Draup Annual Tech Talent Report 2025:

The Economics of Skills, AI, and Human Augmentation

A Draup perspective on how wage inflation, automation, and talent decentralization are redefining global labor dynamics

Key Themes

1. Global Tech Talent Is Decoupling from Traditional Hubs

Tech talent growth is shifting from concentrated hubs in the Global North to distributed ecosystems across the South and East. Emerging markets are no longer secondary delivery centers, they are becoming innovation nodes, fuelled by digital-native startups and Hyperscaler investments.

2. The Workforce Is Splitting into Builders, Orchestrators, and Synthesizers

Future-ready organizations will balance Builders (execution), Orchestrators (systems and automation), and Synthesizers (human-AI integration), roles that collectively drive digital scalability and resilience; Strategic workforce planners must optimize for composition, not just capacity.

3. GenAI Is Compressing the Half-Life of Skills

With GAI adoption, the half-life of technical skills is now below two years. By 2027, 40% of today's core tech skills will be partially obsolete not due to job loss, but due to skill fusion and AI-enabled workflows; Continuous skill renewal and fusion (AI + domain + design) will become the new standard of employability.

4. The Age of the Augmented Employee

AI will not replace tech talent, it will recompose it. Developers will code with Copilot, architects will simulate with design AI, and recruiters will infer adjacencies with skill graphs; Organizations must evolve talent metrics from FTE counts to Effective Digital Capacity (EDC), capturing the combined throughput of humans and AI systems.

5. A "Silent Repricing" Is Reshaping Global Labor Markets

The global labor market is entering a systemic recalibration driven by three converging forces, viz., wage inflation in mature economies, salary normalization in emerging markets, and the rising cost of digital infrastructure and AI talent. As a result, the traditional labor-cost arbitrage that once underpinned global delivery models has narrowed to below 20%, fundamentally altering how organizations allocate work and capital.

Going forward, competitiveness will hinge on how effectively companies balance human capital inflation with technological depreciation curves, ensuring each dollar spent on labor or compute drives measurable output.

6. Tech Startups Are Redefining Emerging-Market Ecosystems

Tech startups across emerging markets now operate on modern tech stacks and agile architectures that rival those of global enterprises.
These ecosystems are setting the pace for AI skill diffusion, innovation velocity, and open-source collaboration, accelerating digital maturity across their regions.

Future SWP will increasingly revolve around a hybrid model, leveraging mature hubs like US, India and China for scale, growth markets like Vietnam, Poland, Indonesia for expansion, and innovation hubs like Israel, Singapore, ANZ etc. for niche capability building.

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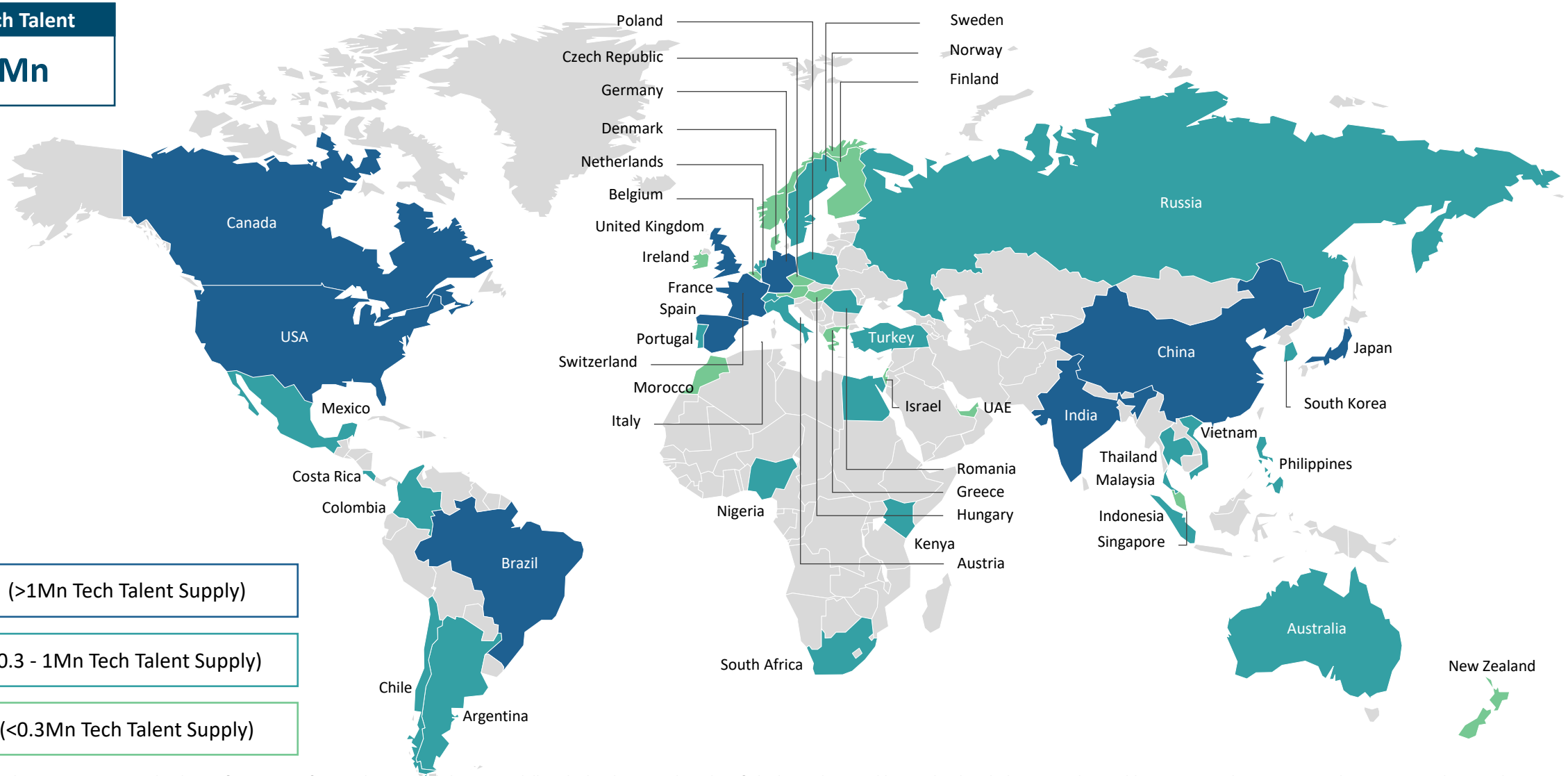
Country wise Tech Talent Supply Landscape

Global Tech Talent

~60 Mn

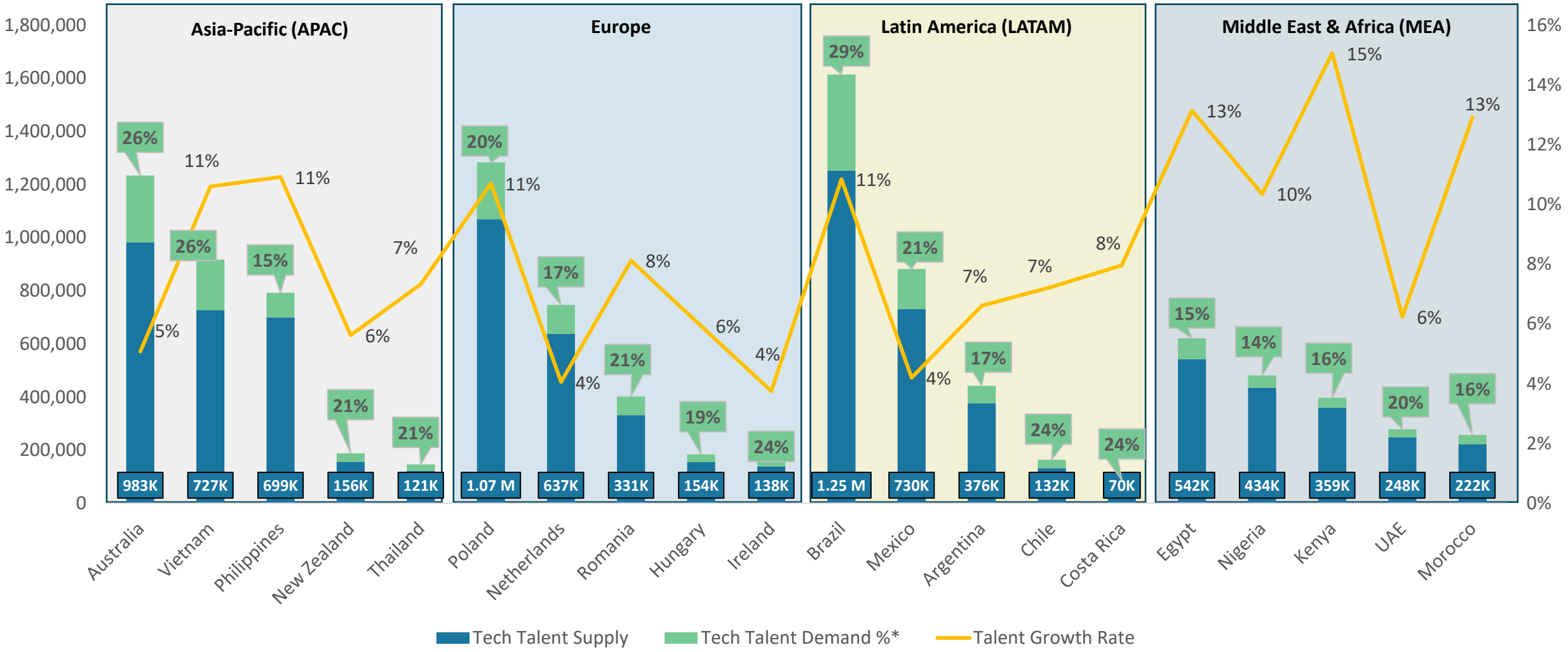


High	(>1Mn Tech Talent Supply)
Medium	(0.3 - 1Mn Tech Talent Supply)
Low	(<0.3Mn Tech Talent Supply)

Note: Draup primarily analyzes its proprietary database **of** 850M+ Professionals, 4,500+ Roles, 30K+ Skills, which is leveraged to identify high, medium and low tech talent hubs across the world. Due to Visual constraints, only countries with more than 50,000 analyzed tech talent supply have been considered for representation

Emerging Tech Hubs Accelerating Global Workforce Transformation: Rapid growth of Technology talent in APAC and LATAM signals a new era of scalable, high-demand talent markets

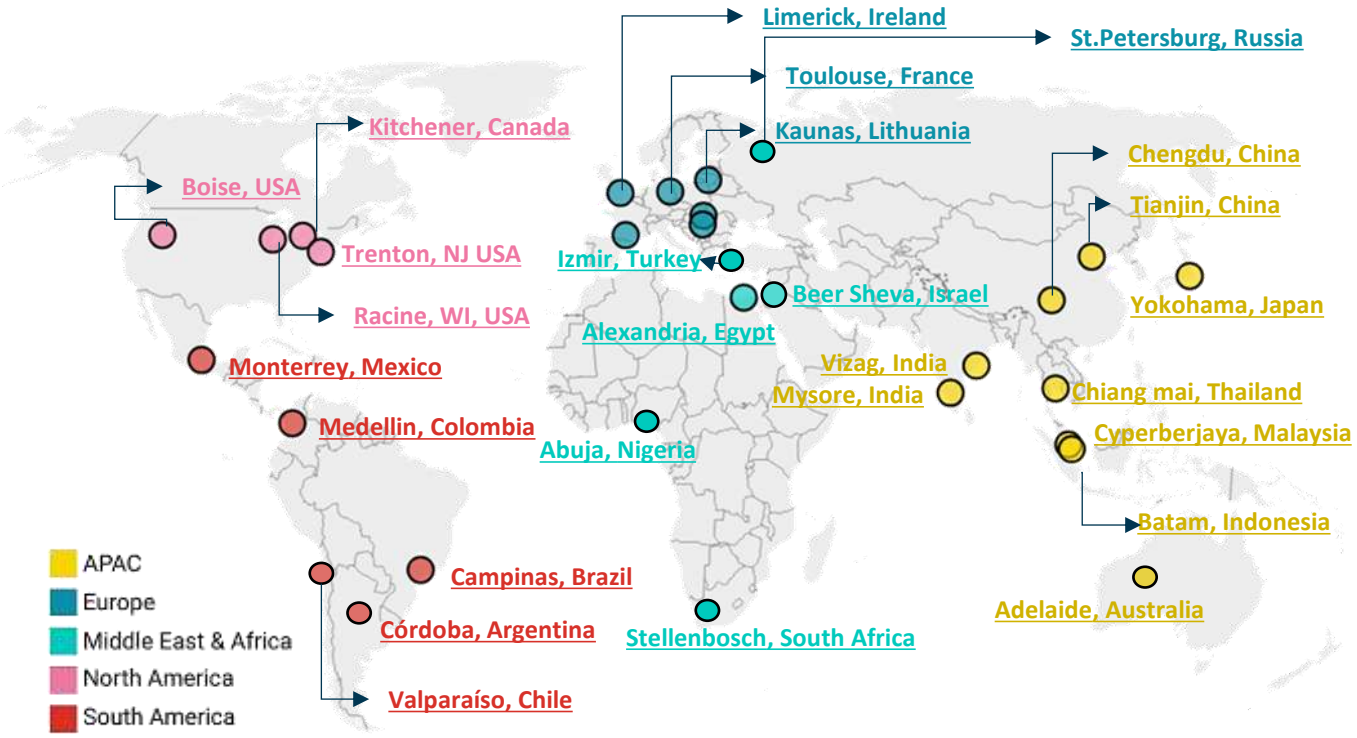
Talent Metrics of Supply, Demand, Growth Rate of Global Emerging locations



Note: Draup tracks 850M+ technical profiles and 650Mn+ Job descriptions, which are leveraged to analyze the key workloads. Talent Growth Rate is depicted as the CAGR of the Talent year-on-year from Nov 2022 to Oct 2025. Talent Demand % is the Job Postings in the last one year to the Total Talent Supply.

Emerging near Tier 1 (or advanced Tier 2) locations globally are experiencing rapid growth; These locations will become critical battlegrounds for specialized talent, intensifying competition, and requiring proactive workforce strategies

RISING HUBS



ADVANTAGES OF TIER 2 CITIES

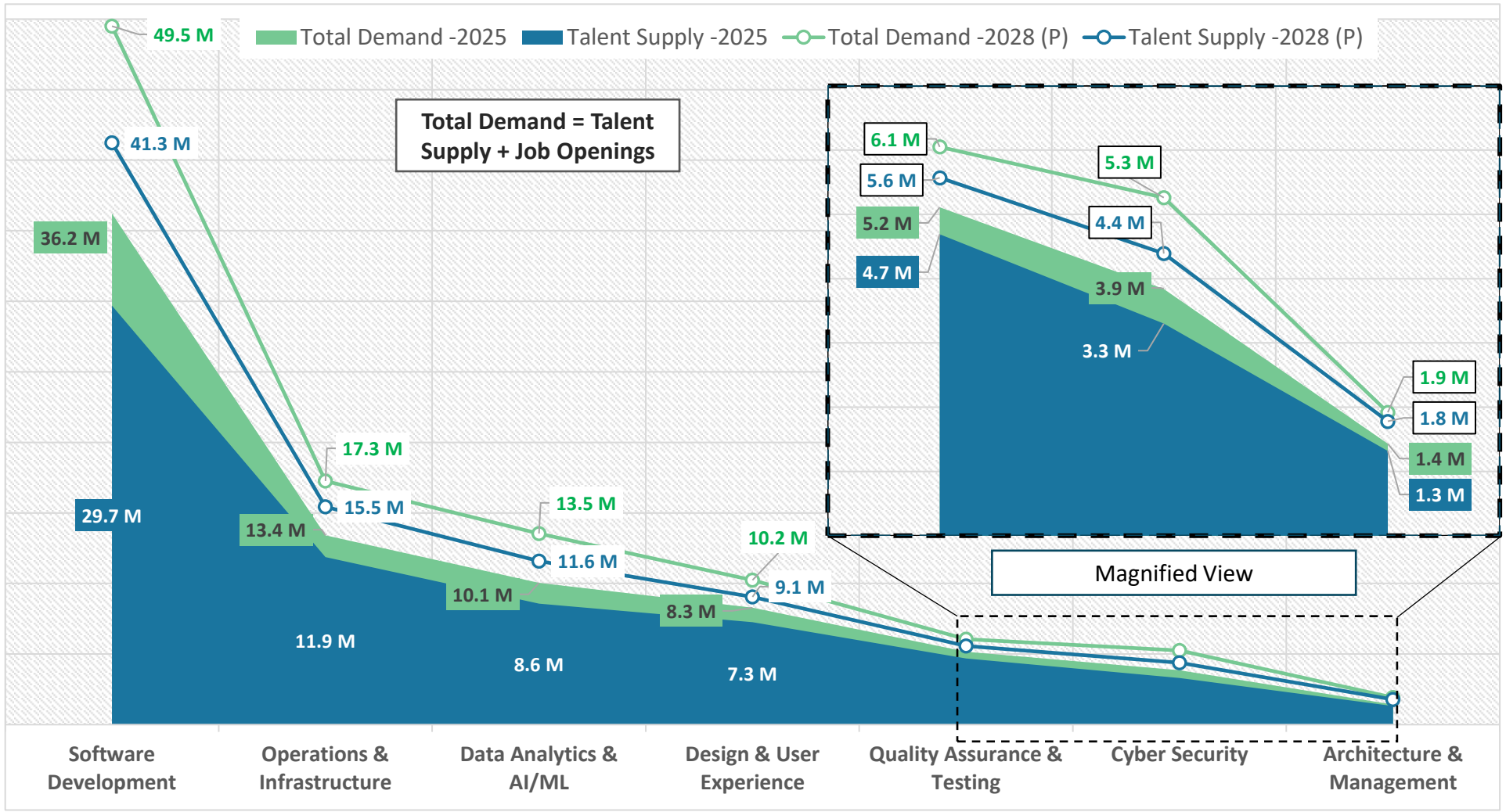
- Local Duty and Tax Exemptions
- Single Window Regulatory Clearances
- Relaxation of SEZ Regulations
- Attractive Commercial Propositions
- Connectivity and Infrastructure
- Lower Operational Costs

Location		Prominence
	Boise, Idaho, USA	• **Boise is emerging** as a **tech hub** with a **61% surge in tech companies** over the last few years. • Meta's $800 M data center is driving a job boom, and the median home price is way more affordable than Silicon Valley • **Micron's chip fab** is expected to **create 2000 direct and 15,000 indirect jobs**
	Puebla, Mexico	• **Puebla is leveraging** its strong **industrial base** to become an emerging innovation hub • **Schaeffler announced** in 2025 to **open an innovation center** in Puebla and **employ ~400 people** specialized in **software engineering, testing, and validation**, as well as in **electrical and mechanical engineering.**
	Leipzig, Germany	• **Just 150 km from Berlin**, Leipzig is Germany's fastest-growing city and an emerging startup hub. • **Set to become the country's 6th largest city by 2040**, it **combines Greentech, Life Sciences, and Digital Tech clusters** with strong investment, talent access, and a **strategic location linking Central and Eastern Europe**
	Timisoara, Romania	• It was one of the **first Romanian cities to attract major tech investment** - **Continental AG** set up its first local site here 15+ years ago and now runs a large **automotive software and electronics R&D center**, alongside other global players in automotive IT, telecom, and cybersecurity.
	Limerick, Ireland	• Dell (since the early 2000s), Analog Devices, and Johnson Controls run local R&D hubs in Limerick, focused on cloud, AI, and embedded systems. • All three tap the University of Limerick's strong co-op talent pipeline.
	Mysore, India	• **Mysore** is steadily gaining traction as a **satellite tech and GIC (Global In-house Center) location close to Bengaluru.**
	Tianjin, China	• **30 minutes by high-speed rail from Beijing** • **Top universities (Nankai, Tianjin Univ.)** anchor its talent base, and the new Tiankai Higher Ed Park (opened 2022) attracted 1,200+ high-tech companies in its first 6 months*
	Yokohama, Japan	• **Yokohama** has evolved into **Japan's second innovation node.** • It **hosts Nissan's global HQ and R&D**, plus **major R&D centers for Sony and Bosch** focusing on mobility tech and embedded hardware. • The city has rolled out the **Tech Hub Yokohama initiative to boost local innovation** in **robotics, AI, and mobility**.

Note: The list of emerging/rising global hubs is non-exhaustive, locations have been selected to portray as the best example of Tier 2 cities with a rising prominence.
Source: Draup's Proprietary Database, Government Press Releases, and News Portals

Global tech roles face accelerating supply–demand gaps, with Cybersecurity emerging as the most constrained function by 2028

Tech Talent Supply & Demand by Job Function – 2025 & 2028 (Predicted)



Insights

Software Development, Cybersecurity and Data Analytics & AI/ML are experiencing the highest talent supply-demand gap in 2025

The **Cybersecurity** function is projected to experience a widening supply-demand imbalance by 2028, unlike other functions showing a narrowing supply-demand gap

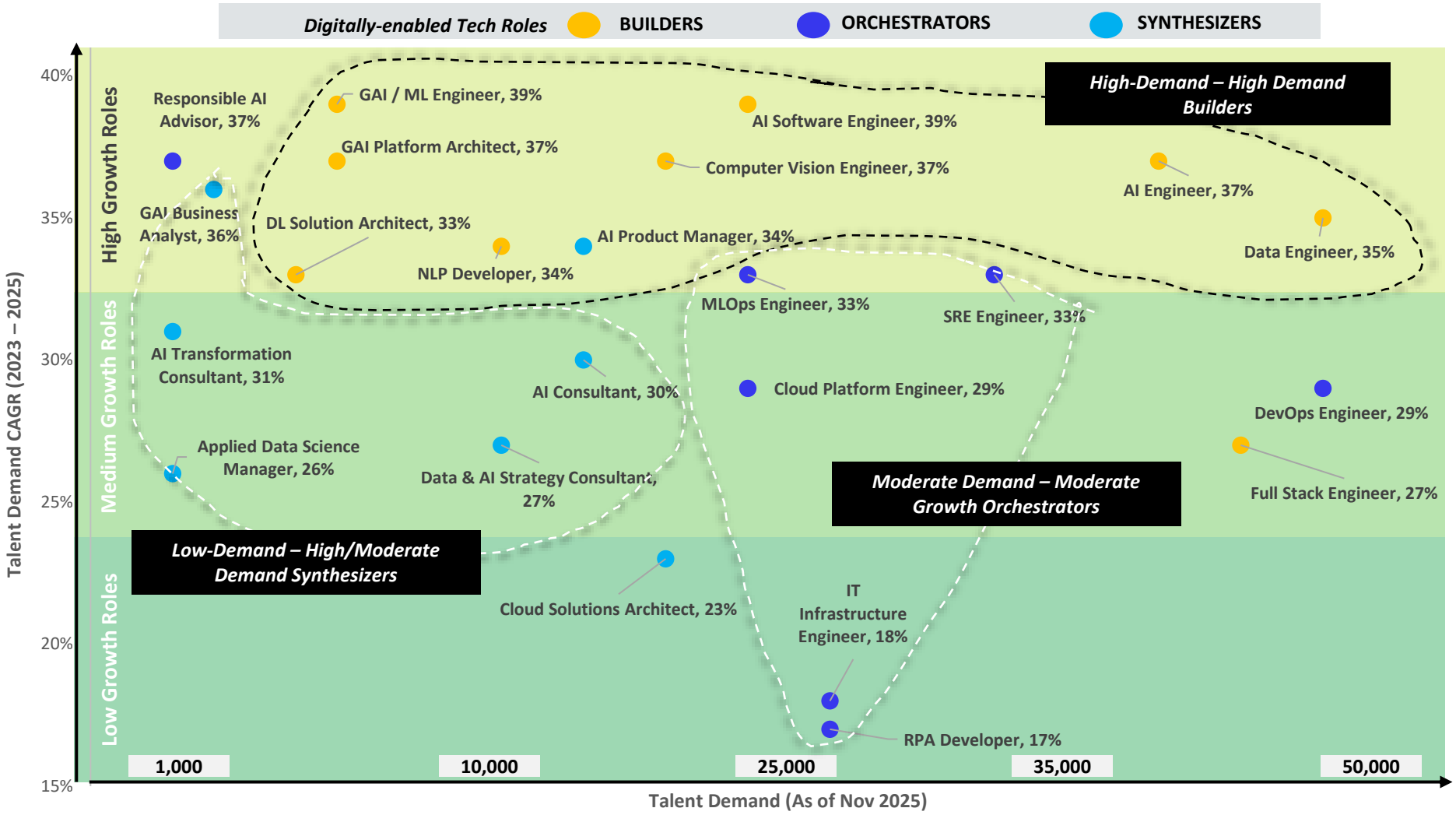
The Cybersecurity workforce gap is set to widen by 2028 as **threat complexity and regulatory demands** accelerate faster than talent development and supply

AI-augmented workflows can counter the projected cybersecurity gap by enhancing individual productivity, automating redundancies, and reducing reliance on manual intervention

22%	13%	17%	14%	10%	17%	8%	2025	Supply Demand Gap Analysis
20%	12%	17%	13%	9%	20%	8%	2028 (P)	

Global Tech Workforce Is splitting into Builders, Orchestrators, and Synthesizers: The war for tech talent is no longer just about engineers, it's about system orchestrators and AI synthesizers; Strategic Workforce Planning must recalibrate to hire right mix of talent signaling an urgent shift from traditional roles to demand for Builders

Demand Trends – Talent Demand v/s Demand CAGR (2023-2025)



High Growth Global Markets

- **US** and **India** are driving global AI build-out, with the US drawing **$109B in private AI investment** and India targeting a **$17B AI market backed by government investments** and **1.25M AI professionals by 2027**
- **China** is scaling AI at speed, combining **$100B** in semiconductor funding and startup capital, creating dense clusters of chip**, AI, and MLOps** talent

Emerging Global AI Markets

- **By 2030,** AI is projected to add about **$320B to Middle East GDP**, including **roughly $135B** in **Saudi Arabia** and **$43B in Egypt**
- In **ANZ**, AI is projected to contribute up to **$600B yearly to Australia by 2030** and around **USD 1.2B to New Zealand by 2035**

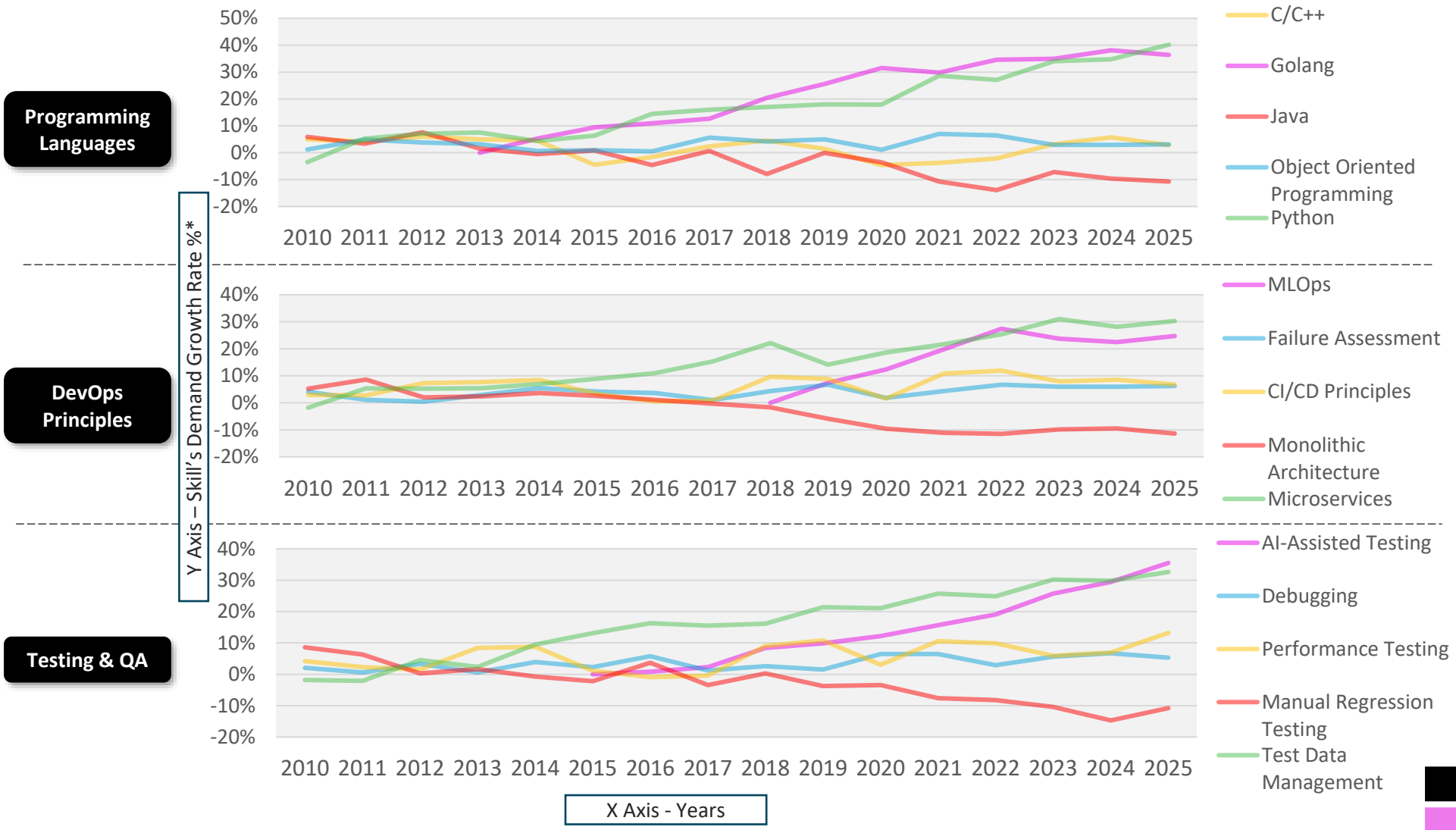
European AI Engines

- **UK** and **Germany** scale with strong private AI funding and a **$3.7B** Germany investment that includes **training about 1.2M professionals** in **digital and AI skills**
- **France** has secured about **$120B in private AI investment** for the coming years, positioning **Paris** as a **leading European AI hub for model builders,** infrastructure projects and high growth startups

Note: Draup utilized its proprietary database of 850Mn+ professional profiles and 650Mn+ job descriptions, analyzed through advanced machine learning models to assess AI Integration impact and workload complexity. The job roles across builders, orchestrators, and synthesizers visualized here have been specifically identified for the tech function and are not exhaustive; **Builders** include roles focused on developing, training, and architecting AI/software systems, **Orchestrators** include roles that integrate, deploy, and maintain AI/software systems, **Synthesizers** include roles that bridge technology, business strategy, and human collaboration

GenAI Is Accelerating the "Half-Life of Skills" to Under Two Years - By 2027, 40% of current tech skills will be partially obsolete, not due to automation, but due to *skill fusion* + Adoption of AI Skills

Software Engineering Talent Skill Cluster Growth Rate



Insights

- Traditional skills associated with Software Engineering irrespective of the skill sub domain display similar steady growth until **2014-2015**
- However, Post-2015 AI-aligned and automation-centric skills such as **Python, Microservices**, and **Test Data Management** have surged in demand to become Sunrise skills
- From 2020 onwards, New-age skills like **Golang, MLOps, and AI-assisted Testing** have accelerated sharply due to their high-compatibility with AI capabilities
- Legacy skills such as **Java, Monolithic Architecture, Manual Regression Testing**, which were less compatible with AI tools declined toward Sunset status

Legend – Skills Categorization		
New Skill	Root Skill	Core Skill
Declining / Sunset Skill	Emerging / Sunrise Skill	

Note: Draup's JD reader which tracks 650Mn JDs annually have been leveraged for analysing the skills in demand at the Software Engineer role. * denotes Skill's Demand Growth Rate % represents the YoY change of the presence of the skill in the Job Postings.

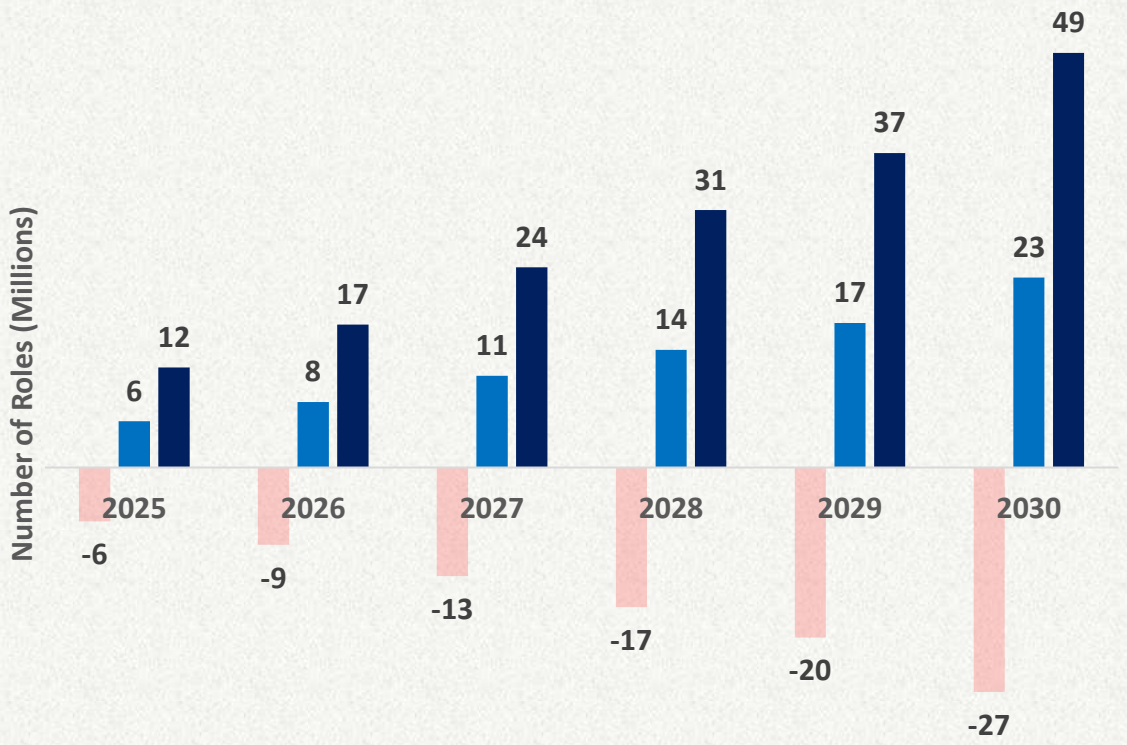
The Next Decade of Workforce Transformation and Value Creation - AI-driven productivity and revenue gains will offset large-scale job displacement; Job creation and automation are converging to drive the next wave of enterprise value

Balancing Job Creation and Displacement in the Decade Ahead

Net Job Gain (2025-2030) = 78M

New Jobs Created (2025-2030) = 170M

Jobs Displaced (2025-2030) = 92M



Job displacement/Augmentation is already visible across Big Tech

Meta

AI Replacing Mid-Level Software Engineering Roles

Jan'25

Meta CEO predicted **AI will replace mid-level Coders/Engineers by end of 2025 in Meta**

Feb'25

Hiring paused for certain junior to mid-level software engineer roles in Meta

Mid-level layer is diminishing across tech domains reducing talent cost

Google

AI-driven acceleration in Software Engineering

Before AI

Manual Code written by Engineers

100% Human – Dependent

After AI

AI generates 25-30% approx. with engineers directing AI and reviewing outputs

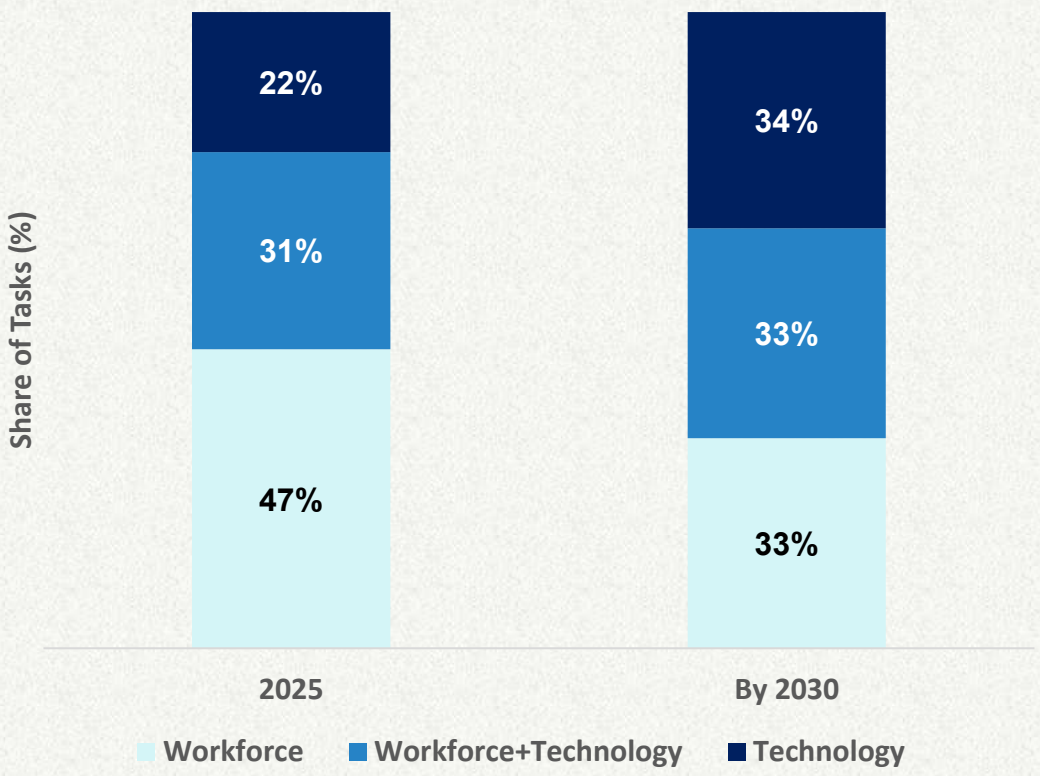
70%-75% Human + 25%-30% AI System

AI adoption boosted **Google's engineering velocity by 10%**, enabling faster and more efficient SW delivery

Source: Draup's ML model that tracks 5 Mn+ news articles, publications, white papers, and industry reports was leveraged to gather the information. *AI Cloud Optimization Engineer

AI evolution is reshaping work composition, reducing human-only tasks while rapidly expanding AI-led and collaborative human–machine roles across engineering functions

Human–Machine Collaboration Becomes the Dominant Work Model



- The **share of tasks executed primarily by technology will grow from 22% in 2025 to 34% by 2030,** marking a 50% increase in automation-driven work within five years.
- This **reflects the acceleration of AI and intelligent automation** adoption across enterprise functions.

Global Impact : Productivity & Revenue Gain

Productivity Impact

20%
reduction in SLDC experiment time

>25%
Productivity improvement in Code-generation

39%
cost reduction for ML training workflows

Role Transformation

Software Engineer →	GenAI Developer	Data Scientist →	Applied AI Scientist
Cloud Engineer →	AI Cloud Opt. Eng*	Security Analyst →	AI Threat Intelligence Eng.
Data Governance Lead →	AI Ethics & Governance Lead	Business Analyst →	AI-Augmented Decision Analyst

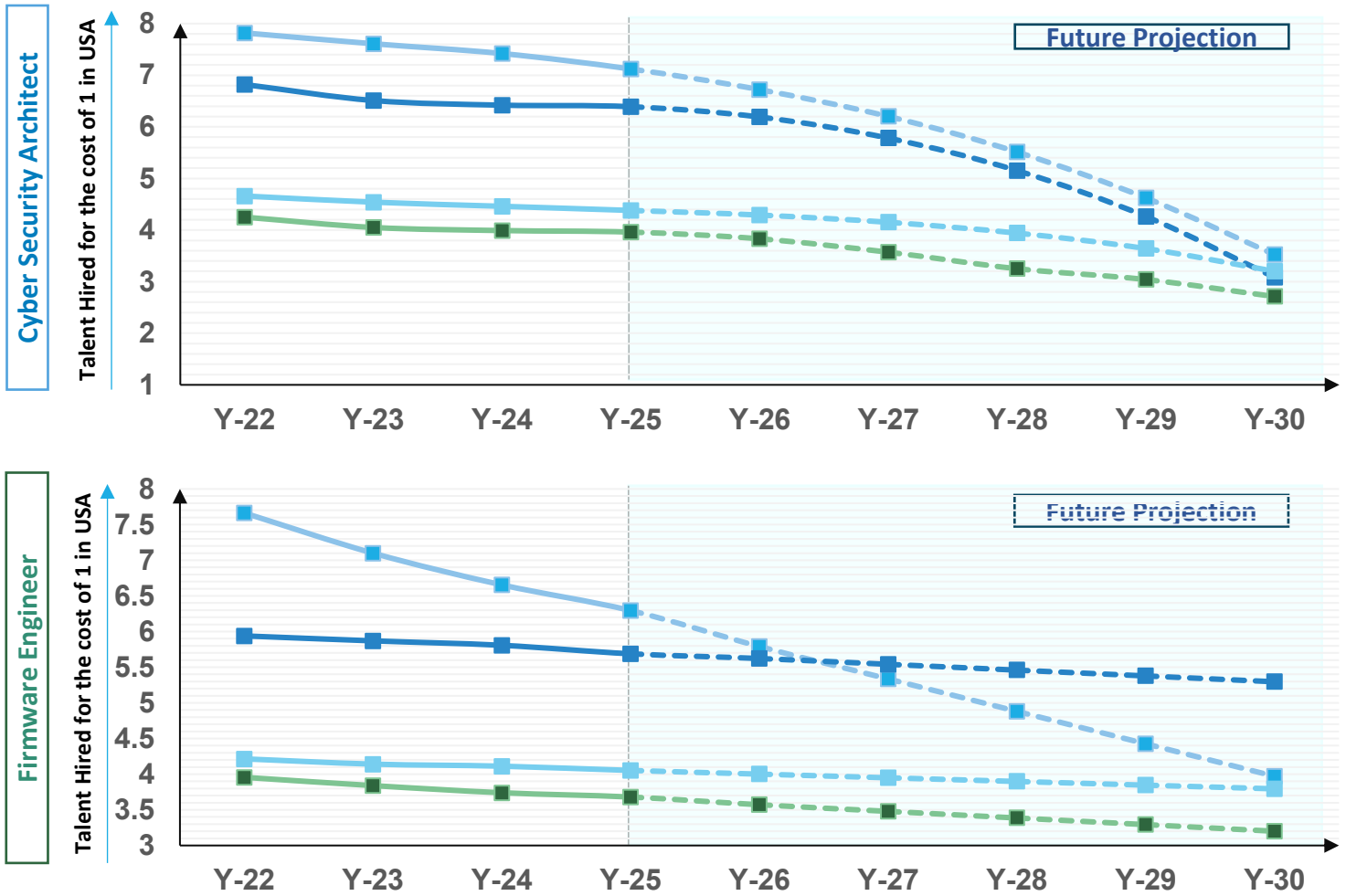
Financial Impact

AI-Powered Revenue Leaders		
IBM	**$4.5B**	Productivity Gain via AI Augmentation (since 2023)
Microsoft	**$500M+**	Saved via AI Enabled Workflows (2024)
salesforce	**$100M+**	Saved via Intelligent Automation

Source: Draup's ML model that tracks 5 Mn+ news articles, publications, white papers, and industry reports was leveraged to gather the information.

Cost gaps between low-cost and high-cost regions are narrowing rapidly for niche tech roles due to rising local wages and global demand

Reducing Cost Advantage against USA



Drivers for Reducing Arbitrage

Wage Growth In Emerging Markets

Consistent double-digit salary growth in India, Mexico, and the Philippines is narrowing the cost gap with developed markets

Globally Competitive Talent Landscape

High global demand for niche roles forces companies to pay a premium, regardless of the talent's geographic location

Proliferation Of Remote Work

Remote work has enabled cross-border talent access but also triggered pay normalization across markets due to broader competition

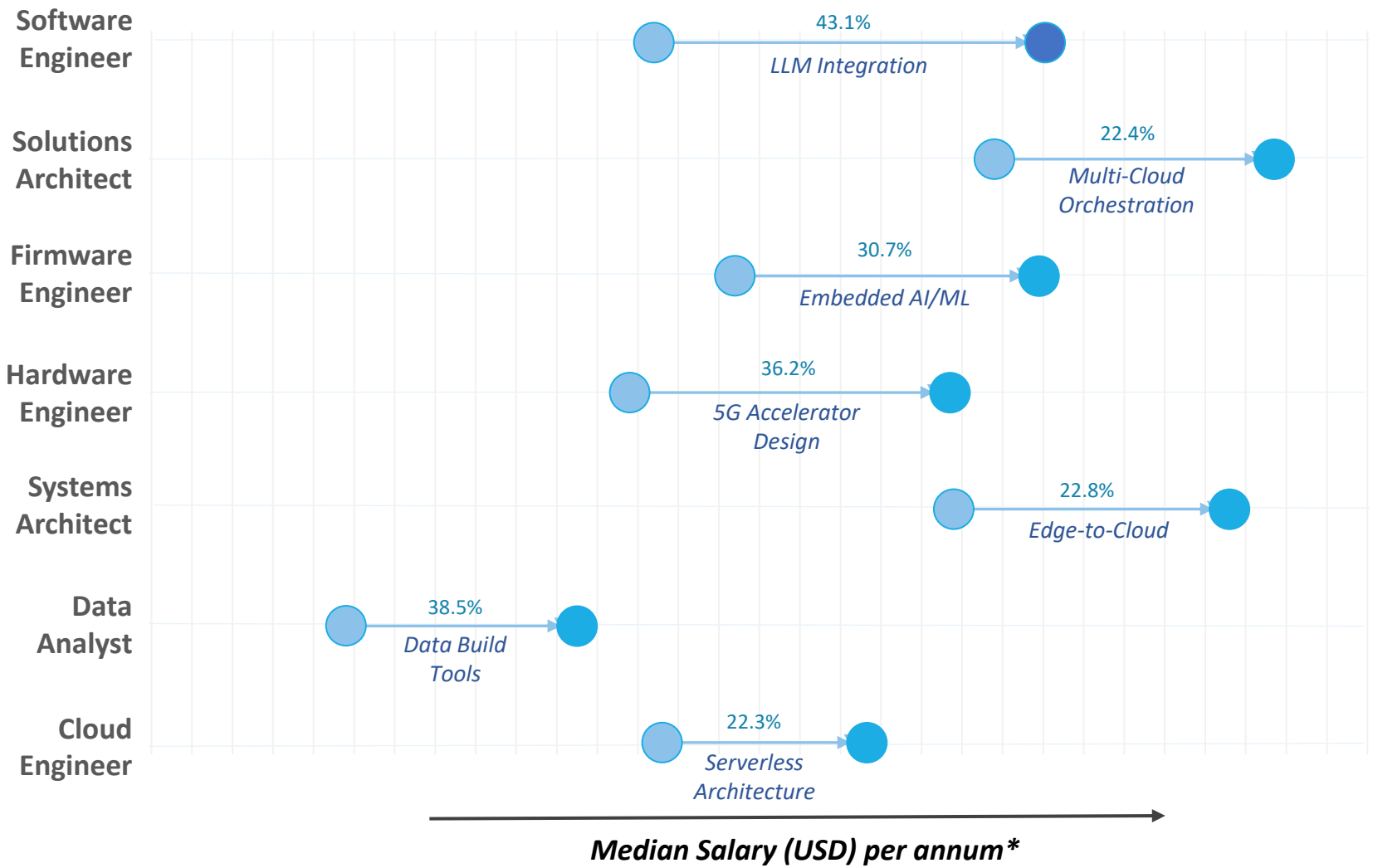
Advances in AI and automation

Automation is optimizing cost structures internally, making labor arbitrage less central to operational efficiency strategies

Source: Draup's ML model that tracks 5 Mn+ news articles, publications, white papers, and industry reports was leveraged to gather the information.

Organizations Are Paying a Premium to Attract Talent with Niche, Innovation-Driven Skills Amid Rising Demand for New-Age Capabilities

SKILL BASED PAY PREMIUM BY ROLES



DRIVERS PROMOTING SKILL BASED PAY PREMIUM

1. **Supply-Demand Imbalance**

   In emerging technologies, early adopters command a premium until the talent supply catches up

2. **Accelerated Time-to-Productivity**

   Candidates with niche skills can deliver results faster, reducing ramp-up time

3. **Certification or Ecosystem Lock-In**

   Certified experts in proprietary systems (e.g., SAP HANA, AWS SageMaker) are expensive to replace

4. **Direct Business Impact**

   Niche skills often directly influence top-line growth (e.g., AI/ML product features) or bottom-line savings (e.g., automation via cloud scripting)

Note: Base Pay reported is for the United States.

Source: Draup's Cost Simulation Module. The analyzed data points are harvested from global salary social media platforms, company job postings, and official boards. The cost datasets are then normalized and mapped to specific job roles. The reported values are then estimated using the ML model at the median level. Further research analysts and consultants validate the cost data sets through primary interviews with organizations, recruiter firms and other stakeholders. MBP – Median Base Pay

Enterprises are shifting from cost-first hiring to talent-first strategies, redefining global location choices for specialized roles

Changing Approach to Arbitrage

*The labor cost gap is closing, especially for experienced professionals. However, global enterprises are realigning strategies, shifting from pure cost savings to long-term talent access, capability building, and location diversity. This results in a **2-tiered approach to arbitrage** for global organizations:*

Tier 1

Critical, Specialized, or Innovative roles

Talent is hired wherever the best talent is found and paid what it takes—often nearly uniform globally. Here, the arbitrage is minimal; the driver is talent availability

Tier 2

Supportive or Process-oriented roles

Still farmed out to lower-cost locales or automated, to benefit from any remaining wage differences. Here arbitrage remains relevant, though perhaps at 30–50% savings instead of 80%.

This Approach can be boiled to

Commodity Skills = Still Large Arbitrage focus

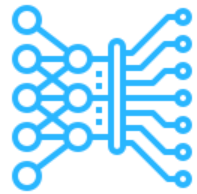
Niche Skills = Shrinking Arbitrage focus

Functions with Reducing Wage Gap

High complexity niche roles with high global competitiveness are highly affected; Tech domain is most affected with high complexity engineering roles predicted to follow the trend in near future

Advanced R&D and Engineering Roles

Senior Chip design engineers, VLSI specialists, and hardware architects, ASIC/FPGA Design Engineer



AI/ML and Data Science Experts

Agentic AI Specialists, Senior Data scientist, MLOps Engineer, AI Infrastructure Engineer

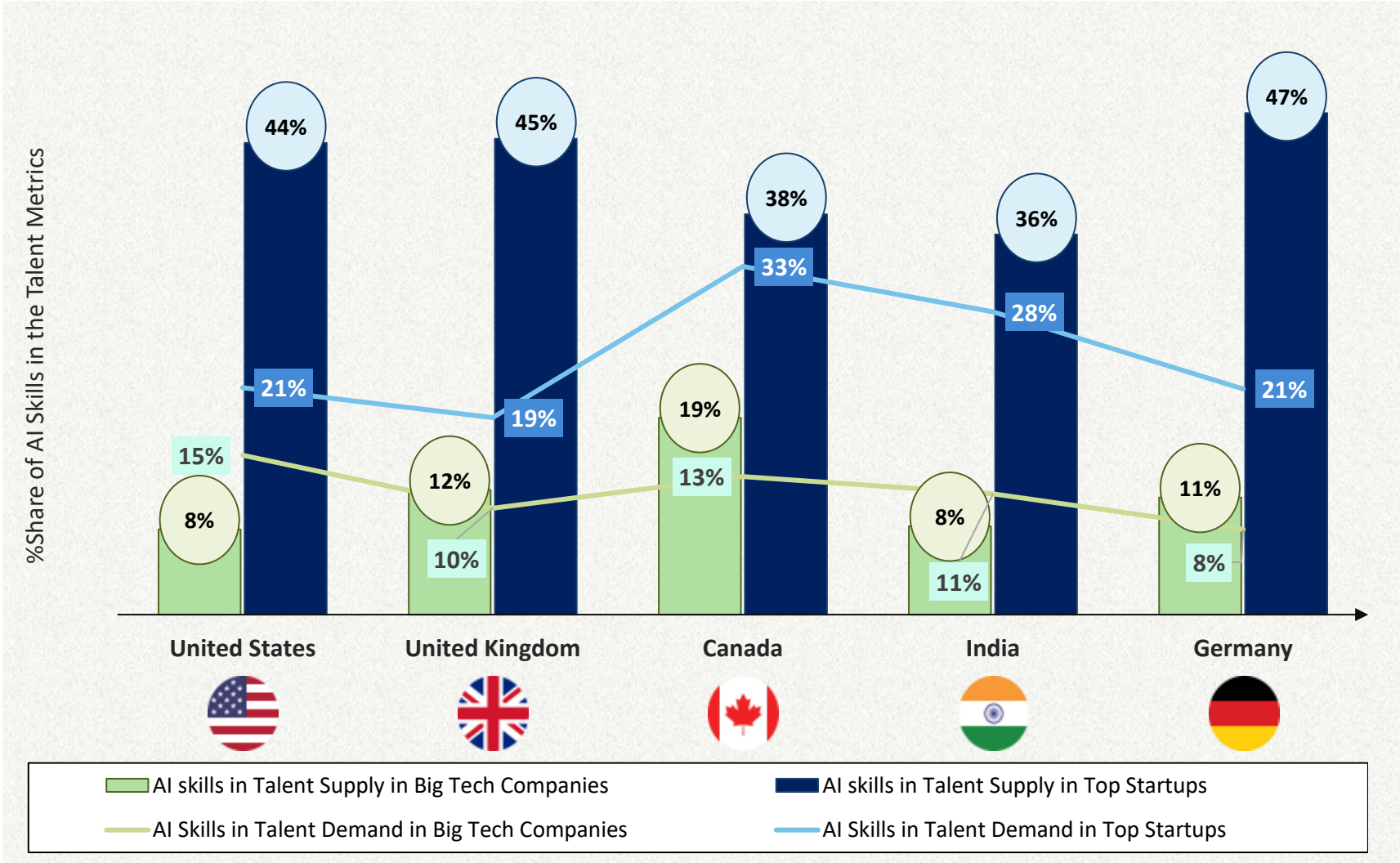
Cloud Infrastructure and Cybersecurity Specialists

Cloud Architect, IAM (Identity & Access Management) Architect, Cloud Compliance/GRC Specialist

Source: Draup's ML model that tracks 5 Mn+ news articles, publications, white papers, and industry reports was leveraged to gather the information

Startups are prioritizing versatile AI engineers who accelerate GenAI development, whereas Big Tech seeks specialists in frontier models and large-scale AI infrastructure, producing clearly differentiated global AI hiring patterns

AI Talent Landscape in Tech Startups vs Big Tech Companies



Strategic Implication: Different Paths, Same Goal: AI maturity

- Startups are **scaling faster, embedding AI as a native competency** for speed and innovation.
- **Large** enterprises are **scaling deeper, embedding AI** into **operations, platforms, and enterprise architecture** for sustained transformation.
- Across markets like the **US, UK, and Germany**, AI skills represent **35–45% of total talent supply** in leading startups, nearly **2x higher** than in large enterprises. The AI skill gap is narrowing faster in emerging markets like India and Canada
- Despite startups' agility, **Big Tech companies continue to attract the largest absolute pool** of AI talent, especially in advanced research, data infrastructure, and platform engineering.
- Companies like **Google, Microsoft, and Amazon account for over 40% of global AI-related** job postings

Note: The Data has been sourced from Draup's proprietary talent module, which tracks 1000+ Custom Reports, 2M+ Publications, 380 Mn+ JDs and 800 Mn+ professional profiles; Top Startups are defined by top 15 startups in the geography that have raised highest funding in the calendar year of 2025; Talent Supply & Talent Demand correspond to the Employed talent & Job Postings belonging to the Big Tech & Startup Organizations

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www.draup.com I info@draup.com