

# Top Technology Trends to Watch



McKinsey Technology Council shares its insights into the top technology trends that all companies should be paying attention to as they invest in and adopt new solutions, applications and hardware.

**K**eeping up with technology trends, knowing which solutions to adopt (or which ones to avoid) and then getting the biggest value from those investments hasn't gotten any easier as technology has advanced. In fact, the sheer number of options now available on the market has made choosing among them—and allocating limited budgets only to those that will provide a strong return on investment (ROI)—more difficult than ever.

“It seems at times, that almost as quickly as a company adopts new technology, it's outdated, or a new version or product has already launched to take its place,” Chelsea Segal writes in “[Tech Trends – How Business Can Keep Up With Changing Technology Trends](#).” “And while it may be tempting to follow the ‘if it's not broken, don't fix it’ methodology, there are risks associated with lagging behind current technology trends.”

For starters, technology is a proven way to improve customer service, streamline your operations, save money, keep out in front of the competition or all of the above. It also shows employees that you're willing to invest in software and hardware that help them get their jobs done—and increasingly important consideration for Gen Y and Z workers.

“Technology continues to be a primary catalyst for change in the world. Technology advances give businesses, governments, and social-sector institutions more possibilities to lift their productivity, invent and reinvent offerings, and contribute to humanity's wellbeing,” McKinsey & Co. writes in its new [Technology Trends Outlook 2022](#) report.

## 4 Tech Trends to Watch

To help companies gain a better understanding of the most relevant technology trends that are happening now and also get those organizations thinking about the future, McKinsey updated past trend research, added new data to it and came up with some new recommendations. The new report is the brainchild of the McKinsey Technology Council—a global group of more than 100 scientists, entrepreneurs, researchers and business leaders.

When coming up with its 2022 trend list, the Council also factored in investment, research activity and news coverage (to gauge momentum for each trend). “We also conducted dozens of interviews and performed hundreds of hours of research to learn which industries are apt to benefit most as they absorb these technologies,” the report states. “And, recognizing that trends can shift, we examined the uncertainties and questions that surround each of them.”

Here are four of the trends that the McKinsey Technology Council tells organizations to watch as the year comes to a close and we move into 2023:

### Trend #1: Applied AI

An artificial intelligence branch that brings AI out of the lab and into the real world, [applied AI enables computers](#) and computer-controlled robots to execute real tasks. It also enhances software applications and puts advanced machine learning (ML) to use, according to Cognizant's IT glossary, and provides “high levels of accuracy and adaptation over time.”

Using applied AI, models trained in machine learning can be used to solve classification, prediction and control problems to automate activities; add or augment capabilities and offerings; and make better decisions.

### **Trend #2: Advanced connectivity**

McKinsey says that the latest connectivity protocols and technologies—5G/6G cellular, wireless lower-power networks and low-Earth-orbit satellites, to name a few—power networks with more data throughput, higher spectrum efficiency, wider geographic coverage, less latency and lower power demands.

“These improvements will enhance user experiences and increase productivity in industries such as mobility, healthcare and manufacturing,” it adds. “Interest in advanced connectivity—especially 5G/6G, Wi-Fi 6 and LEO satellites—has risen significantly.”

### **Trend #3: Industrializing machine learning**

According to McKinsey, industrialized ML uses software and hardware solutions to accelerate the development and deployment of ML and to support performance monitoring, stability and ongoing improvement.

“Experience suggests that organizations that industrialize ML successfully can shorten the production time frame for ML applications by 90% (from proof of concept to product) and reduce development resources by up to 40%,” it adds. “While a small number of leading companies have pioneered the industrialization of AI, we expect its adoption to spread as more companies seek to use AI for a growing number of applications.”

### **Trend #4: Cloud and edge computing**

Cloud computing uses a network of remote servers hosted online to store, manage and process data, while edge is about [processing data closer to where it's being generated](#). Going forward, McKinsey expects more organizations to use cloud and edge computing. The main draw is that these platforms are increasingly incorporating computational and data resources at network edge nodes that are situated near end-users or in their facilities.

“These edge resources fulfill needs for low latency (that is, minimal processing delays) in real-time systems such as warehouse automation,” McKinsey points out. Edge resources are also being used in more mobile applications, including vehicles. “While relatively low levels of general interest reflect the increasing maturity of these platforms,” it adds, “cloud and edge computing have become core technologies for many digital solutions.”