



Tech Trends 2018

The symphonic enterprise

DELOITTE'S ninth annual Tech Trends report identifies trends that are likely to disrupt businesses in the next 18-24 months, from enterprise data sovereignty to digital reality, API imperative, and more. The trends reflect the macro forces fueling growth—cloud, digital, and analytics—as well as the innovations built upon this foundation, such as blockchain and cognitive computing. This year's report spotlights ongoing transformations of core systems and, more broadly, of IT's role within the enterprise. As in previous years, we balance these discussions with perspectives on how such changes are impacting IT operations and how companies respond to cyber risk.

The pace of change across industries and the globe is only increasing. When organizations rec-

ognize connections between new technologies and bring them into harmony, they create something new and greater: the symphonic enterprise.

How are the trends selected?

- Feedback from client executives on current and future priorities
- Perspectives and insights from academic and industry luminaries
- Roadmaps and investment priorities from leading start-ups, venture capitalists, and technology vendors
- Insights and experiences from our global network of Deloitte professionals

Reengineering technology



With business strategies linked inseparably to technology, leading organizations are fundamentally rethinking how they envision, deliver, and evolve technology solutions. They are transforming IT departments into engines for driving business growth, with responsibilities that span back-office systems, operations, and even product and platform offerings. From the bottom up, they are modernizing infrastructure and the architecture stack. From the top down, they are organizing, operating, and delivering technology capabilities in new ways. In tandem, these approaches can deliver more than efficiency—they offer the tools, velocity, and empowerment that will define the technology organization of the future.

No-collar workforce



As automation, cognitive technologies, and artificial intelligence gain traction, companies may need to reinvent worker roles, assigning some to humans, others to machines, and still others to a hybrid model in which technology augments human performance. Managing both humans and machines will present new challenges to the human resources organization, including how to simultaneously retrain augmented workers and to pioneer new HR processes for managing virtual workers, cognitive agents, bots, and the other AI-driven capabilities comprising the “no-collar” workforce. By redesigning legacy practices, systems, and talent models around the tenets of autonomies, HR groups can begin transforming themselves into nimble, fast-moving, dynamic organizations better positioned to support the talent—both mechanized and human—of tomorrow.

Enterprise data sovereignty



As every organization recognizes data as a key asset, there is an increasing demand to “free” it—to make information accessible, understandable, and actionable across business units, departments, and geographies. This requires modern approaches to data architecture and data governance that take advantage of machine learning, natural language processing, and automation to dynamically understand relationships, guide storage, and manage rights. Those same capabilities are needed to navigate changing global regulatory and legal requirements around data privacy and protection.

The new core



Much of the attention paid to cloud, cognitive, and other digital disruptors today centers on the way they manifest in the marketplace: Individually and collectively, these technologies support new customer experiences, product innovation, and rewired industry ecosystems. Often overlooked, however, is their disruptive potential in core back- and mid-office systems and in operations, where digital technologies are poised to fundamentally change the way work gets done. This transformation is beginning with finance and supply chain, two corporate and agency pillars ready to embrace all things digital. From there, next-generation transaction and financial systems, blockchain, machine intelligence, automation, and the Internet of Things (IoT) are redefining what is possible in these mission critical functions.

Digital reality



The augmented reality and virtual reality revolution has reached a tipping point. Driven by a historic transformation in the way we interact with technology and data, market leaders are shifting their focus from proofs of concept and niche offerings to strategies anchored in innovative use cases and prototypes designed for industrialization. They are laying the groundwork for broader deployment by tackling issues such as integration experiences with the core, cloud deployment, connectivity, cognitive, analytics, and access. Some have even begun developing new design patterns and nurturing non-traditional skillsets, heralding a new era of engagement. These early adopters recognize a shift in the AR/VR winds: The time to embrace digital reality is now.

Blockchain to blockchains



Blockchain technologies are on a clear path toward broad adoption, with proofs of concept shifting toward production and leading organizations exploring multiple concurrent use cases of increasing scope, scale, and complexity. Moreover, initial coin offerings and smart contracts are finding more applications and creating more diversity throughout the blockchain ecosystem. Now is the time for organizations to begin standardizing on the technology, talent, and platforms that will drive future blockchain initiatives. Likewise, they can begin identifying business consortia to join. Beyond these immediate steps, they should also look to the horizon for the next big blockchain opportunity: coordinating, integrating, and orchestrating multiple blockchains working together across a value chain.

API imperative

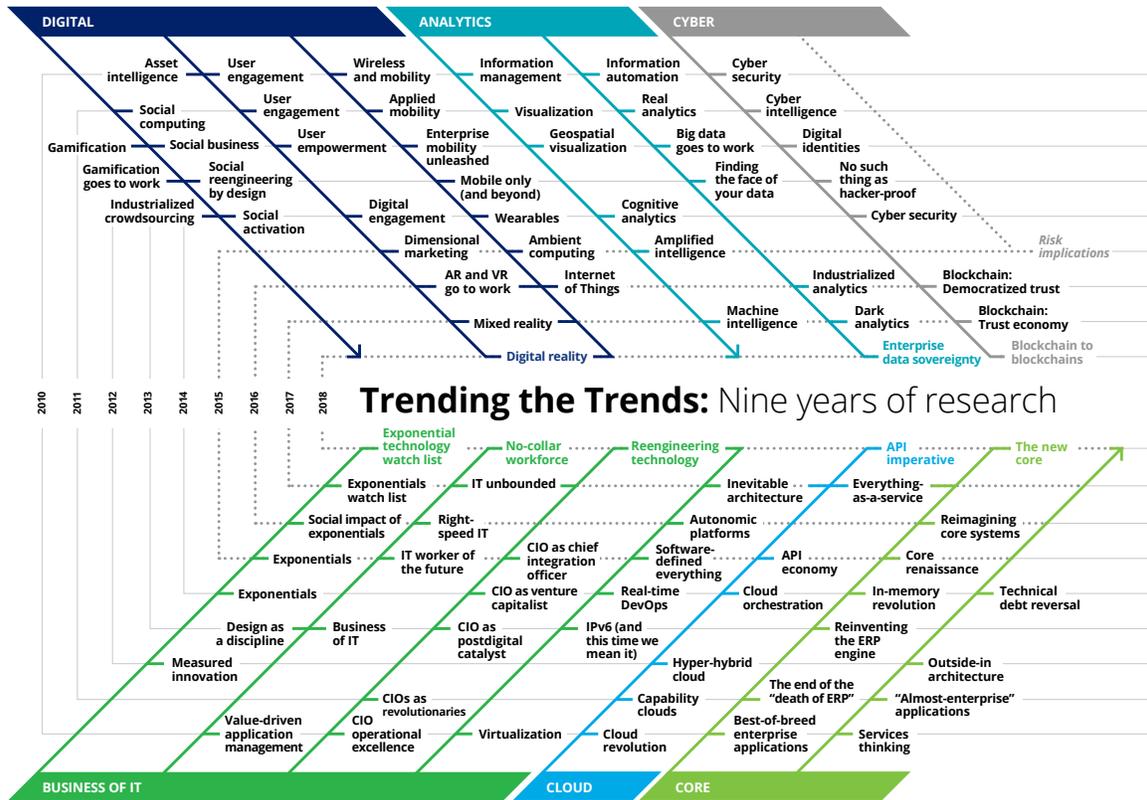


For many years, application programming interfaces (APIs) have made it possible for solutions and systems to talk to each other. But increasingly, companies value these often-overlooked technologies for another capability: They expose technology assets for reuse across and beyond the enterprise. Not only can reuse drive greater ROI in IT investments—it can offer API consumers a set of building blocks for using existing data, transactions, and products in creative ways. As part of the growing API imperative trend, organizations have begun exploring new ways to expose, manage, and control APIs. As this trend gathers momentum in the coming months, expect further innovative approaches emerge for contracting, pricing, servicing, and even marketing a venerable technology that has become a critical pillar of many digital ambitions.

Exponential technology watch list



Is quantum computing becoming powerful enough to render your data encryption technology at risk? If so, will it be possible to “quantum proof” your information and communications? When does that need to be done? Will artificial general intelligence actually emerge and tilt the man/machine equation further toward machines? Will it put your own job at risk? What about your business—or even your industry? Does AI represent an equal amount of opportunity to innovate and thrive? In the face of these and other exponential forces, leading organizations—working within ecosystems that include business partners, start-ups, and academics—are developing the disciplined innovation responses and capabilities they will need to sense, experiment with, incubate, and scale exponential opportunities.



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