



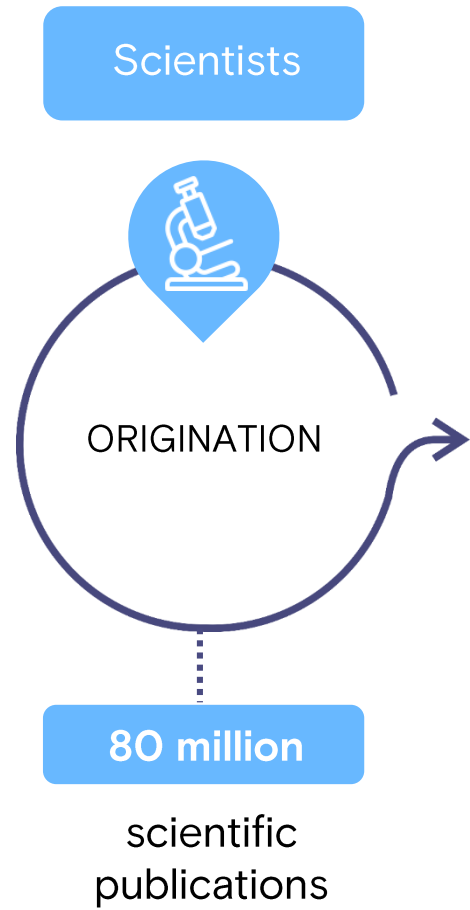
Global Digitalization Trends Monitoring 2025

13 November 2025

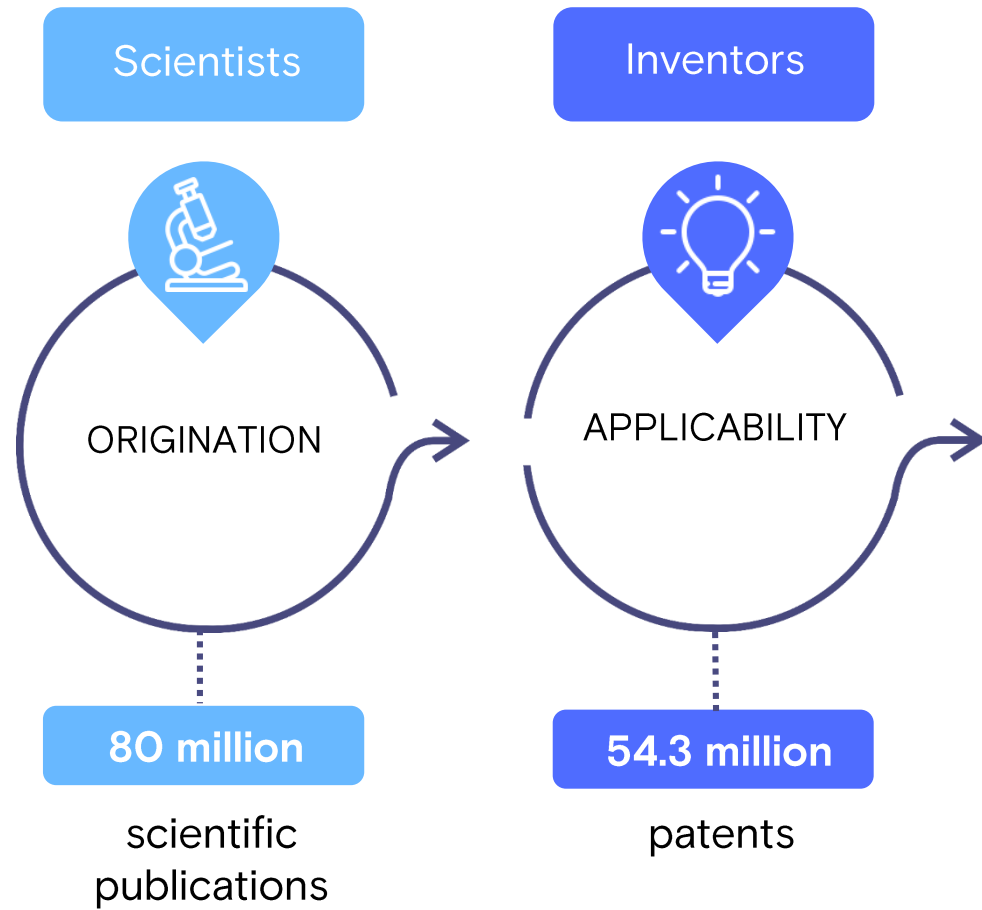
Aleksey Mitkin

Director for Strategic Programs and Innovation
Development, PJSC Rostelecom

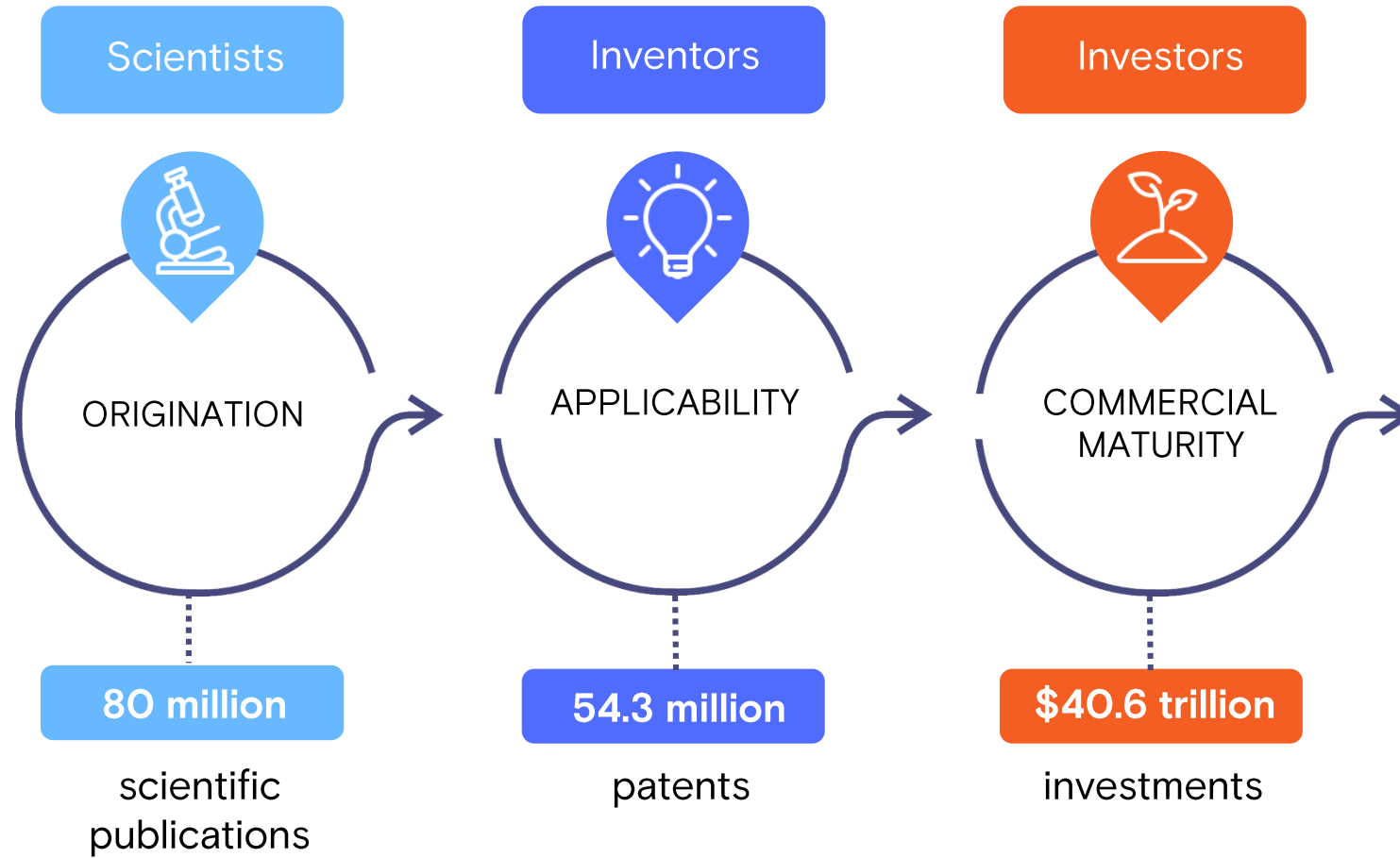
Research methodology



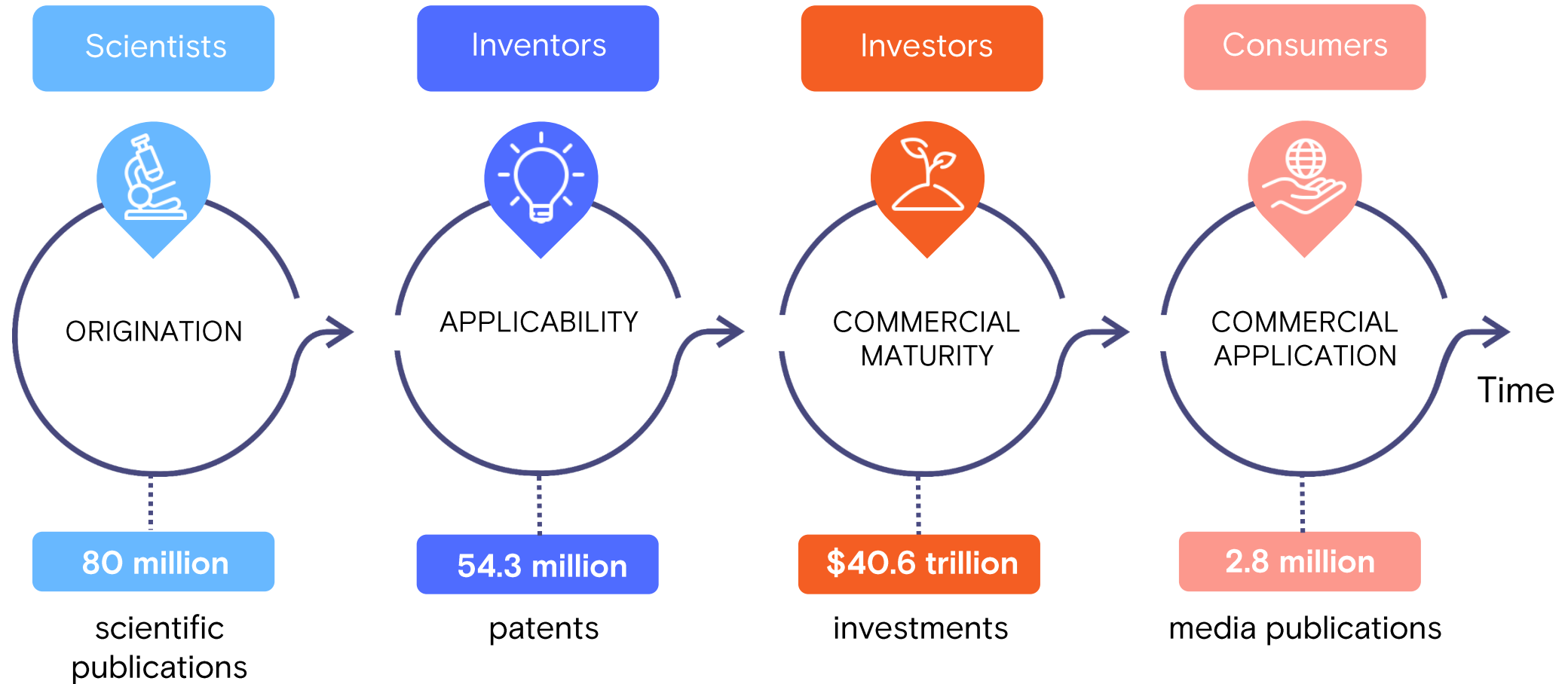
Research methodology



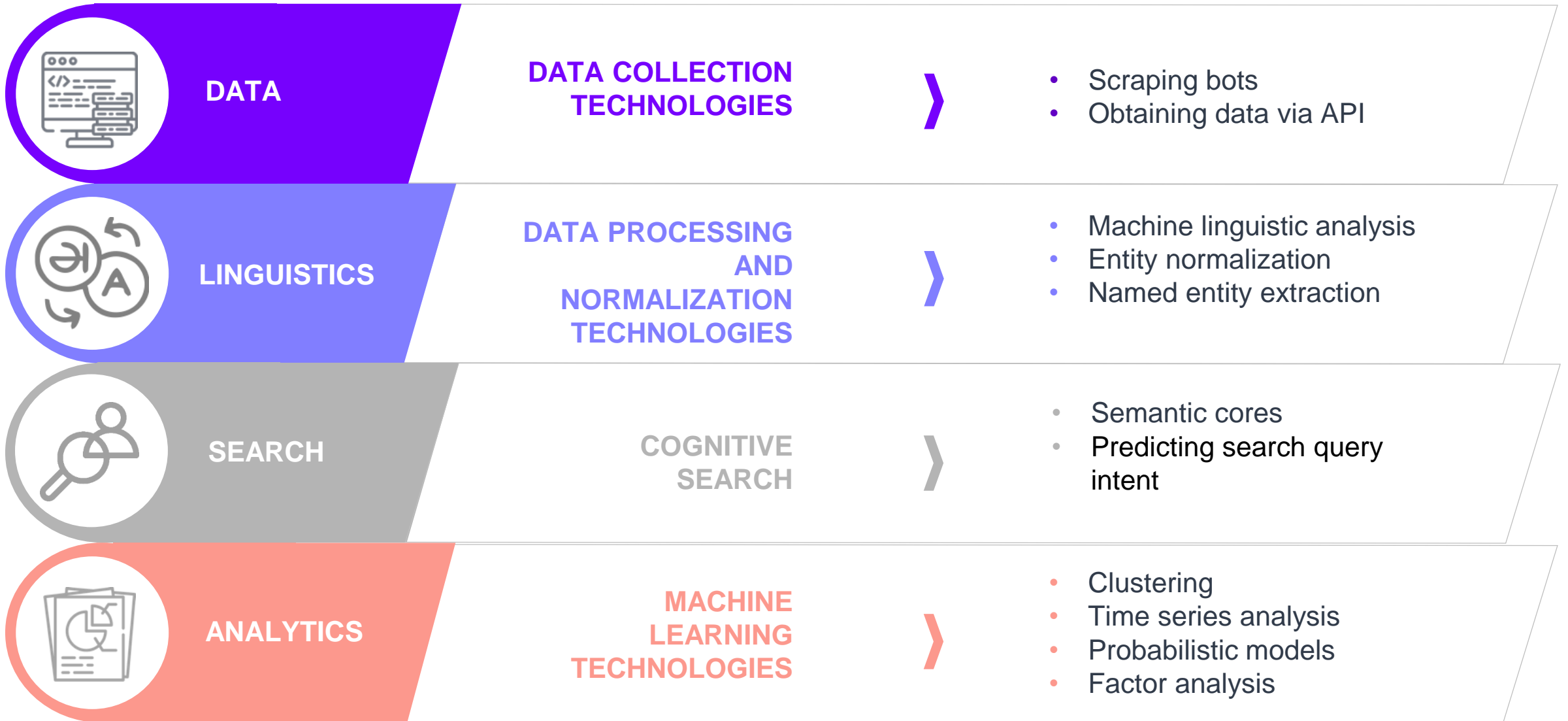
Research methodology



Research methodology



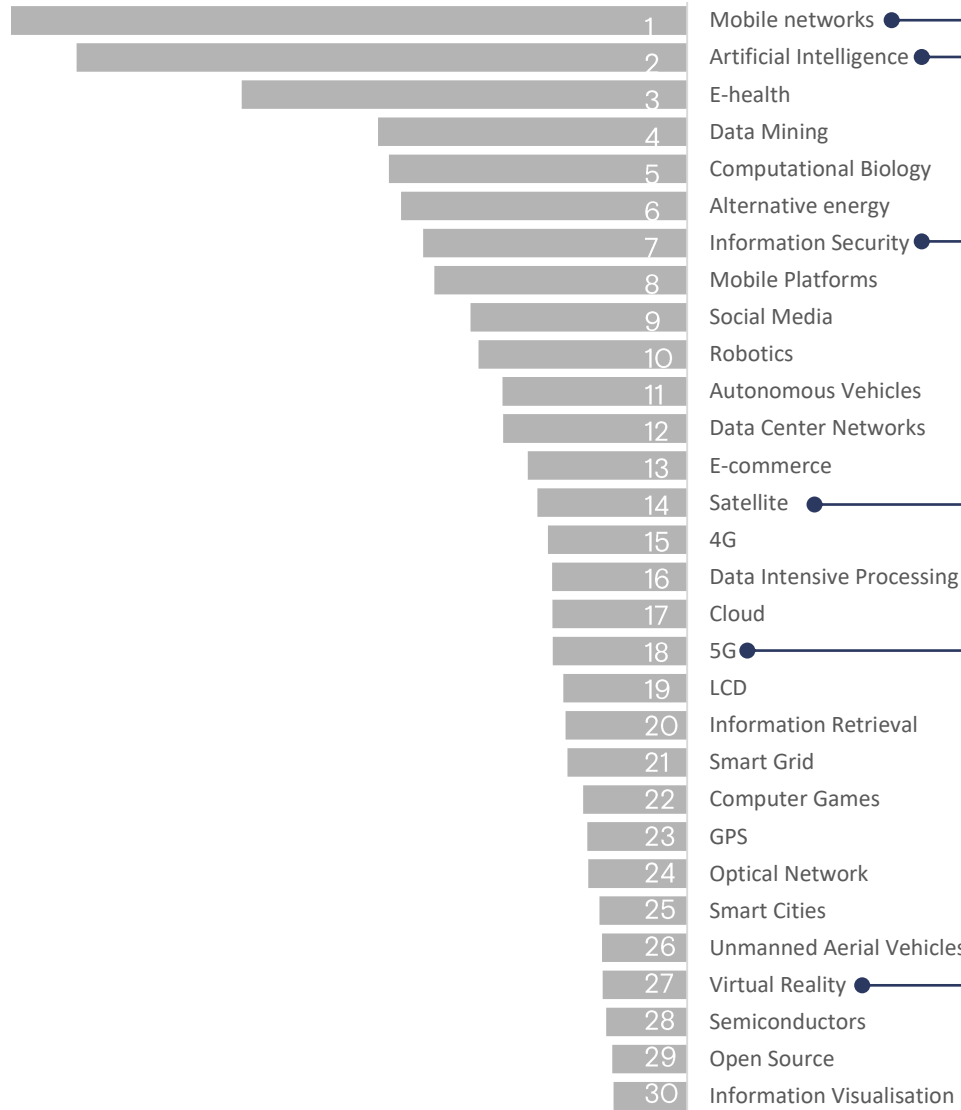
Research methodology



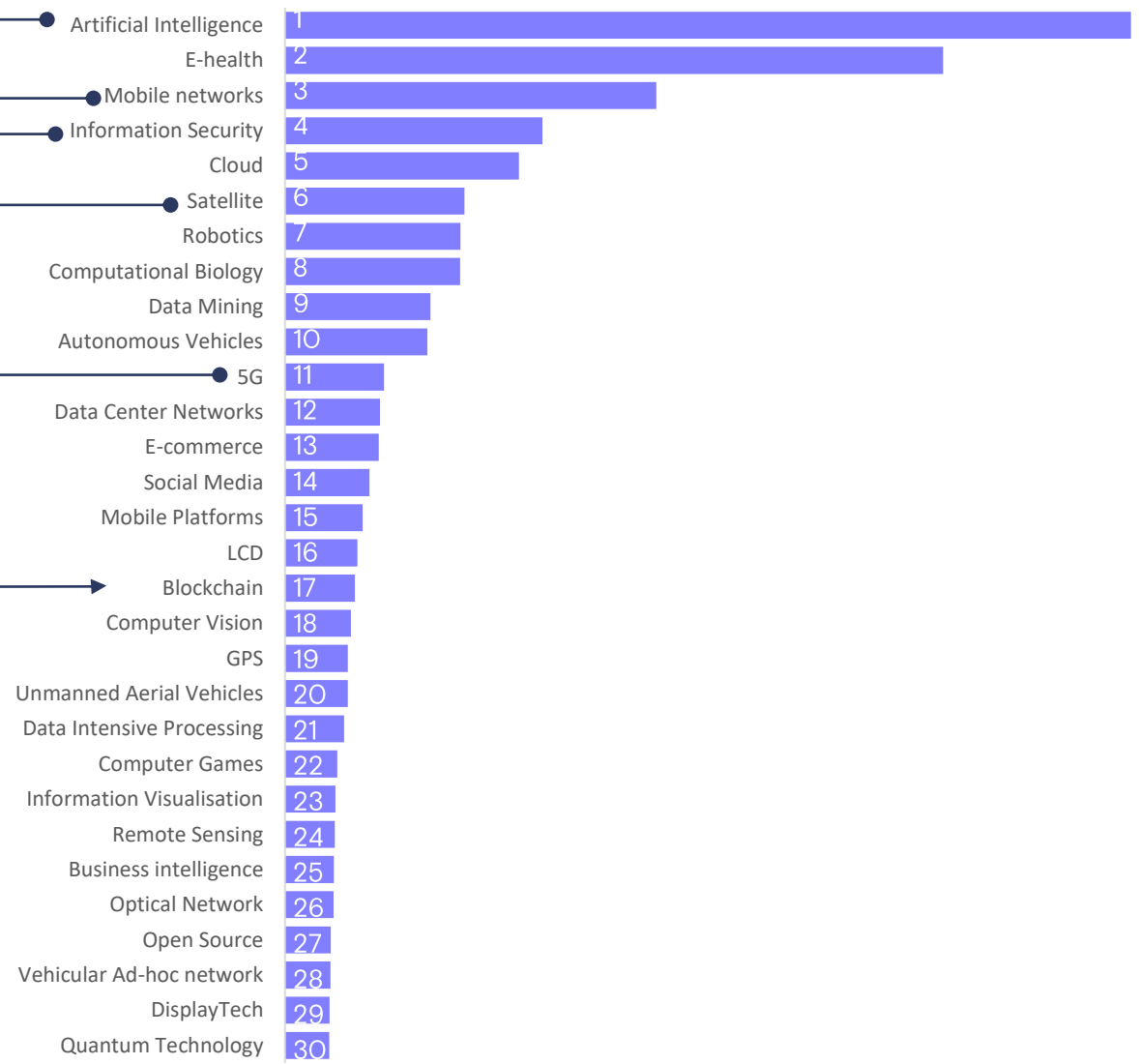


Trend monitoring: what has changed in 8 years

Integral ranking 2017



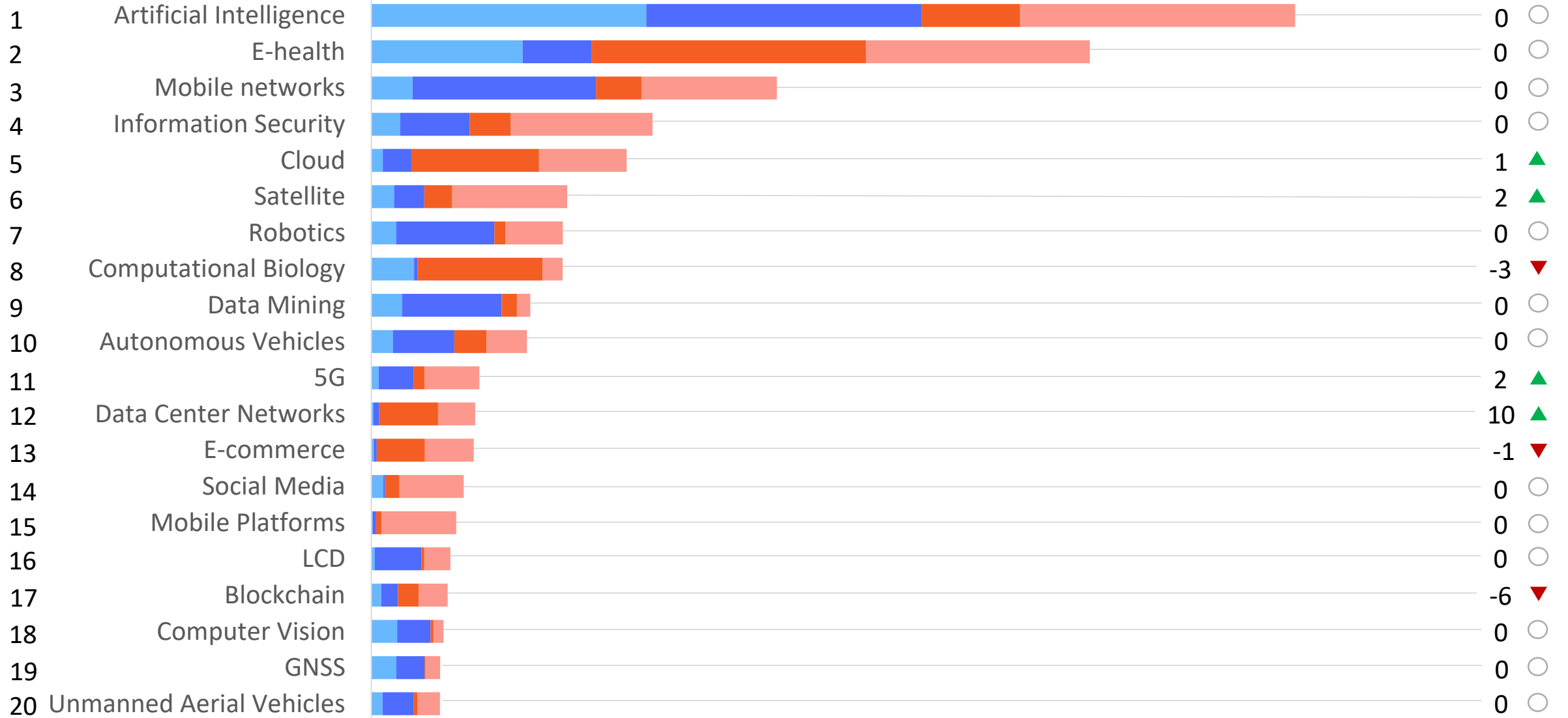
Integral ranking 2025



Overall trend ranking 2025

Rank

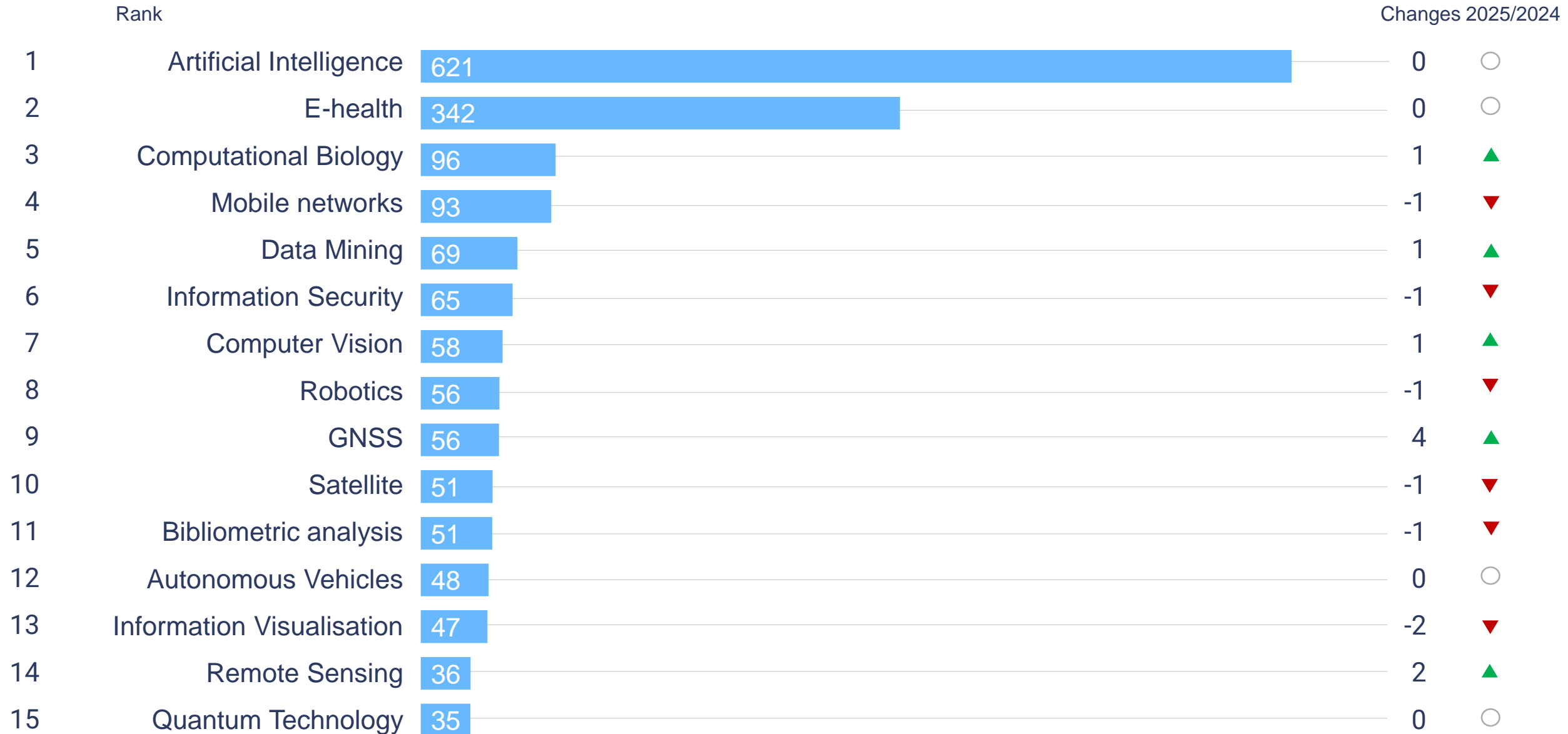
Changes
2024/2023



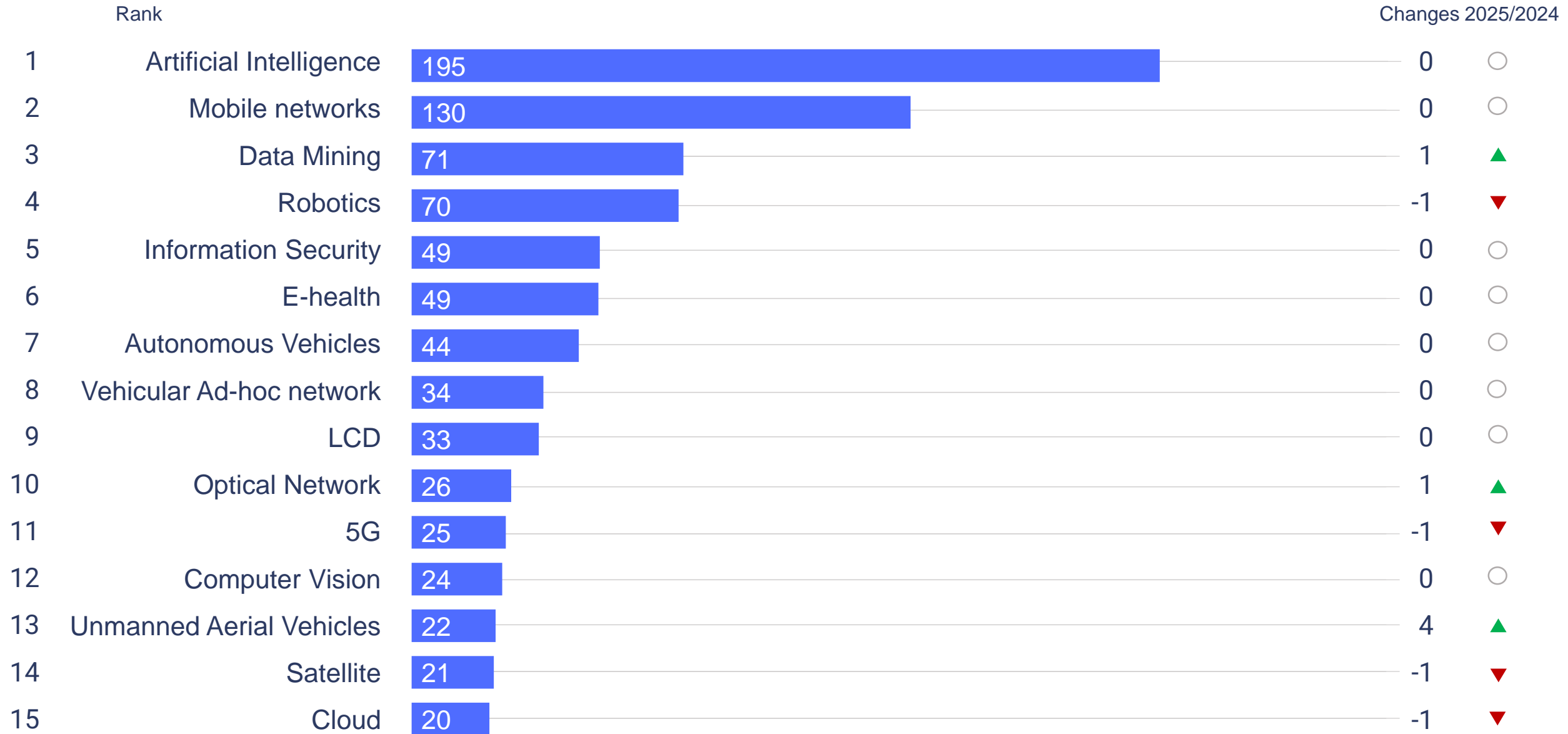
■ - scientific publications
 ■ - patents
 ■ - investments
 ■ - news



Trend ranking by scientific articles, thousand units

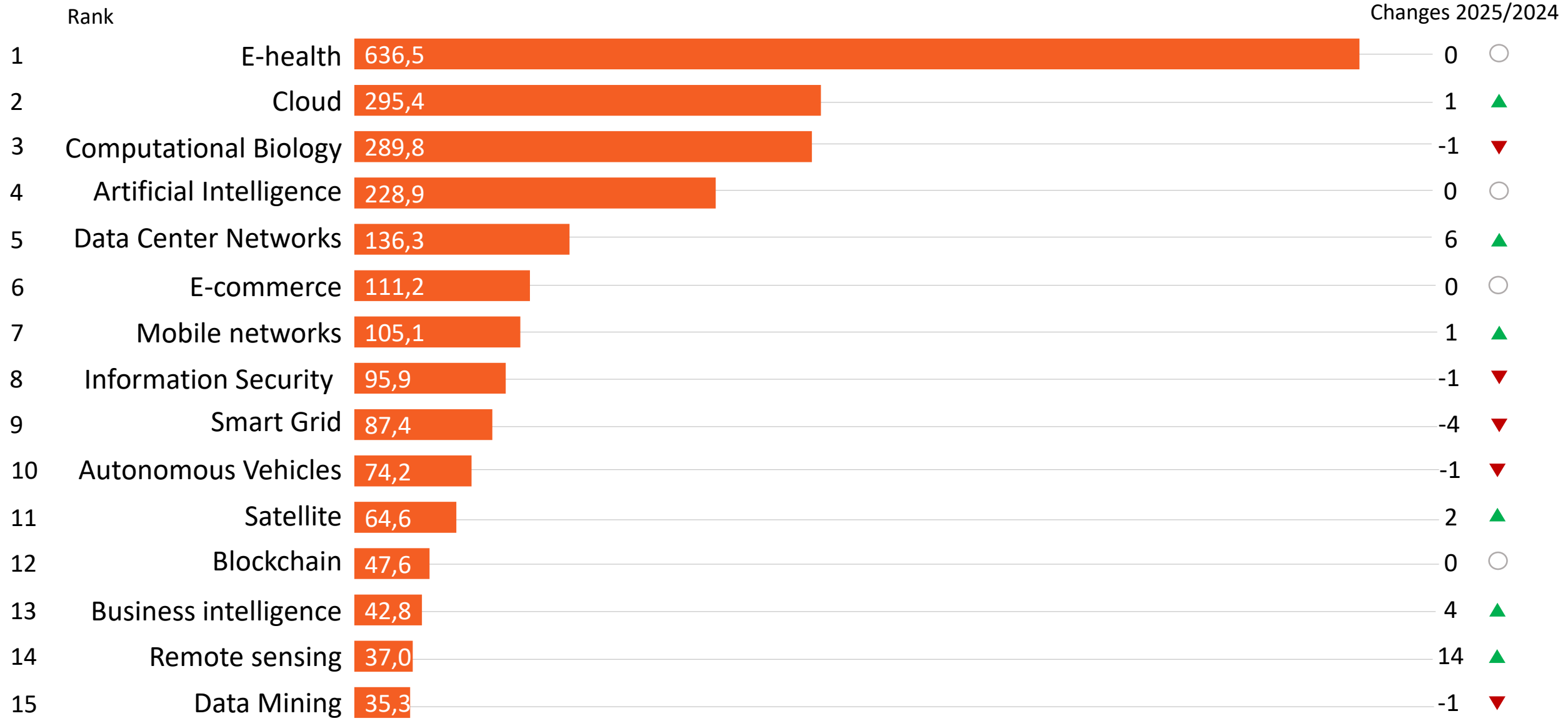


Trend ranking by patents, thousand units



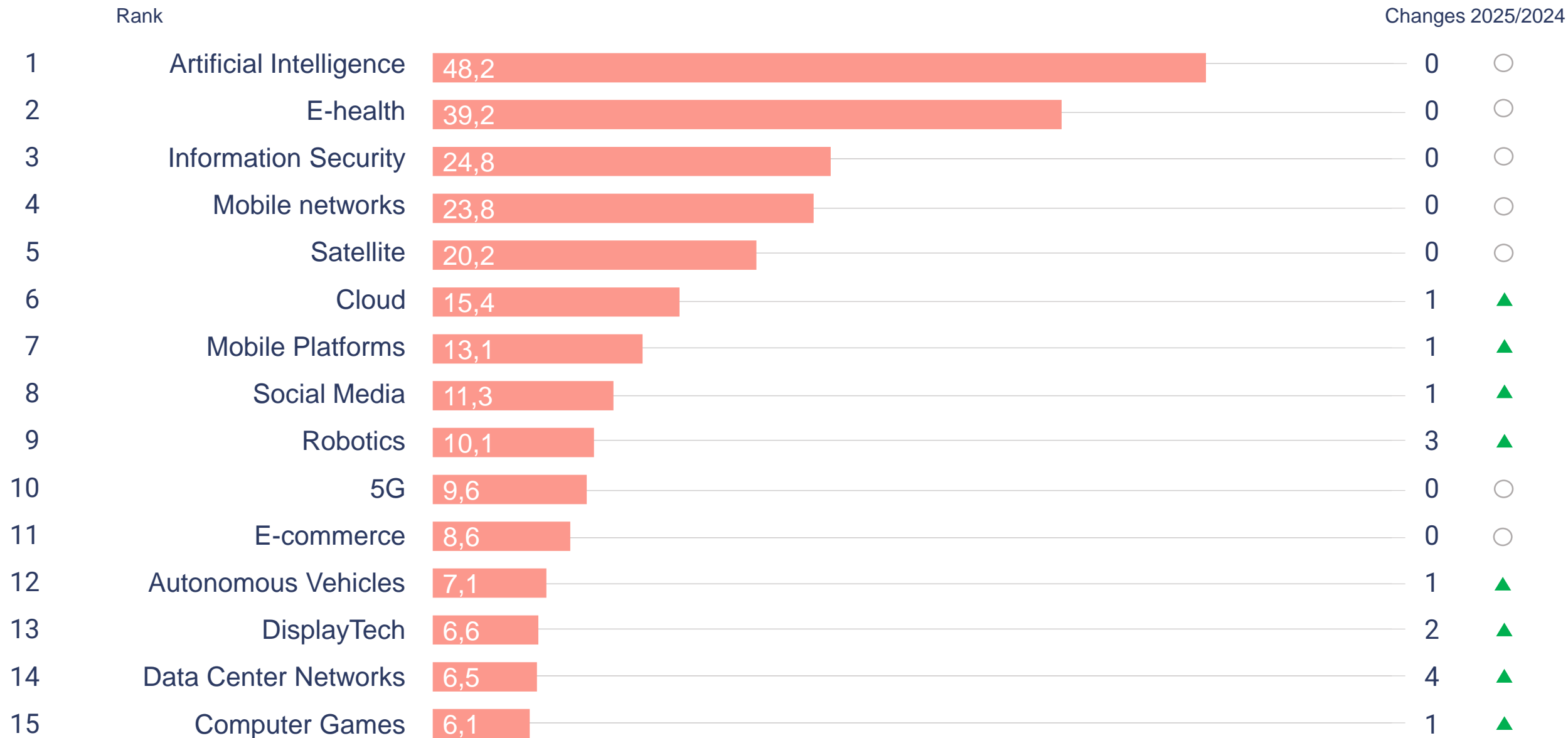


Trend ranking by investment volume (\$ billion)





Trend ranking by news, thousand units



Fast-growing trend ranking



+77%
in the news

Head-mounted Display – growth is driven by news about technologies for improving image clarity and performance in AR devices and about the introduction of 5G support in VR devices.



+58%
in science

Unmanned Aerial Vehicles – The main breakthrough is associated with the development of a new generation of lithium-sulfur (Li-S) batteries: energy density increased almost 2 times while reducing weight by 30–40%. The key effect is increased flight time and payload capacity of UAVs.



+56%
in science

Augmented Reality – growth is driven by the study of AI capabilities for object recognition for their further integration into the immersive environment and the development of educational course functionality in AR.



+38%
in the news

Data Center Networks – growth is driven by news about the optimization of data center networks for AI needs and the development of data centers for tasks in the field of commerce. For example, Walmart uses the NVIDIA Omniverse platform to simulate warehouse operations in real time.



+35%
in the news

Wearable computing – growth is driven by news about the development of wearable devices' functionality for monitoring health indicators. For example, detecting arrhythmias and sleep apnea in patients.



+23%
in patents

Brain-computer interfaces (BCI) – growth is driven by patents on solving communication problems for people with disabilities and using AI to interpret brain signals.



+14%
in patents

User Behavior – growth is driven by patents on AI technologies for predicting user churn and detecting fraud based on human behavior.

Weak signals

600%

Quantum hacking

Research and testing of vulnerabilities in quantum cryptography systems

377%

AI hallucinations

Phenomenon where models generate fabricated or unreliable information presented as fact

420%

Distributed quantum computing

Combining several quantum devices into a network to increase power and reliability

136%

Explainable AI (XAI)

Approach where algorithms provide understandable explanations of their decisions

256%

Nanotechnology drug delivery systems

Allow targeted transport of medicines to affected tissues, minimizing side effects

146%

Covert communication in mobile networks

Data transmission technology invisible to an external observer

148%

Parasocial relationships

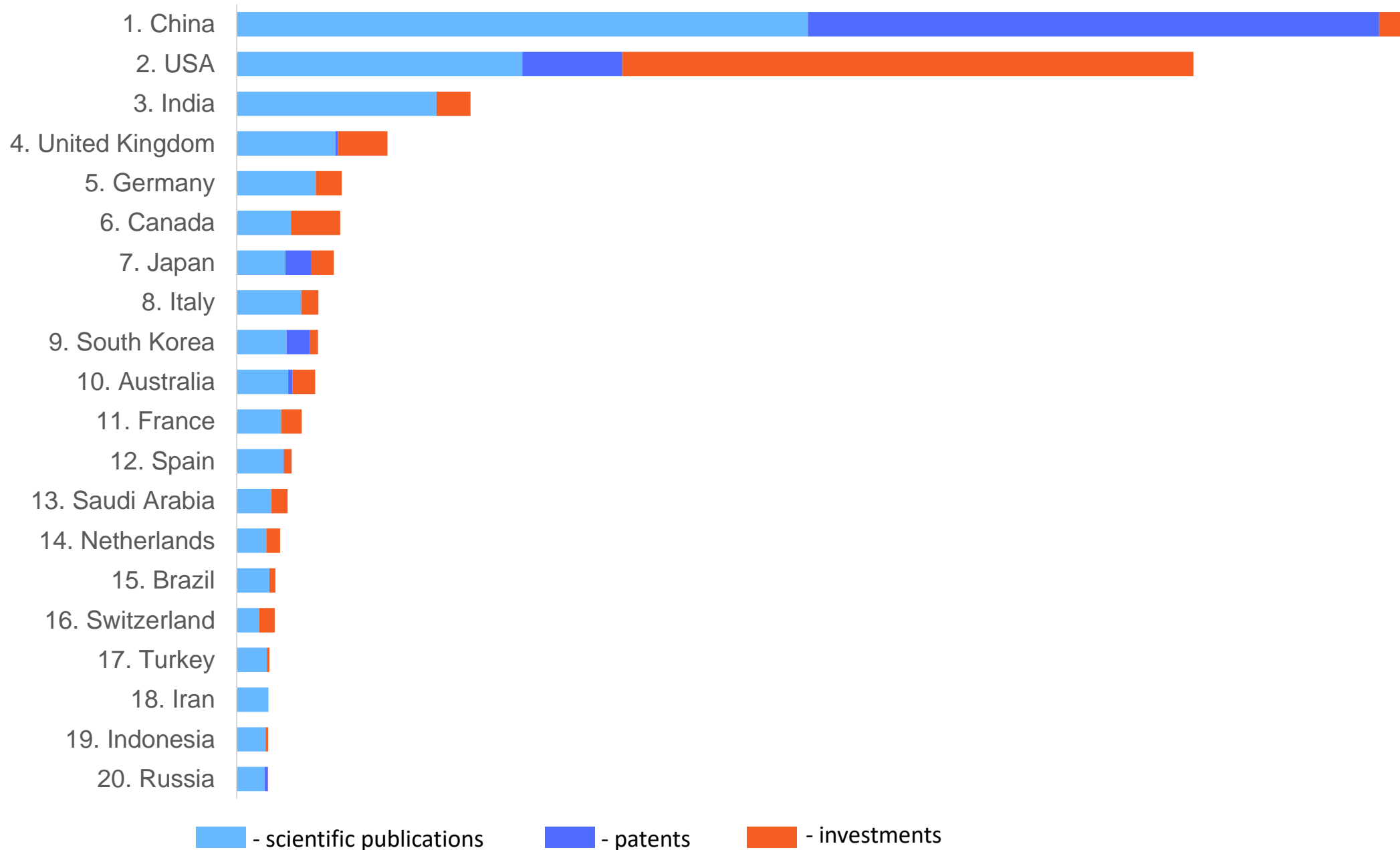
One-sided emotional attachment of viewers to media personalities on social networks

121%

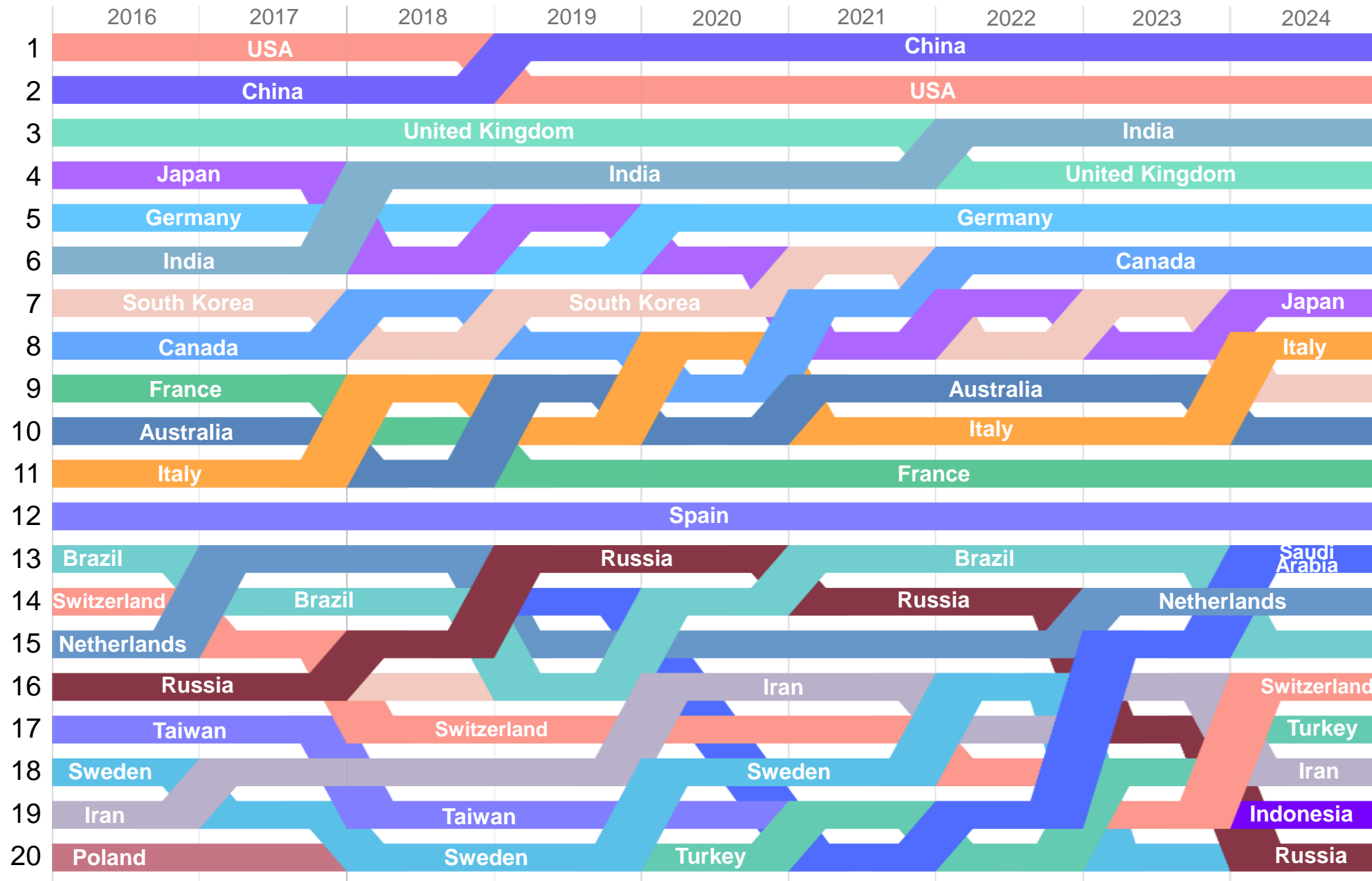
Electronic skin

Flexible sensory coverings that give robots a sense of touch

Country ranking 2025



Country ranking



Monitoring global digitalization trends. Annual study



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**Thank you for your
attention!**