



# Who's Winning the Global Race for STEM and AI Talent?

BCG TOP TALENT TRACKER, Q4 2024



**BCG's Top Talent Tracker allows private- and public-sector executives to map the location choices of nearly 200 million highly skilled people. We focus in particular on STEM and AI talent.**

### **Definitions**

The analysis covers highly skilled talent—those with at least a bachelor's degree. Within that group, STEM talent is defined as working in research, engineering, IT, or product roles. AI talent is defined as having at least one skill in deep learning, computer vision, PyTorch, Hadoop, reinforcement learning, neural networks, MapReduce, or high-performance computing. Note: This definition excludes a lot of talent with end-user knowledge of AI and focuses on those at the AI technology frontier.

### **Global Coverage**

The analysis covers more than 200 countries, with a particular focus on 29 key destinations: Australia, Bangladesh, Brazil, Canada, China, Egypt, France, Germany, India, Italy, Japan, Mexico, Netherlands, Nigeria, Pakistan, Philippines, Poland, Portugal, Russia, Saudi Arabia, Singapore, South Korea, Spain, Sweden, Switzerland, Turkey, United Arab Emirates, UK, and US.

### **Time Coverage**

Data is current as of September 12, 2024.

## At a Glance **Q4 2024**

In the last 12 months, 2.4 million highly skilled people moved internationally. That is 1.2% of the approximately 194 million highly skilled workers overall.

The growth of global talent mobility is slowing, though: In previous years, 3.2 million (some 1.7%) moved across borders. This slowdown is driven by higher interest rates and decelerating hiring growth in software and services.

Meanwhile, more specialized tech talent is more mobile: In the last 12 months, 613,000 (1.9%) STEM experts and 31,000 (2.2%) AI experts moved across borders—making AI talent nearly two times more mobile than all other highly skilled workers.

### **COUNTRY HIGHLIGHTS**

The top three talent hot spots (US, UK, and Canada) still attract about 41% of all highly skilled talent. Next up: UAE, Australia, and Germany with about 20%.

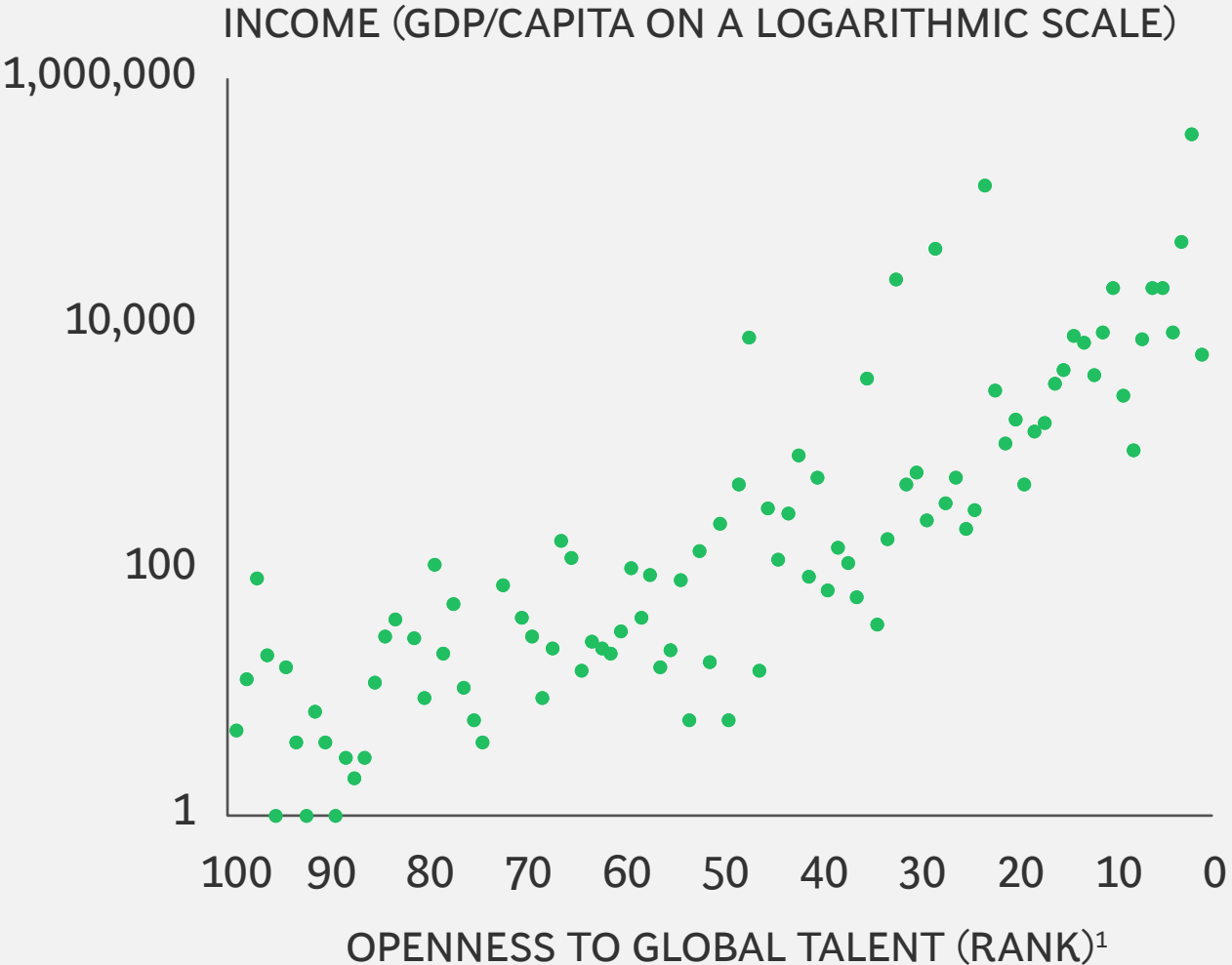
In STEM and AI, the US remains a strong number one choice: 23 of 100 mobile STEM experts and 29 of 100 mobile AI experts choose the US.

Saudi Arabia, UAE, and Switzerland are gaining share, especially in STEM and AI—driven by strong local GDP growth and high retention of STEM and AI workers.

# National and business leadership is driven by openness to global talent

Talent openness drives country-level productivity...

... and leadership in technology and business



**17x**  
more likely  
to lead<sup>2</sup>

Countries that lead in talent for a technology are 17x more likely to also lead in that technology.

**+1pp**  
more value  
per year<sup>3</sup>

Firms that attract more global talent into leadership create 1pp per year more shareholder value.

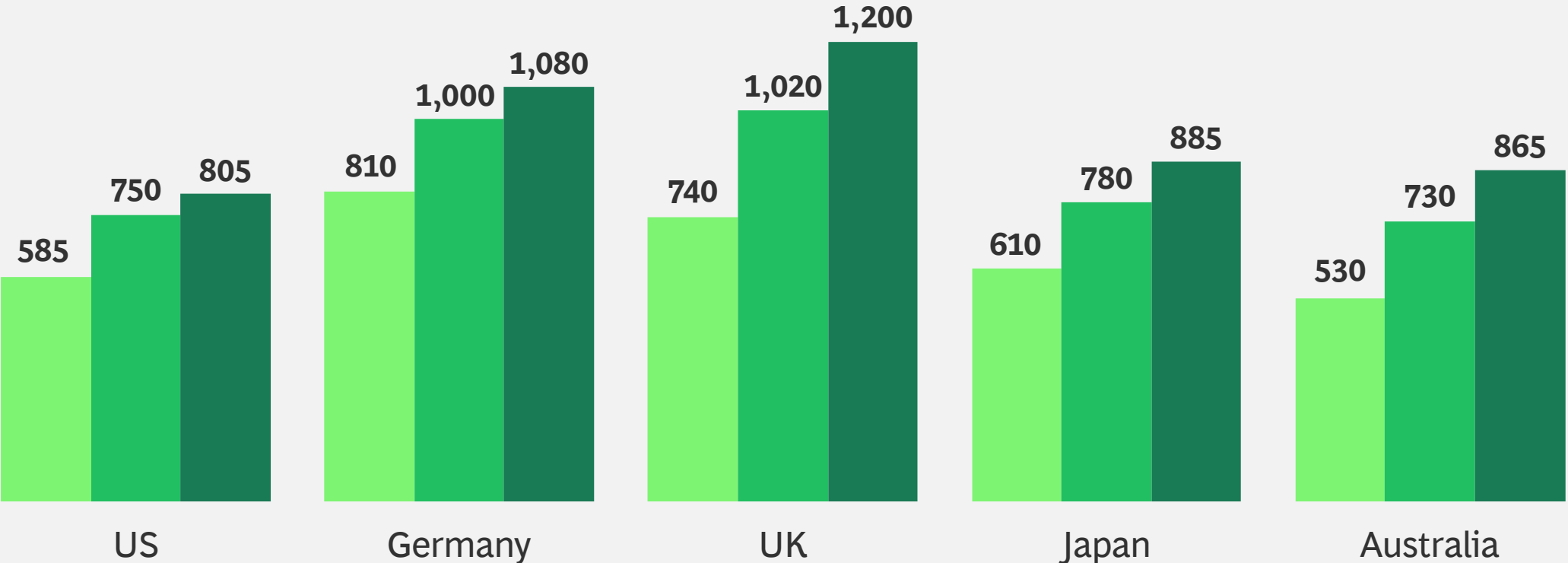
Sources: Australian Policy Institute (ASPI); BCG analysis.  
<sup>1</sup>BCG's Global Talent Migration Index (GTMix), which analyzed 96 countries.  
<sup>2</sup>Technology leadership: country's share of high-impact research across 44 technologies.  
<sup>3</sup>Based on the largest 1,000 public companies per Capital IQ; BCG analysis.

# Global talent can be a significant source of net fiscal revenues

## Lifetime net fiscal benefit of a highly skilled worker (\$K)

Net present value; single, bachelor's degree, gross annual salary increasing with age, 50% dependence on public benefits

Age 25 (\$75,000 salary)    Age 35 (\$110,000 salary)    Age 45 (\$165,000 salary)



Attracting and retaining highly skilled workers:

Could it be one of the **highest ROI activities** in all of government?

Source: BCG analysis.

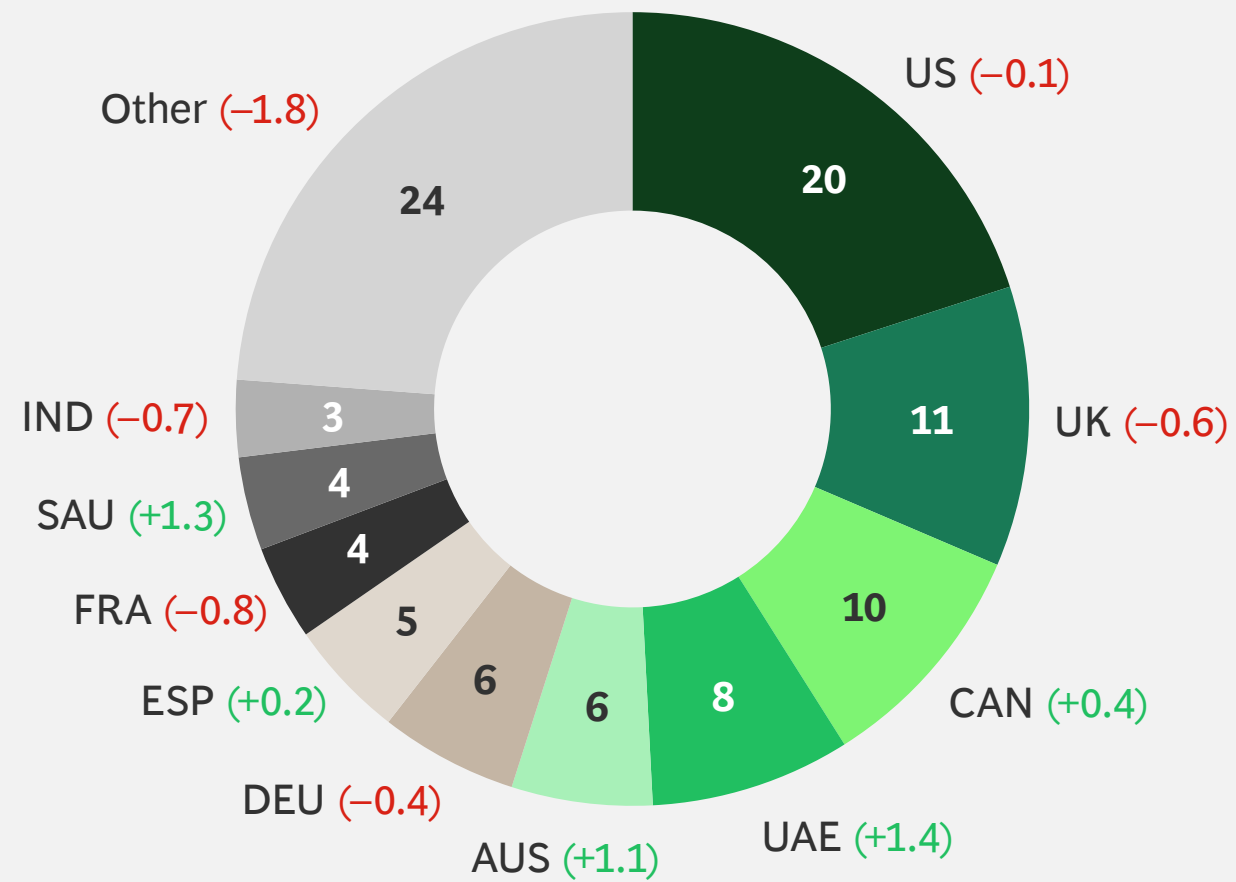
Note: The national fiscal net benefit calculation includes income taxes, payroll taxes, health care taxes, contributions to public pensions where applicable, sales tax revenues, and the cost of public education and health care. The calculation excludes other taxes and second-order GDP effects.

# Traditional global talent hot spots (US, UK, Canada) are losing share

Highly skilled talent: 194 million overall, 2.4 million mobile over the last 12 months

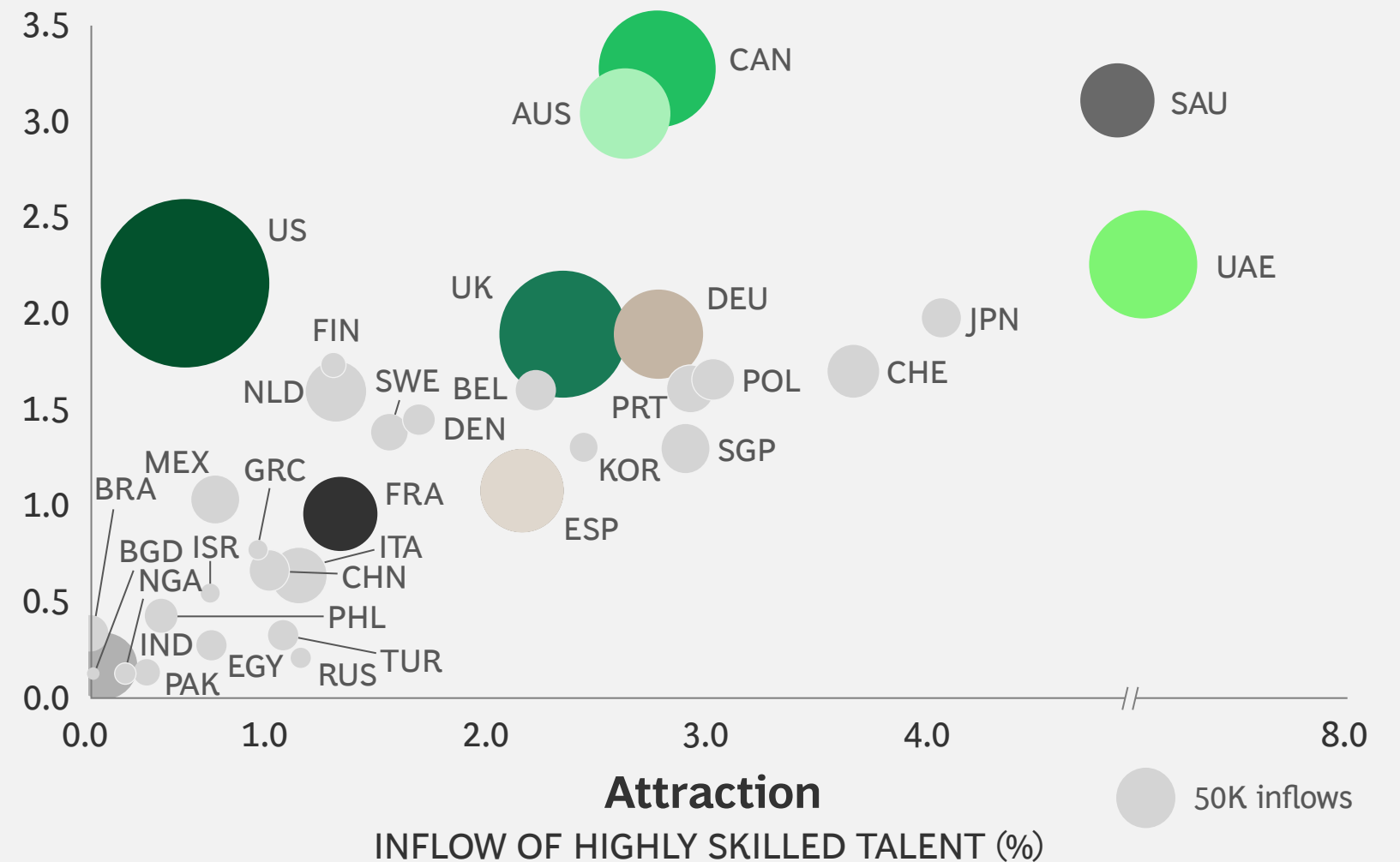
## Market share: Inflow

TOP TEN DESTINATIONS, IN % SHARE AND PP CHANGE VS 2023



## Retention

INFLOW/OUTFLOW OF HIGHLY SKILLED TALENT



Sources: BCG Top Talent Tracker, Q4 2024; BCG analysis.

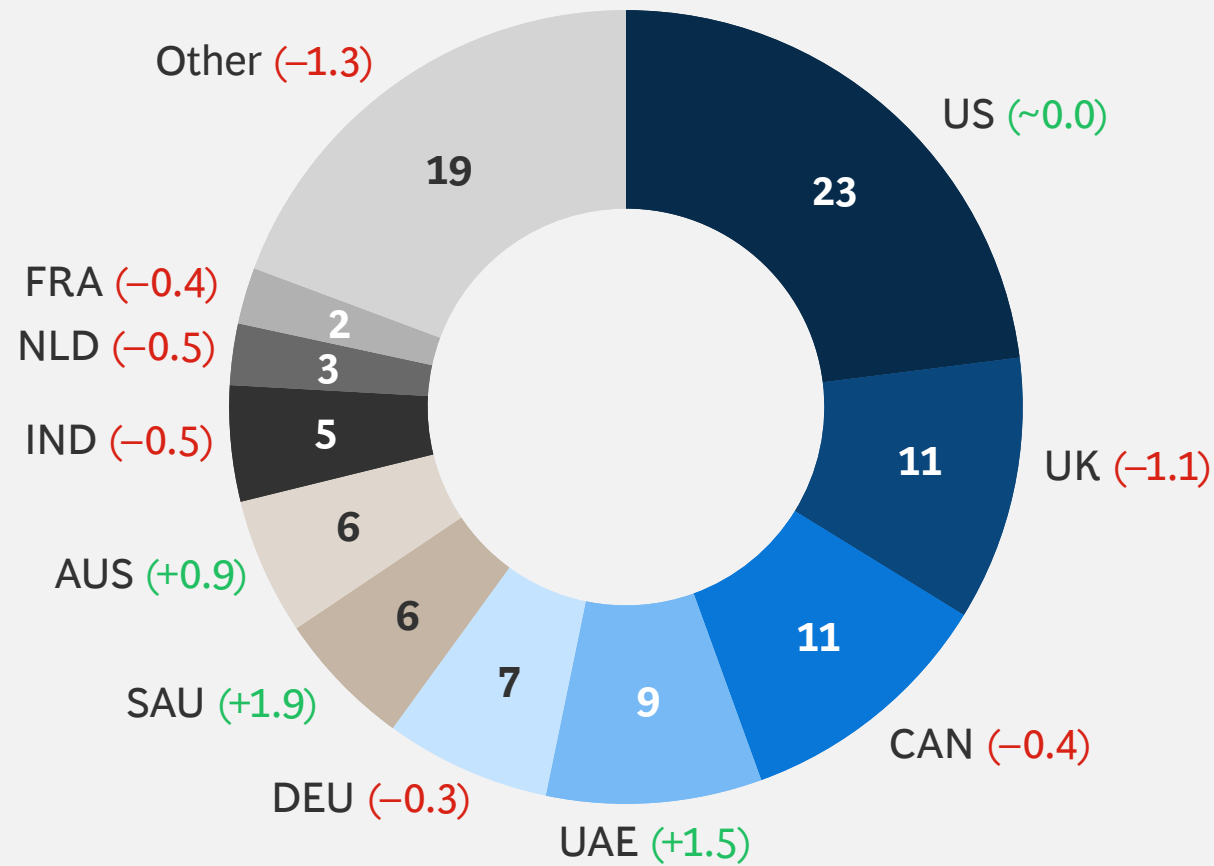


# The US remains the number one talent hot spot for STEM experts

STEM talent: 33 million overall, some 613,000 mobile over the last 12 months

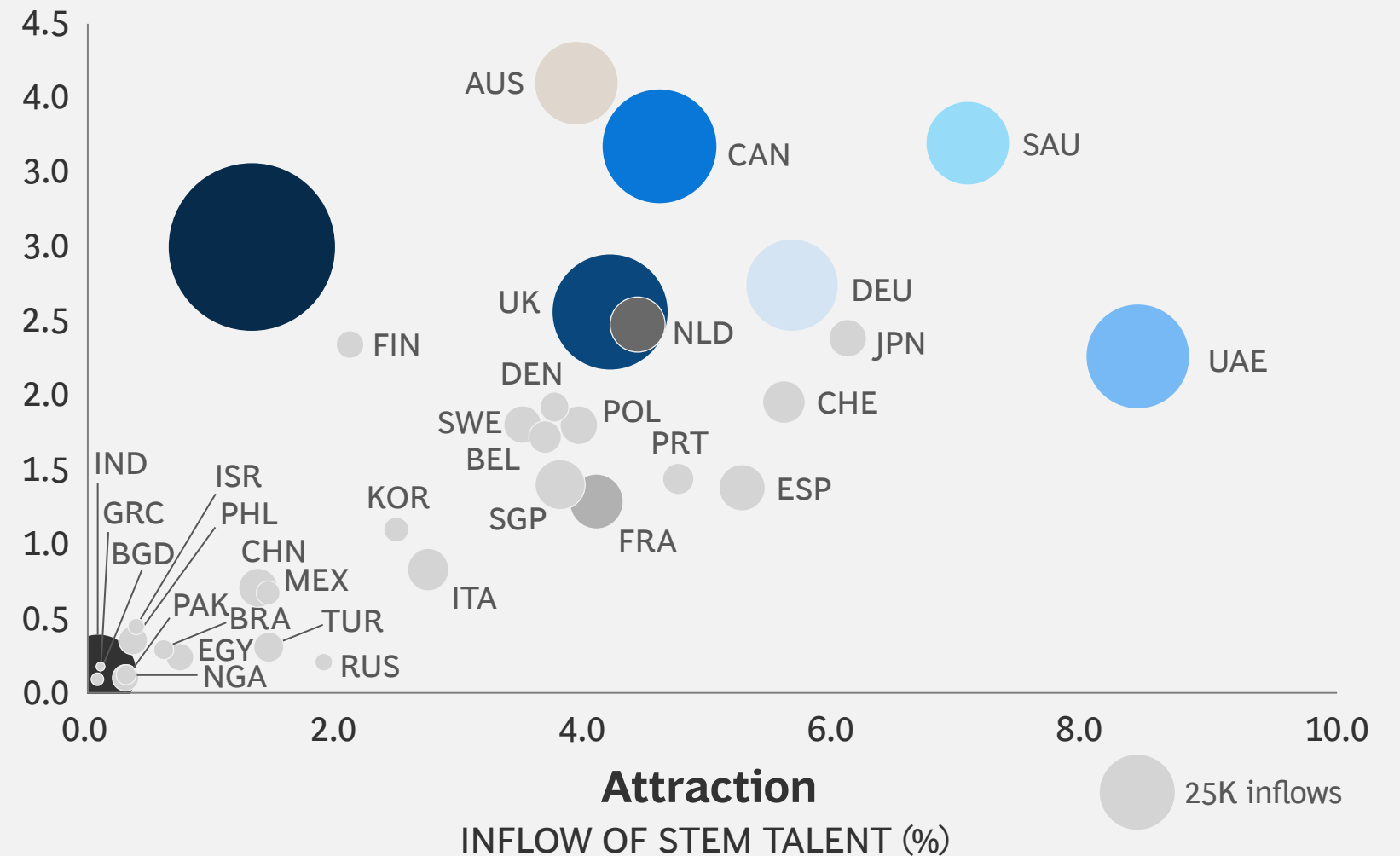
## Market share: Inflow

TOP TEN DESTINATIONS, IN % SHARE AND PP CHANGE VS 2023



## Retention

INFLOW/OUTFLOW OF STEM TALENT



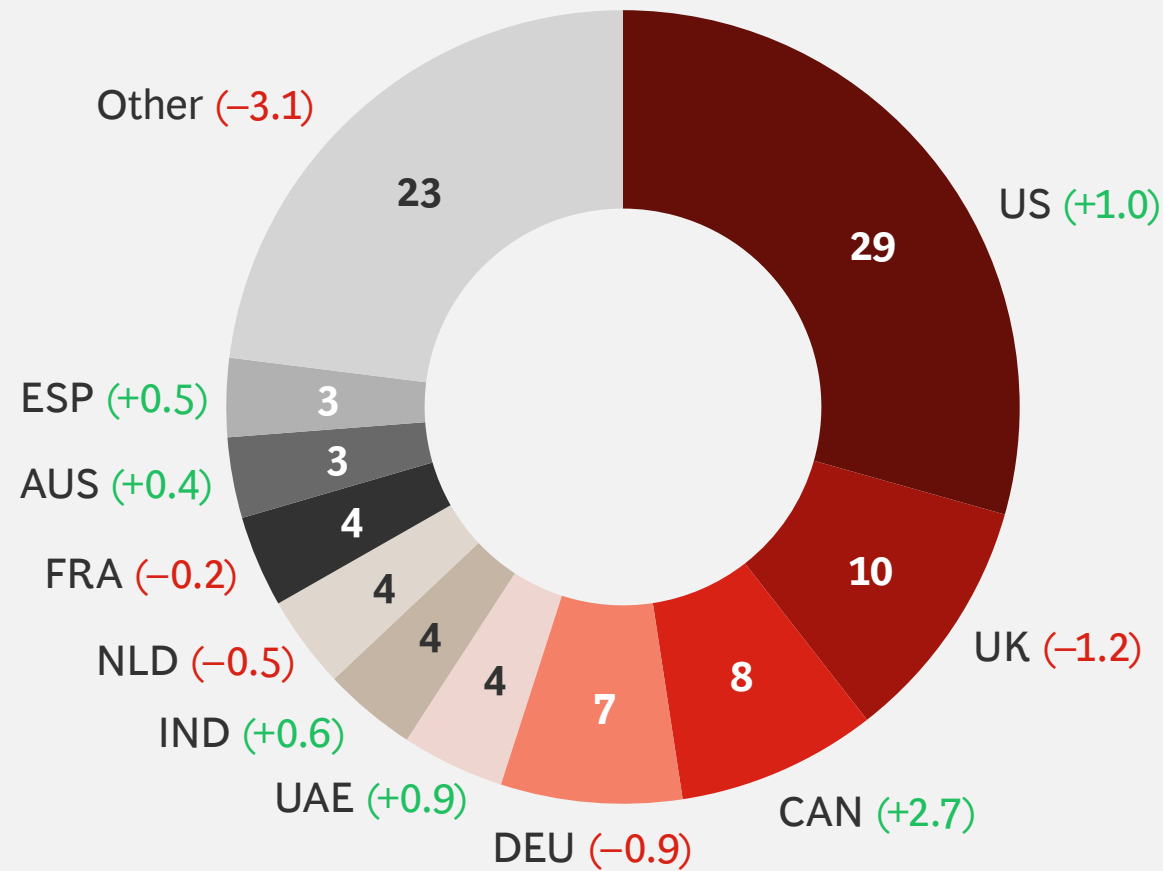
Sources: BCG Top Talent Tracker, Q4 2024; BCG analysis.

# Nearly one in three AI experts who move go to the US; Middle East gaining share

AI talent: 1.4 million overall, 31,000 mobile over the last 12 months

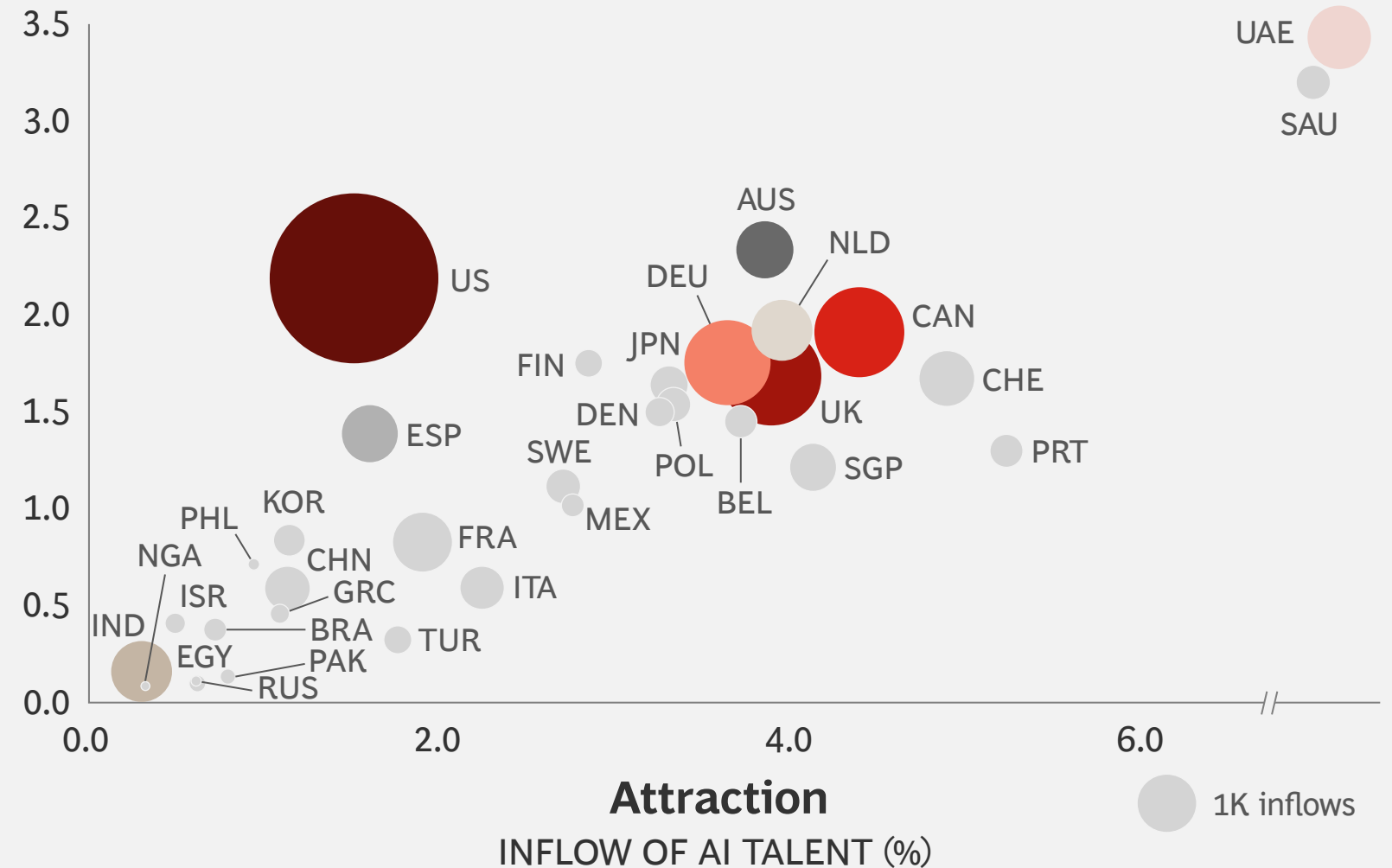
## Market share: Inflow

TOP TEN DESTINATIONS, IN % SHARE AND PP CHANGE VS 2023



## Retention

INFLOW/OUTFLOW OF AI TALENT



Sources: BCG Top Talent Tracker, Q4 2024; BCG analysis.



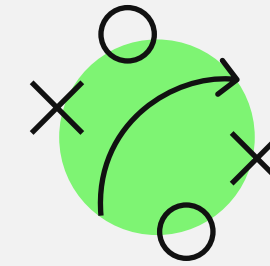
# How nations, cities, and companies can compete for talent



**Company-led programs**



**Public talent funds**



**Immigration strategy**

## SCALABILITY

### THE CHALLENGE

Private-sector companies often lack the experience and cultural affinity to hire truly globally. The challenge is not only operational in HR but ultimately a cultural change that needs to involve the full C-suite.

In the public sector, there is usually not one single owner for global talent attraction and retention, leading to a lack of impact. The opportunity: Bundling of competencies and initial seed funding—leading to ROI by broadening the tax base.

Labor migration strategy evolves very dynamically, creating new best practices. A holistic political approach is needed as part of a “talent trifecta”: upskilling, tech and automation, and migration.

### WHAT NEEDS TO HAPPEN

Make the business case and design an industry-specific global talent toolbox that covers the process from end to end—from workforce planning to recruiting, relocation, and onboarding.

Establish an agency or team with a clear goal, and mandate an ecosystem of recruiters, training providers, and relocators—aiming to engage companies in global hiring and broaden the skills and tax base.

Review the immigration system for highly skilled employment, analyze bottlenecks in the end-to-end process, and learn from international best practices.

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