces, government-led skill development centres, and access to a pool of skilled human resources, the region holds tremendous promise as an attractive destination for entrepreneurs and investors alike seeking to capitalise on growth opportunities within the technology sector.

Lucknow



Lucknow



Population
4 million



Adult literacy
82.50%



Languages spoken
Hindi, Urdu, English

Summary

- Presence of 800+ technology- and BPM-related business set-ups, the major one being HCL.
- High presence of the technology sector; high availability of an employed and trained talent pool, and high availability of graduates.
- The presence of premier institutes such as IIM Lucknow and IIT Lucknow has ensured the supply of quality talent for the industry.
- Lucknow has been ranked 22nd amongst preferred start-up destinations in India and is home to 200+ tech start-ups.
- With the presence of more than eight incubators and accelerators, Lucknow is competing with other cities in terms of the innovation index.
- IT-Upvan, a platform to help start-ups along with The Indian Angel Network and the Lucknow Angel Network (LAN) to mentor and fund.
- High availability of Grade A office infrastructure, dedicated technology SEZ, i.e. Industrial Infrastructure Development Centres (IIDC).
- The metro project has been a major facelift in the past couple of years, which has led to decongestion and essential development.
- Good connectivity to the major technology hub Delhi-NCR via new expressways and by air with an international airport.



70,000-75,000
Experienced talent availability



~200
Technology start-ups



~800
Tech-related businesses



22nd rank
Preferred start-up destinations in India

Note:

- All installed talent in tech and tech-related businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.
- Tech businesses include GCCs, BPM centers, IT service providers, and IT services vendors.

Talent availability



Fresh graduates in the city per year	⇒ 49,000–51,000
STEM graduates	⇒ 22,000–23,000
Other graduates	⇒ 27,000–30,000
Talent pool in tech companies	⇒ 70,000–75,000
No. of colleges	⇒ ~300
Premier institutes	⇒ IIM Lucknow, IIIT Lucknow, SGPGIMS Lucknow, Ram Manohar Lohia National Law University
Avg. salary of a software developer (5–8 yrs exp)	⇒ INR 8–11 lakh per annum

- Home to 70,000–75,000 experienced technology personnel working in small, mid-size, and corporate companies.
- Host to premier tier 1 and Grade A institutes such as IIM Lucknow, IIT Lucknow, SGPGIMS Lucknow, Ram Manohar Lohia National Law University, IHM, along with other tier 2 institutes, have ensured the supply of ~50,000 fresh graduates every year.
- Although Lucknow has abundant talent to support any industry, most of the talent migrates to other parts of India, namely, Bengaluru, Mumbai, and Delhi, in search of a better quality of life. Unemployment has been another key factor in driving migration to other states.
- Lucknow is ranked 6th in the list of the 10 fastest growing job creating cities in India.

Note: Talent pool in tech companies refers to installed talent in tech businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.

Infrastructure attractiveness



Availability of metro (operational/planned) and coverage	⇒ Yes (85 km)
No. of flights to major cities per day	⇒ ~60
Airport connectivity	⇒ Dubai, Sharjah, and Jeddah are top international destinations
Average download speed	⇒ 47.61 Mbps
Office rental (Grade A office space)	⇒ INR 40–50/sq.ft./month

- Lucknow underwent a major facelift in the past couple of years in terms of its infrastructure; ongoing projects such as the Metro Rail, an international cricket stadium, lush green parks, swanky malls, and high-rise luxury apartments are contributing to the growth of its infrastructure.
- As the entrepreneurship culture is booming in Lucknow, there are multiple options available, including ready-to-start-work spaces that offer dedicated cabins, conference rooms, meeting rooms, shared desks and lounges, amongst other facilities apt for start-ups, freelancers, and businesses. Some of the popular co-working avenues are Collab Co-work, Incuspaze, Spring House, and Regus (Hazratganj and Gomti Nagar).
- Lucknow is well connected with other cities in India through road, rail, and air.

Note: Major cities refer to metropolitan cities of India.

Technology ecosystem



No. of tech and BPM set-ups	➔	~800
No. of GCCs	➔	NA
No. of Tech and Tech enabled start-ups	➔	~200
Major industries	➔	Aeronautics, automotive, machine tools, distillery chemicals, furniture

- Major industries in Lucknow include aeronautics, automotive, machine tools, distillery chemicals, and furniture.
- Lucknow has become a hub for niche medium-sized IT players, with companies such as HCL and Siemens having offices in the city.
- The IT sector in Lucknow operates on a 'Plug-n-Play model' to facilitate entrepreneurial activities in IT-related areas and enhance software exports from Uttar Pradesh.
- The city is home to ~200 technology start-ups, spanning education technology, health technology, and e-commerce and has embraced the high-tech culture. Private and government institutions support the start-up ecosystem.
- Organisations such as TiE Global and Business Network International (BNI) support entrepreneurs and networking opportunities.
- The Uttar Pradesh government has established IT-Upvan to assist start-ups and entrepreneurs in commercialising their innovative ideas and plans to establish a new incubator spanning 40 acres near the airport.
- Venture capitalists such as Indian Angel Network and LAN provide mentoring, networking, and funding support.

Note: Tech and tech-enabled start-ups refer to set-ups with computer and software applications.

Risk and regulatory environment



Rank in EODB	➔	13/37 (Moderate)
Developed space/SEZ	➔	~0.4 sq.km.
Seismic zone	➔	3 (Moderate)
Probability of flooding	➔	Medium
Power disruption risk	➔	Medium

- There is little risk of earthquakes and other natural calamities as it lies on the plains and in Seismic Zone 2.

Note:

- Developed space/SEZ refers to areas dedicated to tech industry
- Seismic zone risk scale: 1 = low; 5 = high
- Power disruption risk refers to instances of power failure

Social and living environment



Education ecosystem index	➔	8.72 (Moderate)
Medical ecosystem index	➔	5.73 (Moderate)
Cost of living index	➔	20.48 (Moderate)
Crime Index	➔	48.85 (Moderate)
Pollution index	➔	78.11 (Poor)

- Lucknow boasts a moderate education ecosystem index with various educational institutions for its residents.
- The medical ecosystem index is also moderate with many healthcare facilities available in the city.
- The cost of living index is considered moderate with a relatively affordable cost of living than in other major cities in India. However, the city's pollution index is poor with high levels of air and water pollution.
- Criminal activities are higher than in other cities, but the Uttar Pradesh government has adopted measures to control crime.

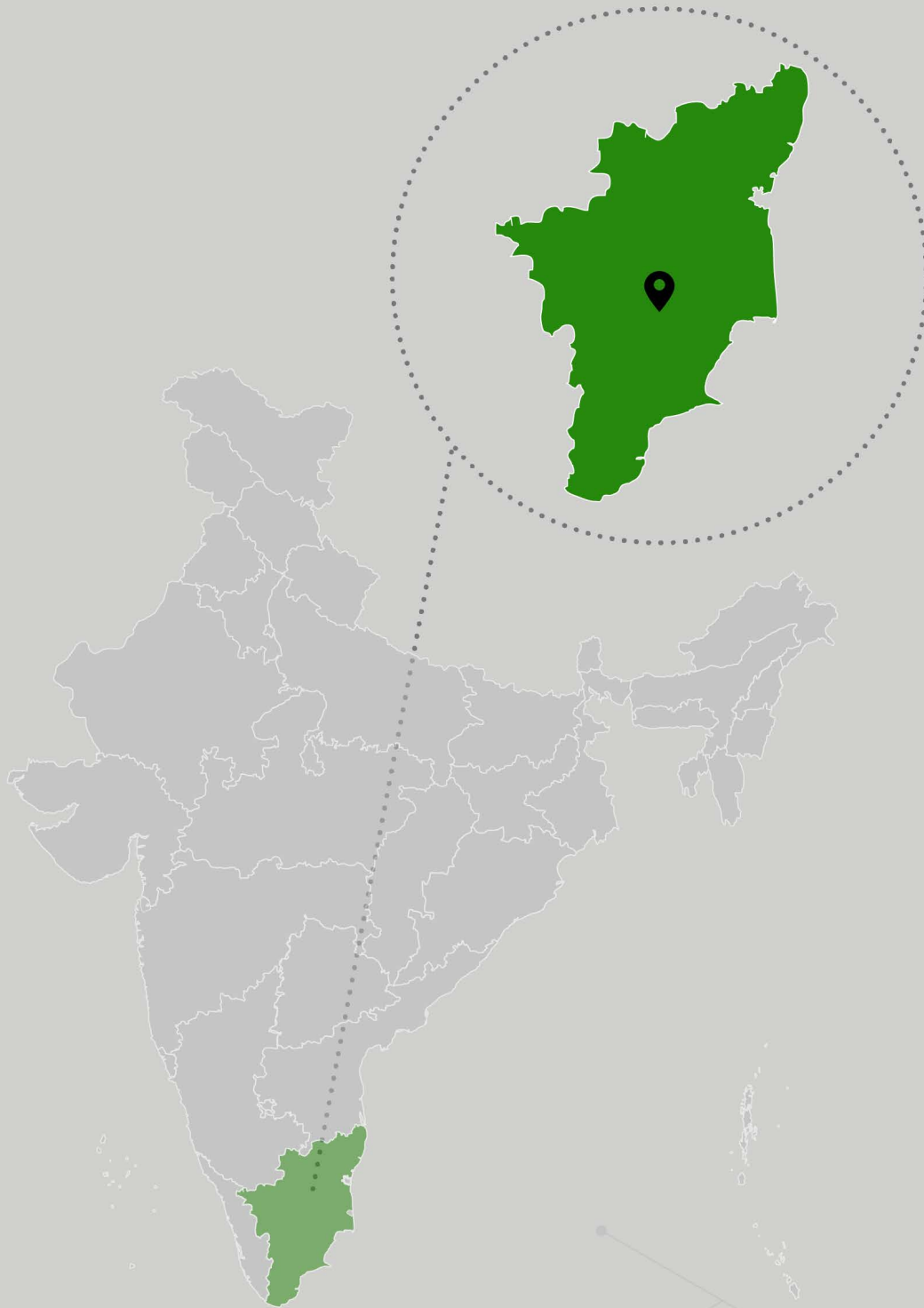
Note:

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- The medical ecosystem index refers to the presence of medical facilities proportional to population.
- The cost of living index infers to the consumer prices and rent.
- The crime index refers to the safety of the citizens affected by criminal acts.
- The pollution index refers to the combination of parameters such as AQI and particulate matter.

What's next?

- Lucknow, the capital of Uttar Pradesh, has seen a significant rise in the BPM domain. Approximately 40 percent of the newly recruited personnel during the COVID-19 pandemic in Lucknow were freshers. The city is becoming a favoured location for domestic and international service providers in the BPM industry.
- With more government-induced training programmes and premier institute incubators contributing to skill development and innovation quotient development, Lucknow is expected to become the second-largest technology hub in Uttar Pradesh.

Madurai



Madurai



Population
1.8 million



Adult literacy
90.91%



Languages spoken
**Tamil, Malayalam,
English**

Summary

- Home to 325+ Technology and BPM businesses (e.g. Siemens).
- Premier institutes such as Madurai Kamraj University and American College and institutes affiliated with Anna University ensure quality talent supply.
- Ranked 20th amongst the most preferred start-up destinations in India; Madurai Start-ups and Start-up Grind are amongst the few start-up networking communities.
- Private players have set up more than three incubators and accelerators to promote innovation in various domains.
- The Madurai-Dindigul-Virudhunagar-Theni industrial corridor project with an investment of more than INR 2,500 crore has boosted industrialisation
- High availability of Grade A office infrastructure and dedicated technology SEZ, i.e. STPI and ELCOT.
- Good connectivity to the major technology hubs, such as Bengaluru and Chennai, by road and other cities of India by air with a domestic airport.



~20,000
Experienced talent available



20th rank
Amongst start-up destinations
in India



~325
Tech-related businesses



1.25 sq. km.
SEZ

Note:

- All installed talent in tech and tech-related businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.
- Tech businesses include GCCs, BPM centres, IT service providers, and IT services vendors.

Talent availability



Fresh graduates in the city per year	⇒	29,000–30,000
STEM graduates	⇒	9,000–10,000
Other graduates	⇒	20,000–21,000
Talent pool in tech companies	⇒	15,000–20,000
No. of colleges	⇒	~130
Premier institutes	⇒	TNAU, PSG College of Arts and Science, and Coimbatore Institute of Technology
Avg. salary of a software developer (5–8 yrs exp)	⇒	INR 7.5–9 lakh per annum

- Home to ~20,000 installed technology talent, with ~90 percent of the talent engaged in IT services.
- Important educational hub in south Tamil Nadu with ~130 colleges in technology, science, engineering, and other fields with ~30,000 fresh graduates annually.
- Kamaraj University, Madurai Medical College, and law colleges are some of the prominent colleges.
- The technology talent is upgrading itself with modern technologies such as cloud and blockchain to cater to the ever-increasing demand in the technology job market and for start-ups.
- Talent suitable for the technology industry regularly migrates to hubs such as Bengaluru and Chennai in search of better remuneration and quality of life.

Note: Talent pool in tech companies refers to installed talent in tech businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.

Infrastructure attractiveness



Availability of metro	⇒	NA
No. of flights to major cities per day	⇒	~16
Airport connectivity	⇒	Customs with direct flights to Dubai, Sri Lanka
Average download speed	⇒	13.6 Mbps
Office rental (Grade A office space)	⇒	INR 45–50/sq.ft./month

- The Tamil Nadu government has planned for the Madurai–Dindigul–Virudhunagar–Theni industrial corridor project and other such projects and allocated INR 11,000 Crore for four projects.
- The Madurai Corporation had initiated 16 projects worth INR ~991 crore under the smart city mission.
- Government-promoted IT SEZs, such as STPI and Electronics Corporation of Tamil Nadu Limited (ELCOT), are doing a commendable job in attracting IT and IT-enabled investments in Madurai.
- Madurai is well connected to other cities by road.

Note: Major cities refer to metropolitan cities of India.

Technology ecosystem



No. of tech & BPM set-ups	➔	~325
No. of GCCs	➔	NA
No. of Tech and Tech enabled start-ups	➔	~150
Major industries	➔	Machinery (water pumps), automobile, textile, and foundry

- Ranks 20th in All India Start-up destinations amongst Indian cities; Madurai has moved up two places from last year.
- The technology industry is still growing, but Madurai is home to a few tech MNCs, mainly BPMs serving the US market.
- It can potentially develop as a spoke to IT hubs of Bengaluru and Chennai. Few Chennai-based start-ups have set up their offices in Madurai
- It has the presence of a thriving ecosystem for start-ups driven by enthusiasts and communities alike.

Note: Tech and tech-enabled start-ups refer to setups with computer and software applications.

Risk and regulatory environment



Rank in EODB	➔	6/37 (Moderate)
Developed space/SEZ	➔	~1.25 sq.km.
Seismic zone	➔	2 (Low risk)
Probability of flooding	➔	Medium
Power disruption risk	➔	Medium

- Madurai has a moderate risk of floods and low risk of earthquakes as it lies in Seismic Zone 2.

Note:

- Developed space/SEZ refers to areas dedicated to tech industry
- Seismic zone risk scale: 1 = low; 5 = high
- Power disruption risk refers to instances of power failure

Social and living environment



Education ecosystem index	➔	6.80 (Moderate)
Medical ecosystem index	➔	5.23 (Moderate)
Cost of living index	➔	21.25 (Moderate)
Crime Index	➔	47.35 (Moderate)
Pollution index	➔	69.03 (Poor)

- Madurai, a culturally rich city located in the southern Indian state of Tamil Nadu, possesses a moderate education ecosystem with various educational institutions catering to the needs of its residents.
- The medical ecosystem in Madurai is also considered moderate, with sufficient healthcare facilities available in the city.
- The cost of living index in Madurai is moderate, with a relatively affordable cost of living compared to other major cities in India.
- The crime index in Madurai is moderate with a relatively safe environment for its residents.
- However, the city's pollution index is poor, with high pollution levels present in the air and water, making it a cause for concern.

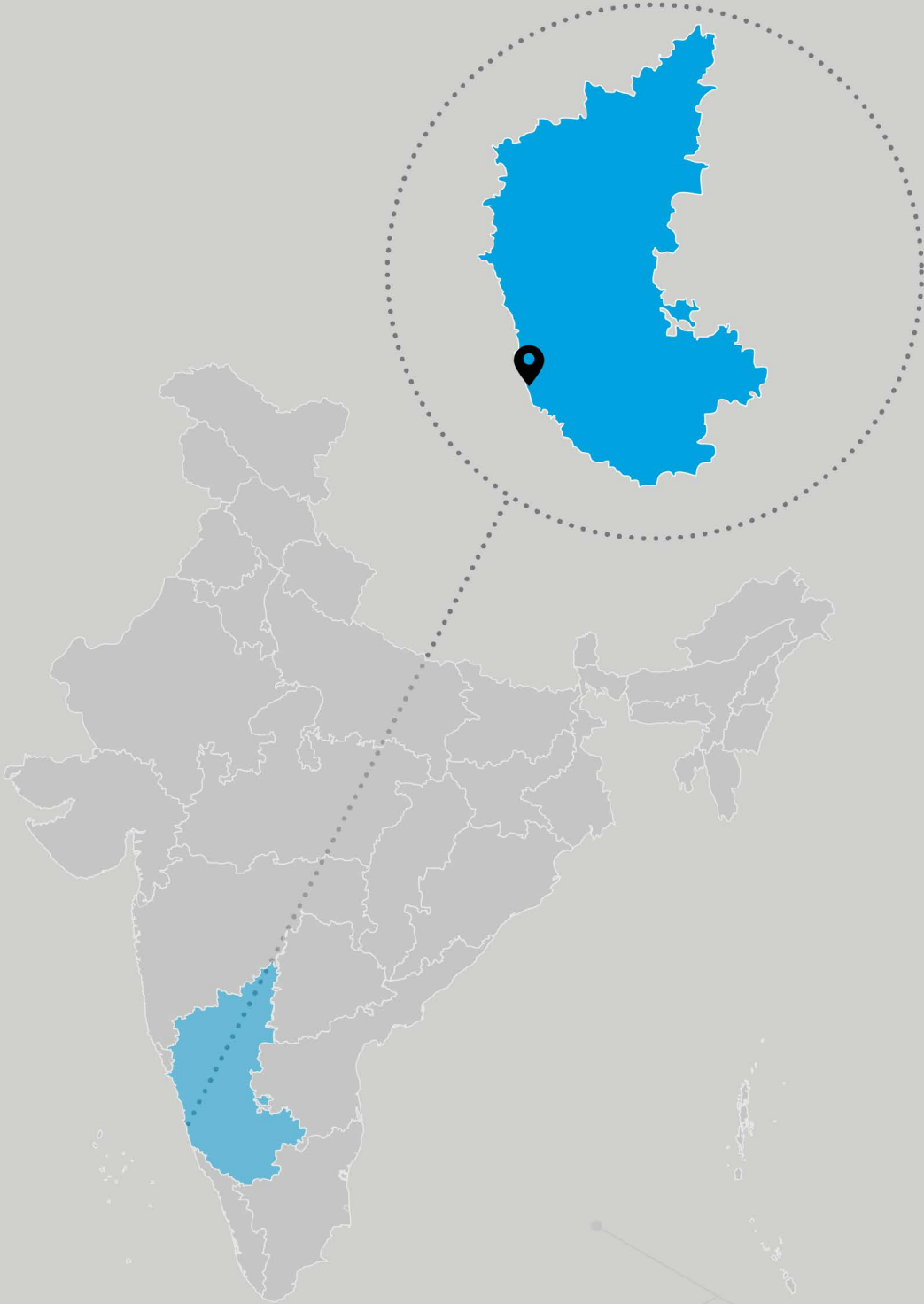
Note:

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- The medical ecosystem index refers to the presence of medical facilities proportional to population.
- The cost of living index infers to the consumer prices and rent.
- The crime index refers to the safety of the citizens affected by criminal acts.
- The pollution index refers to the combination of parameters such as AQI and particulate matter.

What's next?

- Madurai, a city of great historical and cultural significance, has a remarkable potential to emerge as a significant technology spoke, surpassing its dependence on the more established hubs of Chennai and Bengaluru. With technologically advanced parks such as STPI and ELCOT, Madurai is strategically positioned to become the next technology hub, supported by an abundance of engineering institutions that provide the necessary talent pool. These institutions also foster innovation by offering in-house incubators, which are critical to developing a sustainable start-up ecosystem.
- Madurai represents an ideal location for start-ups in fintech, software and data, and social and leisure industries. With more investment in resources, including skilled labour and modern infrastructure, Madurai has the right environment for start-ups to flourish and expand, contributing significantly to the overall growth of the region's economy.

Mangaluru



Mangaluru



Population
0.7 million



Adult literacy
93.72%



Languages spoken
Kannada, Tulu, English, Hindi, Konkani

Summary

- More than 50 technology and BPM-related businesses are based in the city, the major ones being Cognizant and Infosys .
- It has a moderate presence in the technology sector and moderate availability of employed and trained talent pool but high availability of graduates.
- Home to premier institutes such as National Institute of Technology, Mangaluru Institute of Technology, and Manipal University, Mangaluru has ensured quality talent for the industry.
- Declared as the first Start-up District in India, Mangaluru is home to the first government-established incubator for start-ups.
- Home to more than six incubators, thus moving up in the innovation index amongst other tier 2 cities
- High availability of Grade A office infrastructure, dedicated Technology SEZ Mangaluru Special Economic Zone Limited (MSEZL), and investments around US\$ 2 Billion done in MSEZL.
- Moderate Ease of Doing business.
- Port has been the major industry at Mangaluru; logistics along with businesses such as ship building/ maintenance are thriving here.
- Good connectivity to the major technology hub Bengaluru by road and other cities of India by air with an international airport.



~25,000
Experienced talent availability



1st
Start-up district of India (as recognised by Government of India)



~55
Tech-related businesses



US\$ 2 billion+
Investment in Mangaluru SEZ Limited

Note:

- All installed talent in tech and tech-related businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.
- Tech businesses include GCCs, BPM centers, IT service providers, and IT services vendors.

Talent availability



Fresh graduates in the city per year	↻	25,000–30,000
STEM graduates	↻	7,500–8,000
Other graduates	↻	18,000–19,000
Talent pool in tech companies	↻	20,000–25,000
No. of colleges	↻	~300
Premier institutes	↻	Manipal University, NIT Surathkal, Kasturba Medical College, Mangaluru Institute of Technology and Engineering
Avg. salary of a software developer (5–8 yrs exp)	↻	INR 8–11 lakh per annum

- Mangaluru is home to ~25,000 installed technology talent largely engaged in technology services.
- Education hub having ~300 colleges, including prominent colleges and universities such as Manipal University, NIT Surathkal, Kasturba Medical College, and Mangaluru Institute of Technology and Engineering.
- Approximately 60 percent of the colleges in IT, Science and Technical fields provide a large fresh talent pool for skilled outsourcing jobs.
- Many large technology companies are expanding their presence in Mangaluru as an alternative to Bengaluru as it provides high literacy, superior educational facilities, and an English-proficient workforce.

Note: Talent pool in tech companies refers to installed talent in tech businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.

Infrastructure attractiveness



Availability of metro (operational/planned) and coverage	↻	NA
No. of flights to major cities per day	↻	~22
Airport connectivity	↻	International (direct flights to Dubai, Dammam and Abu Dhabi)
Average download speed	↻	45.9 Mbps
Office rental (Grade A office space)	↻	INR 50–80/sq.ft./month

- Mangaluru is the only city in Karnataka to have all modes of transport: air, road, rail, and sea.
- About 75.69 hectares of land notified as SEZ for the technology sector is currently under development. Karnataka Industrial Areas Development (KIADB) and Brigade Enterprises Pvt. Ltd. are the two SEZs currently being developed for the technology sector.
- Mangaluru Special Economic Zone Limited (MSEZL) is one of India's most successful SEZs with investments exceeding US\$ 2 billion. With exports of over US\$ 400 million worth of goods from its units, MSEZL has emerged as one of the most vibrant operational multi-product SEZs in India.

Note: Major cities refer to metropolitan cities of India.

Technology ecosystem



No. of tech and BPM set-ups → ~55

No. of GCCs → NA

No. of tech and tech-enabled start-ups → ~200

Major industries → **Mining, refining, agricultural products; rapid growth for BPOs/outsourcing**

- The city is home to mining and refining companies such as Kudremukh Iron Ore Company Limited, Mangaluru Chemicals and Fertilizers, Mangaluru Refinery and Petrochemicals Limited, and ELF Gas.
- Mangaluru also has research and development centres innovating chemical applications in agriculture and allied utilities.
- It is one of the fastest-growing outsourcing destinations in India with over 50 set-ups.
- Major technology companies such as Cognizant have a presence in the city.
- IT companies have their respective 'Leadership and Training Academy' in Mangaluru, providing skill enhancement opportunities.
- BPM servicing healthcare companies in revenue cycle management processing function, IT companies focused on software development, IT consulting, and Internet publishing are also present in the city.
- The KDEM under 'Beyond Bengaluru' adopted measures to attract technology and GCCs to set up offices in Mangaluru.
- The Dakshina Kannada district in which Mangaluru is situated was declared as the first start-up district of India, where the first government-backed incubator was established.
- The city boasts nearly 200 start-ups with a strong ecosystem, including more than 20 tinkering labs to encourage young minds.
- Start-ups in the domains of SaaS, finance technology, education technology, IoT, and green technology are present in the city.
- The KDEM aims to foster Bengaluru-like Start-up Economy in the state's emerging start-up clusters such as Mangaluru.
- The 'New Age Innovation Network' initiative is a tie-up with technology institutes to set up 30 incubation centres to encourage innovation.

Note: Tech and tech-enabled start-ups refer to set-ups with computer and software applications.

Risk and regulatory environment



Rank in EODB	➔	4/37 (Good)
Developed space/SEZ	➔	~0.75 sq.km.
Seismic zone	➔	3 (Moderate)
Probability of flooding	➔	Medium
Power disruption risk	➔	Medium

- Mangaluru has a moderate risk of earthquakes as it lies in Seismic Zone 3 and moderate risk of other natural calamities; however, none have been recorded recently.

Note:

- Developed space/SEZ refers to areas dedicated to the tech industry
- Seismic zone risk scale: 1 = low; 5 = high
- Power disruption risk refers to instances of power failure

Social and living environment



Education ecosystem index	➔	10.82 (Moderate)
Medical ecosystem index	➔	5.52 (Moderate)
Cost of living index	➔	19.12 (Good)
Crime Index	➔	25.07 (Good)
Pollution index	➔	46.25 (Moderate)

- Mangaluru, a coastal city in the Indian state of Karnataka, boasts a moderate education ecosystem index with various educational institutions for its residents.
- The medical ecosystem index is also moderate with an adequate number of healthcare facilities.
- The cost of living index in Mangaluru is considered good with a relatively affordable cost of living than in other major cities in India.
- The crime index in Mangaluru is good, with a relatively safe environment for its residents.
- The city has a moderate level of air and water pollution.

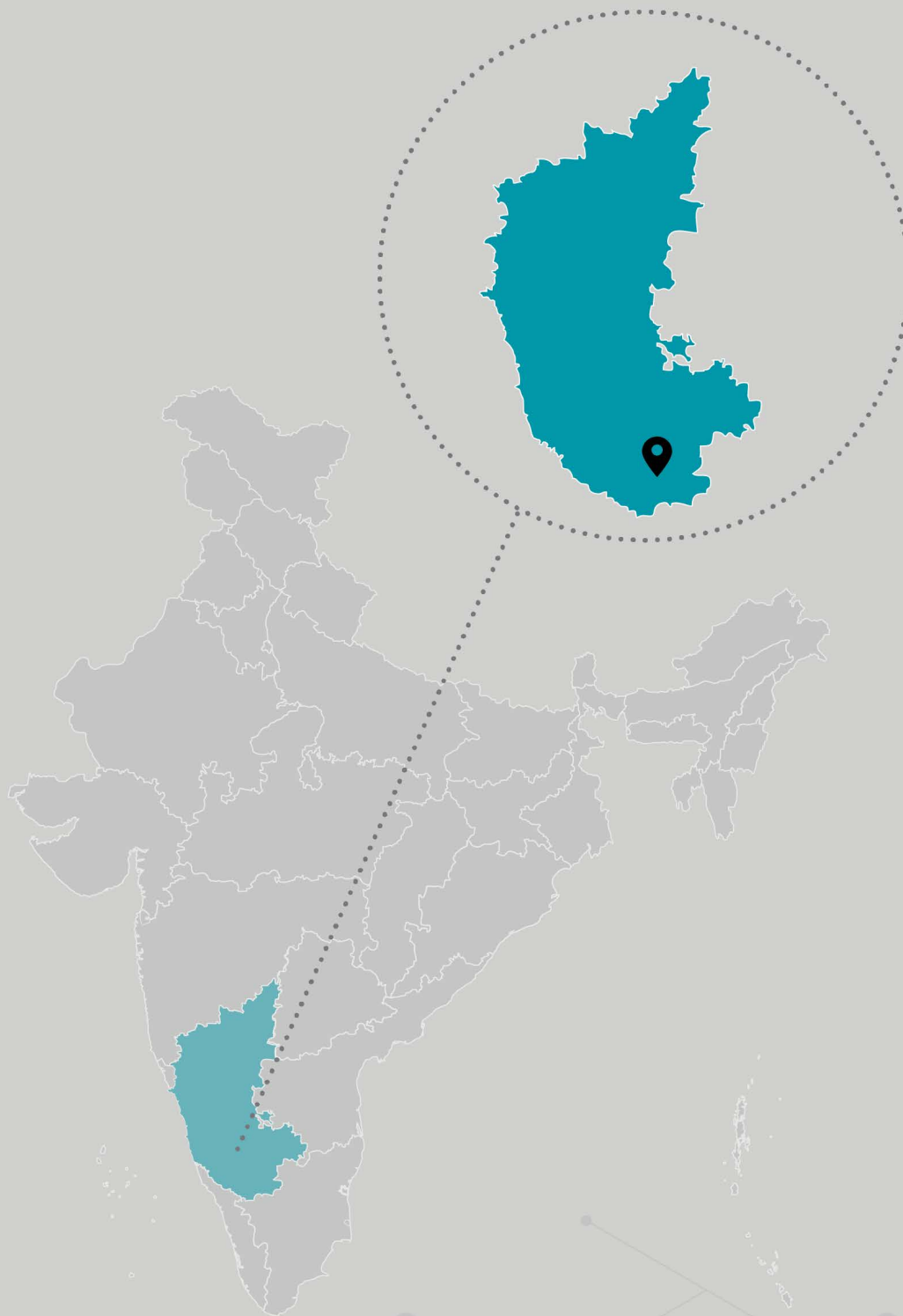
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- The pollution index refers to the combination of parameters such as AQI and particulate matter.

What's next?

- Mangaluru, a coastal city in Karnataka, has emerged as the fastest-growing technology destination with numerous domestic and international service providers establishing their offices in the region, with headcounts ranging in the thousands. This rapid growth trajectory can be attributed to the city's strategic location, favourable business ecosystem, and skilled labour pool.
- The emergence of the first incubator in Mangaluru has further fuelled the city's start-up revolution. The incubator has set the pace for an entrepreneurial wave, providing budding entrepreneurs with the necessary resources and support to transform their ideas into successful businesses. As a result, the start-up scene in Mangaluru has witnessed a significant surge with several innovative start-ups emerging in various sectors, including technology, healthcare, and education. This growth trend is expected to continue, further solidifying Mangaluru's position as a leading technology hub in the region.

Mysuru



Mysuru



Population
1.2 Mn



Adult literacy
86.09%



Languages spoken
**Kannada, Tamil,
Hindi, English**

Summary

- Mysuru has a presence of more than 200 technology- and BPM-related business set-ups, along with training centres of Indian tech companies.
- Moderate presence of the technology sector and moderate availability of employed and trained talent pool.
- Home to premier institutes such as Christ University, Maharaja College, and University of Mysuru, providing quality talent supply to the industry.
- Development of Mysuru as a hub for cyber security is imminent by setting up of the Cyber Security Centre of Excellence.
- The involvement of private players participating in building more than five incubators and ideation labs has set the stage for Mysuru to become a hot destination for innovative start-ups.
- Moderate availability of Grade A office infrastructure and dedicated mega industrial zones planned on the city outskirts.
- Moderate EODB and ease of setting up new business under the Karnataka Industrial Policy 2020 and Karnataka state IT policy.
- Mysuru offers a favourable ecosystem for start-ups with the set-up of 'KDEM' and the 'New Age Innovation Network' Initiative.
- Good connectivity to the major technology hub Bengaluru with a 10-lane expressway.



~18,000
Experienced talent availability



~100
Tech start-ups



~200
Tech-related businesses



10 sq. km.
Planned mega industrial zones

Note:

- All installed talent in tech and tech-related businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.
- Tech businesses include GCCs, BPM centers, IT service providers, and IT services vendors.

Talent availability



Fresh graduates in the city per year	⇒ 16,000–20,000
STEM graduates	⇒ 3,500–4,000
Other graduates	⇒ 12,500–13,000
Talent pool in tech companies	⇒ 15,000–18,000
No. of colleges	⇒ ~175
Premier institutes	⇒ Maharaja’s College, University of Mysuru, St. Philomena’s College, JSS College of Arts, Commerce and Science, Christ College Mysuru
Avg. salary of a software developer (5–8 yrs exp)	⇒ INR 7–10 lakh per annum

- Home to ~18000 installed technology talent largely involved in technology services.
- Relatively low English proficiency owing to local language influence.
- Premier institutes and other Grade A colleges such as Maharaja’s College, University of Mysuru, St. Philomena’s College, JSS College of Arts, Commerce, and Science (Autonomous), and Christ College along with other tier 2 colleges can supply approximately 28,000 graduates yearly.

Note: Talent pool in tech companies refers to installed talent in tech businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.

Infrastructure attractiveness



Availability of metro (operational/planned) and coverage	⇒ NA
No. of flights to major cities per day	⇒ ~9
Airport connectivity	⇒ Domestic airport with two airlines operating
Average download speed	⇒ 40.27 Mbps
Office rental (Grade A office space)	⇒ INR 25–50/sq.ft./month

- Mega industrial zones are being planned on the outskirts of Mysuru, and a feasibility study has been initiated to identify 1000 hectares of land for the same.
- With the completion of the 10-lane Mysuru–Bengaluru Highway, accessibility to Bengaluru will result in a paradigm shift for technology and other service industries on the lines of the Mumbai–Pune industrial corridor.
- Mysuru is well connected with Bengaluru by road and is mainly dependent on Bengaluru International Airport for international connectivity.

Note: Major cities refer to metropolitan cities of India.

Technology ecosystem



No. of tech and BPM set-ups	↔	~200
No. of GCCs	↔	~5
No. of tech and tech-enabled start-ups	↔	~100
Major industries	↔	Chemicals, petrochemicals, machinery, electronics, automobile, engineering

- Mysuru is the second-largest software exporter in the state of Karnataka after Bengaluru. It is home to major GCCs and national technology corporates such as Cognizant, Softvision, and Marlabs.
- With its proximity to Bengaluru, it has emerged as a cost-effective location for technology companies engaged in software development, service delivery, cloud, and information services.
- The city is also developing as a favourable destination for software testing, web designing, web development, and media companies.
- CII is making efforts to make Mysuru a cyber security hub with the setting up of a Cyber Security Centre of Excellence.
- The state government, along with private players, have set up some of the best research and education institutes catering to innovation-focused start-ups by mentoring budding scientists.
- VLSI chip developers are opening a design centre in the S.J. College of Engineering Science Technology Entrepreneurs Park (STEP) incubation centre to make Mysuru an ESDM hub.
- Start-ups in Mysuru are clustered majorly in the technology sector, focusing on design and innovation.
- The KDEM aims to foster a Bengaluru-like start-up economy in the state's emerging start-up clusters such as Mysuru.
- The 'NEW AGE INNOVATION NETWORK' initiative is a tie-up with technology institutes to set up 30 incubation centres to encourage innovation.
- Mysuru is attracting investments from foreign entrepreneurs and investors alike.

Note: Tech and tech-enabled start-ups refer to set-ups with compute and software applications.

Risk and regulatory environment



Rank in EODB	↔	4/37 (Good)
Developed space/SEZ	↔	~2.5 sq.km.
Seismic zone	↔	2 (Low risk)
Probability of flooding	↔	Low
Power disruption risk	↔	Low

- Mysuru has a moderate risk of flooding in the monsoon and a low risk of earthquakes as it lies in Seismic Zone 2.
- It has moderate criminal activity and authorities have implemented strict law and order enforcement.

Note:

- Developed space/SEZ refers to areas dedicated to tech industry
- Seismic zone risk scale: 1 = low; 5 = high
- Power disruption risk refers to instances of power failure

Social and living environment



Education ecosystem index	➔	11.73 (Moderate)
Medical ecosystem index	➔	3.01 (Moderate)
Cost of living index	➔	21.46 (Moderate)
Crime Index	➔	50.04 (Moderate)
Pollution index	➔	58.57 (Moderate)

- Mysuru has a moderate education ecosystem with various educational institutions catering to the needs of its students.
- The medical ecosystem in Mysuru is also considered moderate with sufficient healthcare facilities available in the city.
- The cost of living index in Mysuru is moderate with a relatively affordable cost of living than other major cities in India.
- The city's pollution index is also moderate with moderate levels of air and water pollution.

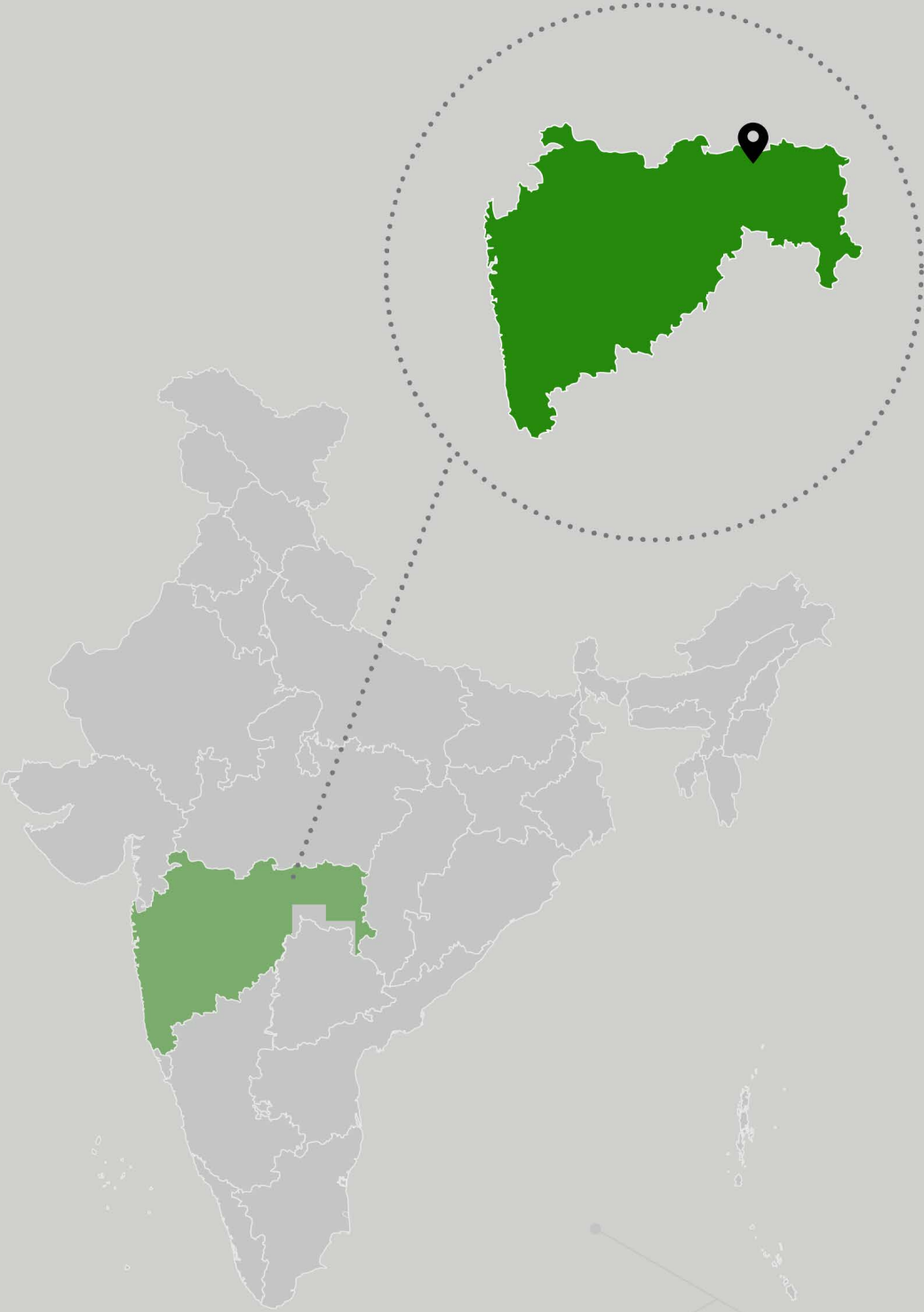
Note:

- The education ecosystem index refers to the number of schools per 1000 children.
- The medical ecosystem index refers to the presence of medical facilities proportional to population.
- The cost of living index infers to the consumer prices and rent.
- The crime index refers to the safety of the citizens affected by criminal acts.
- The pollution index refers to the combination of parameters such as AQI and particulate matter.

What's next?

- Mysuru is primed to solidify its position as a foremost cyber security hub in India due to the abundant availability of talent with requisite emerging skills in the region.
- Moreover, Mysuru benefits from the presence of major Indian corporate service providers, equipped with their training centres, which further fortifies its position as a highly sought-after location for start-up incubators and accelerators, with essential components of a thriving start-up ecosystem. Additional investments from public and private entities can potentially enhance Mysuru's reputation as a preeminent hub for training and incubation.
- With recent infrastructure projects reducing the travel time between Mysuru and Bengaluru to about 90 minutes, Mysuru is poised to grow as an ideal 'spoke' destination.

Nagpur



Nagpur



Population
2.99 million



Adult literacy
91.92%



Languages spoken
**Marathi, Hindi,
English**

Summary

- Nagpur has a presence of more than 200 technology and BPM-related business set-ups with training centres.
- Home to an additional 550+ technology and BPM-related business set-ups.
- It has a moderate presence of the technology sector; high availability of employed and trained talent pool from the city and neighbouring cities.
- Premier institutes such as National Institute of Technology, IIT Nagpur, and IIM Nagpur has ensured the availability of quality talent for the tech domain.
- Nagpur ranks 23rd in the most preferred destination for start-ups in India and home to 300+ technology start-ups.
- Moderate EODB; the region to be developed for aerospace and defence, textile, and food processing hub.
- High availability of Grade A office infrastructure and dedicated SEZ 'MIHAN' with a focus on aviation, logistics, and technology.
- With the construction of Samruddhi Mahamarg, Nagpur will be directly connected to the technology hubs Mumbai and Pune.
- India's ninth National Investment and Manufacturing Zone (NIMZ) SEZ (Planned) is likely to attract an investment of INR 25,000 crore and is expected to create 2,60,000 jobs in the future.



~60,000
Experienced talent availability



23rd Rank
Amongst start-up destinations
in India



~550
Tech-related businesses



12.38 sq. km
MIHAN SEZ

Note:

- All Installed talent in tech and tech-related businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.
- Tech businesses include GCCs, BPM centers, IT service providers, and IT services vendors.

Talent availability



Fresh graduates in the city per year	⇒ 54,000–60,000
STEM graduates	⇒ 20,000–21,000
Other graduates	⇒ 34,000–35,000
Talent pool in tech companies	⇒ 60,000–65,000
No. of colleges	⇒ ~331
Premier institutes (not exhaustive)	⇒ IIT Nagpur, Visvesvaraya National Institute of Technology, IIM Nagpur, Priyadarshini College of Engineering
Avg. salary of a software developer (5–8 yrs exp)	⇒ INR 6.5–9.5 lakh per annum

- Nagpur is a major education hub in central India. The total technology talent pool availability of experienced professionals is ~60,000 in the city.
- It has four state universities, including Rashtrasant Tukadoji Maharaj Nagpur University (founded in 1923 as Nagpur University and is one of the oldest in the country), Visvesvaraya National Institute of Technology, which is the only NIT in Maharashtra, IIIT has been established as a PPP with Ceinsys (erstwhile ADCC Infocad) as industry partners in 2016 and two major management institutes, namely, IIM and IMT.
- Nagpur also has an IGNOU and YCMOU regional centre and premier institutes such as Government Chitrakala Mahavidyalaya and Symbiosis International University.

Note: Talent pool in tech companies refers to installed talent in tech businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.

Infrastructure attractiveness



Availability of metro (operational/planned) and coverage	⇒ Yes (44 Km)
No. of flights to major cities per day	⇒ ~25
Airport connectivity	⇒ International flights to Sharjah and Doha
Average download speed	⇒ 38.56 Mbps
Office rental (Grade A office space)	⇒ INR 45–50/sq.ft./month

- City has a 2000-hectare SEZ named MIHAN. Apart from MIHAN, the city has three prominent MIDC areas: Butibori industrial area, Hingna industrial estate comprising around 900 small and medium industrial units, and Kalmeshwar MIDC with 164 industrial plots, including KTM Textile and ZIM Pharma Ltd.
- India's ninth NIMZ at Nagpur is also in the pipeline. It is likely to attract INR 25,000 crore and create 2,60,000 jobs.
- Nagpur has many prominent infrastructure projects such as the Smart City project, Metro Rail project, IT and manufacturing facilities in MIHAN SEZ and Airport Cargo Hub, and Samruddhi Mahamarg, which will further boost national connectivity and the related demand for quality residential units.
- Godrej Properties plans to invest around INR 7,500 crore over the next 12–18 months on acquisition and development of new real estate projects.

Note: Major cities refer to metropolitan cities of India.

Technology ecosystem



No. of tech & BPM set-ups	➔	~550
No. of GCCs	➔	NA
No. of tech and tech-enabled start-ups	➔	~325
Major industries	➔	Fruit processing, oil industry, agriculture, floriculture, mineral resources, sericulture, fisheries

- Prominent IT companies, such as HCL, GlobalLogic, and Persistent Systems, are located at various IT parks in Nagpur.
- Air India Engineering Services Limited and AAR-Indamer have their MRO Facility in the SEZ. The manufacturing facilities of Dassault Reliance Aerospace Limited and Thales Reliance Defense System are located in MIHAN. Pharmaceutical company Lupin also has its facility in the SEZ
- There are over 326 tech start-ups in the city. The city ranks 15 in India and 339 globally, based on the strength of its start-up ecosystem.
- It has a good base of investors, accelerators, and incubators such as Nagpur Angels, TiE Nagpur, and VNIT Nagpur. According to DataLabs, the total funding of the Nagpur-based start-ups from 2014 to Q1-2019 was US\$ 442,091 across eight deals.
- PSB, an Indian Bank, also launched its online programme for MSMEs to prepare them with the necessary skills required for the professional conduct of business.
- Venture Catalysts, India's first and largest integrated incubator, launched its operations in the city in 2018 to aid the city's entrepreneurial ecosystem.
- Inc42 and Digital Ocean have chosen the city as the second stop for their BIGShift initiative.
- Some major start-ups are Lemon Ideas Innovations (a start-up ecosystem that supported around 1,000 entrepreneurs and innovators), Bloom Consulting Services (with a presence in Singapore), LocationGuru (having Airtel, Vodafone, Qualcomm, and Samsung as clients), RF Arrays' Smart Grid (with a funding of US\$ 7 million), and many others.

Note: Tech and tech-enabled start-ups refer to set-ups with computer and software applications.

Risk and regulatory environment



Rank in EODB	➔	10/37 (Good)
Developed space/SEZ	➔	~20 sq.km.
Seismic zone	➔	2 (Low risk)
Probability of flooding	➔	Low
Power disruption risk	➔	Low

- Nagpur has a moderate natural disaster risk. It is prone to droughts due to less rainfall, and a low risk of earthquakes as it lies in Seismic Zone 2.

Note:

- Developed space/SEZ refers to areas dedicated to tech industry
- Seismic zone risk scale: 1 = low; 5 = high
- Power disruption risk refers to instances of power failure

Social and living environment



Education ecosystem index	↻	7.79 (Moderate)
Medical ecosystem index	↻	5.57 (Moderate)
Cost of living index	↻	20.95 (Moderate)
Crime Index	↻	36.77 (Good)
Pollution index	↻	70 (Poor)

- Nagpur boasts a moderate education ecosystem with various educational institutions catering to the students.
- The medical ecosystem in Nagpur is also considered moderate with an adequate number of healthcare facilities available in the city.
- The cost of living index in Nagpur is moderate with a relatively affordable cost of living than other major cities in India.
- Nagpur has a good crime index with a relatively safe environment for its residents. However, the city's pollution index is poor with high levels of air and water pollution.

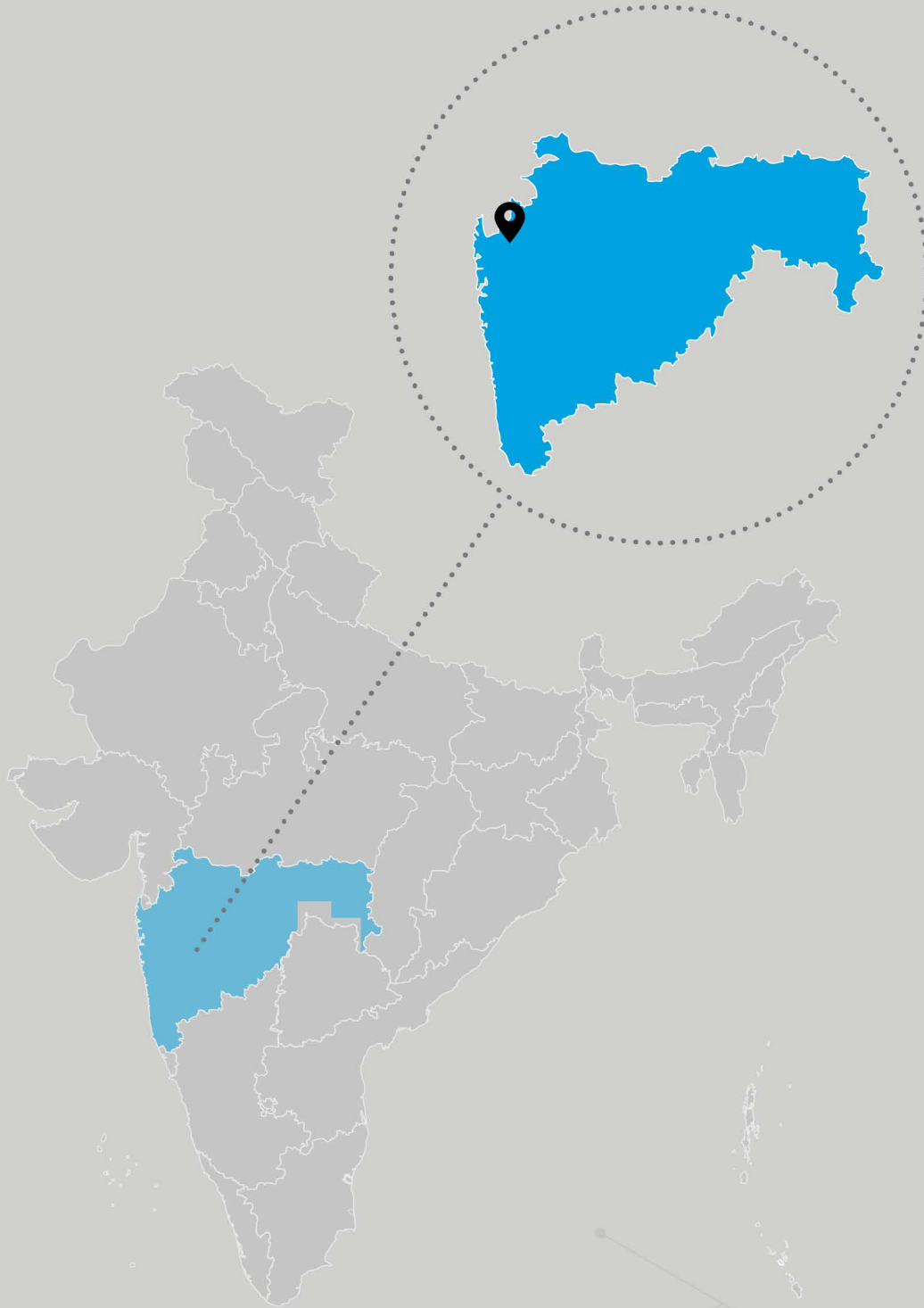
Note:

- The education ecosystem index refers to the number of schools per 1,000 children.
- The medical ecosystem index refers to the presence of medical facilities proportional to population.
- The cost of living index infers to the consumer prices and rent.
- The crime index refers to the safety of the citizens affected by criminal acts.
- The pollution index refers to the combination of parameters such as AQI and particulate matter.

What's next?

- Nagpur, located in the heart of India, can function as a pivotal spoke for the pre-existing hubs of Mumbai, Pune, and Hyderabad, given that it is equidistant from these cities. Furthermore, the recently developed Samruddhi Mahamarg has expedited connectivity to Mumbai and Pune, augmenting Nagpur's importance as a strategic location.
- As an up-and-coming hub, Nagpur houses numerous service providers and GCCs, making it an attractive destination for various industries. Moreover, with esteemed institutions such as NIT boasting in-house incubators, Nagpur possesses all ingredients needed for a thriving tech hub, including SEZs and technology parks.
- Nagpur thus has the potential to emerge as a leading tech hub with its strategic location, comprehensive infrastructure, and an array of tech-focused institutions, which can provide an ideal environment for companies seeking to expand their operations.

Nashik



Nashik



Population
2.18 million



Adult literacy
89.85%



Languages spoken
Marathi, Hindi, English

Summary

- The presence of more than 250 technology and BPM-related business set-ups has made Nashik the next tech destination.
- It has a moderate presence of the technology sector And Good availability of employed and trained technology talent pool from city and neighbouring cities.
- Home to premier institutes such as Symbiosis University and Yashwantrao Chavan University has ensured a steady supply of quality talent.
- Nashik ranks 37th in the most preferred destination for start-ups in India; the Maharashtra Government has set up an INR 200 crore start-up fund.
- Upcoming incubators and the presence of more than three ideation labs are putting Nashik on the innovation map.
- It has a moderate EODB and gained a reputation of being the wine capital of India with more than 50 wineries around the city.
- High availability of Grade A office infrastructure and dedicated technology SEZ, namely, Sinnar SEZ and Adgaon Shivar IT Park.
- The planned 25-km ring road around the city, along with National Highway projects, to help ease congestion.
- Being a holy city, it has good connectivity to the major technology hubs Mumbai and Pune by road and other major cities by railway.



30,000–35,000
Experienced talent availability



~200
Start-ups



~250
Tech-related businesses



37th
Most preferred start-up destination in India

Note:

- All installed talent in tech and tech-related businesses (including GCCs, IT/ITES, BPM, and others); data are from FY 2022–23.
- Tech businesses include GCCs, BPM centers, IT service providers, and IT services vendors.

Talent availability



Fresh graduates in the city per year	⇒ 38,000–40,000
STEM graduates	⇒ 18,000–19,000
Other graduates	⇒ 20,000–21,000
Talent pool in tech companies	⇒ 30,000–35,000
No. of colleges	⇒ ~233
Premier institutes	⇒ Symbiosis International University, Symbiosis Institute of Operations Management, Yashwantrao Chavan University
Avg. salary of a software developer (5–8 yrs exp)	⇒ INR 5.85–9.5 lakh per annum

- Experienced talent of ~ 35,000 currently working in the technology industry.
- One of the fastest-growing cities in India with IT sector fields such as AI, robotics, IoT, and IT services.
- Colleges such as Symbiosis International University, Symbiosis Institute of Operations Management, Yashwantrao Chavan Maharashtra University, and Sandip University are prominent universities in the region, supplying over 8,000 IT graduates every year to the growing technology sector. However, most of the graduates migrate to bigger IT hubs, e.g. Pune, for work.

Note: Talent pool in tech companies refers to installed talent in tech businesses (including GCCs, IT/ITES, BPM, and others); data are from FY 2022.

Infrastructure attractiveness



Availability of metro (operational/planned) and coverage	⇒ Yes (33 Km)
No. of flights to major cities per day	⇒ ~6
Airport connectivity	⇒ Domestic only
Average download speed	⇒ 36.82 Mbps
Office rental (Grade A office space)	⇒ INR 45/sq.ft./month

- Setting up of the mega industrial area in Sinnar, one of Asia's biggest. Furthermore, the NMC administration has issued a separate Expression of Interest (EoI) for joint ventures to develop a 15-acre IT Park and a logistic park in the city.
- The MSME Union Minister has announced a 350-acre land sanction for an IT park establishment in Adgaon Shivar. The project value is estimated at INR 7,000 crore.
- The Maharashtra government has assured to provide INR 300 crore for constructing a 25-km outer ring road on the city's outskirts. A 12 National Highway project in Nashik worth over INR 1,600 crore is functional.
- Well connected with Mumbai and Pune by road.

Note: Major cities refer to metropolitan cities of India.

Technology ecosystem



No. of tech and BPM set-ups	↪	~250
No. of GCCs	↪	NA
No. of tech and tech-enabled start-ups	↪	~200
Major industries	↪	Manufacturing (aerospace, pharma, and defence), Textile, agriculture, IT

- Nashik, located in Maharashtra, is a rapidly growing industrial hub that accounts for 6.7 percent of the state's overall output. The city is home to various industries, including textiles, automotive, electrical engineering, and food processing. Additionally, Nashik serves as a key location for defence innovation in the country; it is also home to over 50 wineries, making it a popular destination for experiential tours and wine festivals.
- Nashik has also emerged as an attractive investment destination for IT companies and is a major start-up hub in Maharashtra. The city is part of the Delhi-Mumbai Industrial Corridor (DMIC), a government initiative that aims to develop Nashik as a hub for IT, engineering, and skill-based knowledge and its existing manufacturing capabilities.
- MNCs such as Datamatics have invested in the city, specifically opening a business process services centre under the Indian government's BPO promotion scheme. The company also operates a social innovation centre, the Digital Impact Square, which includes many innovators from Nashik.
- The city's thriving business ecosystem includes various companies across various sectors, including technology, healthcare, fintech, agritech, education technology, and e-commerce. The development of infrastructure, air connectivity, and an SEZ in Sinnar has further solidified Nashik's position as a premier location for start-ups and businesses.
- In addition to established companies, Nashik is home to a number of promising start-ups such as ESDS, Winjit, Zabuza Labs, and SenseDose. These companies have attracted significant funding, particularly ESDS and Winjit, having raised substantial amounts in recent years.
- An Indian IT company operates an innovation centre to provide a platform for innovators, start-ups, and students, and 15 percent of innovators from Nashik are part of the centre.

Note: Tech and tech-enabled start-ups refer to setups with computer and software applications.

Risk and regulatory environment



Rank in EODB	➔	10/37 (Good)
Developed space/SEZ	➔	~10.1 sq.km.
Seismic zone	➔	3 (Moderate)
Probability of flooding	➔	Medium
Power disruption risk	➔	Low

- Nashik is at a high risk of flooding as it is situated on Godavari riverbanks, which may cause disruptions. However, plans are in place to avoid it in the future. It has a low risk of earthquakes as it lies in Seismic Zone 2.

Note:

- Developed space/SEZ refers to areas dedicated to tech industry
- Seismic zone risk scale: 1 = low; 5 = high
- Power disruption risk refers to instances of power failure

Social and living environment



Education ecosystem index	➔	9.61 (Moderate)
Medical ecosystem index	➔	2.88 (Moderate)
Cost of living index	➔	22.36 (Moderate)
Crime Index	➔	22.96 (Good)
Pollution index	➔	37 (Good)

- Nashik is a city with a moderate education ecosystem, offering a range of educational institutions, including primary and secondary schools, colleges, and universities.
- The city's medical ecosystem is also moderate, with various hospitals and healthcare centres providing essential medical services.
- The cost of living in Nashik is moderate with prices for goods and services being generally affordable.
- The city has a good crime index with relatively low crime rates and a strong presence of law enforcement agencies.
- The pollution index of Nashik is also considered good, with the city's environment being relatively clean and well maintained.

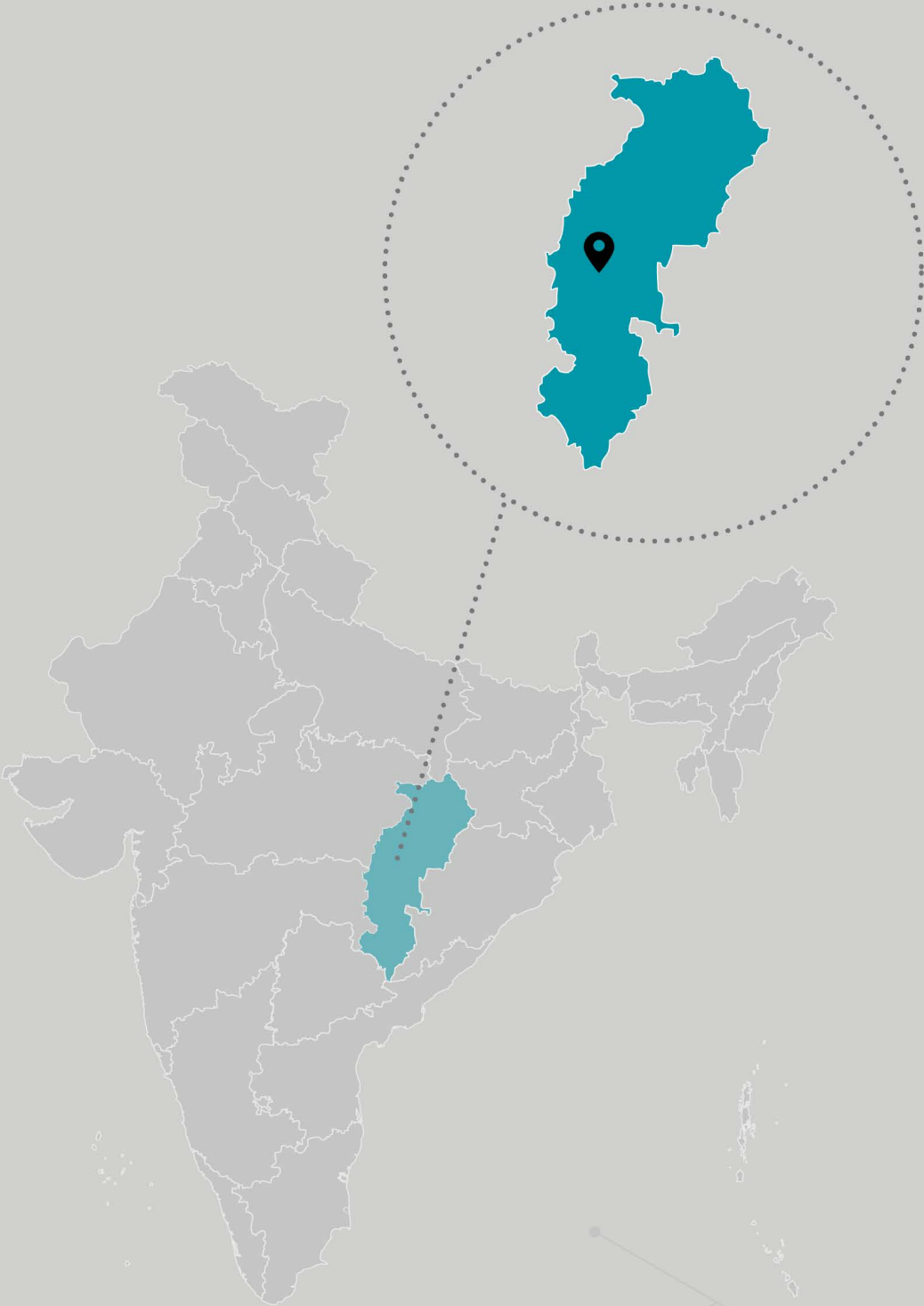
Note:

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- Medical ecosystem index refers to the presence of medical facilities proportional to population.
- Cost of living index infers to the consumer prices and rent.
- Crime index refers to the safety of the citizens affected by criminal acts.
- Pollution index refers to the combination of parameters such as AQI and particulate matter.

What's next?

- Nashik, a city that harbours many international service providers, is an emerging hub with the potential to serve as a pivotal spoke for the established hubs of Mumbai and Pune as it is equidistant from both metropolitan cities.
- Recognised as the agricultural hub of Maharashtra, Nashik has gained significant traction as a nucleus for agritech and foodtech start-ups in the Indian start-up landscape. This burgeoning ecosystem has bolstered Nashik's appeal as a compelling destination for start-ups operating in the software and data, e-commerce and retail, and undefined sectors. Furthermore, through public-private partnerships and government-led initiatives aimed at fostering innovation and training programmes facilitated by leading institutions, Nashik holds the potential to emerge as the third-largest technology belt in western Maharashtra.

Raipur



Raipur



Population
1.76 Mn



Adult literacy
85.95%



Languages spoken
Chattisgarhi, Hindi, Halbi, Bhunjia, English

Summary

- Raipur has a presence of more than 100 technology and BPM-related business set-ups.
- It has a high presence of the technology sector and moderate availability of employed and trained talent pool in the city.
- Premier institutes, such as IIM Raipur, NIT Raipur, Kalinga University, and International Institute of Technology, have ensured quality tech and allied fresh talent essential for the budding tech industry.
- The setup of four incubators has set the pace for the city to enter the space of technology innovation.
- The planned city of Nava Raipur is bound to be home to major IT/ITES and other engineering and tech-allied industries.
- Multi-sector SEZ being developed by the Nava Raipur development authority is spreading over an area of ~25 hectares.
- High EODB ranked sixth makes it one of the most lucrative investment destinations amongst emerging locations.
- Raipur has an operational airport and is connected with major IT hubs, along with a full-fledged railway station connecting to all regions of the country.



~25,000

Experienced talent availability



~340

Technology start-ups



~100

Tech-related businesses



25th

Most preferred start-up destination in India

Note:

- All installed talent in tech and tech-related businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.
- Tech businesses include GCCs, BPM centres, IT service providers, and IT services vendors.

Talent availability



Fresh graduates in the city per year	➔	27,000–28,000
STEM graduates	➔	19,000–20,000
Other graduates	➔	8,000–9,000
Talent pool in tech companies	➔	20,000–25,000
No. of colleges	➔	~158
Premier institutes	➔	IIM Raipur, NIT Raipur, Hidayatulla National Law University, Kalinga University, International Institute of Technology, ITM University
Avg. salary of a software developer (5–8 yrs exp)	➔	INR 6.5–8 lakh per annum

- The city has a fresh talent pool of over 28,000 students and is considered as one of the key educational hubs in the state. It hosts premier institutes such as IIM Raipur, NIT Raipur, and National Law School (NLS, Raipur).
- NIT Raipur saw around 92 companies participating in its placement drive, with 599 offers in year 2021 and an average package of INR 9.7 LPA.
- Almost 100 percent of the 2018–2020 batch students were placed from IIM Raipur. All 100 percent of students received placements for SIP in the batch of 2019–2021 (IIM only).
- The state government invested INR 200 crore to set up a state-of-the-art tier 4 data centre in Raipur. Top BPO companies such as HGS, PatraBPO, and NextWealth have set up production centres in Chhattisgarh, generating more than 2000 jobs.

Note: Talent pool in tech companies refers to installed talent in tech businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.

Infrastructure attractiveness



No. of modes of local transport	➔	Bus, Cab (Ola and Uber), Train, Autorickshaw
No. of flights to major cities per day	➔	~33
Airport connectivity	➔	Domestic
Average download speed	➔	48.70 Mbps
Office rental (Grade A office space)	➔	INR 40–50/sq.ft./month

- The Naya Raipur Development Authority is developing a multi-sector complex with state-of-the-art facilities for manufacturers and service providers in the technology and electronics sectors.
- An electronics manufacturing cluster spanning 28.32 hectares is also being established in Naya Raipur, featuring a world-class ecosystem for electronics manufacturing industries and proposed investments of US\$ 155 million through MoUs.
- Two SEZs are also in the works, including one for gems and jewellery and another for multi-product manufacturing, including front-end components for sales and marketing and back-end components for manufacturing units.
- Dr. Shyama Prasad Mukherjee Udyog Avam Vyapar Parisar, located in the Chhattisgarh Trade Centre in Naya Raipur, is a well-established and well-equipped facility.
- A total of 33 National Highway projects in Raipur, Chhattisgarh, with a total worth of INR 9,240 crore, have laid their foundation stone.
- A 464-km Raipur–Visakhapatnam Economic Corridor is under development, primarily aiming to improve freight movement efficiency and boost exports. The project, worth INR 20,000 crore, is being funded by the Asian Development Bank.
- Being an education hub, it has good-quality schools proportional to the population and scores well on the health index as well.
- The cost of living is 25 percent lesser than in metropolitan matured hubs.
- The political scenario is favourable, considering governments have completed their terms without major and crime as well.

Note: The term 'major cities' refers to metropolitan cities of India.

Technology ecosystem



No. of tech and BPM set-ups	➔	~100
No. of GCCs	➔	NA
No. of tech and tech-enabled start-ups	➔	~338
Major industries	➔	Metal-based, agro-based, ready-made garments and embroidery, repairing and servicing, mineral-based, furniture-based

- The Central Government has allocated NIT Raipur INR 7.9 crore to establish its first Technology Business Incubator, aimed at fostering innovation and entrepreneurship amongst Chhattisgarh's youth and students at the institute.
- The State Incubator, 36 INC, has been selected by NITI Aayog for support under the Atal Innovation Mission. The state is also investing in creating Centres of Excellence in emerging technology areas such as IoT and industrial automation.
- The state government is working to provide ready-to-move-in facilities for enterprises to start operations quickly.
- Nava Raipur Atal Nagar, a hi-tech administrative capital under development on a 20-hectare plot 17 km from Raipur city, aims to put Chhattisgarh on the global IT map and create job opportunities.
- The city has a dedicated OFC network spanning 130 km, serving as the backbone for future services and expansion. Remote locations are serviced through wireless GPRS communications.
- Raipur is becoming a start-up hub, with growing sectors such as e-commerce and technology-powered start-ups such as Innolat, Profezzo, Trackoplus, OnCloudStore, MinoAir, and Rhibhuz Solutions.
- To promote innovation and entrepreneurship in agriculture and allied sectors, the government has set up Biotech Incubation Centre and Agri-Business Incubation and Production Centre at IGKV, Raipur, with a focus on start-ups in agri-biotech, healthcare biotech, and food processing.

Note: Tech and tech-enabled start-ups refer to setups with computer and software applications.

Risk and regulatory environment



Rank in EODB	➔	15/37 (Good)
Developed space/SEZ	➔	~20.29 sq.km.
Seismic zone	➔	2 (Low)
Probability of flooding	➔	Medium
Power disruption risk	➔	Medium

- Raipur has a moderate risk of heavy rainfall and low risk of earthquakes as it lies in Seismic Zone 2.

Note:

- Developed space/SEZ refers to areas dedicated to tech industry
- Seismic zone risk scale: 1 = low; 5 = high
- Power disruption risk refers to instances of power failure

Social and living environment



Education ecosystem index	↻	11.71 (Moderate)
Medical ecosystem index	↻	7.77 (Moderate)
Cost of living index	↻	19.28 (Good)
Crime Index	↻	31.15 (Good)
Pollution index	↻	74 (Poor)

- The social and living environment in Raipur presents a mixed picture. The education ecosystem is moderate with a range of educational institutions catering to different age groups and levels of education, but it is not as comprehensive or advanced as in more developed regions.
- Similarly, the medical ecosystem is moderate with a range of healthcare facilities and practitioners available but not as advanced or specialised as in more developed areas.
- In contrast, the cost of living index is relatively good, with a relatively low cost of living than other regions. Additionally, the crime index is relatively low, making it a relatively safe place to live.
- However, the pollution index is poor. Air and water pollution is significant.

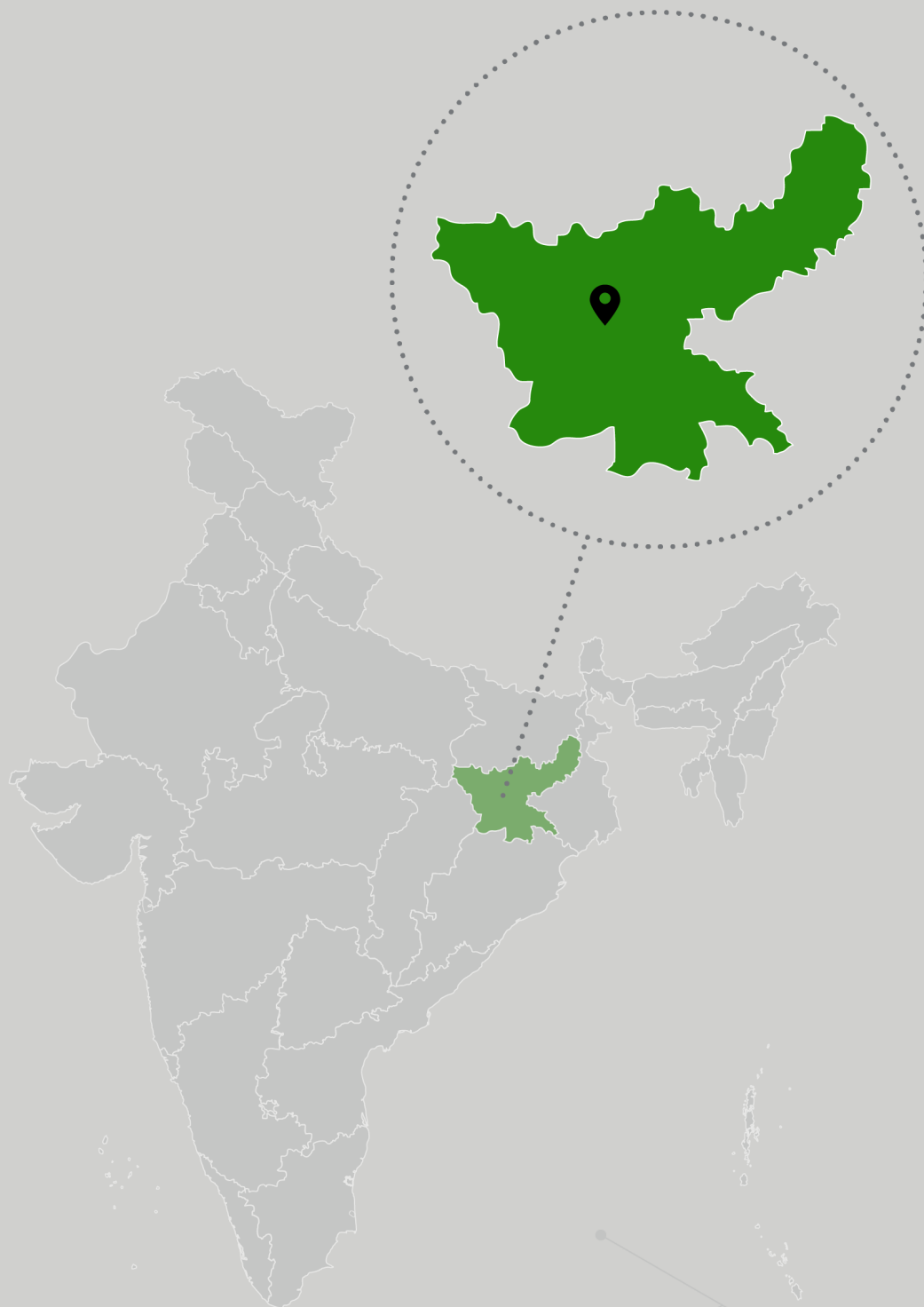
Note:

- The education ecosystem index refers to the number of schools per 1000 children.
- The medical ecosystem index refers to the presence of medical facilities proportional to population.
- The cost of living index infers to the consumer prices and rent.
- The crime index refers to the safety of the citizens affected by criminal acts.
- The pollution index refers to the combination of parameters such as AQI and particulate matter.

What's next?

- Raipur, an emerging location, has the potential to function as a spoke for the established hub of Hyderabad, given its abundance of domestic and international service providers. The city is home to premier institutions such as IIM and NIT, which have in-house incubators, in addition to state-sponsored initiatives for start-ups.
- Furthermore, public-private partnerships modelled on investment initiatives in Naya Raipur, a meticulously designed suburban township of Raipur that offers both SEZs and technology parks, present an attractive proposition for companies seeking to expand their operational footprint.

Ranchi



Ranchi



Population
2.9 million



Adult literacy
87.37%



Languages spoken
**Hindi, Mundari, Nagpuri,
Bengali, English**

Summary

- Ranchi has a presence of over 100 technology and BPM-related business set-ups.
- It has an extremely low presence of the technology sector and very limited availability of employed and trained talent pool in the city.
- Premier institutes such as Birla Institute of Technology Mesra, IIM Ranchi, Xavier Institute of Social Services Ranchi, and IIIT Ranchi have ensured the supply of quality tech talent essential for the tech industry.
- The setup of two Incubators has set the pace for the city to enter the space of technology innovation.
- Mining and ore processing are the main heavy industries in the location and a majority source of employment for the local population.
- A 50-acre pharma park is planned in the city with subsidies to the tune of 20 percent and exemptions to the tune of 100 percent.
- There are 11 highway projects worth more than INR 1000 crore in the pipeline to decongest the city traffic and facilitate inter-city transport.
- The airport has connectivity to major IT hubs in India along with other tier 2 locations and excellent railway connectivity.



~15,000
Experienced talent availability



~36
Technology start-ups



~100
Tech-related businesses



100%
Exemption on stamp duty

Note:

- All installed talent in tech and tech-related businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.
- Tech businesses include GCCs, BPM centers, IT service providers, and IT services vendors.

Talent availability



Fresh graduates in the city per year	⇒ 25,000–26,000
STEM graduates	⇒ 17,000–18,000
Other graduates	⇒ 7,000–8,000
Talent pool in tech companies	⇒ 10,000–15,000
No. of colleges	⇒ ~120
Premier institutes (not exhaustive)	⇒ Birla Institute of Technology Mesra, IIM Ranchi, Xavier Institute of Social Services Ranchi, St. Xavier's College, and IIIT Ranchi
Avg. salary of a software developer (5–8 yrs exp)	⇒ INR 5.5–7.8 lakh per annum

- Ranchi is one of the coveted educational destinations for students of Bihar, Jharkhand, and some parts of West Bengal. Every year, nearly 75,000-80,000 students graduate from Ranchi.
- Ranchi has some prestigious institutes such as Birla Institute of Technology Mesra, IIM, National Institute of Foundry and Forge Technology, National University of Study and Research in Law, Central Institute of Psychiatry, and Rajendra Institute of Medical Sciences.
- Recently, an MoU has been signed between the National Institute for Entrepreneurship and Small Business Development and Central University of Jharkhand to promote entrepreneurship in technical and professional education.

Note: Talent pool in tech companies refers to installed talent in tech businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.

Infrastructure attractiveness



Modes of local transport	⇒ Rail, buses, autorickshaws, and private cabs
No. of flights to major cities per day	⇒ ~ 22
Airport connectivity	⇒ Domestic
Average download speed	⇒ 32.93 Mbps
Office rental (Grade A office space)	⇒ INR 46–55/sq.ft./month

- The state government has significantly improved the city's infrastructure through various projects.
- These include 11 highway projects worth INR 858 crore, including an elevated road in the capital, Ranchi, and additional projects worth INR 84 crore for road, plantation, and power supply.
- Additionally, plans are in place for constructing a 120-km long outer ring road in the city, introducing a Metro-Neo project, and developing a Transport Nagar project, worth INR 113 crore, on 50 acres of land.
- Furthermore, INR 1,000 crore have been allocated for 17 projects to improve multi-modal connectivity throughout the country through Ranchi Rail Division.

Note: Major cities refer to metropolitan cities of India.

Technology ecosystem



No. of tech & BPM set-ups	⇒	~100
No. of GCCs	⇒	NA
No. of tech and tech-enabled start-ups	⇒	~36
Major industries	⇒	Fruit processing, Oil industry, Agriculture, Floriculture, Mineral resources, Sericulture, Fisheries

- Ranchi is home to several key government organisations, including Heavy Engineering Corporation Limited, Central Coalfield Limited, and the Research and Development Centre of Steel Authority of India Limited.
- The Ranchi Industrial Area is an attractive location for businesses due to its abundant available workforce, reputable technical management and educational institutions, good transport and communication facilities, and improving power position.
- In 2021, the Jharkhand government approved a 50-acre pharma park in Ranchi with an estimated budget of INR 34.94 crore.
- The city has an STPI, which houses various technology companies, and efforts are being made to attract more companies and raise its profile on the technology map of India.
- There are 307 start-ups in Ranchi, of which 36 are tech-based start-ups.
- The Jharkhand government has identified the Birla Institute of Technology Mesra and the STPI, Ranchi, as start-up incubation centres.

Note: Tech and tech-enabled start-ups refer to setups with computer and software applications.

Risk and regulatory environment



Rank in EODB	⇒	17/37 (Moderate)
Developed space/SEZ	⇒	~5 sq.km.
Seismic zone	⇒	2 (Low risk)
Probability of flooding	⇒	Medium
Power disruption risk	⇒	Medium

- Ranchi has a low risk of earthquakes as it lies in Seismic Zone 2 and a low risk of natural calamities; no major natural calamities were recorded in recent years.

Note:

- Developed space/SEZ refers to areas dedicated to tech industry
- Seismic zone risk scale: 1 = low; 5 = high
- Power disruption risk refers to instances of power failure

Social and living environment



Education ecosystem index	↻	13.11 (Moderate)
Medical ecosystem index	↻	3.81 (Moderate)
Cost of living index	↻	19.40 (Moderate)
Crime Index	↻	48.80 (Moderate)
Pollution index	↻	115 (Poor)

- The social and living environment in Ranchi presents a mixed picture. The education ecosystem is moderate with a range of educational institutions catering to different age groups and levels of education, but it is not as comprehensive or advanced as that in more developed regions.
- Similarly, the medical ecosystem is moderate with a range of healthcare facilities and practitioners available; however, it is not as advanced or specialised as in more developed areas.
- The cost of living index is relatively good with a relatively low cost of living than in other regions. Additionally, the crime index is considered moderate, which means that safety is not a major concern, but one should still be cautious while living or visiting the city.
- The pollution index is poor.

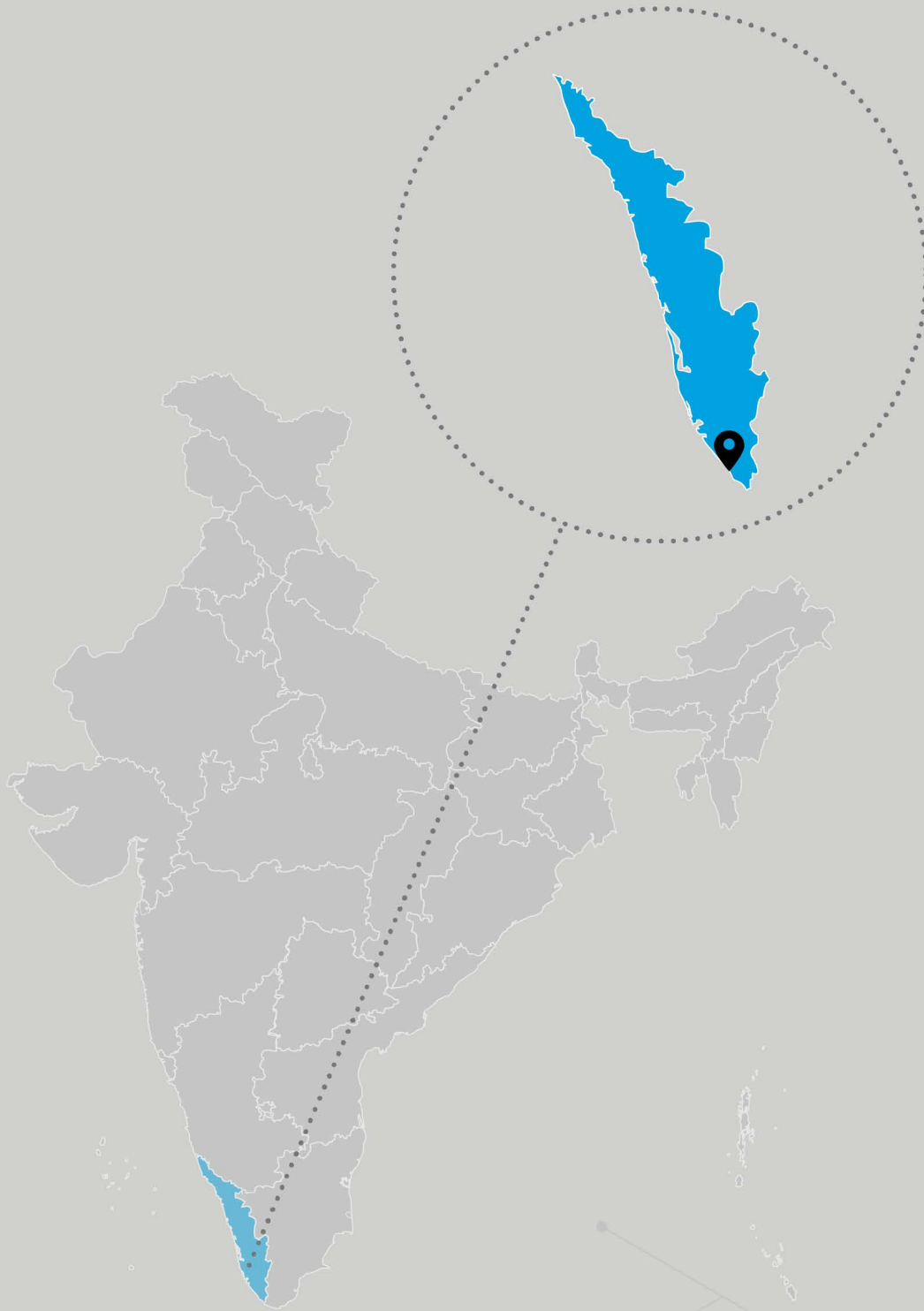
Note:

- The education ecosystem index refers to the number of schools per 1,000 children.
- The medical ecosystem index refers to the presence of medical facilities proportional to population.
- The cost of living index infers to the consumer prices and rent.
- The crime index refers to the safety of the citizens affected by criminal acts.
- The pollution index refers to the combination of parameters such as AQI and particulate matter.

What's next?

- Ranchi is a relatively new emerging hub that primarily hosts domestic service providers today. The city hosts premier institutions such as IIM, BITS, and IIIT, with in-house incubators to promote start-ups.
- Furthermore, as a mining town with several institutes specialising in metallurgical engineering, with government and public-private partnership investments, Ranchi has the potential to emerge as the hub for ER&D in metallurgical and material research.

Thiruvananthapuram



Thiruvananthapuram



Population
1.02 million



Adult literacy
95.10%



Languages spoken
Malayalam, English

Summary

- Thiruvananthapuram has a moderate presence of the technology sector and high availability of employed and trained talent pool.
- It is home to 20+ GCCs and ~550 technology companies.
- It has premier institutes such as Indian Institute of Space Science and Technology and College of Engineering Trivandrum.
- Development of start-up Ecosystem by KSUM to encourage innovators.
- There are more than seven incubators in the region with some focusing on women empowerment.
- High availability of Grade A office infrastructure in the city centre, dedicated SEZ (e.g. Electronics Technology Park).
- High on the infrastructure index due to the presence of a developed airport and the proposed ring road around the city to decongest traffic.
- Good connectivity to the major technology hubs of India (especially Bengaluru and Chennai).



55,000-60,000
Experienced talent availability



19th rank
Preferred destination for start-ups in India



~350
Tech-enabled start-ups



~550
Tech-related businesses

Note:

- All installed talent in tech and tech-related businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.
- Tech businesses include GCCs, BPM centers, IT service providers, and IT services vendors.

Talent availability



Fresh graduates in the city per year	⇒	66,000–70,000	<ul style="list-style-type: none"> • An experienced talent pool of ~56,000 working in the technology industry. • Well-qualified coders/developers and finance/commerce graduates/professionals available for technology services. Advanced skills such as Robotics, AI/machine learning, data science, and DevOps are available. • More than 180 colleges are present in the metropolitan area; of which, ~47 colleges offer technology courses and ~20 offer management courses, specialisation that favours the technology industry. • Approximately 66,000 students graduate every year; significant brain drain due to limited opportunities and migration to Gulf countries. • Prominent colleges such as the Mar Ivanios College, College of Engineering Trivandrum (CET), Indian Institute of Space Science and Technology, and Trivandrum University College serve as providers of quality talent.
STEM graduates	⇒	23,000–24,000	
Other graduates	⇒	43,000–44,000	
Talent pool in tech companies	⇒	55,000–60,000	
No. of colleges	⇒	~180	
Premier institutes (not exhaustive)	⇒	Mar Ivanios College, College of Engineering Trivandrum (CET), Indian Institute of Space Science and Technology, Trivandrum University College	
Avg. salary of a software developer (5–8 yrs exp)	⇒	INR 8.1– 12.0 lakh per annum	

Note: Talent pool in tech companies refers to installed talent in tech businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.

Infrastructure attractiveness



Availability of metro (operational/planned)	⇒	Proposed	<ul style="list-style-type: none"> • The Electronics Technology Park, or Technopark, is an SEZ for technology-based establishments in north Thiruvananthapuram. The Government of Kerala promotes it as an autonomous society. • KINFRA, a statutory body of the Kerala government, has been instrumental in developing various industries, including technology, apparel, film and video, and Ayurveda. • The proposed outer ring road will improve infrastructure in the surrounding areas. • The city is well connected to other Indian cities via road, rail, air, and sea (Vizhinjam seaport). International connectivity is good by air to the Gulf and East Asia destinations. • The city offers attractive real estate options, including commercial and standalone properties at reasonable rental rates, thereby encouraging business owners to consider it as an alternative to established technology hubs in south India.
No. of flights to major cities per day	⇒	~40	
Airport connectivity	⇒	International flights to Sharjah, Maldives, Doha, Dubai, Muscat, Abu Dhabi, Bahrain, Colombo, Madina, Dammam, and Singapore	
Average download speed	⇒	53.73 Mbps	
Office rental (Grade A office space)	⇒	INR 27–50/sq.ft./month	

Note: The term 'major cities' refers to metropolitan cities of India.

Technology ecosystem



No. of tech and BPM set-ups	↔	~550
No. of GCCs	↔	~20
No. of tech and tech-enabled start-ups	↔	~348
Major industries	↔	Tourism and leisure, IT, rubber plantations, coffee and tea production, and education

- Thiruvananthapuram is the state capital and the technology hub accounting for more than 55 percent of the total software exports of the state. Nissan, Allianz Technology, and Tata Elxsi are some of the major set-ups in the city.
- More than 550+ technology set-ups have established Thiruvananthapuram as a go-to tech destination in south India.
- Thiruvananthapuram is an emerging start-up hub mainly in IT services, SaaS, healthcare, and edtech domains.
- KSUM is an initiative by the Kerala Government to tap innovative start-up potential early.
- Thiruvananthapuram has consistently distinguished itself as one of India's most literate and skilled cities.

Note: Tech and tech-enabled start-ups refer to setups with computer and software applications.

Risk and regulatory environment



Rank in EODB	↔	18 /37 (Moderate)
Developed space/SEZ	↔	~1 sq.mm
Seismic zone	↔	3 (Moderate)
Probability of flooding	↔	Medium
Power disruption risk	↔	Low

- Enabled by the government's efforts to improve infrastructure and allow local businesses, Thiruvananthapuram scores moderately in the EODB ranking.
- It has a low risk of natural calamities in general, and a moderate of cyclones and floods due to a high disaster-readiness quotient.

Note:

- Developed space/SEZ refers to areas dedicated to tech industry
- Seismic zone risk scale: 1 = low; 5 = high
- Power disruption risk refers to instances of power failure

Social and living environment



Education ecosystem index	↔	4.47 (Moderate)
Medical ecosystem index	↔	3.37 (Moderate)
Cost of living index	↔	19.28 (Moderate)
Crime Index	↔	39.04 (Good)
Pollution index	↔	55.90 (Moderate)

- Thiruvananthapuram, being an education hub, has good-quality schools proportional to the population, and it scores well on the health index as well.
- The cost of living is 25 percent lesser than in metropolitan matured technology hubs.
- Crime is well within control owing to modern policing.
- Pollution is well within the limits and lies in the moderate category.

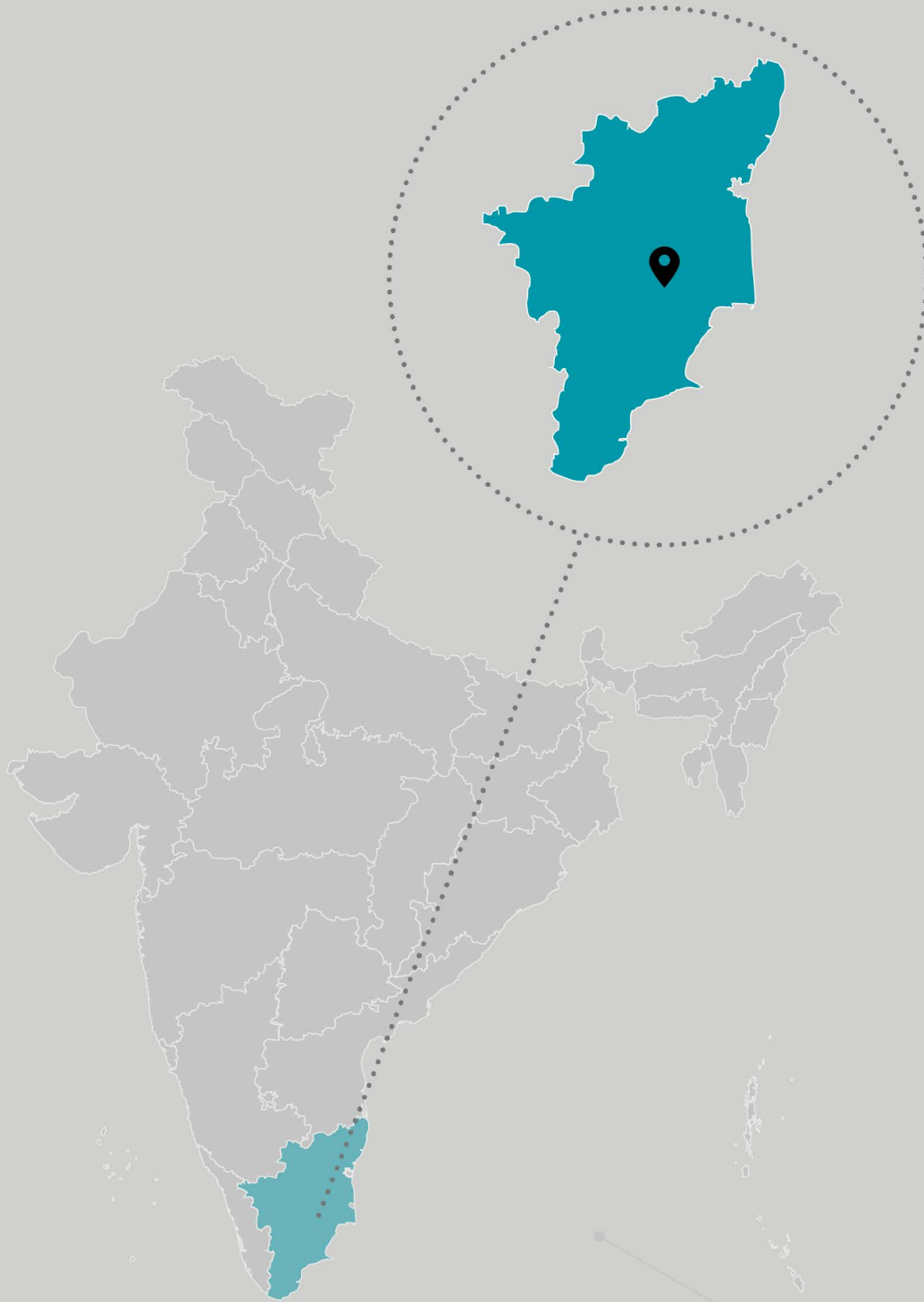
Note:

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- The medical ecosystem index refers to the presence of medical facilities proportional to population.
- The cost of living index infers to the consumer prices and rent.
- The crime index refers to the safety of the citizens affected by criminal acts.
- The pollution index refers to the combination of parameters such as AQI and particulate matter.

What's next?

- Thiruvananthapuram, as a promising emerging technology hub, given its strategic location in proximity to established technology hubs, such as Bengaluru and Coimbatore, makes the city highly attractive to technology organisations seeking investment opportunities.
- Moreover, the presence of premier institutions such as the Indian Institute of Space Science and Technology has already paved the way for advanced ER&D activities in specialised areas such as computational fluid dynamics. As a result, Thiruvananthapuram has already witnessed the establishment of innovation centres by multinational organisations in the city's northern region. More investments in training institutes and incubators through public-private investment models can make it an even more compelling destination for technology-oriented businesses.

Tiruchirapalli



Tiruchirappalli



Population
1.03 Mn



Adult literacy
91.45%



Languages spoken
Tamil, Telugu, Kannada, Malayalam, English

Summary

- Tiruchirappalli has a presence of about 50 technology and BPM-related business set-ups, such as Capgemini, and has developed into an emerging tech hub.
- It has a moderate presence of the technology sector and premiere institutes ensure quality candidates to the industry.
- Home to premier institutes such as National Institute of Technology, IIT Trichy, and IIM Trichy; there is no shortage of quality talent essential for the tech industry.
- With more than five incubators, Tiruchirappalli is emerging to be a hotspot for innovations backed by premier institutes.
- The start-up and innovation policy has helped in the setup of incubators and development centres to support the start-up ecosystem.
- Moderate EODB and has gained the reputation of being a cheaper alternative to tier 1 cities with arbitrage of up to 70 percent.
- High availability of Grade A office infrastructure and a dedicated technology SEZ, namely ELCOT.
- Integrated terminal along with a semi-ring road is planned to decongest the interior roads.
- It has an international airport and developed 11 railway stations to boost both intra- and inter-city transport.



~35,000
Experienced talent availability



~100
Tech enabled start-ups



~50
Tech-related businesses



~5
Incubators

Note:

- All installed talent in tech and tech-related businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.
- Tech businesses include GCCs, BPM centers, IT service providers, and IT services vendors.

Talent availability



Fresh graduates in the city per year	⇒	31,000–35,000
STEM graduates	⇒	23,000–24,000
Other graduates	⇒	8,500–9,500
Talent pool in tech companies	⇒	30,000–35,000
No. of colleges	⇒	~140
Premier institutes	⇒	NIT Trichy, IIIT Trichy, IIM Trichy, and St. Joseph's College
Avg. salary of a software developer (5–8 yrs exp)	⇒	INR 7–9 lakh per annum

- It is ranked third in terms of software production in Tamil Nadu, after Chennai and Coimbatore.
- It produces ~15,430 engineering graduates every year. Premier institutes such as the NIT Trichy, IIIT Trichy, IIM Trichy, and other higher educational institutions have worked in the city's favour, especially in the BPO sectors, according to the industry players.
- It is recognised as one of the top hotspots prepared to observe the demand for office space as it fulfils all primary criteria required for IT set-up: human resource, technical institutions, high English proficiency, low rental cost, and good connectivity.

Note: Talent pool in tech companies refers to installed talent in tech businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022.

Infrastructure attractiveness



Availability of Metro (operational/planned) and coverage	⇒	Proposed monorail
No. of flights to major cities per day	⇒	14
Airport connectivity	⇒	International flights: Singapore, Dubai, Sharjah, and Colombo
Average download speed	⇒	44.52 Mbps
Office rental (Grade A office space)	⇒	INR 23–37/sq.ft./month

- Six industrial estates/parks had been developed and managed by SIDCO in Tiruchirappalli, along with a Women's Industrial Park.
- To promote and invite major technology firms with export-based businesses, ELCOT is expanding its existing IT Park/SEZ consisting of office space of 60,000 sq.ft. by 100,000 sq.ft., creating employment for 2,000 resources.
- It has an international airport and 11 railway stations for intra- and inter-city connectivity; to improve the public transport system, CMRL has launched a feasibility study for a mass rapid transit system.
- Nearly 25 companies have hired office spaces in Tiruchirappalli during the pandemic because the cost of office space in Tiruchirappalli is fixed at INR 5,000, about 70 percent lesser than tier 1 cities.
- Under the smart city mission, the city has accomplished/undertaken some projects (parking, mall construction, residential building construction, and redevelopment civil works).
- Being an education hub, it has good schools proportional to the population, and it scores well on the health index as well.
- The cost of living is 25 percent lesser than in metropolitan matured hubs.

Note: Major cities refer to metropolitan cities of India.

Technology ecosystem



No. of tech and BPM set-ups	↔	~50
No. of GCCs	↔	NA
No. of tech and tech-enabled start-ups	↔	~100
Major industries	↔	Agriculture, cotton and textile milling, tanning, cement, filigree, and tobacco

- Tiruchirappalli is home to several major PSUs, including BHEL, Golden Rock Railway Workshop, Ordnance Factory Tiruchirappalli, and Heavy Alloy Penetrator Project. Despite its significant industrial economy, the city primarily relies on agriculture, with food crops accounting for 72.32 percent of its economy and non-food crops constituting 26.68 percent.
- The city is home to ~100 tech enabled start-ups, 63 of which are in areas such as AI, IT, robotics, financial technology, and IoT.
- The city has incubators and development centres, such as Nativelead Foundation and CEDI at NIT-T, and the Tamil Nadu government provides state-level incubators and funds to support start-ups under its Start-up and Innovation Policy 2018–2023.
- Some start-ups from Tiruchirappalli have received funding from investors, such as Blaer Motors, which have received INR 2.6 crore from The Chennai Angels and Frigate, which raised pre-seed funding of INR 1.35 crore from the founder of Zetwerk, amongst others.

Note: Tech and tech-enabled start-ups refer to set-ups with computer and software applications.

Risk and regulatory environment



Rank in EODB	↔	6/37 (Good)
Developed space/SEZ	↔	0.5 sq.km.
Seismic zone	↔	2 (Low)
Probability of flooding	↔	Medium
Power disruption risk	↔	Low

- Low risk of flooding, but recent floods have been recorded although not severe. Low risk of earthquakes as it lies in Seismic Zone 2.
- It is politically stable as governments complete their respective terms without having drastic negative impact on the technology sector.

Note:

- Developed space/SEZ refers to areas dedicated to tech industry
- Seismic zone risk scale: 1 = low; 5 = high
- Power disruption risk refers to instances of power failure

Social and living environment



Education ecosystem index	➔	7.76 (Moderate)
Medical ecosystem index	➔	4.64 (Moderate)
Cost of living index	➔	19.87 (Good)
Crime Index	➔	38.21 (Good)
Pollution index	➔	54 (Moderate)

- The social and living environment in Tiruchirappalli presents a nuanced picture.
- The education ecosystem is moderate with a range of educational institutions catering to different age groups and levels of education.
- Similarly, the medical ecosystem is moderate with various healthcare facilities and practitioners available.
- The cost of living index is relatively good with a relatively low cost of living compared to other regions. Additionally, the crime index is considered to be good, implying that safety is not a major concern
- However, the pollution index is moderate. Air and water pollution is an issue that should be addressed by the city, and it can be a concern for residents, especially those with pre-existing health conditions.

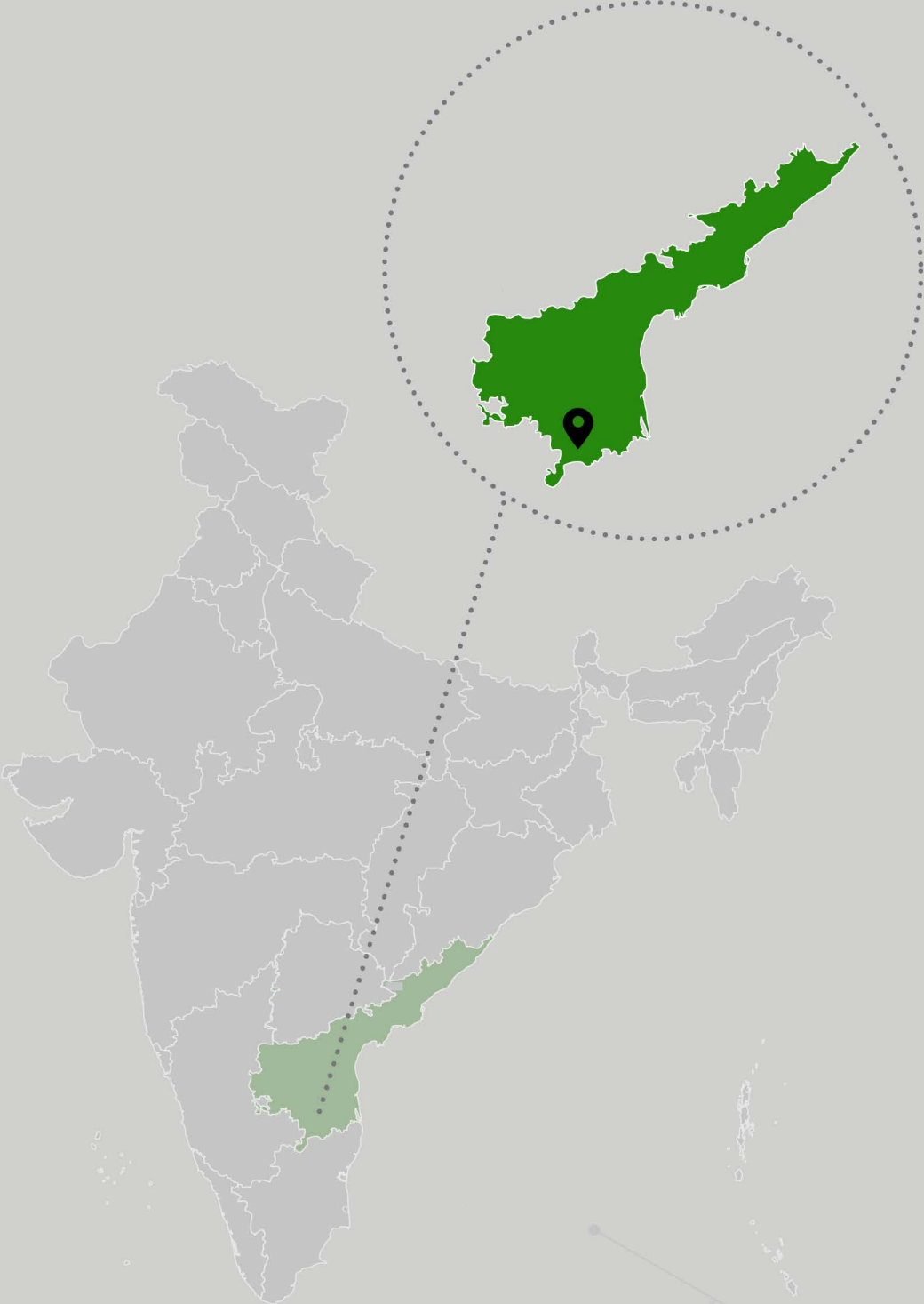
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- The cost of living index infers to the consumer prices and rent.
- The crime index refers to the safety of the citizens affected by criminal acts.
- The pollution index refers to the combination of parameters such as AQI and particulate matter.

What's next?

- The location is host to premier institutions such as NIT, IIT, and IIM, which have earned excellent reputations and have attracted patrons from the US who hire from these institutions. The in-house incubators at these institutes are promoting the growth of numerous start-ups.
- The technology sector in this location is predominantly characterised by SaaS and IT services, whereas BPM is still in its nascent stage. Therefore, to transform this location into a coveted destination for MNCs, there is a need for increased efforts and investments. Such investments would foster the growth of the BPM sector and accelerate the location's emergence as a leading global technology hub.

Tirupati



Tirupati



Population
0.73 million



Adult literacy
90.17%



Languages spoken
Telugu, Tamil, English

Summary

- Tirupati has more than 25 technology and BPM-related business set-ups.
- It has extremely low presence of the technology sector and very limited availability of employed and trained talent pool in the city.
- Home to premier institutes such as IIT Tirupati, Chadalawada Venkata Subbiah Engineering College, and JBICT has ensured quality tech and allied fresh talent essential for the budding tech industry.
- The setting up of eight incubators has set the pace for the enter the space of technology innovation.
- Being a holy city, tourism and allied industries form an integral part of the economy, along with a few manufacturing clusters.
- High EODB, first amongst all states is the primary reason why investing in the city is a preferred option.
- Construction of national highways connecting the cities of Chittoor, Vellore, and Chennai are being prioritised by the Andhra Pradesh government.
- The airport is being upgraded to handle bigger flights and receive an international airport status and connect to major domestic and international destinations.



~10,000
Experienced talent availability



~50
Technology start-ups



~25
Tech-related businesses



~35,000+
Fresh graduates every year

Note:

- All installed talent in tech and tech-related businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022–23.
- Tech businesses include GCCs, BPM centers, IT service providers, and IT services vendors.

Talent availability



Fresh graduates in the city per year	⇒ 33,000–35,000	<ul style="list-style-type: none"> • Headquartered in Tirupati, a battery manufacturing company employs about 16,000 people and was recognised as Forbes' best employer for 2020. They employ people from rural areas (85 percent) and metropolitan areas (15 percent). • Enterprise Minds, Inc., a next-generation product development global firm, started its operations in Tirupati with the vision to create 500 jobs in the next few years by tapping into local talent from various IT domains (digital technologies, data, cloud, algorithms, AI/machine learning, strategy, design, development, testing, deployment, and support). • During the two-day 'YSR Job Mela' held at SV University in Tirupati, around 7,537 applicants found employment. At the employment fair, 25,000 applicants attended, where the maximum package of INR 77,000 per month was offered. • During the placement at IIT Tirupati (2020–2021), the highest package offered was 40 LPA, whereas the average stood at 11 LPA. The institute has signed MoUs with several organisations, such as NHAI, CSIR Labs, Toshiba Software, and Amara Raja Batteries Limited, amongst others.
STEM graduates	⇒ 5,000–5,500	
Other graduates	⇒ 28,000–29,000	
Talent pool in tech companies	⇒ 8,000–10,000	
No. of colleges	⇒ ~55	
Premier institutes (not exhaustive)	⇒ IIT Tirupati, Chadalawada Venkata Subbiah Engineering College, JBICT, SV Ayurvedic College, TT Devasthanams	
Avg. salary of a software developer (5–8 yrs exp)	⇒ INR 5.5–7.5 lakh per annum	

Note: Talent pool in tech companies refers to installed talent in tech businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022.

Infrastructure attractiveness



Modes of local transport	⇒ Bus, cab (rental and Uber), train, autorickshaw	<ul style="list-style-type: none"> • Smart City Mission in Tirupati includes plans for retrofitting parks and open spaces, developing smart classrooms, and implementing e-health solutions and power generation projects. • Expansion of Tirupati International Airport aims to extend the runway to 3,810 m to accommodate larger aircrafts. • MoU signed by AP Electronics and IT Agency with various companies for expansion of operations, expected to create employment opportunities for 15,000 people. • The Tirupati Chittoor six lane highway with two bypasses, 6 major bridges, 15 minor bridges, and 14 grade separators is designed to boost connectivity.
No. of flights to major cities per day	⇒ ~14 flights weekly	
Airport connectivity	⇒ Domestic and International	
Average download speed	⇒ 41.45 Mbps	
Office rental (Grade A office space)	⇒ INR 35-45/sq.ft./month	

Note: Major cities refer to metropolitan cities of India.

Technology ecosystem



No. of tech & BPM set-ups	➔	~25
No. of GCCs	➔	NA
No. of tech and tech-enabled start-ups	➔	~50
Major industries	➔	Tourism, food and beverage, agriculture, manufacturing furniture

- Hilltop SEZ Footwear India Limited plans to invest INR 800 crore in a unit in Srikalahasti Mandal, providing jobs to 10,000 people (80 percent of which will be women).
- IT incubation centre launched on 149 acres of land near Renigunta International Airport, with a 10,000 sq.ft. space complex mentored by seven INQ companies.
- 'Ecogreen Towers' IT tower established on Karakambadi Road, housing software companies such as AGS Health and Parikar, as well as start-ups.
- iTAAP, an industry association for IT, BPM, and the electronics sectors in Tirupati, works to enhance the skills of local talent and support start-ups.
- STPI Tirupati implements STP and EHTP schemes for the promotion of technology industry, 23 start-ups utilising facilities for office expansion.
- IIT Tirupati to establish Technology Innovation Hub with National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS) with DST investment of INR 100 crore by 2025.
- Women Biotech Incubation Facility in the city promotes entrepreneurship in life sciences, healthcare, nutraceuticals, and more.
- Gyan Circle Ventures (GCV) and IIIT Sri City TBI fund nine start-ups with INR 7 lakh grants for R&D, testing, and certification over 12–18 months.

Note: Tech and tech-enabled start-ups refer to set-ups with computer and software applications.

Risk and regulatory environment



Rank in EODB	➔	1/37 (Very Good)
Developed space/SEZ	➔	NA
Seismic zone	➔	3 (Moderate)
Probability of flooding	➔	Medium
Power disruption risk	➔	Medium

- It has moderate risks of flooding during monsoon with recently recorded floodings disrupting transport; low risk of earthquakes as it lies in Seismic Zone 2.

Note:

- Developed space/SEZ refers to areas dedicated to tech industry
- Seismic zone risk scale: 1 = low; 5 = high
- Power disruption risk refers to instances of power failure

Social and living environment



Education ecosystem index	➔	32.44 (Very Good)
Medical ecosystem index	➔	4.92 (Moderate)
Cost of living index	➔	19.61 (Good)
Crime Index	➔	39.83 (Good)
Pollution index	➔	86 (Poor)

- Tirupati boasts a very good education ecosystem, with several prestigious institutions and research centres present in the area.
- However, the medical ecosystem in the city is moderate with adequate healthcare facilities, with room for improvement in advanced medical facilities.
- The cost of living in Tirupati is considered good, with affordable housing and basic necessities readily available.
- The crime rate in the city is good with a relatively low incidence of criminal activity.
- However, the pollution index in Tirupati is poor, with air and water pollution prevalent in the area.

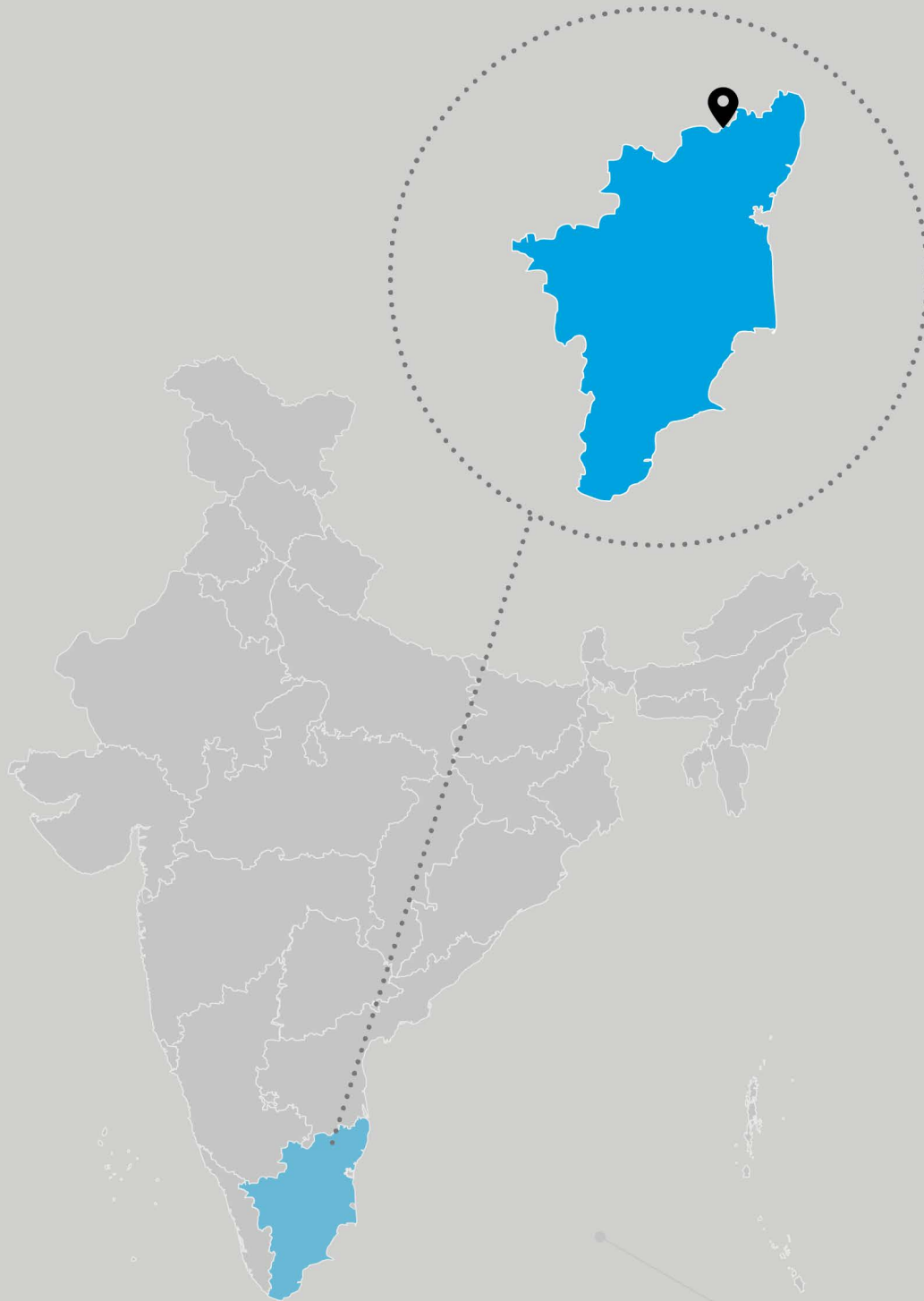
Note:

- The education ecosystem index refers to the number of schools per 1000 children.
- The medical ecosystem index refers to the presence of medical facilities proportional to population.
- The cost of living index infers to the consumer prices and rent.
- The crime index refers to the safety of the citizens affected by criminal acts.
- The pollution index refers to the combination of parameters such as AQI and particulate matter.

What's next?

- Tirupati is fast gaining a reputation as a BPM hub, particularly in medical transcription and revenue cycle management. The location's equidistant proximity to established hubs such as Chennai and Bengaluru has contributed to the emergence of Tirupati as a start-up destination.
- The remarkable growth of start-ups in Tirupati owes much to the presence of premier educational institutions such as the IIT and other academic institutions with in-house incubators. However, to elevate Tirupati's profile as a future technology hub, it will require more public-private investments in the field of educational infrastructure. This should include substantial investments in science and medical education and skill development training. Such investments would drive innovation and position Tirupati as a premier destination for technology-focused businesses seeking to establish a presence in the region.

Vellore



Vellore



Population
0.6 million



Adult literacy
87%



Languages spoken
**Tamil, Telugu, Kannada,
Malayalam, English**

Summary

- Vellore has more than 150 technology and BPM-related business set-ups, Redback being one of the major ones.
- It has extremely low presence of the technology sector and very limited availability of employed and trained talent pool in the city.
- Home to premier institutes Vellore Institute of Technology (VIT) and CMC Vellore has ensured quality tech and allied fresh talent essential for the budding tech industry.
- Incubator in VIT has set the pace for the city to enter the space of technology innovation.
- Agriculture-based industries form an important small and medium-sized cluster and are the main source of employment.
- The multi-sector Ranipet-Vellore SEZ is spread over 56 acres and is promoted by State Industries Promotion Corporation of Tamil Nadu (SIPCOT) by offering land at competitive rates.
- Being equidistant from technology hubs Bengaluru and Chennai, Vellore can act as a spoke to both hubs simultaneously.
- It has good rail connectivity with major hubs of the country and an upcoming upgrade to the existing airport.



~12,000
Experienced talent availability



~40
Technology start-ups



~150
Tech-related businesses



56 acres
SIPCOT SEZ

Note:

- All installed talent in tech and tech-related businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.
- Tech businesses include GCCs, BPM centres, IT service providers, and IT services vendors.

Talent availability



Fresh graduates in the city per year	⇒ 20,000–21,000
Science and tech graduates	⇒ 11,000–12,000
Management graduates	⇒ 3,500–4,000
Talent pool in tech companies	⇒ 10,000–12,000
No. of colleges	⇒ ~171
Premier institutes	⇒ CMC Vellore, VIT
Avg. salary of a software developer (5–8 yrs exp)	⇒ INR 5—9 lakh per annum

- Vellore boasts large human resource availability with 27 percent of the available labour being at a skilled level.
- The city has several skill development centres under the PM's welfare scheme, catering to sectors such as telecom, electronics, technology, healthcare, logistics, and leather.
- VIT, an Institute of Eminence, is a prominent institution in the city.
- The city also has plans to set up a technology park, with a significant increase in the workforce employed.
- However, a decline was seen in cultivators, agricultural labour, and the MSME sector, indicating a shift in the sectoral composition of the workforce.

Note: Talent pool in tech companies refers to installed talent in tech businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022.

Infrastructure attractiveness



Modes of local transport	⇒ Road and Rail (private cabs services such as Ola)
No. of flights to major cities per day	⇒ 0
Airport connectivity	⇒ NA
Average download speed	⇒ 42.08 Mbps
Office rental (Grade A office space)	⇒ INR 35–40/sq.ft./month

- Vellore is at the centre of the Chennai–Bengaluru Highway. It is amongst the five cities where the Tamil Nadu government has planned its next set of five airports. Various new railway lines are also proposed to improve connectivity. A 180-km long Tindivanam–Nagari line to connect Villupuram, Vellore, Tiruvannamalai, and Tiruvallur with Chittoor is also in progress.
- The multi-sector SEZ, Ranipet-Vellore, built by SIPCOT, has around 0.23 sq.km. (56.4 acre) available at about INR 56 lakh per acre.
- The city also comes under the Smart City mission. The project cost is about INR 1,000 crore, with 50 percent investment from the centre. The projects included under the mission include an integrated bus stand, construction of an underground drainage scheme, improvement in water supply and solid waste management.

Note: Major cities refers to metropolitan cities of India.

Technology ecosystem



No. of tech & BPM setups	➔	~150
No. of GCCs	➔	NA
No. of start-ups	➔	~40
Major industries	➔	Trade and transportation, manufacturing, education, health services, leather

- Vellore is known for its robust industrial ecosystem, focusing on the leather, textile, and handloom industries. Additionally, the city has seen significant growth in SMEs in the past few years, with an investment of more than US\$ 51 million.
- The Tamil Nadu government has also announced plans to open an industrial park in Vellore, which is expected to generate 3000–5000 direct and some indirect employment opportunities.
- The city also has a strong presence in the technology sector, with around 140+ technology set-ups, including Redback Media.
- Additionally, Vellore has around 40 start-ups, with 9 of them being tech-based start-ups, such as AERO GEOINFO, Atsae Technologies, and Farm2Dine Organic Foods.
- The VIT also operates a technology business incubator (VITTBI) that funds multiple start-ups in various domains/industries and works to raise capital from central agencies such as the Department of Science and Technology, Department of Biotechnology, MHRD, AICTE, Technology Development Board, Technology Information Forecasting and Assessment Council, Department of Scientific and Industrial Research, and Council of Scientific and Industrial Research.

Note: Tech and tech-enabled start-ups refer to set-ups with computer and software applications.

Risk and regulatory environment



Rank in EODB	➔	6/37 (Good)
Developed space/SEZ	➔	0.541 sq.km. (Ranipet-Vellore SIPCOT SEZ)
Seismic zone	➔	3 (Moderate)
Probability of flooding	➔	Medium
Power disruption risk	➔	Medium

- It is prone to flooding due to torrential rains, but evacuation and rescue plans are in place to avoid casualties, and the risk of earthquakes is moderate as it lies in Seismic Zone 3.

Note:

- Developed space/SEZ refers to areas dedicated to tech industry
- Seismic zone risk scale: 1 = low; 5 = high
- Power disruption risk refers to instances of power failure

Social and living environment



Education ecosystem index	➔	20.66 (Very Good)
Medical ecosystem index	➔	2.23 (Moderate)
Cost of living index	➔	22.67 (Moderate)
Crime Index	➔	48.89 (Moderate)
Pollution index	➔	40 (Good)

- The education ecosystem in Vellore is very good, with several prestigious educational institutions in the city.
- The medical ecosystem in Vellore is moderate, with several hospitals and clinics available to provide healthcare services.
- The cost of living in Vellore is moderate, making it an affordable place to live.
- The crime rate in Vellore is moderate, with a relatively safe environment for residents. The pollution index in Vellore is good, with relatively low pollution levels in the city.

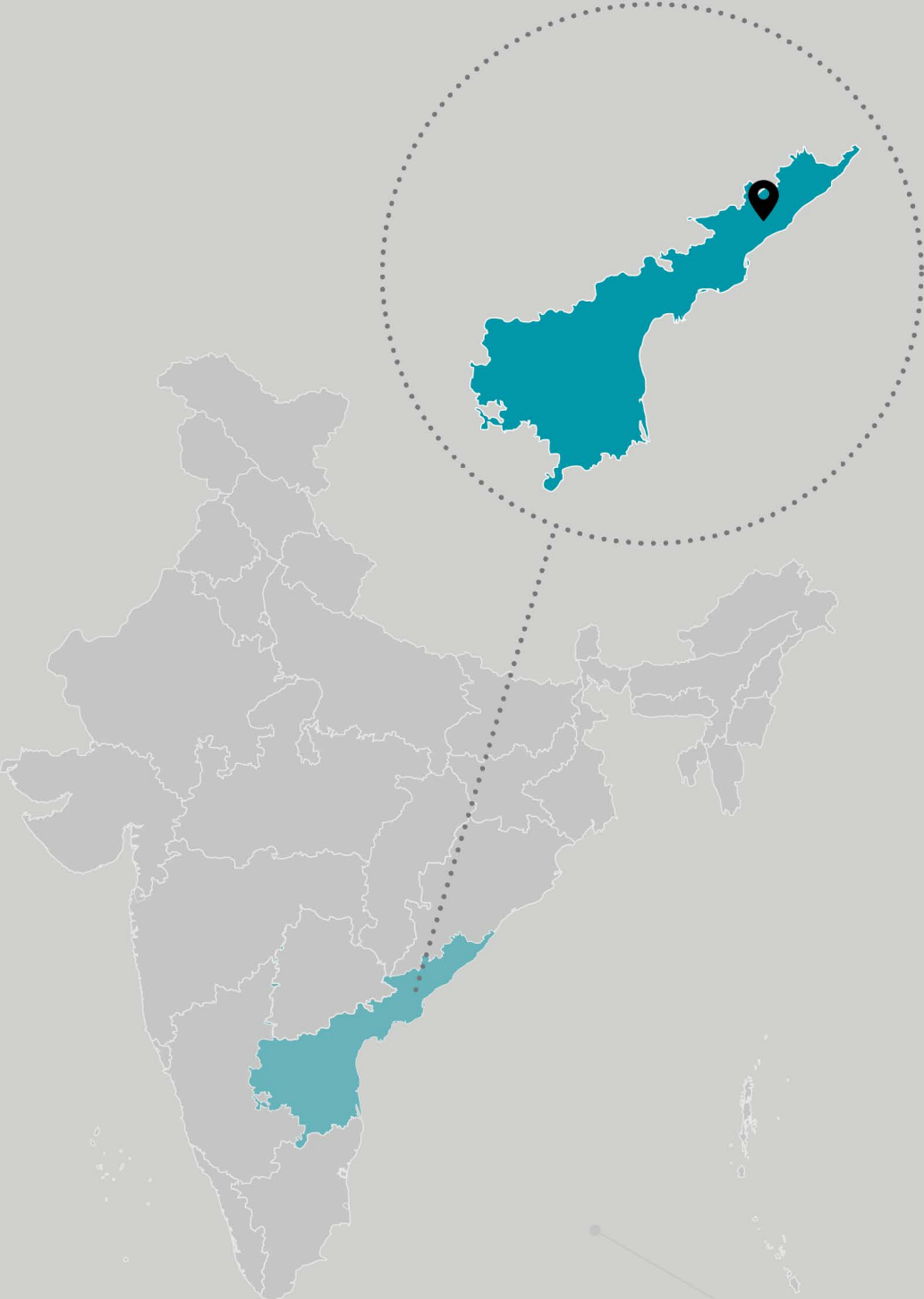
Note:

- The education ecosystem index refers to the number of schools per 1,000 children.
- The medical ecosystem index refers to the presence of medical facilities proportional to population.
- The cost of living index infers to the consumer prices and rent.
- The crime index refers to the safety of the citizens affected by criminal acts.
- The pollution index refers to the combination of parameters such as AQI and particulate matter.

What's next?

- Vellore, situated equidistant from Chennai and Bengaluru, has emerged as a burgeoning technological hub supported by SIPCOT. The city holds tremendous potential in attracting technology organisations intended to establish their operational bases in established hubs.
- Moreover, the start-up ecosystem in Vellore is rapidly expanding, and prestigious institutions such as VIT are nurturing talented individuals to promote the ecosystem in SaaS and IT services. The potential for Vellore to emerge as an alternative destination for organisations seeking to establish a presence near the technology hubs of Bengaluru and Chennai lies in substantial investments in infrastructure, particularly in the form of private SEZs. Additionally, significant investments in education and skill development training can provide the necessary human capital to support the region's economic growth. The resulting improvement in the quality of infrastructure and the availability of skilled talent could ultimately position Vellore as a leading destination for businesses seeking a competitive edge in the technology sector.

Vijayawada



Vijayawada



Population
2.1 million



Adult literacy
81.24%



Languages spoken
Telugu, Urdu, English

Summary

- Vijayawada has a moderate presence of technology and BPM-related business set-ups.
- It has a moderate presence of the technology sector and high availability of employed and trained talent pool in the city.
- Home to premier institutes School of Planning & Architecture and South India Research Institute, Vijayawada has ensured quality tech and allied fresh talent essential for the budding tech industry.
- The setup of two incubators has set the pace for the city to enter the space of technology innovation.
- Agriculture-based industries and automobile spares manufacturing form an important small and medium-sized cluster.
- Lower prices of land than the nearby technology hub Hyderabad and high availability of Grade A office space make it an economically feasible for office set-up.
- Construction of a 40-km metro railway with a budget of INR 11,000 crore is prioritised by the Andhra Pradesh government.
- An international airport is operational with connectivity to major cities of the country.



~25,000
Experienced talent availability



~80
Technology start-ups



~550
Tech-related businesses



27th
Preferred start-up destination in India

Note:

- All installed talent in tech and tech-related businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.
- Tech businesses include GCCs, BPM centres, IT service providers, and IT services vendors.

Talent availability



Fresh graduates in the city per year	⇒ 26,000–30,000
STEM graduates	⇒ 7,000–7,500
Other graduates	⇒ 20,000–21,000
Talent pool in tech companies	⇒ 20,000–25,000
No. of colleges	⇒ ~220
Premier institutes	⇒ SPAV and South India Research Institute
Avg. salary of a software developer (5–8 yrs exp)	⇒ INR 5.2–8.6 lakh per annum

- Vijayawada has more than 9,000 emerging tech talent. The most popular skillset within the talent pool is AI/ machine learning and data analytics. It is also one of the top 20 cities that contributes over 85 percent of the talent from emerging locations across India.
- To encourage talent in emerging tech, Andhra Pradesh Skill Development Corporation recently launched a Data Science Hackathon in the city. Furthermore, an IT service management company is funding a programme as a part of their skilling ecosystem in the city, wherein learners develop their coding, networking, security, IT infrastructure, database, and cloud skills.
- Other initiatives in progress include Tech-Mark Training India's partnership with GoDaddy, where they are planning to set up skill development centres in Andhra Pradesh (in Vijayawada and Visakhapatnam) and many other states to provide digital upskilling and training with live projects to students.
- It has also been observed that there has been an influx of top IT firms (such as HCL) moving to tier 2 and 3 cities as they see increasing attrition rates in the companies.

Note: Talent pool in tech companies refers to installed talent in tech businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022.

Infrastructure attractiveness



Modes of local transport	⇒ Train, road (private taxi services, such as Ola and Uber)
No. of flights to major cities per day	⇒ 10
Airport connectivity	⇒ International
Average download speed	⇒ 44.9 Mbps
Office rental (Grade A office space)	⇒ INR 30–50/sq.ft./month

- The Andhra Pradesh government is dedicated to improving the city's infrastructure and providing support to various industries through initiatives such as the development of a multi-modal logistics park linked to the Vijayawada western bypass and a dedicated freight corridor from Kharagpur to Vijayawada.
- The Andhra Pradesh Industrial Infrastructure Corporation is also implementing a single-window approach for multiple services to investors and existing industrialists and launching an industrial environment improvement drive.
- Additionally, the government plans to develop smart renewable urban microgrids and a 38.4-km modern metro rail system to further improve infrastructure and foster economic growth.

Note: Major cities refer to metropolitan cities of India.

Technology ecosystem



No. of tech and BPM set-ups	⇒	~550
No. of GCCs	⇒	NA
No. of tech and tech-enabled start-ups	⇒	~80
Major industries	⇒	Agriculture, Hardware, Tourism, Textile, Automobile, Consumer Goods

- Auto Nagar and Kondapalli Estate are two major centres of manufacturing units in the city, with Auto Nagar having Jawahar Lal Nehru Auto Nagar Estate, which is one of the largest auto industry hubs of Asia.
- Vijayawada is a major commercial hub for agri-products, metal, wood, food processing, paper, rubber, plastic, petroleum, coal, automobile spare parts, textiles, and furniture.
- Avigna Space has invested in 2 million sq.ft. of space in Vijayawada as part of its INR 2,500 crore investment plan for the next five years and has leased out space to companies such as Stellar, which cater to Flipkart and Wakefit.
- Vijayawada is amongst the top 20 cities where the technology sector is ripe for a massive growth, with around 557 technology set-ups across the city and the extended Krishna district.
- Nipuna Human Development Society and Sewa International, in association with AP State Skill Development Corporation, recently conducted a job fair, with participants from more than 200 companies from the sectors of IT, ITeS, core, management, pharma, and banking.
- Vijayawada has about 83 tech based start-ups, For ex. Eruvaka, a start-up that develops cloud-based aquaculture pond management solutions, and Bounce Infinity, which plans to expand its offline footprint by opening new stores in Vijayawada along with five more cities by 2023.
- The state government has set up the Andhra Pradesh Innovation Society (APIS) with a fund of INR 23 crore for multiple activities, including the maintenance of innovation centres in Tirupati, Visakhapatnam, Kakinada, and Vijayawada to promote entrepreneurship in the state.
- The IT&C Andhra initiative of TiE Amaravati Chapter and Andhra Angels in Vijayawada is also helping nurture the start-up ecosystem in the city.

Note: Tech and tech-enabled start-ups refer to set-ups with computer and software applications.

Risk and regulatory environment



Rank in EODB	➔	1/37 (Very Good)
Developed space/SEZ	➔	0.24 sq.km.
Seismic zone	➔	3 (Moderate)
Probability of flooding	➔	Medium
Power disruption risk	➔	Low

- Vijayawada is prone to flooding as it lies on the low-lying plains and has a moderate risk of earthquakes as it lies in Seismic Zone 3.
- Stable government policies favour the technology sector.

Note:

- Developed space/SEZ refers to areas dedicated to tech industry
- Seismic zone risk scale: 1 = low; 5 = high
- Power disruption risk refers to instances of power failure

Social and living environment



Education ecosystem index	➔	16.78 (Moderate)
Medical ecosystem index	➔	8.61 (Moderate)
Cost of living index	➔	24.06 (Moderate)
Crime Index	➔	36.81 (Good)
Pollution index	➔	73.29 (Moderate)

- The education ecosystem in Vijayawada is moderate with several schools and colleges available to provide education services.
- The medical ecosystem in Vijayawada is also moderate with several hospitals and clinics available to provide healthcare services.
- The cost of living in Vijayawada is moderate, making it an affordable place to live.
- The crime index in Vijayawada is good with a relatively safe environment for residents.
- The pollution level in Vijayawada is moderate with a few sources of pollution, such as traffic and industrial activities.

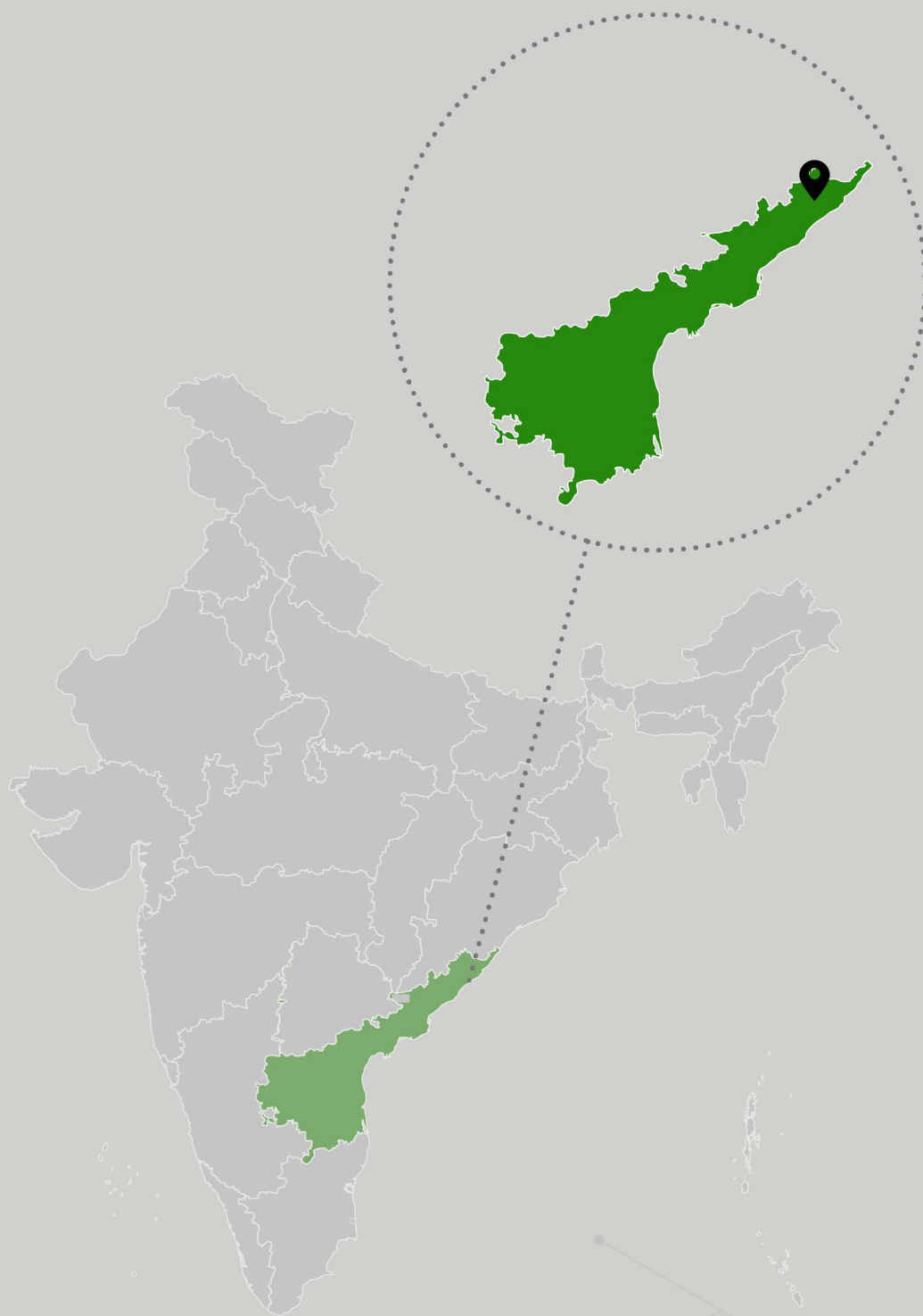
Note:

- The education ecosystem index refers to the number of schools per 1,000 children.
- The medical ecosystem index refers to the presence of medical facilities proportional to population.
- The cost of living index infers to the consumer prices and rent.
- The crime index refers to the safety of the citizens affected by criminal acts.
- The pollution index refers to the combination of parameters such as AQI and particulate matter.

What's next?

- Vijayawada is an emerging hub close to the established hubs of Hyderabad and is now a major hub dominated by emerging tech talent along with high EODB, making it a lucrative location. Vijayawada is ideal for hardware, IoT, foodtech, and software and data start-ups.
- A strategic investment by the government to establish premier institutes and incubators aimed at nurturing innovative talent, combined with investments to develop SEZs, has the potential to propel Vijayawada onto the technology map and position it on par with other emerging technology hubs. These investments can help create a favourable environment for the growth and development of the technology sector in Vijayawada, attracting a diverse range of technology organisations and provide a platform for entrepreneurial activity in the region.

Visakhapatnam



Visakhapatnam



Population
2.28 Mn



Adult literacy
81.79%



Languages spoken
Telugu, Urdu, Odia, Hindi, English

Summary

- Visakhapatnam is home to 250+ technology and BPM-related business set-ups.
- It has a good presence of the technology sector and high availability of employed and trained talent pool.
- Premier institutes such as IIM Visakhapatnam, GITAM School of International Business, have ensured top-notch talent fulfilment for the industry.
- Visakhapatnam ranks 24th in the most preferred destination for start-ups. Programmes such as start-up warehouses offer co-working spaces.
- Presence of 10+ incubators, accelerators, and ideation centres has put Visakhapatnam on the map of preferred destinations for innovation.
- It has high EODB, hub for industries ranging from ship building/repairs, logistics, maritime activities, to name a few.
- High availability of Grade A office infrastructure and a dedicated Technology Special Economic Zone, namely, STPI and other IT parks under Andhra Pradesh Information Technology Park (APITP).
- It has gained reputation as strategic port city of India, with the Eastern Naval Command Headquarters situated in the city.
- Being promoted as a tourist city owing to the beach and temples, Visakhapatnam is undergoing a major facelift and connectivity upgrade.



~55,000
Experienced talent availability



~250
Start-ups



~250
Tech-related businesses



~8
Incubators

Note:

- All installed talent in tech and tech-related businesses (including GCCs, IT/ITES, BPM, and others); data are from FY 2022–23.
- Tech businesses include GCCs, BPM centres, IT service providers, and IT services vendors.

Talent availability



Fresh graduates in the city per year	⇒	26,000–30,000
STEM graduates	⇒	7,000–8,000
Other graduates	⇒	19,000–20,000
Talent pool in tech companies	⇒	50,000–55,000
No. of colleges	⇒	~216
Premier institutes (not exhaustive)	⇒	IIM Visakhapatnam, GITAM School of International Business, Dr. B. R. Ambedkar College of Law, TSR & TBK Degree & PG College
Avg. salary of a software developer (5–8 yrs exp)	⇒	INR 7.5–11 lakh per annum

- It has an experienced talent pool of 50,000- 55,000 that is readily available, owing to several technology set-ups in the city, a significant amount of which is engaged in the AI/machine learning domain.
- There are eight skill development centres to promote technical training, soft skills, and placement assistance in companies such as Flipkart, Blue Ocean, Divis Labs, and more. It has placed 10,000+ individuals in 75+ companies so far.
- The city has a premier college, IIM Visakhapatnam, which recorded 100 percent placement (2021–22). Overall, 86 companies participated in the process, where 34 percent of placements were made in the technology domain, 33 percent in BFSI, and 15 percent in consulting and others.
- From January to October 2020, Visakhapatnam generated ~10,000 fresh graduate jobs in the BPO and IT sectors alone. This was possible during the peak lockdown period from March to July 2020.

Note: Talent pool in tech companies refers to installed talent in tech businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022.

Infrastructure attractiveness



Availability of metro (operational/planned) & coverage	⇒	Yes (80 km)
No. of flights to major cities per day	⇒	27
Airport connectivity	⇒	Domestic + International flights (Singapore and Dubai)
Average download speed	⇒	48 Mbps
Office rental (Grade A office space)	⇒	INR 35–60/sq.ft./month

- The Andhra Pradesh government has implemented the APITP 2021–2024 initiative, which includes faster approvals, land approvals, and an integrated technology park consisting of an emerging technologies research university, incubation centre, centres of excellence, labs, co-working spaces, and a State Data Centre.
- GVMC is implementing an INR 1,000 crore smart city project, including solar street lighting, smart classrooms, retrofitting of schools and parks, and development of open spaces.
- Tourism initiatives include the construction of a mega wheel and sea aquarium, as well as a Natural History park under private–public partnership. The city is well connected by road, rail, and air with major cities in India.
- Additionally, under a private–public partnership, a Visakhapatnam Light Metro with a 79-km railway line, consisting of three lines and 31 stations is proposed to be built at INR 8,300 crore.

Note: Major cities refer to metropolitan cities of India.

Technology ecosystem



No. of tech & BPM set-ups	➔	~250
No. of GCCs	➔	NA
No. of tech and tech-enabled start-ups	➔	~250
Major industries	➔	Fishing, sea trade, fertiliser, steel, power, pharmacy, tourism, oil refinery, heavy engineering

- Visakhapatnam is ranked the number one city for EODB and comprises major industries, such as Hindustan Shipyard, Vizag Steel Plant, Hindustan Petroleum, Bharat Petroleum, and NTPC Simhadri Thermal Power Plant, amongst others. The city is a prominent industrial hub, with major industries being fisheries, tourism, oil refinery, fertilisers, steel, heavy engineering, shipbuilding, and power generation. Vizag Steel Plant is the biggest employer in the region with over 20,000 employees; 143 large industries have an employee force of 1 lakh, and MSMEs have engaged 2 lakh people on direct employment.
- Visakhapatnam has emerged as the largest pharma hub, with Ramky Pharma City, which operates Jawaharlal Nehru Pharma City (JNPC), a successful public-private initiative, comprising 63 major companies such as Biocon from Bengaluru, PharmaZell from Germany, and Smilax Laboratories Limited. The city is poised to be the next IT hub of the country owing to the state government establishing iTAAP (industry association), tech-park infrastructure, and the new AP Information Technology Policy 2021–2024. It is also home to big BPOs such as Concentrix and Patra India.
- The city also has 1,120 homegrown start-ups (20 percent of which are tech start-ups); prominent start-ups in Visakhapatnam include Yes!poho, Saif Automation, Ioninks, Millionth Mile, and Yeskart. From 2014 to the first quarter of 2019, five start-ups were funded in Visakhapatnam to the tune of more than US\$ 11 million. In partnership with AP government, nasscom started 'start-up warehouse' to provide co-working spaces and workshops to support entrepreneurship in 2016.

Note: Tech and tech-enabled start-ups refer to set-ups with computer and software applications.

Risk and regulatory environment



Rank in EODB	➔	1/37 (Very Good)
Developed space/SEZ	➔	1.45 sq.km.
Seismic zone	➔	2 (Low Risk)
Probability of flooding	➔	Medium
Power disruption risk	➔	Low

- Visakhapatnam is prone to cyclones as it lies in the east coast of the country and a low risk of earthquakes as it lies in Seismic Zone 2.

Note:

- Developed space/SEZ refers to areas dedicated to tech industry
- Seismic zone risk scale: 1 = low; 5 = high
- Power disruption risk refers to instances of power failure

Social and living environment



Education ecosystem index	➔	31.22 (Very Good)
Medical ecosystem index	➔	6.58 (Moderate)
Cost of living index	➔	24.44 (Moderate)
Crime Index	➔	37.8 (Good)
Pollution index	➔	65.7 (Poor)

- The education ecosystem in Visakhapatnam is considered very good with various schools and colleges available to provide education services.
- The medical ecosystem in Visakhapatnam is moderate with several hospitals and clinics available to provide healthcare services.
- The cost of living in Visakhapatnam is moderate making it an affordable place to live. The crime rate in Visakhapatnam is good, with a relatively safe environment for residents.
- However, the pollution level in Visakhapatnam is considered to be poor with various sources of pollution such as traffic, industrial activities, and poor waste management.

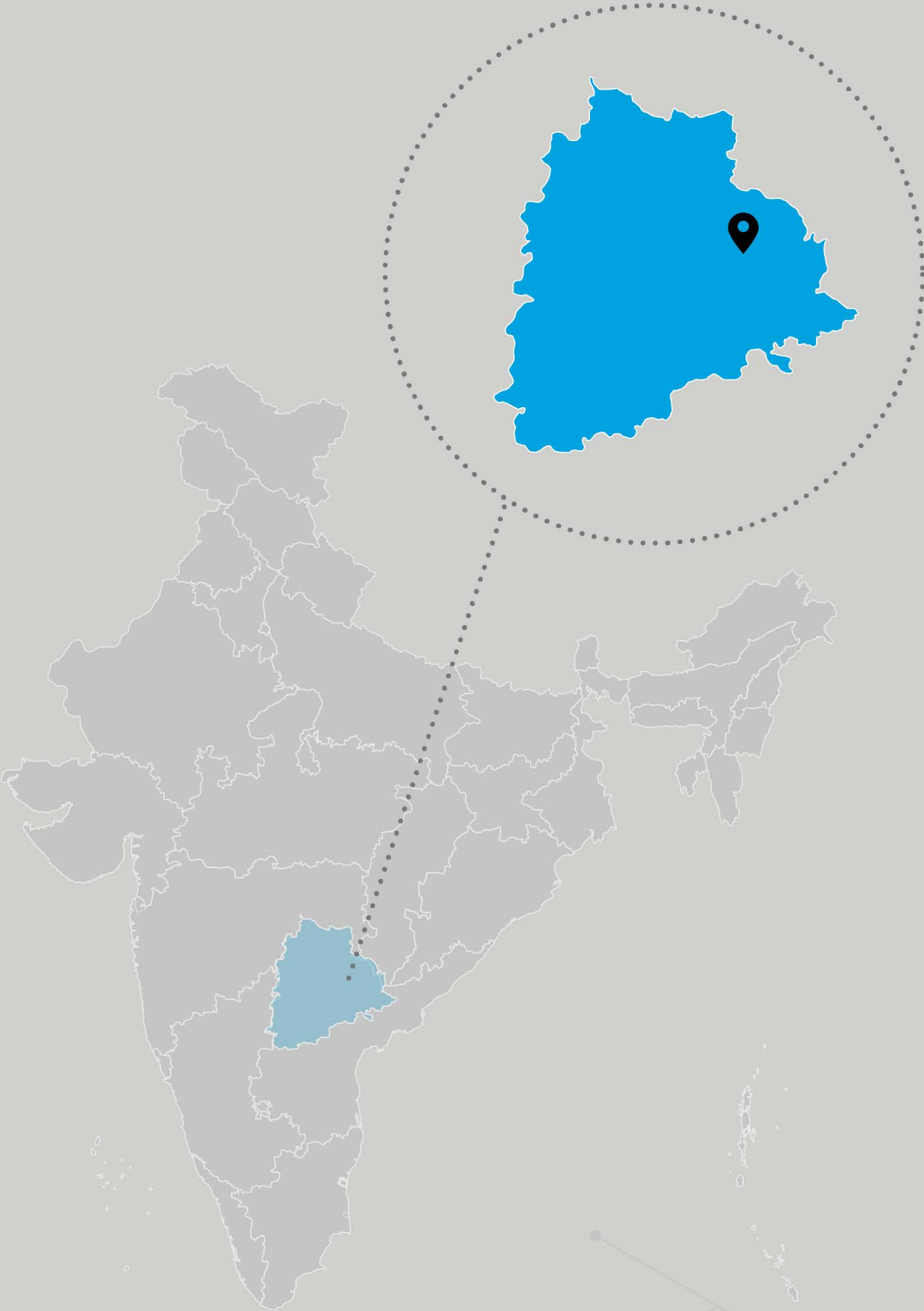
Note:

- The education ecosystem index refers to the number of schools per 1,000 children.
- The medical ecosystem index refers to the presence of medical facilities proportional to population.
- The cost of living index infers to the consumer prices and rent.
- The crime index refers to the safety of the citizens affected by criminal acts.
- The pollution index refers to the combination of parameters such as AQI and particulate matter.

What's next?

- Visakhapatnam stands out as the most strategically located city in eastern India, due to its unique geographical positioning and connectivity with major cities nationwide.
- The city has premier institutions such as IIM, which incubates and supports young entrepreneurs in their start-up endeavours.
- As a port city and an important logistics hub, Visakhapatnam hosts the development centres of numerous e-commerce and logistics corporations, leveraging its strategic location and connectivity to major markets. After the COVID-19 pandemic, BPOs have ramped up recruitment here.
- Additionally, the STPI and APITP are currently in the process of enhancing the technological infrastructure and innovation ecosystem in Visakhapatnam, further bolstering its status as an emerging hub for the tech industry.

Warangal



Warangal



Population
1 Mn



Adult literacy
83.3%



Languages spoken
Telugu, Deccani, Urdu, Hindi, English

Summary

- Warangal has more than 25 technology and BPM-related business set-ups.
- It has an extremely low presence of the technology sector and minimal availability of employed and trained talent pool in the city.
- Premier institutes such as NIT and Kakatiya University have ensured quality tech and allied fresh talent essential for the budding tech industry.
- The setup of two incubators has set the pace for the city to enter the space of technology innovation.
- Agriculture-based industries form an important small and medium-sized cluster and generate 4000+ jobs.
- Lower prices of land as compared to the nearby technology hub Hyderabad and high availability of Grade A office space make it economically feasible for setting up offices.
- Construction of 40 km of smart roads with an outlay of INR 350 crore prioritised by the Telangana government.
- The airport constructed with a budget of over INR 75 crore is set to be operational by 2023 and will connect to major cities.



~35,000
Experienced talent availability



~50
Technology start-ups



~25
Tech-related businesses



~2
Incubators

Note:

- All installed talent in tech and tech-related businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022-23.
- Tech businesses include GCCs, BPM centres, IT service providers, and IT services vendors.

Talent availability



Fresh graduates in the city per year	⇒ 21,000–22,000	<ul style="list-style-type: none"> • Nearly 35,000 people work in the technology sector. • It has the presence of premier colleges such as NIT Warangal and many other tier 2 engineering colleges. • Most people speak Telugu and Urdu with some knowledge of Hindi and English as well.
STEM graduates	⇒ 6,000–6,500	
Other graduates	⇒ 15,000–16,000	
Talent pool in tech companies	⇒ 30,000–35,000	
No. of colleges	⇒ ~180	
Premier institutes	⇒ NIT and Kakatiya University are some of the prominent institutes	
Avg. salary of a software developer (5–8 yrs exp)	⇒ INR 7.5–11 lakh per annum	

Note: Talent pool in tech companies refers to installed talent in tech businesses (including GCCs, IT/ITES, BPM, and others); data from FY 2022.

Infrastructure attractiveness



Availability of metro (operational/ planned) and coverage	⇒ Yes (17 km proposed)	<ul style="list-style-type: none"> • The city is predominantly agricultural with widespread cultivation of crops, such as rice, cotton, grams, and chillies; grain production is the main source of income with Warangal standing at the second position in the world in the grain market. Important industries in the city include food processing, agro-based, textile, and pharma. Warangal is also a heritage place, famous for Warangal Fort, Shiva Temple, Bhadrakali Temple, Thousand Pillared Temple, Wildlife Sanctuaries at Pakhal, which attracts tourism. The administration is keen on developing the amenities around Hillock and improve the fort to boost the tourism sector. • The Telangana government also focuses on technology companies to consider tier 2 locations such as Warangal, Karimnagar, and Nizamabad. It has developed an SEZ for Technology Companies in Madikonda, near Warangal. Cyient has opened their centres in the city, which currently employs 600 engineers and has hired 200 more. These locations are attractive destinations for technology companies due to the availability of cheaper land and infrastructure and several professional colleges, including engineering colleges such as NIT. • Warangal is also home to 208 start-ups; of which, 21 percent are IT/ITES start-ups. TIE, investor network Kakatiya Angels, and SR Innovation Exchange (SRiX) support the start-ups. Furthermore, KITS Warangal in association with a South African company has built an incubation centre for product development on its campus in the fields of the IoT and machine learning. • A project of INR 1,100 crore is proposed for connecting Warangal, Kazipet, and Hanamkonda in Telangana by Greater Warangal Municipal Corporation. • The government has spent over INR 4,000 crore for infrastructure development in Warangal. • A sum of INR 75 crore has been approved for Warangal airport in the 2022–2023 budget. • There are two approved National Highways Projects, i.e. four laning of the Mancheri–Warangal section and four/six laning of the Warangal–Khammam section for INR 2,455 crore and 2,044 crore, respectively.
No. of flights to major cities per day	⇒ Yet to be operational	
Airport connectivity	⇒ Domestic only	
Average download speed	⇒ 44.38 Mbps	
Office rental (Grade A office space)	⇒ INR 35–70/sq.ft./ month	

Note: Major cities refers to metropolitan cities of India.

Technology ecosystem



No. of tech and BPM set-ups	➔	25+
No. of GCCs	➔	NA
No. of tech and tech-enabled start-ups	➔	~48
Major industries	➔	Agriculture, handloom, textile and tourism

- The Telangana government has been focusing on encouraging technology companies to set up operations in tier 2 locations, such as Warangal, Karimnagar, and Nizamabad. As a result, several major companies, such as Cyient, have set up operations in the region.
- The city is also home to a burgeoning start-up ecosystem, with 208 start-ups; of which, 21 percent are IT/ITES start-ups. Several incubators and accelerators, such as TIE, Kakatiya Angels, and SRiX, support the growth of start-ups. Additionally, institutions such as KITS Warangal have set up incubation centres for product development in the fields of IoT and machine learning.

Note: Tech and tech-enabled start-ups refer to setups with computer and software applications.

Risk and regulatory environment



Rank in EODB	➔	7/37 (Very Good)
Developed space/SEZ	➔	0.25 sq.km.
Seismic zone	➔	3 (Moderate)
Probability of flooding	➔	High/Medium/Low
Power disruption risk	➔	Medium

- Warangal is prone to floods as it lies in the low-lying plains and has moderate risk of earthquakes as it lies in Seismic Zone 3.

Note:

- Developed space/SEZ refers to areas dedicated to tech industry
- Seismic zone risk scale: 1 = low; 5 = high
- Power disruption risk refers to instances of power failure

Social and living environment



Education ecosystem index	↻	13.97 (Moderate)
Medical ecosystem index	↻	11.17 (Moderate)
Cost of living index	↻	18.02 (Good)
Crime Index	↻	26.13 (Good)
Pollution index	↻	68 (Moderate)

- Warangal has a moderate education ecosystem with several professional colleges, including engineering colleges such as NIT.
- The city also has a moderate medical ecosystem with several hospitals and healthcare facilities. The cost of living in Warangal is good, with affordable housing and basic necessities.
- The crime index in Warangal is good, making it a safe place to live. The pollution index in the city is moderate, with some areas experiencing higher levels of pollution than others.

Note:

- The education ecosystem index refers to the number of schools per 1,000 children.
- The medical ecosystem index refers to the presence of medical facilities proportional to population.
- The cost of living index infers to the consumer prices and rent.
- The crime index refers to the safety of the citizens affected by criminal acts.
- The pollution index refers to the combination of parameters such as AQI and particulate matter.

What's next?

- Warangal serves as an ideal satellite city to the thriving hub of Hyderabad, with various domestic service providers already establishing their operational offices.
- The city of Warangal also has premier educational institutions such as the NIT and incubation centres, which are expected to facilitate the growth and development of nascent start-ups. The infusion of government investments into the establishment of infrastructure, particularly in the form of SEZs, and the enhancement of connectivity can potentially elevate Warangal's status as the next highly coveted destination in Telangana.

Appendix



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Please find below the cumulative references for the emerging hub profiles section

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Glossary

AI - Artificial Intelligence	KSUM - Kerala Start-up Mission
APIs - Application Programming Interface	LAN - Lucknow Angel Network
AQI - Air Quality Index	MEITY - Ministry of Electronics and Information Technology
AR - Augmented Reality	MIHAN - Multi-modal International Hub Airport of Nagpur
BNI - Business Network International	MIZ - Mega Industrial Zones
BPM - Business Process Management	ML - Machine Learning
BPO/KPO - Business / Knowledge Process Outsourcing	MPIC - Mumbai-Pune Industrial Corridor
CRM - Customer Relationship Management	MPIDC - Madhya Pradesh Industrial Development Corporation Limited
CSR - Corporate Social Responsibility	MSEZL - Mangaluru Special Economic Zone Limited
DevOps - Software Development and Operations	MSME - Micro, Small & Medium Enterprises
DFCCIL - Dedicated Freight Corridor Corporation of India	NAIN - New Age Innovation Network
DTSP - Digital Technology Service provider	NCR - National Capital Region
ELCOT - Electronics Corporation of Tamil Nadu Limited	NIMZ - National Investment and Manufacturing Zones
EODB - Ease of Doing Business	NIRF - National Institutional Ranking Framework
ER&D - Engineering, Research, and Development	IoT - Internet of Things
ESDM - Electronics System Design and Manufacturing	OTC - Over-the-Counter
F&A - Facilities and Administrative	PSU - Public Sector Undertaking
FTEs - Full-Time Equivalents	RERA - Real Estate Regulatory Authority
GCCs - Global Capability Centres	RGCTP - Rajiv Gandhi Chandigarh Technology Park
GDP - Gross Domestic Product	RPA - Robotic Process Automation
GIFT - Gujarat International Finance Tec-City	SaaS - Software as a service
IESA - India Electronics and Semiconductors Association	SEZ - Special Economic Zone
IIDC - Industrial Infrastructure Development Centres	STEM - Science, Technology, Engineering, and Mathematics
IISER - Indian Institutes of Science Education and Research	STEP - Science Technology Entrepreneurs Park
ITES - Information Technology-Enabled Services	STPI - Software Technology Parks of India
ITIL - Information Technology Infrastructure Library	TiE - The IndUS Entrepreneurs
KDEM - Karnataka Digital Economy Mission	VARCoE - Virtual and Augmented Reality Centre of Excellence
KIADB - Karnataka Industrial Areas Development	VR - Virtual Reality
KINFRA - Kerala Industrial Infrastructure Development Corporation	

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