Tech Trends 2017
The kinetic enterprise

What is it?
Deloitte’s eighth annual Tech Trends report identifies trends that are likely to disrupt businesses in the next 18-24 months—from dark analytics to mixed reality, machine intelligence, blockchain and more. These trends reflect macro forces fueling innovation: digital, analytics, cloud, the modernization of core systems, and the changing role of IT within the enterprise, balanced with the implications of cyber risk—security, compliance, regulatory and compliance, quality and safety.

How were the trends selected?
Tech Trends embodies insights from:

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

Today every company is a technology company at its core—driving innovation and growth while also redefining the competitive battleground. But technology is a moving target. In the kinetic enterprise, the only constant is change.
A brief look at the trends

IT unbounded
As organizations modernize their IT operating and delivery models, some are creating multifunctional teams and breaking down silos across IT. They are also looking beyond organizational boundaries to explore the open talent market and to form new types of relationships with vendors, incubators, and academics. Finally, with technology dominating strategic business priorities, some companies are educating executives and staff to increase awareness and understanding of both core and emerging technologies. For many, embracing this multifaceted approach may require adjustments to org models, IT processes, and supporting systems. The good news is that irrespective of an organization’s legacy footprint, there are systematic approaches that can make the task more manageable. And the outcome may justify the effort: Services become “unbounded” and more efficient, transforming the IT organization.

Dark analytics
Across enterprises, ever-expanding stores of data remain unstructured and unanalyzed. Few organizations have been able to explore nontraditional data sources such as image, audio, and video files; the torrent of machine and sensor information generated by the Internet of Things; and the enormous troves of raw data found in the unexplored recesses of the “deep web.” However, recent advances in computer vision, pattern recognition, and cognitive analytics are making it possible for companies to shine a light on these untapped sources and derive insights that lead to better experiences and decision making across the business.

Machine intelligence
Artificial intelligence’s rapid evolution has given rise to myriad distinct—yet often misunderstood—AI capabilities such as machine learning, deep learning, cognitive analytics, robotics process automation (RPA), and bots, among others. Collectively, these and other tools constitute machine intelligence: algorithmic capabilities that can augment employee performance, automate increasingly complex workloads, and develop “cognitive agents” that simulate both human thinking and engagement. Machine intelligence represents the next chapter in the advanced analytics journey.

Mixed reality
The enterprise potential of augmented reality and virtual reality continues to grow as companies explore use cases and move beyond pilot applications. Increasingly, these efforts intersect with opportunities made possible by Internet of Things technology—sensors and connected devices that help build a more integrated and extended digital and physical landscape. Yet amid this flurry of activity, many overlook the larger implications of AR and VR’s emergence. Design patterns are evolving dramatically, with 2D screens giving way to tools that use sensors, gestures, voice, context, and digital content to help humans interact more naturally with the increasingly intelligent world around us. Though it may be several years before mixed reality’s ultimate end game materializes, the time to begin exploring this dynamic new world—and the digital assets it comprises—is now.
Inevitable architecture

Organizations are overhauling their IT landscapes by combining open source, open standards, virtualization, and containerization. Moreover, they are leveraging automation aggressively, taking steps to couple existing and new platforms more loosely, and often embracing a “cloud first” mind-set. These steps, taken individually or as part of larger transformation initiatives, are part of an emerging trend that some see as inevitable: the standardization of a flexible architecture model that drives efficiency, reduces hardware and labor costs, and foundationally supports speed, flexibility, and rapid outcomes.

Everything-as-a-service

Many organizations are reorienting their business capabilities and approaching business products, offerings, and processes as a collection of services that can be used both inside and outside organizational boundaries. But doing so means IT may need to revitalize legacy core assets by upgrading to the latest ERP platforms or refactoring aging custom code. Though sometimes-daunting undertakings, these and other legacy remediation efforts can help achieve short-efficiency gains and cost savings, while laying the foundation for broader strategic shifts.

Blockchain: Trust economy

Blockchain is outgrowing its adolescent cryptocurrency identity, with distributed consensus ledgers becoming smart contracts facilitators. Beyond creating efficiencies by removing the legal and financial intermediary in a contractual agreement, blockchain is assuming the role of trusted gatekeeper and purveyor of transparency. In the emerging “trust economy” in which a company’s assets or an individual’s online identity and reputation are becoming both increasingly valuable and vulnerable, this latest use case may be blockchain’s most potentially valuable to date.

Exponentials watch list

Though business applications for nanotechnologies, energy systems, biotechnology, and quantum technologies may seem light-years away, in reality they are approaching rapidly. In the next three to five years, expect to see business use cases emerge and pioneering deployments accelerate around these once-futuristic technologies. With this in mind, increasing numbers of CIOs, CTOs, and business strategists are already taking exploratory steps with these and other exponential technologies. They are sensing and scanning disruptive forces and putting in place deliberate, disciplined innovation responses. These leaders understand that waiting for exponentials to manifest as mature technology trends before taking action may be waiting too long.
Questions?

✉️ OCTO@deloitte.com

Bill Briggs
Chief Technology Officer
Deloitte Consulting LLP
✉️ wbriggs@deloitte.com
@wdbthree

Scott Radeztsky
Deputy CTO
Deloitte Consulting LLP
✉️ sradeztsky@deloitte.com
@radezt

Learn more

🔗 dupress.deloiite.com/tech-trends
Follow @DeloitteOnTech

This publication contains general information only and Deloitte is not, by means of this publication, rendering accounting, business, financial, investment, legal, tax, or other professional advice or services. This publication is not a substitute for such professional advice or services, nor should it be used as a basis for any decision or action that may affect your business. Before making any decision or taking any action that may affect your business, you should consult a qualified professional advisor. Deloitte shall not be responsible for any loss sustained by any person who relies on this publication.

As used in this document, "Deloitte" means Deloitte Consulting LLP, a subsidiary of Deloitte LLP. Please see www.deloitte.com/us/about for a detailed description of the legal structure of Deloitte LLP and its subsidiaries. Certain services may not be available to attest clients under the rules and regulations of public accounting.