

Professional Staffing – Digital Employment Trends Report

FY 2021-22

ENGINEERING | TELECOM | HEALTHCARE

Contents

	Pg no.
01	Background
02	Preface
03	Foreword
04	About TeamLease Digital
05	Executive Summary
06	The Engineering Sector
14	The Telecom Sector
22	The Healthcare Sector
30	Spotlight: Semiconductors – Tomorrow's frontier for specialized roles
33	Technology Fusion in the Engineering, Telecom and Healthcare sectors
38	Annexure

Background

Telecom, Engineering, and Healthcare comprise a nearly USD 1.5 trillion aggregate-sector in market size, by conservative estimates. Together, they employ about 42 million people – approximately 8.7% of India's entire workforce – today, and are estimated to create 12 million more jobs by 2026.

Of the 42 million employed in the three sectors an estimated 4.6 million are in specialized roles – roles that need high-skill and expertise. While the Indian economy is slated for recovery towards pre-pandemic levels, technology proliferation and digitization in these sectors has accelerated in the Covid-19 aftermath. As a consequence of these factors, the need for technical and technological expertise is expected to double the demand for specialized roles by 2026.

Clearly, the precedence of demand outstripping supply of specialized roles makes the case for actionable market intelligence that aids talent managers in making effective hiring decisions.

The Professional Staffing – Digital Employment Trends Report from TeamLease Digital is the first of its kind from the TeamLease Group's Thought Leadership stable. The report tables hiring trends in the Engineering, Telecom & Healthcare sectors for specialized roles. It delves into top specialized roles and related sought after skills, skill gap and measures undertaken to address the gap by employers, and market median salaries for these roles.

The insights presented in the report are distilled from a quantitative survey carried out with a sample of 750 employers in the three sectors across India, and extensive literature review.

Contribution to GDP:

Engineering

To contribute 27% of GDP by end-2025



Telecom

To contribute 10% of GDP by end-2025

Healthcare

To contribute 2.5% of GDP by end-2025

Preface

India@75 is changing rapidly because her labour market is changing exponentially; our current trajectory suggests many changes over the next 25 years is a radically different sectoral, physical, enterprise, education, and wage geography of work at India@100.

India's problem has never been a shortage of what are traditionally viewed as the three factors of production; land (we could give every Indian household half an acre and they would fit in Rajasthan and half of Maharashtra), labour (40% of India's force generates 16% of our GDP) or capital (fifty percent of our FDI since 1993 was received in the last 5 years). But our traditional challenge has been the fourth factor of production that economists call Total Factor Productivity and ordinary people call innovation and productivity.

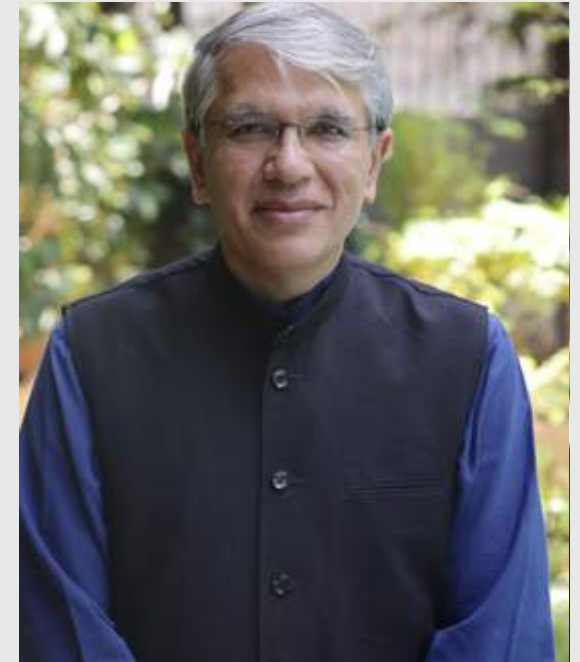
Harvard economist Ricardo Hausman suggests that the only sustained predictor or sustained economic success is economic complexity. India's prosperity has always been much lower than its economic complexity would predict after 1947 because of regulatory cholesterol; our capital has been handicapped without labour and our labour has been handicapped without capital. This began to change in 1991 and has accelerated in the last few years. An inevitable consequence of this is firms required more specialized and skilled people.

This report captures how India's economic reboot is leading to a massive revamp of people supply chains for Corporate India in the domains that reflect our economic complexity; engineering, healthcare and telecom. COVID means global supply chains in engineering are moving from just in time to just in case and the telecom industry is massively expanding both wireless and wired digital plumbing. Needless to say decades of underinvestment in healthcare are being reversed by state governments.

Policy makers, firms, universities and staffing firms are now actively working together in the quest for a more prosperous, inclusive and productive India which will soon cross Japan and Germany to become the 3rd largest economy in the world. The new world of work, organizations, and educations mean that productive firms are actively innovating in how they structure their organizations, staff their positions, and think about their employees.

India's staffing industry is rapidly moving beyond its traditional domains, sectors, and salaries. This report is only a small preview of how the infrastructure of opportunity is evolving to meet our national ambitions and become the skill and productivity capital of the world.

Manish Sabharwal, Vice Chairman, TeamLease Services.



Foreword

We are delighted to launch the first edition of Professional Staffing – Digital Employment Trends Report with focus on Engineering, Telecom & Healthcare sectors. Our research team has put together a comprehensive record of employment trends in FY '22, future opportunities, top roles sub-sector wise, most sought after skills & salary trends along with interesting insights on demand – supply situation of digital talent in these sectors. The roles which need high skills and expertise have been categorized as specialized roles and staffing them as been called as Professional Staffing. Specialized roles within these sectors witnessed a huge demand & growth for contract employment in the last 2 years while Healthcare emerged as an aggregator. The three sectors in focus witnessed an increase of 10 -11% scale in contract staffing.

During FY '22, the Engineering sector oversaw the highest growth in hiring of specialized roles, in comparison to Telecom and Healthcare. The sector hired for a judicious mix of core domain skills and technological skills. Public investments, such as the defence sub-sector and construction witnessed growth, translating into robust hiring during the FY.

Data, video, and wireless network services became more critical than ever for the Telecom sector during FY 2021-22. The ubiquitous need for remote work infrastructure and its reliable functioning was a big boost to the demand for network operation skills. Likewise, the Network Engineer role turned out to be the most sought-after role, with the hiring volume nearly doubling during the FY.

Healthcare is expected to rise up to 25% of growth in contract staffing hiring by 2026 as all top specialized roles in healthcare witnessed superlative growth rates during the FY. The acute need for data-driven support and for analysing and acting on massive volumes of patient data created high demand for the Nurse Informatics Specialist and the Clinical Research Scientist roles.

Also, the deployment of 5G by the Indian semiconductor market will boost growth opportunities for the wireless industry and will accelerate post-Covid economic recovery. Technology Fusion in the Engineering, Telecom & Healthcare sectors is driving an Industry 4.0 transformation, currently accelerated by Covid-19, and demonstrated by a steady penetration of tech roles within individual functional domains of the sectors.

We see a huge increase in the target addressable market (TAM) in Professional Staffing segment, backed by overall growth in every segment, fusion of technologies like 5G, IT & Engineering, favourable GOI policies and high economic growth in next 5 years. To sum it up, we believe that there is a huge opportunity for the job seekers in the Telecom, Engineering & Healthcare sectors, not only for specific industry focused employment but also for industry agnostic employment with a bent of digital skills.

Sunil Chemmankotil, Head - Specialized Staffing, TeamLease Digital



About TeamLease Digital



About TeamLease Digital

TeamLease Digital is a subsidiary of TeamLease Services Limited, which offers Specialized Staffing & human resource Solutions across IT, ITeS, Telecom, Engineering, EdTech, HealthTech, and Gaming industries. TeamLease Digital has emerged as one of the largest professional staffing services providers in the country. TeamLease Digital has hired over 80,000+ professionals since its inception, has 10,000 + consultants currently deployed with 200+ clients including some of the largest Fortune 500 clients, and has over 7,000+ open jobs every day. With the purpose of 'Putting India to Work', we at TeamLease Digital are committed to being part of the amazing growth story of our country.

TeamLease Digital has been creating business impact for its clients by matching their needs with best resources available in the market, in a quick and cost-efficient way, and having one of the best professional hiring engines in the staffing industry, a leadership team comprising industry veterans, sturdy finances, and a pan-India presence, has made the company their preferred partner and, a leader in the industry. With a purpose of 'Putting India to Work', TeamLease Digital is committed to be part of the growth story of the technology sector and people of India.

Sector Taxonomy and Market Estimates

ENGINEERING

Employment

30 million as of FY '22 (Est)

38 million as of FY '26 (Est)

Share of Specialized Staff (FY '22): 10%

Share of Specialized Staff (FY '26): 15%



Auto, Aerospace & Defence

Market Size USD 73 billion

Power & Construction

Market Size USD 24 billion

Chemical, Agri & Process

Market Size USD 178 billion

Manufacturing

Market Size USD 695 billion

Electrical & Electronics

Market Size USD 118 billion

TELECOM

Employment

4 million as of FY '22 (Est)

6 million as of FY '26 (Est)

Share of Specialized Staff (FY '22): 11%

Share of Specialized Staff (FY '26): 16%



Telecom Infrastructure & Development

Market Size USD 104 billion

5G and White Space Spectrum Mobile

Market Size USD 477 million

Mobile Virtual Network Operators

Market Size USD 16 billion

App and Gaming

Market Size USD 1 billion

HEALTHCARE

Employment

7.5 million as of FY '22 (Est)

9.5 million as of FY '26 (Est)

Share of Specialized Staff (FY '22): 15%

Share of Specialized Staff (FY '26): 25%



Medical Devices and Hospital Supply

Market Size USD 10.4 billion

Pharma and Biotechnology

Market Size USD 70 billion

Healthcare Services and Facilities

Market Size USD 116 billion

Medical Services and Managed Care

Market Size USD 30 billion

Data Source: Please refer to the Bibliography

The Engineering sector-

Executive Summary

Sector Employment Growth: 29.2 million in FY 2020-21 to 30 million in FY 2021-22

Hiring Tech Talent in Automotive Industry witnesses growth by 45% as compared to 2019 and is expected to grow at 15% in FY 2021-22 and the same should reach between 18 to 22% by 2024. FY 2021-22 witnessed 18000+ jobs for Tech Roles in Automotives and this is expected to grow to 25000+ quarter on quarter.

-Munira Loliwala, AVP - Engineering Staffing & RPO Solutions, TeamLease Digital, in The Economic Times

The Engineering sector employs about 30 million people, and this is slated to grow at a pace of 6.1% (CAGR) to reach 38 million by 2026. Each of the five subsectors constitutes an enormous, multiple billion dollar market size, with Manufacturing being the largest at USD 695 billion. During FY 2021-22, hiring of specialized roles in the Engineering sector commanded the highest growth rates among the three sectors covered in this study, with the roles most sought after growing at over 200%. Employer demand during FY 2021-22 encompassed a wide variety of specialized roles that aid smart and reliable project delivery and process performance during a period of considerable uncertainty.

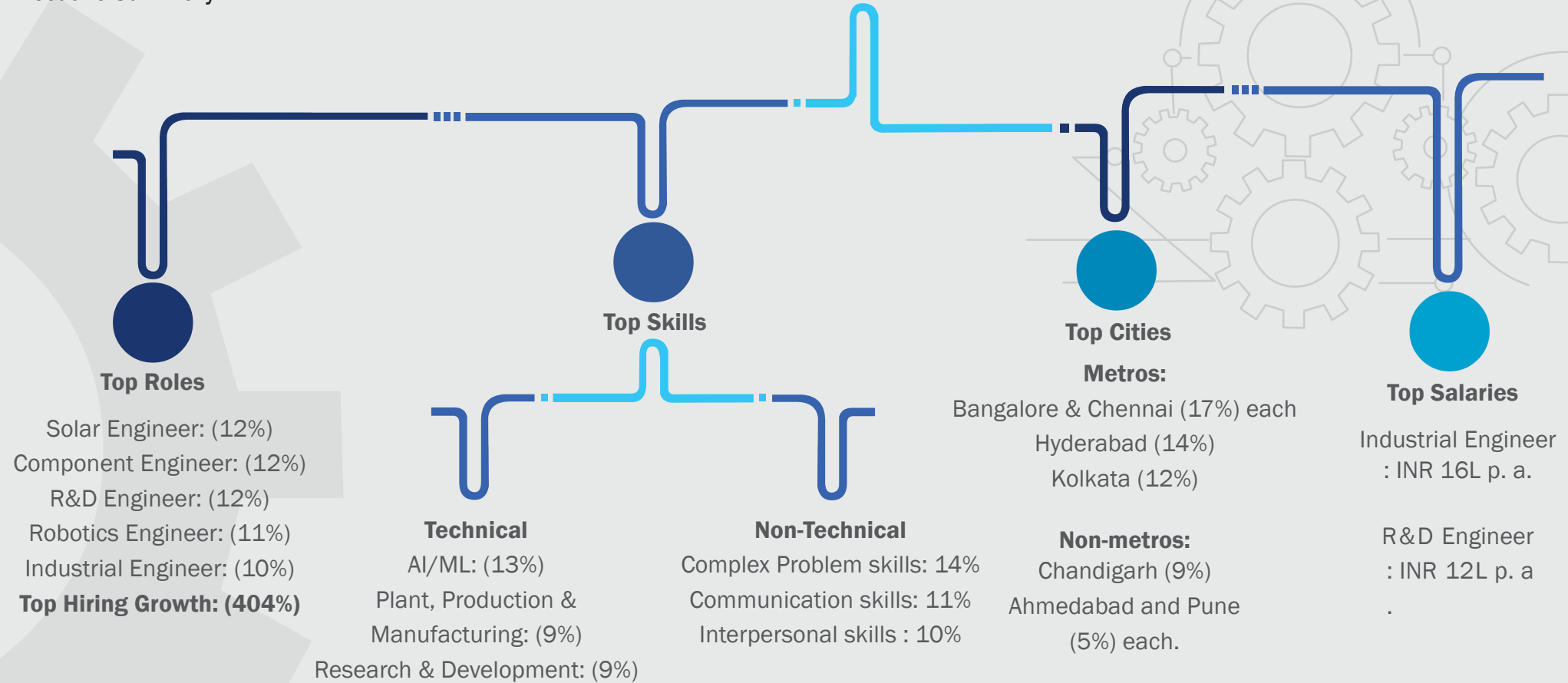
GDP Contribution: The Engineering sector is likely to contribute nearly 27% to the national income by end-2022.

Production-linked Incentive (PLI) Scheme: The government has announced upwards of INR 36,000 crores for textiles, automobiles and auto components. MEITY has proposed a PLI scheme of about INR 22,000 crores to promote wearables as well as enhance incentives for IT hardware manufacturers during 2022-23. Large scale electronics manufacturing and IT hardware have attracted INR 133,000 crores under the EMC 2.0 scheme. PLI schemes have the potential to create over 180,000 jobs (direct and indirect) in the Engineering sector over the next four years.

The Engineering sector

Executive Summary

Topline Findings



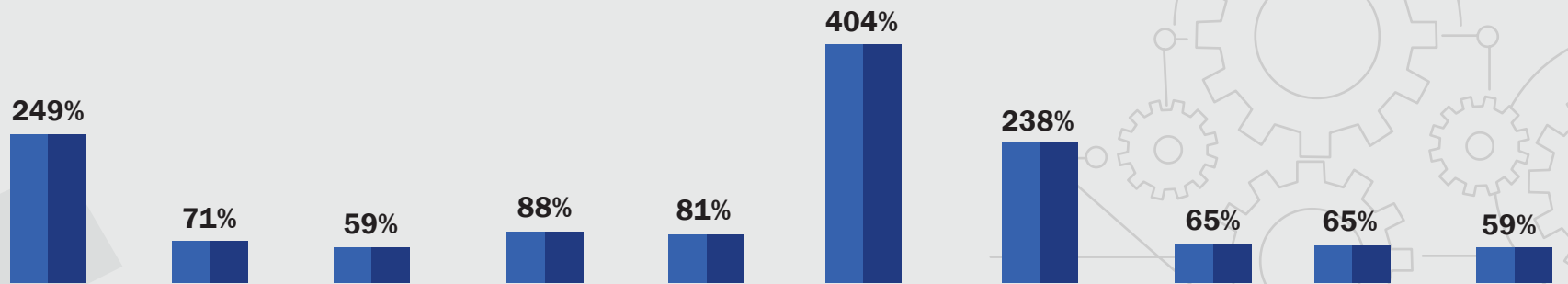
As the Engineering sector makes quick strides towards pre-pandemic levels of activity, focus on smart and reliable operations has become paramount. Employers were seen to be hiring for a wide range of specialized roles that bolster project delivery and process performance during FY 2021-22. As a consequence of this, hiring demand was seen to be spread more or less uniformly across the top specialized roles. The need for intelligent business processes and the prevailing uncertainty drove the demand for AI/ML and complex problem solving skills. Specialized roles in the Engineering sector were more sought after in the metro cites than in the non-metros.

Data Source: Valuvox+TeamLease Survey, December, 2021 – January 2022

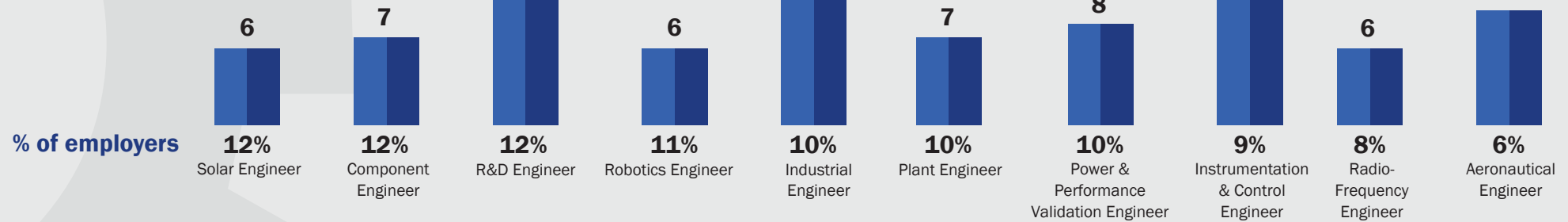
Engineering: Top Roles

Market Payouts & Hiring Growth

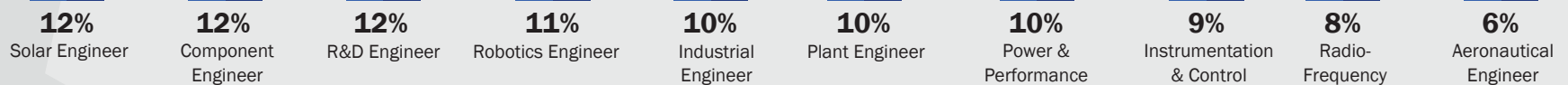
Hiring Growth



Market Payouts



% of employers

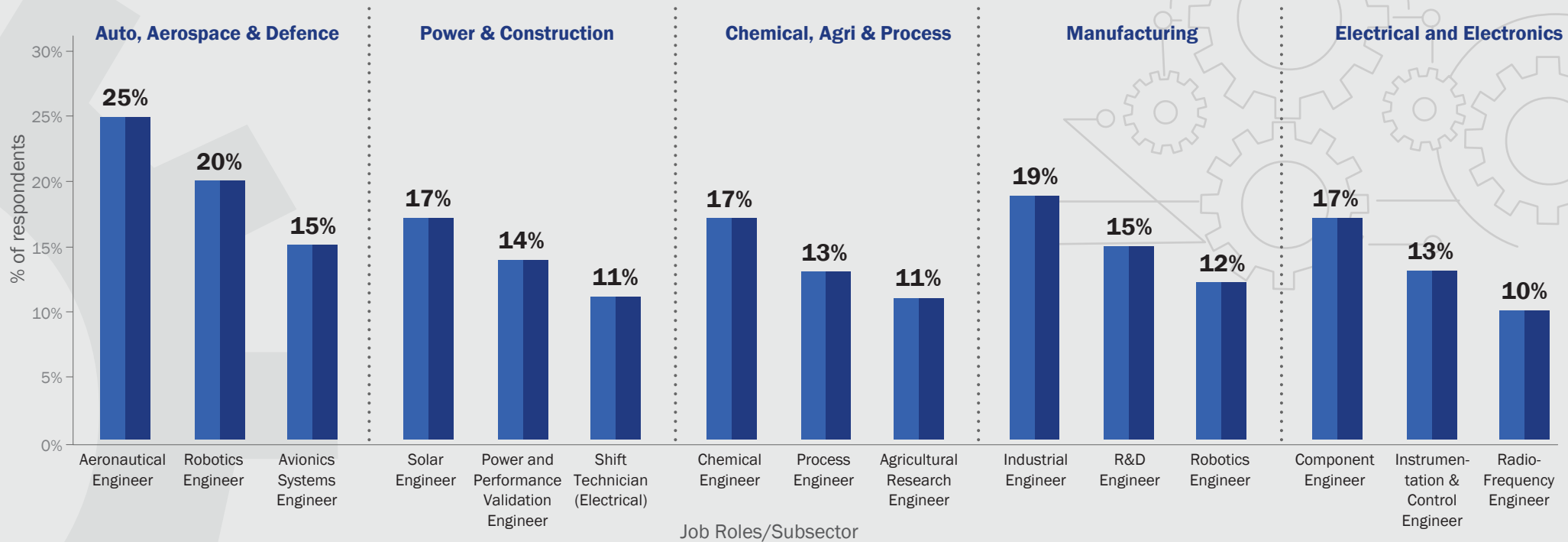


Average Salary is in Rs LPA

Top specialized roles had an equitable representation from across subsectors with rather modest market average salaries. However, the hiring volumes showed healthy increase across all roles. Multiple subsectors, mainly Manufacturing, saw a near 5-fold increase in the hiring of Plant Engineers. Hiring of two specialized roles – Solar Engineer and Power & Performance Validation Engineer – by the Power and Construction subsector increased by a factor of 2.5.

Engineering: Top Roles by subsector

Engineering: Top 3 roles by subsector



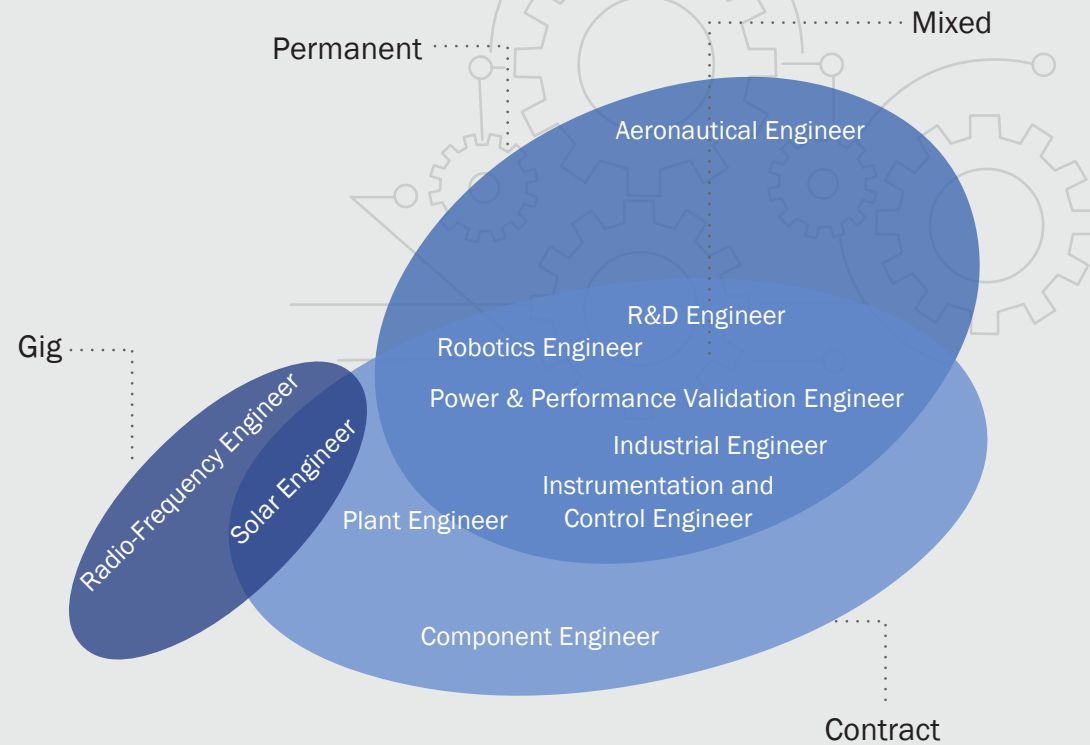
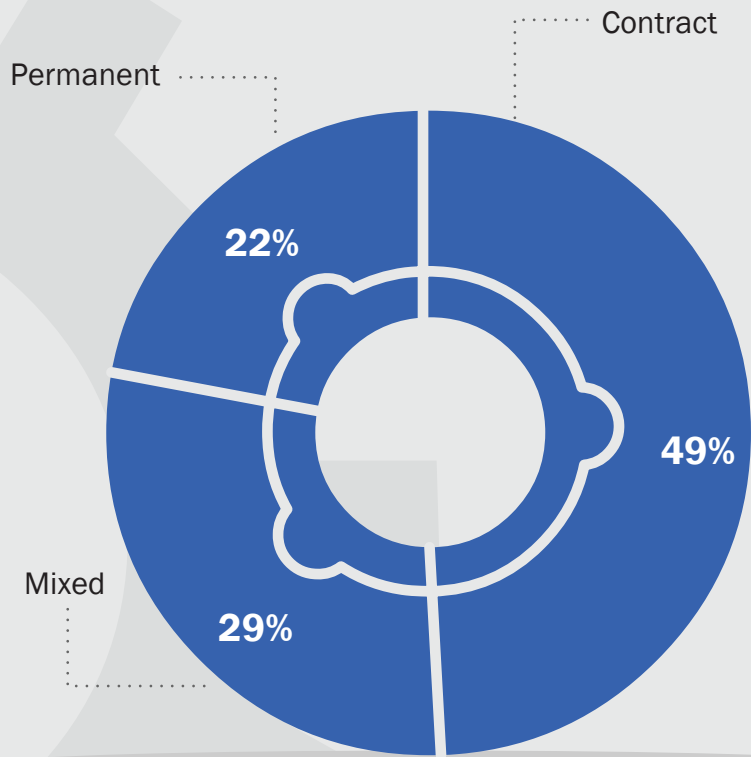
Economic activity across subsectors is quickly picking up and growth rates are gradually scaling to pre-pandemic levels. The Defence subsector is galloping towards 4% growth, fuelled by the government's USD 25 billion production target. Construction activity is slated to grow by an estimated 16% growth driven by public investments of USD 1.4 trillion in infrastructure development. These public investments have translated into robust hiring during FY 2021-22.

Data Source: Valuvox+TeamLease Survey, December, 2021 – January 2022

Note: Top 10 roles consist of roles that cut across sub-sectors and, therefore, the order of this set is independent of the order of the top roles by sub-sector

Engineering: Preferred Engagement Type

Preferred employment type

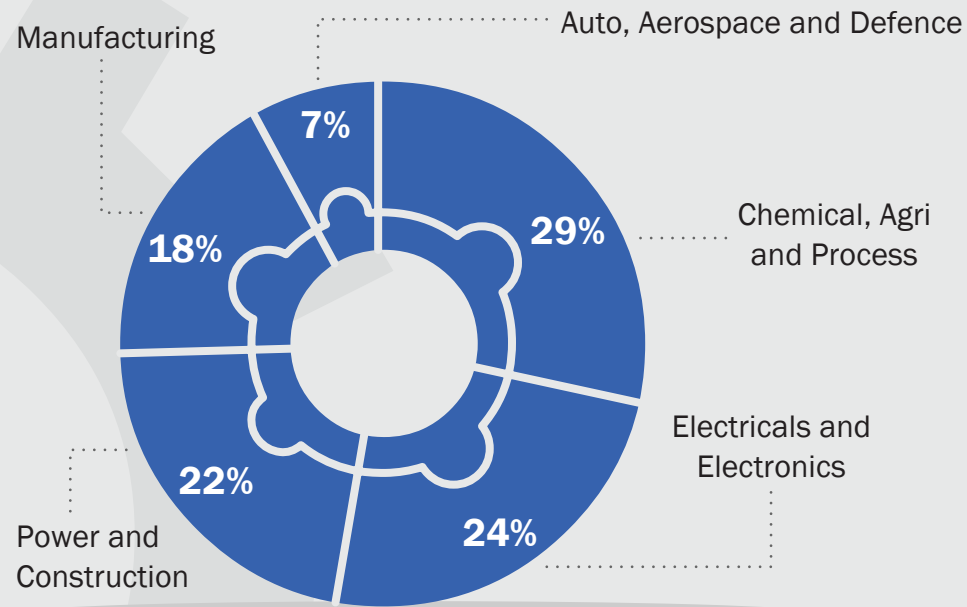


Contractual engagements were sought after across the sector, since the dynamic nature of sectoral recovery necessitates a variety of skills at different stages. Gig assignments are finding gradual acceptance as well – and include Solar Engineer, the top role in demand. A “mixed” engagement type where the number of positions are split between permanent and contract was seen to be popular with a significant 29% of all employers. The highest paid roles mostly fall in this category.

Data Source: Valuvox+TeamLease Survey, December, 2021 – January 2022

Engineering: Hiring Trends

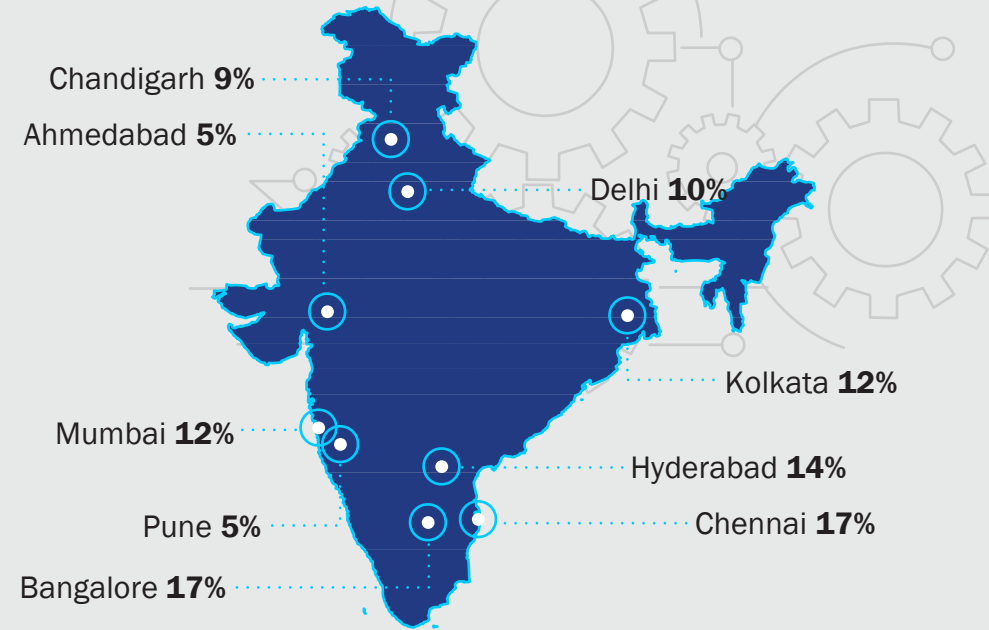
Hiring trend: by Subsector



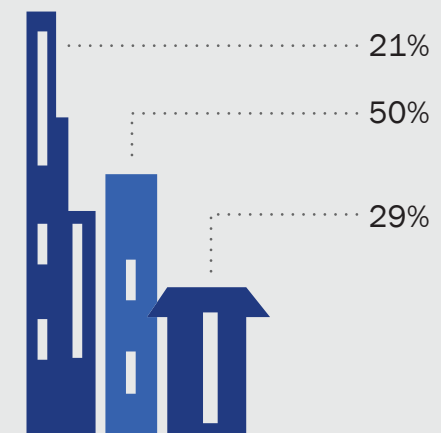
Together, the Chemical, Agri and Process, and the Electrical and Electronics subsectors accounted for more than half of all sectoral demand for specialized roles during the FY. Likewise, medium sized businesses account for 50% of the demand for specialized roles. Cities in the south and the east of India constitute 60% of all demand for specialized roles.

Data Source: Valuvox+TeamLease Survey, December, 2021 – January 2022

Hiring trend: by City



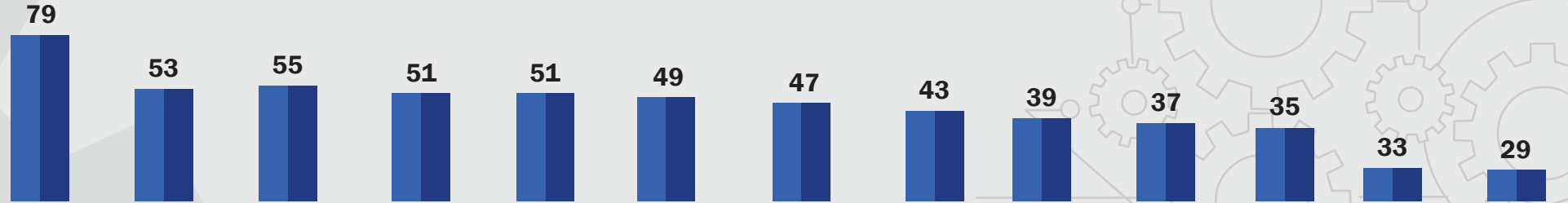
Hiring trend: by Business Size



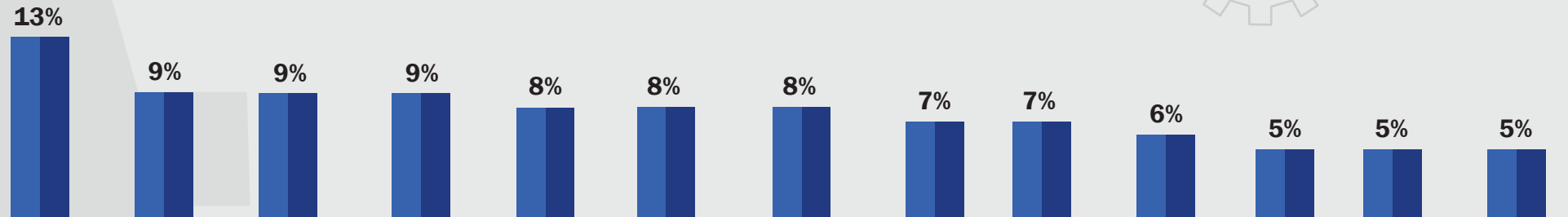
Note: Percentages indicate proportion of employers

Engineering: Sought after skills and the demand-supply gap

Demand-Supply Gap: Weight-Gap Scores



Hiring Sentiment



Skills

AI/ML Quality Assurance & Quality Control Plant, Production and Manufacturing R & D Field Engg and Project management Embedded systems design Robotics and Automation Engineering Procurement Construction (EPC) SCM, Logistics and Procurement Data Engineering Engineering Design Computer systems administration Application development

Demand for skills, as in case of roles, was widespread during FY 2021-22. The Engineering sector hired for a judicious mix of core domain skills and technological skills.

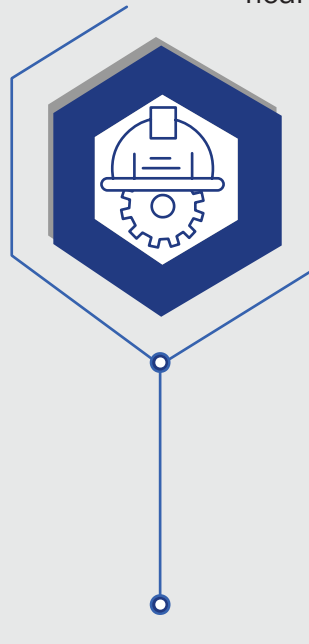
The prominent exception to this trend is the top-rated AI/ML skills. More than one in eight employers hired for AI/ML, reflecting the need for intelligence infused processes in the times of pandemic-driven uncertainty.

Data Source: Valuvox+TeamLease Survey, December, 2021 – January 2022

The Weight-Gap Score is the weighted aggregate of demand and supply gap estimates quoted by respondents for each skill. The response has been collected under three categories - High, Medium and Low. The applied weights are 1, 0.75 and 0.5 respectively.

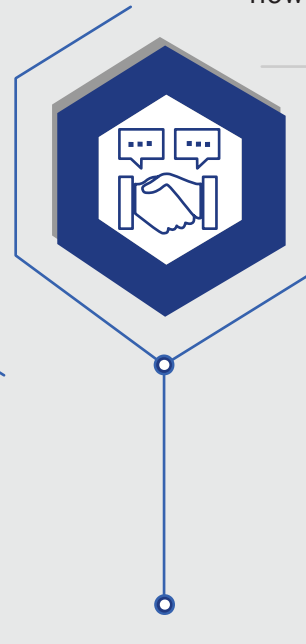
KEY TAKEAWAYS

Hiring volumes for specialized roles in the sector surged during the FY, and niche roles that re-engineer operations and ensure robust production and delivery commanded near-300% growth in hiring.

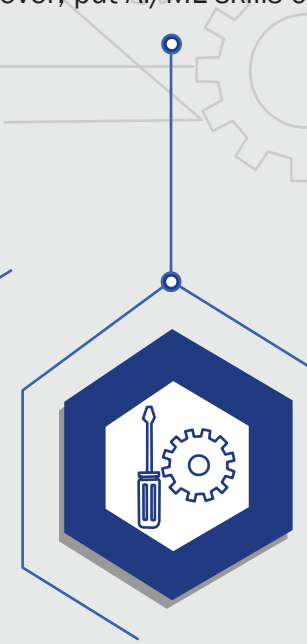


The Engineering sector made smart and reliable operations a big priority during FY 2021-22, and employers hired for a wide range of specialized roles that bolster project delivery and process performance.

Employers hired for a judicious mix of core domain skills and technological skills. The need for intelligence infused processes to manage pandemic-driven uncertainty, however, put AI/ML skills on top.



Contractual engagements are sought after across the sector, since the dynamic nature of post-pandemic recovery necessitates a variety of skills at different stages. Gig assignments are finding gradual acceptance as well.



The Telecom sector

Executive Summary

Sector Employment Growth: 3.72 million in FY 2020-21 to 4 million in FY 2021-22

India is witnessing a 60% surge in hiring for data scientists as compared to FY 2021-22, among all digital skills. "Data Scientists" has become a hot job with significant demand across sectors, thus pushing the Non-IT domains to ramp up their Tech Teams.

-by TeamLease Digital in The Hindu

The Telecom sector has an estimated 4 million in employment, a number that is set to grow at a 10.6% CAGR to reach 6 million by 2026. Telecom Infrastructure and Development constitutes the largest subsector with an estimated market size of USD 104 billion. While employers picked from a diverse range of specialized roles, the Network Engineer role was in high demand amongst nearly one-third of all Telecom companies during FY 2021-22. Hiring for specialized roles grew at close to 100% and the sector made the highest payouts for specialized roles.

GDP Contribution: The sector is expected to contribute 8% to India's GDP in 2022, with 5G technology contributing approximately USD 450 billion during the 2023-2040 period.

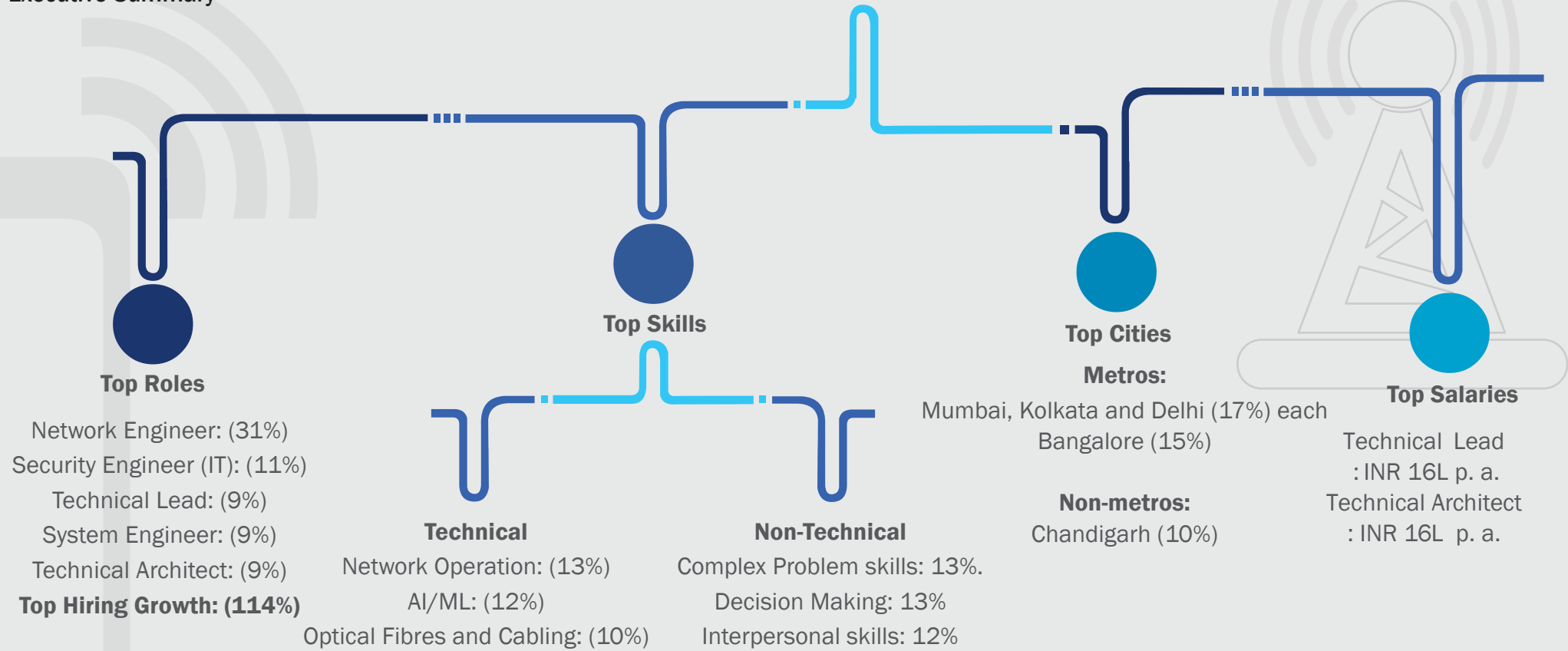
Production-linked Incentive (PLI) Scheme : The INR 12,195 crores production-linked incentive (PLI) scheme for telecom is expected to bring in investments of around USD 400 million and generate substantial direct and indirect employment.



The Telecom sector

Executive Summary

Topline Findings

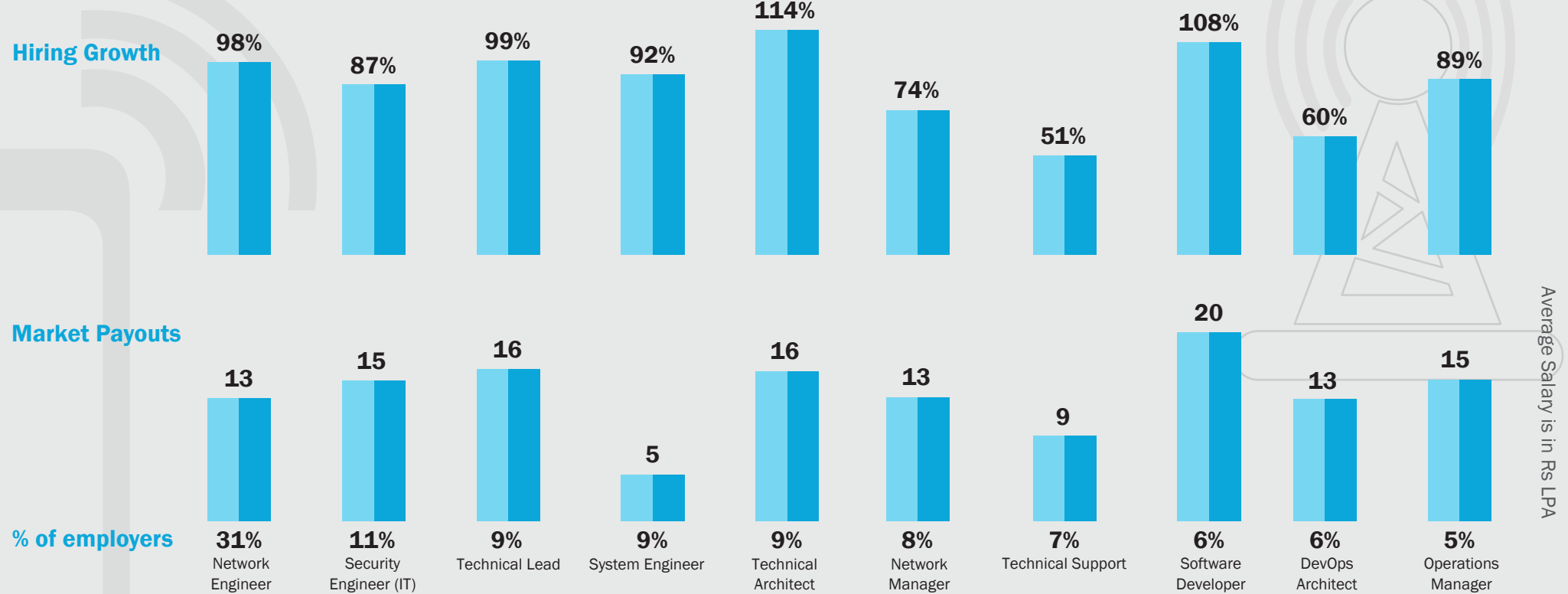


With data, video and wireless network services becoming more critical than ever, Network Engineer turned out to be the most sought after role, during FY 2021-22, across the Telecom sector. This factor was also behind Network Operation being the top skill in demand during the FY. Playing a transformative role in supporting business operations across the country, the Telecom sector put Complex Problem and Decision Making skills on equal priority as well. Leveraging AI/ML skills to run high performance processes turned out to be another area of focus. The sector saw significantly higher growth from metro cities than from the non-metros.

Data Source: Valuvox+TeamLease Survey, December, 2021 – January 2022

Telecom: Top Roles

Market Payouts & Hiring Growth



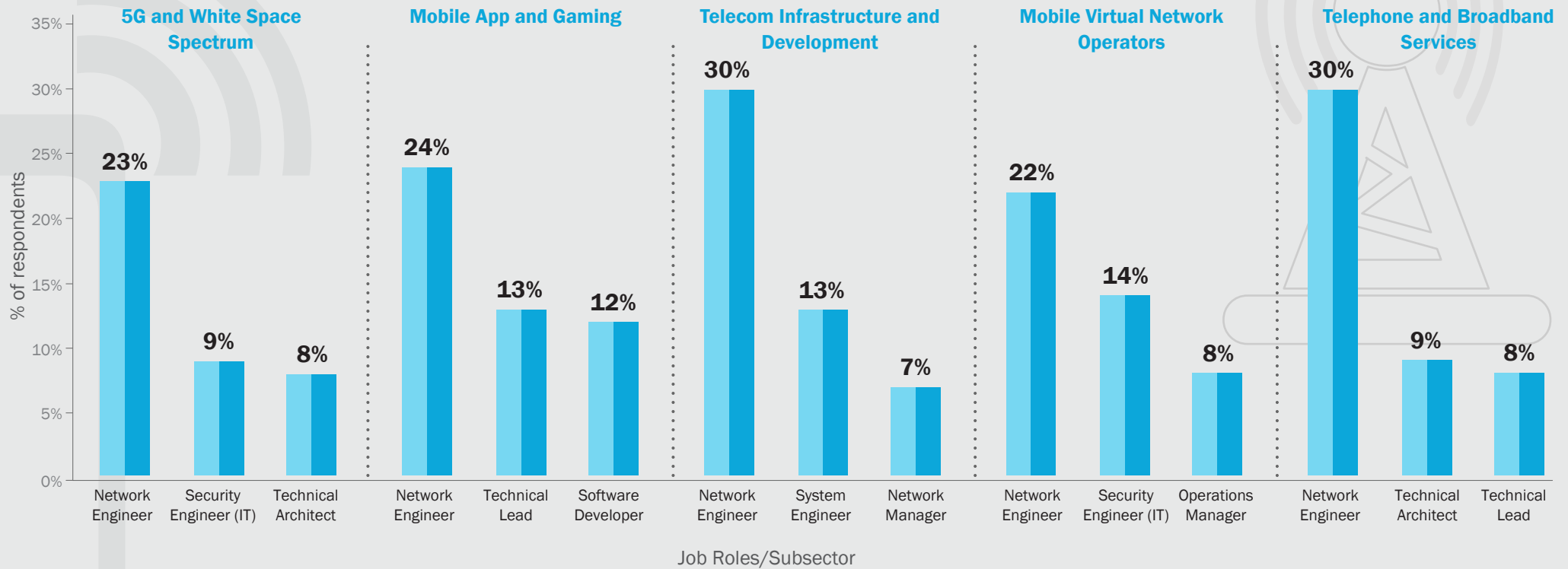
The criticality of the top role – the Network Engineer – translated into a near-doubling of its hiring volume during the FY. Six other top roles also witnessed a similar magnitude of growth in hiring during FY 2021-22, and the market payouts to the top specialized roles were mostly in the double-digit LPA range.

Data Source: Valuvox+TeamLease Survey, December, 2021 – January 2022

Note: Top 10 roles consist of roles that cut across sub-sectors and, therefore, the order of this set is independent of the order of the top roles by sub-sector

Telecom: Top Roles

Telecom: Top 3 Roles by subsector



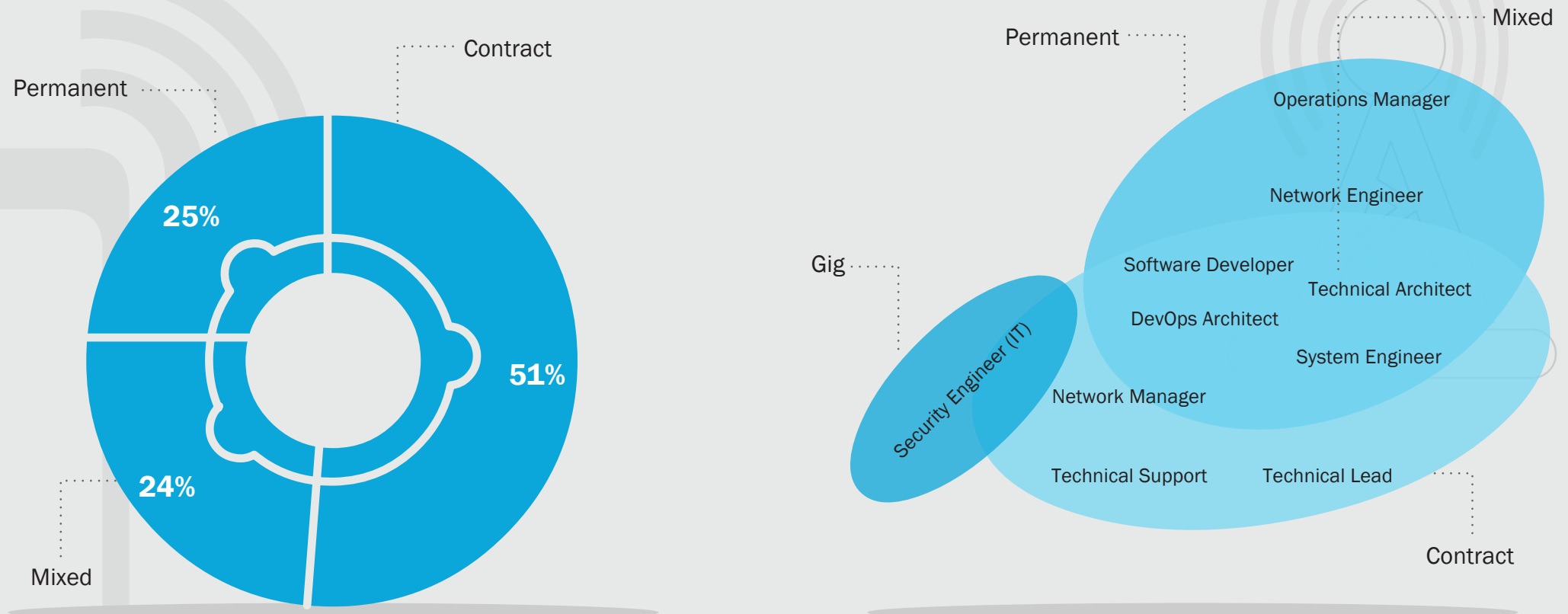
The proportion of employers who hired for Network Engineers (between 22% and 30%) outstripped those for other top specialized roles by a wide margin across Telecom subsectors. Domain specific roles dominated subsector hiring with data and IT skills conspicuous by their bleak presence among the top three roles in all subsectors (Security Engineer (IT) being the exception). Technical Lead, Technical Architect and Security Engineer (IT) were sought after in four out of five subsectors but with barely one-tenth of the subsector employers hiring for these roles.

Data Source: Valuvox+TeamLease Survey, December, 2021 – January 2022

Note: Top 10 roles consist of roles that cut across sub-sectors and, therefore, the order of this set is independent of the order of the top roles by sub-sector

Telecom: Preferred Engagement Type

Preferred employment type

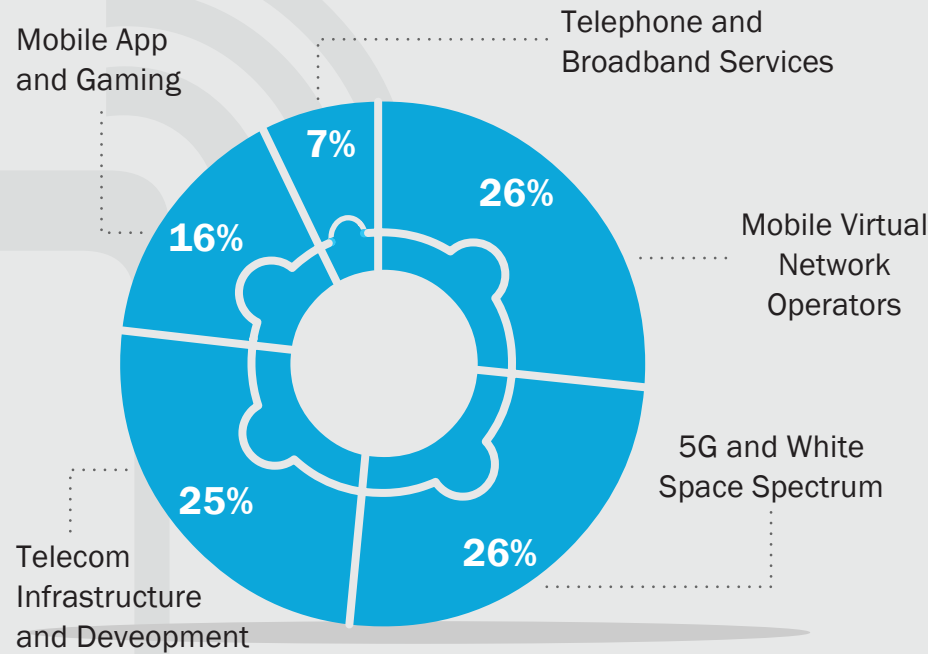


A majority of Telecom sector employers preferred engaging specialized talent via Contractual employment. A host of top roles – all of which have to do with core operations – were also hired in the Mixed mode. Roles that were hired in the Permanent mode included the highest in demand Network Engineer, and the Operations Manager. Technical Support and Technical Lead roles were mostly hired on Contract, while the Security Engineer (IT) is increasingly being seen as a gig role.

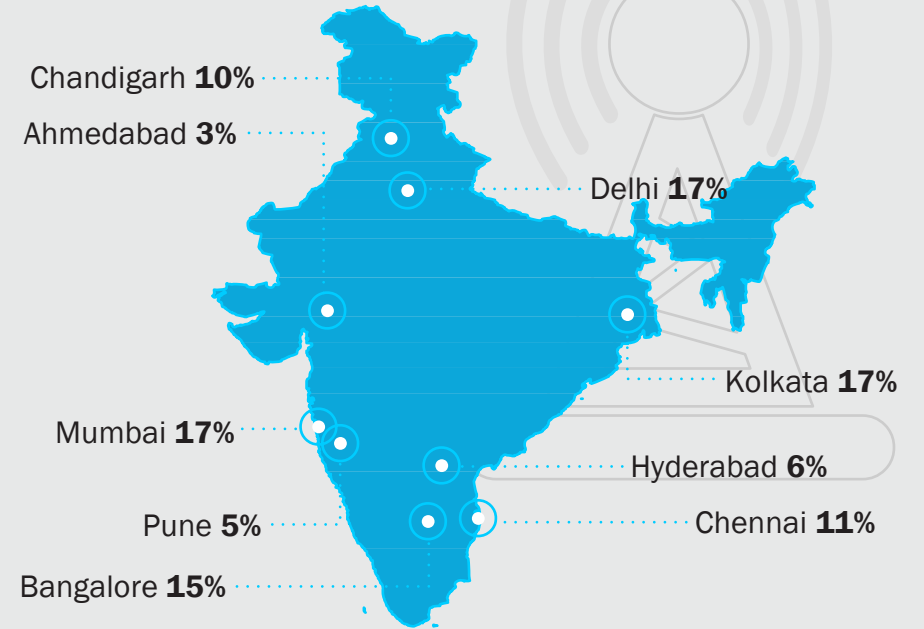
Data Source: Valuvox+TeamLease Survey, December, 2021 – January 2022

Telecom: Hiring Trends

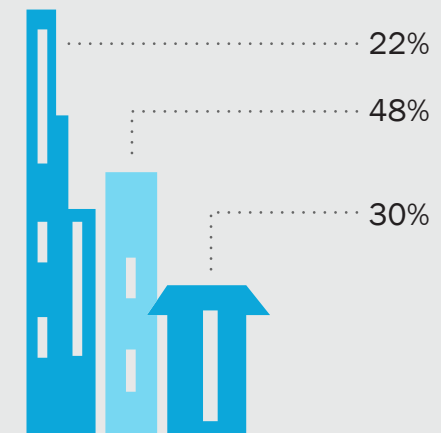
Hiring trend: by Subsector



Hiring trend: by City



Hiring trend: by Business Size



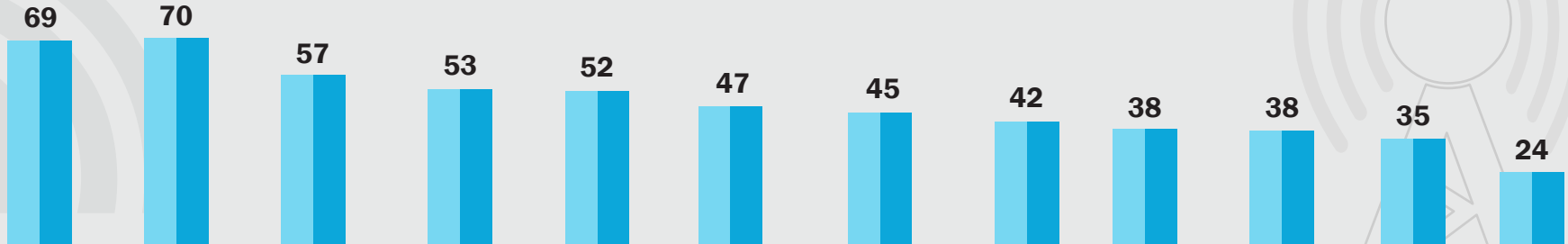
More than half (52%) of all hiring requirements in the Telecom sector came from two new-age subsectors – Mobile Virtual Network Operators, and 5G and White Space Spectrum during FY 2021-22. Medium-sized businesses in Delhi, Mumbai and Kolkata also accounted for nearly half of all hiring in the sector. Notably, Hyderabad, Pune and Ahmedabad lagged far behind other major cities.

Data Source: Valuvox+TeamLease Survey, December, 2021 – January 2022

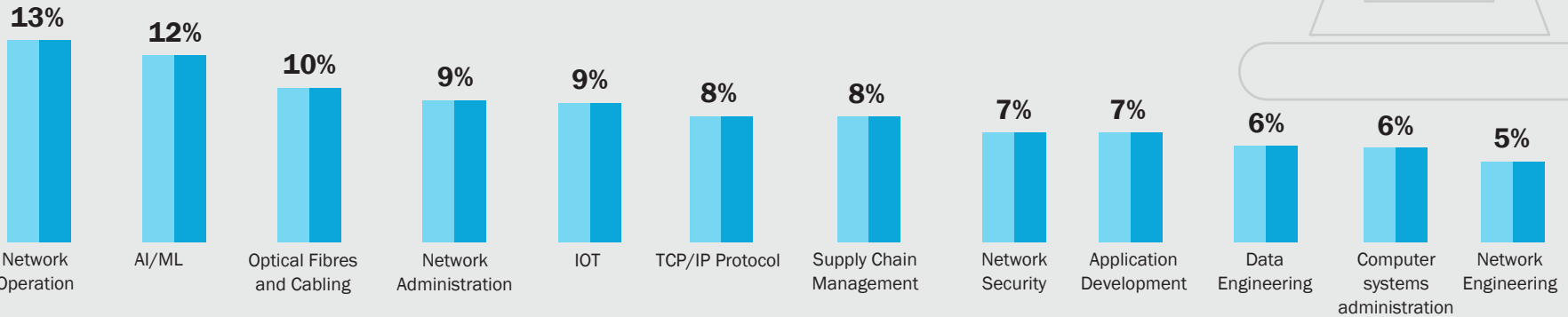
Note: Percentages indicate proportion of employers

Telecom: Sought after skills and the demand-supply gap

Demand-Supply Gap: Weight-Gap Scores



Hiring Sentiment



Skills

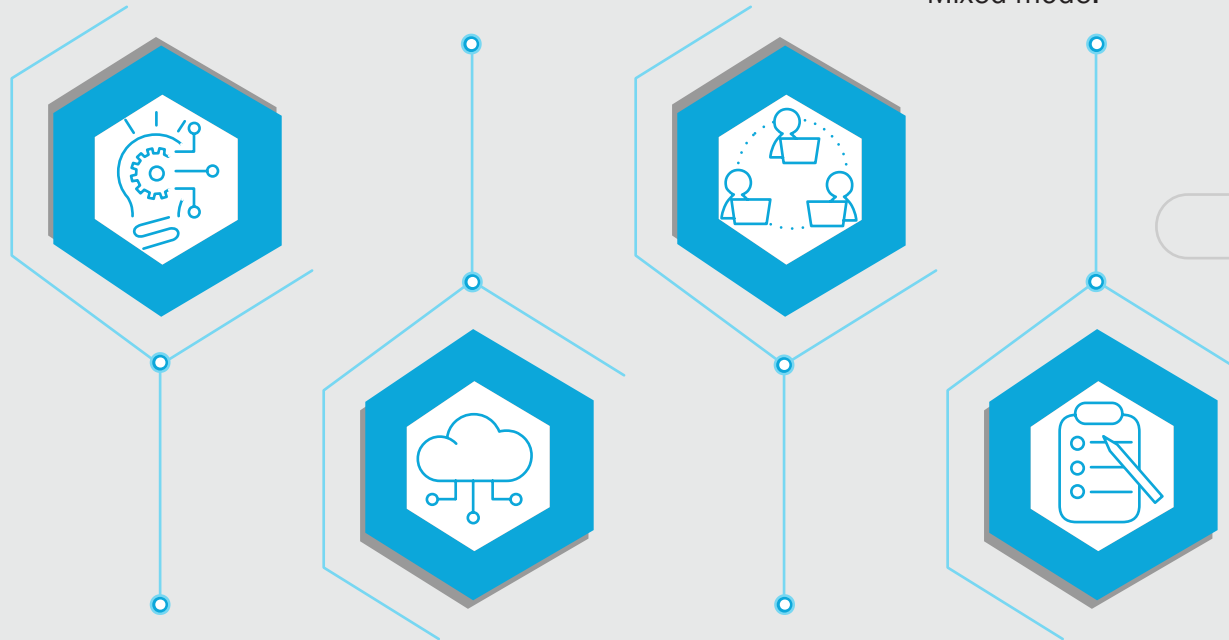
The ubiquitous need for remote work infrastructure and its reliable functioning was a big boost to the demand for Network Operation skills. AI/ML came a close second on the back of scaling and performance requirements.

Except for IoT, Domain skills – ones that are network management focused – dominated the top skill rankings and IT and data skills lagged behind.

KEY TAKEAWAYS

The criticality of the top role translated into a near-doubling of hiring volumes for Network Engineers during FY 2021-22. Six other top roles also witnessed a similar magnitude of growth in hiring during the FY.

Most employers in the sector preferred engaging specialized talent via the contractual employment mode. Top roles concerned with core operations were also hired in the Mixed mode.



Network Engineers were in high demand in the sector during the FY, with data, video and wireless network services becoming more critical than ever.

Provisioning of reliable remote work infrastructure as a universal need for businesses boosted demand for Network Operation skills. Scaling and performance management needs by employers put AI/ML skills in the second place.

The Healthcare sector

Executive Summary

Sector Employment Growth: 6.8 million in FY 2020-21 to 7.5 million in FY 2021-22

Skilled-based careers such as Healthcare IT professionals that will develop the working and operations of the telemedicine network are on the rise. In 2021-22 demand for Paramedics staff increased by 8% -10% as compared to 2019, while the growth will exceed by 18%.

- Munira Loliwala, AVP - Engineering Staffing & RPO Solutions, TeamLease Digital in Yourstory and Asian News

The Healthcare sector is estimated to be employing nearly 7.5 million people currently, and is expected to ramp up this number to 9.5 million by 2026. The Healthcare Services and Facilities subsector dominates with a market size of about USD 116 billion. Two specialized roles dominated the hiring scene in the sector during FY 2021-22 – the Nurse Informatics Specialist (in demand among 20% of all employers surveyed, and hiring growing at 175%) and Clinical Research Scientist (in demand among 17% of all employers surveyed, and one of the highest paid roles at INR 15 lakh per annum). Hiring for most top specialized roles in the sector witnessed growth in the 100% - 200% range.

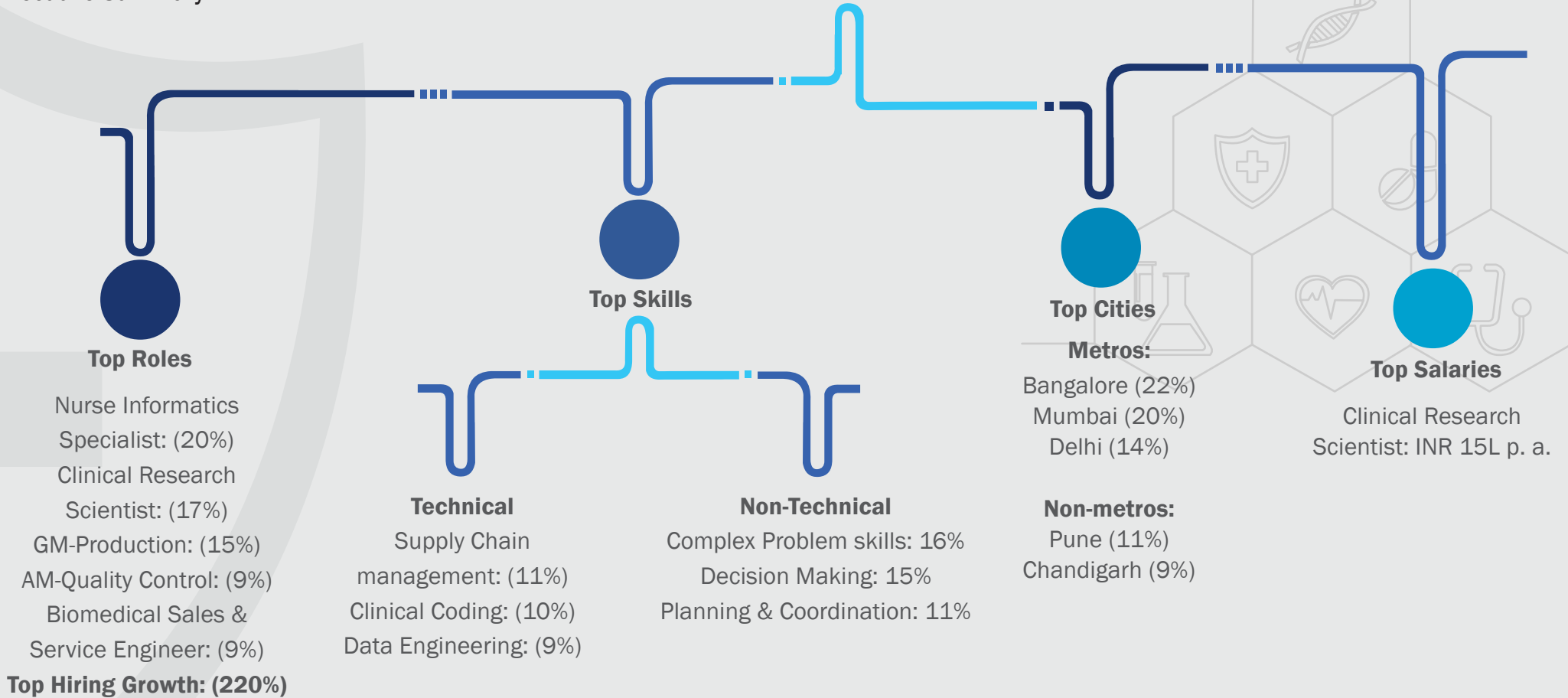
GDP Contribution: The government is planning to increase public health spending to 2.5% of the country's GDP by 2025.

Production-linked Incentive (PLI) Scheme: 1) Under the promotion of Domestic Manufacturing of Medical Devices PLI to the tune of INR 3,420 crores has been granted. Approval has been granted to 21 applicants with committed investment of INR 1,059 crores. 2) Pharmaceuticals (PLI 2.0): 55 Pharma Companies have qualified for the INR 15,000 crores PLI Scheme, giving the “Pharmacy of the World” a boost to increase investment & production of Pharmaceuticals & Medical Devices. 3) Promotion of Medical Device Parks: Development of world-class standard testing and infrastructure facilities will build momentum for domestic production and deepen the value chain of the medical devices market.

Healthcare

Executive Summary

Topline Findings



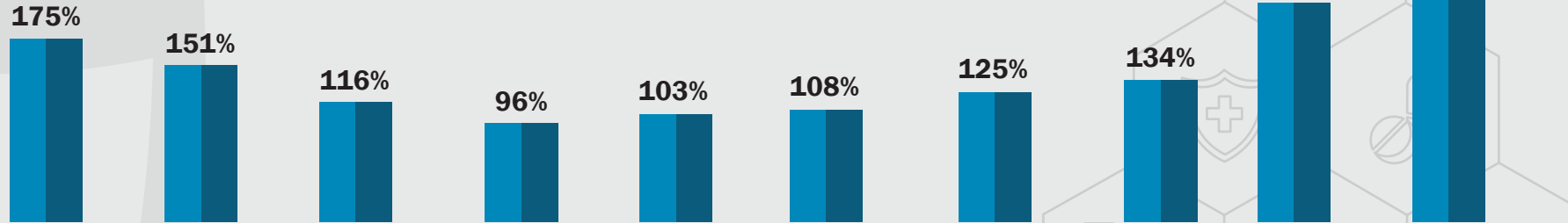
Data driven support has become critical in healthcare establishments in a post-pandemic world. The need to collate, analyse and act on massive volumes of patient data has never been as important as it is today. Accordingly, the Nurse Informatics Specialist – a data support role – and clinical research topped the list for the Healthcare sector, followed by production and sales roles. Lockdowns and the disruption they have caused to material movement and the prevalent uncertainty put a premium on Supply Chain, Complex problem solving and decision skills. Metro cities did significantly better than the non-metros in FY 2021-22.

Data Source: Valuvox+TeamLease Survey, December, 2021 – January 2022

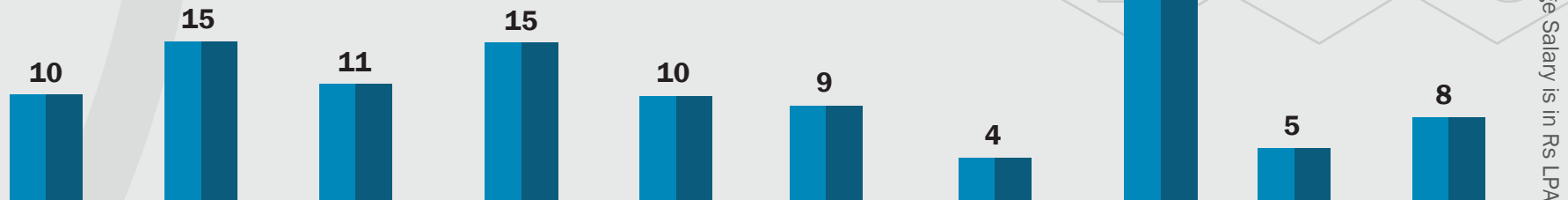
Healthcare: Top Roles

Market Payouts & Hiring Growth

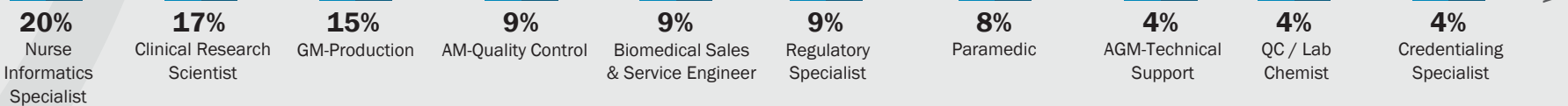
Hiring Growth



Market Payouts



% of employers



Average Salary is in Rs LPA

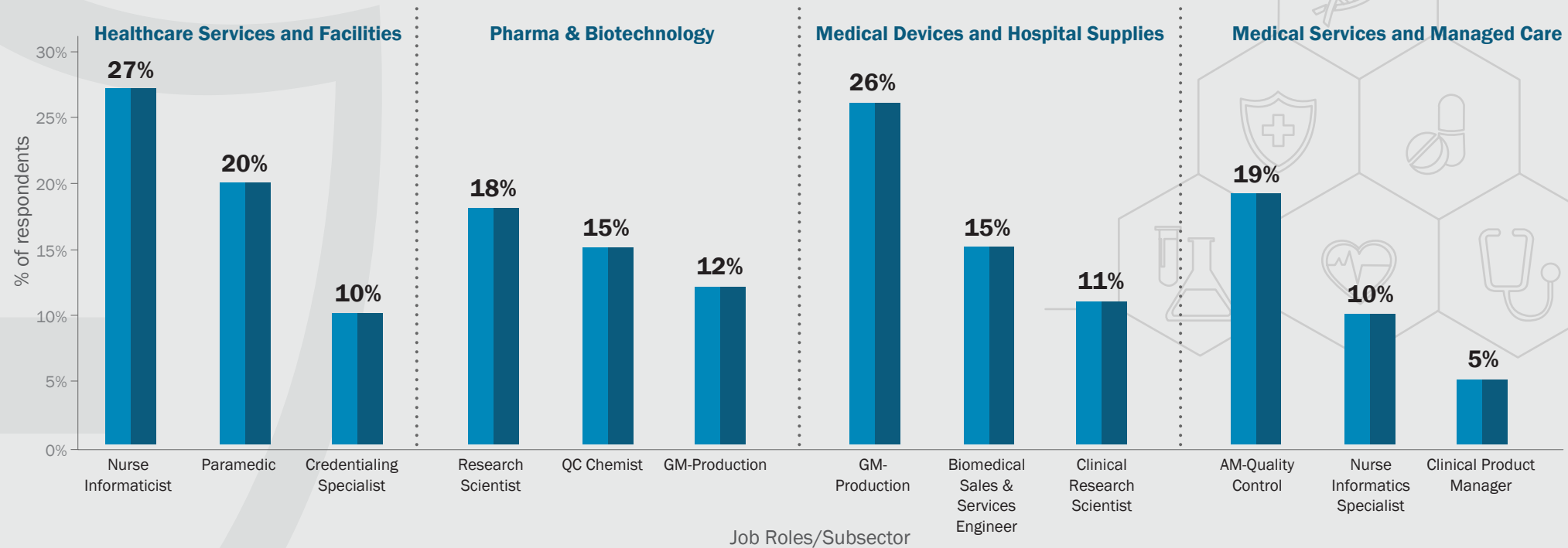
All top specialized roles in Healthcare witnessed superlative growth rates (near-100% to 220%) during the FY. While the top-ranked Nurse Informatics Specialist – hired by one-in-five of all Healthcare employers surveyed – grew at a trailblazing 175%, two niche roles – QC / Lab Chemist and Credentialing Specialist – in demand from 4% of all employers surveyed in the sector commanded growth rates well over 200%.

Data Source: Valuvox+TeamLease Survey, December, 2021 – January 2022

Note: Top 10 roles consist of roles that cut across sub-sectors and, therefore, the order of this set is independent of the order of the top roles by sub-sector

Healthcare: Top Roles

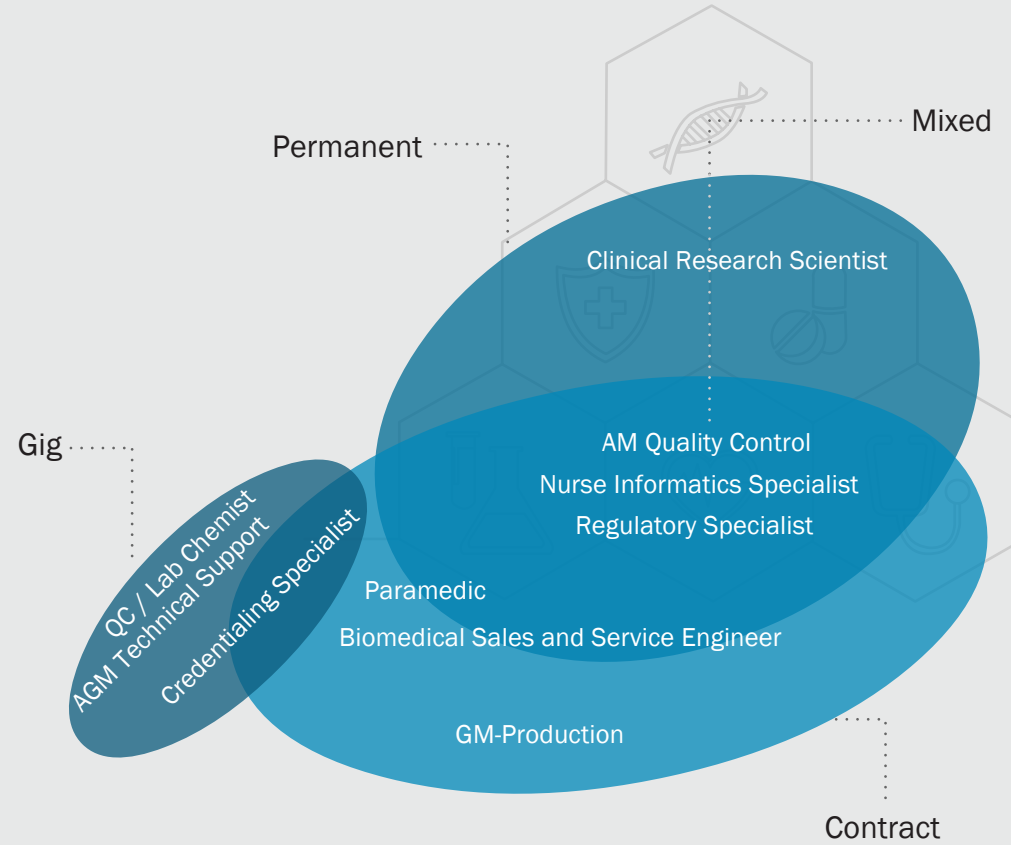
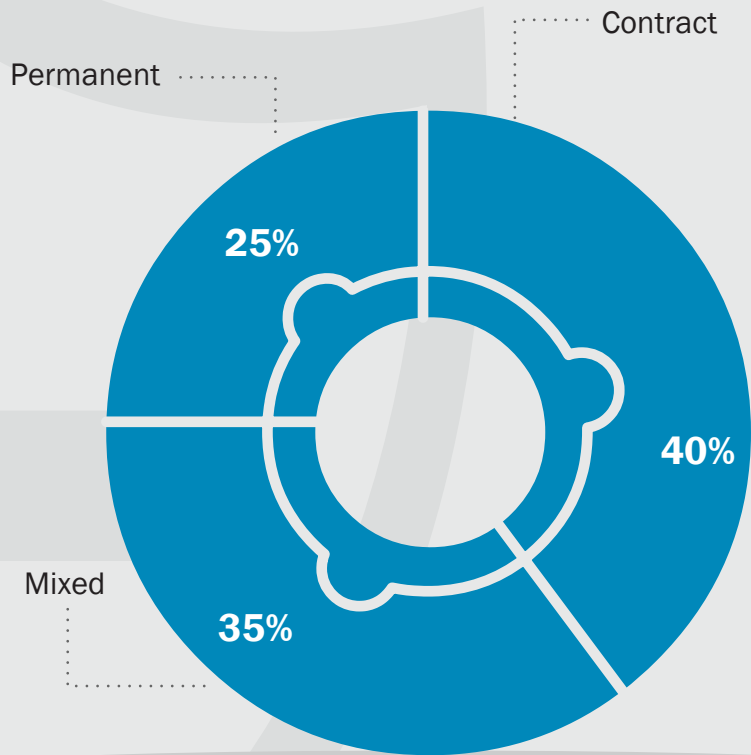
Healthcare: Top 3 Roles by subsector



Each of the Healthcare subsectors placed equal emphasis on data and research roles as they did on production, sales and service roles during FY 2021-22. The Healthcare Services and Facilities subsector and the Pharma & Biotechnology subsector hired more of the first set of roles, while the Medical Devices and Hospital Supplies and the Medical Services and Managed Care subsectors hired more of the second.

Healthcare: Preferred Engagement Type

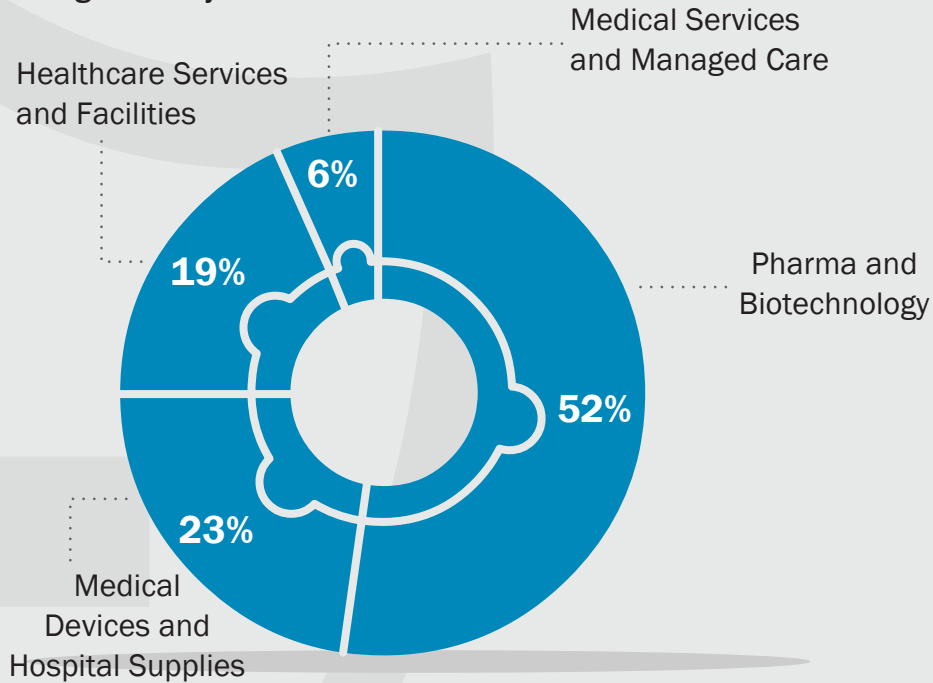
Preferred employment type



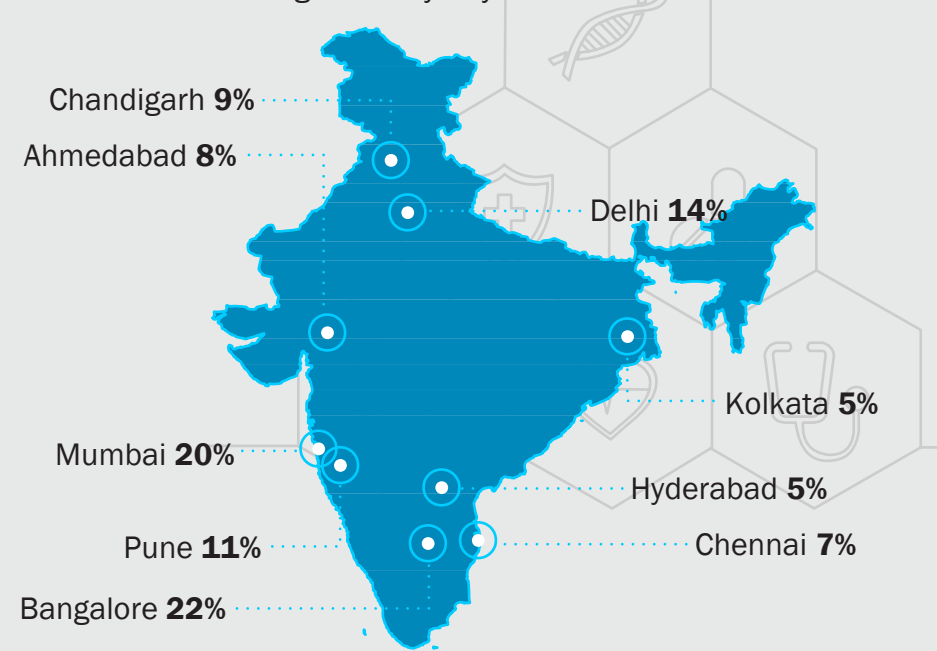
Gig assumed significance in the Healthcare sector engagement preferences during FY 2021-22, in case of the three roles ranked last in the top roles list. The Mixed engagement type also turned out to be very popular among employers in the sector. The Clinical Research Scientist was the only top role employers preferred to engage in a permanent category.

Healthcare: Hiring Trends

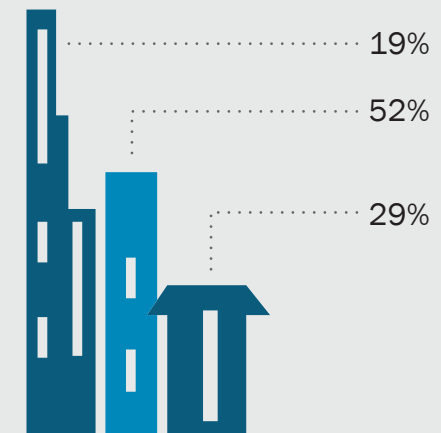
Hiring trend: by Subsector



Hiring trend: by City



Hiring trend: by Business Size



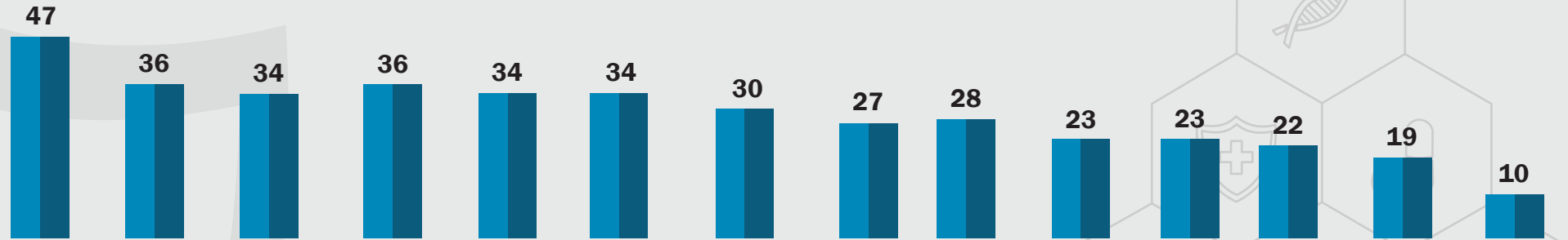
Hiring during the FY was clearly dominated by Pharma and Biotechnology with a 52% share. The Medical Devices and Hospital Supplies subsector hired less than half of this share (23%) to occupy the second place. Bangalore and Mumbai dominated hiring among cities, and mid-sized businesses accounted for more than half of all hiring.

Data Source: Valuvox+TeamLease Survey, December, 2021 – January 2022

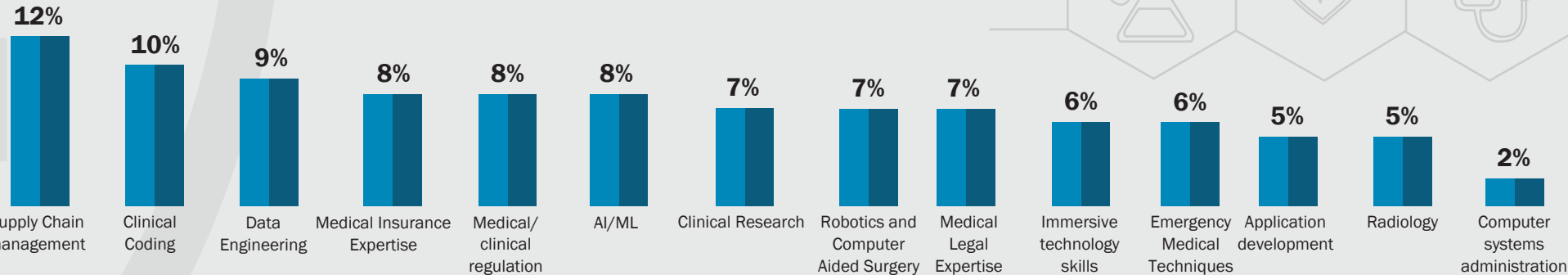
Note: Percentages indicate proportion of employers

Healthcare: Sought after skills and the demand-supply gap

Demand-Supply Gap: Weight-Gap Scores



Hiring Sentiment



Skills

The skill demand pattern in the sector was an eclectic mix of domain, data, research and technology during FY 2021-22. Supply Chain Management topped the skill demand ranking and exhibited a significantly higher demand-supply gap than all other top skills in the sector.

Nearly a tenth of all healthcare employers surveyed looked to hire for data and insurance regulatory skills and experienced significant skill gaps in these areas as well.

Data Source: Valuvox+TeamLease Survey, December, 2021 – January 2022

The Weight-Gap Score is the weighted aggregate of demand and supply gap estimates quoted by respondents for each skill. The response has been collected under three categories - High, Medium and Low. The applied weights are 1, 0.75 and 0.5 respectively.

KEY TAKEAWAYS

Specialized roles in Healthcare exhibited superlative growth rates (near-100% to 220% across roles) and nearly thrice the number of Nurse Informatics Specialists were hired during FY 2021-22.



The Healthcare sector required an eclectic mix of domain, data, research and technology skills during the FY. Supply Chain Management was the top skill in demand and with the highest skill-gap.

The acute need for data driven support and for analysing and acting on massive volumes of patient data created high demand for the Nurse Informatics Specialist and the Clinical Research Scientist roles.

Most Healthcare employers engaged talent via gig and mixed modes of employment during FY 2021-22, with the mixed engagement type turning out to be most popular.



Spotlight

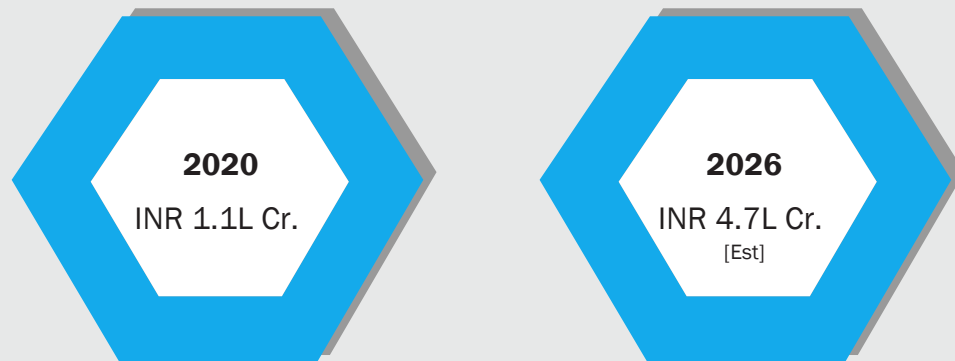
Semiconductors:
Tomorrow's frontier for
specialized roles

Semiconductors: Tomorrow's frontier for specialized roles

Enabling growth for the Engineering, Telecom and Healthcare sectors

The Indian semiconductor market was worth INR 1.1 lakh crores in 2020, and is expected to touch INR 4.7 lakh crores by 2026 (GoI estimates). The deployment of 5G will boost growth opportunities for the wireless industry and will accelerate post-Covid economic recovery.

Today & Tomorrow [2020 & 2026]



These opportunities are bringing with them a growing need from Junior to Senior professionals – to drive Design, Application, Strategic direction and business growth.

Data Source: Chip production: A long way to go, newindianexpress, Dec 2021 | India's Chase to the Semiconductor Business, Strangleholds and Up Comings, ELE Times, Jan 2022 | With INR 76,000 crores PLI scheme, India set to action its semiconductor fab vision, ET, Jan 2022

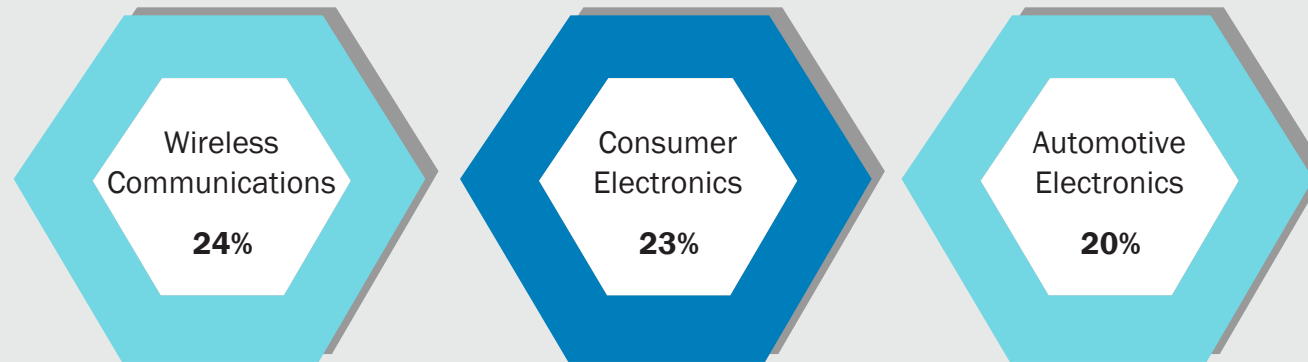


Broad contours of the semiconductor market

- The deployment of 5G will boost growth opportunities for the wireless industry; it will also provide an economic recovery due to the acceleration of wireless take-up for businesses globally plus rapidly changing consumer behaviours
- The need for semiconductors in autonomous driving, AI and low-power semiconductors will lead upticks in demand. Additionally, optoelectronics will rise and experience growth ahead of 2022
- Similarly Integrated Circuits are highly impacting the healthcare segment in medical devices, Implants, sensing circuits and similar electronic devices. Semiconductor in healthcare is segmented by Application and Components both growing at a massive rate with the rise in Healthcare, Medical device, Telemedicine and diagnostics
- The deployment of 5G will boost growth opportunities for the wireless industry and will accelerate post-Covid economic recovery
- Semiconductors in Healthcare is a subsector expected to grow at a 10.2% CAGR between 2021- 26

Semiconductors: Tomorrow's frontier for specialized roles

Driven by market share [by 2030]



The PLI Scheme and specialized job creation in the Engineering & Telecom sectors

Under the PLI scheme the government has announced incentives worth INR.1.5 lakh crores. This is likely to boost the development of a complete semiconductor ecosystem, ranging from design, fabrication, packaging, and testing.

The scheme will be instrumental in creating an estimated **35,000 specialised jobs** apart from one lakh indirect employment opportunities.

Data Source: Chip production: A long way to go, newindianexpress, Dec 2021 | India's Chase to the Semiconductor Business, Strangleholds and Up Comings, ELE Times, Jan 2022 | With INR 76,000 crores PLI scheme, India set to action its semiconductor fab vision, ET, Jan 2022



Career opportunities and Roles in demand in the semiconductor ecosystem

• Career opportunities in the ecosystem

- System and application software development
- System integration and testing
- Heat and mass transfer
- Imaging and lithography performance
- Electronics
- Mechatronics
- Electron optics

• Roles in demand in the ecosystem

- PCB Design
- Application Engineer
- Product Support Engineer
- Integration Engineer
- Equipment Technician



Technology Fusion in the Engineering, Telecom and Healthcare sectors

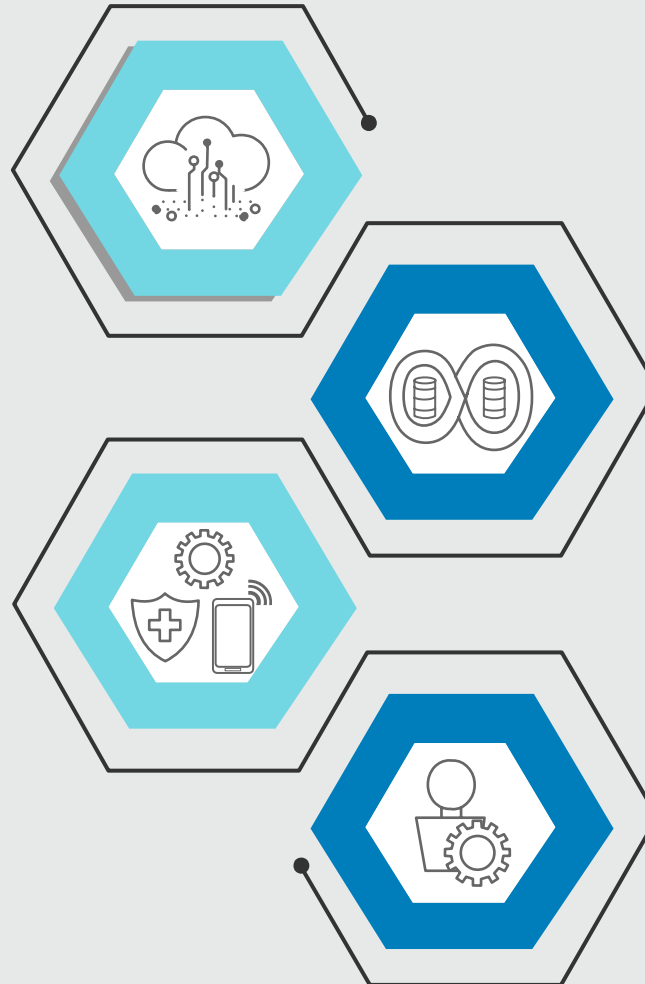
Industry 4.0 – the technological / digital transformation of Telecom, Engineering and Healthcare sectors – is leading to a surge in the hiring of software, bigtech and data professionals across the three sectors. Market demand and competitive considerations are necessitating the induction of tech talent in fair measure in conventional domain functions.

For instance, the automotive industry hires nearly 50% more IT, data science, and data engineering professionals today compared to pre-Covid levels. The digitisation drive by vehicle manufacturers to boost virtual sales and run smooth supply chains has resulted in an unprecedented uptick in the hiring of tech talent. Data Scientists are among the hottest tech-fusion categories and the auto, health-tech and manufacturing sub-sectors have raised the hiring mandate for this category by 60%.

Tech-fusion: The Big Picture

In the evolution of Industry 4.0, Cyber-Physical systems form a keystone concept. They use modern control systems, have embedded software systems and dispose of an Internet address to connect and be addressed via IoT.

The Engineering, Telecom & Healthcare sectors are on the verge of an Industry 4.0 transformation currently accelerated by Covid-19, and demonstrated by a steady penetration of tech roles within individual functional domains of the sectors.



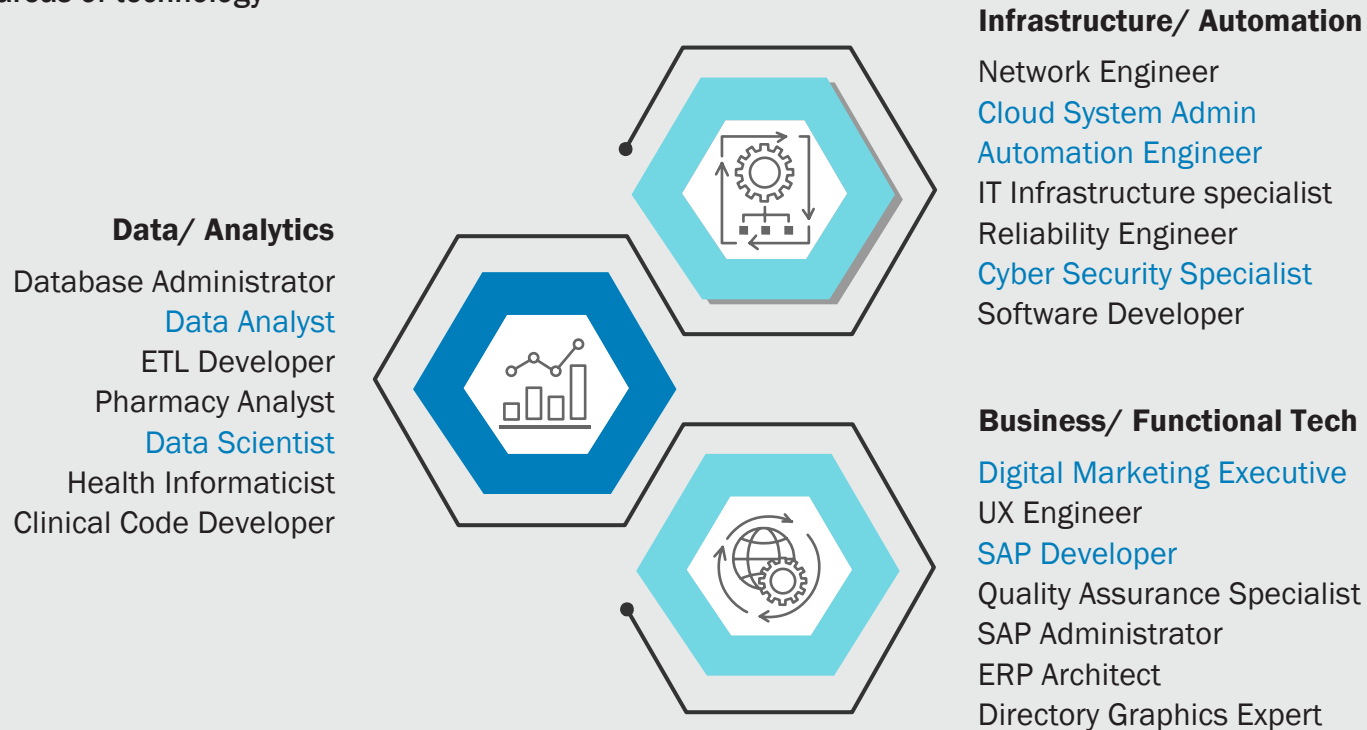
This constitutes a shift from a central industrial control system to one where smart products define the production steps. The purpose of personalization / customization of products via closed-loop data models and control systems.

The surging demand for tech roles is focused on leveraging data to gain efficiencies on multiple levels, transform existing processes, create end-to-end information streams across the value chain and realize new services and business models.

Data Source: The expected contribution of Industry 4.0 technologies for industrial performance, International Journal of Production Economics, Aug 2018; Industry 4.0 and the fourth industrial revolution explained, i-scoop

Technology fusion in the Engineering, Telecom and Healthcare sectors

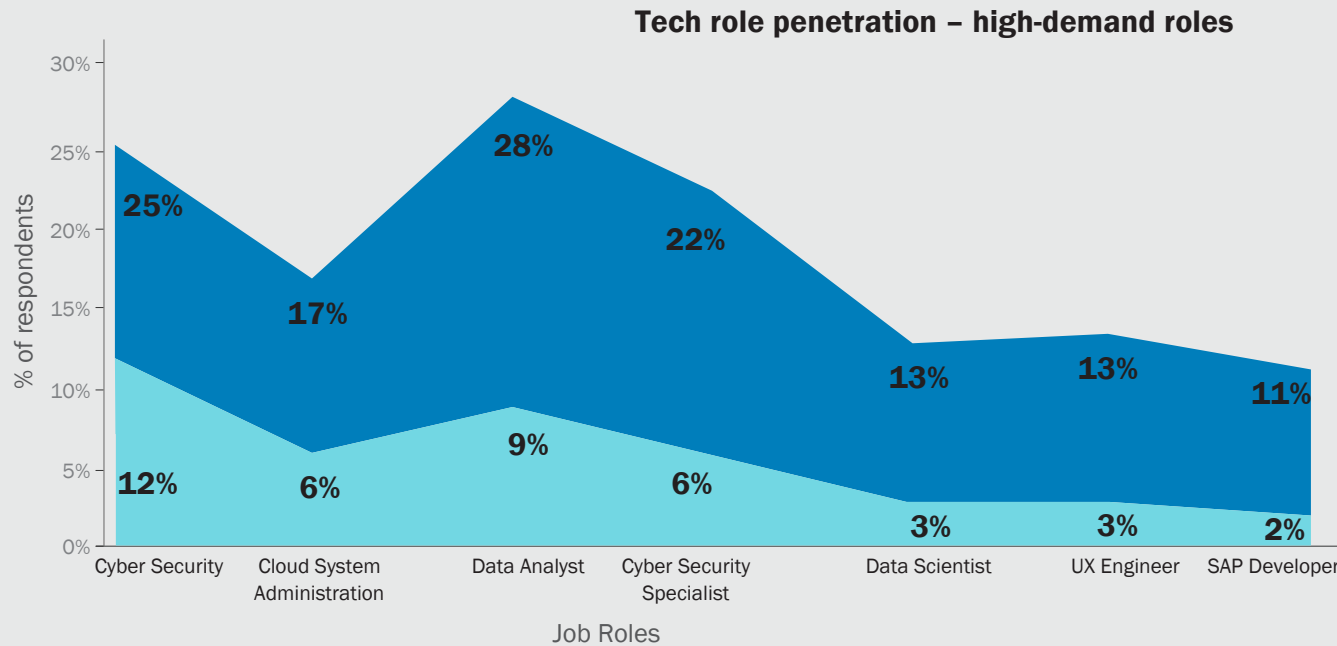
Roles classified by areas of technology



Across Engineering, Telecom & Healthcare employers are hiring tech roles that broadly belong to three broad areas of technology. The Infrastructure / Automation area supports and secures business systems and processes; data acquired through these systems and processes is managed and analysed for topline / bottomline benefits; and, finally, actioned via Business and functional applications.

Technology fusion in the Engineering, Telecom and Healthcare sectors

Penetration of tech roles



Upcoming tech fusion roles

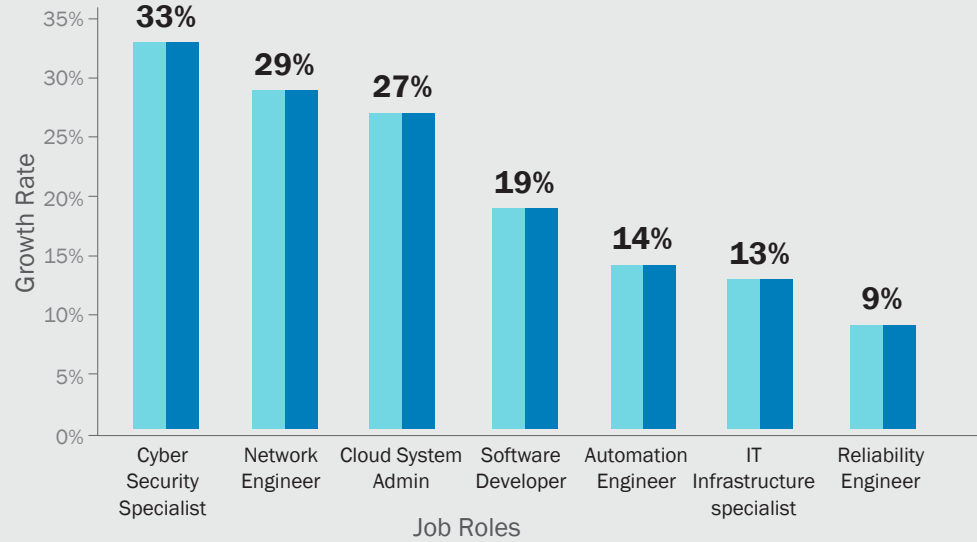
- Robotics Scientist
- IoT Trainer
- Cloud Automation Engineer
- Machine Learning Engineer
- Information Risk Auditor
- Growth Manager
- Software Engineering Head
- Director of Engineering
- Cryptologist
- Security Analyst

The above seven representative roles have significant levels of penetration (ratio of number of tech roles to domain roles hired) across the three sectors. Cyber Security, for instance, has a 48% penetration, and Cloud System Administration has a 35% penetration. Each of the three areas of technology will drive a level of penetration in each of the three sectors based on the role they play in the Industry 4.0 evolution.

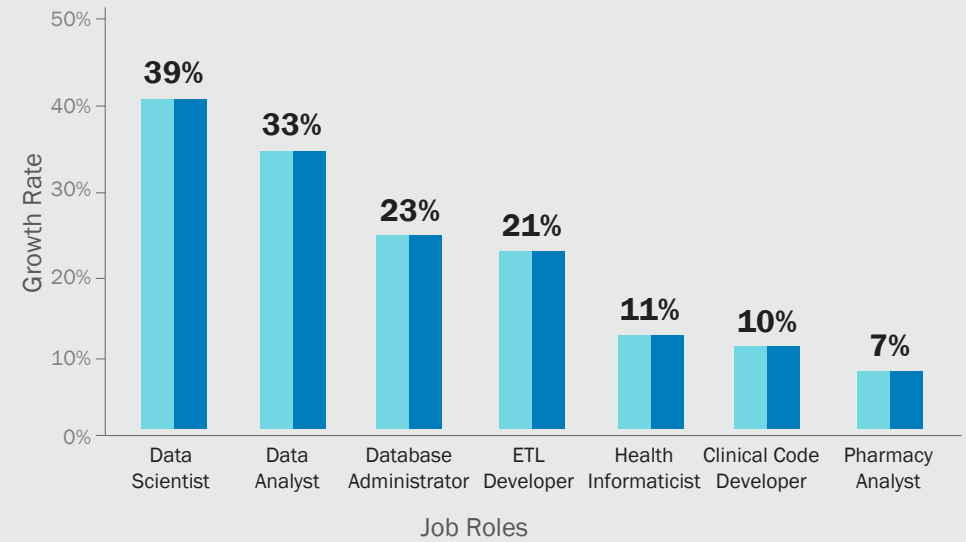
Technology fusion in the Engineering, Telecom and Healthcare sectors

Growth rates for roles across areas of technology

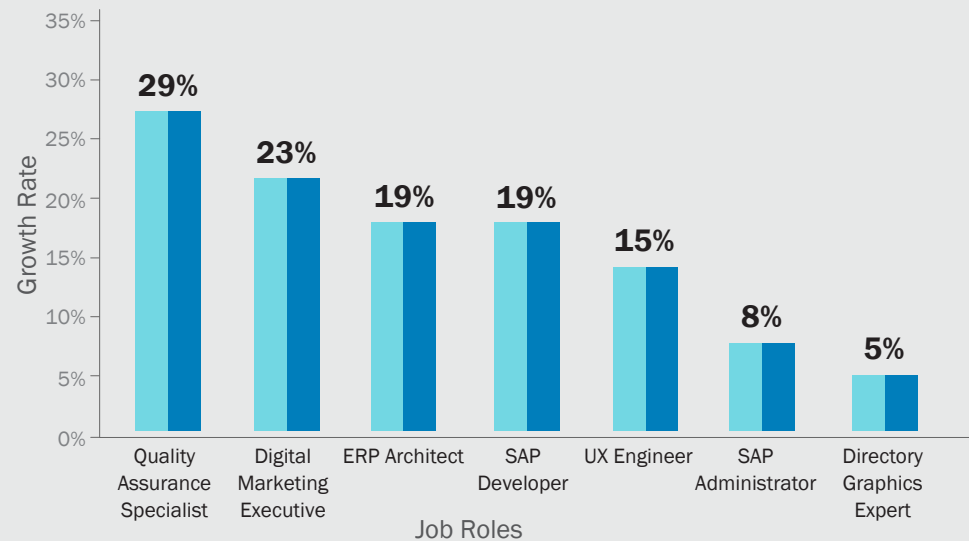
Infrastructure / Automation

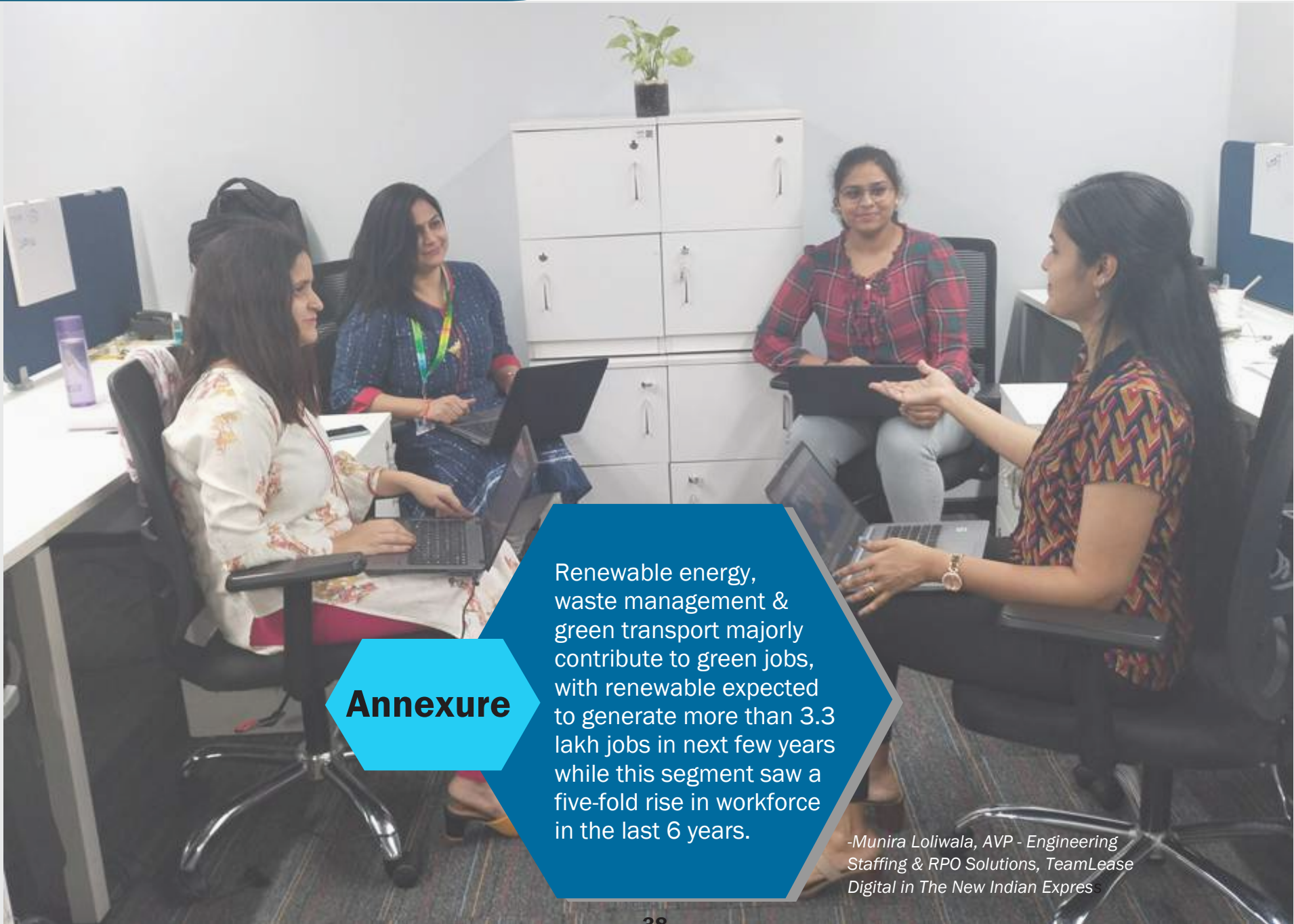


Data / Analytics



Business / Functional Tech





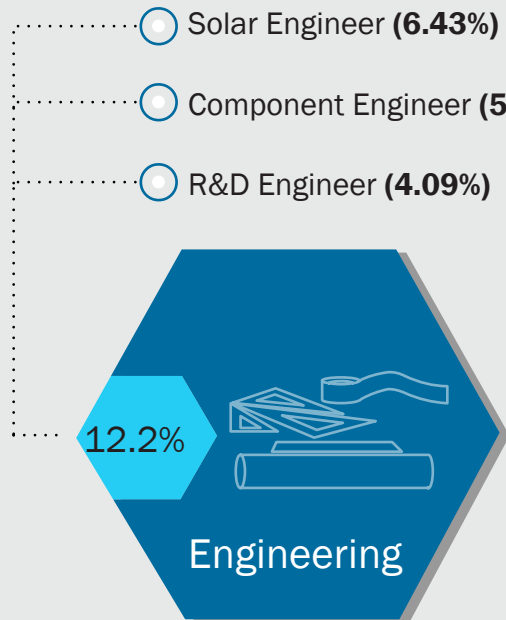
Annexure

Renewable energy, waste management & green transport majorly contribute to green jobs, with renewable expected to generate more than 3.3 lakh jobs in next few years while this segment saw a five-fold rise in workforce in the last 6 years.

-Munira Loliwala, AVP - Engineering Staffing & RPO Solutions, TeamLease Digital in The New Indian Express

Attrition Rates

in the Engineering, Telecom and Healthcare sectors during FY 2021-22



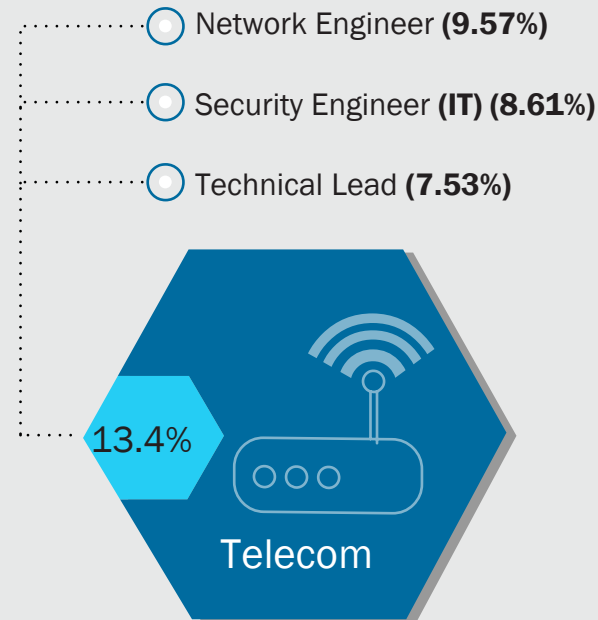
Auto, Aerospace & Defence (**9.33%**)

Power & Construction (**7.13%**)

Chemical, Agri & Process (**6.29%**)

Manufacturing (**5.35%**)

Electricals & Electronics (**3.93%**)



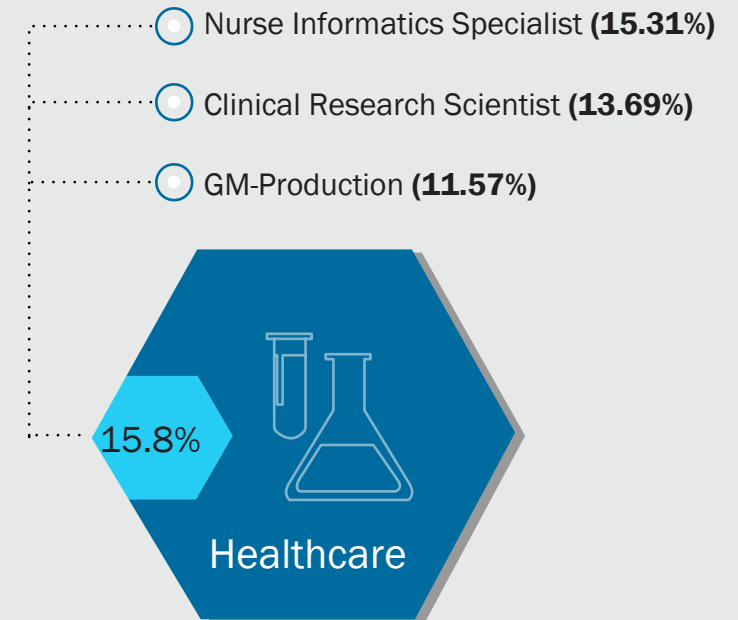
Telephone and Broadband Services (**11.89%**)

Telecom Infrastructure & Development (**10.65%**)

Mobile Virtual Network Operators (**10.21%**)

5G and White Space Spectrum (**9.43%**)

Mobile App and Gaming (**7.27%**)



Healthcare Services and Facilities (**16.79%**)

Medical Services and Managed Care (**15.03%**)

Medical Devices and Hospital Supplies (**13.95%**)

Pharma & Biotechnology (**13.07%**)

**Career prospects and role opportunities
in the Engineering, Telecom and Healthcare sectors**

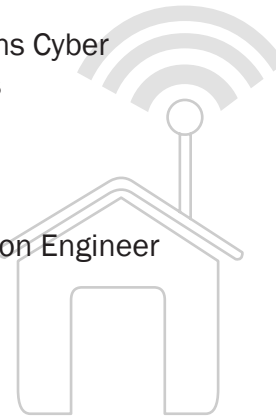
Engineering

Electronic Component Manufacturing
Material Design Engineer
ISRO/ DRDO/ CSIR Labs
Industrial Automation Engineer
Power Engineering
Environmental Engineering
Safety Engineers



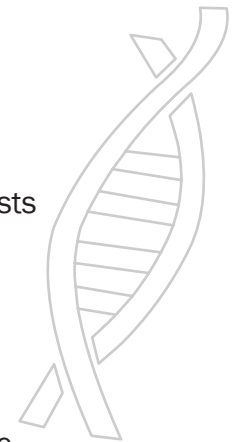
Telecom

Telecoms Engineer
Specialists Telecom Security
5G Telecommunications Cyber
Security – Consultants
Networks Engineer
Wireless Communication Engineer
IC Design Engineer



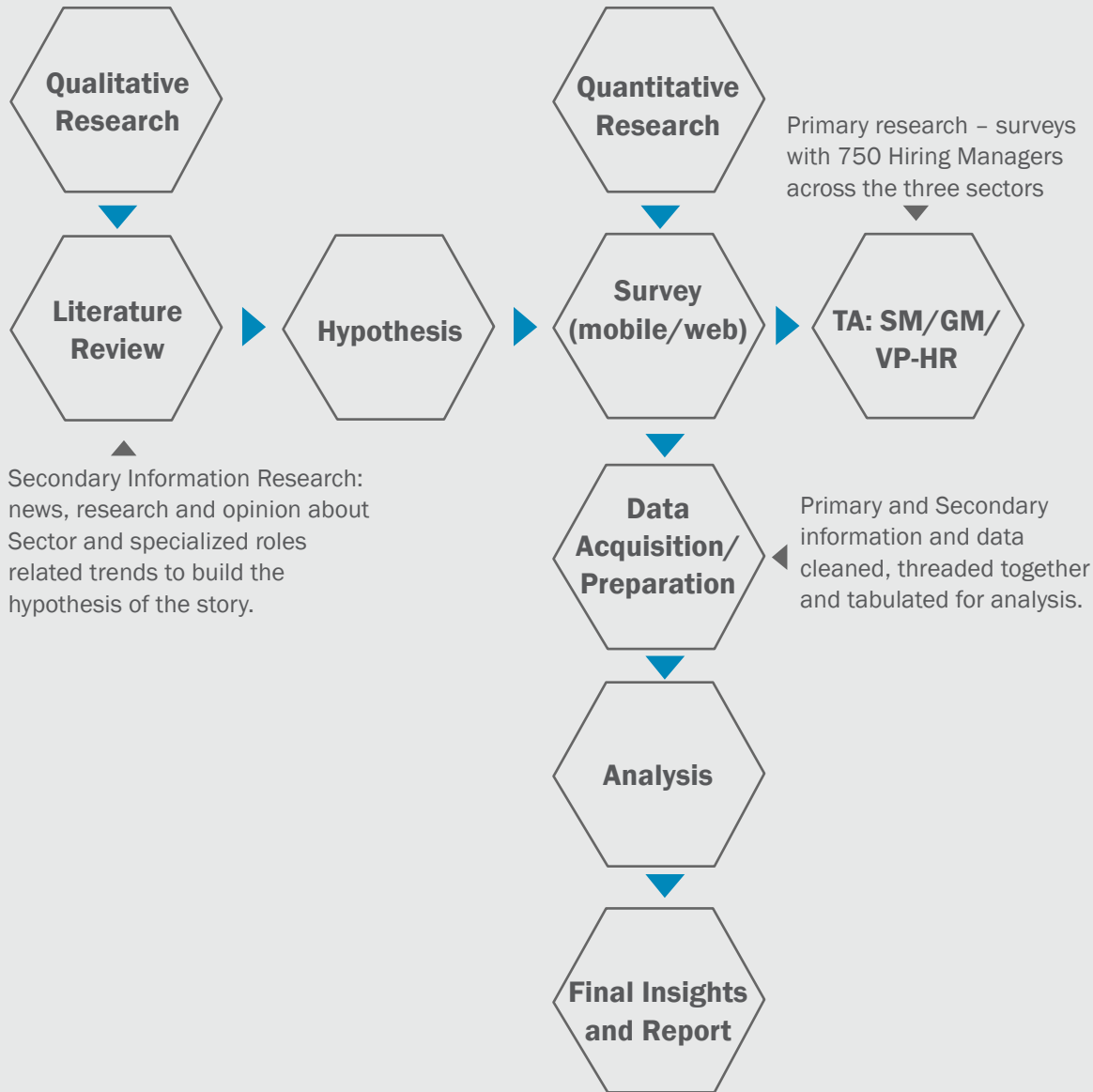
Healthcare

Home health aides / care
Nurse Practitioner
Medical Consultants
Occupational Therapists
Telemedicine Technologists
Clinical Coding
Data Analytics
Patient Monitoring & Care
Speech-Language Pathologists



The role opportunities in the three sectors are an eclectic mix of high-end roles across the spectrum of the respective sub-sectors. The Engineering sector roles comprise those that demand precision and diligence. Telecom sector roles are expertise-driven and are in cutting-edge applications. Healthcare roles range from caregiving / therapy and tech / data orientation.

Methodology Overview & Sample Design



Sectors	Total Respondents
Engineering:	306
Telecom	241
Healthcare	203
Total	750

Cities	Total Respondents
Ahmedabad:	36
Bangalore	141
Chandigarh:	49
Chennai	105
Delhi	97
Hyderabad:	63
Kolkata	77
Mumbai	117
Pune	65
Total	750

Business Size	Total Respondents
Small [10 to 49 employees]	323
Medium [50 to 249 employees]	269
Large [250 employees or more]	158
Total	750

Total Employer Respondents = 750
Survey timeline: December 2021 – January 2022

Data Sources

- Size of India's defence, aerospace mfg sector will be INR 1 trn in 2022, Business-Standard, December 2021
- India - Country Commercial Guide - India - Country Commercial Guide, International Trade Administration, October 2021
- Aerospace & Defence Sector Overview, Maier Vidorno
- Current scenario of the Indian construction industry in 2021, Construction Placements, June 2021
- Construction fuels jobs revival in rural India, cities struggle, Live Mint, February 2021
- India ranks 6th in the world in Chemicals sales and contributes 3% to global chemical industry, Invest India, December 2021
- India is one of the largest consumer electronics markets in Asia Pacific Region, Invest India, December 2021
- Manufacturing Sector in India, IBEF, December 2021
- Indian Telecom Services Market, Infoholic Research, February 2016
- Indian Telecom Services Market Trends Forecast 2020-2030, Market Watch, February 2021
- India has the world's 2nd largest mobile market, Invest India, December 2021
- Wireless subscriber market share in India as of June 2021, by service provider, Statista, December 2021
- Mobile Virtual Network Operator (MVNO) Market Size, Share & COVID-19 Impact Analysis, Fortune Business Insights, March 2021
- India 5G Market Report 2020 - Market is Projected to be Valued at INR. 32.43 billion by 2020 and is Estimated to Reach INR. 19,053.09 billion by 2025, Globe News Wire, November 2020
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- Indian gaming market poised to reach \$3.9 billion by 2025: Report, Business-Standard, October 2021
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- Biotechnology industry in India, IBEF, December 2021
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