

Top Strategic Technology Trends for the Next 5-10 Years



A new Gartner report outlines the top strategic technology trends that companies should be watching over the next 5-10 years.

As technology continues to advance and the volume of software platforms, applications, tools and equipment available on the market proliferates, picking the options that best meet your company's needs isn't getting any easier.

In fact, culling through the options may be getting *more difficult* as the sheer number of viable options grows year over year. Add newer possibilities like artificial intelligence, machine learning and blockchain to the list, and the selection process becomes even more difficult.

Knowing this, Gartner, Inc., has identified [a list of top strategic technology trends](#) that can help CIOs, CPOs and other professionals whittle down their list of options and make the best strategic technology decisions. Here are six of the main trends that the research firm says companies should be paying attention to over the next 5-10 years:

1. Generative Artificial Intelligence (AI). The technology used to create new content by utilizing existing text, audio files or images, generative AI relies on computers to detect the underlying pattern related to the input and produce similar content. Using machine learning, it learns about content or objects from data, and then uses the information to generate brand-new, completely original, realistic artifacts. Gartner says generative AI can be used for a range of activities, including creating software code, facilitating drug development and targeted marketing.

2. Data Fabric. Flexible, resilient integration of data across platforms and business users, data fabric helps simplify a company's data integration infrastructure. It also creates a scalable architecture that reduces the technical debt seen in

most data and analytics teams due to the rising integration challenges. "A data fabric's real value is its ability to dynamically improve data usage with its inbuilt analytics," Gartner reports, "cutting data management efforts by up to 70% and accelerating time to value."

3. Distributed Enterprise. With more people working remotely and from home right now, traditional office setups have been turned on end. In fact, they're evolving into distributed enterprises comprising a large number of geographically-dispersed workers. Gartner expects that by 2023, 75% of organizations that exploit distributed enterprise benefits will realize revenue growth 25% faster than competitors.

4. Cloud-Native Platforms. To deliver digital capabilities anywhere and everywhere, more organizations are using cloud-native software platforms (CNPs) versus on-premises options. "CNPs use the core capabilities of cloud computing to provide scalable and elastic IT-related capabilities as-a-service to technology creators," reports Gartner, which predicts that cloud-native platforms will serve as the foundation for more than 95% of new digital initiatives by 2025—up from less than 40% in 2021.

5. Autonomic Systems. These self-managing physical or software systems learn from their environments. And unlike automated or even autonomous systems, autonomic systems can dynamically modify their own algorithms without an external software update. This allows them to rapidly adapt to new conditions in the field, much like humans can.

6. Decision Intelligence. A practical discipline used to improve decision making by explicitly understanding and engineering how decisions are made, decision intelli-

gence addresses how outcomes are evaluated, managed and improved by feedback. In the next two years, Gartner expects one-third of all large organizations to be using decision intelligence for structured decision-making and to improve competitive advantage.

Six More Technologies to Watch

Rounding out Gartner's top 12 list were composable applications (whereby **functional blocks of an application** are dissociated from the complete application or process); hyperautomation (a **business-driven, disciplined approach** that organizations use to rapidly identify, vet and automate as many business and IT processes as possible); and privacy-enhancing computation (techniques that protect personal and sensitive information at a data, software or hardware level).

Cybersecurity mesh, AI engineering and total experience (TX) also made the research firm's 2022 list of strategic tech trends that will drive significant disruption and opportunity over the next 5-10 years.