

# Gartner's top tech predictions for 2021





#### **TABLE OF CONTENTS**

- **03** Introduction
- **O4** Gartner's top 10 strategic predictions for "resetting everything" in 2021 and beyond
- **07** Top tech trends for 2021: Gartner predicts hyperautomation, Al and more will dominate business technology
- 4 key moves CIOs can use to accelerate digital business according to Gartner
- 16 IT spending forecast for 2021: Gartner predicts some growth, but market still below pre-pandemic levels



### Introduction

We're living in a world of uncertainty and Gartner's top strategic predictions for 2021 examine how technology will help with resetting, restarting, and responding to society and the enterprise.

The predictions, developed by Gartner's team of analysts, were revealed during the virtual Gartner IT Symposium/Xpo Americas conference on October 19-October 22.

Also revealed at the conference were the top strategic technology trends that businesses should plan for in 2021 and five areas of digital commerce that are being changed due to COVID-19.

Learn about these predictions and more in this free ebook from TechRepublic.



# GARTNER'S TOP 10 STRATEGIC PREDICTIONS FOR "RESETTING EVERYTHING" IN 2021 AND BEYOND

How tech will lead the reset of everything next year and beyond, and the three key components of these technologies.

#### BY TEENA MADDOX

We're living in a world of uncertainty and Gartner's top strategic predictions for 2021 examine how technology will help with resetting, restarting, and responding to society and the enterprise.

"Technologies are being stressed to their limits, and conventional computing is hitting a wall," said Daryl Plummer, distinguished research vice president and Gartner Fellow, in a press release. "The world is moving faster than ever before, and it's essential that technology and processes are able to keep up to support digital innovation needs.

Starting now, CIOs can expect a decade of radical innovation led by nontraditional approaches to technology."

The top technologies for the future will promote greater innovation and efficiency in the enterprise; they will be more effective than the technologies they are replacing; and they will have a transformational impact on society, Plummer said.

The predictions, developed by Gartner's team of analysts, were revealed Wednesday during the virtual Gartner IT Symposium/Xpo Americas conference.



### By 2024, 25% of traditional

large enterprise CIOs will be held accountable for digital business operational results, effectively becoming "COO by proxy."

The role of the chief operating officer (COO) is increasing in importance among born-digital companies. It's essential to have a COO in place in order to achieve digital success.



### By 2025, 75% of conversations at work will be recorded and analyzed, enabling the discovery of added organizational value or risk.

Traditional conversations in real time are lessening, particularly with the increase in remote work during the pandemic, and cloud meeting solutions, messaging platforms and virtual assistants are the new norm for workplace conversations. The analytics of these conversations which can be recorded and replayed will be used to help companies comply with existing laws and regulations and predict future behavior and performance. Digital surveil-lance technology use will come with ethical considerations and privacy rights.

### By 2025, traditional computing technologies will hit a digital wall forcing the shift to new paradigms such as neuromorphic computing.

Current computing techniques will not be enough to allow CIOs and IT executives to deliver critical digital initiatives by 2025. Artificial intelligence (AI), computer vision and speech recognition will be used everywhere, and general-purpose processors will be unsuitable.

"A variety of advanced computing architectures will emerge over the next decade," Plummer said. "In the short term, such technologies could include extreme parallelism, DNN-on-a chip or neuromorphic computing. In the long term, technologies such as printed electronics, DNA storage, and chemical computing will create a wider range of innovation opportunities."

### By 2024, 30% of digital businesses will mandate DNA storage trials, addressing the exponential growth of data poised to overwhelm existing storage technology.

More advanced systems will be necessary as the computing needs of humanity evolves. These systems will be capable of radical adaptation and resilience in complex and hostile environments. DNA is inherently resilient and capable of error checking and self-repair, so it is an ideal data storage and computing platform for a range of applications.

### By 2025, 40% of physical experience-based businesses will improve financial results and outperform competitors by extending into paid virtual experiences.

The Internet of Things (IoT), digital twins and virtual reality (VR) and augmented reality (AR) are making immersive experiences more appealing and affordable to a wider range of consumers. This trend has accelerated during the pandemic as people have needed more remote and virtual engagement as a result of the social effects of the pandemic's isolation. Physical experience companies need to begin building and acquiring skills in disciplines related to creating, delivering and supporting immersive, virtual experiences.

### By 2025, customers will be the first humans to touch more than 20% of all products and produce in the world.

Automation has been accelerated by the pandemic, so customers will become the first humans to touch



manufactured products and agricultural produce.

"Automation is a new source of competitive advantage and disruption," Plummer said. "For example, an intelligent machine may not squish the grapes in the same way a human packing them might. CIOs should see hyperautomation as a principle, not a project, as they move forward in updating their processes for the future."

### By 2025, customers will pay a freelance customer service expert to resolve 75% of their customer service issues.

Opting for going outside of official company channels will be more effective and create a better customer experience, so customers will opt for freelance customer service professionals with expert knowledge of the technology for which they are seeking assistance.

### By 2024, 30% of major organizations will use a new "voice of society" metric to act on societal issues and assess the impacts to their business performance.

The shared perspective of people in a community is the "voice of society" and drives the desire to represent and shift ethical values toward a commonly acceptable outcome. Opinion-based metrics such as the voice of society will be used as businesses expand to use these measurement tactics. They will be equal to more tangible metrics such as click-through rates.

### By 2023, large organizations will increase employee retention by more than 20% through repurposing office space as onsite childcare and education facilities.

In the wake of COVID-19, the global worker demand for childcare assistance will become even more challenging with Gartner predicting that one-in-five childcare centers will have permanently closed by early 2021. Large companies will begin to repurpose empty facility spaces for childcare or educational services to meet this increased demand and increase employee satisfaction, productivity and retention, particularly among women in the workforce.

### By 2024 content moderation services for user generated content will be surveyed as a top CEO priority in 30% of large organizations.

Content volatility on social media has increased with the social unrest of the past year. This creates brand-safety concerns for brand marketers and advertisers. Enterprises will invest in content moderation, enforcement and reporting services to understand the providence of the content on their sites.

Plummer said: "In many cases, brands are going dark altogether on user-generated content platforms until appropriate policing measures are in place. Yet site and app publishers must walk the line between enforcing policies to provide a safe environment and being accused of censorship. Therefore, brand advertisers will become responsible for neutralizing polarizing content, and industry standards for content moderation will emerge."



# TOP TOP TECH TRENDS FOR 2021: GARTNER PREDICTS HYPERAUTOMATION, AI AND MORE WILL DOMINATE BUSINESS TECHNOLOGY

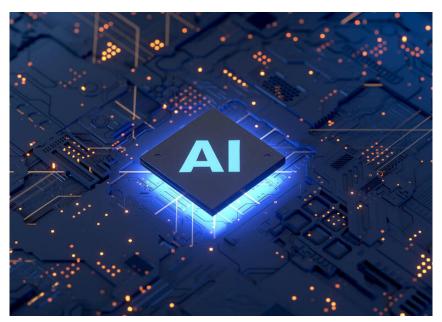
Operational resiliency is key as the COVID-19 pandemic continues to change how companies will do business next year.

#### BY TEENA MADDOX

There are nine top strategic technology trends that businesses should plan for in 2021 as the pandemic continues, according to Gartner's analysts. Their findings were presented on Monday at the virtual Gartner IT Symposium/Xpo Americas conference, which runs through Thursday.

Organizational plasticity is key to these trends. "When we talk about the strategic technology trends, we actually have them grouped into three different themes, which is people centricity, location independence, and resilient delivery," said Brian Burke, research vice president at Gartner. "What we're talking about with the trends is how do you leverage technology to gain the organizational plasticity that you need to form and reform into whatever's going to be required as we emerge from this pandemic?"

Here are the top nine trends, in no particular order. And they will have an impact for more than the next year. Companies can look at these for insight through 2025, per Gartner.



Al engineering is one of the key strategic trends Gartner predicts for 2021.

IMAGE: ISTOCK

"We don't prioritize these. So we don't say that one is more important than the other," Burke explained. "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."



# TOP STRATEGIC TECHNOLOGY TREND NO. 1: INTERNET OF BEHAVIORS

The Internet of Behaviors (IoB) is an emerging trend. The term "Internet of Behaviors" was first coined in Gartner's tech predictions for 2020. This is how organizations, whether government or private sector, are leveraging technology to monitor behavioral events and manage the data to upgrade or downgrade the experience to influence those behaviors. This is what Gartner calls the "digital dust" of peoples' daily lives. It includes facial recognition, location tracking, and big data.

Burke said, "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. Burke said: "That might be a little bit of an understatement because when you think about the social credit system in China, you're already up to double digit percentages of people that are being monitored just with one implementation. There's all kinds of these things that are popping up here and there and everywhere."

# TOP STRATEGIC TECHNOLOGY TREND NO. 2: CYBERSECURITY MESH

The cybersecurity mesh technology trend enables people to access any digital asset security, no matter where the asset is, or where the person is located. Burke said: "The cybersecurity mesh is really how we've really reached a tipping point or inflection point with security, and that's causing us to really decouple policy enforcement from policy decision-making. Those were coupled in the past. What that allows us to do is it allows us to put the security perimeter around the individual as opposed to around the organization."

He added "The way that security professionals have traditionally thought about security is that inside of the organization is secure. Then we make sure that everything outside of your organization is secured through that security mechanism inside the organization, inside the firewall, so to speak."

With more digital assets outside of the firewall, particularly with cloud and more remote employees, the security perimeter needs to be around an individual and enforcement is handled through a cloud access security broker, so that policy enforcement is done at the asset itself, Burke explained.

Gartner predicts that by 2025, the cybersecurity mesh will support more than half of digital access control requests.



### TOP STRATEGIC TECHNOLOGY TREND NO. 3: TOTAL

Another trend is total experience (TX). Last year, Gartner introduced multiexperience and this is a step beyond that. Multiexperience is multiple modes of access using different technologies, and TX ties together customer experience, employee experience, and user experience with the multiexperience environment, Burke said.

Organizations need a TX strategy as interactions become more mobile, virtual, and distributed, particularly as a result of the COVID-19 pandemic.

"The challenge is that in most organizations, those different disciplines are siloed. So what we're saying the basis of that prediction is that if you can bring together customer experience, employee experience, multi experience and user experience, the common notarial effect, common notarial innovation as a combination of strategies is harder to replicate than in a single strategy, according to Michael Porter. And we believe that, too. So you can bring those things together. That's where you'll gain the competitive advantage that will be realized through those experience metrics," Burke said.

Gartner predicts that organizations providing a TX will outperform competitors across key satisfaction metrics over the next three years.

# TOP STRATEGIC TECHNOLOGY TREND NO. 4: INTELLIGENT COMPOSABLE BUSINESS

This trend, intelligent composable business, is about leveraging from an application perspective and leveraging packaged business capabilities, which can be thought of as chunks of functionality accessible through APIs, Burke said.

"They can be developed by vendors or provided by vendors or developed in-house. That kind of framework, that allows you to cobble together those package business capabilities, and then access data through a data fabric to provide it's configuration and rapid reconfiguration of business services that can be highly granular even personal acts."

"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.

# TOP STRATEGIC TECHNOLOGY TREND NO. 5: HYPERAUTOMATION

Hyperautomation is another key strategic trend for 2021. It was a top strategic trend last year as well, and it has been evolving.



"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. 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," Burke explained.

## TOP STRATEGIC TECHNOLOGY TREND NO. 6: ANYWHERE OPERATIONS

Another strategic trend, anywhere operations, refers to an IT operating model that supports customers everywhere and enables employees everywhere and manages the deployment of business services across distributed infrastructure.

Burke said that anywhere operations were always there but the pandemic made urgent.

"There always had been a movement towards location independent and providing services at the point where they're required. But back at least in America and Europe in March, suddenly all of these people working from home really raised the awareness of it, which was we have an immediate need to be able to support remote employees and most organizations were able to resolve that really quickly. But then we also are dealing with our customers, and our customers are remote and our products need to become a deliverable remotely as well."

With employees working from home, and salespeople working from home, talking to purchasing agents and buyers working from home, it ramped up the problem and the need to deliver services to people wherever they are and wherever they are required, Burke said.

Gartner predicts that by the end of 2023, 40% of organizations will have applied anywhere operations to deliver optimized and blended virtual and physical customer and employee experiences.

### TOP STRATEGIC TECHNOLOGY TREND NO. 7: AI ENGINEERING

This trend involves providing engineering discipline to an organization because only 53% of projects make it from artificial intelligence (AI) prototypes to production, according to Gartner research.

"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. So 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 and that's really what AI engineering's about," Burke said.



# TOP STRATEGIC TECHNOLOGY TREND NO. 8: DISTRIBUTED CLOUD

Distributed cloud is another technology trend and it involves the distribution of public cloud services to different physical locations while the operation, governance, and evolution of the services are the responsibility of the public cloud provider.

Gartner predicts that by 2025, most cloud service platforms will provide at least some distributed cloud services that begin at the point of need.

### TOP TOP STRATEGIC TECHNOLOGY TREND NO. 9: PRIVACY-ENHANCING COMPUTATION

Privacy is more important than ever as global data protection legislation matures, and Gartner predicts that by 2025, half of large organizations will implement privacy-enhancing computation for processing data in untrusted environments and multiparty data analytics use cases. Privacy-enhancing computation protects data in use while maintaining secrecy or privacy.

Burke said the actual number of companies that will use privacy-enhancing computation is tough to assess. "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."

He added: "Privacy is going to be an issue for organizations going forward. The importance is going to increase, but also the opportunities are going to be increased to be able to use trusted third parties for analytics and share data across priorities without exposing the private details in that data and that kind of thing."

### HOW TO PLAN FOR A FUTURE PHASE

"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 said. "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 from the pandemic on that different trajectory. So 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."



# 4 KEY MOVES CIOS CAN USE TO ACCELERATE DIGITAL BUSINESS ACCORDING TO GARTNER

Gartner outlines how CIOs can move their companies ahead next year and gain long-term agility.

#### BY TEENA MADDOX

The race to digital is on, and the companies that win will be those that can continue the momentum built up this year during the COVID-19 pandemic, according to Gartner's CIO Agenda survey for 2021, which was announced during the Gartner IT Symposium/Xpo Americas conference, which runs through Thursday.

"The most important job you have as CIO, as an IT leader, is figuring out how to accelerate your digitization," said Andy Rowsell-Jones, distinguished research vice president at Gartner.

"Coming into 2021, I think it's more of a straight road now. The black top is a bit more solid under our feet. There's still a few nasty twists and turns to be had, but I don't think from what we're seeing 2021 is going to be as interesting as 2020 was. It's going to be tough. And the economic fallout is going to continue to rain down on us. But I think it's becoming a little more predictable. And



**IMAGE: ISTOCK** 

I think we are in a better position coming into 2021 than in 2020 because at least we know what to do, which is really the acceleration of digital and digital business," he said.

Gartner has identified four drivers that will help CIOs seize the moment and accelerate digital business and achieve long-term agility.

### WIN DIFFERENTLY

In the survey, 76% of respondents said that demand for new digital products and services increased in 2020, and 83% said it will increase in 2021.



"Win differently is really deciding that your consumer group, and your products and services really have gone digital for real, at scale. And therefore, how do you make sure that you go with them? Now this isn't going to save everybody. If you're in the cruise liner business, or if you're in hotel businesses in a country that's still locked down, or if you're in the airline business in certain parts of the world, you're cooked. Digital isn't going to save you. What's going to save you is conserving cash, conserving resources," Rowsell-Jones said.

In the survey, there were two areas of customer digitalization where top performers are significantly more aggressive than typical performers: The use of digital channels to reach customers and achieve citizen engagement, and the rate of introduction of new digital products and services. Nine out of ten of the top performers who were surveyed are pursuing digital channels, and almost three-quarters of those are introducing digital products faster.

Businesses that are on an even keel or picking up need to go digital if they haven't already. "There's money available for this. Coming into this part of the cycle, the CIO's themselves have an improved standing with the senior leadership team. Because of this work from home thing, because we had to move thousands of employees and get them from working from home at very short notice, CIO's themselves and the IT leaders have improved their standing, their reputations with the senior leadership of their enterprises. So you've got this confluence of digitizing as best we can for years, and now you're really opening the taps and letting this go and making the money available. In addition, you now trust us more," Rowsell-Jones said, calling it a "once-in-a-generation opportunity" for CIOs.

"COVID-19 is so horrible and so transformational that if we can't now push the digital agenda, frankly, you don't deserve to keep your job because the doors are open," Rowsell-Jones added.

### UNLEASH FORCE MULTIPLIERS

Survey respondents characterized changes related to enterprise IT leadership trends due to the pandemic. Approximately 70% of CIOs increased their knowledge of specific business processes to advise the business, and the same percentage did more to measure and articulate the value of IT.

"We talked about unleashing force multipliers. A force multiplier is something that you're kind of good at already, or something that's a latent ability," Rowsell-Jones said.

Companies that are risk averse have had to set aside that risk aversion and embrace change. COVID-19 swept away risk aversion in some organizations.

"We are all now basically startup businesses trying to figure out how the heck we operate in this new world. So again, this is all part of taking advantage of this once in a lifetime change. Digital has been going for a while, but it's now going faster. If senior leadership have kind of been paying lip service to it, they now get it. There is money



available. We have seen that even those cultural barriers that were persistent resistors of digitalization are beginning to crumble," Rowsell-Jones said.

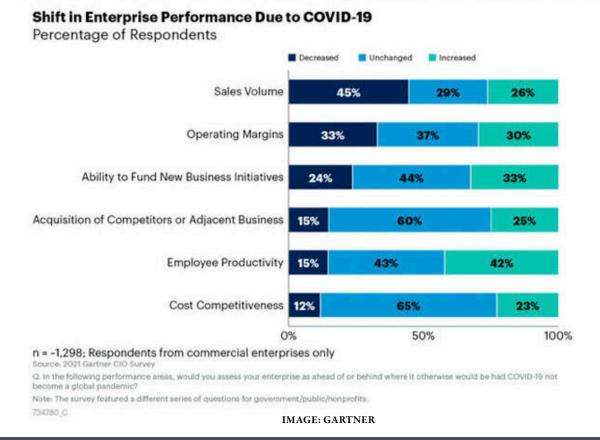
### **BANISH DRAGS**

"Banishing drags is the other thing which is really about the impediments to transformation, the impediments to the change," Rowsell-Jones said. "One of the interesting things that came out from our survey is supply chain issues. If you've outsourced your business processes to a location at lockdown, suddenly your processes break. If you already rely on external providers or certain other services who are now suddenly unable to provide those services, you stop working. Even something as simple as, 'How do I buy 10,000 or 1,000 laptops or 100 laptops?' Well, you can't because there aren't any."

In the survey, most respondents reported they were behind in sales volumes during the pandemic, but only 29% of top performers reported a decrease versus 45% of typicals and 62% of trailings.

"A lot of us have optimized our supply chains for efficiency. Now we're beginning to have to look at those supply chains for resilience. So we're now asking ourselves, is this the most resilient or robust form of supply?" Rowell-Jones said.

Figure 1: Shift in Enterprise Performance (% of Respondents)





### REDIRECT RESOURCES

The fourth driver is redirecting resources. Survey respondents projected a 2% IT budget increase for 2021, on average—slightly down from the 2020 survey (2.8%).

"The budget numbers for this year are about 2% growth, which is not brilliant. It's a bit lower in North America, but globally it's about 2%. This has been a lot better than we expected, but it's nowhere near enough to fund an acceleration of digital business. What it does mean is one of the responsibilities for anybody who's involved in IT leadership is to take a really hard look at the investments for in flight," Rowsell-Jones said. "So if you've got a business case that's older than January 2020, you've got some in-flight projects from last year, really look at them hard and say, 'Do I really need to spend the money, time, effort, energy, and resources on these things which were a brilliant idea back in January 2020, but it's now October 2020.' So maybe the world has changed sufficiently that we will have to push all these things to the right and spend our time doing things that are of greater immediate and medium term value."

### THE ESSENTIALS TO ACCELERATE DIGITAL BUSINESS

"When you're thinking about what it takes to accelerate digital business, you need money, resources, time, energy and focus. COVID-19 has accelerated consumer shift. The digital has educated senior leaders, boards of directors, and chief executives of digital's importance. They've been playing lip service for years, but I think they really mean it this time. It has even changed some of those cultural barriers. It was the force, not multipliers, but force attenuators. We've run into this squidgy sand bag of culture. Well, the squidgy sand bag of culture now looks like it's firmed up. It's been in the gym, and it's trimmed itself down, and it's willing to take some change," Rowsell-Jones said.

### SURVEY METHODOLOGY

The 2021 Gartner CIO Agenda survey gathered data from 1,877 CIO respondents in 74 countries and all major industries, representing approximately \$4.7 trillion in revenue/public-sector budgets and \$85 billion in IT spending.

The survey separated CIO respondents' enterprises into three groups: Top, typical and trailing. Top performers rated themselves highly for digital maturity, business performance relative to competitors, and how advanced their post-pandemic response is. The trailing group rated themselves poorly on digital maturity and relative business performance, and the typical group represented the rest of— and majority of—respondents.



# IT SPENDING FORECAST FOR 2021: GARTNER PREDICTS SOME GROWTH, BUT MARKET STILL BELOW PRE-PANDEMIC LEVELS

IT spending is expected to grow 4% in 2021, which still leaves the market below numbers reached before COVID-19 impacted the enterprise.

#### BY TEENA MADDOX

IT spending will increase next year, but it will not reach pre-pandemic levels. The IT market declines of 2020 will take another two or three years to recoup, according to the most recent Gartner forecast.

Worldwide IT spending is forecast to hit \$3.754 trillion in 2021, a 4% increase over 2020, a year in which spending is expected to reach \$3.6 trillion. This is a 5.4% decline from 2019, when spending hit \$3.816 trillion. The forecast was released Tuesday during the virtual Gartner IT Symposium/Xpo Americas conference.

In 2020, each IT spending segment is expected to decline. This includes data center systems, enterprise software, devices, IT services and communication services. Devices will take the biggest hit in 2020, down 13.4%. But in 2021, enterprise



Digital transformation is now essential for business survival

IMAGE: ISTOCK

software will have the strongest rebound, with 7.2% growth. Coming in second will be data center systems, with 5.2% growth. The weakest growth area will be communications services with 2.8% growth in 2021.

John-David Lovelock, distinguished research vice president at Gartner, said in a press release, "The spending slowdown that took place from roughly April through August of this year, coupled with cloud service providers' 'try before you buy' programs, is shifting cloud revenue out of 2020. Cloud had a proof point this year—it worked throughout the pandemic, it scaled up and it scaled down. This proof point will allow for accelerated penetration of cloud through 2022."

"With revenue uncertainty promoting cash from being king to being emperor, CIOs are now prioritizing IT



projects where the time to value is lowest," he said in the release.

Table 1. Worldwide IT Spending Forecast (Millions of U.S. Dollars)

	2019 Spending	2019 Growth (%)	2020 Spending	2020 Growth (%)	2021 Spending	2021 Growth (%)
Data Center Systems	214,911	1.0	208,292	-3.1	219,086	5.2
Enterprise Software	476,686	11.7	459,297	-3.6	492,440	7.2
Devices	711,525	-0.3	616,284	-13.4	640,726	4.0
IT Services	1,040,263	4.8	992,093	-4.6	1,032,912	4.1
Communications Services	1,372,938	-0.6	1,332,795	-2.9	1,369,652	2.8
Overall IT	3,816,322	2.4	3,608,761	-5.4	3,754,816	4.0

Source: Gartner (October 2020)

IMAGE: GARTNER

In an interview with TechRepublic, Lovelock explained further: "Back in March when the lockdown happened, the only thing that was going to cause a company to go out of business in 2020 was running out of cash, becoming unprofitable. So everyone started to hoard cash. We saw billions pulled out of lines of credit early."

"The same is true in the lease car world where companies are holding onto trucks and cars and facilities equipment longer than they would have to hold onto the cash. But the IT version of that is hard assets. So all of those were frozen. Of course, we also had to implement remote working in this cash freeze time. So the referral away from desktop into ultra premium mobile things like Microsoft Surface, those actually grew this year, overall, in the remote world," Lovelock said. "We are now going to buy the bigger, faster technology."

Companies have more to do, and less to do it with. Lovelock said this is similar to what happened in 2009 and 2010 when companies didn't have a lot of cash and the world was facing a recession. Some companies will be going to the cloud since there is less initial cash outlay.

There will be less growth in devices and communications services, since CIOs want to accelerate their digital business. Infrastructure-as-a-Service (IaaS) and customer relationship management software will help them accomplish this better than mobile phone or printer refreshes, Lovelock said.

#### DIGITAL TRANSFORMATION NOW ESSENTIAL FOR SURVIVAL

Digital transformation will not need ROI justification from CIOs as it did pre-pandemic, since it will be essential for business survival, he said.

"In the 25 years that Gartner has been forecasting IT spending, never has there been a market with this much volatility," Lovelock said.

#### **CREDITS**

Editor In Chief
Bill Detwiler

Editor In Chief, UK Steve Ranger

Associate Managing Editors Teena Maddox Mary Weilage

> Editor, Australia Chris Duckett

> Senior Writer Veronica Combs

Senior Writer, UK Owen Hughes

> Editor Melanie Wolkoff Wachsman

Staff Writer R. Dallon Adams

Multimedia Producer

Derek Poore

Staff Reporter Karen Roby



#### ABOUT TECHREPUBLIC

TechRepublic is a digital publication and online community that empowers the people of business and technology. It provides analysis, tips, best practices, and case studies aimed at helping leaders make better decisions about technology.

#### **DISCLAIMER**

The information contained herein has been obtained from sources believed to be reliable. CBS Interactive Inc. disclaims all warranties as to the accuracy, completeness, or adequacy of such information. CBS Interactive Inc. shall have no liability for errors, omissions, or inadequacies in the information contained herein or for the interpretations thereof. The reader assumes sole responsibility for the selection of these materials to achieve its intended results. The opinions expressed herein are subject to change without notice.

Cover Image: iStockphoto/ structuresxx

Copyright ©2020 by CBS Interactive Inc. All rights reserved. TechRepublic and its logo are trademarks of CBS Interactive Inc. ZDNet and its logo are trademarks of CBS Interactive Inc. All other product names or services identified throughout this article are trademarks or registered trademarks of their respective companies.