# SKILLING FOR GAINFUL EMPLOYMENT IN THE IT/ITES SECTOR

**Article**

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*The Indian IT/ITES sector has been witnessing steady growth in recent years, propelled by the emergence of Industry 4.0 and the government's push for a Digital India. Increasing digitization across domains, particularly in a post-pandemic scenario, has made IT skills essential for a market-ready workforce. A multi-stakeholder approach towards skilling interventions at various levels can realize the opportunities that this sector presents.*

Information technology has evolved rapidly in recent years – a development marked predominantly by the emergence of Industry 4.0 worldwide. In India, growth in IT has been complemented by increasing internet penetration and ease of internet access in recent years. Digitization is being prioritized in commerce and governance, be it small businesses, local administration or large-scale operations. The push for a Digital India – encompassing social welfare, banking, health, education and other arenas – underscores the predominance of IT in public systems. COWIN, Aadhar and BHIM UPI are now three of the world's largest public digital

platforms[1]. In the wake of the Covid-19 pandemic, IT and IT-enabled services (ITES) have been further cemented as indispensable for the functioning of the public and private organizations, irrespective of the sector.

Policy-level initiatives that focus on ramping up IT infrastructure and last-mile digitization have also fuelled the growth of this sector in recent years. BharatNet, for instance, aims to connect all 250000 Gram Panchayats in the country with high-speed broadband. As the world's largest rural broadband connectivity programme, it will also be an enabler for other Digital India initiatives. This is complemented by initiatives such as the Simplified Other Service Provider Guidelines (2020) aimed towards improving the ease of doing business in IT/ITES and BPO sectors, and the National Policy on Software Products (2019). Of special note is the MoU signed between India and Japan to enhance cooperation in the area of 5G technology, telecom security and submarine optical fibre cable systems[2].



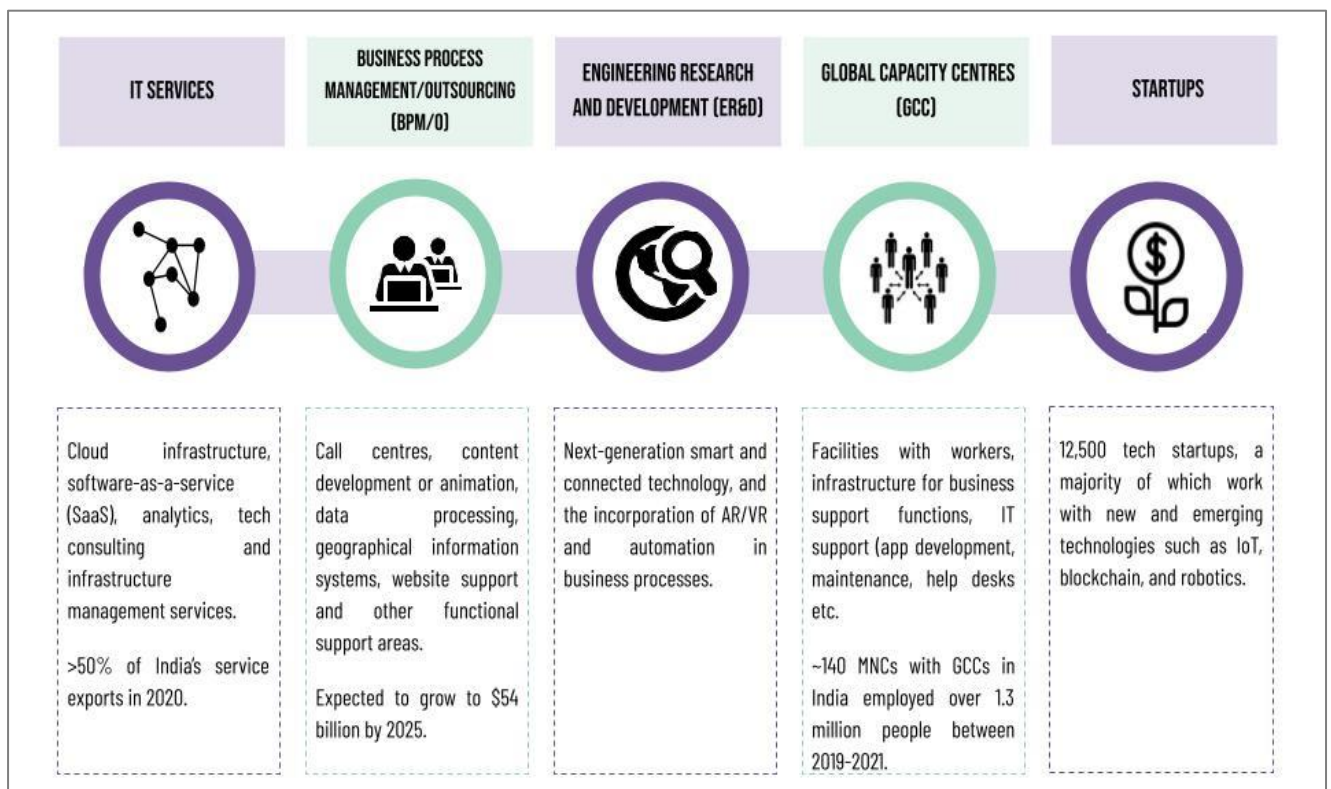| IT SERVICES | BUSINESS PROCESS MANAGEMENT/OUTSOURCING (BPM/O) | ENGINEERING RESEARCH AND DEVELOPMENT (ER&D) | GLOBAL CAPACITY CENTRES (GCC) | STARTUPS |
|---|---|---|---|---|
| Cloud infrastructure, software-as-a-service (SaaS), analytics, tech consulting and infrastructure management services. >50% of India's service exports in 2020. | Call centres, content development or animation, data processing, geographical information systems, website support and other functional support areas. Expected to grow to $54 billion by 2025. | Next-generation smart and connected technology, and the incorporation of AR/VR and automation in business processes. | Facilities with workers, infrastructure for business support functions, IT support (app development, maintenance, help desks etc. ~140 MNCs with GCCs in India employed over 1.3 million people between 2019-2021. | 12,500 tech startups, a majority of which work with new and emerging technologies such as IoT, blockchain, and robotics. |

Fig 1: Key growth sub-sectors in IT/ITES

As a key driver of India's growth – it contributed to 8% of the national GDP in 2020 - the IT/ITES sector presents an opportunity to employ a suitably skilled workforce in the coming years[3]. The sector is experiencing a growth surge, and is expected to grow to become a $350-billion industry by 2025[4]. India continues to enjoy its reputation as a favoured destination for investment in IT

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[1] Digital Public Goods, NASSCOM.
[2] IBEF, Department of Commerce & Industry, GOI
[3] Invest India
[4] IBEF May 2020 Report

and BPM services. As of 2021, the IT and BPM (Business Process Management) sector employs over 4.5 million people[5], and the sector creates indirect employment for over 9.5 million others[6].

## NEED FOR SKILLED WORKFORCE TO MATCH THE BURGEONING DEMAND

> **THE CURRENT DEMAND FOR JOBS IS 8 TIMES THE EXISTING TALENT POOL — A DIFFERENCE WHICH COULD GROW TO 20 TIMES, BY 2024.**

These developments have necessitated the simultaneous growth of a talent pool with industry-ready skills. It must be noted that in addition to the core sector, IT/ITES also facilitate business processes in a number of other sectors such as telemedicine, smart manufacturing, remote asset control etc. The overall shift towards a digital and data-driven economy thus calls for a workforce with relevant levels of digital literacy and IT skills across sectors and job roles. There is, however, a glaring mismatch between industry demands and the existing skills in the present talent pool in India.
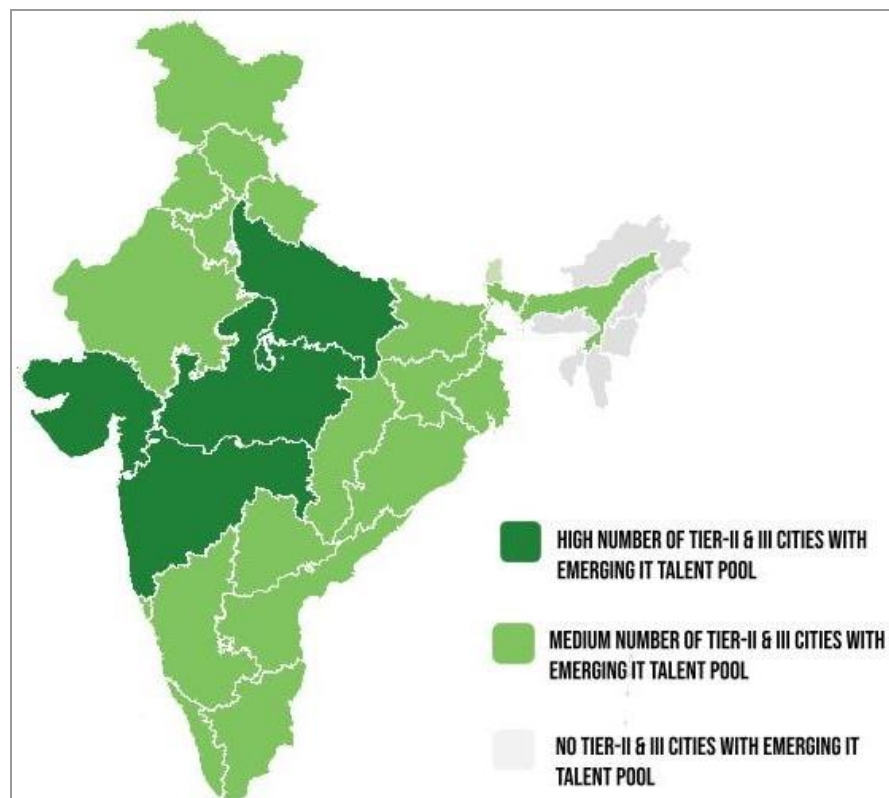


**HIGH NUMBER OF TIER-II & III CITIES WITH EMERGING IT TALENT POOL**

**MEDIUM NUMBER OF TIER-II & III CITIES WITH EMERGING IT TALENT POOL**

**NO TIER-II & III CITIES WITH EMERGING IT TALENT POOL**

Fig 2: Regions with Emerging Talent Pools

The IT/ITES sector is expected to create a total of 7.5 million jobs by the end of FY2022[7]. The gap between existing skilled human resources and the market demand continues to widen

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[5] IBEF
[6] NSDC IT/ITES Report
[7] NSDC – Skill Requirement in IT/ITES

significantly. The current demand for jobs is 8 times its existing talent pool – a difference which could grow to 20 times, by 2024[8].

Skilling for this sector is therefore an area that needs immediate intervention. The emergence of talent pools in Tier-II and Tier-III cities also demands an inclusive strategy for skill development in IT/ITES, in order to match human resources with demand centres efficiently.

## CURRENT INTERVENTIONS BY ECOSYSTEM PLAYERS AND WAY FORWARD

A number of current skilling interventions are being led by the government in close collaboration with industry stakeholders. The Sector Skills Council NASSCOM has been scaling the IT/ITES talent pool by tapping into industry partnerships, academic collaborations and apprenticeship programmes. NASSCOM has identified ten major technologies (including AI & Big Data Analytics, Blockchain, AR/VR, and IoT, among others) under its FutureSkills initiative as its focus areas for talent pool development[9].

The clear delineation of emergent areas facilitates the formulation of a tiered approach to IT/ITES skill development. The skills necessary in the IT/ITES sector, as well as other sectors can be graded from elementary to advanced. While elementary skills include basic digital competencies, such as the ability to use digital devices and applications, more advanced skills are technical and domain-specific, such as those employed by existing IT professionals and prospective job seekers in the core sector. In addition to sector-specific capabilities, existing skilling interventions are also focusing on imparting competencies in communication, empathy and teamwork to both prospective and current job seekers, thus creating a job-ready workforce.

For prospective job seekers, IT/ITes is a significant sector to absorb the burgeoning workforce. It is imperative to provide basic IT skills in schools and this sits very well with government's agenda for the vocationalization of education under NEP 2020. At an elementary stage, schools currently impart basic IT skills as part of the standard curriculum. However, there is an urgent need for the course material to be updated, in addition to improving hands-on access to technology for students, in order to prime them for increasingly digitizing workspaces in the future.

Skilling agencies, corporate entities and government bodies have made some headway in vocationalizing education for the youth at college levels. Future Ready Talent, for instance, is a joint initiative between AICTE, Future Skills Prime, EY, GitHub, QuessCorp and Microsoft, which offers a virtual internship programme for students in their second and third years of college. It allows students to gain in-demand technology skills, and aims to impact over 1.5 lakh students who will be entering the workforce between 2022 and 2024.

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[8] NASSCOM FutureSkills Talent in India
[9] NASSCOM FutureSkills Talent in India
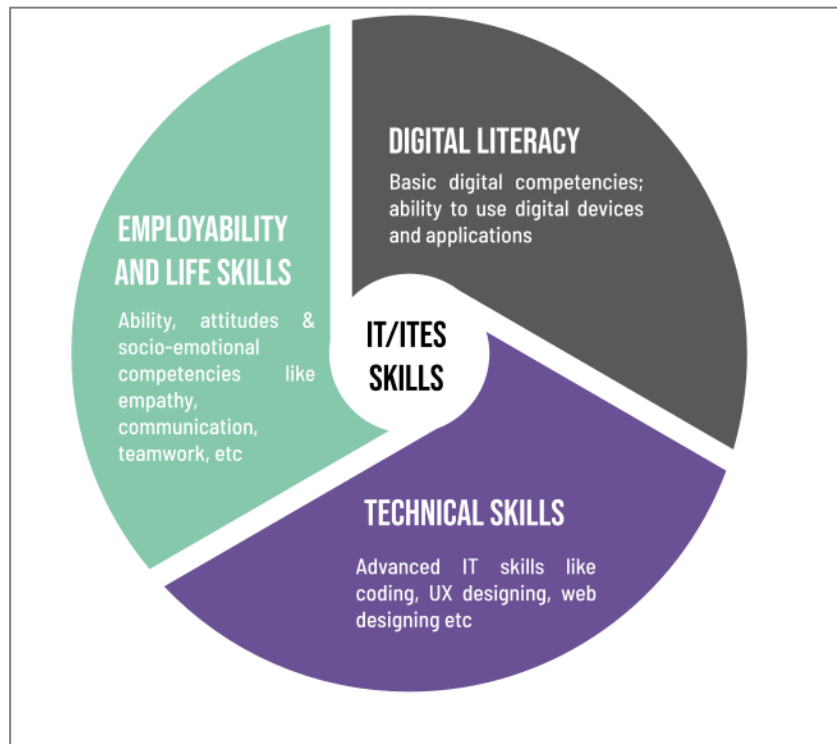
Another focus area is the upskilling of the existing workforce to keep up with emerging developments in IT. AWS Re-Start offers courses in cloud fundamentals, training modules for job-specific skills and professional soft skills, resume development and interview coaching for unemployed and underemployed individuals, to facilitate their recruitment in entry-level positions. In addition to this, an increasing number of Massive Online Open Courses (MOOCs) are available on platforms such as Coursera and Udemy for currently employed people to obtain certifications in digital competencies.

It is important, however, for these interventions to converge in order to serve a larger beneficiary base. Foundations and social purpose organizations, while actively conducting skilling initiatives, are able to tap only a fraction of the potential workforce that could benefit from these offerings. A particularly underserved section belongs to Tier-II and Tier-III cities, which hold a significant potential talent pool for the years to come. Collaboration between these organizations and government institutions could facilitate skilling interventions for more sections of the population. Centres of Excellence in Emerging Technologies such as AI, Big Data Analytics and Cloud computing are being established in locations such as Ropar (Punjab), Nagpur (Maharashtra), Gangtok (Sikkim) and Tiruvallur (Tamil Nadu), which could act as nodes for promoting skilling initiatives in adjoining regions.

The tremendous potential for gainful employment in the IT/ITES sector can therefore be tapped by adopting a collaborative approach by skilling agencies, government entities, and social sector enterprises. Such an approach, that reaches out to last-mile beneficiaries, and facilitates capability building for varying levels of skill sets, is key to bridging current gaps in labour demand and enabling the growth of the sector in the coming years.