

19 October 2020 — Gartner has revealed its annual list of the top strategic technology trends that organisations need to explore in the year ahead during Gartner IT Symposium/Xpo Americas, which is taking place virtually this week.

“The need for operational resiliency across enterprise functions has never been greater,” said Brian Burke, research vice president at Gartner. “CIOs are striving to adapt to changing conditions to compose the future business. This requires the organisational plasticity to form and reform dynamically. Gartner’s top strategic technology trends for 2021 enable that plasticity.

“As organisations journey from responding to the COVID-19 crisis to driving growth, they must focus on the three main areas that form the themes of this year’s trends: people centricity, location independence and resilient delivery. Taken together, these trends create a whole that is larger than its individual parts and focus on social and personal demand from anywhere to achieve optimal delivery.”

The top strategic technology trends for 2021 are:

Internet of Behaviours

The internet of behaviours (IoB) is emerging as many technologies capture and use the “digital dust” of peoples’ daily lives. The IoB combines existing technologies that focus on the individual directly – facial recognition, location tracking and big data for example – and connects the resulting data to associated behavioural events, such as cash purchases or device usage.

Organisations use this data to influence human behaviour. For example, to monitor compliance with health protocols during the ongoing pandemic, organisations might leverage IoB via computer vision to see whether employees are wearing masks or via thermal imaging to identify those with a fever.

Gartner predicts that by year-end 2025, over half of the world’s population will be subject to at least one IoB program, whether it be commercial or governmental. While the IoB is technically possible, there will be extensive ethical and societal debates about the different approaches employed to affect behaviour.

Total Experience

“Last year, Gartner introduced multiexperience as a top strategic technology trend and is taking it one step further this year with total experience (TX), a strategy that connects multiexperience with customer, employee and user experience disciplines,” said Mr. Burke. “Gartner expects organisations that provide a TX to outperform competitors across key satisfaction metrics over the next three years.”

Organisations need a TX strategy as interactions become more mobile, virtual and distributed, mainly due to COVID-19. TX strives to improve the experiences of multiple constituents to achieve a transformed business outcome. These intersected experiences are key moments for businesses recovering from the pandemic that are looking to achieve differentiation via capitalising on new experiential disruptors.

Privacy-Enhancing Computation

CIOs in every region face more privacy and noncompliance risks than ever before as global data protection legislation matures. Unlike common data-at-rest security controls, privacy-enhancing computation protects data in use while maintaining secrecy or privacy.

Gartner believes that by 2025, half of large organisations will implement privacy-enhancing computation for processing data in untrusted environments and multiparty data analytics use cases. Organisations should start identifying candidates for privacy-enhancing computation by assessing data processing activities that require transfers of personal data, data monetisation, fraud analytics and other use cases for highly sensitive data.

Hyperautomation

Business-driven hyperautomation is a disciplined approach that organisations use to rapidly identify, vet and automate as many approved business and IT processes as possible. Although hyperautomation has been trending at an unrelenting pace for the past few years, the pandemic has heightened demand with the sudden requirement for everything to be “digital first.” The backlog of requests from business stakeholders has prompted more than 70% of commercial organisations to undertake dozens of hyperautomation initiatives as a result.

“Hyperautomation is now inevitable and irreversible. Everything that can and should be automated will be automated,” said Mr. Burke.

Distributed Cloud

Distributed cloud is the distribution of public cloud services to different physical locations, while the operation, governance and evolution of the services remain the responsibility of the public cloud provider. It provides a nimble environment for organisational scenarios with low-latency, data cost-reduction needs and data residency requirements. It also addresses the need for customers to have cloud computing resources closer to the physical location where data and business activities happen.

By 2025, most cloud service platforms will provide at least some distributed cloud services that execute at the point of need. “Distributed cloud can replace private cloud and provides edge cloud and other new use cases for cloud computing. It represents the future of cloud computing,” said Mr.

Burke.

Anywhere Operations

Anywhere operations refers to an IT operating model designed to support customers everywhere, enable employees everywhere and manage the deployment of business services across distributed infrastructures. It is more than simply working from home or interacting with customers virtually – it also delivers unique value-add experiences across five core areas: collaboration and productivity, secure remote access, cloud and edge infrastructure, quantification of the digital experience and automation to support remote operations.

By the end of 2023, 40% of organisations will have applied anywhere operations to deliver optimised and blended virtual and physical customer and employee experiences.

Cybersecurity Mesh

The cybersecurity mesh enables anyone to access any digital asset securely, no matter where the asset or person is located. It decouples policy enforcement from policy decision making via a cloud delivery model and allows identity to become the security perimeter. By 2025, the cybersecurity mesh will support over half of digital access control requests.

“The COVID-19 pandemic has accelerated the multidecade process of turning the digital enterprise inside out,” said Mr. Burke. “We’ve passed a tipping point — most organisational cyberassets are now outside the traditional physical and logical security perimeters. As anywhere operations continues to evolve, the cybersecurity mesh will become the most practical approach to ensure secure access to, and use of, cloud-located applications and distributed data from uncontrolled devices.”

Intelligent Composable Business

“Static business processes that were built for efficiency were so brittle that they shattered under the shock of the pandemic,” said Mr. Burke. “As CIOs and IT leaders struggle to pick up the pieces, they’re beginning to understand the importance of business capabilities that adapt to the pace of business change.”

An intelligent composable business radically re-engineers decision-making by accessing better information and responding more nimbly to it. For example, machines will enhance decision making in the future, enabled by a rich fabric of data and insights. Intelligent composable business will pave the way for redesigned digital business moments, new business models, autonomous operations and new products, services and channels.

AI Engineering

Gartner research shows only 53% of projects make it from artificial intelligence (AI) prototypes to production. CIOs and IT leaders find it hard to scale AI projects because they lack the tools to create and manage a production-grade AI pipeline. The road to AI production means turning to AI engineering, a discipline focused on the governance and life cycle management of a wide range of operationalised AI and decision models, such as machine learning or knowledge graphs.

AI engineering stands on three core pillars — DataOps, ModelOps and DevOps. A robust AI engineering strategy will facilitate the performance, scalability, interpretability and reliability of AI models while delivering the full value of AI investments.

This year’s top strategic technology trends highlight those trends that will drive significant disruption and opportunity over the next five to 10 years.

Gartner clients can read more in the Gartner Special Report “Top Strategic Technology Trends for 2021” and associated Gartner e-book.

About Gartner IT Symposium/Xpo

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October 27-29| APAC| Virtual

November 9-12| EMEA| Virtual

November 17-19| Japan| Virtual

November 23-25| India| Virtual

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