TOP IT TRENDS FOR 2021

If one thing's for sure, it's that 2020 threw everyone for a loop, including those in the tech industry. When looking ahead to next year, this pandemic will continue to change how companies do business, demanding organizational plasticity and a people-first mentality for any IT decisions or trends.

During the virtual Gartner IT Symposium/Xpo Americas conference, analysts shared their findings on what they predict the top strategic technology trends will be for businesses in 2021.

"We don't prioritize these. So we don't say that one is more important than the other," said Brian Burke, research vice president at Gartner.

"Different organizations in different industries will prioritize the impact of the trends on them as being higher or lower, but when we look really across industries and across geographies and across these trends, we think that these are the most impactful trends that organizations generally are going to face over the next five years."

Here are the top IT trends Gartner predicts for 2021—as well as some of our own!

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Top Tech Trends in 2021

Internet of Behavior	Total Experience
Privacy-Enhancing Computation	Anywhere Operations
Cybersecurity Mesh	Intelligent Composable Business
AI Engineering	Hyperautomation
Edge Computing	5G

Let's take a look.

Trend 1: Internet of Behaviors

First coined in Gartner's tech predictions for 2020, the Internet of Behaviors (IoB) is an emerging trend that is proving to have some staying power. In short, IoB is the culmination of collecting data on how people behave with their technology. By leveraging applications and other modes of tech, such as facial recognition, big data, and location tracking, organizations are able to monitor behavioral events and manage this data to further influence behaviors.

Burke explained, "In practical terms, it's real things like health insurance companies that are monitoring your fitness bands and your food intake, and the number of times you go to the gym, and those things to adjust your premiums."

Gartner predicts that by the end of 2025, more than half of the world's population will be subject to at least one IoB program.

(Learn more about Goodhart's Law, which says that measuring something inherently changes user behavior.)

Trend 2: Total Experience

Last year, the concept of multiexperience was introduced. Multiexperience is multiple modes of access using different technologies. For 2021, Gartner predicts that the next evolution of this is total experience, tying together:

- Employee experience
- Customer experience
- User experience

Having a solid total experience strategy will be crucial for organizations in 2021, especially as business and customer interactions continue to be more virtual and distributed. With the combination of all of these disciplines and experiences, businesses will recognize a strong competitive advantage.

Trend 3: Privacy-Enhancing Computation

As legislation for global data protection matures, privacy will only become even more important. Enter privacy-enhancing computation. Privacy-enhancing computation will protect data in use while also maintaining its privacy and secrecy, exceptionally critical in:

- Multi-party data analytics use cases
- Untrusted environments

The actual number of organizations that will end up utilizing privacy-enhancing computation, however, is challenging to predict, according to Burke:

> *"That's a difficult one to gauge because what we've seen over the years of course, is that a lot of organizations have not focused as much attention as they probably require on privacy. But we think that what's happening now is that privacy legislation globally is really starting to take hold. So when privacy legislation is introduced, it takes a while for enforcement to catch up to legislation."*

Trend 4: Anywhere Operations

In large part thanks to current work conditions, a major strategic IT trend of 2021 will be anywhere operations. Anywhere operations refers to an IT operating model that:

- Enables employees to work from anywhere
- Supports the deployment of business services across a distributed infrastructure

This type of structure is also highly beneficial to customers, as their experience is increasingly mobile, as well.

Whether services need to be available on a desktop computer, tablet, mobile phone, or other device, Gartner predicts that, in the next few years, nearly half of all organizations will have applied this model in order to optimize both their customer and employee experiences.

Trend 5: Cybersecurity Mesh

Cybersecurity mesh essentially allows businesses to decouple policy decision making from policy

enforcement: a cybersecurity mesh puts security perimeters around individuals—instead of just around the organization.

Utilizing this mesh technology, organizations will be better able to protect data and information, including what's inside the walls of your facility as well as everything that's on the outside With more employees working remotely and the cloud becoming the norm, this type of mechanism will become imperative.

Trend 6: Intelligent Composable Business

Another interesting trend that will take shape in 2021 is intelligent composable business, which is the concept of leveraging packaged business capabilities and applications into interchangeable building blocks.

"Composable business is a natural acceleration of the digital business that you live every day. It allows us to deliver the resilience and agility that these interesting times demand," said Daryl Plummer, Distinguished VP Analyst. "We're talking about the intentional use of 'composability' in a business context—architecting your business for real-time adaptability and resilience in the face of uncertainty."

The idea of composable business operates on four basic principles:

- More speed through discovery
- Greater agility through modularity
- Better leadership through orchestration
- Resilience through autonomy

You can develop your building blocks in-house or look to outside vendors. Either way, these blocks will allow companies to:

- Piece together the packaged capabilities
- Access that data and rapidly reconfigure it

"The intelligent composable business is about bringing together things like better decision making, better access to data that changes the way that we do things, which is required for flexible applications, and which we can deliver when we have this composable approach to application delivery," Burke said.

Trend 7: AI Engineering

Even though artificial intelligence (AI) has been mainstream in the tech world for years, the concept of AI engineering is proving to be a revolutionary new trend. AI engineering provides organizations with better direction in their AI projects, as close to half of these never make it out of the prototype stage to production.

"AI engineering is about providing the sort of engineering discipline, a robust structure that will emphasize having AI projects that are delivered in a consistent way to ensure that they can scale, move into production, all of those kinds of things. So it's really bringing the engineering discipline to AI for end-user organizations. When you talk about large vendors, yes, they've been delivering successfully for the past quite a few years, but end-user organizations are needing to move out of the experimental stage with AI and move into a robust delivery model," Burke said.

Developing an explicit AI engineering process will be key to success, incorporating elements of [DevOps](#), ModelOps, and DataOps. This robust strategy will:

- Help projects reach development
- Improve the scalability, performance, and reliability of AI models in general
- Increase ROI

Trend 8: Hyperautomation

Hyperautomation is nothing new; in fact, it was one of the top [ITSM trends of 2020](#). What continues to change about hyperautomation, however, is its adoption and evolution.

"We've seen tremendous demand for automating repetitive manual processes and tasks; so [robotic process automation](#) was the star technology that companies were focused on to do that," Burke explained.

"That has been happening for a couple of years, but what we're seeing now is that it's moved from task-based automation, to process-based automation, so automating a number of tasks in a process, to functional automation across multiple processes and even moving towards automation at the business ecosystem level. So really, the breadth of automation has expanded as we go forward with hyperautomation."

[Hyperautomation](#) in 2021 will combine technologies like Robotic Process Automation (RPA), Artificial Intelligence (AI), and [Machine Learning](#) to process information in more impactful ways, improving quality and increasing overall productivity. Hyperautomation will also offer real-time, continuous intelligence with improved analytics to further enhance operations and processes.

Trend 9: Edge Computing

[Edge computing](#) is closely tied to IoT—it is the compute power that lets a variety of devices connect to bring users a mix of services and products that are more customizable and personal. Edge isn't limited to personal use, though. Companies can expect edge computing to improve:

- Predictive maintenance
- Fleet and product management
- Voice assistances

Coupled with this next trend, edge computing is likely just getting started.

(Learn more about the [Empowered Edge](#) and [Edge AI](#).)

Trend 10: 5G

5G has been long anticipated but 2021 is the first year the latest cellular technology will be widespread. Though there are [some myths about 5G making](#) the rounds—a bit of marketing overhype you could say—there are real benefits that 5G can offer companies, including:

- New jobs
- Mission-critical communications
- Massive IoT opportunities

Technology trends in 2021

"One of the things that's really an underlying premise of all of our research, including the top technology trends, is that we're not going to come out of the pandemic and go back to what we were," Burke concluded.

"We're going to come out of the pandemic, but we're going to move forward on a different trajectory. So really, trying to anticipate what that trajectory is going to be for your organization helps to guide you on how you're going to emerge on that different trajectory. These trends are focused on organizational agility because that's what's going to be successful as we step into a new future phase, hopefully sometime soon."

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