

Tech Trends 2022

Peering through the lens of government

The technologies that enhance our organizations and our lives are more powerful (and more essential) than ever before. Forward-thinking governments and organizations understand the technological forces that surround them and look for ways to harness them for the benefit of citizens and constituents alike.

Relevance and readiness scale: We looked at each trend and assigned a value from one (low) and five (high) based on the trend's relevance and readiness of government adoption.

Relevance: How impactful would it be if the government adopted the trend?

Readiness: How ready is the government to adopt the trend?

This report provides a government-specific take on Deloitte's Tech Trends 2022 report, spotlighting the accelerating technology trends most likely to cause disruption over the next 18–24 months. We explore which trends may be most relevant for governments and how ready governments are to take advantage of them.

Learn how early trend participants are taking advantage of new opportunities in automation, blockchain, data-sharing, and other areas to transform their organizations and engineer competitive advantage.



Data-sharing made easy

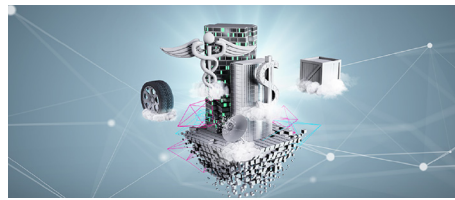
A host of new technologies promise to simplify the mechanics of data-sharing across and between organizations while preserving the veil of privacy. As part of a growing trend, organizations are unlocking more value from their own sensitive data while leveraging enormous volumes of externally sourced data that has traditionally been off limits. This can open up a new arena of data-driven opportunities. Indeed, the ability to share secured data with others within an ecosystem or value chain is giving rise to new business models and products. For example, by pooling clinical data on shared platforms in the early days of the COVID-19 pandemic, researchers, medical authorities, and drug makers were able to accelerate the development of treatments and vaccines. Moreover, these same data-sharing protocols have helped drug makers, government agencies, hospitals, and pharmacies coordinate and execute expansive vaccination programs that prioritize efficiency and safety, and preserve intellectual property.

Trends in action

Governments often need to coordinate across institutions and with the private sector. By implementing technologies that both preserve privacy and permit real-time data sharing for analysis and modeling, governments may be able to seamlessly gather information about public health, supply chains, cybersecurity and more.

Readiness: ● ● ○ ○ ○ ○

Relevance: ● ● ● ● ● ●



Cloud goes vertical

The center of gravity around digital transformation has shifted from meeting the IT needs of an industry-agnostic organization to meeting the unique strategic and operational needs of each sector and even subsector. Hyperscalers and SaaS vendors are working with global system integrators and clients to provide modularized, vertical-specific business services and accelerators that can be easily adopted and built upon for unique differentiation. As this trend gains momentum, deploying applications will become a process of assembly rather than creation—a shift that could reorder the entire value stack. Business processes will become strategic commodities to be purchased, freeing organizations to focus precious development resources on critical areas of strategy and competitive differentiation.

Trends in action

As cloud vendors offer increasingly powerful APIs, organizations are increasingly able to configure and assemble systems. Governments should evaluate legacy applications and portfolios against modern capabilities to identify potential areas to use new APIs and capabilities to replace legacy features and functions.

Readiness: ● ● ○ ○ ○ ○

Relevance: ● ● ● ● ○ ○



Blockchain: Ready for business

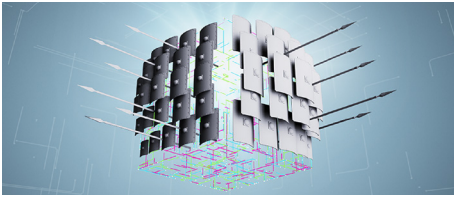
Trendy cryptocurrencies and nonfungible tokens (NFTs) capture media headlines and the public imagination, but these and other blockchain and distributed ledger technologies (DLTs) are also making waves in the enterprise. In fact, blockchain and DLT platforms have crossed the disillusionment trough of the hype cycle and are well on their way to driving real productivity. They are fundamentally changing the nature of doing business across organizational boundaries and helping companies reimagine how they make and manage identity, data, brand, provenance, professional certifications, copyrights, and other tangible and digital assets. Emerging technical advancements and regulatory standards, especially in nonpublic networks and platforms, are helping drive enterprise adoption beyond financial services organizations. As enterprises get comfortable with blockchain and DLT, creative use cases are cropping up in many industries, with established industry leaders expanding their portfolios and creating new value streams, while startups dream up exciting new business models.

Trends in action

As DLT technologies pick up in adoption, governments find themselves in the twin role of regulator and user. As regulators, providing clear policies and regulations helps unlock national innovation. As users, governments are finding new and creative ways to use these technologies to reduce fees in financial transfer, improve operational efficiency, provide visibility to supply chains, promote digital identities and much more.

Readiness: ● ○ ○ ○ ○ ○

Relevance: ● ● ● ● ○ ○



Cyber AI: Real defense

Security teams may soon be overwhelmed by the sheer volume, sophistication, and difficulty of detecting cyberattacks. Enterprise attack surfaces are expanding exponentially. The use of 5G is growing, along with the number of network-connected devices; remote work is gaining ground; and third-party attacks have become increasingly pernicious. It's time to call for AI backup. Cyber AI can be a force multiplier that enables organizations not only to respond faster than their attackers can move but also to anticipate these moves and act in advance. AI can be expanded beyond established applications, such as using it to accelerate data analysis, identify anomalies, and detect threats. These emerging AI techniques can help human analysts focus on prevention, remediation, and developing a more proactive, resilient security posture. And as AI is adopted across the business, it can also be leveraged to help protect valuable AI resources and combat AI-powered attacks.

Trends in action

As cyberattacks increase globally, governments need to be on guard. As evidenced by recent large scale attacks, the status quo is no longer sufficient. Governments must evaluate the use of AI to automate attack detection and response, even considering supplementing in house talent with outsourcing.

Readiness: ● ● ○ ○ ○
Relevance: ● ● ● ● ●



IT, disrupt thyself: Automating at scale

Faced with creeping technological complexity and higher expectations of stability and availability, some CIOs are radically reengineering their IT organizations. How? By taking a page from the cloud provider's playbook. They are identifying repetitive, manual processes and applying a combination of engineering, automation, and self-service. The net result is streamlined timelines, accelerated value delivery, and more effective and stable IT across the board. This kind of disruptive automation represents a vast yet underrealized opportunity. Previous technology trends such as NoOps, Zero trust, and DevSecOps, share a common theme—the importance of moving to code across the organization. Migrating away from manual administration to engineering and automation: organizations can manage complex systems more effectively and improve the customer experience through improved availability and resilience.

Trends in action

Given the war for IT talent, governments cannot afford to squander employees' minutes and hours. Aggressively move to automating or eliminating all low value activities, moving towards having human resources managing code that manages environments and systems. Properly executed, this will improve efficiency and morale.

Readiness: ● ● ○ ○ ○
Relevance: ● ● ● ● ●



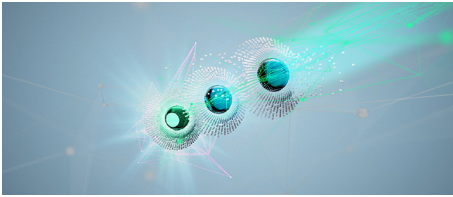
The tech stack goes physical

With the explosion of “smart devices” and the increased automation of physical tasks, IT's remit is growing again, extending beyond laptops and phones. CIOs must now consider how to onboard, manage, maintain, and secure such business-critical physical assets as smart factory equipment, automated cooking robots, inspection drones, health monitors, and countless others. Because outages could be business- or life-threatening, devices in the evolving physical tech stack require the highest levels of system uptime and resilience. And a fresh approach to device governance and oversight may be needed to help IT manage unfamiliar standards, regulatory bodies, and liability and ethics concerns. Finally, CIOs likely will need to consider how to procure needed technology talent and reskill the current workforce.

Trends in action

With the advent of drones, sensors and smart devices, the number of “computers” has exploded. Government missions increasingly use physical technology that interacts with humans, meaning IT must manage those devices, set standards, provide security, and support implementations.

Readiness: ● ● ○ ○ ○
Relevance: ● ● ● ● ○



Field notes from the future

A bold, technologically sophisticated future awaits—this we know. Yet from our vantage point today, we cannot discern precisely what this bold future looks like, or how we can prosper in it. How can we plan for events that are likely, yet vaguely defined? In Field notes from the future, our final chapter of Tech Trends 2022, we examine the trajectories of three technologies that will likely dominate the digital landscape a decade or more from now: quantum, exponential intelligence, and ambient experience. Though currently nascent, each of these technologies has captured the imagination of researchers and the investment dollars of venture capitalists, startups, and enterprises who all agree: Something interesting will happen, and with diligence and groundwork planning, we can be ready to act when the future finally arrives.

Trends in action

The technology of the next decade is already starting to arrive. Ensuring that future planning and strategies are implemented with the future's technologies in mind is an important factor in creating future-proof designs and approaches. Don't be backed into a corner by making yesteryear's decisions tomorrow.

Readiness: N/A

Relevance: N/A

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