Top 10 tech trends that will shape the coming decade, according to McKinsey

Technology trends and underlying technologies

Industry-agnostic trends

1. Next-level process automation…

Industrial IoT[1]

Robots/cobots[2]/RPA[3]

… and process virtualization
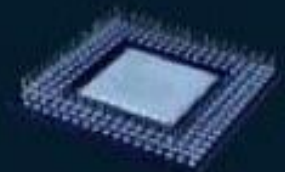
Digital twins

3-D/4-D printing

2. Future of connectivity

5G and IoT connectivity

3. Distributed infrastructure

Cloud and edge computing

4. Next-generation computing

Quantum computing

Neuromorphic chips (ASICs[4])

5. Applied AI

Computer vision, natural-language processing, and speech technology

6. Future of programming

Software 2.0

7. Trust architecture

Zero-trust security

Blockchain

Industry-specific trends

8. Bio Revolution

Biomolecules/"-omics"/biosystems

Biomachines/biocomputing/augmentation

9. Next-generation materials

Nanomaterials, graphene and 2-D materials, molybdenum disulfide nanoparticles
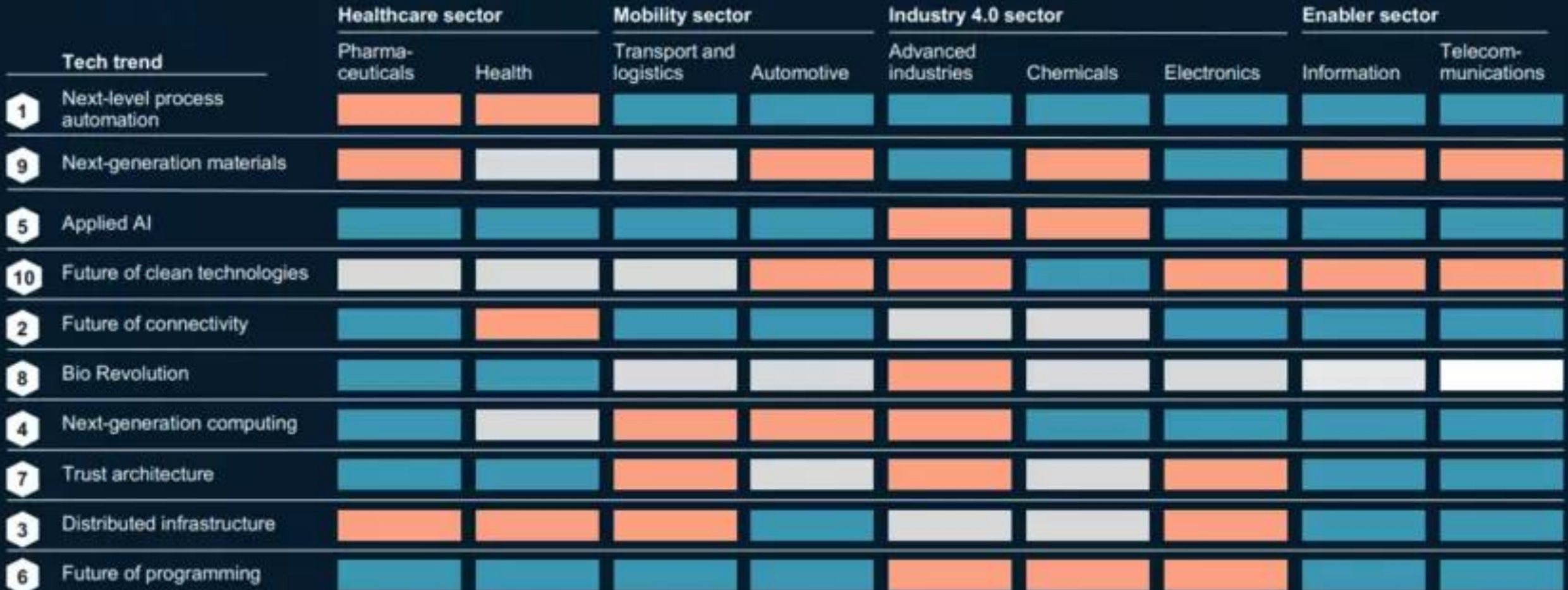
10. Future of clean technologies

Nuclear fusion

Smart distribution/metering

Battery/battery storage

Carbon-neutral energy generation

Top 10 tech trends that will shape the coming decade, according to McKinsey

Tech trends affect all sectors, but their impact varies by industry.

Estimated effects of tech trends across select sectors

Legend: ■ Major influence (blue) · ■ Moderate influence (orange) · ■ Limited influence (gray)

Tech trend	Healthcare sector		Mobility sector		Industry 4.0 sector			Enabler sector	
	Pharmaceuticals	Health	Transport and logistics	Automotive	Advanced industries	Chemicals	Electronics	Information	Telecommunications
1 Next-level process automation	Moderate	Moderate	Major	Major	Major	Major	Major	Major	Major
9 Next-generation materials	Moderate	Limited	Limited	Moderate	Major	Moderate	Major	Moderate	Moderate
5 Applied AI	Major	Major	Major	Major	Moderate	Moderate	Major	Major	Major
10 Future of clean technologies	Limited	Limited	Limited	Moderate	Moderate	Major	Moderate	Moderate	Moderate
2 Future of connectivity	Major	Moderate	Major	Major	Limited	Limited	Major	Major	Major
8 Bio Revolution	Major	Major	Limited	Limited	Moderate	Limited	Limited	Limited	Limited
4 Next-generation computing	Major	Limited	Moderate	Moderate	Moderate	Major	Major	Major	Major
7 Trust architecture	Major	Major	Moderate	Limited	Moderate	Limited	Moderate	Major	Major
3 Distributed infrastructure	Moderate	Moderate	Moderate	Major	Limited	Limited	Moderate	Major	Major
6 Future of programming	Major	Major	Major	Major	Moderate	Moderate	Moderate	Major	Major

Top 10 tech trends that will shape the coming decade, according to McKinsey

Effects of technology trends up to 2050

1 Next-level process auto-mation and virtualization

50%

of today's work activities could be automated by 2025

2 Future of connectivity

Up to **80%**

of global population could be reached by 5G coverage[1] by 2030

3 Distributed infrastructure

>75%

of enterprise-generated data will be processed by edge or cloud computing by 2025

4 Next-generation computing

>$1 trillion

value potential of quantum-computing use cases at full scale by 2035

8 Bio Revolution

45×

cost reduction for sequencing the human genome has been achieved in the past 10 years

9 Next-generation materials

10×

growth in number of patents between 2008 and 2018

5 Applied AI

>75%

of all digital-service touch points (eg, voice assistants) will see improved usability, enriched personalization, and increased conversion

6 Future of programming

~30×

reduction in the working time required for software development and analytics

7 Trust architecture

~10%

of global GDP could be associated with blockchain by 2027

10 Future of clean technologies

>75%

of global energy will be produced by renewables in 2050