Tech Trends 2023
Executive summary
Deloitte’s 14th annual Tech Trends report explores the impact of emerging technology opportunities in the innovation areas of interaction, information, and computation, and the foundational areas of business of technology, cyber and trust, and core modernization. Through the stories of pioneering organizations, we note what’s happening now across sectors and geographies, highlight new technologies and approaches that stand to become the norm within 18 to 24 months, and project where the trends could be headed next during the coming decade.

Prologue: A brief history of the future
The entire history of IT has been a steady evolution of the same three enduring eternities: interaction, information, and computation. The future of IT will continue to march along these same three tracks toward specific, convergent endgames: simplicity, intelligence, and abundance. Three additional categories—the business of technology, cyber and trust, and core modernization—acknowledge the reality that business drives technology, not the other way around, and that extant systems and investments need to play nicely with pioneering innovations so that businesses can seamlessly operate while they grow. Taken together, these six macro technology forces are the backbone of information technology.
**Eyes to the sky: Three enduring eternities**
The history of IT has been a steady evolution of pioneering innovations in interaction, information, and computation, the three enduring eternities of modern computing.

**Trend 1**
**Through the glass: Immersive internet for the enterprise**
For a generation, the connection to the digital world has been mediated through an ever-shrinking series of rectangular screens. Now, as technologists recognize that screens can’t keep shrinking forever, the paradigm is shifting again, toward interfaces that take users through the glass and into immersive virtual experiences, including the digital world known as the metaverse. Over the next few years, tangible, conversational, and virtual interfaces will likely continue to graduate from tech to toy to enterprise tool. While some companies build lucrative business models around the unique capabilities afforded by an “unlimited reality,” others provide immersive environments for employees to streamline operations or collaborate and learn. As technology advances further over the next decade, organizations should be ready for reality to move online through expanded ways of interacting with mixed reality.

**Trend 2**
**Opening up to AI: Learning to trust our AI colleagues**
With AI tools increasingly standardized and commoditized, few businesses may realize true competitive gains from crafting a better algorithm. Instead, what will likely differentiate the truly AI-fueled enterprise from its competition will be how robustly it uses AI throughout its processes. The key element here, which has developed much slower than machine learning technology, is trust. As machines encroach on humanlike tasks that go beyond basic number crunching and enter the realm of discernment and decision-making via AI, the business world is having to develop a new understanding of what it means to trust machines.

**Trend 3**
**Above the clouds: Taming multicloud chaos**
To simplify multicloud management, some enterprises are beginning to turn to a layer of abstraction and automation that sits above the burgeoning multicloud. Known alternately as metacloud or supercloud, this family of tools and techniques can help cut through the complexity of multicloud environments by providing access to common services such as storage and computation, AI, data, security, operations, governance, and application development and deployment. Metacloud offers a single pane of control for organizations feeling overwhelmed by multicloud complexity.
Executive summary

**Feet firmly on the ground:**
**Three foundational forces**
Existing systems and investments—represented by the business of technology, cyber and trust, and core modernization—should integrate well with pioneering innovations so that businesses can seamlessly operate while they grow.

**Trend 4**
**Flexibility, the best ability: Reimagining the tech workforce**
In the last year, many organizations have been engaged in a heated competition for a limited supply of technology talent. Yet with technical skills becoming outdated every few years, hiring for current needs is not a winning long-term strategy. Rather than competing in scarcity, savvy leaders consider an abundance frame, wherein technology talent can be curated, created, and cultivated. Companies should be prepared to eschew IT orthodoxies and prize flexibility as the best ability. By building a skills-based organization, tapping into creative sources for finding talent, and providing a compelling talent experience, companies can meet their talent goals. In the longer term, organizations should plan to brush up on their humanities, as AI technology advances enough to carry out many of the lower-order tasks that IT teams are burdened with today.

**Trend 5**
**In us we trust: Decentralized architectures and ecosystems**
Blockchain-powered ecosystems are becoming key not only to developing and monetizing digital assets but also to creating digital trust. As organizations begin to understand blockchain's utility, they’re realizing that building stakeholder trust could be one of its primary benefits. From everyday enterprise applications to blockchain-native business models, decentralized architectures and ecosystems disintermediate trust, placing it not in a single person or organization but distributing it across the community of users. Organizations may be able to cement their credibility by helping reinvent a more decentralized internet—Web3—in which a single, immutable version of the truth is based on public blockchains. In this world, digital natives are increasingly likely to demand higher-quality proof and higher-order truth. Digital ledger technologies and decentralized business models that achieve consensus through code, cryptography, and technology protocols are demonstrating that none of us is as trustworthy as all of us.

**Trend 6**
**Connect and extend: Mainframe modernization hits its stride**
Rather than rip and replace legacy core systems, enterprises are increasingly looking to bring them into the modern era by connecting and extending them to emerging technologies. Through tried-and-true approaches to legacy system modernization, businesses are leveraging mainframes—and their precious data—to drive digital transformation.
Epilogue: Widening the aperture—From infoTech to xTech

Historically, to enterprise audiences, “technology” has served as shorthand for information technology. But separate and distinct from enterprise IT, an extended set of technologies—or xTech—are on the horizon. Rooted in the formal, natural, and social sciences, these academic and research areas are brimming with patent and startup activity, technology maturity and advancements, academic and grant investments, and venture capital funding. And they’re attracting the best and brightest talent. We anticipate six emerging technology disciplines to eventually rival IT in their impact on business innovation: space and aeronautical engineering; cellular and biomolecular engineering; brain and nervous systems applications and interfaces; climate, sustainability, and the environment; autonomous and precision robotics; and power, energy, and battery technologies.
Trend Lines

The future is already here, albeit unevenly distributed.

Our collection of technology case studies highlights pioneering leaders and organizations throughout the year to curate a collage of emerging technology innovations. Taken together, these varied vignettes outline the likely shape of work and life for the next 18 to 24 months, and serve as the signals that we synthesize into our annual Tech Trends report.

Source: Deloitte analysis.