एसटीपीआई
STPI
Software Technology Parks of India

A REPORT ON

ACCELERATING THE GROWTH OF GLOBAL CAPABILITY CENTRES (GCCS) IN INDIA

FOR

SOFTWARE TECHNOLOGY PARK OF INDIA

BY 1Lattice
Enabling Better Decisions

सत्यमेव जयते

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Executive Summary

The Global Capability Centre industry in India has emerged as a cornerstone of the country's economic growth, driven by sectors like software, internet services, engineering research & development (ER&D) and others. This report highlights need to harness India's potential and making it a global leader in high-end technological work by formulating a comprehensive national GCC policy. The report presents critical challenges faced by GCCs and provides ways for capitalizing on opportunities for innovation, talent development, and sustainable growth.

The report provides an overview of GCC industry which is experiencing rapid growth in India, driven by concentrated activity in the top six cities, leveraging extensive office space infrastructure. Currently, more than 90% of GCCs are in these urban hubs. In the natural course, projections suggest significant expansion, with the market expected to double from US$ 50B in FY24 to US$ 110B by FY30, indicating a robust CAGR of 14%. This growth underscores India's strategic importance as a leading destination for GCCs, driven by favourable factors such as skilled talent, cost efficiencies, and supportive infrastructure.

The report undertakes a comparative analysis of eight Indian states' policies viz. Gujarat, Haryana, Madhya Pradesh, Maharashtra, Karnataka, Tamil Nadu, Telangana, and Uttar Pradesh. The report benchmarks these states on different parameters individually as well as overall. The report also undertakes comparative analysis of five international locations & their policies vis-à-vis India and highlights India's cost efficiency and large skilled workforce as key advantages. Amongst the five countries studied, USA excels in infrastructure and supportive government policies, while Malaysia offers competitive labour costs and a strategic location for APAC markets. Costa Rica shows promise with its growing tech talent pool and pro-business policies, whereas Mexico faces issue of skill shortages. Poland provides strong language skills for European operations but faces higher labour costs. The report also touch bases few other countries like Philippines, China and Brazil. Understanding their strengths and nuances is crucial for businesses seeking optimal locations for establishing or expanding their GCC operations globally.

Engineering R&D

The report delves deep into ER&D with a separate chapter on E&RD GCCs. India is a key hub for ER&D within GCCs, hosting over 1,440 ER&D GCCs and 695,000 professionals as of FY2023. Key activities include research, innovation, and product strategy, with Bengaluru as the leader. The report analyses four countries viz. Poland, USA, Malaysia, and Costa Rica who offer conducive environments for ER&D GCCs. Poland provides skilled talent and government incentives. USA supports innovation through robust policies. Malaysia offers strong government commitment and financial incentives. Costa Rica provides skilled talent and a supportive ecosystem but has some regulatory challenges.

Expert Interaction

The report encapsulates key inputs from eminent experts invested in the GCC ecosystem including the President of the US-India Strategic Partnership Forum (USISPF), US-India Business Council (USIBC), CEOs of GCCs, CXOs of 2 of Big 4, and few others.

Findings and Recommendations

Considering the critical role of streamlined regulatory frameworks, infrastructure development, talent enhancement, and advancement of research & innovation in fostering GCC growth the report includes following recommendations:

- **Single Window Agency** for receipt of application & recognition to GCCs
- **Specific fiscal incentives** to recognized GCCs.
- **Grant of specific industry status to GCCs:** Facilitating easier compliance with labor laws and overtime policies. This recognition will facilitate tailored regulations that acknowledge the

unique operational dynamics of GCCs, moving beyond the constraints of conventional manufacturing laws.

- **Enhancing Transfer Pricing Policies:** Development of competitive transfer pricing regulations to incentivize higher-value activities within GCCs, thereby boosting economic contributions.
- **Regional Development Initiatives:** Promotion of smart cities and satellite GCC corridors to decentralize growth, mitigate urban concentration risks, and leverage regional talent pools.
- **Investment in STEM Education:** Expansion of STEM education initiatives and vocational training programs to cultivate a skilled workforce aligned with industry needs, particularly in emerging technologies.
- **Support for ER&D Innovation:** Introduction of an online platform for expedited ER&D permit and patent processes, facilitating seamless collaboration and innovation within the GCC ecosystem.

The recommendations represent a strategic imperative to sustainably enhance India's global competitiveness in high-value service sectors. By addressing regulatory, infrastructure, and talent challenges, this framework seeks to catalyse innovation, attract foreign investments, and foster inclusive economic growth. It aligns stakeholders towards a common goal of positioning India as a hub for innovative global capabilities, ensuring long-term prosperity and technological leadership.

The report shall be useful resource for governmental bodies, industry associations, and MNCs invested in India's GCC ecosystem.

Chapter 1: Overview of the GCC industry

Introduction

Global Capability Centres are specialized entities established by multinational corporations, typically as wholly owned subsidiaries, strategically located in regions like India that offer significant talent and cost advantages. These centres function as strategic extensions of their parent organizations, centralizing operations, optimizing efficiencies, and playing a crucial role in supporting global business strategies. Primarily focused on IT and ITeS, GCCs oversee a broad range of functions, including software engineering, product development, deep technology, R&D, process outsourcing, process outsourcing (business, knowledge, legal etc), IT support, and shared services.

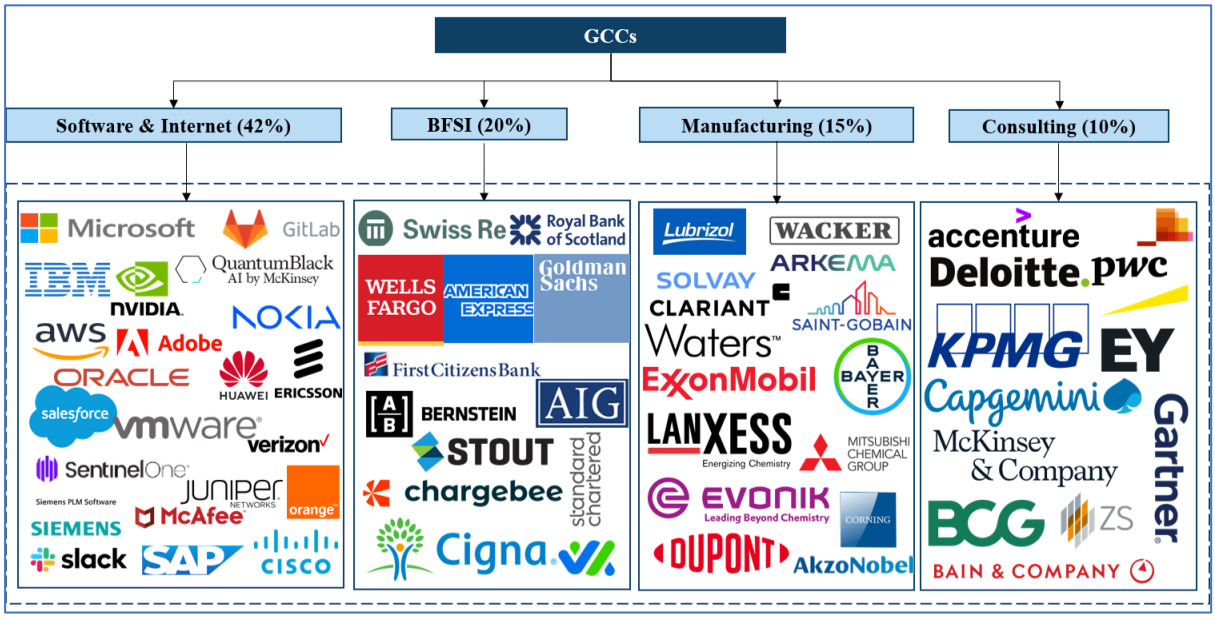
Initially, GCCs were created to offload back-office functions, but over time, they have evolved into pivotal drivers of growth and innovation across various industries. Beyond mere cost reduction, these centres enhance organizational capabilities by advancing technological solutions, driving strategic initiatives, and fostering innovation, thereby bolstering competitiveness on a global scale. Today, GCCs in India manage intricate aspects of the organizational value chain, serving as hubs for operational excellence, product development, and innovation.

GCCs in India can be categorized into two main types: Brownfield GCCs and Greenfield GCCs. Brownfield GCCs are existing centres already operational in the country, focusing on optimizing their functions within the current regulatory regimes of GST, transfer pricing, and income tax. Greenfield GCCs represent new centres being established to expand their parent organization's footprint in India. Based on their functions, GCCs can be classified into several different types: R&D and Knowledge Centres, which focus on innovation, new product development, and technology advancements; Shared Service Centres, which specialize in software development, IT services, and technology infrastructure management; Captive BPO Centres, which handle customer support, human resources, and financial services outsourcing; and Global Industrial Operations, which manage manufacturing processes and optimize supply chain efficiencies.

These classifications underscore the diverse scale and impact of GCCs within the global business landscape, highlighting their integral role in supporting global business strategies and driving organizational growth and innovation.

GCCs & STP Units: Software Technology Park (STP) units are specialized entities focused on exporting software and IT services to any foreign entity, benefiting from fiscal incentives like tax exemptions and customs duty waivers. The key distinction between GCCs and STP units lies in their export activities: GCCs exclusively export services to their parent organization, while STP units export to multiple foreign entities which are their ‘customer’ or ‘client’. A GCC can establish itself as an STP unit to access the benefits available under the STP scheme. This flexibility allows GCCs to leverage additional advantages while adhering to their core operational model.

Figure 1: Categorization of Indian GCCs



Source(s): NASSCOM report 2023, Industry reports, 1Lattice analysis.

With **62% share**, two key segments dominate the GCC industry: software & internet **(42%)** and BFSI **(20%)**; Other segments include manufacturing **(15%)**, consulting **(10%)**, healthcare **(8%)** and the remaining **5%**.

Need for GCCs

GCCs have emerged as vital components for organizations aiming to enhance their global operations. These centres are strategically established in regions with talent-&-cost advantages, providing companies with the ability to centralize and optimize a variety of functions such as IT, R&D, and business processes. By leveraging the benefits of GCCs, companies get access vast talent pool in a cost-effective way which drives innovation, streamlines operations, and provides strategic business growth.

Figure 2: Need for GCCs

Need	Description
Access to Talent	• GCCs provide access to a large, **diverse talent pool** in emerging countries, enabling companies to **leverage specialized skills** and knowledge that may not be available in their home countries
Cost Efficiency	• GCCs enhance **cost efficiency** by leveraging economies of scale, labor arbitrage, and efficient resource allocation. • This allows for significant **cost savings** across global operations, optimizing overall expenses
Innovation and R&D	• GCCs foster innovation by tapping into **dynamic tech ecosystems**, rich in creative and technical expertise. • This enhances the company's capacity to drive business growth through continuous R&D and innovation efforts
Centralized Operations	• GCCs enhance **efficiency** by centralizing and standardizing business functions such as IT services, finance, HR, and customer support • This streamlining process **reduces redundancies** and ensures consistency across global operations
Strategic Business Growth	• By establishing GCCs, companies can more **effectively** manage and execute global business strategies, ensuring alignment across international markets • This supports **market expansion** by adapting and responding quickly to new opportunities and challenges

Source(s): Industry reports, 1Lattice analysis.

Setting up a GCC

Setting up a GCC requires a strategic approach to maximize benefits such as cost savings, access to a skilled talent pool, and enhanced operational efficiency. When setting up a GCC, organizations typically consider four main models based on strategic objectives, operational requirements, and desired value delivery.

- The **Captive Model**, where the parent company fully owns and operates the GCC. This model offers complete control over operations, elevated levels of data security, and direct alignment with the company's goals and culture. However, it involves higher initial setup and operational costs and requires significant investment in infrastructure and talent acquisition.

- The **Outsourcing Model**, in which the parent company contracts a third-party service provider to manage specific functions or processes. This approach is cost-efficient, leveraging the provider's expertise and economies of scale, and is typically used for non-core activities like IT support and customer service. While it offers lower initial costs and flexibility, it also means less control over operations, potential risks to data security, and misalignment with the company's strategic goals and culture.

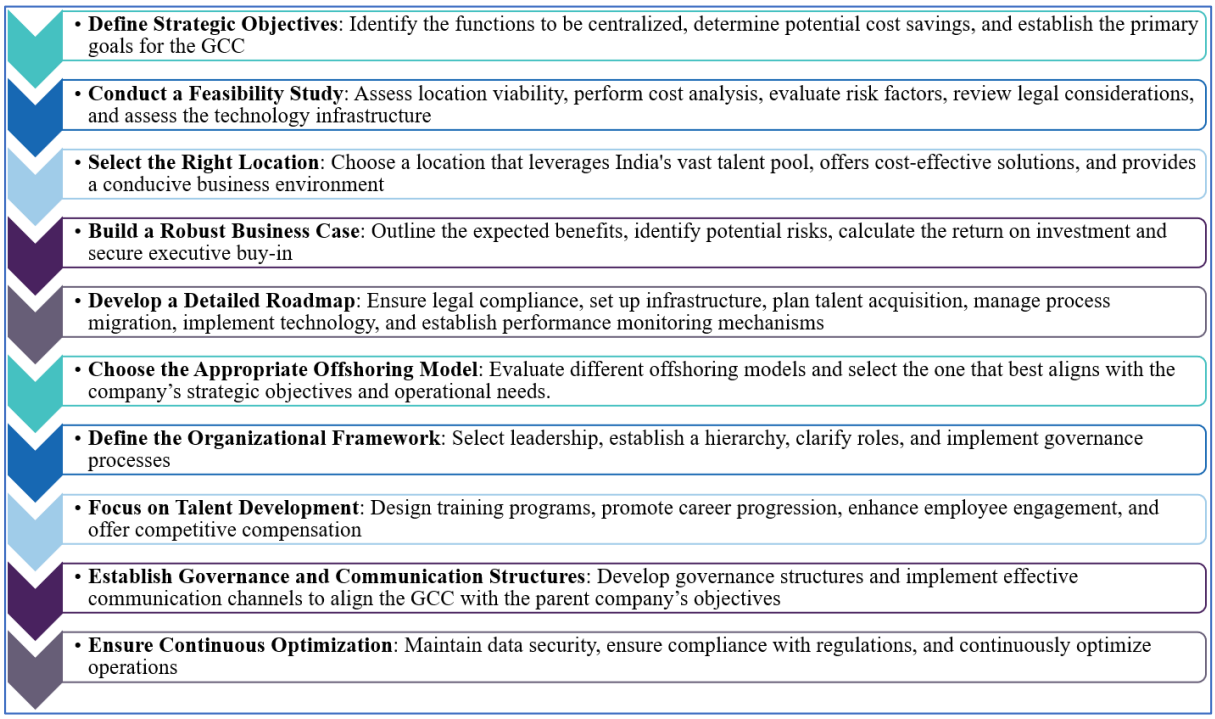
- The **Hybrid Model** combines elements of both the captive and outsourcing models. It allows the parent company to retain control over critical functions while outsourcing non-core activities, optimizing cost efficiency, and maintaining flexibility. This model enables a tailored approach that balances control, cost, and flexibility, but it can be complex to manage and integrate both in-house and outsourced operations, posing coordination and communication challenges.

- The **Build-Operate-Transfer (BOT) Model** involves partnering with an external provider to build and operate the GCC initially, with the option to transfer ownership and operations to the parent company later. This phased approach reduces initial setup risk and complexity, leveraging the partner's expertise in the initial stages. The BOT model allows the parent company to focus on core activities while the partner manages the setup and early operations. However, it requires careful selection of a trustworthy partner, detailed planning for a smooth transition, and addressing potential risks during the transfer phase, such as knowledge transfer and cultural integration.

Each of these models offers distinct advantages and challenges, and the choice depends on factors like strategic goals, cost considerations, the desired level of control, and the nature of the functions to be performed by the GCC.

Following figure depicts the structured outline of the typical key steps involved in setting-up a GCC:

Figure 3: Setting up GCCs



Source(s): 1Lattice analysis

Critical parameters for the growth of GCCs

As GCCs continue to expand and evolve, understanding the critical factors that drive their growth is essential. The top 10 parameters are ranked by importance, based on their impact on the success and scalability of GCCs.

1. Talent Pool

The availability and quality of the talent pool are paramount for the success of a GCC. A robust talent pool not only ensures that the centre can deliver high-quality services but also drives innovation and growth. Key factors include:

- **Skilled Professionals:** Access to a large, cost-competitive tech talent pool skilled in programming, technology development, and other tech-fused roles is critical.
- **Academic Ecosystem:** Proximity to strong universities and a history of success in the company's target industry enhance the talent pipeline.
- **Employee Value Proposition:** Investing in the culture and enhancing the overall employee value proposition is crucial for talent retention.

2. Operational Efficiency

Operational efficiency is vital for balancing costs with the value delivered, especially in challenging economic conditions. Efficient operations help GCCs maintain competitiveness by optimizing processes, reducing waste, and improving productivity.

3. Cost Management

Effective cost management is essential for ensuring the financial viability of a GCC. This involves:

- **Labour and Real Estate Costs:** Comparing the costs of labour, real estate, and other operational expenses across various locations.
- **Cost-Quality Balance:** Achieving a balance between cost savings and the quality of talent and infrastructure is critical for long-term success.

4. Scalability
Scalability is a key consideration for GCCs aiming for long-term growth. Factors contributing to scalability include:

- **Quality Assets and Talent Attraction:** The future supply of quality assets and the ability to attract talent is crucial for scaling operations.
- **Government Investments:** Investments in infrastructure by local governments make cities more liveable and attractive for GCC operations.

5. Innovation
Innovation is a driving force behind the expansion of GCCs. To stay competitive, GCCs must focus on:

- **Knowledge-Based Capabilities:** Expanding services with a focus on innovation and knowledge-based capabilities.
- **Ecosystem Synergies:** Driving synergies through collaboration with ecosystem partners, including start-ups and academic institutions.
- **Advanced Technological Applications:** Developing advanced technological applications either through in-house Centres of Excellence or external collaborations.

6. Legal & Regulatory Environment
Understanding and navigating the legal and regulatory environment is crucial for the smooth operation of a GCC. Key aspects include:

- **Compliance:** Ensuring compliance with local laws and regulations, including employment, tax, and environmental laws.
- **Ease of Doing Business:** Selecting locations with favourable business environments, incentives for start-ups, and strong digital infrastructure.

7. Technology Implementation
Implementing the right technology infrastructure is critical for supporting GCC operations. This includes:

- **Software & Hardware:** Investing in the necessary software, hardware, and communication tools to ensure seamless operations
- **Communication & colloboration:** Ensuring a robust technology infrastructure to support collaboration and communication across global operations.

8. Infrastructure
Infrastructure investment is necessary for establishing a GCC. This includes:

- **Office Space:** Investing in quality real estate that favours large office spaces and R&D centres.
- **Social Infrastructure:** Considering the work ecosystem, including the availability of social infrastructure, to support talent dispersion and attract a diverse workforce.

9. Time Zone Compatibility
Time zone compatibility is important for ensuring smooth collaboration across global operations. A location with a time zone that aligns with the company's global operations can facilitate better communication and ensure 24/7 uninterrupted operations.

10. Transportation and Logistics
While often overlooked, transportation and logistics play a crucial role in the operational efficiency of a GCC. Reliable transportation and logistics support make the movement of people and goods to and from the centre more efficient, contributing to overall productivity.

While India already fairs well in multiple parameters, improvement is needed in few others. An exponential growth in GCCS can be witnessed with formal recognition & registration of GCCs, provision of incentives, and facilitating other services, all through a designated Single Window Agency like STPI.

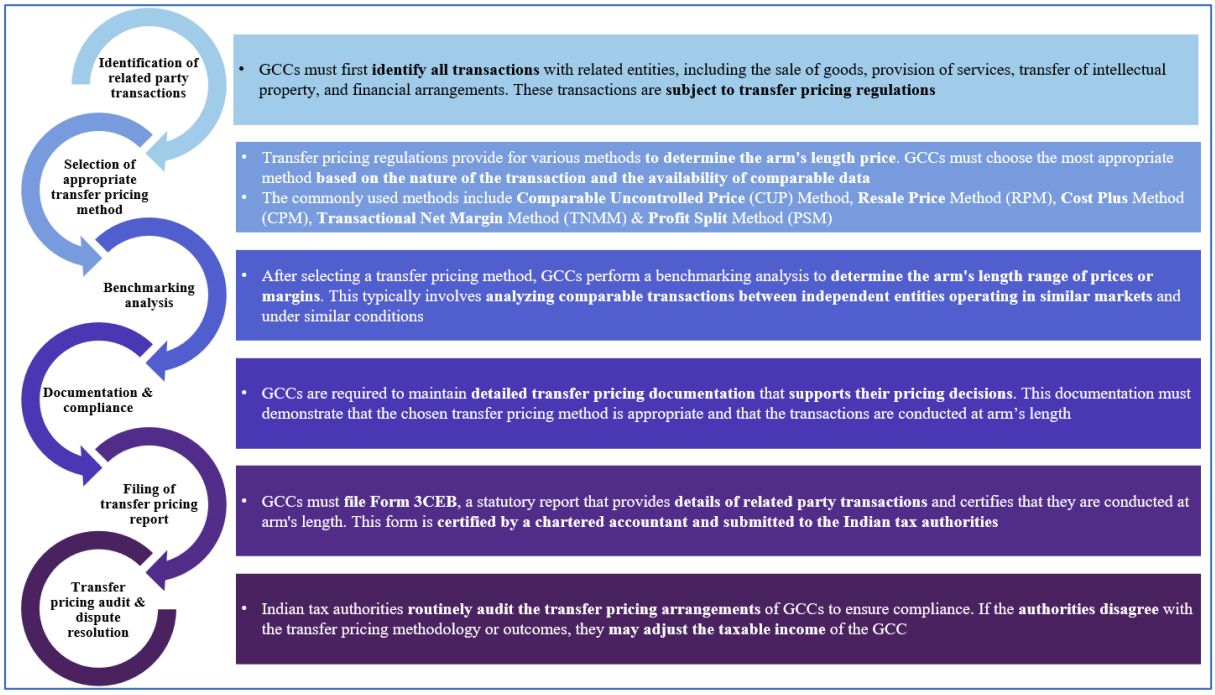
Transfer pricing

Transfer pricing refers to the pricing of transactions between related entities within a multinational corporation. The primary objective of transfer pricing regulations is to govern international transactions and specified domestic transactions between associated enterprises, ensuring these transactions are conducted at arm's length prices. These regulations are designed to prevent the manipulation of prices that could lead to profit shifting from higher-tax jurisdictions to lower-tax jurisdictions, a strategy often employed to reduce the overall tax burden by MNCs. Additionally, transfer pricing rules aim to prevent the misuse of government incentives intended to promote the development of specific areas or sectors, ensuring these benefits are not exploited through inappropriate profit allocation.

Transfer pricing is crucial for ensuring that intercompany transactions within an MNC are conducted fairly and in compliance with international standards. It facilitates the equitable allocation of income and expenses among different entities, helping to accurately reflect the true economic performance. By adhering to the arm's length principle, transfer pricing prevents tax avoidance and ensures that MNCs fulfil their tax obligations accurately. Moreover, it supports accurate financial reporting by establishing market-based prices for transactions, which is essential for preparing consolidated financial statements. Transfer pricing also enhances business transparency, aids strategic decision-making, and contributes to a stable international trade environment by ensuring consistent pricing practices across jurisdictions.

India introduced transfer pricing regulations in 2001 through the Finance Act, aligning them with the OECD Transfer Pricing Guidelines' arm's length principle. These regulations are governed by the Income Tax Act, 1961, and the Income Tax Rules, 1962, with the Central Board of Direct Taxes (CBDT) issuing guidelines to ensure consistent application. For greater certainty, India introduced a Safe Harbor regime in 2012. Further strengthening its regulatory framework, India adopted the Base Erosion and Profit Shifting (BEPS) measures in 2017, aimed at curbing aggressive tax planning by multinational corporations. India employs several transfer pricing methods, such as the Comparable Uncontrolled Price (CUP) Method, Resale Price Method (RPM), Cost Plus Method (CPM), Profit Split Method (PSM), and Transactional Net Margin Method (TNMM), to ensure that transactions between related entities are conducted at arm's length. MNCs must maintain detailed documentation, including a Master File and Local File, and file an annual transfer pricing report (Form 3CEB). The Advance Pricing Agreements (APAs) offer certainty regarding transfer pricing practices.

Figure 4: Process of Transfer pricing



Source(s): 1Lattice analysis

Definition & registration of GCCs in India

With a brief introduction as above, for the purposes of the recommendations made in this report, a GCC is proposed to be defined as

- A Private Limited Company or Limited Liability Partnership established in India which is wholly owned subsidiary of its foreign parent organization, primarily focused on exporting technology services to the parent organization and raising invoices directly to this parent organization.
- The technology export services shall encompass core technology functions, including but not limited to Engineering R&D, product development, software engineering, deep tech as well Process Outsourcing (Business, Knowledge Legal etc).

To gain official recognition as a GCC, the entity shall be required to apply through a designated Single Window Agency (SWA), submitting the necessary documentation along with a five-year projection of includes employment figures, technology export values, capital investment, and the scope of work as follows:

Parameter	Y1	Y2	Y3	Y4	Y5
Employment					
Tech Export					
Capital Investment					
Nature & Scope of Work					

During application, the entity must pay applicable charges. The GCC will pay the nominal registration fee and annual charges that may be in line with STP unit charges to SWA.

Once approved, the SWA shall issue a GCC registration certificate with a unique registration number, officially designating the entity as a Global Capability Centre.

STPI is proposed to be designated SWA for GCCs.

Chapter 2: GCC Market in India

Evolution

India's journey as a hub for GCCs began in the early 2000s, driven by the tech and outsourcing boom. This pioneering move paved the way for other multinational corporations to follow suit, leading to a significant rise in the number of GCCs over the years in four distinct phases.

Phase 1.0: Operational Outposts (Till 2010)
In the initial stages, GCCs primarily served as cost-effective operational outposts. By 2010, the number of GCCs had surpassed 1,000, employing a talent pool exceeding 400,000 and generating a revenue of US$ **11.5B**. The primary driver for this phase was cost arbitrage, leveraging India's skilled workforce and affordable real estate. These centres focused on basic back-office and IT support services, including data processing and customer service, providing cost-effective solutions for global corporations seeking efficiency and scale.

During this phase, GCCs functioned as support units for global organisations, focusing on quality analysis and engineering with limited emphasis on development activities.

Phase 2.0: Talent Incubators (2011-2015)
The focus gradually evolved beyond mere cost savings as GCCs transitioned into talent incubators. By 2015, the number of GCCs reached 1,448, with a talent base exceeding 754,000 and generating a revenue of US$ **19.4B**. GCCs began to take on more complex and strategic roles, fostering digital transformation and innovation. They marked the establishment of Global In-House Centres (GICs), emphasising research and development skills, delivery, and process excellence. This period also saw an increased emphasis on developing and harnessing local talent to drive innovation and enhance competitiveness.

During this phase, the teams relied heavily on headquarters for design and architectural insights but contributed significantly to development and support activities.

Phase 3.0: Innovation Engines & Manufacturing Hubs (2015-2023)
This period witnessed a significant leap in the role and capabilities of GCCs. By 2023, the number of GCCs had increased to 2,740, employing a workforce of 1,659,000 and generating a revenue of US$ **46B**. GCCs evolved into innovation engines and manufacturing hubs, driving high-value activities such as digital transformation, adoption of emerging technologies like AI and machine learning, and establishing Centres of Excellence across various sectors.

Following are the key aspects of this phase:

- **Global Collaboration:** GCCs embraced a collaborative model that transcended borders, enabling seamless integration of global teams. This approach facilitated round-the-clock productivity and innovation. For instance, a leading tech firm established a 24-hour innovation cycle by coordinating efforts between its GCC in India and its head office in the US, drastically reducing product development times.
- **Strategic Capabilities:** GCCs are enhancing their strategic impact by aligning closely with the core objectives and strategies of their parent organisations. This strategic realignment allows them to drive key initiatives that significantly contribute to corporate growth and innovation.
- **Portfolio Expansion & Ownership:** Many GCCs in India are transitioning from traditional service roles to taking ownership of comprehensive business functions, which include product development and global business strategies. This shift is seen across major centres in India where GCCs are not only expanding their service scope but also increasingly participating in critical decision-making processes.
- **Transition to Global Business Services (GBS):** There is a noticeable trend where GCCs are evolving into GBS models, which consolidate and standardise services across global operations. This model enhances efficiency and consistency in service delivery, reinforcing the strategic role of GCCs in global business operations.
- **Digital Transformation:** GCCs in India are pivotal in spearheading digital transformation efforts for their global counterparts. For instance, renters in India are integral in implementing automation and advanced data analytics, contributing significantly to transforming business processes and service delivery models.
- **Innovation Hubs:** Reflecting a shift towards high-value functions, many GCCs have developed into hubs of innovation, fostering significant advancements in technology and processes. These hubs are crucial for the development of new products and services, often working coordinated with startups and academic institutions to boost technological and business model innovation.

- **Tier II/III Location Expansion:** To capitalize on cost efficiencies and access a broader talent pool, GCCs are expanding into Tier II and III cities. These locations offer cost benefits and access to untapped talent, helping companies scale operations while maintaining quality and operational excellence.
- **New Talent Paradigm**: GCCs are also revolutionizing their talent management strategies to accommodate the preferences and strengths of a diverse workforce, including millennials and Gen Z. This involves adopting more flexible work models, enhancing employee engagement practices, and focusing on continuous learning and development to attract and retain top talent.

During this phase, GCCs acted as engineering hubs for multiple portfolios, taking full ownership and execution of technology and architectural decisions. They maintained structured connections with customers and had a deep understanding of their needs.

Phase 4.0: Strategic Navigators (2023 Onwards)
Looking ahead, GCCs are set to evolve into pivotal strategic hubs, with projections indicating that by 2030, their numbers will surpass 4,200. These centres are expected to employ over 4.5 million people and generate revenue exceeding US$ 110 billion. Key drivers of this transformation include:

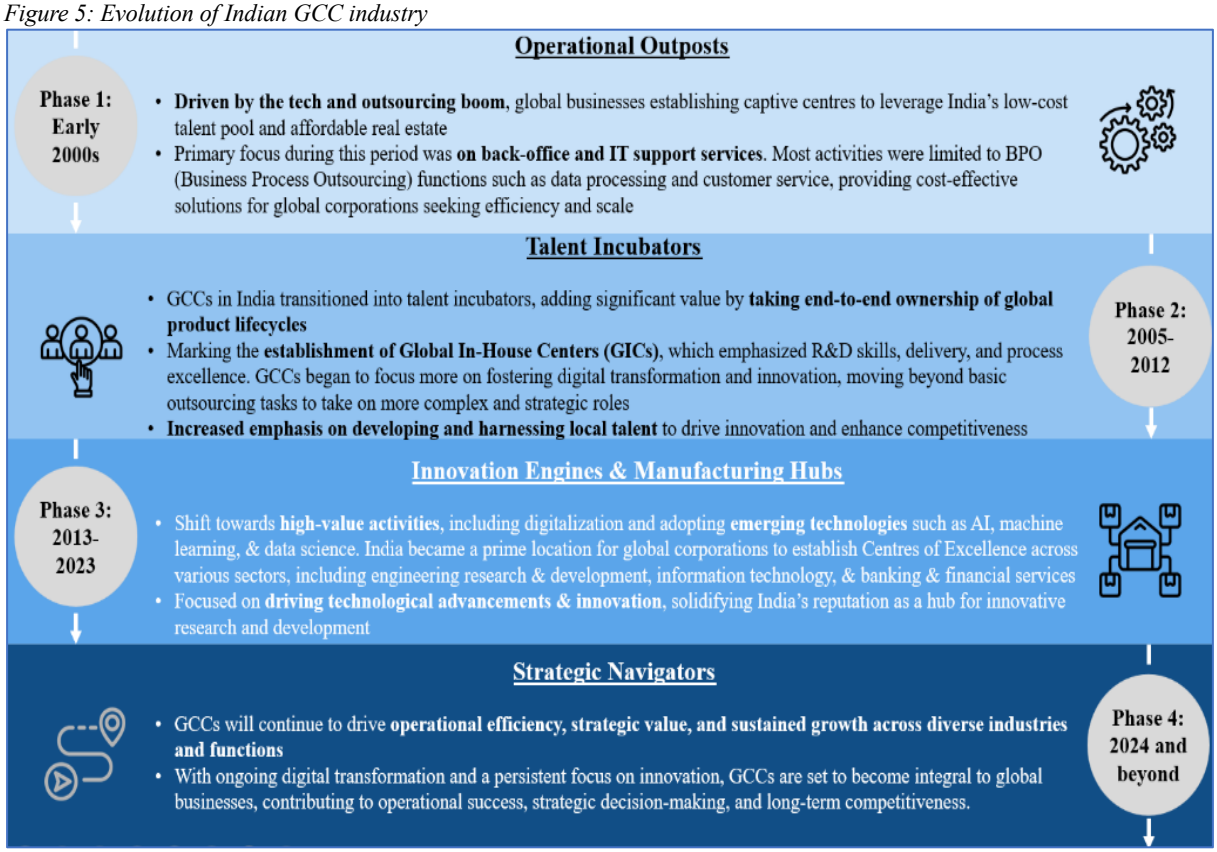
- **Creation of General Manager (GM) Roles:** Empowering GCC leaders to make strategic decisions and drive local growth. This increased autonomy allows GCCs to be more responsive to market needs and adapt their operations accordingly.
- **Monetizing Service Capability:** Offering expertise as a service to other businesses or even external clients. GCCs can leverage their deep domain knowledge and skilled workforce to consult on areas like process improvement or digital transformation.
- **Hub for as-a-Service Transformation:** Providing on-demand transformation solutions for global operations. GCCs can function as a central hub, designing and implementing transformation initiatives across different geographies within the MNC.
- **Expansion to New Markets:** GCCs as launchpads for entering new geographical markets. Leveraging their local expertise and infrastructure, GCCs can help MNCs establish a presence and navigate the regulatory landscape in new markets.
- **Accountability for Creating Newer Hubs:** GCCs playing a role in establishing satellite centres in other countries, allowing for a more geographically distributed workforce, and catering to the specific needs of different regions.
- **Customer-Centric Business Development:** A shift towards a more customer-centric approach. GCCs will play a role in developing and implementing strategies to better understand and cater to the needs of the MNC's clients.
- **Policy Formulation with Government:** Increased collaboration with the Indian government to develop policies that are conducive to the growth of the GCC sector. This could involve lobbying for favourable tax regulations or talent development initiatives.

During this phase, GCCs will act as strategic partners, driving global transformation initiatives from their locations. They will have complete ownership of product roadmaps, manage budgets locally, and maintain strong customer connections, significantly influencing sales and strategic directions.

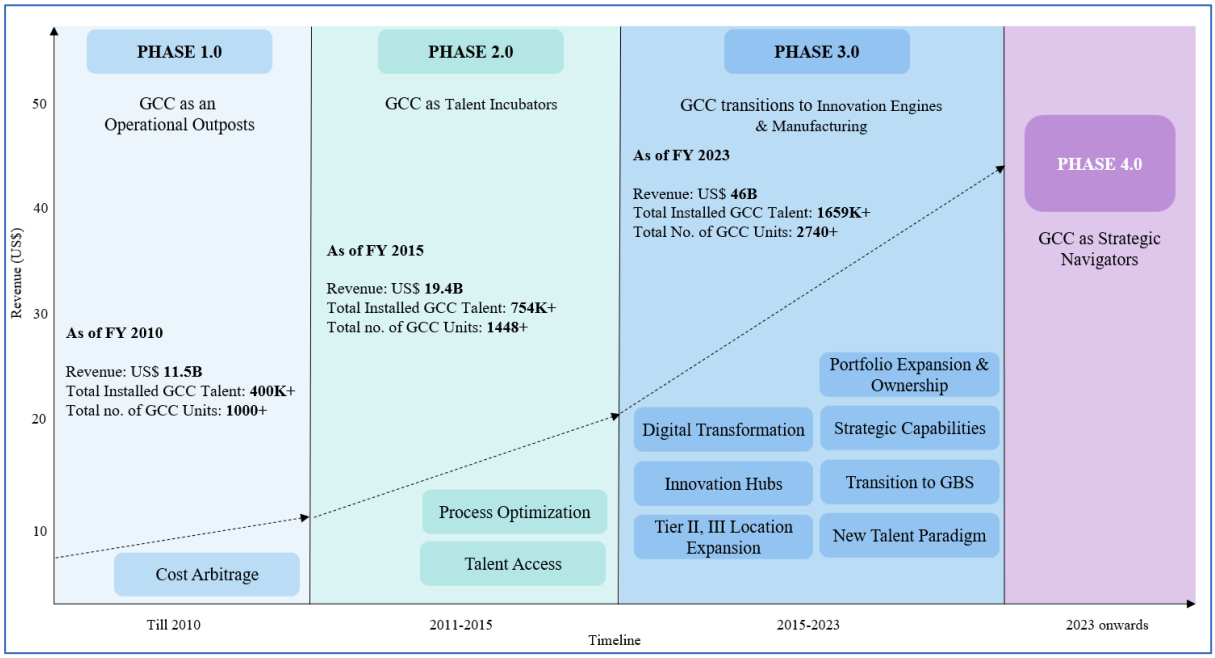
The four phases illustrate the dynamic growth and strategic importance of GCCs in India, highlighting their evolving roles from operational support to strategic partners in the global business landscape.

The phase-wise evolution of the GCC industry in India is depicted in two figures below:

Figure 5: Evolution of Indian GCC industry



Source(s): Industry reports, 1Lattice analysis.



Source(s): Zinnov, Industry reports, 1Lattice analysis

India has firmly established itself as the go-to destination for GCCs, attracting an increasing number of global companies seeking to leverage the country's unparalleled advantages. The future of GCCs in India looks promising, with continued growth and evolution, positioning India as a critical player in the global business landscape.

Key location and clusters

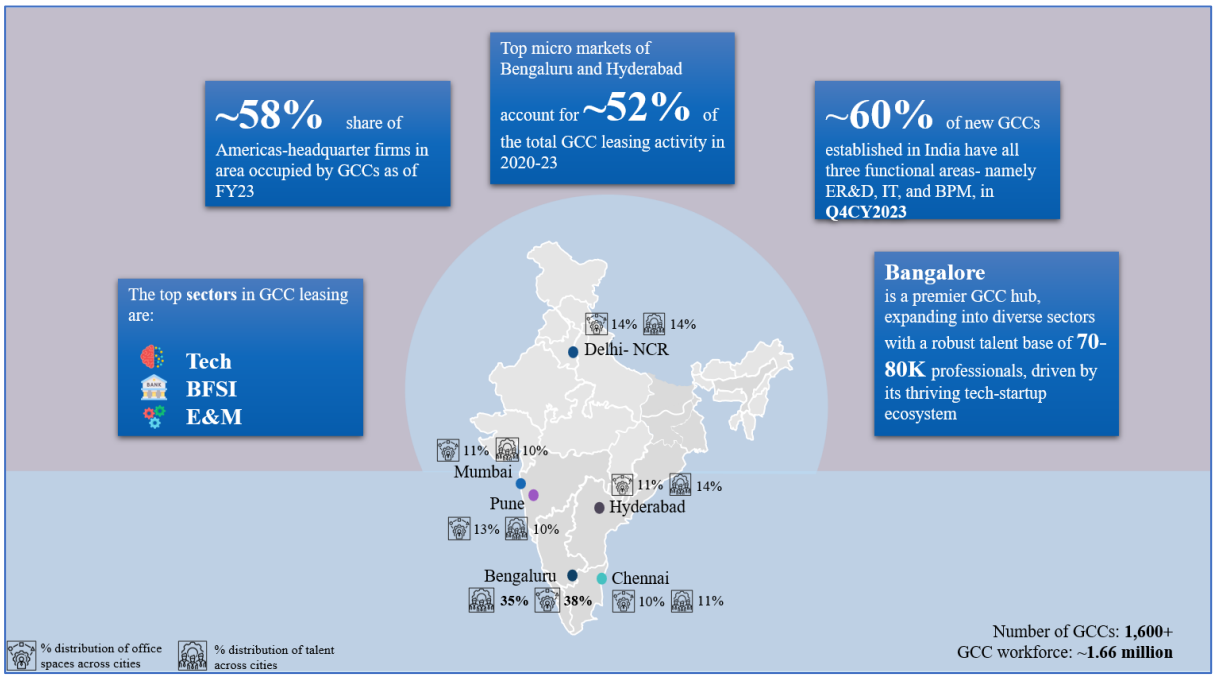
India has emerged as the top destination for GCCs, drawing an increasing number of global companies eager to capitalize on the country's unique advantages. Demonstrating their long-term commitment, these companies are leasing larger office spaces with future expansion potential. In the coming years, along with established sectors like technology, BFSI, and engineering and manufacturing, there is expected growth in demand from sectors such as life sciences, automobiles, aviation, and electronics, with many firms planning to expand their GCC operations in India.

More than ~90% of the GCCs are being set up in the top six cities of India in terms of office space. The leading sectors for GCC leasing are technology, BFSI, engineering and manufacturing. Together these represent about 58% of the area which is occupied primarily by GCCs of US-headquartered firms. Bengaluru and Hyderabad have been the most active, accounting for around **~52%** of the total GCC leasing activity between **2020** and **2023**. Bengaluru stands out as a key GCC hub, diversifying across various sectors and supported by a robust talent base of **70-80K** professionals, fuelled by its vibrant tech-startup ecosystem. Notably, **~60%** of the new GCCs established in India in **Q4CY2023** include all three functional areas: Engineering, Design & Development, IT, and BPM.

This strategic distribution of GCCs across major Indian cities highlights the country's ability to support large-scale operations with quality infrastructure, a vast talent pool, and favourable business conditions, solidifying India's position as a global leader in the GCC landscape.

Following figure depicts the GCC landscape in India:

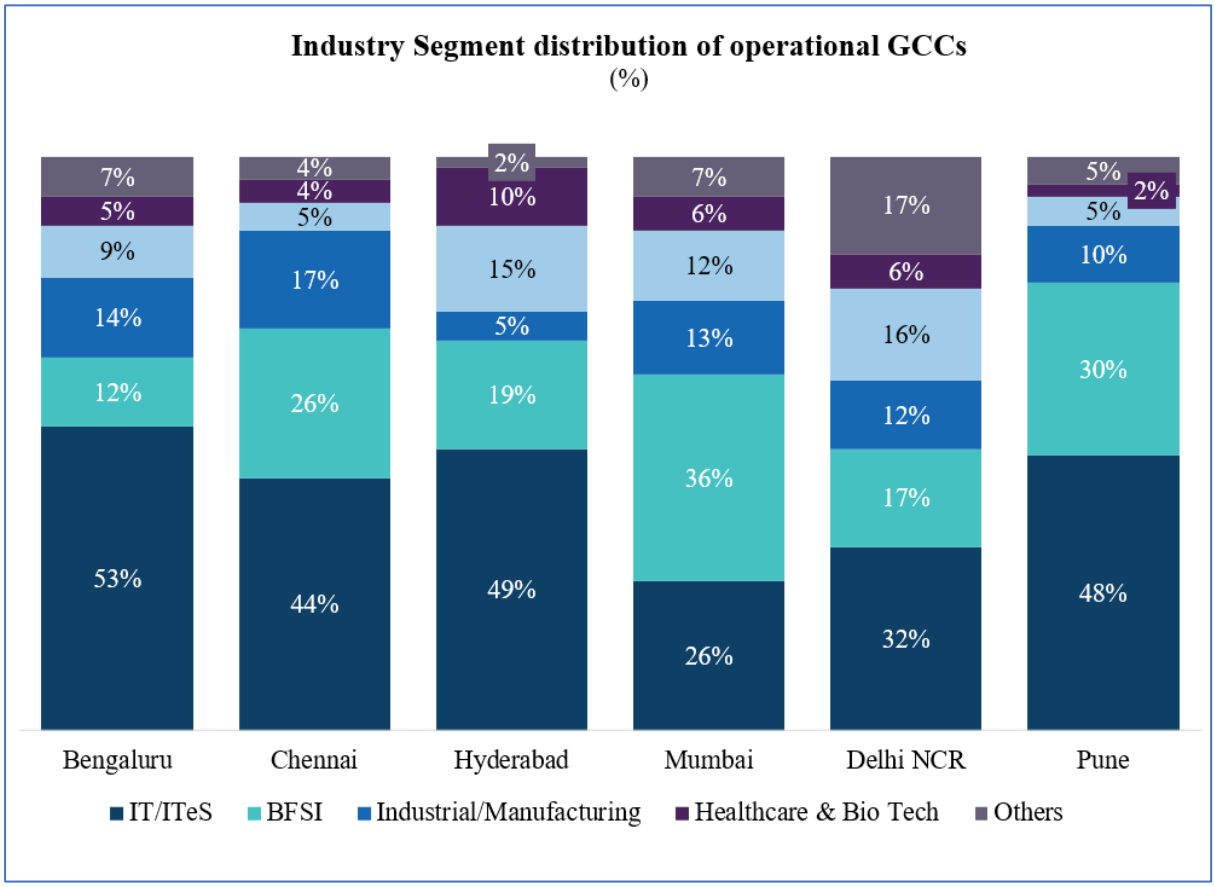
Figure 6: GCC landscape in India



Source(s): CBRE, Cushman & Wakefield, Industry reports, 1Lattice analysis.

Currently, the 1,600+ GCCs in India are distributed across Bengaluru (546), NCR (259), Mumbai (211), Pune (194), Hyderabad (178) and Chennai (162). Tier 2 and 3 cities collectively account for 70 GCCs.

Figure 7: Industry segment distribution of operational GCCs

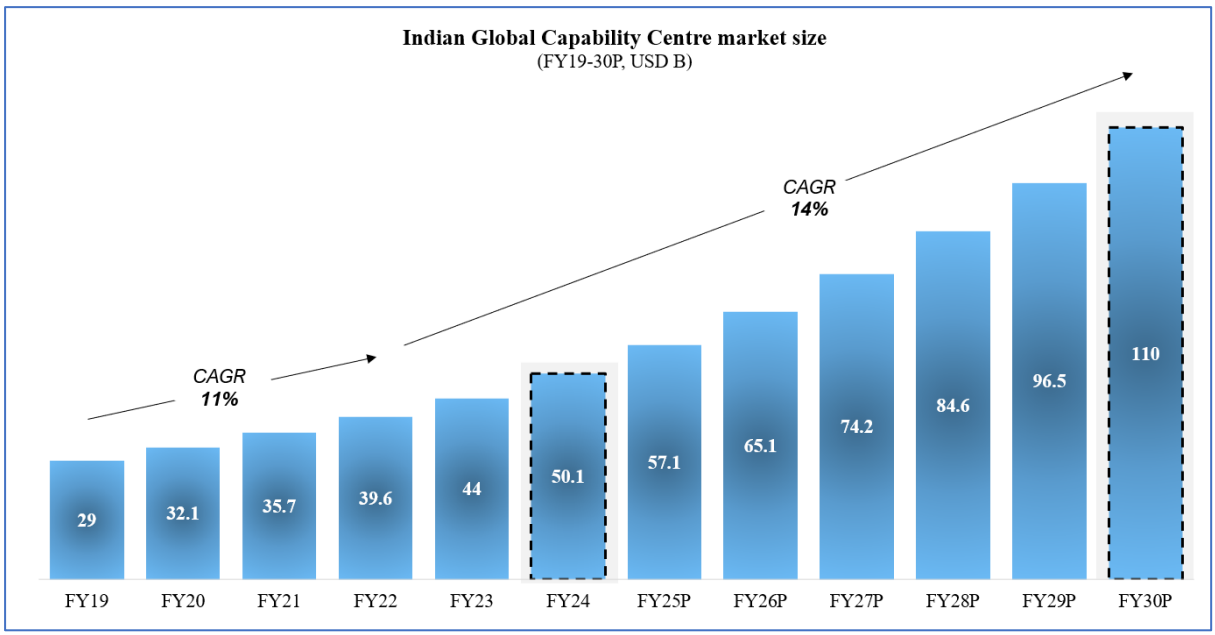


Source(s): Industry reports, 1Lattice analysis.

Market size

Following figure graphically depicts the market size of GCC in India, past, present & future:

Figure 8: Market Size of GCCs



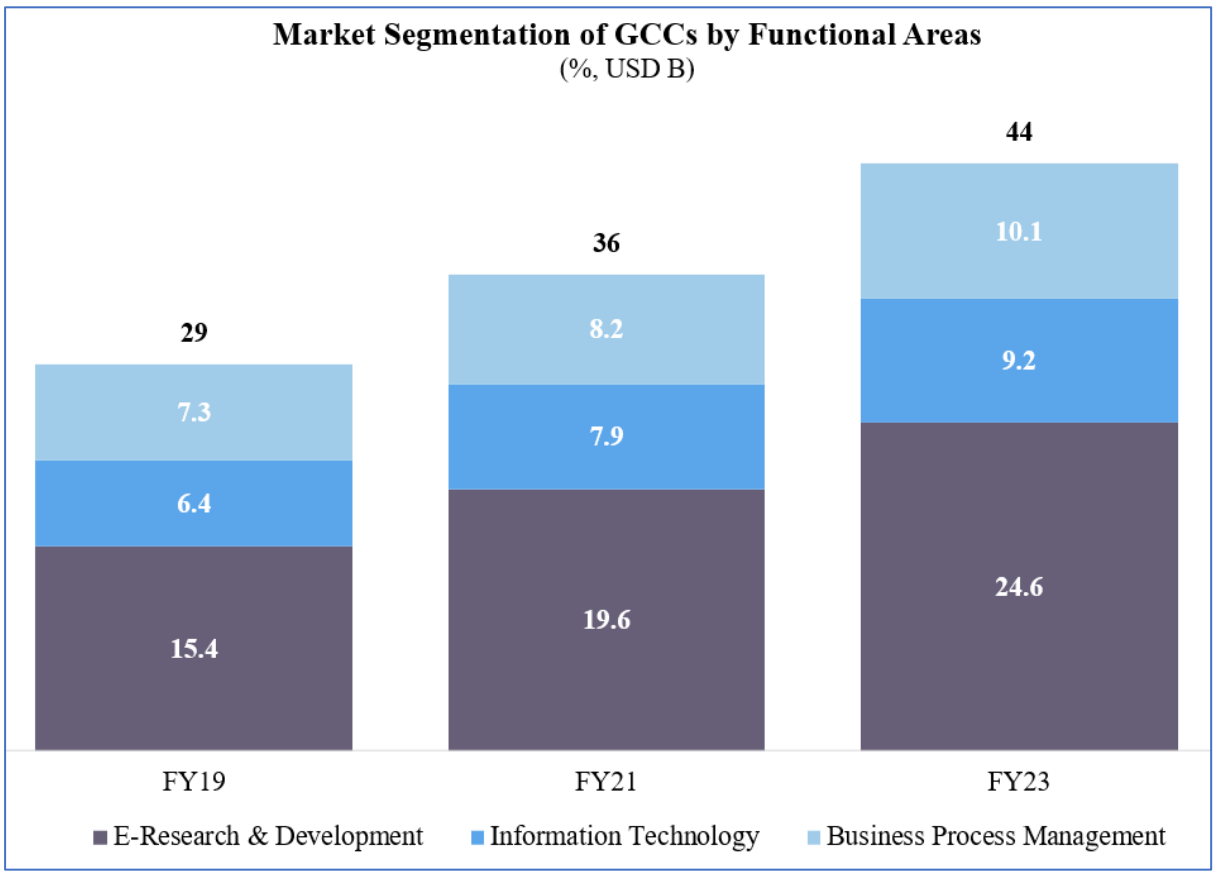
Source(s): Industry reports, 1Lattice analysis.

The GCC market in India is on the verge of significant expansion, with forecasts predicting a surge from US$ 50 billion in FY24 to US$ 110 billion by FY30, reflecting a strong CAGR of 14%. Industry reports, including those from NASSCOM, consistently project that the market will reach this US$ 110 billion milestone by 2030. This growth trajectory not only underscores India's critical role in the global GCC landscape but also highlights its increasing contribution to the national economy, with GCCs projected to constitute 3.8% of India's GDP by 2030.

Functional Areas

Within this burgeoning market, the ER&D sector holds a dominant position, capturing around 50% of the market share. The ER&D sector grew from USD 15.4 billion in FY19 to USD 24.6 billion by FY23, marking it as a cornerstone of the GCC landscape in India. Following this, the Information Technology (IT) sector accounts for approximately 20% of the market. The BPM sector has shown significant growth, expanding from USD 7.3 billion in FY21 to USD 10.1 billion in FY23. This diverse and evolving nature of the GCC market in India reflects its strategic importance and the broad spectrum of services that these centres provide globally.

Figure 9: Market segmentation of GCCs by functional areas



Source(s): Industry reports, 1Lattice analysis.

Trends

The GCC industry is undergoing significant advancements, characterized by several key developments and trends:

- **Integration of Advanced Technologies**: The integration of advanced analytics, AI/ML, and automation is driving digital transformation initiatives within GCCs.
- **Development of New Capabilities**: **~67%** of GCCs are focused on developing new capabilities or Centres of Excellence in data analytics, cloud, and emerging technologies with robotic process automation streamlining processes such as data transfers, payroll, financial analysis, and employee onboarding.
- **Shift from Support to Strategic Roles**: GCCs in India have evolved from back-end support centres to strategic partners, transitioning from 'cost centres' to 'profit centres' with an emphasis on generating new revenue streams.
- **Enhancement of Employee Value Proposition (EVP)**: The Employee Value Proposition (EVP) is being enhanced by integrating organizational culture, work nature, rewards, and compensation to attract and retain top talent.
- **Employment Projections**: The GCC sector is projected to employ over **4.5M** people by **2030**, up from the current **1.9M**.
- **Fostering Innovation**: GCCs are fostering innovation by collaborating with over **300** startups, generating approximately **US$ 15M** in annual revenue, and investing **US$ 1.5B** in Indian startups in **2019** alone.
- **Partnerships with Academia**: Partnerships with academia have enabled over **5,00,000** students to acquire AI and IoT skills.
- **Shift to Tier-2 Cities**: There is a strategic shift to Tier-2 cities, which offer better infrastructure and talent availability, making them viable alternatives to Tier-1 cities.
- **Emerging Semiconductor Vertical**: The emerging semiconductor vertical is particularly noteworthy, with around **30%** of new GCCs in this industry, primarily located in Bengaluru and Hyderabad, which host over two-thirds of these centres.

These points highlight the rapid evolution and strategic advancements within the GCC industry in India.

Growth drivers

The growth of GCCs in India is experiencing a significant surge, driven by a confluence of factors that create a conducive environment for expansion and innovation.

Talent Pool and R&D Capabilities

- India's robust **technology talent** makes it a key driver for the GCC industry, which plans to **expand** its **workforce** to over **4.5M by 2030, up from 1.9M.**
- Enhancing **R&D capabilities** alongside a **skilled talent pool** prioritization aims to transform **GCC** into centers of operational efficiency and innovation, elevating delivery standards and process excellence.
- Migration and reverse migration trends during the pandemic have dispersed quality talent across India, enabled by remote and hybrid work models and the appeal of lower living costs. This distributed talent

pool represents a significant opportunity for GCCs in the region, offering access to diverse skill sets and fostering innovation and efficiency in their operations.

Quality Infrastructure

- India offers **ample space** and **expansion potential**, with convenient access via roads, airports in major cities, and other essential facilities. Under Interim Budget 2024-25, capital investment outlay for infrastructure has increased by **11.1%** to **INR 11.11L Cr (US$ 133.86B)**, which amounts to ~**3.4% of GDP.**
- Moreover, **electricit**y and **reliable internet connectivity** are now widely available beyond just the major metropolitan areas.

Increase in software exports.

- Robust **software export sector**, which continues to be a significant part of India's service exports, with **offshoring services** experiencing **sustained growth.**
- It is estimated that the domestic GCC market size will reach US$ **110B** by the year 2030, led by software exports.

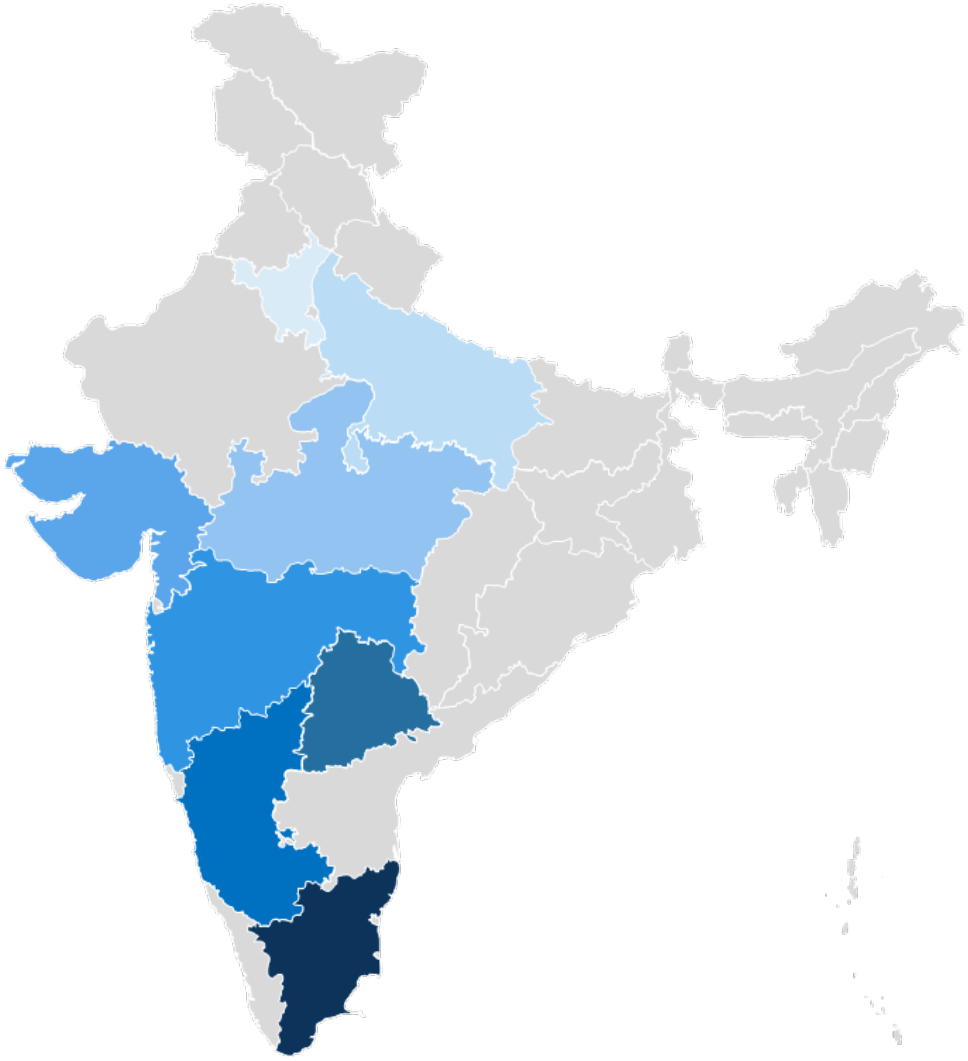
Government Incentives

- Both central and state governments provide numerous **incentives** for companies to establish operations in cities and create jobs through various policies & schemes like **Digital India Act (DIA)**, **Zero Trust Policy**, **IT/ITES policies** of Maharashtra, Uttar Pradesh, Telangana, Haryana, Gujarat, Tamil Nadu etc.
- Adjustments have been made to the country's **FDI policies and tax regulations** to enhance their attractiveness and favorability towards businesses.

Chapter 3: Enabling policies by different Indian States

This report scrutinizes the IT policies of eight key Indian states—Haryana, Uttar Pradesh, Madhya Pradesh, Gujarat, Maharashtra, Telangana, Karnataka, and Tamil Nadu—chosen for their proactive efforts to attract FDIs and significant global IT entities seeking to establish IT hubs.

Figure 10: Indian map highlighting states with enabling policies



While most policies do not explicitly mention GCCs, the above states are better placed for technological and operational advancements due to their competitive incentives, robust infrastructure, and strategic importance in the national IT landscape.

Specifically, Tamil Nadu's recent R&D policy has an explicit commitment to fostering GCCs, setting it apart as a leader in innovating state-driven IT development strategies. This strategic focus aims to catalyze a conducive environment for innovative technological growth and international collaboration.

Figure 11: Overview of Indian states' policies

Policy	Key Incentives
Haryana IT/ITeS policy 2017	• **Capital Subsidy:** Up to 25% of eligible capital expenditure, with the total incentive capped at INR 300Cr • **Interest Subsidy:** 7% per annum on term loans or actual interest paid, whichever is lower, up to INR 1Cr per annum for five years • **Stamp Duty:** 100% reimbursement of stamp duty paid on sale/lease deeds for setting up units in notified IT Parks, IT Cities, Technology Parks, STPIs, or any land earmarked by the state government for IT industry • **Electricity Duty Exemption:** 100% exemption from electricity duty for a period of 7 years from the commencement of commercial operations
Uttar Pradesh IT/ITeS policy 2022	• **Capital Subsidy:** 10% on Fixed Capital Investment (FCI), subject to a maximum subsidy of INR 50Cr. Disbursed in annual instalments over five years, with each annual instalment not exceeding INR 10Cr • **Interest Subsidy:** 7% per annum on term loans or actual interest paid, whichever is lower, up to INR 1Cr per annum per unit for five years • **Stamp Duty:** 100% exemption on stamp duty for the purchase/lease of land/office space/buildings for IT/ITeS use, provided operations commence within stipulated timelines
Madhya Pradesh IT/ITeS policy 2023	• **Capital Subsidy:** 25% CAPEX assistance on Gross Fixed Capital Investment (GFCI) with additional 2% for units set up by women entrepreneurs. Disbursed in equal yearly instalments based on GFCI levels, capped at INR 30Cr • **Interest Subsidy:** 6% on the interest recovered or actual rate (whichever is lower) with a maximum reimbursement of INR 5Cr in five years • **Stamp Duty:** 100% reimbursement of stamp duty and registration charges for eligible units
Gujrat IT/ITeS policy 2022	• **CoE Collaboration**: Establishes Centers of Excellence in partnership with academia and industry • **R&D Funding:** Provides substantial financial support for research and development activities • **Infrastructure Grants:** Allocates financial grants for setting up and developing state-of-the-art facilities • **Skills Enhancement:** Implement extensive training and educational programs to develop a skilled workforce
Maharashtra IT & ITeS policy 2023	• **Capital Subsidy:** One-time support of up to 25% of eligible capital expenditure capped at INR 50Cr • **Interest Subsidy:** 7% per annum on term loans, up to INR 1Cr per annum for five years • **Stamp Duty:** Exemptions on stamp duty for eligible IT/ITeS entities • **Employment Generation Incentive (EGI):** One-time support for new jobs, covering 50% of one month's CTC up to INR 50,000 for males and INR 60,000 for females
Karnataka IT policy 2020	• **GCC Support:** Reimbursement of 50% of rent, capped at INR 2Cr or INR 1,666 per employee per month • **IT Infrastructure Development:** Up to 20% investment support for developing IT infrastructure (max INR 3Cr) • **Co-working Space Support:** Up to 33% support for infrastructure investment in co-working spaces (max INR 2Cr) • **Lease/Rental Support:** Reimbursements to support lease or rental costs, specifics to be determined based on project impact
Telangana ICT policy 2021	• **Infrastructure Support**: Development of 6 industrial parks on 2000 acres of developed land • **Workforce Up-Skilling**: Training initiatives for 2 lakh skilled workforce • **Ready to Occupy Space**: Provision of 5 lakh sq.ft. in Phase 1 and additional 10 lakh sq.ft. in PPP mode
Tamil Nadu R&D policy 2022	• **Land Cost Incentive**: Up to 50% subsidy on land purchase or lease costs for standalone R&D projects, capped at INR 50L per acre • **R&D Training Incentive**: INR 10K per person per month for up to 12 months, aimed at employees engaged in core R&D • **Quality Certification Incentive**: 50% subsidy on costs incurred for obtaining various quality certifications, limited to INR 1Cr • **Intellectual Property Incentive**: 50% reimbursement for IP-related expenses, capped at Rs. 1 crore for in-house R&D and up to INR 5Cr for standalone R&D assets • **Special Capital Subsidy**: 25% of eligible fixed assets for highly capital-intensive R&D operations, up to INR 25Cr • **Innovation Lab Incentive**: 50% of expenses for establishing innovation labs reimbursed (max INR 1 Cr)

Comparative Analysis

As summarised in figure above, India's states incentivize establishment of GCCs in their own ways. This comparative analysis explores the key incentives offered by various states under the following eight parameters:

- Capital Subsidy
- Interest Subsidy
- Employment Subsidy
- Stamp Duty Concession

- Skill Development Incentives
- Electricity & Power Subsidy
- Single Window System
- Lease/Rental Subsidy

Upon analysis, the report benchmarks the states on a scale of 1 to 5 on each individual parameter as well as overall, with 5 as the 'highest' or 'best' rank.

5	*4*	*3*	*2*	*1*
Excellent	***Incredibly good***	***Good***	***Fair***	***Poor***

Benchmarking

- **Capital Subsidy**

Parameter	Weighted Scores Calculation	Haryana	Uttar Pradesh	Madhya Pradesh	Gujarat	Maharashtra	Karnataka	Telangana	Tamil Nadu
Capital Subsidy	Percentage of Subsidy	-	2	5	5	5	5	-	5
	Max. Cap	-	4	3	5	4	1	-	3
	Weighted Score*	-	3	4	5	4.5	3	-	4

Percentage of Subsidy					
5	4	3	2	1	-
≥ 25%	20-24%	15-19%	10-14%	< 10%	Missing
Maximum Cap on Subsidy					
5	4	3	2	1	-
≥ INR 100 Cr	50-99 Cr	20-49 Cr	10-19 Cr	< 10 Cr	Missing

*Formula for calculation of weighted score = (score of % of Subsidy) *0.5 + (score of Max Cap) *0.5

- **Interest Subsidy**

Parameter	Haryana	Uttar Pradesh	Madhya Pradesh	Gujarat	Maharashtra	Karnataka	Telangana	Tamil Nadu
Interest Subsidy	-	5	4	5	5	-	1	-

Interest Subsidy					
5	4	3	2	1	-
≥ 7% per annum for ≥ 5 years	6-6.99% per annum for ≥ 5 years	5-5.99% per annum for ≥ 3 years	4-4.99% per annum for ≥ 2 years	Mentioned but no figure specified	Missing

- **Employment Incentive**

Parameter	Haryana	Uttar Pradesh	Madhya Pradesh	Gujarat	Maharashtra	Karnataka	Telangana	Tamil Nadu
Employment Incentives	-	5	4	5	5	1	1	4

Employment Incentives (reimbursement)					
5	4	3	2	1	-
80-100%	60-79%	40-59%	≤ 39%	Mentioned but no figure specified	Missing

- **Stamp Duty Concession**

Parameter	Haryana	Uttar Pradesh	Madhya Pradesh	Gujarat	Maharashtra	Karnataka	Telangana	Tamil Nadu
Stamp Duty Concession	5	5	5	5	1	4	1	1

Stamp Duty Concession (exemption/reimbursement)					
5	4	3	2	1	-
100%	75-99%	50-74%	25-49%	Mentioned but no figure specified	Missing

- **Skill Development Incentives**

Parameter	Haryana	Uttar Pradesh	Madhya Pradesh	Gujarat	Maharashtra	Karnataka	Telangana	Tamil Nadu
Skill Development Incentives	-	-	-	5	1	1	5	4

Skill Development Incentives (Students per annum)					
5	4	3	2	1	-
> 50,000	30,000 – 50,000	10,000 – 29,999	1 – 9,999	Mentioned but no figure specified	Missing

- **Electricity / Power Subsidy**

Parameter	Haryana	Uttar Pradesh	Madhya Pradesh	Gujarat	Maharashtra	Karnataka	Telangana	Tamil Nadu
Electricity and Power Incentives	5	1	-	5	5	2	5	5

Electricity / Power Incentives					
5	4	3	2	1	-
100% exemption for > 5 years	100% exemption for 3-5 years	75-99% exemption for > 3 years	50-74% exemption for ≤ 2 years	Mentioned but no figure specified	Missing

- **Lease / Rental Subsidy**

Parameter	Haryana	Uttar Pradesh	Madhya Pradesh	Gujarat	Maharashtra	Karnataka	Telangana	Tamil Nadu
Lease/Rental Subsidy	1	3	4	1	1	2	1	5

Lease/Rental Subsidy					
5	4	3	2	1	-
≥ 50%	30-49%	20-29%	1-19%	Mentioned but no figure specified	Missing

- **Single Window Access**

Parameter	Haryana	Uttar Pradesh	Madhya Pradesh	Gujarat	Maharashtra	Karnataka	Telangana	Tamil Nadu
Single Window System	5	5	5	5	5	5	5	5

Single Window System	
5	-
Yes	Missing

Overall Rankings

Parameter	*Haryana*	*Uttar Pradesh*	*Madhya Pradesh*	*Gujarat*	*Maharashtra*	*Karnataka*	*Telangana*	*Tamil Nadu*
Capital Subsidy	-	3	4	5	4.5	3	-	4
Interest Subsidy	-	5	4	5	5	-	1	-
Employment Subsidy	-	5	4	5	5	1	1	4
Stamp Duty Concession	5	5	5	5	1	2	1	1
Skill Development Incentives	-	-	-	5	1	1	5	4
Electricity & Power Subsidy	5	1	-	5	5	2	5	5
Single Window System	5	5	5	5	5	5	5	5
Lease/Rental Subsidy	1	3	4	1	1	2	1	5

SWOT Analysis

Haryana:

- **Strengths**: Haryana stands out for its dedicated support in stamp duty concessions, electricity duty exemption, and power subsidies. The state's single window system is also very efficient.
- **Weaknesses**: However, Haryana lacks incentives in key areas like capital subsidy, interest subsidy, employment subsidy, skill development incentives, and lease/rental subsidy.

Uttar Pradesh:

- **Strengths**: Uttar Pradesh excels in capital subsidy, offering a maximum of INR 50 Cr, and provides strong interest and employment subsidies. It also scores well in stamp duty concessions and has an efficient single window system.
- **Weaknesses**: The state could improve in areas like electricity and power subsidies and skill development incentives.

Madhya Pradesh:

- **Strengths**: Madhya Pradesh offers excellent support in capital subsidy (up to INR 30 Cr), employment subsidy, stamp duty concessions, and has a highly effective single window system.
- **Weaknesses**: The state needs to work on providing better electricity and power subsidies and skill development incentives.

Gujarat:

- **Strengths**: Gujarat excels in all areas, including capital subsidy (up to INR 200cr for mega projects), interest subsidy, stamp duty concessions, skill development incentives, electricity, and power subsidies, and has a robust single window system.
- **Weaknesses**: The only area where Gujarat could improve is lease/rental subsidy.

Maharashtra:

- **Strengths**: Maharashtra has strong incentives in capital subsidy (up to INR 50 Cr), interest subsidy, employment subsidy, and a very efficient single window system.
- **Weaknesses**: However, the state needs to improve its support for stamp duty concessions, skill development incentives, and lease/rental subsidy.

Karnataka:

- **Strengths**: Karnataka's single window system is highly effective, and it provides fair lease/rental subsidies.
- **Weaknesses**: The state needs to boost its support in capital subsidy (up to INR 3 Cr), employment subsidy, and skill development incentives.

Telangana:

- **Strengths**: Telangana does well in skill development incentives, electricity, and power subsidies, and has a strong single window system.
- **Weaknesses**: The state falls short in areas like interest subsidy, employment subsidy, stamp duty concessions, and lease/rental subsidy.

Tamil Nadu:

- **Strengths**: Tamil Nadu is strong in employment subsidy, stamp duty concessions, electricity and power subsidies, single window system, and lease/rental subsidy.
- **Weaknesses**: The state needs to improve its support in skill development incentives and could do better with its capital subsidy (up to INR 3 Cr).

Inferences

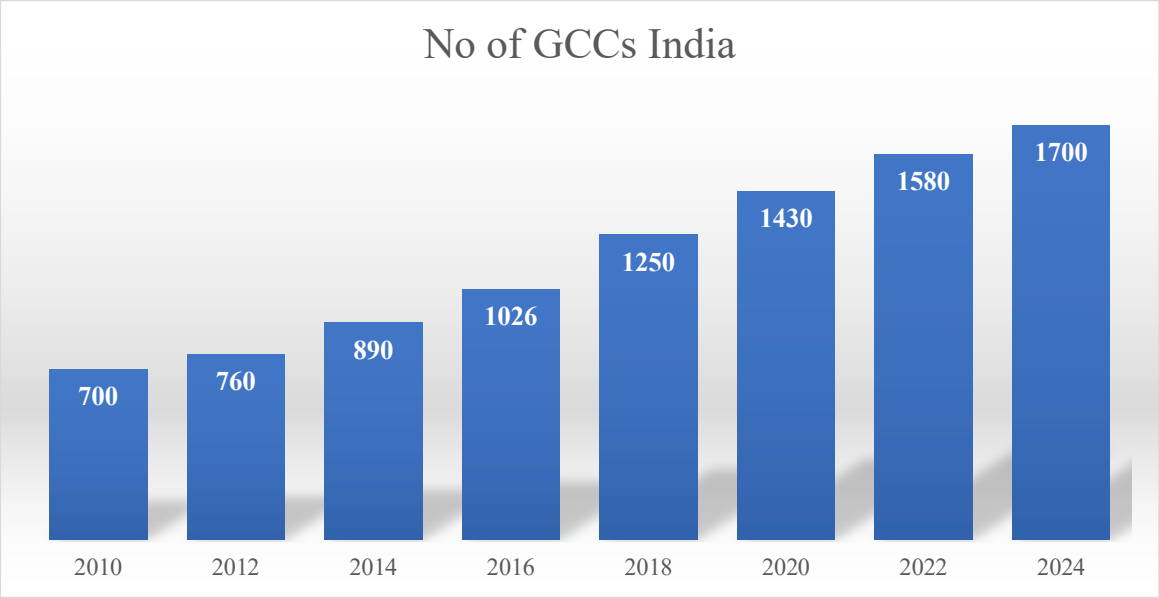
Based on the studies of the state policies above, few inferences may be drawn:

- **Karnataka** provides a strong single window system but there is scope for improvement in other critical areas like capital subsidy and employment subsidy.
- **Gujarat** is the most well-placed state with high scores across multiple parameters.
- **Uttar Pradesh** and **Maharashtra** have strong policy support but have a few areas for improvement.
- **Tamil Nadu** and **Madhya Pradesh** have robust policies but need enhancements in specific areas.
- **Haryana** and **Telangana** excel in specific areas but can have more comprehensive policy incentives.

Chapter 4: International locations & their enabling Policies

The GCC market is a rapidly expanding sector that plays a crucial role in the global economy by supporting multinational companies with specialized services in technology and business processes. India remains a leading player in this space, benefiting from a vast talent pool and significant cost advantages, which continue to drive its robust growth trajectory. Poland has emerged as a major European hub for GCCs, reflecting its substantial growth over the years. In North America, Mexico serves as a key nearshore destination, experiencing steady expansion. Costa Rica, while growing at a slower pace, is focusing on high-value services to strengthen its GCC presence. Malaysia's consistent growth, particularly in Kuala Lumpur, underscores its importance in the GCC landscape. The Philippines, highly rated in Asia after India, is experiencing significant growth in BPO and IT services, with Manila as a prominent centre. China, with its strong engineering talent, vibrant tech ecosystem, and supportive government policies, is witnessing rapid growth, especially in tech and manufacturing sectors. In South America, Brazil stands out as a leader, with gradual increases in GCC activities, particularly in São Paulo and Rio de Janeiro. This diverse and dynamic landscape highlights the GCC market's critical role in driving innovation, efficiency, and economic development across regions. Below, we will deep dive into the key GCC markets.

Figure 12: India's Established Leadership Position in GCCs, Number of GCCs across India from 2010-2024



Source(s): Industry reports, 1Lattice analysis.

Parameters

This chapter provides a comparative analysis of five countries (Poland, Mexico, Malaysia, USA, and Costa Rica) vis-à-vis India across parameters like:

- Cost efficiency,
- Talent pool & skill development
- Location, connectivity, infrastructure
- Government policies & regulatory framework,
- Digital Economy Leadership & Internet users

Each country is assessed on how they perform on these parameters, highlighting their strengths and strategic advantages for businesses considering global operations.

Ranking of Parameters

- **Cost Efficiency**

Parameter	India	Poland	USA	Malaysia	Mexico	Costa Rica
Cost Efficiency	Lower operational costs than Western Europe and US	Less expensive to operate than in the US and Western Europe	Higher labour and operational costs	Competitive labour costs	Competitive labour costs, cost-effective operations	Moderate operational costs
Rating	5	5	1	2	4	3
Observation	Lower operational costs	Lower costs than Western Europe and the US	Increased labour and operational expenses	Affordable labour expenses	Cost-effective operations	Reasonable operational expenses

- **Cost of Resources**

Parameter	*India*	*Poland*	*USA*	*Malaysia*	*Mexico*	*Costa Rica*
Cost of Resources (per resource)	**$10-12K**	**$50K**	**Not specified**	**$25-30K**	**$30-40K**	**Not specified**
Rating	5	1	2	4	1	3
Observation	Lowest cost, highly competitive	Highest labour costs	Significantly higher labour costs	Higher than India but still competitive	Competitive but higher than India	Moderate cost

- **Talent Pool**

Parameter	India	Poland	USA	Malaysia	Mexico	Costa Rica
Talent Pool	Large, English-speaking, technically skilled workforce. Dominates with about **1600 GCCs** and a **~50%** market share by headcount	Specific language skills are required for European companies. **1500** centres, **3,50,000** employed, highly skilled	Highly advanced and skilled workforce across various industries	English-speaking capabilities, some knowledge of Chinese. Suitable for smaller centres (up to **50** people).	Availability of skill sets, and better time zone alignment for North American companies. Challenging to scale beyond **2000** people	Large and diverse talent pool
Rating	5	4	2	5	3	5
Observation	Large, skilled workforce, significant market share	Strong language skills, good for European operations	Highly advanced, diverse talent pool	Good for smaller centres, multilingual	Good talent pool but scalability issues	A growing pool of tech talent

- **Skill Development**

Parameter	India	Poland	USA	Malaysia	Mexico	Costa Rica
Skill Development	Advanced technology skills, large pool of specialized professionals (e.g., CA, credit professionals, risk professionals)	Strong in business process areas, especially for non-English speaking requirements (e.g., German-speaking).	Highly skilled and advanced workforce	Good for English-speaking and some Chinese language roles. Not as technically advanced as India	Struggles to find enough skilled workers for large GCCs. Many COEs moving to India due to scalability issues.	Highly skilled and advanced workforce, particularly in technical and professional roles. Significant investment in education and training programs.
Rating	5	2	4	1	1	3
Observation	Advanced tech skills, specialized professionals	Strong business process skills	Known for high-skill development	Good language skills, less advanced tech skills	Struggles with finding enough skilled workers	Investment in education and training programs during the growing and developing stages

- **Government Policies**

Parameter	India	Poland	USA	Malaysia	Mexico	Costa Rica
Government Policies	SEZ's, tax incentives, innovation, and R&D policies	Pro-digital transformation , EU funding support	Supportive policies, R&D incentives, tech grants	Supportive policies, incentives for IT sector	Expanding internet access, improving cybersecurity	Pro-business policies, focus on tech growth
Rating	2	5	4	3	4	1
Observation	Supportive incentives like SEZ's, tax incentives, innovation, and R&D policies	Business-enabling policies, targeting tech innovation	Favourable policies, R&D benefits, tech subsidies	Supportive legislation, research funding, tech grants	Expanding internet access, improving cybersecurity	Supportive business regulations, concentrating on tech development

- **Regulatory Environment**

Parameter	India	Poland	USA	Malaysia	Mexico	Costa Rica
Regulatory Environment	Size, scale, and cost advantages. Flexible regulatory environment conducive for GCCs	Strong data protection laws and compliance with GDPR. Setting up GCCs requires time and resources for compliance.	Stringent data protection and regulatory requirements. Higher costs and complexity for setting up GCCs.	Stable country, suitable for setting up smaller centres with English and some Chinese language capabilities.	Emerging option with favourable time zones. Challenging to scale large operations.	**Not specified**
Rating	5	4	1	2	3	1
Observation	Flexible, conducive for GCCs	Strong data protection laws, complex compliance	Stringent, higher costs and complexity	Stable, suitable for smaller centres	Emerging, favourable time zones, scalability issues	Not specified

- **Digital Economy Leadership**

Parameter	India	Poland	USA	Malaysia	Mexico	Costa Rica
Digital Economy Leadership	India's ICT market is expected to develop at a CAGR of **~18.85%** from its **2022** valuation of **US$ 139.08B** to **US$ 329.77B** by **2027**. ICT providers in India are expected to generate a total of **US$ 1,323.85B** in revenue between **2022** and **2027**	Poland's IT market was projected to account for **~4.1%** of GDP at the end of **2021** and is predicted to grow to **~4.5%** by **2025**	The ICT market in the United States of America was estimated to be worth **US$ 1230.84**B in **2022** and is expected to increase at a compound annual growth rate (CAGR) of approximately **~8.66%** to **US$ 1864.50B** by **2027**	The size of the Malaysian ICT market was estimated at **US$ 20.31B** in **2022**, and it is expected to increase at a compound annual growth rate (CAGR) of around **~17.29%** to **US$ 45.08B** by **2027**.	The ICT market in Mexico was estimated to be worth **US$ 53.31B in 2022**, and it is expected to increase at a compound annual growth rate (CAGR) of about **~13.32%** to **US$ 99.61B** by **2027**.	**Not specified**
Rating	**5**	**1**	**4**	**3**	**2**	**1**
Observation	Largest IT services market, high growth	Strong IT services market, high growth	Largest ICT market, with high growth	Relatively High growth ICT market	High growth ICT market	Not specified

- **Internet Users**

Parameter	India	Poland	USA	Malaysia	Mexico	Costa Rica
Internet Users	There were **751.5M** i nternet users in India at the start of **2024**	**35.75M** internet users in Poland at the start of **2024**	**331.1M** internet users in the United States of America at the start of 2024.	**33.59M** internet users in Malaysia at the start of **2024**	**107.3M** internet users in Mexico at the start of **2024**	**4.84M** internet users in Costa Rica at the start of **2024**
Rating	**5**	**2**	**4**	**1**	**3**	**1**
Observation	Largest number of users	Moderate number of users	More number of users	Fewer number of users	Substantial number of users, yet lesser	Smallest number of users

- **Location and Connectivity**

Parameter	India	Poland	USA	Malaysia	Mexico	Costa Rica
Location and Connectivity	India is key for APAC market strategy	Strategic for European operations	Central location for global operations	Strategic for APAC markets	Tactical for markets in North and South America	Strategic for North and Latin American markets
Rating	**5**	**2**	**2**	**5**	**3**	**4**
Observation	Key location for APAC markets	Strategic initiatives for operations in Europe	Central location for global operations	Key location for worldwide operations	Market-related strategy for North and South America	Strategic approach for the North and Latin American markets

- **Infrastructure**

Parameter	India	Poland	USA	Malaysia	Mexico	Costa Rica
Infrastructure	Advanced IT hubs in Bengaluru, Hyderabad, Pune, Chennai, and Delhi	Advanced IT hubs in Warsaw, Krakow, Gdansk	World-class infrastructure and tech hubs	Well-developed tech parks and hubs	Growing tech hubs in Mexico City, Guadalajara, Monterrey	Developing tech hubs, improving infrastructure
Rating	**5**	**5**	**4**	**2**	**3**	**1**
Observation	Advanced IT hubs	Leading technology centres	World-class infrastructure	Well-developed tech parks and hubs	Growing tech hubs	Developing tech hubs

Overall Rankings

Parameter	*India*	*Poland*	*USA*	*Malaysia*	*Mexico*	*Costa Rica*
Cost of Resources	5	1	2	4	1	3
Talent Pool	5	4	2	5	3	5
Skill Development	5	2	4	1	1	3
Regulatory Environment	5	4	1	2	3	1
Digital Economy Leadership	5	1	4	3	2	1
Internet Users	5	2	4	1	3	1
Cost Efficiency	5	5	1	2	4	3
Location and Connectivity	5	2	2	5	3	4
Infrastructure	5	5	4	2	3	1
Government Policies	2	5	4	3	4	1
Rank	**1**	**2**	**3**	**4**	**5**	**6**

5	*4*	*3*	*2*	*1*
Excellent	*Incredibly good*	*Good*	*Fair*	*Poor*

Inferences

Based on the analysis presented above, few inferences which may be drawn are:

- Overall, **India** is most well-placed due to low costs, a large talent pool, advanced skill development, and favourable government policies.
- **Poland** is also quite well-placed benefiting from low operational costs, advanced infrastructure, and strong government support for digital transformation.
- **USA** is uniquely placed due to its central location for global operations and high-quality infrastructure but is weighed down by inflated costs.
- **Mexico** has its advantages with competitive labour costs and strategic location for North American markets but lower ratings in talent pool and skill development.
- **Costa Rica** has pro-business policies and moderate operational costs, but it has a smaller internet user base and less advanced infrastructure.

Chapter 5: Engineering Research & Development GCCs

Overview

In Chapter 2, this report enunciates the advancement of GCCs from *operational outposts* to *innovation centres* to *strategic hubs* from before 2000 to 2025 in 4 distinct phases. This phase-wise transformation can also be rephrased as "evolution from *traditional IT//IteS work* to *Engineering R&D work*." This transformation can be considered applicable to overall Indian IT industry as well as GCCs.

India's ER&D sector has emerged as a crucial component of the country's GCCs, significantly contributing to its export revenue. In FY 2023, the ER&D segment within the GCC market reached US$ **25.6B**, achieving a CAGR of 10.7%. India commands a dominant 40% share in the global ER&D outsourcing market, underscoring its crucial role driven by advanced engineering capabilities and innovations in requirement analysis, concept development, and product/technology strategy. This underscores India's pivotal role in global ER&D, driven by advanced engineering capabilities, innovation in requirement analysis, concept development, and product/technology strategy.

The ER&D landscape in India Is supported by a skilled workforce, which increasin'ly manages activities like software development, product management, and manufacturing engineering. As of FY 2023, India hosts over **1,440 ER&D** GCC centres, employing approximately 695,000 professionals. India's broader engineering talent pool stands at around **3M**, encompassing diverse sectors such as industrial engineering, software, BFSI, and automotive.

Bengaluru stands out as India's epicentre of ER&D talent, hosting 38% of the country's ER&D workforce. Major companies like Bosch, Carelon, Microsoft, and Intel leverage Bengaluru's skilled talent pool and innovative ecosystem. Pune and Hyderabad collectively account for 26% of India's ER&D talent, with Hyderabad offering a business-friendly environment and Pune fostering a thriving ecosystem with companies like Skoda Auto, Siemens, and Amdocs. The National Capital Region (NCR) contributes 13% to India's ER&D talent, benefiting from robust infrastructure and proximity to governmental bodies. Tier-II and Tier-III cities account for about 5% of the total ER&D talent, with Ahmedabad, Coimbatore, Thiruvananthapuram, and Vadodara leading in talent concentration.

The growth of India's ER&D sector Is driven by several key factors.

- **Highly Skilled Workforce**: India boasts a vast pool of highly skilled engineers, providing a competitive edge in the global ER&D market.
- **Cost Efficiency**: The cost efficiency of operating in India, compared to Western countries, makes it an attractive destination for global ER&D activities.
- **Government Support**: The Indian government supports the sector with incentives and grants, fostering a conducive environment for growth.
- **Advanced Technology Investments**: Significant investments in advanced technologies like AI, machine learning, and IoT bolster India's position as a key player in global ER&D.
- **Expansion into Tier 2 and Tier 3 Cities**: The growth and expansion of GCCs into Tier 2 and Tier 3 cities contribute to the sector's overall development by tapping into new talent pools and reducing operational costs.

Technologies such as Cloud Computing, AI, Intelligent Automation, and Cybersecurity are further enhancing India's position as an innovation hub, with the potential to reshape its economy. Organizations can leverage India's ER&D ecosystem, rich in digital engineering talent, including over 180,000 AI/ML experts and 600 dedicated AI researchers. This ecosystem fosters a fertile ground for innovation, encouraging collaborations and R&D investments.

Looking ahead, several key factors will drive the evolution of India's ER&D sector over the next five years. Technological advancements in AI, IoT, blockchain, and cloud computing will enhance innovation and efficiency in ER&D GCCs. These centres will increasingly expand into new sectors, including electric vehicles, renewable energy, and healthcare, broadening their market scope. Geographical diversification into Tier 2 and Tier 3 cities will provide access to untapped talent pools and reduce operational costs. Increased collaboration with universities, research institutions, and startups will foster a collaborative ecosystem for innovation. There will be an enhanced focus on

sustainability, with ER&D GCCs prioritizing sustainable engineering practices and solutions to align with global sustainability goals. Additionally, continued regulatory support from the government through favourable policies and incentives will further boost the growth and development of ER&D GCCs in India.

Differentiation between ER&D and Traditional Engineering Service Providers

Characteristic	*ER&D GCC*	*Traditional Engineering* Service Providers
Global Collaboration	Engages global teams across regions, utilizing worldwide talent.	Focuses on regional projects within specific locales.
Focus on Innovation and R&D	Dedicated to pioneering modern technologies and products.	Concentrates on routine tasks and incremental product improvements.
Advanced Technology and Tools	Employs the latest technology and tools for research and development.	Uses established engineering tools and technologies.
Cross-Disciplinary Expertise	Combines various engineering disciplines for comprehensive innovation.	Specializes in specific engineering fields.
Strategic Alignment	Aligns with corporate goals to propel business growth.	Targets specific project or product objectives.
Investment in Talent Development	Invests in ongoing training to lead in technology and innovation.	Provides basic training with limited focus on advanced skills.
Higher Level of Autonomy	Decides independently on R&D and innovation strategies.	Operates under stringent management oversight.
Emphasis on IP Creation	Focuses on generating and securing intellectual property.	Prioritizes enhancement of existing technologies.
Complex Problem-Solving	Tackles intricate issues requiring innovative solutions.	Handles well-defined, routine engineering challenges.
Global Business Integration	Integrates engineering with global business operations.	Largely isolated to specific engineering tasks.

Setting-up ER&D GCCs Across Different Countries: A Comparison

Parameter	*Poland*	*USA*	*Malaysia*	*Costa Rica*
Global Innovation Index Ranking (2023) (Out of 132 countries)	**41st Rank**	**3rd Rank**	**36th Rank**	**74th Rank**
Global Startup Ecosystem Index Ranking (2024) (Out of 100 countries)	**34th Rank**	**1st Rank**	**43rd Rank**	**75th Rank**

Government Advantages & Support	**Grants**, **tax advantages** (IP Box, Relief for R&D), **strategic location**	**Legislative**, **financial**, **innovative service support**, strong IP framework	**Financial and tax incentives**, NPSTI 2021-2030, strong public-private collaboration	**Fiscal incentives** under the Free Trade Zone regime, **supportive ecosystem**, **regulatory support**
Regulatory and Bureaucratic Challenges	**Bureaucracy** and **compliance management can be challenging**	**Handling bureaucratic processes and effectively managing compliance can pose considerable challenges.**	**Requires active participation** in initiatives for **maximizing government resources**	**Regulatory** and **administrative difficulties**, **compliance** with labour rules and intellectual property laws
Cost-Effectiveness	**Financial support** from NCBR for activities associated with R&D, **Lower living costs** and **operating expenses**	**Financial subsidies**, **low-interest loans, tax incentives**	**Tax breaks** (ITA, Pioneer Status), **release from import taxes**	**Fiscal incentives**, **high quality of life**, but **higher living expenses compared to other Latin American countries**
Innovation and Technological Capabilities	**Robust talent pool** and **cost reduction incentives**	**STI policy promoting economic growth**, **technological** and **energy innovation**	**Strong innovation ranking (36th in GII 2023)**, **sector-specific growth (E&E sector)**	**Focus on advanced technologies (AI, ML, VR/AR, etc.)**, presence of global companies
Language and Cultural Barriers	**Significant investment is needed in language** and **cross-cultural training**	**Beneficial talent clusters enhancing productivity through proximity** and **networks**	**Encouragement of global cooperation through the International Collaboration Fund**	**Language disparities can create communication difficulties**
Recruitment and Retention	**Dependent on specialized recruitment firms**, **targeted recruitment strategies**	**Talent attraction** and **retention supported** by a **strong IP framework** and **immigration policies**	**Highly qualified staff due to alignment of educational programs with industry demands**	**High quality of life helps in attracting** and **retaining top talent**

Note: Mexico ranks 58th out of 132 countries on the Global Innovation Index and 41st out of 100 countries in the startup ecosystem ranking. However, specific information regarding ER&D GCCs in Mexico was not available, hence Mexico is not included in the comparative analysis above.

Chapter 6: Expert Interactions

To compile this report, a comprehensive approach involving qualitative interviews and survey was employed. In-depth interviews were conducted with stakeholders from consulting firms, GCC companies, and embassies, focusing on the industry overview, challenges faced, and recommendations for accelerating growth. These interviews provided rich qualitative insights from experienced professionals. By integrating qualitative and quantitative data, the report aims to present a well-rounded view of the GCC industry, offering actionable recommendations and strategic insights.

The following tables summarize the Expert Interactions held:

Expert 1 – Partner & Sector leader – Financial services for GCCs, KPMG	
Industry Overview	The dynamic nature of the GCC market in India has significant variability in market size and workforce. According to NASSCOM, there were 1,600 GCCs last year, with direct employment at **1.35M** and potential indirect employment reaching up to **5.4M**. The industry saw a CAGR of **~28%** in FY24, with a projected growth rate of **30-~35%** this year, and 2-4 new GCCs are being established monthly. Traditional GCCs typically employ **2,000-5,000** people, but newer, smaller GCCs usually have around 100 employees.
Challenges	• High attrition rates are problematic due to new GCCs recruiting trained staff from existing ones. • Concentration risk becomes significant as GCCs grow, necessitating a well-defined purpose. • Cost management remains critical, with costs often escalating post-setup. Talent retention is another issue, as building a sustainable core team is difficult. • Regulatory and operational hurdles include unclear labour laws and complex transfer pricing and taxation, which affect the ease of doing business. • Simplifying regulations on working hours and addressing cost escalation and money remittance issues are also necessary.
Recommendations	• To integrate industry-specific certifications into curricula for immediate employability in fields like banking and pharma. • Centralizing internal services within GCCs can streamline operations, particularly for smaller firms. • Developing platform products for industries such as insurance can standardize operations. Automating and standardizing jobs will allow GCCs to focus on business-specific roles.

Expert 2 – Associate Partner GCCs, IBM	
Industry Overview	There are about **1,600** GCCs in India, employing **1.66M** people by the end of **2023**, with one new GCC being set up every week. The current revenue is around US$ **46B** and is projected to reach US$ **110B** by **2030**. GCCs currently contribute about **~1%** to India's GDP, with expectations to reach **~22%** by **2030**.
Challenges	• During the pandemic, attrition was a significant issue, but it has slowed in the past **12-18** months. High attrition rates, especially during night shifts, remain problematic compared to countries like the Philippines. • Many GCCs with **300-500** employees struggle to scale, limiting their influence with headquarters. • Increasing the presence of senior talent in India is crucial for playing global roles. • Attracting and retaining talent in tier-2 cities, especially at mid and senior levels, is challenging despite improved air connectivity. • GCCs often focus on headcount rather than value-added, which hampers growth. • Meeting the aspirations of Indian engineering talent to work on the latest technologies is difficult, and complex transfer pricing and taxation processes affect the ease of doing business.

Recommendations	• Focus on aligning with headquarters' overall strategy, emphasizing value addition over cost arbitrage. • Establishing SEZs in tier-2 cities and improving digital infrastructure can encourage job creation outside tier-1 cities. • Developing GIFT City-like constructs in **5-10** states can attract financial services companies. • Simplifying transfer pricing and taxation processes and providing tax incentives can make India more attractive for GCCs. • Increasing the presence of Indian senior talent on global boards can enhance strategic roles. • Embracing AI and automation can improve efficiency and shift the focus from headcount to value and revenue addition.

Expert 3 – Partner, EY	
Industry Overview	India's technological prowess has significantly influenced the evolution of GCCs over the past decade, shifting from cost arbitrage through BPOs and KPOs to becoming hubs of technological innovation. According to Expert 3, major corporations initially set up operational centres in India to leverage cost savings, but in the last five years, there has been a substantial shift towards technological functions. ~**70%** of the GCCs established in India in the past **2-3 years**, especially post-COVID, have focused primarily on technology, moving up the value chain to encompass finance, procurement, and operations. Other global locations, such as Bratislava, Poland, the Philippines, and Mexico, have struggled to match India's workforce capabilities. Despite the proximity benefits of Costa Rica and Mexico to the US time zone, the 'follow-the-sun' model has not been universally successful. The Philippines has seen growth in the GCC sector, but innovative technology remains limited. India now commands over **~50%** of the global GCC market share, with this figure expected to rise to **~70%** in the next **2-3** years, driven by an increasing number of finance, actuarial, and tech professionals. Recently, numerous Centres of Excellence (COEs) have been established across various functions, including tech, analytics, AI, finance, actuarial sciences, and risk management, particularly within the financial services sector.
Challenges	• Employee retention and attrition are significant issues, with millennials seeking engaging and varied work, leading to shorter tenures. • Providing career advancement opportunities is another challenge, as the workforce has expanded from **500,000** to **2M**, yet senior roles have not kept pace, causing mid-management turnover. • Achieving gender diversity is difficult, with most GCCs hovering around **~30%**, far from the anticipated **~50%**, requiring recalibration. • Rising salaries for advanced skills like DevSecOps have increased cost pressures. • Frequent changes in state and central regulations pose compliance challenges, creating operational disruptions. • While progress has been made in data protection, many compliance issues remain, and new labour laws add complexity.
Recommendations	• Enhancing employee engagement by providing stimulating work and clear career progression pathways, increasing senior and mid-management roles to offer more growth opportunities, promoting gender diversity through targeted initiatives, managing salary expectations with a comprehensive compensation strategy. • Streamlining regulatory compliance by establishing dedicated teams and collaborating with regulatory bodies and clarifying new labour laws through close collaboration with government bodies.

Expert 4 – CEO, Strat infinity	
Industry Overview	India has established itself as a global leader in ER&D through a substantial presence of GCCs. With over **1,620 GCCs** and around **2,800 units**, India accounts for **67%** of global GCCs, a sizeable portion being US-based. The Indian IT talent pool is estimated at **6.5**

	to 7M professionals, with 1.6 to 1.8M working for GCCs. Despite this, challenges such as ambiguous transfer pricing guidelines and GST policies hinder new entrants, particularly smaller or first-generation GCCs, from navigating India's regulatory landscape effectively.
Challenges	• India's R&D is driven by a narrow pool of engineering talent, with limited opportunities outside of IT. • While India produces millions of engineering graduates annually, only those from top-tier institutions (IITs, NITs, IIITs) are highly sought after. • Many institutions are reducing seats in traditional engineering disciplines due to a shift towards AI, data science, and cybersecurity. • The declining popularity of diploma courses affects the supply of technically proficient graduates, especially in tier 2 and tier 3 cities. • Current government initiatives aimed at enhancing technical education and skill development lack visibility and effectiveness. • Additionally, there is insufficient collaboration between industry and academia, with underutilization of the Apprenticeship Act.
Recommendations	• Developing a clear, unified policy framework with better guidance on transfer pricing and GST integration, particularly for non-SEZ entities, to streamline GCC operations. Incentives, while helpful, should not be the primary focus; rather, the emphasis should be on talent availability, cost-effectiveness, ease of business setup, and a supportive government ecosystem. A pan-India GCC policy with uniform processes for registration, labour laws, and taxes across states could attract more GCCs. • Emphasizes the need for greater support for medium and smaller GCCs, proposing the creation of a dedicated body to facilitate and market India as a prime destination for GCCs. This body could streamline processes, from initial setup to operational phases, ensuring faster decision-making and better coordination between central and state governments. • Enhanced skill development initiatives, including hands-on training programs involving industry experts, are also recommended to align academic output with industry needs. • For successful integration of GCCs in tier 2 and tier 3 cities, targeted incentives, and robust infrastructure development, address concerns like IT infrastructure, disaster recovery, and safety. Communication skills, essential for the matrix organizational structures of GCCs, should be a focus in these regions. • Comprehensive approach involving academia, local administration, and central agencies is necessary to create a seamless entry and operation framework for GCCs, with a pilot target of bringing 200 new GCCs within 24 months. Building an application to streamline the setup process and marketing India's capabilities can further enhance its appeal as a global hub for GCCs.

Expert 5 – President & CEO, US-India Strategic Partnership Forum	
Challenges	• Central and state government incentives for GCCs are inconsistent, causing market confusion. • Many U.S. SMEs and large corporations are unaware of the benefits of establishing GCCs in India. • Slow and cumbersome patent registration processes in India lead GCCs to register patents in the U.S. • India needs a comprehensive strategy to communicate its GCC advantages to Fortune 1000 companies.
Recommendations	• Develop a unified incentive structure that aligns central and state-level policies to provide a clear and consistent message to potential GCC investors. Establish a coordination mechanism between central and state governments to ensure synchronized and attractive incentive packages. • Simplify and expedite the IP registration process in India to make it more efficient and less cumbersome. Increase the number of IP experts in India to handle the demand and reduce bottlenecks in the registration process. Provide

	incentives for GCCs to register their patents in India, fostering a more innovative and creative environment. • Launch a marketing campaign targeting Fortune 1000 companies to highlight India's GCC advantages. Organize roadshows to inform U.S SMEs and large corporations about the benefits of GCCs in India.

Expert 6 – Senior Director, GE Healthcare	
Industry Overview	The GCC landscape in India is rapidly expanding, with the current number of GCCs at around 1,600, employing approximately 1.6 million people. This number is projected to increase to 1,900-2,000 in the next few years and reach about 3,000 by 2030. India has emerged as a prime location for GCCs, primarily due to geopolitical challenges in Eastern Europe, particularly in Ukraine and Russia, which previously were key locations for these centres. As a result, more than 50% of new GCCs globally are being set up in India. The availability of a skilled talent pool is another significant factor driving this growth.
Challenges	• Poland's strategy to attract R&D work through lucrative policies helps them build a highly skilled workforce, India often ends up focusing on operational tasks. This division hinders India's ability to develop its talent pool in advanced technologies. • Regulatory policy poses challenges related to transfer pricing and taxation. As GCCs often operate as cost centres, managing transfer pricing becomes crucial yet complicated. • The projected growth of GCCs will necessitate an additional four to five million skilled workers. However, Indian colleges are currently not producing enough graduates with the required skills in emerging technologies like AI and generative AI. This talent gap is a significant risk for the future of GCCs in India. • The hiring cycle in India is lengthy, often taking six to nine months due to extended notice periods and the time needed to identify suitable candidates. This extended cycle increases costs and may not be sustainable in the long term. • Setting up GCCs involves numerous clearances, including legal entity establishment and labour approvals, which can be cumbersome. Although companies exist that help navigate these hurdles, a more streamlined process is needed. • GCCs are concentrated in tier 1 cities like Bengaluru, NCR, Hyderabad, Chennai, and Pune. Other cities need similar scaling opportunities to distribute development more evenly across the country.
Recommendations	• The government should continue to enhance the ease of doing business across all sectors, including GCCs. Providing incentives specifically tailored for GCCs will encourage more setups, creating numerous white-collar jobs. • Simplifying transfer pricing policies is crucial. High transfer costs are a significant hurdle for GCCs, and addressing this issue will make India more competitive. • Colleges should focus on producing graduates with skills in emerging technologies. Expanding the talent pool is essential to meet the growing demand from GCCs. • The lengthy hiring process needs to be streamlined. Reducing the notice period and improving the hiring cycle efficiency will help GCCs manage costs better and fill positions faster. • Establishing a business model that simplifies the process of setting up GCCs is essential. Companies that assist in legal and administrative processes should be supported and promoted. • Government policies should incentivize the establishment of GCCs in smaller cities, not just tier 1 cities. This approach will help in evenly distributing development and tapping into the talent pool in these regions. • It is vital for the government to maintain a supportive environment for GCCs. Even with a high influx of GCCs, discontinuing incentives or creating less lucrative conditions could drive these investments to competing countries. Sustaining supportive policies will ensure that India continues to be a preferred

	destination for GCCs, bolstering the services industry and driving economic growth.

Expert 7 – Head of GCC, Siemens Energy	
Industry Overview	GCC, previously known as captive centres or Global In-house Centres (GICs), have emerged as vital components in the global business ecosystem. These centres are established by multinational corporations (MNCs) to centralize and optimize various functions such as IT, finance, HR, and R&D. Particularly in regions like India, GCCs play a critical role due to their cost advantages, availability of skilled labour, and linguistic benefits. The workforce within GCCs is expanding rapidly. Each year, approximately 300 new projects become operational, ranging from large-scale initiatives to smaller projects involving around 50 people. The industry's pipeline is robust, with about 1,600 projects under consideration or development.
Challenges	• There is confusion over the roles and designations of directors in GCCs, which can lead to potential conflicts of interest and compliance issues. Ensuring clear role definitions and compliance standards is essential to mitigate these risks. • Determining the appropriate transfer pricing margin is complex due to inconsistent regulations and varying risk appetites among companies. This inconsistency complicates financial planning and compliance. • Compliance and enforcement of regulations about related party transactions pose significant challenges. Ensuring that these transactions are conducted fairly and transparently is critical to maintaining regulatory compliance and corporate integrity. • Indian cities, where many GCCs are located, face challenges with disorganized traffic flow and inadequate infrastructure such as roads and bridges. These deficiencies lead to inefficiencies, safety issues, and difficulties in managing urban growth. • Inadequate rainfall management results in frequent flooding, disrupting daily life and business operations. Enhancing urban resilience through better environmental management is necessary to sustain business continuity. • India grapples with high attrition rates and inconsistent employment standards across the industry. There is a need for standardized compensation and benefits to ensure fair treatment of employees and to reduce turnover. • The removal of tax holidays without easing other restrictions has made the SEZ process cumbersome and less attractive to businesses. Addressing these policy inconsistencies can enhance the appeal of SEZs. • The wait times for obtaining visas, such as U.S. and German Schengen visas, are excessively long, affecting the mobility of employees. Streamlining visa processes and regulating entities like VFS can mitigate these delays.
Recommendations	• Address key infrastructural issues including traffic management, power reliability, and safety standards. Investments in urban infrastructure can significantly improve operational efficiency and employee satisfaction. • Ensure clear and consistent regulations to simplify compliance processes. Providing comprehensive guidelines and support for regulatory adherence can help reduce operational complexities. • Align educational programs with market needs and enhance support for skill development initiatives. This alignment can ensure a steady supply of skilled labour tailored to industry requirements. • Review and streamline the visa application processes to reduce wait times. Ensuring efficient visa services is crucial for maintaining the mobility of the workforce and supporting global operations.

Expert 8 –American GCC conference, USISPF	
Industry Overview	The Global Capability Centres market has evolved significantly, with India emerging as a major hub. By 2030, India is projected to host 70 to 75% of the world's GCCs, driven by cost advantages, a large pool of highly educated and tech-savvy young professionals, and the impact of global crises. Initially focused on technology and

	Fortune 500 companies, GCCs in India have diversified into financial services, manufacturing, and pharmaceuticals. While other destinations like Manila, Eastern Europe, and Latin America are popular, they are less favoured due to India's superior cost and skill advantages. India's competitive edge is bolstered by its cost-effectiveness, a skilled workforce proficient in English, and world-class digital infrastructure. Policy incentives such as subsidies, tax breaks, and increased capital expenditure support have reduced operational costs. Global crises like the Y2K crisis, the 2008 fiscal crisis, and the COVID-19 pandemic have also driven the growth of GCCs in India.
Challenges	• Regulatory and compliance burdens, particularly regarding ease of business and transfer pricing issues, continue hindering operational efficiency and investor confidence. • Despite improvements, India's physical infrastructure, including logistics, roads, ports, and airports, still presents challenges for companies needing robust systems to support extensive operations. • Companies often face challenges with regulatory continuity, transparency, judicial reforms, land reforms, and labour issues.
Recommendations	• Simplify regulatory and compliance procedures to reduce bureaucratic hurdles and enhance operational efficiency for GCCs. • Focus on both digital and physical infrastructure improvements, ensuring robust logistics and transportation systems. • Continue and enhance policy incentives such as subsidies, tax breaks, and capital expenditure support to attract and retain GCCs. • Provide robust backing for research and development to drive innovation and maintain a competitive edge in the global market. • Implement policies for skill development to ensure a continuous supply of highly skilled professionals. • Simplify the processes for intellectual property creation and patent filing, along with providing increased support and incentives for R&D activities. • Enhance transparency and implement judicial and land reforms to create a more favourable business environment. • Address labour issues to ensure a stable and efficient workforce.

Expert 9 – Country Director, AGCO Corporation	
Challenges	• The concentration of GCCs in major cities such as Bengaluru, Hyderabad, and NCR have led to intense competition for talent, resulting in shortages, rising salary demands, and challenges in employee retention. • Despite India's vast pool of skilled professionals, the demand for talent, particularly in tech hubs, outstrips supply. This creates difficulties in attracting and retaining top-tier talent, as professionals often seek rapid career advancement, leading to higher attrition rates. • The diverse regulatory environment in India, with varying state-specific labour laws, tax structures, and compliance requirements, adds significant complexity to managing operations across multiple locations. Additionally, the post-pandemic transition to office work presents further operational challenges. • New GCC entrants face difficulties in establishing a strong brand presence in a market dominated by well-established global companies, which affects their ability to attract top talent and compete effectively. • Discrepancies between the Indian government's expectations and companies' transfer pricing calculations frequently lead to disputes and prolonged negotiations. The absence of a streamlined regulatory framework across states further complicates expansion and operations. • Infrastructure in many Indian cities remain inadequate for the needs of rapidly expanding GCCs. Issues such as traffic congestion, inconsistent power supply, and limited availability of commercial space disrupt business operations and negatively impact employee morale.

	• A gap exists between the skills imparted by the education system and those required by the corporate sector. This gap results in a workforce that may not be fully prepared to meet the evolving demands of GCCs. • The current incentive structure in India may not be robust enough to attract and retain GCC investments.
Recommendations	• Introduction of policies that incentivize employee retention, such as tax breaks for companies that maintain low attrition rates. Additionally, programs to promote employee well-being and career development should be supported to reduce turnover. • The government should encourage the development of GCCs in emerging cities by offering incentives like tax holidays, subsidies, and improved infrastructure. This will help reduce pressure on saturated markets and foster balanced regional growth. • Government-led initiatives to align educational curricula with industry requirements should be prioritized. Partnerships between educational institutions and GCCs can be fostered to ensure a steady pipeline of skilled professionals. Funding for continuous learning and upskilling programs should also be provided. • The government should work towards harmonizing labour laws, tax structures, and compliance requirements across states to reduce operational complexities. A uniform regulatory framework would ease the administrative burden on companies and encourage multi-location operations. • The government can aid new GCC entrants by promoting India as a premier destination for GCCs globally. Public-private partnerships can be leveraged to enhance India's image as a hub for innovation and talent, making it easier for new companies to establish themselves in the market. • The government should establish clear guidelines for transfer pricing that align with international standards and reduce disputes. A dedicated regulatory body could be established to facilitate faster resolution of these issues and ensure smoother operations for GCCs. • To address infrastructure challenges, the government should prioritize investments in transportation, power supply, and commercial real estate in cities with a high concentration of GCCs. Public-private partnerships can be explored to accelerate infrastructure projects in key regions. • Implementing a single-window clearance system that consolidates all necessary approvals and compliance processes into one digital platform would significantly reduce the complexity and time involved in setting up and expanding operations. This initiative should be prioritized to enhance the ease of doing business in India. • The government should invest in national-level skill development programs that target specific industries, including those relevant to GCCs. This includes vocational training, internships, and partnerships with GCCs to ensure that the workforce is equipped with the necessary skills. • The government should reassess the current incentive structure to ensure it is competitive on a global scale. This includes offering more substantial incentives for infrastructure development, streamlining regulatory processes, and creating a uniform regulatory environment across states to attract and retain GCC investments.

Expert 10 – GCC Industry Stakeholder Meeting, STPI	
Challenges	• The complexity of tax structures across states and varying policies often leads to confusion and delays in availing tax holidays, discouraging offshore companies from establishing GCC units in India. • High import duties and slow customs clearance procedures create significant delays in setting up infrastructure for new GCCs. This negatively impacts the timely commencement of operations. • High custom duties and complex transfer pricing regulations add to operational costs and reduce competitiveness. Transfer pricing rules are ambiguous, and the benchmarking processes are often unclear, leading to compliance challenges.

	• The application of transfer pricing regulations lacks transparency and creates subjectivity, with high margins often applied. This makes it difficult for GCCs to comply, particularly for intellectual property creation and new service line development. • Although schemes to obtain rebates and incentives are well-defined, the documentation requirements are often unclear, leading to inconsistent submissions from companies. This results in delays and inefficiencies, as reviewing teams benchmark data provided by clients, leading to further requests and hampering timely approval and release of incentives. • New GCCs face a lack of support in navigating local regulatory landscapes, leading to friction during the setup phase. Limited awareness of local tax incentives, business practices, and regulatory requirements can delay the launch of operations. • Regulatory hurdles and high tax burdens make it difficult for GCCs to acquire startups in India, hindering potential collaboration between large corporates and local innovation ecosystems. • GCCs face barriers in tapping talent from Tier 2 and Tier 3 cities due to a lack of infrastructure and employment incentives. This results in missed opportunities to leverage regional talent and spread economic benefits more evenly.
Recommendations	• Simplify the approval process for tax holidays and promote uniformity across states. Introduce a fast-track system for GCCs to expedite access to tax benefits, creating a more predictable and attractive environment for offshore companies. • Provide tax exemptions or reduced duties on hardware imports specifically for GCCs to facilitate faster infrastructure setup. Digitize and streamline customs procedures to reduce delays, ensuring a smooth flow of equipment for new entrants. • Lower custom duties on essential goods and services imported by GCCs. Simplify transfer pricing regulations by providing clearer guidelines and international benchmarking standards. Partner with reputable firms (e.g., Big 4) to offer transparent benchmarking for businesses. • Simplify the transfer pricing regime by reducing the subjectivity involved and lowering the margins to be more industry-specific and globally aligned. This will encourage intellectual property development and allow for the growth of new service lines. • Establish a transparent, streamlined process for releasing incentives with clearly defined documentation requirements and standardized procedures. Set a turnaround time for approvals and disbursals, ensuring that companies receive rebates and incentives promptly. • Streamline the acquisition process by offering specific tax incentives for GCCs that acquire Indian startups. Develop a regulatory framework that promotes collaboration between large GCCs and the local startup ecosystem, fostering innovation and local entrepreneurship. • Introduce financial and operational incentives for GCCs to recruit from Tier 2 and Tier 3 cities. Invest in developing infrastructure in these regions to enable seamless integration of regional talent into GCC operations, thereby enhancing local employment and economic distribution. • Establish awareness and facilitation programs aimed at helping new GCCs during the initial setup phase. These programs should focus on providing single-window access for approvals and licenses, reducing friction in navigating India's regulatory environment.

Chapter 7: Findings - Industry Challenges

GCCs have become a pivotal component of the global business strategy for multinational corporations, leveraging India's vast talent pool and cost efficiencies. However, as the GCC ecosystem matures and expands, it faces an array of complex challenges that threaten to undermine its potential. By identifying and understanding these challenges, stakeholders can develop informed policies and strategies to enhance the effectiveness and sustainability of GCC operations in India.

The findings highlight a multifaceted set of challenges faced by GCCs in India, ranging from employee retention and career growth to regulatory compliance and talent shortages. Addressing these issues requires strategic adjustments, enhanced training programs, regulatory reforms, and improved connectivity to ensure the sustainable growth and competitiveness of GCCs in the evolving global landscape.

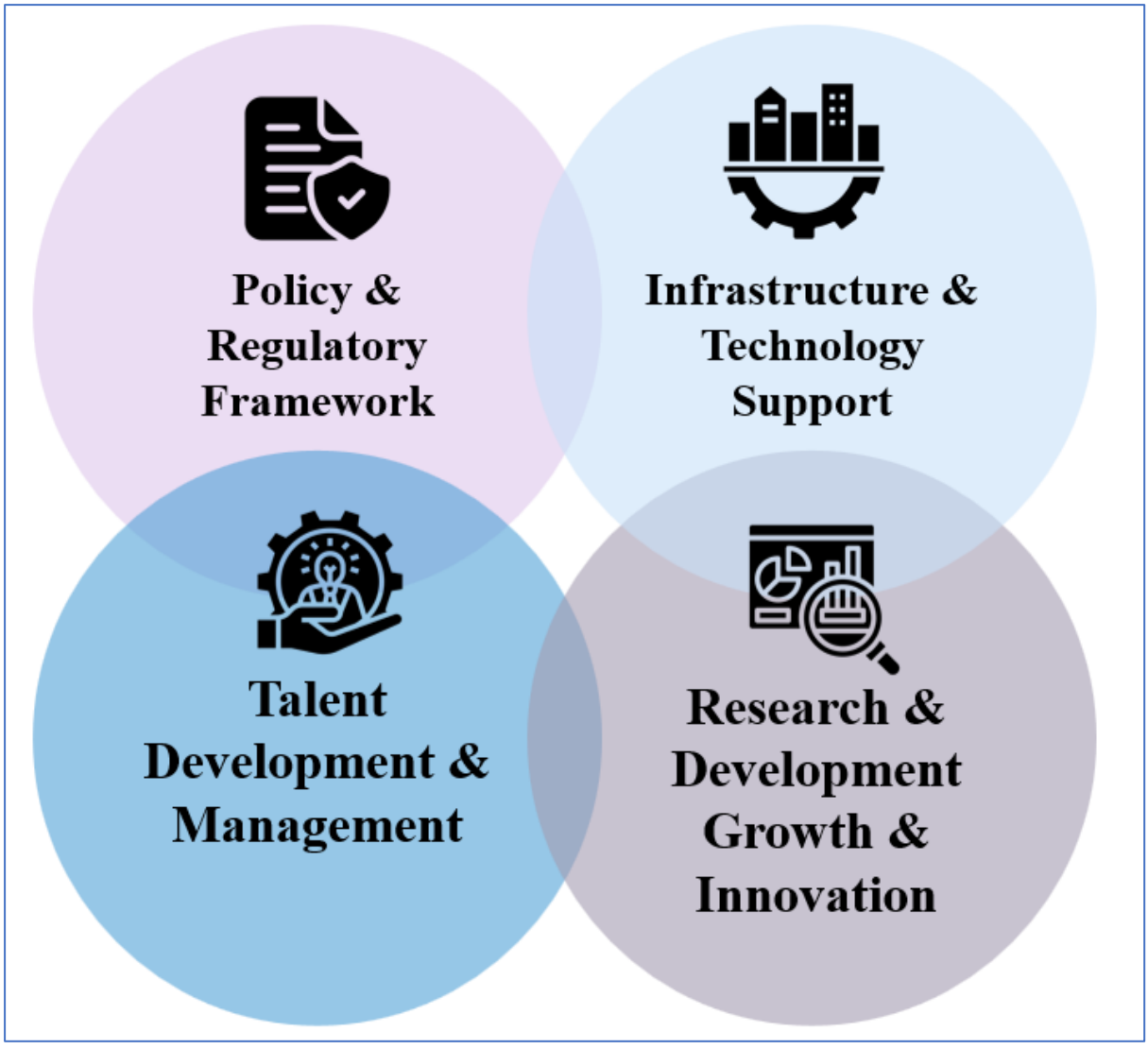
Figure 13: GCC industry challenges

Source(s): Industry reports, Expert interviews, 1Lattice analysis

Chapter 8: Recommendations for the GCC industry

To address the dynamic challenges faced by GCCs in India, strategic recommendations are proposed to strengthen policy and regulatory frameworks, enhance infrastructure and technology support, advance talent development and management initiatives, and drive research and development growth and innovation. By aligning efforts across government bodies, industry associations, academia, and private enterprises, India can foster an environment conducive to GCC growth, drive innovation, and reinforce its global leadership in high-value service delivery.

Figure 14: Recommendations in 4 categories



Policy and Regulatory Framework

Figure 15: Policy & regulatory framework (Government bodies)

Government Bodies

- ***Industry Status & light-touch regime for GCCs:***
  - Grant specific industry status to GCCs for easier compliance with labour laws and overtime policies. This recognition may be limited to establishments engaged in medium to high end technological work including innovation and R&D. Such recognition will facilitate tailored regulations that acknowledge the unique operational dynamics of GCCs, moving beyond the constraints of conventional manufacturing laws.
  - Introduce a streamlined, minimal-intervention regulatory framework tailored to the needs of GCCs. This approach should focus on reducing bureaucratic red tape, simplifying compliance procedures, and fostering a more business-friendly environment.
- ***Nodal Agency for Regulatory Clarity:***
  - Establish a dedicated nodal agency for GCCs in India to act as a single-window facilitator, offering clear regulatory guidance and simplifying compliance processes for GCCs.
  - Nodal agency would provide clear guidelines on GCC classification, streamline GST input credit claims and ensure income tax regulations are applied appropriately, and track all GCC operations, ensuring transparency and easing interactions with regulatory bodies like the RBI.
- ***IP registration & dispute resolution:***
  - GoI should establish a centralized authority similar to the Intellectual Property Appellate Board (IPAB) for efficient and hassle-free IP – registration & dispute resolution for GCCs.
  - Strengthen alternative dispute resolution mechanisms like mediation and arbitration is crucial for faster, more cost-effective IP dispute resolutions in India.
  - Introduction of an IPR-based reimbursement scheme where for every Indian patent published or granted domestically, up to Rs 1 lakh shall be reimbursable.
- ***Unified Incentive Structure:***
  - GoI should develop a comprehensive GCC policy that aligns with state-level incentives. Establish a joint committee with representatives from both central and state governments to regularly review and adjust the incentive packages.
  - The incentive structure could include:
    - Direct Employment-Based Incentives: For each direct employment generated, up to Rs. 2 lakhs shall be reimbursable (one time), providing a direct financial incentive for job creation within GCCs.
    - Exports Performance-Based Incentives: For a year-on-year growth of 10% in exports, 2% of the total exports from the previous year shall be reimbursable, encouraging export-oriented growth.
- ***Single Window Agency:***
  - A specific agency like STPI should be designated Single Window Agency (SWA) for registration of GCCs, monitoring them and extending benefits.
  - During receipt & processing of application, a "Registration Fee" shall be collected by the SWA based on the projection figures submitted as part of application
  - The SWA shall be common interface or facilitator for various statutory requirements of the establishment and operations of GCC.
  - The SWA shall be responsible for attestation of exports done by the GCC thereby enabling realization of foreign remittance through RBI. This service shall be chargeable (similar to Softex attestation by STPI).
  - The SWA shall promptly release the eligible incentives to the GCC subject to validation of the documentation by relevant authorities and adherence by the GCC.
  - The SWA shall also be responsible for growth of GCCs in India (similar to "TN Guidance Cell" or "Dubai Economic Development Wing")
- ***Strategic fiscal policies:***
  - GoI should offer incentives of its own and further encourage more stated to offer their own incentives. Such an environment fostering healthy competition between stated shall be to attract more GCCs to India.
  - Provision of flexibility within SEZs to extend SEZ benefits and tax incentives to Tier 2 and Tier 3 cities to promote economic diversification. This includes developing a tiered taxation framework that incentivizes value-added activities and supports GCC expansion into less saturated markets.
- ***Taxation & Custom provisions:***
  - Incentives allowing deductions for preoperative expenses, including capital and intangible assets, up to 8 years post-operation commencement.
  - No withholding tax on dividends distributed to foreign parent entities.
  - Provide exemption on custom duties for capital goods imported and certified by the Single Window Agency.
- ***Streamlined transfer pricing process:***
  - Development of competitive and standardized transfer pricing policies to encourage higher-value work. Simplified transfer pricing regulations to reduce compliance costs and promote higher value-added activities within GCCs. Clarity on tax implications and competitive tax rates will position India as a favourable destination for GCCs compared to global alternatives
  - Simplifying and expediting the Advance Pricing Agreement (APA) process will reduce uncertainties, while mandatory time limits for tax case resolutions and fewer audits will lower compliance burdens.
  - The Single Window Agency (SWA) can simplify transfer pricing and taxation by:
    - Requiring GCCs to submit a 5-year projection, APA, transfer pricing method, and PE status during registration.
    - Acting as the custodian of documents, validating them with tax authorities as needed.
    - Releasing eligible incentives after validating documentation and compliance.
- ***Enhance Ease of Doing Business:***
  - Develop a comprehensive compliance framework aligned with global standards and local regulations like GDPR. Implement robust cybersecurity measures to protect against cyberattacks.
- ***Rebrand Engineering Service Providers as GCCs:***
  - Offer tax incentives, grants, or subsidies to ESPs that transition to GCCs. This could include R&D tax credits, reduced corporate tax rates, or financial support for infrastructure development.

Source(s): Expert interviews, 1Lattice analysis

Figure 16: Policy & regulatory framework (Industry and Private players)

Industry Associations & Academia	Private Players

• ***Advocate for Regulatory Reforms***:
  ○ Industry associations should advocate for favourable regulatory reforms and collaborate with governments to develop comprehensive compliance standards.
 	
• ***Educate Stakeholders***:
  ○ Educating stakeholders on regulatory compliance and its impact on GCC operations is essential for sustainable growth. Industry associations should facilitate workshops, seminars, and training programs to ensure all parties are informed and compliant.
 	
• ***Strengthen industry-academia Collaboration:***
  ○ Foster stronger collaboration between industry and academia through incentives, such as tax breaks or grants for companies that engage in meaningful partnerships with educational institutions.
 	
• ***Marketing Campaign and Roadshows:***
  ○ Organize roadshows and informational sessions in key U.S. cities to promote India's GCC potential by creating promotional materials and case studies that highlight the advantages of setting up GCCs in India.
	• ***Talent driven acquisition***:
	  ○ Acquire startups to gain niche skills and leadership talent. This approach will ease the entry into the Indian market and enhance the capability of GCCs in specialized areas.
	
	• ***Ensure Compliance and Advocate for Transparency***:
	  ○ Private companies operating in the GCC sector must ensure compliance with regulatory requirements while advocating for clear guidelines and policy transparency.
	  ○ Actively participate in policy discussions and decisions that impact business sustainability and growth.

Source(s): Expert interviews, 1Lattice analysis

Infrastructure and Technology Support

Figure 17: Infrastructure & technology support

Government Bodies	Industry Associations & Academia	Private Players
• ***Future Innovation zones***: Encourage Global Capability Centres to establish themselves in smart cities to benefit from advanced infrastructure and improved quality of life. By expanding this focus to Tier-2 and Tier-3 cities, the government can decentralize growth, leverage regional talent, and mitigate concentration risks. • ***Development of Satellite Cities and Connectivity***: Build satellite cities as GCC corridors (e.g., Mysuru for Bengaluru, Coimbatore for Chennai) and improve infrastructure connectivity between them. Implement a hub-and-spoke model to enhance transport and digital infrastructure between Tier-1 and Tier-2 cities, reducing operational costs and attracting GCCs to decentralized locations. • ***Investment in Infrastructure***: Enhance both digital & physical infrastructure by funding robust IT systems with a focus on cybersecurity and cloud security. Simultaneously, improve physical infrastructure such as logistics, transportation, traffic management, power reliability, and safety standards.	• ***Plug-and-Play Sector-Specific Incubation Centres***: Offer sector-specific incubation centres that provide a plug-and-play environment for new global players to collaborate with the Indian ecosystem on innovation use cases. These centres will foster technology adoption and support GCCs in scaling their operations with innovative infrastructure. • ***Promotion of Technology Adoption***: Facilitate collaborative efforts to promote technology adoption through R&D grants and the establishment of sector-specific incubation centres. Industry associations should work closely with academia to ensure that educational curricula integrate emerging technologies and industry-relevant skills. • ***Leverage the Apprentice Act:*** Effectively utilize the Apprentice Act by ensuring industries adhere to apprenticeship norms and create more apprenticeship opportunities. Monitor and evaluate the impact of apprenticeships on skill development and employability.	• ***Investment in IT Infrastructure and Cybersecurity***: Private companies in the GCC sector need to invest significantly in robust IT infrastructure and comprehensive cybersecurity measures. This investment is crucial to safeguard operations, protect sensitive data, and maintain business continuity.

Source(s): Expert interviews, 1Lattice analysis

Talent Development and Management

Figure 18: Talent development & management

Government Bodies	Industry Associations & Academia	Private Players
• ***Investment in STEM Education and Vocational Training***: Increase funding and support for STEM education and vocational training programs aligned with industry requirements. This includes creating specialized courses in engineering fields such as AI/ML, cybersecurity & big data analytics to ensure a future-ready workforce. • ***Learning and Development Initiatives***: Allocate resources for microlearning and skill-development opportunities, complemented by government scholarships tailored for postgraduate and PhD students specializing in Engineering Research and Development (ER&D). • ***Upskilling and Reskilling Programs***: Implement comprehensive upskilling and reskilling programs that link learning paths to career progression. These initiatives should bridge existing skill gaps and nurture leadership talent, ensuring a sustained pipeline of qualified professionals within the GCC sector. • ***Enhance Visa Services:*** Review and streamline visa application processes to reduce wait times, ensuring efficient visa services that support global operations and workforce mobility.	• ***Industry-Specific Training Development***: Collaborate with academic institutions to co-develop specialized curricula, apprenticeship programs, and technology transfer initiatives. These partnerships will ensure that educational programs are aligned with industry needs and produce graduates who are immediately employable. • ***Promotion of Global Exposure***: Facilitate opportunities for global exposure, through international engagements and exchange programs, to attract talent back to India. This will help develop a globally mature pool of mid to senior-level managers capable of leading GCCs to greater heights. • ***Integration of Industry Certifications***: Encourage the integration of industry certifications with academic courses to enhance the employability of graduates. Certifications in fields like banking, pharma, and insurance can be pursued alongside traditional degrees to make students job-ready upon graduation.	• ***Holistic Well-being Initiatives***: Implement comprehensive employee assistance programs, wellness initiatives, and health insurance plans that cover mental health needs. Prioritizing holistic well-being will help attract and retain top talent in a competitive market. • ***Hybrid Operating Models***: Adopt hybrid workforce models to effectively balance talent needs with vendor partners. This flexible approach will allow GCCs to respond agilely to changing demands and maintain operational efficiency. • ***Streamline Hiring Processes***: Reduce the length of hiring processes, including notice periods, to improve hiring cycle efficiency. This will help GCCs manage costs and fill positions more rapidly • ***Utilization of Gig Workforce***: Leverage the gig workforce through partnerships with vendor companies and staffing services. This approach can address short-term talent needs while maintaining cost-effectiveness and operational agility. • ***Women Leadership Programs***: Develop and implement mentoring programs aimed at advancing women technologists into leadership roles. Providing development sessions and ample growth opportunities will help build expertise and support career advancement for women within GCCs.

Source(s): Expert interviews, 1Lattice analysis

Innovation, R&D, and IP Generation

Figure 19: Innovation, R&D, and IP Generation

Government Bodies	Industry Associations & Academia	Private Players
• ***Streamline IP Agreements***: Establish standardized agreements and protocols for IP ownership and rights sharing in collaborative projects, streamlining legal frameworks to enhance collaboration. Simplify the IP registration process and provide support for seamless integration of startups, ensuring transparent compliance frameworks are in place to facilitate these initiatives. • ***Enhanced Digital Platform for ER&D***: Implement an online platform to expedite R&D permit, license, and patent application processes for ER&D GCCs in India. This centralized system will facilitate real-time tracking, online submissions, and fast-track patent reviews, ensuring efficient regulatory support and fostering innovation competitiveness. • ***Financial Support for R&D Innovation***: Provide financial incentives for adopting digital tools like simulation software and cloud-based R&D platforms.	• ***Launch Platforms for Co-Creation***: Develop digital platforms or marketplaces where ER&D GCCs can connect with startups and ESPs to share ideas, resources, and capabilities for joint R&D initiatives. • ***Collaborative Research Projects***: Academia should engage in collaborative research projects with GCCs to drive innovation and provide students with hands-on experience in emerging technologies. These projects will prepare students for future roles in GCCs and contribute to the development of a skilled workforce.	• ***Investment in R&D***: Allocate resources to develop cutting-edge facilities and adopt digital tools such as simulation software, AI-driven analytics, and cloud platforms. Convert R&D breakthroughs into commercial products to expand market presence and drive revenue growth. • ***Collaboration and Partnerships***: Forge strategic alliances with startups, academic institutions, Engineering Service Providers (ESPs), and other industry players to leverage complementary strengths and accelerate R&D projects.

Source(s): Expert interviews, 1Lattice analysis

Historical Impact of Fiscal Incentives

The Indian IT/ITeS industry's remarkable growth trajectory has been significantly shaped by strategic fiscal incentives, particularly those implemented between 1994 and 2011. During this period, the government introduced tax exemptions on profits from exports under the Software Technology Park (STP) scheme. This initiative was pivotal in catalysing the sector's rapid expansion. Prior to these incentives, the industry's export earnings were modest, measured in mere double digits (INR crores). However, within less than a decade of the STP scheme's introduction, exports by STP units surged past INR 10,000 crores, and within another decade, they exceeded INR 2 lakh crores.

The fiscal incentives during this time laid the foundation for sustained growth, fundamentally transforming India's economic landscape. Notably, even after the tax exemptions concluded in 2011, the industry continued to flourish, with export figures multiplying exponentially. Today, the sector's exports have surpassed INR 9 lakh crores, underscoring the long-term impact of these early fiscal policies. The STP scheme accelerated the industry's initial growth and established a momentum that has carried forward, making the IT/ITeS industry one of the cornerstones of India's economy.

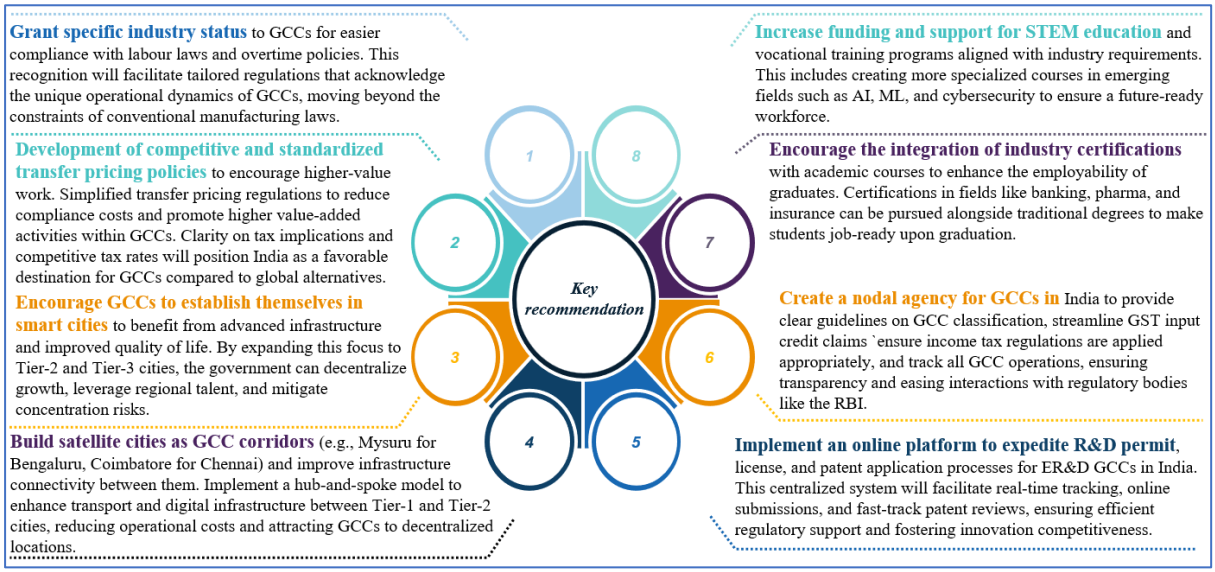
GCCs are expected to drive the next wave of technology growth across the world. It can be said with significant certainty that, over the next decade GCCs can witness growth similar to that by witnessed Indian IT Industry over past 3 decades, provided appropriate fiscal incentives and other recommendations are implemented by Govt.

Summary

GCCs in India have emerged as strategic assets for multinational corporations, contributing significantly to their innovation, efficiency, and competitiveness. As the industry continues to evolve amidst dynamic global economic conditions, it is imperative to outline key recommendations that can propel GCCs in India to new heights of performance and value creation.

The following figure summarizes the entire analysis of the report, presenting eight key recommendations essential for accelerating the growth of GCCs in India. These recommendations include formal recognition and registration of GCCs, the provision of incentives, and the facilitation of other services, which can be managed through a designated Single Window Agency, such as STPI.

Figure 20: Key recommendations



Source(s): Expert interviews, 1Lattice analysis

Appendix A

Indian Policies

Haryana IT/ITeS & ESDM policy 2017

The policy aims to position Haryana as a leader in Information Technology (IT) and Electronics System Design and Manufacturing (ESDM). The policy seeks to attract investments, promote innovation, and ensure sustainable growth in these sectors. It focuses on creating an enabling environment for businesses, leveraging Haryana's strategic location and existing industrial base to drive economic growth and job creation.

Operative period of the policy

The policy is effective from August **2017** and will remain in force until it is amended or replaced by a new policy.

Scope of the policy

- **Infrastructure Development**:
  - Development of Integrated IT Townships and Electronic Manufacturing Clusters (EMCs)
  - Provision of necessary infrastructure such as road access, dedicated power supply, water, bandwidth, and master sewerage.

- **Investment and Innovation Promotion**:
  - Attractive fiscal incentives to encourage private sector participation.
  - Support for research and development (R&D) and innovation through financial assistance and infrastructure development.

- **Skill Development**:
  - Promotion of skill development programs in collaboration with industry leaders and educational institutions.
  - Focus on creating a ready talent pool with skills relevant to the IT and ESDM sectors.

- **Ease of Doing Business**:
  - Simplification of regulatory processes and provision of a single-window clearance system.
  - Streamlined procedures for setting up and operating IT and ESDM units.

- **Sustainable Growth**:
  - Encouragement of green technologies and practices.
  - Development of eco-friendly infrastructure and promotion of energy efficiency in IT and ESDM operations.

Targets of the policy

- **Investment Attraction**:
  - Attract investments of **INR 20,000cr** in the IT&ESDM sector over the next five years.

- **Employment Generation**:
  - Create employment opportunities for **1.2L** people in the IT & ESDM sector within the next five years.

- **Economic Contribution**:
  - Increase the IT & ESDM sector's contribution to the state's GDP from **~9.4%** to **~15%.**

- **Equitable Development**:
  - Promote equitable development across the state by increasing the contribution of tier II and III cities to the state's workforce in the sector by **~25%.**

- **Efficient Citizen Services**:
  - Enhance the delivery of citizen services using technology as a key enabler, with specific goals:
    a) Deliver ~**75%** of services to citizens through the Mobile Service Delivery Platform (MSDP) by **2019.**
    b) Implement state-wide digital network (Optical Fiber Cable) in each Gram Panchayat of Haryana by **2018.**
    c) Establish one Atal Seva Kendra in each Gram Panchayat by **2017.**
    d) Integrate all e-Governance services with the State Resident Database (SRDB) by **2019.**

Key Incentives

- **Stamp Duty**:
  - **~100%** reimbursement of stamp duty paid on sale/lease deeds for setting up units in notified IT Parks, IT Cities, Technology Parks, STPIs, or any land earmarked by the state government for IT industry.

- **Electricity Duty Exemption**:
  - **~100%** exemption from electricity duty for a period of **7 years** from the commencement of commercial operations.

- **Power Subsidy**:
  - IT/ITeS industry is eligible for power at **INR 5.49 per unit**, provided the investor signs a Memorandum of Understanding (MoU) with the Government of Haryana.

- **Property Tax at Industrial Rates**:
  - Property tax on IT/ITeS units is levied at industrial rates.

- **SGST Reimbursement**:
  - **~100%** reimbursement (net tax) for a period of **10 years**, subject to a maximum of **~100%** of Fixed Capital Investment (FCI) for units setting up in certain blocks.

- **Mega Projects**:
  - Eligible for a special package of incentives over and above the standard package on a case-by-case basis.

- **Ultra Mega Projects**:
  - Special package of incentives including mixed land use, land allotment at a decided price, etc.

Value propositions of the policy

- **Strategic Geographic Positioning**:
  - Haryana's strategic location with its proximity to the national capital region, extensive road and metro connectivity, and growing infrastructure makes it an attractive destination for GCCs.

- **Gurugram as BPM Capital**:
  - Gurugram has solidified its position as the BPM capital of India, employing about **~5%** of the global BPM workforce. This not only highlights the city's prominence in the sector but also demonstrates the successful impact of the Haryana IT & ESDM Policy in fostering a significant employment hub within the region. The concentration of BPM services in Gurugram provides a robust ecosystem for GCCs, supported by a skilled and extensive workforce dedicated to business process management.

- **Robust Infrastructure Development**:
  - The policy emphasizes the development of Integrated IT Townships and Cyber Cities, offering modern infrastructure with high connectivity and world-class facilities.

Limitations of the policy

- **Regional Competition from Neighbouring States**:
  - The ambitious IT initiatives of neighbouring states, particularly Uttar Pradesh's IT Policy and the rapid development of Noida as a tech hub, present a significant challenge. Noida's emergence as a competitive IT destination could divert potential investments and talent away from Haryana, affecting its position as a leading IT and BPM hub. Enhancing Haryana's own IT incentives and infrastructure could help mitigate this threat by reinforcing its attractiveness as an ideal location for GCCs.

- **Rising Housing Costs Impacting Talent Acquisition**:
  - The escalating cost of housing in key areas such as Gurugram is becoming a significant hurdle in attracting and retaining talent. As housing becomes less affordable, it creates a talent crunch for GCCs, which rely heavily on local skilled professionals. Addressing housing affordability could help ensure a steady influx of talent essential for the sustained growth and success of GCCs in the region.

Impact of the policy

- **Economic Growth and Employment Generation**:
  - The policy is designed to spur significant economic growth and employment opportunities in the IT and ESDM sectors by attracting global and domestic investments. This not only boosts the state's economy but also offers numerous high-quality job opportunities, aiding in the overall socio-economic development of the region.

- **Promotion of Technological Excellence**:
  - With a clear focus on fostering a culture of innovation and excellence, the policy aims to position Haryana as a leader in IT and electronics on the global map. The emphasis on quality infrastructure, skilled workforce development, and support for entrepreneurship aligns with the needs of GCCs that demand a sophisticated business and technological ecosystem.

Uttar Pradesh IT & ITeS policy 2022

The policy aims to transform Uttar Pradesh into a leading global hub for information technology. The policy focuses on developing world-class IT infrastructure, fostering innovation, enhancing skill levels, attracting investments, boosting exports, and generating employment. It aims to create a conducive business environment by establishing IT Parks, IT Cities, and Centres of Excellence in emerging technologies such as AI, Blockchain, Big Data, Cloud Computing, and IoT. The policy aligns with the vision of 'Digital India' and aims to make Uttar Pradesh a preferred destination for IT investments.

Operative period of the policy

The policy will be effective from its notification date and will remain in force for five years or until a new policy is announced. The units availing incentives under this policy are required to commence commercial operations within specified timelines based on their fixed capital investment (FCI):

- **Up to INR 200cr: 4 years** from the date of issuance of Letter of Comfort (LoC)
- **Greater than INR 200cr but less than INR 1,000cr: 5 years** from the date of issuance of LoC
- **Greater than INR 1,000cr: 7 years** from the date of issuance of LoC

Scope of the policy

The policy encompasses various strategic initiatives and incentives aimed at boosting the IT and ITeS sector in Uttar Pradesh:

- **Infrastructure Augmentation:**
  - Development of IT Parks and IT Cities with modern amenities and state-of-the-art infrastructure.
  - Financial and logistical support for creating greenfield IT Parks and IT Cities in different regions of the state.

- **Encouraging Innovation:**
  - Establishment of Centres of Excellence (CoE) for research, innovation, and entrepreneurship in collaboration with reputed institutions.
  - Support for standalone and in-house R&D centres with financial reimbursements for eligible expenditures.

- **Skill Development:**
  - Initiatives to upskill the existing and new workforce in emerging technologies.
  - Reimbursement of certification course fees for professionals and students domiciled in Uttar Pradesh.

- **Incentives for IT/ITeS Units:**
  - Fiscal incentives such as capital subsidy, operating expense subsidy, land rebate, interest subsidy, and stamp duty exemption.
  - Non-fiscal incentives including exemptions from certain inspections and permissions for 24x7 operations.
  - Specific incentives for recruitment assistance, patent filing costs, and work-from-home benefits.

- **Policy Implementation Framework:**
  - Establishment of a State Level Empowered Committee, Policy Implementation Unit, and a dedicated Project Management Unit to oversee and facilitate the policy's implementation.
  - Designation of UP Electronics Corporation Ltd. (UPLC) as the nodal agency for policy implementation.

Targets of the policy

- **Infrastructure Development**:
  - Develop one IT City in each of the regions: Paschim Anchal, Madhyanchal, Poorvanchal, and Bundelkhand.
  - Develop one greenfield IT Park in every revenue division of the state, excluding Gautam Buddh Nagar and Ghaziabad, with capital expenditure support of **~25%** of eligible costs, subject to a maximum of INR **20 Cr.**

- **Skill Development**:
  - Encourage professionals and students to complete certifications in emerging technologies by reimbursing **~50%** of the course fee up to INR **50,000** per candidate.

- **Employment Generation**:
  - Provide recruitment assistance of **INR 20,000** per employee for units in Uttar Pradesh, excluding Gautam Buddh Nagar and Ghaziabad, subject to continuous employment of a minimum of 1 year and annual recruitment of at least **30** students in the IT/ITeS sector.
  - Generate state-wide direct and indirect employment opportunities through special incentives to boost local employment.

- **Investment and Export Promotion**:
  - Promote Uttar Pradesh as a preferred investment destination for technology companies and attract domestic as well as foreign investments during the policy period.
  - Boost export potential of the state's IT/ITeS sector and provide single window clearance for units setting up in Software Technology Parks of India (STPIs) within Uttar Pradesh.

Key Incentives

- **Fiscal Incentives**
  - **Capital Subsidy**:
    a) A capital subsidy of **~10%** on Fixed Capital Investment (FCI), subject to a maximum subsidy of **INR 50 Cr**, is provided to eligible IT/ITeS units with a minimum capital investment of **INR 5 Cr**. The subsidy is disbursed in annual instalments over five years post-commencement of commercial operations, with each annual instalment not exceeding **INR 10 Cr.**
  - **Operating Expense Subsidy**:
    a) **Lease Rentals**: Reimbursement of expenditure on leasing office space, subject to a maximum monthly rental of **INR 50 per sq. ft**, including co-working spaces

b) **Bandwidth Expenses**: Reimbursement of actual expenses incurred on bandwidth connectivity.
c) **Data Centre/Cloud Service Costs**: Reimbursement of actual costs incurred on data centre or cloud services from providers based within Uttar Pradesh.
d) **Power Charges**: Reimbursement of actual power tariffs paid for energy consumed in running IT/ITeS operations.

- **Rebate on Land**:
  a) **~25%** reimbursement on the cost of land, subject to a maximum rebate of INR **50 Cr**. Employment criteria apply: **200** employees per acre in Paschim Anchal (except TTZ), **150** employees per acre in Madhyanchal, and **100** employees per acre in Bundelkhand, Poorvanchal, and TTZ.

- **Interest Subsidy**:
  a) An interest subsidy of **~7%** per annum on term loans or actual interest paid, whichever is lower, up to a maximum of Rs. **1cr** per annum per unit for a period of **5 years** from the commencement of commercial operations.

- **Stamp Duty**:
  a) **~100%** exemption on stamp duty for the purchase/lease of land/office space/buildings for IT/ITeS use, provided operations commence within stipulated timelines.

- **Grant on EPF for Employment Generation**:
  a) **~100%** reimbursement of the EPF amount paid for IT/ITeS professionals of Uttar Pradesh domicile for continuous employment of 1 year, up to Rs. **2000** per employee per month, subject to a maximum of INR **1cr** per annum for **5 years**. Applicable only for Women/SC/ST/Transgender/Divyangjan employees.

- **Recruitment Assistance**:
  a) INR **20,000** per employee for units located in Uttar Pradesh (excluding Gautam Buddh Nagar and Ghaziabad) for continuous employment of at least **1 year** and annual recruitment of at least **30** students in IT/ITeS sector. The assistance is applicable for first-job employees of Uttar Pradesh domicile and from UP-based colleges.

- **Incentives for Certifications**:
  a) Reimbursement of costs incurred on quality and IT-related certifications such as CMM, **ISO 27001**, **ISO 20000**, COPC, eSCM, with a maximum reimbursement of **INR 25L** per unit for up to 3 certifications.

- **Patent Filing Cost**:
  a) Reimbursement of up to **~100%** of actual filing costs for awarded patents, subject to a maximum of **INR 5L** for domestic patents and **INR 10L** for international patents per unit.

- **Work From Home (WFH)**:
  a) Eligibility to claim employment generation subsidy, EPF reimbursement, and other employment-linked benefits for Uttar Pradesh-based employees working from home or other premises within the state.

- **Non-Fiscal Incentives**
  - **Exemption from Inspections**:
    a) Exemption from inspections under various acts such as the Factories Act, Maternity Benefit Act, Shops & Establishments Act, and others, barring specific complaints. Units are eligible for inspection only once every 5 years.

  - **Permission for 24x7 Operations**:
    a) IT/ITeS companies are allowed to operate 24x7 and employ women in all three shifts.

Value propositions of the policy

- **Comprehensive Operating Expense Subsidies:**
  - The policy cuts down costs for GCCs by reimbursing **~10%** of operating expenses like rent, internet, data centres, and electricity, up to **INR 20cr** each year for five years. This makes Uttar Pradesh an appealing place for GCCs to set up shop without worrying too much about high overhead costs.

- **Boosting Skills**:
  - There is a great focus on skilling up the workforce. The policy offers to cover half the cost for training courses in new tech, up to **INR 50,000** per person. This ensures that employees at GCCs are well-prepared and up to date with the latest tech, driving innovation and productivity.

Limitations of the policy

- **Streamlining the Process**:
  - While the financial rewards are generous, getting them can be a bit of a hassle. Simplifying how GCCs can claim these benefits would help them get started faster and make the most out of the policy's offerings.

- **Speeding Up Infrastructure**:
  - The policy promises the development of IT Parks and IT Cities, which is great, but speeding up these projects would really help. Faster completion means GCCs can move in and get going sooner, boosting local economies quicker.

Impact of the policy

- **Strategic Spot**:
  - Uttar Pradesh is in a prime location and the policy's robust incentives package makes it an even more attractive place for GCCs. This environment encourages investment and helps the state stand out as a top choice for global companies looking to expand.

- **Encouraging Diversity**:
  - The policy is quite progressive, offering full EPF reimbursement for employing women, people from SC/ST categories, transgender individuals, and those with disabilities, up to **INR 1cr** each year for five years. This fosters a diverse and inclusive workplace culture within GCCs, which is essential for nurturing creativity and innovation.

Madhya Pradesh IT/ITeS policy 2023

The policy is designed to foster the growth and development of the Information Technology (IT), Electronic System Design and Manufacturing (ESDM), and related sectors within the state. The policy aims to promote investments, create employment opportunities, and enhance the technological capabilities of the region. It provides a range of incentives and support measures to encourage businesses to set up operations in Madhya Pradesh and leverage the state's resources and infrastructure.

Operative period of the policy

The policy came into effect on 29th September 2023 and will remain in force until the announcement of a new or revised policy. It covers a comprehensive period to ensure stability and support for the industries involved.

Scope of the policy

Encompasses development, production, and services related to software and applications. This includes services rendered through IT software or IT products in areas such as call centres, medical transcription, BPO, KPO, BPM, web aggregators, bioinformatics, IT-enabled banking, depository and security services, GIS-enabled services, IT support centres, website services, AVGC, and emerging technologies like cybersecurity, big data, AI, blockchain, and machine learning.

Targets of the policy

- **Job Creation**
  - Create **2L** new jobs in the IT/ITeS/ESDM sector in Madhya Pradesh.
- **Investment Attraction**
  - Attract **INR 10,000cr** of investment in the IT/ITeS/ESDM sector.

- **Infrastructure Development**
  - Develop **10M sq. ft.** of state-of-the-art IT parks, buildings, plug-and-play spaces/sheds across the state for the IT/ITeS/ESDM sectors.

Key Incentives

- **Capital Assistance Model**
  - **CAPEX Assistance**:
    a) Eligible units can receive **~25%** CAPEX assistance on Gross Fixed Capital Investment (GFCI).
    b) Additional assistance of **~2%** for units set up by women entrepreneurs.
    c) Disbursement in equal yearly instalments based on GFCI levels:
       - Up to **INR 10cr**: in 4 years.
       - **INR 10cr** to **INR 50cr**: in 5 years.
       - Above **INR 50cr**: in 7 years.
    d) Maximum assistance amount: INR **30cr**
    e) Expenditure reimbursement up to:
       - INR **2,000**/sq. ft or the actual lower cost for bare shell infrastructure.
       - INR **3,000**/sq. ft or the actual lower cost for furnished/plug & play spaces.
    f) CAPEX assistance is capped at **~80%** of the total built-up area developed for core activities.

- **Interest Assistance**
  - Interest subsidy of **~6%** on the interest recovered or actual rate (whichever is lower).
  - Maximum reimbursement of **INR 5cr** in 5 years.
  - Term loans from financial institutions are eligible.

- **Rental Assistance Model**
  - Eligible units leasing bare shell spaces or plug & play spaces on rental basis:
    a) Co-working Rental Assistance:
       i. Category A districts: **INR 3,000** per seat/month, up to **INR 10cr**
       ii. Category B districts: **INR 1,500** per seat/month, up to **INR 5cr**
    b) Rental Assistance:
       i. Category A: **INR 1,000**/sq. ft., up to **INR 3cr**
       ii. Category B: **INR 500**/sq. ft., up to **INR 1.5cr**
    c) Assistance provided for 3 years from the start of commercial operations.

- **Employment Generation Assistance**
  - Incentive based on the number of employees:
    a) Up to **1000** employees: INR **4,000** per employee/month.
    b) **1000-1500** employees: INR **4,500** per employee/month.
    c) **1500-2000** employees: INR **5,000** per employee/month.
    d) Up to **20** employees in rural BPOs: **INR 5,000** per employee/month.
  - Assistance provided for a maximum of **3** years, up to INR **15cr**

- **Additional Assistance**
  - **Marketing Assistance**: **~50%** subsidy on expenses for international/national events, up to INR **2L** for international and **INR 1L** for national events.
  - **Quality Certification Assistance**: **50%** cost reimbursement, up to **INR 6L**
  - **Assistance for Filing Patents**: Up to **INR 5L** for domestic patents and INR **10L** for international patents.
  - **Reimbursement of Stamp Duty & Registration Charges**: **~100%** reimbursement for eligible units.

- **Non-Fiscal Assistance**
  - Exemptions under various labour acts for IT/ITeS units.
  - Permission for women employees to work in night shifts with proper safety measures.
  - Self-certification and exemption from inspections under certain conditions.

Value propositions of the policy

- **Financial Incentives**:
  - **CAPEX and Interest Subsidies**: GCCs benefit from **~25%** CAPEX assistance on Gross Fixed Capital Investment (GFCI) up to **INR 30cr**, plus a **~6%** interest subsidy on loans. These incentives significantly reduce initial setup costs and financial burdens.

- **Infrastructure Development**:
  - **Plug-and-Play Facilities**: The policy supports the creation of ready-to-use office spaces and IT parks, reducing setup time and providing a conducive environment for GCC operations. Indore IT Park, with over **500,000 sq. ft.** of space, exemplifies this support.

Limitations of the policy

- **Skill Development**:
  - **Tailored Programs Needed**: More specific training programs are necessary to meet the specialized skill requirements of GCCs, particularly in emerging technologies like AI and machine learning.

- **Clarity on Subsidies**:
  - **Detailed Guidelines**: The policy should provide clearer criteria and streamlined processes for accessing electricity duty exemptions and power subsidies, ensuring GCCs can fully utilize these benefits.

Impact of the policy

1. **Investment Attraction**:
   - **High-Value Investments**: The policy aims to attract **INR 10,000cr** in investments over five years, making Madhya Pradesh a competitive destination for global companies to establish GCCs.

2. **Economic and Employment Impact**:
   - **Job Creation**: Targeting the creation of **2L** new jobs, the policy ensures a skilled workforce is available for GCCs, supporting their operational needs and contributing to economic growth.

Gujarat IT/ITeS Policy 2022

The policy aims to make Gujarat a leading state in the IT sector. The policy focuses on attracting investments, creating jobs, and encouraging innovation by providing various incentives and support to IT companies. It seeks to build strong IT infrastructure, develop skilled resources, and support modern technologies.

Operative period of the policy

The policy is effective from the date of the Government Resolution (G.R.) and will remain in force until **March 31, 2027**, or until a new or revised policy is declared. Only eligible entities that apply for assistance on or before **March 31, 2027**, and commence operations on or before **March 31, 2028**, will be eligible for the incentives provided through this policy.

Scope of the policy

- **Building Infrastructure**: Setting up IT Parks and IT Cities with the latest facilities to support IT businesses.

- **Encouraging Innovation**: Establishing Centres of Excellence and supporting research and development in modern technologies.

- **Developing Skills**: Offering programs and incentives to train people in advanced IT skills, making them more employable.

- **Supporting Companies**: Providing financial and non-financial incentives for new and expanding IT businesses, including subsidies, tax breaks, and help with hiring.

- **Creating Jobs**: Offering special incentives to boost local employment and ensure job creation across the state.
- **Making Business Easier**: Streamlining processes and providing support to attract and facilitate business operations in Gujarat.

Targets of the policy

- **Top Five IT States**: Position Gujarat among the top five performing states in IT in India.

- **Export Growth**: Increase the state's annual IT exports from **INR 3,000cr** to **INR 25,000 Cr.**

- **Job Creation**: Generate more than one **1L** new IT/ITeS jobs within the state.

- **National Leader in Infrastructure**: Become the national leader in world-class IT infrastructure, Data Centres, and Innovation Centres in Emerging Technologies.

Key Incentives

- **CAPEX-OPEX Model:** The policy offers fiscal incentives split into CAPEX (Capital Expenditure) and OPEX (Operating Expenditure) supports, tailored to the needs of various project categories:
  - **Category I: GFCI less than INR 250 Cr.**
    a) **CAPEX Support**: One-time support up to **~25%** of eligible CAPEX, capped at **INR 50 Cr**, disbursed in **20** equal quarterly instalments.
    b) **OPEX Support**: Annual support up to **~15%** of eligible OPEX, capped at **INR 20cr** per year for five years, disbursed in quarterly instalments.
  - **Category II: Mega Projects**
    a) **CAPEX Support**: One-time support up to **~25%** of eligible CAPEX, capped at INR **200 Cr**, disbursed in **20** equal quarterly instalments.
    b) **OPEX Support**: Annual support up to **~15%** of eligible OPEX, capped at **INR 40cr** per year for five years, disbursed in quarterly instalments.
    c) **Early Mover Advantage**: Strategic advantage for projects with GFCI of more than or equal to **INR 100cr** to attract further investments.
    d) **Enhanced Incentive Components**: Additional incentives may be provided based on the investment, employment generation, and strategic importance of the project.

- **Special Incentives for IT/ITeS Units:** In addition to the CAPEX-OPEX support, the policy offers special incentives to boost growth:
  - **Employment Generation Incentive (EGI)**
    a) One-time support for every new and unique job created in Gujarat, covering **~50%** of one month's CTC up to **INR 50,000** for males and **INR 60,000** for females. This is tied to each individual employee and can be claimed once in their lifetime.
  - **Interest Assistance**
    a) Interest subsidy of **~7%** per annum on term loans or actual interest paid, whichever is lower, up to **INR 1cr** per annum for five years.
  - **Atmanirbhar Gujarat Rojgar Sahay**
    a) Reimbursement of the employer's statutory contribution to EPF for employees working in Gujarat offices for five years:
       i. **~100%** for female employees.
       ii. **~75%** for male employees.
       iii. Capped at **~12%** of the employee's basic salary plus DA and retaining allowance.
  - **Electricity Duty Incentive (EDI)**
    a) Exemption from electricity duty for five years from the start of commercial operations or in-principal approval, whichever is later.

- **Work From Home Support:** The policy also supports employees availing work-from-home options by allowing eligible IT/ITeS units to claim EGI and Atmanirbhar Gujarat Rojgar Sahay benefits for such employees, applicable to incremental employees only.

Value propositions of the policy

- **Generous Financial Support**:
  - **CAPEX and OPEX Incentives**: The policy is particularly beneficial for GCCs due to its generous financial incentives, including a CAPEX support of up to **~25%** of eligible CAPEX expenditures, capped at INR **200cr** for mega projects. Additionally, it offers OPEX support of up to **~15%** of annual eligible OPEX expenses, capped at INR **40cr** per year for five years. These incentives help reduce the financial burden on GCCs, making Gujarat an attractive destination for setting up operations.

- **Focus on Advanced Infrastructure**:
  - **IT City and Township Support**: The policy promotes the development of advanced infrastructural facilities such as IT cities and townships. It includes relaxations in zoning and land use, assistance in obtaining statutory clearances, and infrastructure support up to the doorstep. This focus on infrastructure development provides GCCs with state-of-the-art facilities, enhancing their operational efficiency and attractiveness to global clients.

Limitations of the policy

- **Clarification and Accessibility of Incentives**:
  - **Complexity in Incentive Claims**: Although the policy offers significant incentives, there is a need for more clarity and streamlined processes to access these benefits. Simplifying these processes would help GCCs avail themselves of the incentives more efficiently and encourage more companies to consider Gujarat as a viable location.

- **Speeding Up R&D Support**:
  - **Enhancing R&D Facilities**: While the policy provides incentives for R&D activities, increasing the support for establishing R&D centres and labs, particularly those focusing on emerging technologies, would further bolster Gujarat's appeal to GCCs that are often heavily reliant on innovation and technological advancement.

Impact of the policy

- **Promoting Gujarat as a Tech Hub**:
  - **Building a Comprehensive Ecosystem**: The policy's comprehensive approach, from financial incentives to infrastructural development and a supportive regulatory environment, positions Gujarat as an emerging tech hub in India. This holistic strategy is designed to attract substantial foreign and domestic investment in the IT and ITeS sectors, further establishing Gujarat's reputation as a leading destination for global business services.

Maharashtra IT and ITeS Policy 2023

The policy is designed to establish Maharashtra as a leading state for technology and innovation. The policy focuses on attracting investments, creating job opportunities, and fostering a conducive environment for IT and ITeS companies. It aims to position Maharashtra as a global technology hub, promoting inclusive and sustainable growth in the IT sector.

Operative period of the policy

The policy is effective from **June 27, 2023**, and will remain in force until a new or revised policy is declared.

Scope of the policy

- **Infrastructure Development**:
  - Establishment of IT Parks and IT Cities.
  - Promotion of Integrated IT Townships.

- **Skill Development**:
  - Programs to enhance skills and increase employability in the IT sector.
  - Support for specialized job roles in emerging technologies.

- **Incentives for Companies**:
  - Financial incentives such as CAPEX and OPEX support, employment generation incentives, interest subsidies, and more.
  - Non-financial incentives like stamp duty exemptions, power rationalization benefits, and property tax benefits.

- **Support for Innovation**:
  - Establishment of Centres of Excellence and support for R&D in emerging technologies.
  - Promotion of start-ups and SMEs through financial support and incubation centres.

- **Ease of Doing Business**:
  - Implementation of a single-window system for approvals and clearances.
  - Simplified processes for setting up and operating IT businesses.

- **Sustainable Growth**:
  - Encouraging the use of energy-efficient technologies.
  - Incentives for green IT initiatives.

Targets of the policy

- **Investment Attraction**: Aim to attract new investments worth **INR 95,000** Cr. in the IT and ITeS sector.

- **Job Creation**: Create **3.5M** new job opportunities in the IT and ITeS sector.

- **Export Growth**: Achieve IT and ITeS exports worth INR **10T**

Key Incentives:

- **CAPEX and OPEX Support**:
  - **CAPEX Support**: One-time support of up to **~25%** of eligible capital expenditure, capped at **INR 50cr**
  - **OPEX Support**: Annual support of up to **~15%** of eligible operational expenditure, capped at **INR 20cr** per year for five years.

- **Employment Generation Incentive (EGI)**:
  - One-time support for new jobs, covering **~50%** of one month's CTC up **to INR 50,000** for males and **INR 60,000** for females.

- **Interest Assistance**:
  - Interest subsidy of **~7%** per annum on term loans, up to **INR 1cr** per annum for five years.

- **Electricity Duty Incentive (EDI)**:
  - Exemption from electricity duty for five years from the start of commercial operations.

- **Certification Assistance**:
  - **~50%** reimbursement of certification costs, limited to **INR 5L** for micro and small-scale IT units.

- **Work From Home Support**:
  - Eligibility to claim EGI and other benefits for employees working from home.

- **Essential Services Status**:
  - IT & ITeS units can operate 24x7x365 without any close-down, except in cases of government-declared exigencies.

- **Property Tax**:
  - Property tax levied at residential rates in relevant jurisdiction.

Value propositions of the policy

- **Robust Infrastructure Development**:
  - The policy places a strong emphasis on developing state-of-the-art IT parks and townships. These are not just spaces filled with tech gadgets but are designed to be ecosystems where businesses can thrive. The infrastructure push includes easy access to essential services and premium connectivity options, ensuring that GCCs can operate efficiently and without unnecessary logistical hurdles.

- **Incentives for Emerging Technologies**:
  - Maharashtra is making a big play to attract companies specializing in AI, machine learning, and big data by offering specific incentives for projects in these fields. This is not about providing cost benefits but about building an ecosystem that supports the growth and innovation in high-tech industries, making it an ideal environment for GCCs focused on technological advancement.

Limitations of the policy

- **Clarity and Accessibility of Incentives**:
  - As generous as the incentives are, there is a recurring theme that accessing these benefits can sometimes feel like you are navigating a labyrinth. Simplifying the process and making it more transparent can help GCCs leverage these incentives more effectively, which in turn will encourage more businesses to set up shop in Maharashtra.

Impact of the policy

- **Promotion of High-Value Economic Zones**:
  - By creating high-value economic zones specifically tailored for high-tech industries, Maharashtra aims to attract significant investment and foster high-skilled employment. This strategic focus not only supports the operational needs of GCCs but also contributes significantly to the local economy.

- **Focus on Quality Employment**:
  - The policy is not just about creating jobs but about creating good jobs. By aligning its goals with the demands of modern tech industries, it ensures that the workforce is not only large but skilled, making Maharashtra a hotbed for talent that GCCs can tap into

Telangana ICT policy 2.0 2021-26

The policy is crafted to enhance Telangana's appeal as a leading centre for technology and innovation, targeting not only multinationals but also local enterprises aiming to scale up their technological capabilities. This updated policy seeks to refine the region's digital infrastructure, foster a culture of innovation, and promote robust economic growth through advanced technology adoption.

Operative period of the policy

The policy covers the period from **2021** to **2026**, providing a five-year roadmap for the ICT sector's development in Telangana.

Scope of the policy

This policy encourages companies to leverage Telangana's dynamic ICT environment, which includes comprehensive support for software development, IT-enabled services, and electronics manufacturing. With a strong emphasis on advanced technologies such as AI, machine learning, and data analytics, it aims to empower companies with the tools and environment necessary for innovation and competitiveness on a global stage.

Targets of the policy

- **Employment and Education:**
  - Train and reskill **~80%** of Telangana's citizens to meet workforce requirements through local talent.
  - Generation of **25,000** jobs in Tier-II and Tier-III cities by **2026**, alongside broader goals to create **3L** jobs in the Electronics sector by **2026.**
  - Training over **50,000** students annually to enhance workforce capabilities and meet industry demands.

- **Connectivity and Technological Advancement:**
  - **~100%** of government institutions, rural, and urban households to have internet access through T-Fiber by **2026.**
  - Complete rollout of 5G technology across the state, enhancing connectivity and supporting advanced tech applications.

- **Investment and Economic Growth:**
  - **Targeting an investment inflow** aiming to generate employment of **3L** by **2026** in the Electronics sector alone.
  - Attract INR **75cr** of total investments in the Electronics sector, of which INR **25Kcr** is targeted from the EV & ESS sector.
  - Aim to double annual IT/ITeS sector exports to reach INR **3L cr.** by **2026.**

- **Digital Transformation and Service Accessibility:**
  - Over **1000** online G2C services to be made accessible through a mobile platform by **2023**, ensuring no G2C service mandates physical presence of citizens.
  - Significant expansion in digital governance tools, utilizing AI, ML, and blockchain to ensure efficient and secure service delivery.

- **Infrastructure Expansion:**
  - Development and allocation of **2K acres** of developed land for industrial parks to facilitate swift business operations.
  - Create **1.8M sq. ft.** of ready-to-occupy built-up space in E-City EMC and an additional **10L sq. ft.** of plug-and-play space.

Key Incentives

- **Digital Governance and Services Transformation**:
  - **Over 1000 G2C services provided** online, accessible through the mobile app T-App Folio, eliminating the need for physical presence.
  - Utilization of emerging technologies like AI, ML (Machine Learning), and blockchain in platforms such as **MeeSeva 2.0 and T-App Folio** to streamline service delivery.

- **Fiscal Incentives**:
  - Reimbursement of State GST to support financial sustainability for companies.
  - Electricity Duty Exemption to reduce operational costs for businesses.
  - Investment Subsidies on capital investment to encourage more businesses to invest in the state.

- **Infrastructure Development:**
  - Development of plug-and-play spaces and the **allocation of 2000 acres of developed land** for industrial parks to facilitate swift business operations and reduce the setup time for new companies.
  - Land Subsidy and Lease Rental Assistance to reduce initial setup costs and foster more investment.

- **Skill Development Initiatives:**
  - **Training over 50,000 students** annually to enhance workforce capabilities and meet industry demands.
  - Comprehensive up-skilling and re-skilling programs aimed at reducing unemployment and aiding transitions to new careers or enhancing current skill sets.
  - The **Telangana Academy of Skill and Knowledge (TASK)** will provide a skilled workforce for the industry, deploying over **18,000** trained personnel.

- **Special Incentives for Strategic Investments:**
  - Mega Project Incentives: Additional benefits for large-scale projects which can include higher subsidies and more extensive infrastructure support.

- **Research and Development Support:**
  - R&D Grants: Incentives specifically aimed at promoting research and development activities within companies.

- **Innovation and Technology Support:**
  - Emphasis on emerging technologies to prepare the workforce for future challenges.
  - Foreign language training programs to enhance global competitiveness and meet the demands of foreign markets.

Value propositions of the policy

- **GCCs and MNC Expansion:**
  - Telangana's ICT Policy 2.0 has attracted notable GCCs from global giants like **Microsoft, Google, Amazon, and Apple** due to its robust talent pool and innovation ecosystem.
  - New entrants such as **DBS Bank, Pepsi, and Goldman Sachs** have established GCCs in Hyderabad, influenced by strategic initiatives like the skill development programs offered by TASK, which provides tailored programs to GCCs at no cost.

- **Economic and Employment Growth:**
  - The policy aimed to double IT exports and significantly increase IT jobs. By 2023**, IT/ITeS exports grew by 31.44%,** reaching INR **~2.41L Cr**
  - The IT/ITeS sector saw an addition of **~1.27L** new jobs, underscoring substantial employment growth within the region bringing the total IT/ITeS employment to **~9L**, marking a year-on-year increase of **~16.29%.**

- **Infrastructure and Real Estate Development:**
  - The policy's implementation has initiated the development of over **40 smart regions** across the state, expected to boost demand for both commercial and residential real estate.
  - Plans include the establishment of new ICT Hubs and plug-and-play spaces for the electronics sector, aimed at attracting further investments and facilitating faster business setups.

Limitations of the policy

- **Resource Allocation Concerns:**
  - While Hyderabad has benefited significantly, there is concern about whether the benefits of the policy are equally reaching other parts of the state, particularly the newer IT hubs in Tier-II and Tier-III cities.

- **Implementation Delays:**
  - Certain aspects of the policy, especially those involving large infrastructure projects, have experienced delays due to bureaucratic and operational challenges.

- **Sustainability Issues:**
  - There are concerns regarding the sustainability of rapid growth, particularly the environmental impact and the long-term viability of focusing heavily on the IT sector for economic growth.

- **Risk of Over-Saturation:**
  - The influx of investments and the rapid expansion of the IT sector may lead to market saturation, potentially stifling the growth of smaller local businesses and increasing competition.

Impact of the policy

- **Economic Expansion:**
  - Targeted IT Export Growth: Aims to increase IT exports to INR **3L Cr** by 2026, marking a significant expansion from INR **~1.45L Cr**.

- **Employment Impact:**
  - Job Creation Goals: Plans to increase IT-related employment from **6L** to **10L** by **2026**, supporting broader economic growth.
- **Infrastructure Development:**
  - Smart Regions Development: Over **40** smart regions are planned to promote balanced regional growth and reduce urban concentration.

- **Innovation and Skills:**
  - Workforce Development: Aiming to train and reskill **~80%** of the state's workforce, equipping them with the necessary skills to thrive in the evolving tech landscape.

Karnataka IT policy 2020-25

The policy is designed to elevate Karnataka's status as an attractive hub for both multinational and domestic companies looking to establish or expand their GCCs, By extending the IT and ITeS (Information Technology Enabled Services,) sectors beyond Bengaluru, the policy seeks to spur regional development and leverage local talent pools across the state, creating a conducive environment for innovation and technological advancement.

Operative period of the policy

The policy is structured to be effective over a five-year period, spanning from **2020** to **2025**.

Scope of the policy

Targeting the IT and ITeS (Information Technology Enabled Services,) sectors, this policy aims to attract significant investments into software development, IT-enabled services, and electronics manufacturing. It particularly focuses on nurturing innovation through support for emerging technologies such as AI, IoT, and blockchain, thereby positioning Karnataka as a pioneering state for companies, including MNCs, seeking advanced technological ecosystems and skilled workforce to establish their specialized centres.

Targets of the policy

- **Economic Contribution:** The policy aims for the state's IT industry to contribute **~30%** towards India's goal of becoming a **US$ 1T** digital economy.

- **Employment Generation:** It seeks to achieve the generation of over **60L** direct and indirect jobs in the state throughout the policy period.

- **IT Penetration and Innovation**: The goal is to boost IT penetration and innovation across the state, strengthening the IT ecosystem in new regions beyond Bengaluru.

- **Labor Force Distribution:** Enable a remote, distributed labour force required for the IT industry, facilitating growth in various regions of the state.

- **Cyber Security Development:** The policy intends to evolve a state Cyber Security policy to implement necessary Data Protection safeguards and to create and sustain a safe and resilient ecosystem.

Key Incentives:

- **Infrastructure Development**
  - **IT Hubs/Clusters**:
    a) Financial support of up to **~20%** of fixed investment for infrastructure (excluding the cost of land), with a ceiling of **INR 3 Cr.**
  - **Co-working Spaces/Plug and Play Infrastructure**:
    a) Financial support of up to **~33%** of fixed investment for infrastructure (excluding the cost of land), capped at **INR 2 Cr.**
    b) Minimum built-up area of **15,000 sq. ft.** and a minimum occupancy rate of **~60%.**

- **Fiscal Incentives**
  - **Lease/Rental Reimbursement:**
    a) Reimbursement of INR **10 per sq. ft.**, up to a maximum of **INR 3L** for one year, applicable to IT/ITeS entities set up outside Zone 3.
  - **Mega Projects/Enterprises:**
    a) Tailor-made package of incentives for projects with an investment in fixed assets above **INR 250 Cr**, offered on a case-by-case basis.
  - **Stamp Duty Exemption:**
    a) **~75%** exemption in Mysuru, Hubballi, Dharwad, and Mangalore, and **~100%** in other zones except Zone 3.
  - **Power Tariff Concession:**
    a) Applicability of Industrial Power Tariff instead of Commercial Power Tariff for IT/ITeS industry.

- **Market Development**
  - **Quality Certification Cost Reimbursement:**
    a) **~50%** reimbursement of the cost of quality certification fee, with a ceiling of INR **6L**
  - **Marketing Cost Reimbursement:**
    a) Reimbursement of **~30%** of actual costs incurred for international marketing, up to **INR 5L** per entity.

- **Talent Development**
  - **National Apprenticeship Training Scheme (NATS):**
    a) Supports the engagement of apprentices to promote firsthand training in the industry.
  - **Yuva Yuga Program:**
    a) Focuses on reskilling and skill upgradation of the workforce affected by technological evolution.

- **Ease of Doing Business**
  - **Single Window Agency:**
    a) Karnataka Udyog Mitra acts as the single point of contact for all regulatory approvals for IT/ITeS Entities.

Value propositions of the policy

- **Economic and Employment Growth:**
  - **Investment Attraction**: The state has made considerable strides in attracting investments. Notably, Karnataka was the top recipient of FDI equity inflow in India in **FY23**, accounting for **~24% of the total,** with a substantial contribution to the state's economic infrastructure.
  - **Export Growth**: Karnataka has maintained its position as **India's largest software exporter**, with electronics and computer software exports reaching significant figures annually. The exports were robust, highlighting the state's pivotal role in India's tech export economy.
- **Infrastructure Development:**

- **Renewable Energy Initiatives**: The state has signed substantial MoUs under the 'Renewable Energy' sector, indicating robust growth in this area and supporting sustainable development.
- **Transport and Connectivity Improvements**: Investments in infrastructure, such as road projects and the enhancement of rail station facilities, have been part of the government's efforts to improve statewide connectivity.

Limitations of the Policy

- **Skill Mismatch in Local Workforce:** Despite the focus on training, there is a significant gap between the skills taught in traditional educational institutions and the evolving needs of the IT sector. Karnataka, while a hub of educational institutions, often sees a mismatch in the qualifications of its graduates and the technical skills required by the industry, potentially limiting the effectiveness of the policy's skill development initiatives.
- **Urban Infrastructure Strain:** The policy promotes the growth of IT companies in tier-2 and tier-3 cities, but these areas may not be prepared to handle rapid growth. For example, cities like Mysuru and Hubli could face challenges such as strained water resources, inadequate public transportation, and housing shortages, which could impede their ability to attract and sustain new IT businesses.

Impact of the Policy

- **Boost in Local Economies:** The policy's implementation has led to a noticeable boost in local economies of tier-2 and tier-3 cities through job creation and infrastructure development. By diversifying the locations of IT hubs beyond Bengaluru, cities like Mangalore and Belagavi are beginning to see more economic activities and opportunities for local talent, reducing the migration to bigger cities.
- **Increase in Start-Up Ventures:** Karnataka has seen an increase in start-up ventures, particularly in IT and IT-enabled services, as a direct result of policy-driven incentives and support systems. This is particularly evident in Bengaluru, which continues to strengthen its position as the Silicon Valley of India, supported by policy initiatives that encourage innovation, entrepreneurship, and incubation activities.

Tamil Nadu R&D policy 2022

The policy sets a visionary framework aimed at transforming the state into a premier hub for research and innovation. This policy not only seeks to amplify the state's historical strengths in sectors like IT and manufacturing but is strategically designed to attract MNCs and bolster local companies looking to establish or expand their GCCs and GICs. By focusing on fostering a robust environment for innovative research and development, the policy supports these entities in leveraging local talent and infrastructure for global competitiveness.

Operative period of the policy

The policy, launched in **2022**, is designed to be effective for a ten-year period.

Scope of the policy

The policy extensively covers R&D activities across various sectors, with a pronounced focus on aligning with the needs of MNCs and large Indian corporations seeking to establish GCCs or GICs. It includes incentives and support for R&D centres in core manufacturing, IT, biotechnology, and emerging technologies such as AI and IoT. Emphasizing both the development of sophisticated R&D infrastructure and the valorisation of research, the policy is crafted to make R&D outputs more accessible and commercially viable, directly appealing to global and local firms aiming to innovate and expand their technological and research capabilities in Tamil Nadu.

Targets of the policy

- **Knowledge Infrastructure:**
  - Develop Innovation Clusters across the state, anchored by an academic or research institute, to foster a collaborative ecosystem and cultivate a talent pool for high-quality jobs.
  - Establish Hi-Tech Corridors and dedicated nodes within industrial corridors to enhance sector-specific growth, especially in Chennai, Sriperumbudur, Hosur, and Coimbatore

- Create a Knowledge City in Tamil Nadu to provide high-calibre universities and educational institutions with a focus on ICT and manufacturing.

- **Industry 4.0 Platform:**
  - Launch a dedicated platform for Industry 4.0 to promote opportunities and information on advanced manufacturing and service technologies, facilitating better integration and innovation.

- **Centres of Excellence (CoEs):**
  - Promote and establish CoEs through public-private partnerships, focusing on emerging technologies to support industry-specific needs and enhance the state's manufacturing and service sectors.

- **Work Labs:**
  - Set up Work Labs under the Tamil Nadu State Council for Science and Technology to bridge the gap between academia and industry and facilitate lifelong learning programs.

- **Research Capacity Building:**
  - Enhance research capacities by increasing PhD enrolments, supporting research projects, and hosting conferences and seminars.

- **MSMEs and Start-ups:**
  - Establish around **10,000 start-ups** by **2026** with a focus on fostering regional start-up hubs and industrial innovation centres to boost local economies and innovation.

- **Funding Avenues:**
  - Leverage various funding mechanisms such as the Tamil Nadu Start-up Seed Grant Fund (TANSEED) and the Emerging Sector Seed Fund to support early-stage and sector-specific innovations.

- **National and International R&D Collaboration:**
  - Promote international collaboration to enhance the global reach and impact of local research efforts, encouraging international and national partnerships to advance state-wide R&D objectives.

Key Incentives

- **Eligibility Criteria for R&D Centres and GCCs**:
  - R&D units in manufacturing or technical services, and standalone R&D units are encouraged.
  - R&D firms must engage in innovative R&D linked directly to their core business activities.
  - Eligibility for GCCs includes requirements like being a recent or existing Forbes Global 2000 or Fortune 1000 company and creating a minimum of **500** jobs within Tamil Nadu.

- **Financial Support for Infrastructure**:
  - Up to **~25% of fixed investment** for infrastructure support for IT hubs/clusters, with a ceiling of INR **3 Cr**, excluding land costs. Facilities must meet a minimum occupancy or employment threshold.
  - Co-working spaces and plug-and-play infrastructure receive support for a minimum build-up of **15,000 sq. ft** and a **~60% occupancy.**

- **Lease/Rental Reimbursement**:
  - Reimbursement for IT/ITeS entities setting up outside Zone 3, with up to **INR 3L** overall for a period of 1 year, and additional benefits per sq. ft rates based on policy guidelines.

- **Special Incentives**:
  - Mega Projects with investments in fixed assets over **INR 250cr** may receive tailor-made incentive packages.
  - Land cost incentives include a **~50% subsidy** for purchasing or leasing land for R&D projects, capped at INR **50 L/acre.**
  - Enhanced Quality and Intellectual Property Incentives offer substantial financial support for certification and IP (Intellectual Property) costs. Reimburses **~50% of IP-related expenses**, capped at **INR 1cr** for in-house R&D and up to **INR 5cr** for standalone R&D assets.
  - Offers an electricity tax exemption for **5 years.**
  - Marketing and operational cost reimbursements to support R&D and GCC activities, including international trade shows and patent filing.

- Offers a special capital subsidy **~25%** on eligible fixed assets for highly capital-intensive R&D operations, up to **INR 25Cr.**
- Gives a **~50%** subsidy on costs incurred for obtaining various quality certifications, limited to **INR 1Cr.**
- Reimburses **~50%** of the expenses for establishing innovation labs, with a maximum support of **INR 1Cr.**
- Provides a **~50%** subsidy on the cost of specialized software licenses, capped at **INR 25L.**
- Provides a **~25%** subsidy on the cost of establishing product testing and prototyping facilities, up to **INR 1cr.**

- **Tax and Capital Goods Incentives**:
  - Exemptions on stamp duty and electricity duty for eligible IT/ITeS entities, aligned with the Karnataka Industrial Employment (Standing Orders) Rules, 1946.
  - SGST refund on capital goods as per policy specifications.

- **Innovation and Skill Development**:
  - The policy provides incentives for innovation labs, offering a subsidy for eligible R&D expenditure.
  - Financial support for prototyping and product testing to enhance product development stages.
  - Training incentives that offer INR **10K** per person per month for **12** months to employees involved in core R&D activities.

- **Regulatory and Labor Incentives**:
  - Regulatory sandbox enablement to foster innovation in various technology fields.
  - Facilitation of easier business operations through self-certification and streamlined regulatory approvals.

Value propositions of the policy

- **Private Sector Engagement:** With incentives such as capital subsidies and training, the policy encourages private sector participation in R&D, which is crucial for sustainable technological development.
- **Enhanced Infrastructure:** Significant investments in infrastructure like research parks and CoEs are planned to support advanced research and development activities.

Limitations of the policy

- **Implementation limitation:** There may be limitations in executing such an ambitious policy effectively, including potential delays in infrastructure development and the disbursement of incentives.

- **Resource Allocation:** Ensuring equitable distribution of resources across various sectors and regions could pose challenges, risking potential neglect of less prominent sectors or areas.

Impact of the policy

- **Boosting Research Capabilities:** The policy is crucial for enhancing the state's research capabilities, aiming to establish Tamil Nadu as a leader in innovation and high-tech industries.

- **Economic Diversification:** By fostering R&D in various sectors, the policy supports economic diversification, reducing dependence on traditional industries and enhancing the state's competitiveness on a global scale.

Tamil Nadu IT policy 2018

The policy focuses on promoting the IT and ITeS sector, positioning the state as a leading destination for IT investments. For GCCs, the policy aims to create a conducive environment for their establishment and growth by providing robust infrastructure, skilled workforce, and various incentives. The policy aligns with Tamil Nadu's Vision 2023, emphasizing inclusive development, innovation, and the creation of intellectual capital.

Operative Period of the Policy

The policy does not explicitly state an operative period.

Scope of the Policy

- **Infrastructure Development**: Establishing IT-specific Special Economic Zones (SEZs), IT Parks, and data centres across the state, including Tier II and III cities.
- **Skill Development**: Implementing initiatives to enhance the employability of the local workforce through training programs and partnerships with educational institutions.
- **Incentives**: Providing fiscal and administrative incentives to attract IT/ITeS companies, including capital subsidies, tax exemptions, and support for MSMEs and startups.
- **Focus Areas**: Encouraging investment in emerging technologies like AI, IoT, blockchain, and digital content creation, as well as sectors like animation, gaming, and digital entertainment.
- **Regulatory Support**: Offering a single-window clearance system and relaxation of regulatory norms to streamline the establishment and operation of IT/ITeS companies.

Targets of the Policy

- **Economic Leadership**: Making Tamil Nadu the top state in India for the IT/ITeS sector and a preferred destination for foreign investors.
- **Employment Generation**: Creating large-scale employment opportunities, particularly for youth and in rural areas.
- **Skill Availability**: Ensuring the availability of a world-class skilled workforce through focused training programs.
- **Cost-Effective Destination**: Making Tamil Nadu a cost-effective destination with competitive operating costs and a safe living environment.
- **Inclusive Growth**: Promoting the use of IT/ITeS for the overall improvement of the quality of life and fostering inclusive growth.

Key Incentives

- **Financial Incentives:**
  - **Capital Subsidy**: Up to INR 1.5cr based on investment in fixed assets and employment generation.
  - **Electricity Tax Exemption**: Exemption from electricity tax for a specified number of years based on the scale of investment and employment.

- **Support for MSMEs and Startups**:
  - **Lease Rental Subsidy**: A 10% subsidy on lease rentals, up to INR **2L** per annum for three years.
  - **Training Assistance**: Free training programs for employees through the Tamil Nadu Skill Development Corporation.
  - **Quality Certification Assistance**: Reimbursement of 50% of costs for obtaining quality certifications, up to INR **5L**.

- **Administrative Incentives**:
  - **Self-Certification**: IT/ITeS companies can self-certify compliance with various labour laws.
  - **Regulatory Flexibility**: Exemptions from certain provisions of the Tamil Nadu Shops and Establishments Act, 1947, and other labour laws.

- **Infrastructure Support**:
  - **Dedicated Power Supply**: Priority for uninterrupted power supply and dedicated feeders for high-demand units.
  - **SEZ Benefits**: Additional capital subsidy for units located in ELCOSEZs and special incentives for setting up in B and C locations.

- **Innovation and R&D**:
  - **Patent Filing Support**: Reimbursement of 50% of patent filing fees, up to INR **3L** for domestic patents and INR **5L** for international patents.
  - **Market Development Assistance**: Support for participation in exhibitions, trade shows, and marketing activities.

- **Tax Incentives**:
  - **Stamp Duty Reimbursement**: 50% reimbursement of stamp duty and registration fees for land/building transactions in C locations.
  - **SGST Refund**: Refund of State Goods and Services Tax on capital goods as per policy specifications.

- **Special Incentives**:
  - **Mega Projects**: Tailor-made incentive packages for mega projects with significant investments.
  - **Land Subsidy**: Up to 50% subsidy on land costs for R&D projects, capped at INR **50L** per acre.
  - **Quality and IP Incentives**: Financial support for obtaining quality certifications and IP-related expenses, up to INR **1cr** for in-house R&D.

Appendix B

National Policy on Information Technology 2012

The policy aims to position India as a global IT hub and leverage IT to drive growth, inclusivity, and sustainability across the nation. Recognizing the transformative power of IT, the policy seeks to enhance India's IT capabilities, promote widespread IT adoption, and address significant economic and developmental challenges. The focus areas include improving infrastructure, fostering innovation, enhancing cybersecurity, and making IT accessible to all citizens.

Scope of the Policy

- **Enhancement of IT Infrastructure:** Development of broadband infrastructure, expansion of fibre optics networks to all villages, and promotion of mobile technology.
- **Cybersecurity:** Establishing a robust cybersecurity framework and promoting the development of local security technologies to ensure a secure cyberspace.
- **E-Governance:** Mandating the provision of all government services through electronic modes to enhance transparency, efficiency, and accountability. This includes implementing the National e-Governance Plan (NeGP) and the Electronic Delivery of Services (EDS) Bill.
- **Innovation and R&D:** Encouraging research and development in emerging technologies such as cloud computing, AI, and mobile technologies, and promoting collaboration between industry and academia.
- **Digital Literacy:** Ensuring at least one individual in every household is digitally literate through various educational and skill development programs.

Targets of the Policy

- **Innovation Hubs:** Establish centres of excellence in higher education institutions to drive high-end research and innovation in specialized ICT areas.
- **Digital Inclusion:** Ensure that all public services are accessible online and promote digital literacy across all households, aiming to make at least one person in every household e-literate.

Value Propositions of the Policy

- **Economic Growth:** Aiming to triple IT and ITES industry revenues and significantly boost exports, the policy seeks to enhance India's economic footprint globally.
- **Digital Inclusion:** Ensuring at least one digitally literate person per household, promoting affordable access to IT services, and fostering inclusive growth.
- **Innovation and R&D:** Encouraging research and development in emerging technologies to maintain India's competitive edge.

Limitations of the Policy

- **Execution Complexity**: Implementing policy directives uniformly across diverse and geographically vast regions like India is inherently complex and resource intensive.
- **Cybersecurity Adaptability**: The rapid pace of technological advancements often outstrips the ability of static policies to effectively address emerging cybersecurity threats and vulnerabilities.

Impact of the Policy

- **Increased Digital Literacy**: Initiatives under the policy, like Digital India, have improved digital literacy and access to IT services, though regional disparities persist.
- **Boosted e-Governance**: The policy has driven the adoption of e-governance practices, enhancing the efficiency, transparency, and accountability of government services.

Appendix C

Global IT/ ICT Policies

Rising GCC Hub in Poland

Poland is emerging as a prominent technology innovation hub, attracting major multinational corporations like IBM, Samsung, and Intel to establish GCCs. These companies are leveraging Poland's dynamic ecosystem to drive their operations and innovation initiatives forward. Poland's prominence in the IT outsourcing domain is underscored by its ranking as the third most appealing global destination for IT outsourcing.

Poland's transformation into a technology-rich economy has been instrumental in gaining international recognition. The IT sector has witnessed substantial growth, with the country boasting 3,00,000 software developers as of **2021**, making it an ideal location for establishing Global Capability Centres.

Despite the competitive landscape within the European Union, Poland's software development industry has shown remarkable resilience and steady growth, reaching a valuation of EUR **8.8B** in **2023**. This growth underscores Poland's status as a thriving hub for technology and innovation in Central and Eastern Europe.

Global tech giants in Poland

The influx of major global IT corporations into Poland further underscores its emergence as a key IT hub. Cities

- Warsaw - Google, Microsoft,
- Krakow - IBM, Intel, Cisco,
- Wroclaw - HP, SAP,
- Gdansk - Amazon

host significant R&D centres of these multinational giants, contributing to Poland's expanding IT ecosystem.
Moreover, IT services exports form a substantial portion of Poland's IT sector, constituting approximately **70%**, underscoring Poland's attractiveness to foreign firms seeking IT services.

Poland's status as an IT talent hub is supported by its robust education system for the Global Capability Centre, which prioritizes STEM disciplines. Annually, over **15,000** students graduate from IT-related programs in Poland. This educational framework positions Poland among the top three European countries in terms of IT graduates, crucial for nurturing and sustaining IT talent.
Language proficiency is another advantage, with English widely spoken as a second language by **~30%** of the population. Poland ranks highly in the EF English Proficiency Index, reflecting its effective communication capabilities in the global IT arena (EF education first).

Strategically located in Europe and sharing time zones with many Western European countries, Poland provides logistical advantages for seamless business operations and collaboration for Global capability centres.

Poland's IT Policy

Poland's IT policy focuses on fostering digital transformation and enhancing technological capabilities. The government prioritizes digital transformation through investments in e-administration, integrating e-services with systems like the land and mortgage register, and promoting open government initiatives. Cloud computing is a significant growth area, with investments from major companies like Google, Amazon, and Microsoft, making Poland a potential colocation data centre hub in Central and Eastern Europe by **2026**. In response to frequent cyberattacks, cybersecurity is a critical focus, supported by laws to strengthen infrastructure and programs like "Digital Voivodeship" to fund local digitization and cybersecurity projects. While 5G deployment has faced delays, the government aims to establish a wholesale operator in the 700 MHz band and a Strategic Communications Operator for public administration services. The IT sector benefits from substantial EU funding, which supplements government investments directed toward digitization strategies in both public and private sectors, including software development outsourcing, R&D, data centre expansions, and automation solutions. To address the digital skills gap, the government invests in education initiatives, such as providing free laptops to students and teachers and increasing digital literacy through various programs. Overall, Poland's IT policy supports sector-specific growth in areas like manufacturing,

healthcare, retail, logistics, finance, and public administration, with emerging technologies such as IoT, cybersecurity, and cloud computing identified as high-growth areas.

Scope of the policy

The IT policy for Poland should aim to establish the country as a global leader in IT services and innovation by enhancing IT infrastructure, promoting research and development, and fostering a favourable environment for startups and SMEs, while ensuring world-class cybersecurity and data protection standards. Additionally, it should focus on improving IT education and vocational training to build a skilled workforce and attract global IT talent.

Beneficiaries of the policy

The public sector with improved e-administration and cybersecurity, the private sector with enhanced innovation and cloud services, educational institutions and students with digital literacy programs, and technology companies with investments in infrastructure. The public also benefits from better digital services and increased cybersecurity.

Value propositions of the policy

- **Economic Growth and Digital Transformation**: The focus on digital transformation in Poland's IT policy aims to boost economic growth by enhancing efficiency and productivity across various sectors, such as manufacturing, healthcare, and public administration. This is supported by significant EU funding and government initiatives.

- **Cloud Computing and Data Centres**: Investments by major tech companies like Google, Amazon, and Microsoft in cloud services and data centres are turning Poland into a colocation data centre hub in Central and Eastern Europe, fostering technological advancement and attracting further investments.

- **Cybersecurity Improvements**: With the increasing incidence of cyberattacks, the emphasis on cybersecurity infrastructure and laws to protect against threats enhances the security and resilience of both public and private sectors.

- **Support for Innovation**: Policies supporting innovation, such as public innovation grants and the creation of technology parks, help stimulate research and development activities, fostering a culture of innovation.

- **Educational Initiatives**: Investments in digital literacy and education, including providing free laptops to students and teachers, help address the digital skills gap and prepare the future workforce for a technology-driven economy.

Limitations of the policy

- **Currency Fluctuations:** Substantial fluctuations in the Polish currency affect the consistency of investment values in US$.

- **Cybersecurity Vulnerabilities:** Despite improvements, Poland remains highly vulnerable to cyberattacks.

- **Regulatory Delays:** Delays in assigning radio spectrum for 5G deployment could hinder technological advancement.

- **Talent shortage:** Despite a strong pool of IT talent, the rapid growth of the sector has created a high demand for experienced professionals, leading to a talent shortage in certain areas.
- **Economic Uncertainties:** Supply chain disruptions, economic slowdown, and high inflation could impede sector growth.

Impact of the Policy

Poland's IT policies have boosted its IT market, fostering growth in areas such as cloud computing, cybersecurity services, and IoT solutions. These policies have attracted substantial investments from global tech giants and local enterprises alike, establishing Poland as a leading technology and innovation hub in Central and Eastern Europe.

Rising GCC Hub in Mexico

Mexico is an ideal destination for establishing GCCs due to its economic strengths, abundant talent pool, and strong industry-academia collaborations. Ranked 15th globally and second in Latin America, Mexico's robust economy provides a stable environment for business operations. Strategic trade agreements with the United States and Canada ensure seamless market access, enhancing Mexico's appeal for international businesses. Furthermore, Mexico boasts the largest number of STEM graduates in the Americas, with over **1,10,000** new graduates annually from its extensive network of more than **1,250** universities and colleges. This thriving talent pool is a significant asset for companies looking to innovate and expand.

Renowned academic institutions such as Universidad Nacional Autónoma de México (UNAM), Tecnológico de Monterrey, and Instituto Politécnico Nacional have gained global recognition for excellence in fields like computer science, engineering, and technological research. These universities actively collaborate with industry leaders, fostering a dynamic ecosystem where theoretical knowledge translates into practical applications.

For instance, Microsoft's collaboration with UNAM illustrates Mexico's strong industry-academia ties. Microsoft has established laboratories within UNAM to cultivate advanced technical skills, ensuring graduates are well-prepared for the demands of Centres of Excellence (COEs) across industries.

Mexico City, Guadalajara, and Monterrey have become technology hubs, drawing in a mix of local and international talent due to their excellent infrastructure, appealing living standards, and flourishing startup ecosystems, enhancing their attractiveness as key Centres of Excellence (COEs). Major multinational corporations such as Oracle, Microsoft, Intel, and Hewlett Packard Enterprise acknowledge the strategic importance of cities like Guadalajara, particularly within the software and internet sectors. Additionally, Mexico provides cost-effective business operations relative to other global tech hubs, leveraging lower living costs and competitive salaries for skilled professionals to maximize resources while benefiting from a highly capable and motivated workforce.

Despite ongoing social challenges, the Mexican government implements proactive measures to address concerns. Initiatives like the ‘Invest in Mexico’ business centre aim to simplify foreign investment processes and create a favourable environment for international companies.
Mexico offers industry-specific options such as the Shelter model for the Manufacturing Industry and the Subsidiary-as-a-Service model for Tech companies. These models enable private investors to significantly reduce the cost of foreign operations by leveraging the vendor's economies of scale and minimizing risk exposure, all while retaining ownership of the operation. This approach has proven highly suitable for smaller Portfolio Companies looking to optimize their operations in Mexico.

Mexico’s ICT policy

Mexico's ICT infrastructure policy has significantly evolved since the **2013** structural reforms that established a new Communications Regulator and launched the National Digital Strategy. These reforms aimed to improve broadband penetration, especially in rural areas, recognizing its potential to drive economic growth and social inclusion. The government has focused on expanding both mobile and fixed broadband access, targeting a **~60%** mobile broadband penetration by **2030**. This ambitious goal requires substantial investment but promises significant GDP growth and economic benefits, with estimates suggesting a return of **25** pesos for every peso invested. The policy emphasizes removing barriers to broadband expansion and efficiently allocating wireless spectrum to support 3G and 4G network deployment.

Scope of the policy

The policy focuses on expanding internet access, improving cybersecurity, and fostering technological innovation while addressing regulatory and market challenges to create a more competitive and innovative ICT environment in Mexico.

Beneficiaries of the policy

The beneficiaries of Mexico's ICT licensing practices and proposed reforms include telecommunication companies gaining concessions for network operations and service providers benefiting from simplified regulations, fostering competition and innovation in the market.

Value propositions of the policy

- **Increased Internet Penetration:** Mexico has seen a significant rise in internet users, reaching **92M** in **2021**, which is **~71%** of the population. This growth highlights the expanding digital landscape and the increasing accessibility of the Internet to the Mexican population.
- **E-commerce Growth:** The pandemic accelerated e-commerce growth in Mexico by 37%, prompting substantial investments in infrastructure and logistics to meet the rising demand. This surge in online shopping has driven companies like Mercado Libre to expand their operations, illustrating the rapid development of the digital economy.

- **Proximity to USA**: Mexico's geographical location offers a favourable time zone for collaboration with the USA, facilitating real-time communication and efficient business operations.

- **Low-Cost Labor**: Mexico provides cost advantages with lower labour costs compared to the USA and many other countries, making it an attractive outsourcing destination.

- **Skilled Talent**: Mexico boasts a large talent pool with the largest number of STEM graduates in the Americas, supported by over **1,250** universities and colleges that produce more than **110,000** new graduates annually.

Limitations of the policy

- **Decline in Foreign Direct Investment:** Foreign direct investment in Mexico's ICT sector declined by **~15%** from **2019** to **2020**, exacerbated by economic uncertainties and regulatory issues. This decline highlights the challenges faced by the sector in attracting and maintaining international investment.
- **Regulatory and Market Barriers:** Monopolistic practices, regulatory barriers, and corruption deter smaller firms and hinder sector growth. These issues create an uneven playing field, limiting competition and innovation within the ICT sector in Mexico.

Impact of the Policy

The policy has significantly increased internet penetration and accelerated e-commerce growth but has also faced a decline in foreign direct investment and regulatory barriers, impacting the overall growth and competitiveness of the ICT sector.

Rising GCC Hub in Costa Rica

Costa Rica is renowned for its highly educated and skilled workforce, emphasizing bilingualism through initiatives such as the Costa Rica Multilingual program. This educational focus ensures a steady supply of talent proficient in languages and technical skills critical for sectors like IT, engineering, finance, and customer service.
Situated in Central America, Costa Rica benefits from a strategically advantageous location, serving as a gateway to both North and South American markets. This geographic advantage reduces logistical complexities and enhances connectivity for businesses operating regionally or globally.

Costa Rica maintains a stable political environment characterized by democracy and peaceful governance, providing a secure foundation for business investments. This stability fosters confidence among multinational corporations in the country's long-term operational reliability.
The Costa Rican government actively supports foreign investment through incentives and policies designed to attract businesses. Agencies like the Costa Rica Investment Promotion Agency (CINDE) assist companies in establishing GCCs by guiding legal frameworks, tax incentives, and administrative procedures. Additionally, Costa Rica's free trade zones offer further benefits such as tax exemptions on income, exports, imports, and other duties, enhancing its attractiveness for international firms.

Costa Rica’s ICT policy

The digital policy framework in Costa Rica, guided by the National Telecommunications Development Plan **2015-2021** and the Digital Transformation Strategy towards the Costa Rica of Bicentennial 4.0 **2018-2022**, emphasizes three pillars: digital inclusion, digital economy, and transparent/electronic government. It aims to enhance digital connectivity, promote industry 4.0 technologies, develop a digitally intelligent government, and foster human talent, supported by international collaborations and initiatives like the National Bioeconomy Strategy and ICT cooperation agreements with Estonia and the EU.

Scope of the policy

Aimed at transforming the country into a digitally inclusive, connected, productive, and innovative nation.

Beneficiaries of the policy

Costa Rica's ICT policies benefit the general population through improved internet access, businesses, and SMEs by fostering a supportive digital economy, government entities via enhanced transparency and efficiency, and educational institutions and students by promoting digital literacy and human talent development.

Value propositions of the policy

- **Skilled Workforce with STEM Education**: Costa Rica boasts a skilled workforce with a strong emphasis on education in science, technology, engineering, and mathematics (STEM), making it an attractive location for technology and innovation-driven industries.
- **Time Zone Alignment with North America**: Costa Rica's time zone alignment with North America facilitates real-time communication and collaboration, making it an ideal location for companies looking to establish or expand their GCCs in the region.
- **Advanced Mobile Broadband Subscriptions:** Costa Rica's mobile broadband subscriptions surpass regional averages, ensuring reliable and widespread digital communication infrastructure necessary for global operations.
- **Strategic National Plans:** The National Telecommunications Development Plan and Digital Transformation Strategy foster a supportive environment for technology-driven growth, benefiting GCCs by promoting digital inclusion and economic development.
- **International Collaborations:** Collaborations with countries like Estonia and entities like the European Union enhance Costa Rica's digital capabilities, cybersecurity measures, and interoperability, which are critical for the secure and efficient functioning of GCCs.

Limitations of the policy

- **Decline in High-Technology Exports:** The decrease in high-technology exports can indicate underlying economic and industry challenges that might affect the long-term sustainability and growth of GCCs.
- **Gaps in Open Government Data Policies:** Inadequate implementation of open government data policies can hinder transparency and access to critical information, impacting decision-making processes within GCCs.

Impact of the Policy

Costa Rica's ICT policies have significantly impacted the establishment and growth of GCCs by enhancing digital connectivity and fostering economic development through digital technologies. Hewlett Packard Enterprise (HPE), for example, has expanded its operations in Costa Rica, attributing its growth to the country's strong emphasis on education and a skilled workforce. HPE's investments in supply chain management and research and development have led to job creation and innovation, highlighting the positive outcomes of Costa Rica's ICT policies in attracting and supporting GCCs.

Rising GCC Hub in Malaysia

Malaysia offers significant advantages for establishing GCCs. One of the primary benefits is its cost efficiency compared to developed nations like the USA and Europe. The lower cost of living and competitive wage rates enables businesses to optimize operational expenses without compromising on quality.
Additionally, Malaysia boasts a highly skilled workforce, particularly in key sectors such as IT, finance, engineering, and customer service. The country's commitment to education and continuous upskilling ensures a steady supply of professionals proficient in global business practices.
English proficiency is widespread in Malaysia, supported by government initiatives aimed at enhancing language skills. This linguistic advantage facilitates seamless communication within global teams and with international clients, thereby enhancing operational efficiency.
Strategically located in Southeast Asia, Malaysia provides easy access to major markets in the Asia-Pacific region. This geographic advantage simplifies logistical operations and enhances connectivity for regional and global business activities, making it an ideal location for GCCs.
Malaysia's supportive business environment further enhances its appeal. The government actively promotes foreign investments through initiatives like the Malaysia Digital Economy Corporation (MDEC) and the Multimedia Super Corridor (MSC Malaysia). These programs offer incentives, infrastructure support, and streamlined processes for establishing and operating GCCs.
Moreover, Malaysia has invested in robust digital infrastructure, including designated technology zones like Cyberjaya and Cyber Centre, equipped with advanced facilities tailored for IT and digital operations. These areas support innovation and technological advancement crucial for modern GCCs.
The country's stable political environment and pro-business policies create a conducive ecosystem for long-term investments. Initiatives by agencies such as PIKOM and MDEC further strengthen the outsourcing and technology sectors, promoting growth and competitiveness.

Malaysia’s ICT policy

Malaysian government's MyDIGITAL initiative, part of the Malaysia Digital Economy Blueprint, aims to transform Malaysia into a digitally driven, high-income nation and a regional leader in the digital economy by **2030**.

Scope of the policy

Aiming to transform various aspects of the country's economy and society through digitalization.

Beneficiaries of the policy

The beneficiaries of Mexico's ICT policies include Mexican citizens who gain better internet access and digital services, especially through the Internet para Todos initiative; Mexican businesses that benefit from improved digital infrastructure and cybersecurity, boosting e-commerce and economic growth; foreign investors who find an appealing environment due to enhanced regulatory frameworks and opportunities in Mexico’s expanding digital economy; and the public and private sectors, which gain from partnerships fostering technological innovation and competitive market dynamic.

Value propositions of the policy

- **Robust Cybersecurity Measures**: The Malaysian government highlights its strong commitment to cybersecurity through initiatives such as the Malaysia Cyber Security Strategy (MCSS). Significant investments bolster cybersecurity measures, creating a secure digital environment for GCCs. This stability is vital for multinational corporations looking to establish GCCs in Malaysia, ensuring the protection of sensitive data and intellectual property.

- **Innovation and Advanced Technologies**: Emphasizing the integration of AI and other advanced technologies in cybersecurity solutions, Malaysia creates opportunities for GCCs to innovate and offer state-of-the-art security services. This positions Malaysia as a strategic hub for cybersecurity operations within the region.

- **Attraction of Foreign Investment**: Malaysia's robust cybersecurity infrastructure attracts foreign investment, ensuring the country remains a competitive and appealing destination for global corporations.

- **Skilled Workforce**: Malaysia boasts a highly skilled workforce with strong expertise in IT and cybersecurity. Continuous government and private sector initiatives focus on upskilling and reskilling talent in advanced technologies.

- **Strategic Corridors**: Malaysian economic corridors, such as the Multimedia Super Corridor (MSC), provide world-class infrastructure and a conducive business environment. These corridors support the growth and development of GCCs by offering special incentives and facilities.

- **Access to Major Markets**: Malaysia's strategic location provides convenient access to major markets across the Asia-Pacific region. This proximity enhances business operations and facilitates efficient supply chain management for GCCs.

Limitations of the policy

- **Data Systems Integration**: Despite government incentives and initiatives such as the Industry Digitalization Transformation Fund, integrating diverse digital platforms and technologies into operations seamlessly may pose implementation complexities.

- **Rapid Technological Advancements**: Continuous adaptation and investment in talent and infrastructure are imperative to keep pace with rapid advancements in AI, IoT, and blockchain. GCCs must remain updated with emerging digital technologies to sustain a competitive advantage.
- **Talent and Training Needs**: Addressing potential gaps in local expertise may necessitate extensive training programs to effectively leverage modern technologies. Ensuring a skilled workforce capable of handling advanced digital technologies poses a significant operational challenge.

- **Operational Complexities**: Successfully navigating the complexities of digital transformation demands strategic planning and substantial resources. Effectively managing these challenges is pivotal for ensuring the long-term success and sustainability of GCCs in Malaysia.

Impact of the policy

The impact of Mexico's ICT policies includes increased digital connectivity and internet access, particularly through the Internet para Todos initiative, which aims to bridge the digital divide in rural areas. These policies have spurred growth in the digital economy, enhanced cybersecurity measures, and attracted foreign investment by creating a more competitive and regulated market environment. However, challenges such as budget cuts and regulatory constraints under President López Obrador have hindered the full potential of these policies, affecting the effectiveness of regulatory bodies like the IFT, and limiting the overall growth and security of the ICT sector.

Rising GCC hub in USA

United States boasts the world's largest advanced economy consumer market, with a GDP of US$ **25T** and a population of **335M**. Household spending in the U.S. accounts for nearly one-third of global household consumption, underscoring its immense economic influence. Facilitated by free trade agreements with 20 countries, U.S. exporters enjoy access to additional markets comprising over **790M** consumers. This expansive trade network, coupled with the U.S.'s leadership in consumer goods research, innovation, manufacturing, and marketing, positions it as a pivotal hub for global business operations. The country's efficient export procedures, recognized by the World Bank, further bolster its appeal as a prime destination for establishing export-oriented operations, exemplified by U.S.-based affiliates of foreign companies exporting goods valued at over US$ **370B** annually.

The United States stands out globally for its competitive business environment and robust regulatory framework, which promotes entrepreneurship and ensures fair competition, making it highly attractive for foreign direct investment (FDI). With a commitment to transparent legal processes and a predictable business environment, successive administrations have emphasized equality and openness, solidifying its position as a leading global economic player.

The country boasts a diverse and highly productive workforce, surpassing OECD averages by over **~30%**. Supported by a strong education system—from robust K-12 schooling to advanced colleges and universities—over **~40%** of adults pursue post-high school education. The U.S. also offers extensive vocational training opportunities, with collaborative efforts between the public and private sectors enhancing workforce adaptability through job training and apprenticeship programs. In addition to its economic strengths, the U.S. benefits from expansive natural resources across its vast land area, including energy sources such as petroleum, natural gas, coal, and renewable energy options. It leads globally in the production of metals and minerals, supports extensive forest areas, and maintains agricultural innovation on **2.3B** acres of farmland, cementing its status as a major food producer and exporter.

Furthermore, the U.S. boasts the world's most dynamic and efficient financial markets, offering unparalleled access to capital through diverse funding sources. From traditional banks to investment firms, venture capitalists, and private equity, the financial sector manages substantial assets and provides extensive financial services, including strategic advice on capital raising, mergers, and acquisitions. This comprehensive ecosystem supports a wide spectrum of investment opportunities, driving business innovation and growth across various sectors.

USA ICT policy

The United States' ICT policy focuses on maintaining its leadership in innovation and technology through several key strategies. It emphasizes the importance of federal funding for ICT research, advocating for multi-year research plans and significant investments in basic research, exemplified by initiatives like the $3B Wireless Innovation Fund (WIN). The policy also aims to enhance broadband deployment across urban and rural areas to ensure widespread access. Furthermore, it fosters technological innovation across various sectors, improves coordination among federal agencies conducting ICT research, and encourages private investment through tax incentives and supportive regulations. This comprehensive approach supports continuous advancement and integration of ICT infrastructure and services, positioning the U.S. as a global leader in the digital landscape.

Scope of the policy

The scope of the U.S. ICT policy aims to foster a robust research ecosystem through federal funding, enhance broadband deployment across urban and rural areas, encourage technological innovation, and improve coordination among federal agencies conducting ICT research while promoting private investment through tax incentives and supportive regulations.

Beneficiaries of the policy

The beneficiaries of the U.S. ICT policy include GCCs, which benefit from the advanced ICT infrastructure, skilled workforce, and supportive regulatory environment. The private sector and startups gain from R&D tax credits and support for innovation and commercialization, making the U.S. an attractive location for setting up GCCs. The public enjoys enhanced access to advanced ICT services, facilitating better communication and public services. Additionally, government agencies benefit from better coordination and funding, leading to more effective use of ICT in public safety, health, and other critical areas.

Value propositions of the policy

- **High-Quality ICT Infrastructure**: The U.S. boasts one of the most advanced ICT infrastructures in the world, essential for the smooth operation of GCCs.
- **Skilled Workforce**: Access to a large pool of highly skilled professionals, particularly in technology and engineering, supports the staffing needs of GCCs.
- **Increased Funding for Research**: Federal and private investments in ICT research help maintain U.S. leadership in innovation, providing a conducive environment for GCCs.
- **Tax Incentives and Supportive Regulations**: R&D tax credits and a favourable regulatory environment promote private sector investment in long-term research and development, which benefits GCCs.

Limitations of the policy

- **Talent Cost**: The USA has higher labour costs compared to other regions, making it more expensive to hire and retain talent. Salaries for skilled professionals, especially in tech-related fields, are significantly higher.

- **Market Competition and Economic Pressures**: Intense competition and economic challenges may lead to underinvestment in long-term, basic research by the private sector.

- **Regulatory Barriers**: The complex and temporary nature of tax credits and regulations can hinder long-term research and investment strategies.

- **Global Competition**: Other nations aggressively investing in ICT R&D threaten U.S. leadership and could divert R&D investments away from the U.S.

Impact of the Policy

The U.S.'s leadership in technological innovation, coupled with a highly skilled workforce and a strong ecosystem of universities and tech companies, makes it an ideal location for GCCs. Advanced ICT infrastructure and supportive regulatory and financial incentives further enhance the viability and operational efficiency of GCCs in the U.S.

Appendix D

ER&D GCC's Global Initiatives/Support

Poland for Engineering R&D GCC's

Key Policy Aspects

- **Talent Pool:** Poland's robust educational system consistently produces many highly skilled graduates, particularly in STEM fields, contributing to a significant talent pool. With **360,000** IT specialists, the country boasts a substantial workforce well-suited for engineering R&D.
- Government Advantages: **Cost Reduction and Innovation Incentives:** Poland offers various grants and tax advantages, such as the IP Box and Relief for Research and Development, to lower costs and promote innovation.
- Strategic Location as a **Central European Hub:** Poland's central location in Europe, coupled with its advanced transportation and technology infrastructure, provides strategic access to markets in both Western and Eastern Europe.
- Cost-Effectiveness**: As compared to many other European nations, Poland offers lower living and operating expenses, allowing more funds to be allocated to R&D projects.**

Limitations of the Policy

- **Bureaucracy and Compliance**: Reliance on regional consultants to manage regulatory processes can be challenging.
- **Language and Cultural Barriers**: Requires significant investment in language and cross-cultural training.
- **Rapid Technological Changes**: Necessitates ongoing collaboration with local tech clusters and universities to stay current with technological advancements.
- **Recruitment**: Dependent on specialized recruitment firms and the implementation of targeted recruitment strategies.
- **Maximizing Government Resources**: Requires active participation in initiatives that support research and development.

USA for Engineering R&D GCC's

Key Policy Aspects

- **Support for New Enterprises and SMEs:** The US provides legislative, financial, and innovative service support. Public policies encourage entrepreneurship, risk-taking, and technological change, crucial for industries with rapid technological advancements. The **Sherman Act** (1890) and subsequent laws like the **Clayton Act** and the **Small Business Act** (1953) laid the foundation for anti-monopoly and small business support. The Department of Defence ensures small and medium enterprises (SMEs) participate in defence-related technological innovation through various regulations and programs.

- **Science and Technology Innovation (STI) Policy:** Policies are structured around promoting scientific knowledge production, economic growth, and addressing social and environmental challenges. Despite uncertainties, such as those introduced by changing administrations, STI policies aim to balance various priorities, from infrastructure to manufacturing revitalization.

- **Immigration and Talent Flow:** The US attracts many highly skilled immigrants, including students, Nobel laureates, and inventors. Talent clusters in the US enhance productivity through proximity and professional networks, making it a hub for innovation.

- **Technological and Energy Innovation:** Policies stimulate industries with high development potential and economic contributions. The policy framework includes legal, fiscal, tax, and service systems that support scientific and technological innovation, providing a conducive environment for R&D. The US government

uses various policy instruments, including financial subsidies, low-interest loans, and tax incentives, to promote innovation.

- **Technology Transfer and Financial Support:** The **Patent and Trademark Act** amendment (1980) and the **Technological Innovation Act** emphasize technology transfer from government-funded R&D to private enterprises. The **National Cooperative Research Act** (1984) and the **Federal Technology Transfer Act** (1986) encourage collaboration between national laboratories and industry to promote technology transfer and commercialization. The **Small Business Innovation Research (SBIR) program** and the **Rapid Innovation Fund (RIF) program** by the Department of Defence support SMEs in technological innovation through funding and guidance.

- **Intellectual Property Rights:** Effective management of intellectual property (IP) is critical for knowledge-intensive activities. IP is used as a financial asset, and companies invest significantly in IP management and training. Policies like the **Federal Technology Transfer Act** (1986) and initiatives by President Bush in 1990 to issue exclusive patent licenses to private enterprises enhance the creation, application, transfer, and commercialization of patents, improving R&D efficiency.

Value proposition of the Policy

- **Support for High-Tech Industries:** Government policies utilize the characteristics of the American business environment, enabling new enterprises to identify and exploit research fields effectively.
- **Talent Attraction and Retention:** The US remains a top destination for skilled immigrants, contributing to its innovation ecosystem.
- **Strong IP Framework:** Robust IP laws and policies encourage innovation and protect inventors, ensuring a secure environment for R&D investments.

Malaysia for Engineering R&D GCC's

Key Policy Aspects

- **Government Commitment to R&D:** The National Policy on Science, Technology, and Innovation (NPSTI) 2021-2030 outlines strategies to achieve the country's STI aspirations, with goals to increase gross domestic expenditure on R&D (GERD) to 2.5% by 2025 and 3.5% by 2030. The government approved 99 projects in research, development, and innovation for RM 5.6B in 2021-2022, showing a strong commitment to R&D investments.

- **Financial and Tax Incentives:** The Malaysian Business Angel Policy supports technology entrepreneurs through the Cradle Fund, offering funding, advisory support, and tax incentives for angel investors. It aims to nurture the local entrepreneurial ecosystem rather than facilitate multinational operations via GCCs.

- **Public-Private Collaboration:** Malaysia prioritizes collaborations between the private sector, academia, and government to streamline R&D facilitation and enhance commercialisation. The Research Management Unit (RMU) within the Prime Minister's Department Monitors R&D quality, ensuring over 50% of R&D funds aid experimental development with commercial potential.

- **Strong Innovation Ranking:** Malaysia is ranked 36th in the Global Innovation Index (GII) 2023 and is the 2nd most innovative upper middle-income economy driven by strong tertiary education, sophisticated capital markets, and a thriving private sector.

- **Sector-Specific Growth:** The Electrical & Electronics (E&E) sector, especially semiconductors, is highlighted as a key area of growth, with Malaysia outperforming global trends in shipments and sales. The E&E sector's performance highlights Malaysia's capability in technology growth across industries.

- **Comprehensive Support and Infrastructure:** MIDA provides comprehensive support to businesses, including dedicated resources, a wide range of facilities, and consultation services. Various incentives like R&D Status, Contract R&D Company, R&D Company, and In-House R&D cover the innovation process from start to finish.

- **Global Presence and Reach:** MIDA's global presence ensures support and facilitation for businesses looking to invest in Malaysia.

Value proposition of the policy

- **Grants & Financial Assistance:** Malaysia provides grants and cash to assist with research and development. The MESTECC R&D Fund, which is offered by the Ministry of Energy, Science, Technology, Environment & Climate Change (MESTECC), provides funding for initiatives that aim to advance societal benefits and economic progress (Malaysia R&D).

- **Tax Breaks:** Malaysian businesses conducting research and development can take advantage of significant tax breaks. These include the Investment Tax Allowance (ITA), which provides a 100% allowance on qualified capital expenditure for ten years (Malaysia R&D), and Pioneer Status, which offers a 100% income tax exemption for five years.

- **Release from Import Taxes:** If a company is engaged in research and development (R&D), import duties are not applied to machinery, equipment, samples, materials, and components that are utilized directly in R&D if they are not made locally

- **Ownership of 100% Foreign Equity:** For R&D firms and contract R&D firms, including design houses eligible for incentives under the Promotion of Investments Act, Malaysia permits 100% foreign equity participation. This facilitates the establishment of foreign R&D activities in Malaysia (Malaysia R&D) and promotes foreign investment.

- **Highly Qualified Staff:** With a growing number of STEM graduates and a workforce well educated overall, Malaysia is well-positioned to benefit from government initiatives and excellent academic institutions that match industry demands with educational programs. As a result, there will always be a skilled labour pool available for Malaysian R&D projects.

- **Encouragement of Global Cooperation:** Research and development collaborations between Malaysian scientists and foreign collaborators are encouraged by the International Collaboration Fund (ICF). Enhancing research capability, boosting competitive R&D initiatives, and advancing technological developments are the goals of this fund (Malaysia R&D).

Costa Rica for Engineering R&D GCC's

Key policy aspects

- **Strategic Human Capital:** Costa Rica boasts a highly skilled and educated workforce, particularly in technical fields. The country has a strong emphasis on education and vocational training, ensuring a steady supply of qualified professionals for R&D activities. Costa Rica has robust academic partnerships that support R&D through collaboration with universities and research institutions, ensuring a pipeline of talent and innovative ideas.

- **Innovation and Technological Capabilities:** Costa Rica focuses on advanced technologies such as AI, machine learning, VR/AR, cloud computing, robotics, big data/analytics, cybersecurity, UX/UI, IoT, 3D printing, automation/RPA, and new materials. This makes it a hub for innovative research and development. The presence of leading global companies like Intel, Boston Scientific, and HPE in Costa Rica highlights its capabilities in handling sophisticated R&D tasks and projects.

- **Supportive Ecosystem and Government Incentives:** Costa Rica offers attractive fiscal incentives under the Free Trade Zone regime, including tax exemptions and other benefits that significantly reduce the cost of operations. The government actively promotes R&D through incentives and regulatory support, ensuring a conducive environment for innovation.

- **Strategic Location and Connectivity:** Costa Rica's strategic location provides excellent connectivity to North and South America, Europe, and Asia, facilitating global collaboration and distribution. The country's

customer-centric culture ensures that R&D outputs are not only innovative but also highly relevant to market needs.

- **Environmental and Quality of Life Factors:** Costa Rica is known for its commitment to environmental sustainability, which aligns with the values of many global companies. The high quality of life in Costa Rica attracts and retains top talent, ensuring long-term stability for R&D operations.

- **Robust R&D Infrastructure:** Companies in Costa Rica benefit from advanced R&D infrastructure, including specialized labs and research centres that support diverse fields such as engineering, technology, and medical sciences. CINDE, the Costa Rican Investment Promotion Agency, provides comprehensive support to businesses, from initial setup to expansion, ensuring seamless integration into the local R&D ecosystem.

Limitations of the policy

- **Regulatory and Administrative Difficulties:** Getting around municipal laws and bureaucracy can be difficult and time-consuming. This entails complying with labour rules, handling intellectual property laws, and acquiring the required approvals for research and development activities.

- **Infrastructure Restraints:** Even though Costa Rica's infrastructure has improved significantly, there are still shortcomings, especially outside of large cities. There may not be as strong of a transit network, high-speed internet, or reliable energy as in more developed nations.

- **Language Disparities:** Even though Spanish is the official language, and English is the most often spoken language, communication difficulties can still arise when conducting daily business and interacting with suppliers and local government.

- **Compliance and Taxation:** In Costa Rica, taxes can be onerous, particularly corporate income tax and social security obligations. Maintaining tax compliance and reporting obligations can increase a GCC's administrative cost.

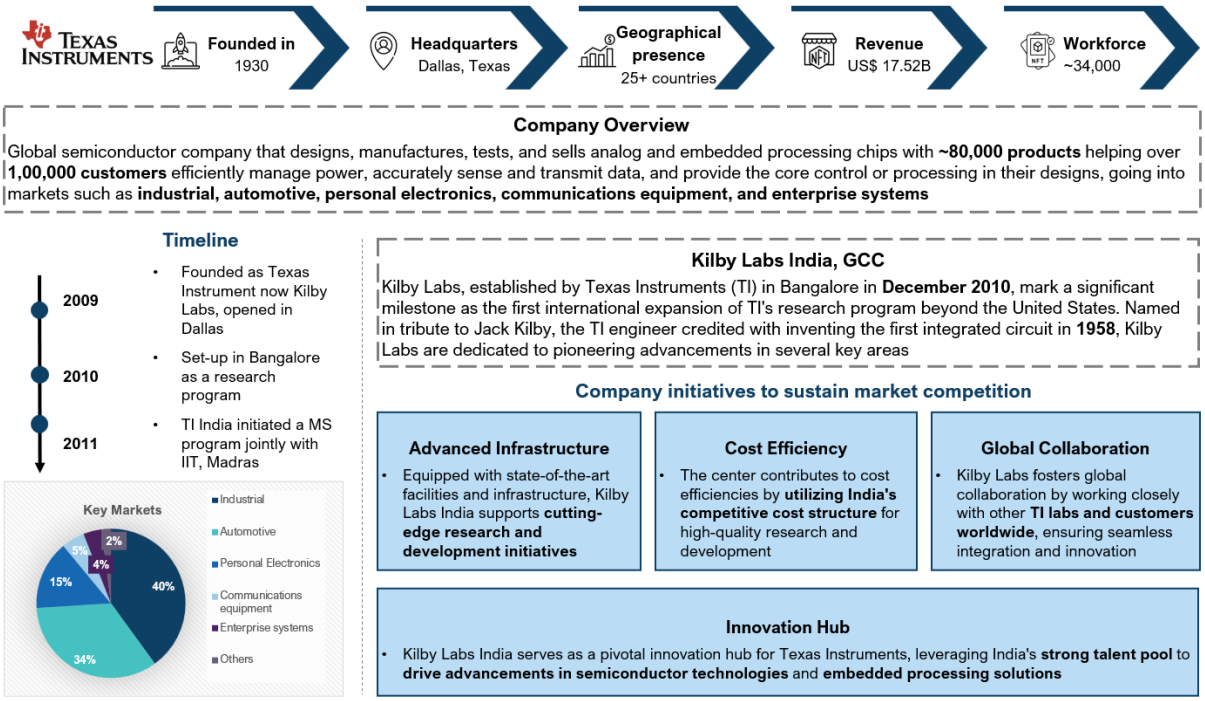
- **Living Expenses:** Compared to many other Latin American nations, Costa Rica has higher living expenses, which may influence foreign employees and the GCC's total cost structure.

Appendix E

Case Studies

Case Study 1: Kilby Labs Bengaluru: Expanding Texas Instruments' Global Research and Innovation

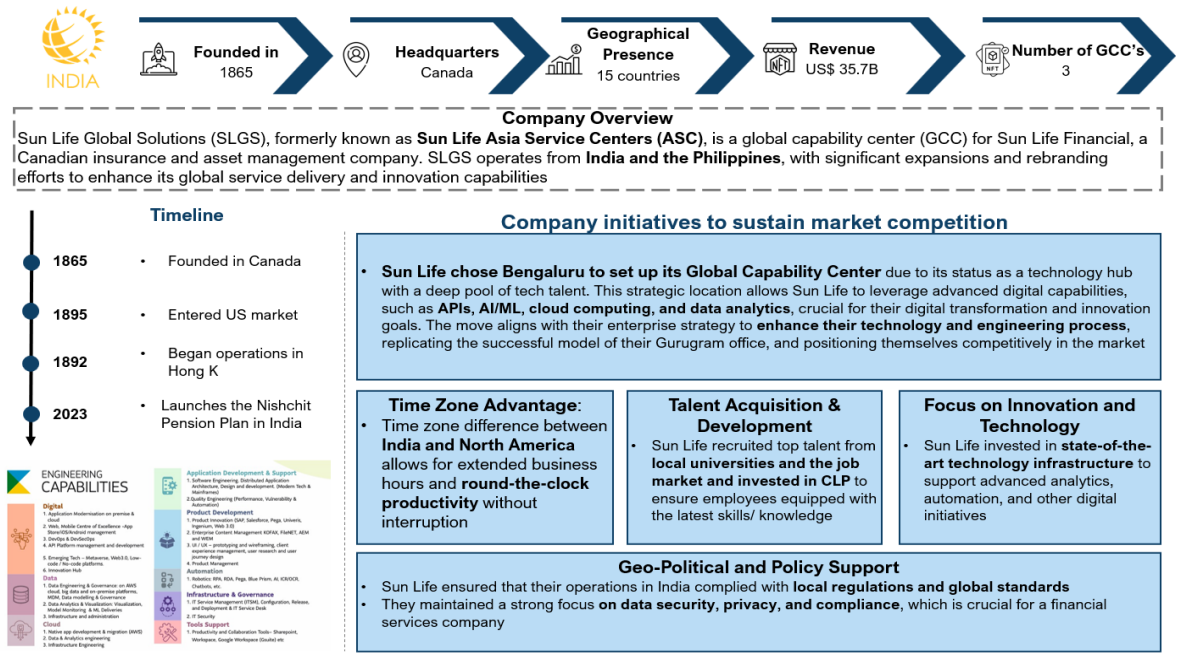
Figure 21: Case Study 1



Source(s): Company website, 1Lattice analysis

Case Study 2: Sun Life Global Solutions: Empowering Through Innovation at its GCC in India

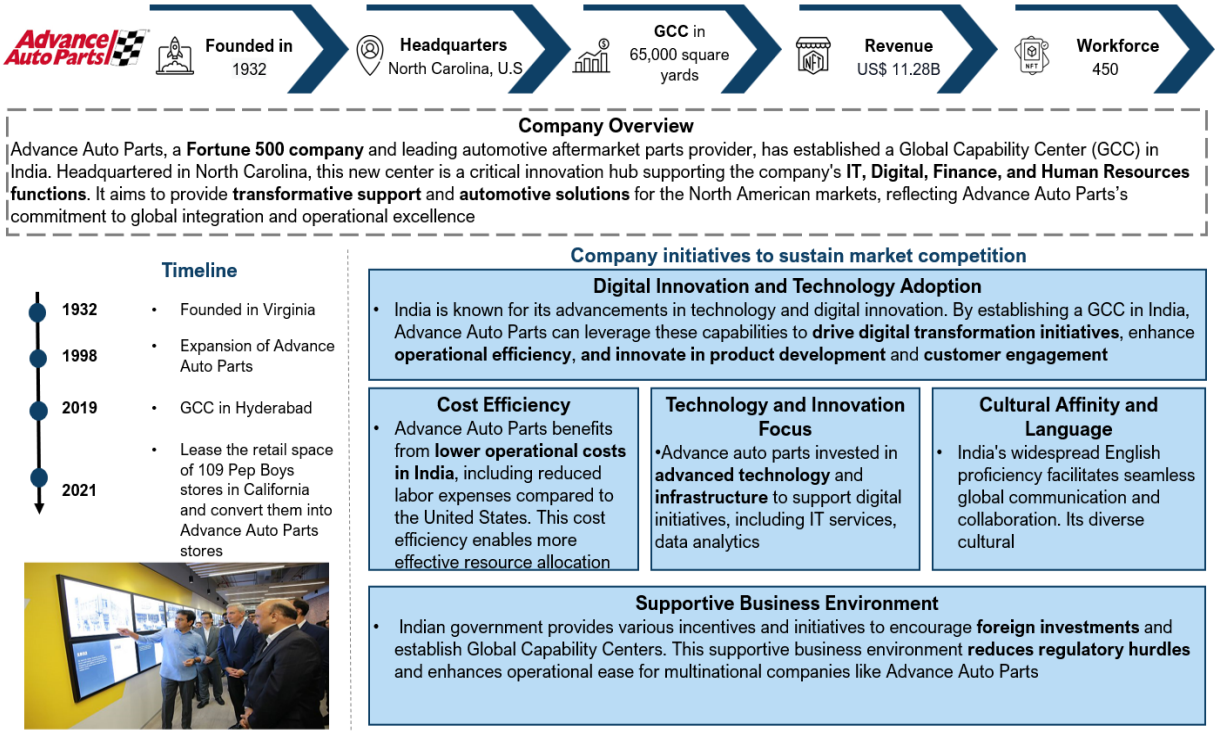
Figure 22: Case Study 2



Source(s): Company websites, media reports, 1Lattice analysis

Case Study 3: Advance Auto Parts: Empowering Through Innovation at its GCC in India

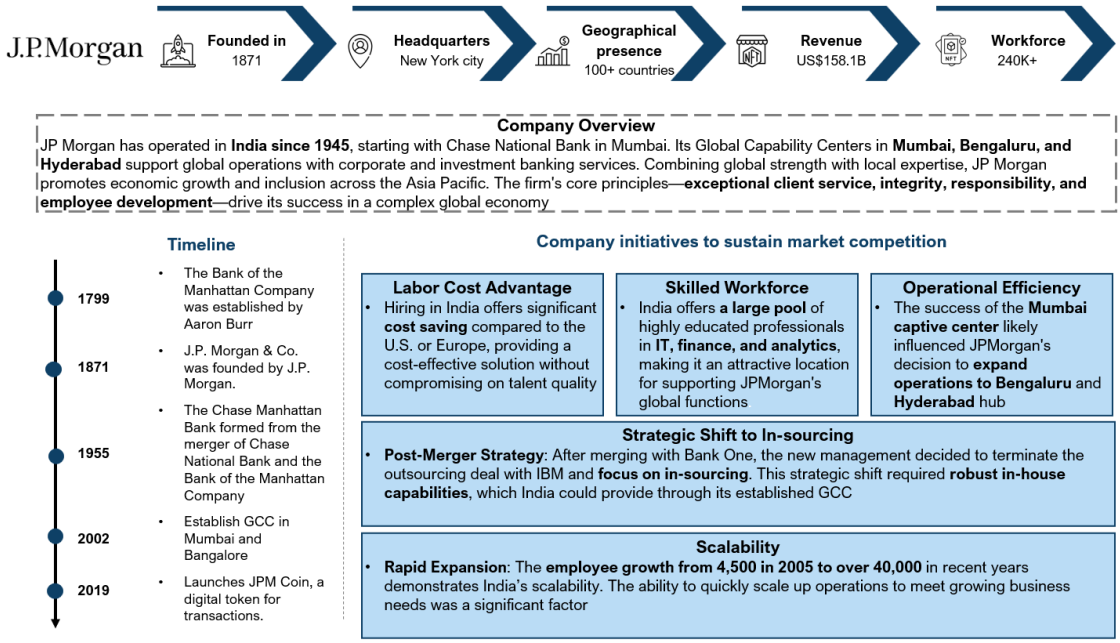
Figure 23: Case Study 3



Source(s): Company websites, media reports, 1Lattice analysis

Case Study 4: Empowering Global Finance: JP Morgan's GCC in India Driving Innovation and Excellence

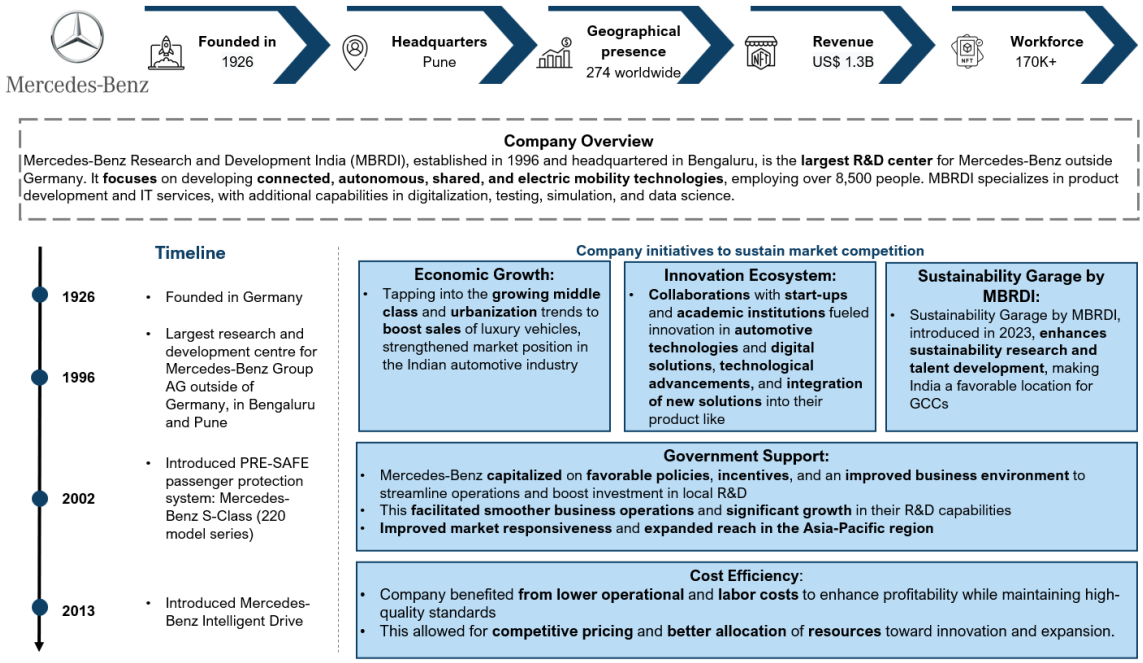
Figure 24: Case Study 4



Source(s): Company websites, media reports, 1Lattice analysis

Case Study 5: Mercedes-Benz Research and Development India (MBRDI)

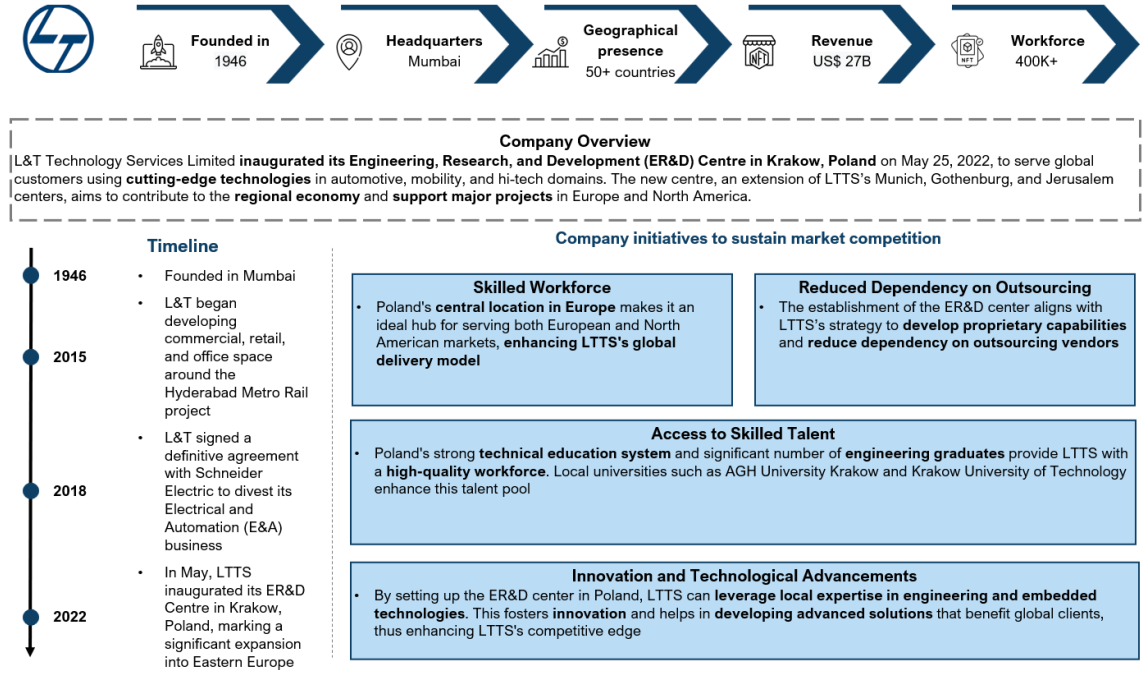
Figure 25: Case Study 5



Source(s): Company websites, media reports, 1Lattice analysis

Case Study 6: L&T Technology Services opens a new Engineering R&D Center in Poland to offer Embedded and Digital Solutions to clients

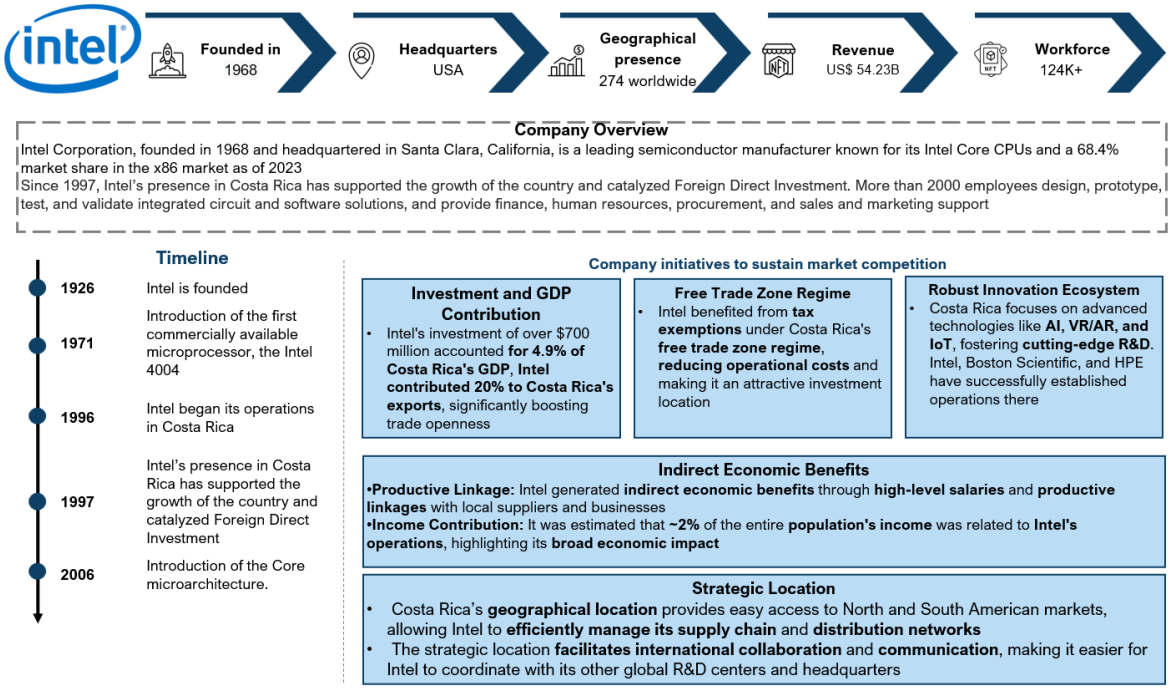
Figure 26: Case Study 6



Source(s): Company websites, media reports, 1Lattice analysis

Case Study 7: Empowering Innovation: Intel's Journey in Costa Rica

Figure 27: Case Study 7



Source(s): Company websites, media reports, 1Lattice analysis

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List of Abbreviations

AI	Artificial Intelligence
AVGC	Animation, Visual Effects, Gaming, and Comics
BFSI	Banking, Financial Services, and Insurance
B	Billion
BPM	Business Process Management
BPO	Business Process Outsourcing
CAGR	Compound Annual Growth Rate
CAPEX	Capital Expenditure
CINDE	Costa Rican Investment Promotion Agency (Corporacion Inversionista de Desarrollo de Costa Rica)
CMM	Capability Maturity Model
CoE	Centre of Excellence
COPC	Customer Operations Performance Centre
CTC	Cost to Company
DA	Dearness Allowance
DBS	Digital Business Services
DESH	Development of Enterprise and Service Hubs
DIA	Digital India Awards
DIGITAL	Development, Innovation, Growth, Intelligence, Technology, Advancement, and Leadership
DITEC	Department of Information Technology and Communication
E&M	Electronics and Manufacturing
EDI	Electronic Data Interchange
EGI	Employment Generation Incentive
EMC	Electronics Manufacturing Cluster
EPF	Employees' Provident Fund
ER	Enterprise Resource
ER&D	Engineering Research and Development
ESDM	Electronic System Design and Manufacturing
ESS	Employee Self-Service
EU	European Union
EV	Electric Vehicle
EVP	Employee Value Proposition
FCI	Fixed Capital Investment
FDI	Foreign Direct Investment
GCC	Global Capability Centre
GDP	Gross Domestic Product
GDPR	General Data Protection Regulation
GFCI	Gross Fixed Capital Investment
GIC	Global In-house Centre
GIFT City	Gujarat International Finance Tec-City
GIS	Geographic Information System
GST	Goods and Services Tax

HANS	Haryana Network for Surveillance
HEPB	Haryana Enterprise Promotion Board
HPE	Hewlett Packard Enterprise
HR	Human Resources
ICT	Information and Communication Technology
INR	Indian Rupee
IP	Intellectual Property
ISO	International Organization for Standardization
IT	Information Technology
ITeS	IT-enabled Services
KPO	Knowledge Process Outsourcing
MCSS	Master Control and Switching System
MDEC	Malaysia Digital Economy Corporation
M	Million
ML	Machine Learning
MNC	Multinational Corporation
MSC	Multimedia Super Corridor
MSDP	Market Systems Development Program
MSME	Micro, Small, and Medium Enterprises
NATS	National Apprenticeship Training Scheme
OECD	Organisation for Economic Co-operation and Development
OPEX	Operational Expenditure
PHDCCI	PHD Chamber of Commerce and Industry
PIKOM	The National ICT Association of Malaysia
PPP	Public-Private Partnership
R&D	Research and Development
SC	Scheduled Caste
SCM	Supply Chain Management
SEZ	Special Economic Zone
SGST	State Goods and Services Tax
SME	Small and Medium Enterprises
SRDB	Supplier Registration and Data Base
ST	Scheduled Tribe
STEM	Science, Technology, Engineering, and Mathematics
TANSEED	Tamil Nadu Startup Seed Grant Fund
TASK	Telangana Academy for Skill and Knowledge
TTZ	Taj Trapezium Zone
UNAM	Universidad Nacional Autónoma de México
UP	Uttar Pradesh
UPLC	Uttar Pradesh Electronics Corporation Limited
US	United States
USA	United States of America
WFH	Work From Home
WIN	Wireless Innovation Fund

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