Global Telecom Industry: Jobs & Workforce Outlook 2025

By ClearlyIP Published March 7, 2025 10 min read

Telecommunications Industry Job Market (July 2025)

The global telecom sector remains a major economic force. According to GSMA Intelligence, the mobile ecosystem alone supported ~28 million jobs worldwide in 2022 (16 M direct, 12 M indirect) gsma.com. By 2025 mobile's contribution to global GDP is projected at ~$5.6 trillion gsma.com. However, growth is slowing: PwC notes telecom service revenues (fixed+mobile) grew only ~4.3% in 2023 to $1.14 trillion and may rise at a modest 2.9% CAGR to 2028 pwc.com. In the US, NAICS 517 (telecom) employed about 647,000 people in 2023, with a mean annual wage of ~$84,500 bls.gov. European operators saw their total workforce shrink ~4% in 2021 even as average salaries rose

~6.3% connecteurope.org. Regionally, Asia-Pacific leads in subscriber growth and 5G deployment, driving demand for network engineers, while Africa and Latin America continue rapid mobile network expansion. Major infrastructure rollouts (for example US BEAD broadband projects) are creating large hiring needs: U.S. reports estimate ~34,000 additional workers needed in 2023 alone to meet fiber expansion goals isemag.com. Nonetheless, market conditions vary: some operators have even instituted hiring freezes amid cost pressures telconews.asia, reflecting uneven demand and geopolitical uncertainties.

In-Demand Roles and Skills

Operators are shifting hiring to new technical domains. Industry analyses (STL Partners, LinkedIn data) find telecoms are recruiting in **cybersecurity, full-stack/software development, cloud/DevOps, automation, AI/data science, and user experience/UI** at **more than double** the rate of traditional roles like network engineering or legacy systems stlpartners.com. The figure below illustrates this shift in a sample of operators: cybersecurity specialists and cloud/software engineers dominate new hires, while classic radio or core-network engineers grow more slowly.

Figure: Share of recent hires by role in telecom operators, showing far higher recruitment in cybersecurity, cloud and software roles versus network engineering stlpartners.com.

Key roles and skills in demand include:

- **Network Engineers (5G/6G)** – RF engineers, RAN/core specialists and planners to deploy and optimize next-gen wireless networks, including mmWave/terahertz expertise for future 6G systems.
- **Fiber and Broadband Technicians** – Skilled technicians and installers to build out fiber-to-the-home and fixed-wireless networks, especially in rural expansion projects isemag.com.
- Cloud/Virtualization Engineers – Network cloud architects, container/edge computing experts and site reliability engineers for cloud-native, virtualized infrastructure (e.g. vRAN, SDN/NFV).
- **Cybersecurity and Trust Professionals** – Security architects, ethical hackers and privacy engineers to protect increasingly software-defined networks from evolving threats stlpartners.com.

- **Software & Full-Stack Developers** – Programmers and DevOps engineers for telecom applications, network management software, AI/ML systems, and customer platforms stlpartners.com.
- AI/Data Analysts – Data scientists and ML engineers to apply AI for network optimization, predictive maintenance, customer analytics and emerging use cases.
- **IoT/Embedded Engineers** – Specialists in sensors, connectivity (LPWAN, NB-IoT), and low-power wireless systems as IoT deployments grow across industries.
- **Project Managers/Consultants** – Professionals to oversee large-scale rollouts (5G, broadband), system integrations, and digital transformation initiatives.

In summary, demand has moved beyond "copper wires and cell towers" to software, cloud and security skills stlpartners.com. Vendors and carriers are investing in training: for example, Ericsson's talent programs (5G Academy, AI/IoT training) explicitly target future skills in AI, IoT and advanced networks allthingstalent.org.

Salary Benchmarks

Compensation in telecom varies widely by role, region and seniority. In the United States, telecom technician roles (cable/fiber installer, equipment installer) earn median wages around **$64,300/year** (May 2024) bls.gov. BLS data for the wider telecom industry (NAICS 517) shows an overall mean annual wage of **$84,550** (2023) bls.gov. Higher-skilled jobs command much more: for example, telecom engineering managers and marketing/sales managers often earn well above $150,000 annually bls.gov. Executive-level telecom positions (CTO/VP) can see median incomes in the $150–200k+ range bls.gov, reflecting the specialized skill set and leadership responsibilities. (The 2024 IEEE-USA salary report, while not telecom-specific, notes median engineer salaries of ~$174k in the US insight.ieeeusa.org.)

By contrast, salaries in other regions tend to be lower on average. GSMA and ETNO reports suggest that Western European telecom salaries are somewhat below US levels (rising ~6% in 2021 connecteurope.org) while economies of scale result in productivity gaps. Major urban operators (e.g. Deutsche Telekom, BT) may pay well above national norms, but smaller markets and carrier tech roles generally see lower pay than US peers. In Asia and Latin America, experienced engineers might earn roughly half (or less) of US peers, depending on local market (for example, senior telecom engineers in India might range ~$10k–20k/year, whereas Chinese state carrier positions can be more competitive).

Overall, **compensation is high for in-demand skills**: cloud architects, network security experts and data scientists with telecom experience typically command top-of-market salaries in their regions. By one industry survey, some specialized 5G/AI roles can reach six-figure salaries in the US isemag.com. Entry-level technical roles (installers, field techs) are more modest but often above average for technical trades. The table below (US data) illustrates wages for a few representative telecom occupations:

ROLE (US, 2023)	MEDIAN ANNUAL WAGE	SOURCE
Telecom Equipment Installer/Technician	$64,310 bls.gov	BLS/O*NET (2024)
Network & Computer Sys Admin	$112,010 bls.gov	BLS (telecom industry)
Software Developers (telecom)	$127,310 bls.gov	BLS (telecom industry)
Marketing/Sales Managers	$163,500 bls.gov	BLS (telecom industry)
Chief Executives (telecom)	$296,040 bls.gov	BLS (telecom industry)

(*All figures are U.S. median values; regional and company-specific rates vary significantly.)

Major Employers and Sectors

Operators and Carriers: The largest traditional employers are network operators. In mobile, companies like AT&T, Verizon, T-Mobile (US), Vodafone, Orange, Telefonica (Europe), and China Mobile/China Telecom dominate hiring for 5G buildout and maintenance. Fixed broadband providers (Comcast, Charter, BT, Deutsche Telekom, Telefónica) recruit technicians for fiber and cable networks. Many regional/local carriers and ISPs (e.g. Frontier, Altice) are also aggressively expanding teams under government broadband initiatives.

Equipment and Technology Vendors: Telecom equipment manufacturers and network vendors are major hirers. Ericsson (≈94K employees in 2024 macrotrends.net), Nokia (~80K), Huawei (≈200K), Samsung, ZTE, Cisco, and Juniper staff R&D, engineering, and services to build new network gear (5G base stations, RAN equipment, core routers) and software platforms. These firms hire large numbers of RF engineers, software developers, and cloud infrastructure experts.

Satellite Communications: The satellite sector is expanding. Companies like SpaceX (Starlink), OneWeb, Amazon's Project Kuiper, Intelsat, SES, and Eutelsat are growing teams for satellite design, operations, and user terminals. Roles include satellite systems engineers, ground station specialists, and network integration experts as LEO broadband deployments scale.

Internet/Cloud Companies: Major cloud and tech firms are hiring telecom talent to support network services and edge computing. For example, Amazon Web Services, Google Cloud, Microsoft Azure recruit network engineers and solutions architects for edge and 5G solutions. IoT device companies (Qualcomm, Intel, ARM) and M2M platform providers (Cisco IoT, IBM) also seek embedded systems engineers and cybersecurity experts.

Emerging Sectors: IoT and vertical industries (automotive, energy, healthcare) are creating new telecom-adjacent roles. Smart grid, connected car, and remote healthcare projects need telecom skillsets. Many private network integrators, systems integrators and technology startups (e.g. in smart factories) also join the hiring mix.

Impact of Technological Evolution

Rapid tech innovation is reshaping telecom jobs. **5G and 6G networks** require telecom professionals with advanced radio and system knowledge. Operators are deploying mid-band and mmWave 5G, which demand RF and propagation experts, plus network planners. Meanwhile, research into 6G (terahertz, AI-native networks) is creating R&D positions in academia and industry.

Cloud-native and Virtualized Networks: Telcos are transforming into "software companies." The shift to software-defined networking (SDN/NFV) and containerized network functions means many roles now require cloud skills. Engineers who understand Kubernetes, virtualization (VMware/OpenStack), and CI/CD pipelines are increasingly needed to manage modern networks. STL Partners notes that operators are hiring cloud specialists and automation engineers at **2× the rate** of traditional network roles stlpartners.com.

AI/Automation Integration: Artificial intelligence is increasingly integrated into telecom operations (for network optimization, anomaly detection, customer service bots, etc.). This drives demand for **AI/ML engineers, data scientists**, and automation experts. For example, many operators are exploring generative AI for service design and using automated tools for network management. Ericsson highlights AI and machine learning as core competencies for next-generation telecom talent allthingstalent.org.

Edge Computing and IoT: The rise of edge computing (hosting compute resources at cell sites or customer premises) creates jobs for edge cloud architects and systems engineers. The explosion of IoT devices (sensors, wearables, industrial controllers) means telecom networks must support billions of endpoints; this requires embedded systems engineers, IoT security specialists, and network architects who understand LPWAN (NB-IoT, LTE-M) and URLLC (ultra-reliable low-latency comms).

In short, technological trends are shifting skills requirements from hardware-centric (cabling, RF installation) toward software, cloud, and data-oriented roles. The telecom workforce of 2025 must blend traditional engineering with IT and cybersecurity expertise stlpartners.comallthingstalent.org.

Workforce Challenges and Talent Shortages

A key issue is a **talent gap**. Many regions report shortages of skilled telecom workers. In the U.S., the federal Broadband Workforce report warned of *thousands* more workers needed: one estimate projected **34,000 new hires in 2023** just to keep pace with federal broadband programs isemag.com, and industry groups forecast hundreds of thousands of broadband jobs over the decade. However, surveys indicate a lack of qualified applicants. The GAO found that certain telecom occupations already have lower-than-average unemployment, suggesting tight labor supply gao.gov.

Globally, an EY study found **over half of telecom companies** facing hiring freezes due to cost cuts, and 61% reporting salary cuts harming retention telconews.asia. This pressure exacerbates shortages: retaining network engineers and tech experts is harder when budgets shrink. Europe's telecom association (ETNO) reports a declining workforce (–4% in 2021) even as demand for new networks grew connecteurope.org. Similarly, Asia-Pacific operators flag a need for cyber and cloud talent at the same time they constrain headcount. Factors fueling shortages include retirements of veteran engineers, competition from IT and big-tech (which often offer higher pay for similar skills), and underinvestment in training.

To address this, many companies emphasize **upskilling and education**. For example, U.S. community colleges and industry partnerships are creating fiber technician training programs. Ericsson's "RISE UP" and university collaborations aim to fill 5G/AI roles allthingstalent.org. Nevertheless, the consensus is that workforce capacity remains a bottleneck for rapid expansion.

Remote and Hybrid Work Trends

Telecom jobs are increasingly embracing hybrid/remote models. White-collar roles (network architects, software developers, analysts) often work remotely or in hybrid schedules, similar to other IT sectors. According to Forbes, by 2025 roughly **32.6 million Americans** (≈20% of the workforce) will be remote workers telcoblog.zyxel.com, and many of those in tech sectors are telecom professionals. This trend is driven by younger generations' demand for flexibility and the fact that digital network tools allow remote collaboration. As a result, telecom companies are offering flexible work to attract talent, while focusing office presence on critical on-site tasks (like data-center management or field installation). The shift to remote/hybrid work has also increased demand for network capacity and security expertise, further entwining telecom and workplace trends telcoblog.zyxel.comtelcoblog.zyxel.com.

Regulatory and Geopolitical Influences

Regulatory policies and geopolitics are shaping hiring. Governments' spectrum auctions, digital infrastructure programs, and security mandates create job opportunities (and constraints). For example, U.S. and EU stimulus for broadband (like the U.S. BEAD program with ~$42.5 billion in funding isemag.com) is driving hiring for rural broadband projects. Conversely, trade restrictions on equipment have ripple effects: bans on certain 5G vendors (e.g. Chinese vendors in US/EU networks) force operators to redesign networks, hire specialized engineers for new vendors, and sometimes retrain staff.

Immigration and labor policies also impact the talent pool. Tech visa caps and security clearance rules in some countries can limit the availability of experienced foreign engineers. In many markets, regulatory focus on cybersecurity and data protection means companies must hire compliance officers and security auditors. Moreover, spectrum allocation decisions (e.g. auctioning mmWave bands for 5G) can create surge hiring in radio engineering to exploit new frequencies.

Geopolitical tensions (e.g. U.S.-China technology rivalry, Russia-Ukraine conflict affecting Eastern Europe) add uncertainty. Companies may delay projects or shift supply chains, indirectly affecting staffing. For instance, sanctions on Russia and Ukraine have complicated cross-border network projects, while trade restrictions have spurred investment in domestic chip and gear manufacturing (aimed at reducing reliance on imports), which in turn creates new R&D and production jobs.

In summary, the telecom labor market in mid-2025 is defined by **transition**: rising demand for high-tech skills (cloud, AI, security) amid modest industry growth and cost pressures. Operators and vendors emphasize training and internal mobility (Ericsson reports ~45% of roles filled by internal moves allthingstalent.org) to bridge gaps. **Workforce challenges** – skill shortages, an aging workforce, and geopolitical shifts – remain significant. Nonetheless, the ongoing rollout of 5G/6G, fiber, satellite and IoT technologies means telecom professionals continue to play a crucial role, with competitive compensation and a broad array of emerging career paths stlpartners.comgsma.com.

Sources: Authoritative industry and government reports were used, including GSMA (global mobile industry data) gsma.com, U.S. BLS (employment & wage statistics) bls.govbls.gov, U.S. GAO broadband workforce projections gao.gov, Ericsson/industry interviews allthingstalent.org, and analytical reports (STL Partners, EY, ETNO) stlpartners.comconnecteurope.org telconews.asia. These shed light on trends in jobs, skills and compensation across regions.

Tags: telecommunications, job market, employment trends, workforce analysis, telecom industry, 5g deployment, broadband infrastructure, economic outlook

---

About ClearlyIP

ClearlyIP Inc. — Company Profile (June 2025)

---

1. Who they are

ClearlyIP is a privately-held unified-communications (UC) vendor headquartered in Appleton, Wisconsin, with additional offices in Canada and a globally distributed workforce. Founded in 2019 by veteran FreePBX/Asterisk contributors, the firm follows a "build-and-buy" growth strategy, combining in-house R&D with targeted acquisitions (e.g., the 2023 purchase of Voneto's EPlatform UCaaS). Its mission is to "design and develop the world's most respected VoIP brand" by delivering secure, modern, cloud-first communications that reduce cost and boost collaboration, while its vision focuses on unlocking the full potential of open-source VoIP for organisations of every size. The leadership team collectively brings more than 300 years of telecom experience.

---

2. Product portfolio

- **Cloud Solutions** – Including *Clearly Cloud* (flagship UCaaS), **SIP Trunking**, **SendFax.to** cloud fax, **ClusterPBX OEM**, **Business Connect** managed cloud PBX, and **EPlatform** multitenant UCaaS. These provide fully hosted voice, video, chat and collaboration with 100+ features, per-seat licensing, geo-redundant PoPs, built-in call-recording and mobile/desktop apps.
- **On-Site Phone Systems** – Including CIP PBX appliances (FreePBX pre-installed), ClusterPBX Enterprise, and Business Connect (on-prem variant). These offer local survivability for compliance-sensitive sites; appliances start at 25 extensions and scale into HA clusters.
- **IP Phones & Softphones** – Including CIP SIP Desk-phone Series (CIP-25x/27x/28x), fully white-label branding kit, and *Clearly Anywhere* softphone (iOS, Android, desktop). Features zero-touch provisioning via Cloud Device Manager or FreePBX "Clearly Devices" module; Opus, HD-voice, BLF-rich colour LCDs.
- **VoIP Gateways** – Including Analog FXS/FXO models, VoIP Fail-Over Gateway, POTS Replacement (for copper sun-set), and 2-port T1/E1 digital gateway. These bridge legacy endpoints or PSTN circuits to SIP; fail-over models keep 911 active during WAN outages.
- **Emergency Alert Systems** – Including **CodeX** room-status dashboard, **Panic Button**, and **Silent Intercom**. This K-12-focused mass-notification suite integrates with CIP PBX or third-party FreePBX for Alyssa's-Law compliance.
- **Hospitality** – Including **ComXchange** PBX plus PMS integrations, hardware & software assurance plans. Replaces aging Mitel/NEC hotel PBXs; supports guest-room phones, 911 localisation, check-in/out APIs.
- **Device & System Management** – Including **Cloud Device Manager** and **Update Control (Mirror)**. Provides multi-vendor auto-provisioning, firmware management, and secure FreePBX mirror updates.
- **XCast Suite** – Including Hosted PBX, SIP trunking, carrier/call-centre solutions, SOHO plans, and XCL mobile app. Delivers value-oriented, high-volume VoIP from ClearlyIP's carrier network.

---

3. Services

- **Telecom Consulting & Custom Development** – FreePBX/Asterisk architecture reviews, mergers & acquisitions diligence, bespoke application builds and Tier-3 support.
- **Regulatory Compliance** – E911 planning plus **Kari's Law**, **Ray Baum's Act** and **Alyssa's Law** solutions; automated dispatchable location tagging.
- **STIR/SHAKEN Certificate Management** – Signing services for Originating Service Providers, helping customers combat robocalling and maintain full attestation.
- **Attestation Lookup Tool** – Free web utility to identify a telephone number's service-provider code and SHAKEN attestation rating.
- **FreePBX® Training** – Three-day administrator boot camps (remote or on-site) covering installation, security hardening and troubleshooting.

- **Partner & OEM Programs** – Wholesale SIP trunk bundles, white-label device programs, and ClusterPBX OEM licensing.

---

4. Executive management (June 2025)

- **CEO & Co-Founder: Tony Lewis** – Former CEO of Schmooze Com (FreePBX sponsor); drives vision, acquisitions and channel network.
- **CFO & Co-Founder: Luke Duquaine** – Ex-Sangoma software engineer; oversees finance, international operations and supply-chain.
- **CTO & Co-Founder: Bryan Walters** – Long-time Asterisk contributor; leads product security and cloud architecture.
- **Chief Revenue Officer: Preston McNair** – 25+ years in channel development at Sangoma & Hargray; owns sales, marketing and partner success.
- **Chief Hospitality Strategist: Doug Schwartz** – Former 360 Networks CEO; guides hotel vertical strategy and PMS integrations.
- **Chief Business Development Officer: Bob Webb** – 30+ years telco experience (Nsight/Cellcom); cultivates ILEC/CLEC alliances for Clearly Cloud.
- **Chief Product Officer: Corey McFadden** – Founder of Voneto; architect of EPlatform UCaaS, now shapes ClearlyIP product roadmap.
- **VP Support Services: Lorne Gaetz** (appointed Jul 2024) – Former Sangoma FreePBX lead; builds 24×7 global support organisation.
- **VP Channel Sales: Tracy Liu** (appointed Jun 2024) – Channel-program veteran; expands MSP/VAR ecosystem worldwide.

---

5. Differentiators

- **Open-Source DNA:** Deep roots in the FreePBX/Asterisk community allow rapid feature releases and robust interoperability.
- **White-Label Flexibility:** Brandable phones and ClusterPBX OEM let carriers and MSPs present a fully bespoke UCaaS stack.
- **End-to-End Stack:** From hardware endpoints to cloud, gateways and compliance services, ClearlyIP owns every layer, simplifying procurement and support.
- **Education & Safety Focus:** Panic Button, CodeX and e911 tool-sets position the firm strongly in K-12 and public-sector markets.

In summary

ClearlyIP delivers a comprehensive, modular UC ecosystem—cloud, on-prem and hybrid—backed by a management team with decades of open-source telephony pedigree. Its blend of carrier-grade infrastructure, white-label flexibility and vertical-specific solutions (hospitality, education, emergency-compliance) makes it a compelling option for ITSPs, MSPs and multi-site enterprises seeking modern, secure and cost-effective communications.

DISCLAIMER