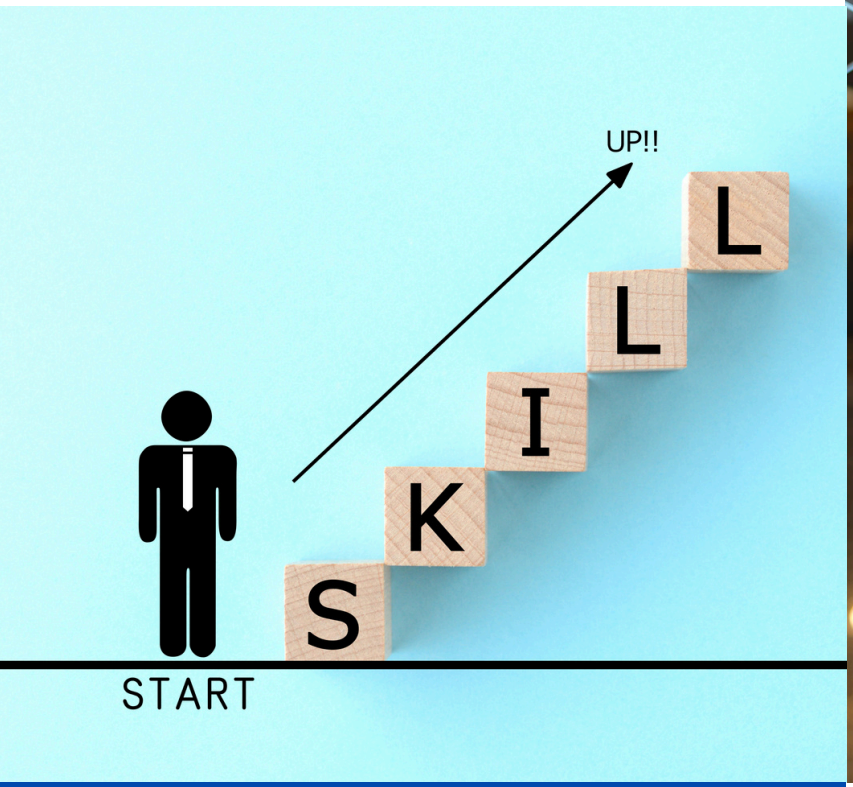
Telecom Sector Skill Council

Kaushal किरण

MARCH 2025

TSSC'S NEWSLETTER



Welcome to the March 2025 edition of the Telecom Sector Skill Council (TSSC) Newsletter!

As India cements its position as a global leader in 5G deployment, we stand at the cusp of a technological and economic transformation. This month, we dive into the broader picture of 5G expansion and monetization in India, exploring its current state, implications, and the critical role of a skilled workforce in driving this revolution forward.

www.tsscindia.com

tssc@tsscindia.com

0124-4148029

Current State of 5G in India (March 2025)

Since its launch in 2022, India's 5G rollout has evolved at breakneck speed, emerging as one of the fastest globally. Giants like Reliance Jio and Bharti Airtel have blanketed urban hubs and are now pushing into Tier-II and Tier-III cities, while BSNL's indigenous 4G-to-5G upgrade gains traction in rural markets. With over 300 million 5G subscribers (Nokia MBiT 2025 Report), data consumption has surged 40% year-over-year.

The Department of Telecommunications (DoT) forecasts telecom revenues to surpass Rs 4 lakh crore by year-end, with 5G driving over 30% of this growth. Beyond consumer adoption, 5G is powering enterprise solutions—smart manufacturing, telemedicine, and AR/VR classrooms—propelling India toward a digital economy powerhouse.

Yet, a key challenge looms: a shortage of skilled professionals to sustain and scale this expansion.

Technological Implications

5G is more than an upgrade—it's a game-changer. With ultra-low latency (<1ms), blazing speeds (up to 10 Gbps), and massive connectivity (1 million devices per sq. km), it unlocks transformative possibilities: IoT-driven smart cities, edge computing for autonomous systems, and network slicing for tailored industry needs. These advancements demand expertise in radio access network (RAN) design, cloud-native infrastructure, and software-defined networking (SDN)—skills still emerging in India's talent pool.

Economic and Industry Impact

Telecom operators are pivoting to B2B models—Jio's Industry 4.0 partnerships, Airtel's logistics innovations, and content-driven collaborations with OTT and gaming platforms. Affordable 5G plans are also unlocking rural markets, aligning with Digital India's vision. This shift promises a $450 billion GDP boost by 2030 (GSMA), alongside job creation and new revenue streams.

HOWEVER, SUCCESS DEPENDS ON A WORKFORCE EQUIPPED TO INNOVATE AND SCALE THESE SOLUTIONS. THE SKILLS WE BUILD TODAY WILL SHAPE THIS FUTURE. AS WE NAVIGATE THIS DYNAMIC LANDSCAPE, TSSC REMAINS COMMITTED TO EMPOWERING INDIA'S TELECOM WORKFORCE.

Upskilling the Indian Youth

TSSC'S QUALIFICATION PACKS FOR
THE 5G ECOSYSTEM

Infrastructure Technician - 5G Networks | QP Code: TEL/Q4201

Responsible for installing the passive infrastructure equipment at 5G network infrastructure sites to ensure power supply to 5G network and transmission equipment. The individual is also responsible for maintaining the passive infrastructure equipment. The person may also carry out regular repair and maintenance of the 5G network infrastructure

NSQF Level: 4
Duration: 570 hrs

5G System Integrator | QP Code: TEL/Q4202

Responsible for designing, implementing, and maintaining 5 G network. The individual collaborates with cross-functional teams to develop and optimize network solutions, ensuring high-speed connectivity, low latency, and reliable performance.

NSQF Level: 5
Duration: 570 hrs

Information and Communication Technology (ICT) Engineer - 5G Networks | QP Code: TEL/Q6205

An ICT Engineer at work installs and ensures uptime of the assigned ICT node/network segment by undertaking preventive maintenance, fault management activities, up gradation, capacity augmentation, configuration changes and Point of Interconnect (POI) testing with minimal disruption of services.

NSQF Level: 6
Duration: 600 hrs

Telecom Rigger – 5G and Legacy Networks | QP Code: TEL/Q6212

A Telecom Rigger - 5G and Legacy Networks works under supervision and is responsible for assisting in the installation and maintenance of telecom equipment on telecom structures and towers by using rigging and other installation related skills. The individual also assists in upgrading, dismantling and removing telecom equipment and cabling as per the requirement.

NSQF Level: 3
Duration: 450 hrs

Technician 5G – Active Network Installation | QP Code: TEL/Q6213

A 5G Technician - Active Network Installation is responsible for carrying out rack-level installation to install 5G network equipment and then carrying out the 5G active network installation. The individual also identifies and rectifies faults or malfunctions during the installation process.

NSQF Level: 4
Duration: 540 hrs

Project Engineer - 5G Networks | QP Code: TEL/Q6306

The individual in this job is responsible for ensuring that the 5G site is active and running right after successful installation and commissioning of mobile site include 5G antenna, MIMO of Next Generation Nodes (gNodes).

NSQF Level: 5
Duration: 660 hrs

In their essential form, NOS describe functions, standards of performance and knowledge/understanding. A set of NOS, aligned to a certain job role along with their NSQF level form a "Qualification Pack".

National Occupational Standards (NOS) specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the knowledge and understanding he/she needs to meet that standard consistently. Essentially NOS are benchmarks of good practice.

The developing usage of NOS also reflects the current desire of industries to agree to national standards of competence, descriptions of skills, and a common 'vocabulary' among trainees, employers and training providers.

For more information, contact **tssc@tsscindia.com**

6G & BEYOND

Future 6G networks will bridge physical things, people and activities into a fully cyber-physical world where the digital and physical worlds as we know them today have merged. This will provide new ways of interacting with the world around us, new possibilities to connect from anywhere and new ways to experience faraway places and cultures. In doing so, 6G will form the bedrock of a more human-friendly, sustainable and efficient future society.

By focusing on upskilling and reskilling in telecom, TSSC is preparing for the revolution.

The 6G Revolution: What Lies Ahead

6G is more than just an upgrade from 5G—it's a leap into a hyper-connected world. Expected to deliver speeds up to 100 times faster than 5G, ultra-low latency, and seamless integration with artificial intelligence (AI), the Internet of Things (IoT), and advanced robotics, 6G will power smart cities, autonomous systems, and immersive digital experiences.

This evolution demands a workforce equipped with cutting-edge skills in areas like AI-driven network management, quantum communication, and sustainable telecom infrastructure.

TSSC'S VISION FOR A 6G-READY WORKFORCE

At TSSC, we recognize that the shift to 6G and beyond requires a proactive approach to skill development. Our strategy is built on three pillars:

- **Anticipating Future Skills:** Collaborating with industry leaders, we're identifying the competencies that will drive 6G—think AI-powered network optimization, advanced spectrum management, and sustainable connectivity solutions.
- **Upskilling Programs:** Maximizing skilling in current technologies which shall build the foundation for the advent of 6G.
- **Ecosystem Partnerships:** Building an ecosystem with policies and frameworks prepared for 6G, a robust skilling framework that bridges the gap between education and industry needs.

The future of telecom is here, and TSSC is leading the charge. Whether you're a student, a professional, or an organization, we invite you to partner with us in shaping a 6G-ready workforce. Together, let's build a future where India's telecom talent powers the world.

6G in India: Pioneering a Hyper-Connected Future

India is set to harness 6G technology for transformative economic and societal growth. With speeds up to 1 terabit per second and ultra-low latency, 6G will build on India's expanding digital infrastructure, including 1.16 billion mobile connections and a rapidly growing fiber optic network. The Bharat 6G Vision targets 10% of global 6G patents by 2030, with over 127 patents already filed. Economically, 6G could add $240 billion to India's GDP by FY28, enabling smart cities, advanced healthcare, and Industry 4.0 while bridging the digital divide in rural areas, solidifying India's global telecom leadership.

TELECOM INDUSTRY KEY UPDATES
MARCH 2025

India Showcases Telecom Prowess at MWC 2025

Union Telecom Minister Jyotiraditya Scindia highlighted India's rapid telecom transformation at the Mobile World Congress (MWC) 2025 in Barcelona. He showcased India's advancements, including the world's lowest data tariffs, indigenous 4G/5G stacks, and robust cybersecurity measures. He also inaugurated the Bharat Pavilion, which featured 38 Indian telecom manufacturers.

India's Internet User Base Reaches 936 Million

It was reported that India's telecom sector reached 936 million internet users with significant growth in wireless subscriptions and a notable increase in rural teledensity. Government initiatives like the Digital India program and the PLI scheme are boosting domestic manufacturing and foreign investments. 5G adoption is expected to grow significantly by 2026.

India Becomes 2nd Largest 5G Market Globally

India solidified its position as the world's second-largest 5G market, as announced by Union Telecom Minister Shri Jyotiraditya Scindia. The rapid expansion of 5G infrastructure, with a target to operationalize all 100,000 sites by May-June 2025, underscores the country's commitment to advanced connectivity.

This milestone reflects growing investments and innovation, positioning India as a global leader in telecom technology and creating new opportunities for skill development in 5G deployment and maintenance.

SPACEX
STARLINK
airtel
Jio

Starlink Nears Regulatory Approval in India, Aiming for Market Entry

In March 2025, Starlink, led by Elon Musk, signed deals with Reliance Jio and Bharti Airtel to distribute satellite internet services in India, pending final approvals from the DoT and IN-SPACe. Its high-speed connectivity (up to 80-90 times faster than competitors) could boost rural access, but spectrum and tax issues remain challenges.

Happenings at
TELECOM SECTOR SKILL COUNCIL

MARCH 2025

11.03.2025

TSSC Celebrates Women's Day & Felicitation Ceremony at

Indira Gandhi Delhi Technical University for Women (IGDTUW)

The Telecom Sector Skill Council (TSSC) joined the Women's Day celebrations and Felicitation Ceremony at Indira Gandhi Delhi Technical University for Women (IGDTUW), honoring students who completed the Internet of Things (IoT) course at TSSC's Centre of Excellence.

This initiative, supported by Vodafone Idea Foundation's CSR efforts, highlights a collaboration between IGDTUW, TSSC, and Vodafone Idea Foundation to foster industry-relevant skills and empower future tech leaders.

Distinguished guests included Ms. Nandini Paliwal (IAS, Secretary, DTTE), Ms. Ambika Khurana (Vodafone Idea), Prof. Ranjana Jha (Vice Chancellor, IGDTUW), Shri Ashwani Mahaur (DoT), Mr. Praveen Sirohi (TSSC), and Ms. Ujala Chandra (CRPF).

Students were felicitated for completing their IoT training, and faculty received IoT Trainer certifications under the Skill India Mission through TSSC's Faculty Development Program.

13.03.2025

Salil Nath Speaks at

NABARD Regional Advisory Meeting in Tripura

Salil Nath, Regional Head-NER, Telecom Sector Skill Council, delivered a special talk on "**Assessing and Implementing 21st Century Sectors and Skills in Tripura" at the NABARD Regional Advisory Meeting on Farm and Off-Farm Sectors.**

The event, addressed by **Shri Anil S Kotmire, GM & Officer-in-Charge, NABARD Tripura**, emphasized technology adoption for sectoral growth. Representatives from government and non-government organizations engaged in insightful discussions on workforce development.

Salil Nath **highlighted the impact of 5G telecommunications in transforming industries, bridging skill gaps, and enhancing access to modern learning resources**. The session reinforced the need to align Tripura's workforce with emerging skills for sustainable growth in the evolving digital landscape.

19.03.2025

TSSC & NABARD Launch

Skill Development Program in Kerala

The Telecom Sector Skill Council (TSSC), in association with **NABARD**, launched a skill development program in Kerala to provide **placement-linked training for youth, women, and SC/ST candidates across various districts**.

The program was inaugurated by Mr. **Baiju N Kurup, Chief General Manager, NABARD Kerala & Lakshadweep, with key attendees including Mr. Premkumar, Alappuzha District Development Manager, Lekshmi V Pillai, District Skill Coordinator, and Jisha Ragesh, Managing Director, Kavitha ITI**.

This initiative aims to empower marginalized communities by equipping them with industry-relevant skills, **enhancing employability, and fostering economic growth**.

19.03.2025

Praveen Sirohi at the Inaugural **Panel** at

32nd Convergence India 2025

Praveen Sirohi, CEO (Interim) of the Telecom Sector Skill Council, had the privilege of participating in the 32nd Convergence India 2025 Expo as a speaker on the inaugural panel, "Connecting India: From 5G Leader to 6G Game Changer," held on **19th March 2025**. The session brought together industry leaders to discuss the transformative journey from 5G to 6G, where **he contributed by addressing the critical need to bridge the telecom talent demand-supply gap**.

The discussions encompassed emerging technologies such as AI and quantum computing, alongside a strong focus on collaboration and regulatory frameworks, reflecting the event's forward-thinking vision. The Expo provided an outstanding platform to connect with industry peers, exchange insights, and explore the future of India's telecom ecosystem.

International Women's Day 2025

This International Women's Day, the Telecom Sector Skill Council (TSSC) buzzed with excitement as we celebrated the remarkable women who are the backbone of our organization and the telecom industry at large. The day kicked off with a series of fun-filled activities, including team-building games, creative quizzes, and a lively dance-off that had everyone on their feet. Laughter and cheers filled the air as colleagues bonded over these engaging events, showcasing the spirit of togetherness and appreciation for the diverse skills and perspectives that women bring to TSSC.

The highlight of the celebration was a heartfelt ceremony where we honored the women of TSSC for their unwavering dedication and groundbreaking contributions.

From spearheading innovative projects to mentoring the next generation of telecom professionals, these trailblazers were recognized with awards and warm applause. The event served as a powerful reminder of TSSC's commitment to fostering an inclusive workplace, where women's voices are valued and their achievements celebrated. It was a perfect blend of joy, inspiration, and gratitude, leaving everyone with renewed energy and pride in our shared mission.

> When women are empowered, economies grow, families thrive, and societies progress. We must ensure every woman has the opportunity to reach her full potential
>
> **NIRMALA SITHARAMAN**
> *Finance Minister of India*

FROM THE CEO'S DESK

As we enter a transformative era in telecommunications, the buzz around 5G and early whispers of 6G are impossible to ignore. 5G is already redefining how we connect, work, and innovate—delivering high speeds, ultra-low latency, and support for a rapidly expanding digital ecosystem. But even as 5G takes hold, 6G looms on the horizon, promising a future powered by AI, quantum computing, and next-level connectivity.

I had the privilege of exploring this evolution at the 32nd Convergence India 2025 Expo, where I spoke on the panel "Connecting India: From 5G Leader to 6G Game Changer" on March 19th. It was an honour to join industry leaders in unpacking the 5G-to-6G shift—discussing everything from regulatory frameworks and AI integration to workforce readiness. I especially highlighted the telecom talent demand-supply gap, a challenge we at the Telecom Sector Skill Council (TSSC) are working to solve through focused skilling programs.

So, why does this matter? 5G is already proving its worth—powering smart cities, enabling IoT at scale, and driving digital inclusion across India. But 6G? That's where imagination meets reality. Think holographic communications, intelligent networks that adapt in real-time, and a level of connectivity that blurs the lines between physical and digital. For India to lead this charge, we need more than just technology—we need skilled talent ready to build, manage, and innovate within these networks. That's where TSSC steps in, bridging the gap and ensuring our workforce is equipped to turn vision into action.

The journey from 5G to 6G isn't just about faster speeds or fancier gadgets—it's about creating a connected India that thrives on opportunity and ingenuity.

I'm excited to be part of this moment, and even more excited to see where it takes us. Let's keep the conversation going—after all, the future of telecom is ours to shape.

Praveen Sirohi
Chief Executive Officer (Interim)
Telecom Sector Skill Council

EMPOWERING THE WORKFORCE, ADVANCING THE NATION'S DIGITAL FUTURE.

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