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How the Cloud is Taking IT to the Next Level

DELL Technologies

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Taking IT to the next level

How the right cloud strategy saves money, improves agility, and inspires innovation.

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When it comes down to it, cloud services exist to make things easier. If you need more capacity at certain times, it's easy to dial up capacity — and dial it back down when your need decreases. The cloud also helps speed up the launch of new applications and services.

Overall, cloud computing has lifted IT's historical constraints by delivering new levels of speed and agility, as well as increased innovation.

This explains why 95% of enterprises already use the cloud in some form and 50% of all corporate data sits in a cloud. Seventy-four percent of executives take part in cloud-related decisions, and 56% see it as a platform for strategy and innovation, according to a report from PwC.

Based on these numbers, the cloud is poised to reshape the future of IT, opening up opportunities for innovative leaders to focus on strategic business outcomes.

"The cloud is the future of IT," said Adam Glick, senior director for APEX, Dell Technologies' portfolio of cloud services. With a cloud, "you can stop worrying about keeping the system running and focus more on building new capabilities. This, in turn, empowers users and changes the role of IT teams from gatekeepers to business enablers."

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The cloud is the future of IT.

Adam Glick, senior director for APEX, Dell Technologies' portfolio of cloud services

"If done right, it should bring your systems, users, and technology together," he added.

To be successful, though, innovative business leaders need strategies to decide which data and workloads to assign to the cloud.

It all starts with assessing technical needs. Is the need best addressed by moving the workload to the cloud? And if so, does the workload belong in a private or public cloud?

Making these decisions boils down to people, process, and technology, Glick said. That means assessing a company's technical capabilities and expertise to determine how to best handle the workload. "Don't overengineer a problem," he said. "Know what you need and then look at things that help solve that need."



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How to grow business with a cloud

One of the cloud's biggest benefits is speed. "Think of it as a turbo button," Glick said. "Cloud technology is a turbo button for everything that you want to do. It speeds things up."

And that's very important in the dynamic business environment that we have today."

During the pandemic, the cloud allowed organizations to make quick adjustments such as setting up remote environments and connecting employees through videoconferencing. That's compared to the more than nine months it would traditionally take to set up new IT infrastructure.

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Cloud technology is a turbo button for everything that you want to do. It speeds things up.

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The use of cloud environments also boosts efficiency by enabling IT teams to focus on strategic tasks and implementations as opposed to spending 40% or more of their time on "keeping the lights on," Glick said. This enables real business growth: scaling up and expanding to new facilities and even countries.

And of course, there's the financial aspect. Cloud brings cost effectiveness to IT spending, Glick said. Because you can do more projects faster, the cloud allows IT teams to better evaluate what is working so they can "double down on ones that are working and avoid overinvesting in others that aren't moving as fast," he added.

How the cloud can inspire innovation

The cloud experience can deliver the resilience, agility, and adaptiveness required to compete in today's dynamic markets — if approached correctly. "At the end of the day, all of this should mean more innovation coming from IT," Glick said.

This innovation, of course, is set to benefit customers and change their experience for the better. Cloud solutions enable businesses to build innovative services and products using the latest technologies. What's more, "green" clouds support forward-looking leaders to embrace sustainability and strive for a brighter future for all.

That all hinges on whether IT teams can avoid the complexity that a hybrid, multicloud infrastructure can create. The trick is to keep it simple by building a consistent layer across the environment for users. This way, rather than getting bogged down by the nuances and complexities of using multiple clouds, users can focus on deriving benefits from the cloud to better do their jobs.



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Choosing the right cloud experience

Public clouds such as Amazon Web Services, Microsoft Azure, and Google Cloud are accessible through the internet and shared by multiple customers in a multitenancy environment. A private cloud, on the other hand, is built for a company's exclusive use and managed either by an off-site hosting service or within the company's facilities. Most organizations leverage multiple clouds in a hybrid approach that combines public and private cloud services.

Public clouds, Glick said, are suited to "incredibly spiky workloads." For example, video-game launches can be very difficult to predict from a traffic standpoint. Having to plan for great success, while not spending your way into financial challenges, can be very difficult in an industry that has seen traffic spikes up to 50 times what is expected, requiring extra resources to prevent a crash. Public clouds offer the flexibility and elasticity to dial up use to handle massive traffic spikes and dial down capacity when traffic wanes.

If a company requires high levels of availability — say, 99.9999% uptime (less than three seconds of downtime a month) — a private cloud is the better option, Glick said. Availability is key to keeping a business resilient and agile.

Private clouds are also better suited to data-intensive environments involving machine learning, artificial intelligence, or high-performance computing. The last is used for processing massive data volumes in areas such as medical research and special effects for movies.

"Private cloud offers performance you don't get in public cloud," Glick said, adding that APEX Data Storage Services I/O and throughput for storage is up to 19 times higher than a public cloud. "If you need something that's really high-performance, you are going to get better price and higher performance with a private cloud than you would with a public cloud."

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Public vs Private Cloud



Public Cloud



Private Cloud

- Scalability
- Developer-focused
- Internet accessible

- Security
- Performance
- Familiarity

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Whether you opt for a public or private cloud, plan your cloud strategically to realize benefits such as agility, speed, and innovation. It's important to put the time into proper planning to ensure workloads are allocated to the right cloud so you can maximize your investment and continue to innovate well into the future.

[Find out more about how the cloud can help your business.](#)

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4 ways IT teams can make remote work successful and safe

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Over the past two years, IT teams faced an unprecedented level of disruption.

First, the onset of COVID-19 meant that many workers rapidly transitioned to remote work, and as recently as September 2021, 45% of all full-time employees were working from home, according to a Gallup poll. One of the biggest challenges for IT was whether their infrastructure could handle the rapid increase in remote workers. While most companies already had some tools, such as VPN software, in most cases only a handful of people had been using those them.

"A lot can change when all of a sudden, a large percentage of your workforce is now remote," said Adam Glick, senior director for APEX, Dell Technologies' portfolio of cloud services, adding that it raises a lot of questions.

"Do you have the bandwidth to be able to handle that? Do you have the server capacity to be able to monitor all those connections? Do you have the network capacity to be able to handle the increase in traffic? Do you have the VPN capacity, and the VPN licenses, to enable all of these new remote workers?"

Security was another big issue. So many remote workers made it harder for organizations to protect their critical data and comply with relevant regulations. In fact, the FBI reported that cybercrimes skyrocketed by 300% in the first month of the pandemic alone.

IT teams that have embraced agile ways of working have weathered these challenges the most successfully. "Speed and agility just become so important in this world when you have so many major changes happening," Glick said. He added that Dell Technologies has seen companies flourish when they adopt the following best practices.

1. Use cloud computing to improve scalability

One of the inherent benefits of the cloud is that it enables organizations to rapidly scale up or down as needed. Organizations that were further along in their migration to the cloud when the pandemic began have generally fared better than those with more traditional environments.

Glick said that the cloud makes organizations much more scalable and flexible — which is very important when workers are joining and quitting more frequently than in the past.

2. Deploy virtual desktop infrastructure (VDI)

One particular type of cloud computing that can be very useful is VDI. It solves many problems related to security, compliance, and logistics by giving workers access to the tools and data they need while lending IT more control over those applications and users — regardless of where they are located.

"IT has full control over VDI-based machines, much more so than if you are just managing laptops for your users and even more so than if you had desktops in your own buildings," Glick said.

3. Choose infrastructure and tools that leverage current skills

As organizations move to the cloud, they need to make thoughtful choices about automation and architecture that allows them to use their existing skills.

Glick advised that organizations look for solutions that help them "extend that skillset into a hybrid and multi-cloud world without having to relearn everything they already know how to do and without having to buy new tools, design new systems, and re-architect what is already working."

4. View remote work as an opportunity

Finally, Glick said that IT teams should remember that "from a business standpoint, remote work is an incredible opportunity."

He added, "It has unlocked the ability to give much more flexibility and freedom to employees, and for employers to find a much broader base of talent to be able to bring into the organizations to help make things happen."

About 37% of workers in the Gallup poll said they want to continue working remotely exclusively and 91% would like the option of working from home to be permanent. Organizations that are better able to support remote workers will be able to attract and retain more of their valuable talent. And in today's constantly changing environment, that can be tremendously beneficial to their business.

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5 ways cloud technology can fast-track international expansion

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International expansion opens new markets and growth opportunities for companies. However, setting up shop in a different country requires an understanding of market dynamics, local culture, employment regulations, and international legal requirements. While a well-thought-out expansion strategy is always required, going international can be made easier by leveraging cloud benefits such as speed, reach, agility, and scalability.

Here are five ways a cloud can fast-track your international plans.

1. Jumpstarts the process

Setting up operations in a new country — whether over the border or on a different continent — typically requires numerous steps before you can even start doing business, such as finding real estate, setting up the facility, and hiring staff. Another step is setting up a data center with the requisite hardware, software, and networking infrastructure. This alone can take several years.

But by tapping a cloud infrastructure, you can bypass this step and squeeze a three-to-five year plan into six months, assuming all other pieces are in place, said Adam Glick, senior director of portfolio marketing for APEX Cloud Services at Dell Technologies. “If you just cut that part off your timeline, think about how much faster you could go.”

2. Supports fast expansion

If your initial international foray is a success, you may want to build on that momentum for further expansion. Let’s say your company runs quick-serve restaurants. You open your first one in a city in Asia or Europe and it takes off quicker than you expected. It’s a sign the market is ready for your services and a second location is likely to succeed.

The cloud gives you the ability to scale much faster by enabling you to replicate the environment from the first location at a new site. So instead of planning out years in advance, from an IT standpoint, you have the business and operational flexibility to get things done faster, and to adjust with the needs of the business rather than doing a whole lot of planning up front, Glick said.

3. Transplants business applications

Cloud services can be orchestrated to automatically deploy and update business applications so you don’t have to undergo complex, time-consuming implementations at every site. This simplifies and accelerates international expansion. If your new site is in a jurisdiction with different laws and requirements, the cloud also helps by simplifying the adjustment process needed for compliance.

Consider data sovereignty. Some countries and regions don’t allow private data to be transmitted outside their borders, so you need a plan to achieve compliance.

With Dell Technologies’ APEX Cloud Services, for example, companies can meet compliance by placing their data where it needs to be. With public clouds, the data resides where the cloud is located. A private cloud gives companies control over data and its location while enjoying the speed and agility they need.

4. Helps to pivot quickly

Not everything happens according to plan, and that can certainly be the case with international expansion. Businesses today must be nimble and adaptable to survive and thrive as market conditions change.

As you move forward with international expansion, chances are you will need to modify your plan along the way.

Using the restaurant example, perhaps your original plan didn’t account for the volume of takeout orders you are getting. That may require boosting bandwidth for online and mobile ordering systems. Or maybe you need to equip more employees with handheld devices to run a curbside pickup business. The elasticity and flexibility of the cloud allow you to make quick changes without protracted planning or large capital investments.

5. Allows to budget accordingly

No matter how modest or ambitious, an international expansion plan requires capital to invest in real estate, systems, equipment, and people. When it comes to IT, however, the need for a large upfront investment can be reduced. By leveraging cloud services, you can finance much of your IT investment on a subscription basis.

“What if you didn’t have to spend \$50 million right now? What if the real answer is to spent \$20,000 a month?” Glick said. “You don’t need that large capital outlay. You don’t need to deal with the issues that come up internally with financial justification or rationalization.”

This approach enables agility and flexibility in your planning and execution. “You can scale up if it turns out your business is doing much better than you thought it was. And if you’ve hit some hurdles, you can scale back,” he said.

How to ensure international success

International expansion poses risks and benefits. Without proper planning or a well-defined vision, a plan can go off the rails delaying launches, creating opportunities for competitors and increasing costs.

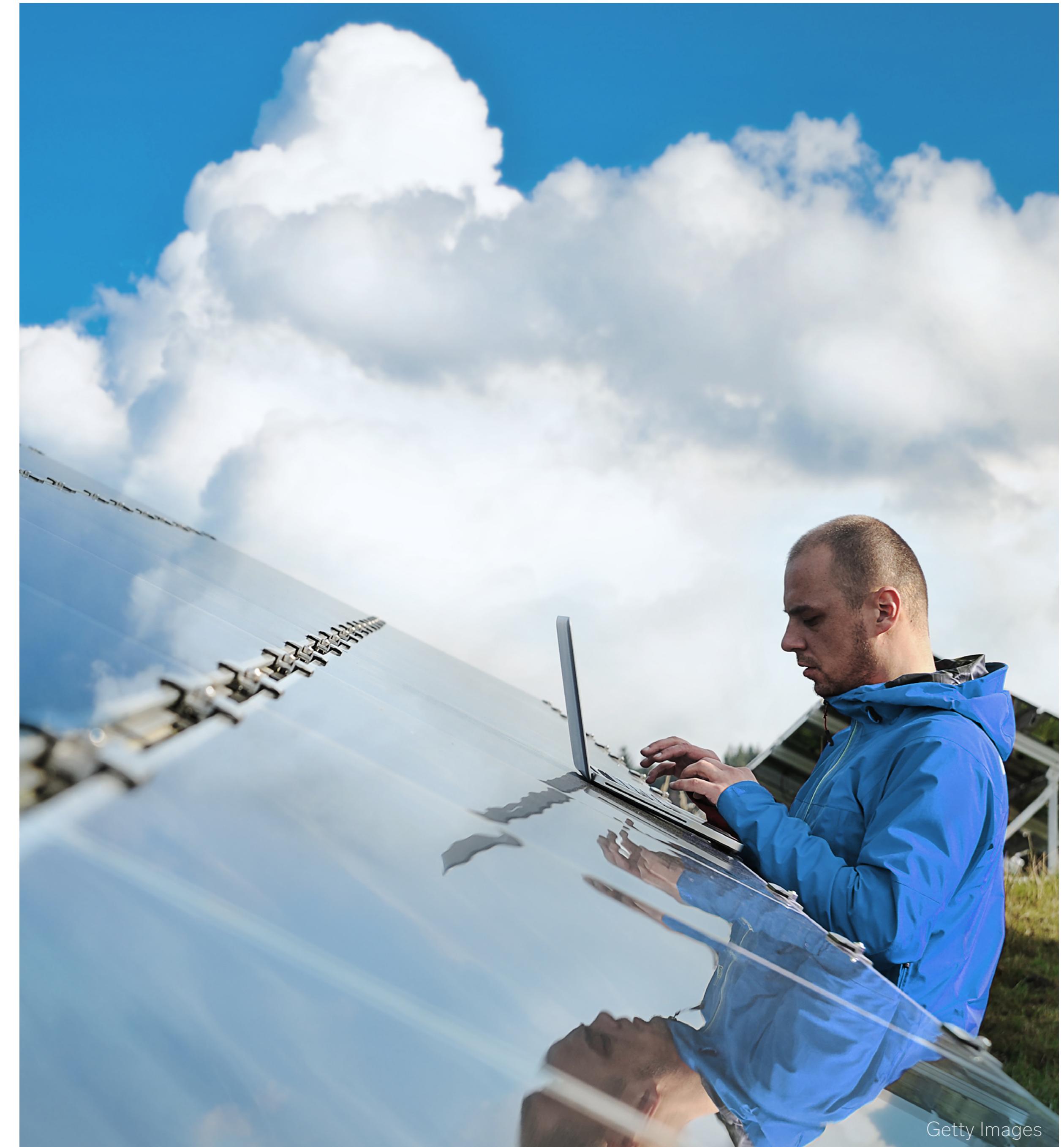
By using cloud services, however, you gain the flexibility to adjust the plan up or down as market conditions dictate, giving you a greater chance of succeeding in your expansion endeavors.

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How the cloud can help your company reach its sustainability goals



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Over the past few years, environmental, social, and governance (ESG) issues have become a top priority in the corporate world. These changes are led by consumers and stakeholders supporting organizations that act on their values and do better for the world. In fact, a report by KPMG shows that 58% of CEOs say that their investors, regulators, and customers demand increased reporting and more transparency on their ESG goals.

Under increasing pressure to report on the actions they take to and decrease their impact on climate change and other environmental topics, business leaders are turning to technology; the KPMG report shows 75% of them say their digital and ESG investments are inextricably linked.

So is cloud technology.

A cloud offers not only the agility and speed that moves you into the express lane of the digital transformation journey, but it can also help meet your sustainability goals.

“A cloud operating model enables organizations to be more green,” said Adam Glick, senior director of portfolio marketing for APEX Cloud Services at Dell Technologies. “It gives you more control. You can choose where and how you want to run your IT operations, selecting sites with limited environmental impact and choosing to purchase renewable electricity.”

And beyond managing the IT assets in a cloud efficiently and responsibly, you can also use a cloud to get better business insights, helping you reach those sustainability (and financial) goals even faster.

Choosing a ‘green’ cloud

A number of years ago, as cloud computing was in its infancy, many worried that the new massive data centers constructed around the world would dramatically increase pollution and electricity demand. But a recent study found that while these data centers’ computing output increased six times, their energy consumption rose by only 6%. The reason: These data centers were constructed with the latest sustainable technology in mind and are the most energy-efficient in the world.

Choosing to build and run a green cloud allows a company to reduce its carbon footprint, Glick said, adding that one area of focus should be embracing “green power from the start and choosing the right locations for where your data will be.”

Reduce, reuse, recycle your old data warehouse

Site and electricity choice are important, but so is how the equipment in a data center is managed throughout its lifecycle. Some cloud technology, like Dell Technologies APEX, helps companies transition to a cloud and retire their old infrastructure sustainably.

“We are focused on responsibly managing the lifecycle of technology, which includes refurbishing and reusing equipment that hasn’t reached the end of its life and recycling what has, really minimizing the creation of electronic waste,” Glick said. “It’s part of Dell Technologies’ effort to have a lower impact on the environment and make it a better world for all of us.”

To that end, in March 2021, Dell Technologies became one of the founding members of the Circular Electronics Partnership, which aims to maximize the value of electronic components, products, and materials through their full lifecycles, using safe and fair labor and depending exclusively on circular resources.

As part of this initiative and in line with its own sustainability goals, the company is also committing to recycle or reuse one piece of equipment for every product sold by 2030. Dell Technologies collects used electronics from its clients to refurbish and reuse all of them, meaning your old data servers and other e-waste can get a new lease on life after you migrate to the cloud. In 2021, over 27 million pounds of sustainable (recycled and renewable) materials were used in new Dell Technologies products.



A cloud operating model enables organizations to be more green.

Adam Glick, senior director for APEX, Dell Technologies’ portfolio of cloud services

Better, greener insights

Reusing or recycling old technology and equipment is only one step toward achieving sustainability goals. Like with all business insights today, data is key here too.

Investing in a cloud experience can help you make data-driven decisions that will further improve your sustainability benchmarks in real time. The Internet of Things (IoT) and edge computing is a proven solution enabling organizations to monitor energy consumption, water use, or materials' waste. When coupled with cloud technology, this data — regardless of its volume, source, or type — can be ingested and analyzed automatically.

In manufacturing, for example, various artificial intelligence techniques use the IoT data to design and produce better products faster. Predictive and prescriptive analytics running in the cloud help to leverage sustainable production methods and react to changes in real time.

“It’s the same whether you want to create a greener IT department, a greener company, or you want to drive profitability more, and greater efficiency,” Glick said. “Data’s always the best way to be able to look at your goals and objectively see if you are achieving what you intended.”

Fighting climate change together

Global leaders regularly gather to address the climate crisis, setting goals and looking for joint solutions. This includes both governments and business leaders, whose investors and customers are demanding they transform organizations into sustainable ones.

It’s often said that every little step counts and brings about a bigger change. Building a sustainable cloud experience is one such step — not just for your company itself, but for its end users too.

“We are shifting to a cloud-based model that’s using more sustainable pieces,” Glick said. “Every user that’s checking their email, everyone that’s using their remote desktop, every backend data processing system, every online ordering system, every sales’ tracking system — all of those things benefit and every user — without having to do anything, is now helping create a cleaner, more sustainable world.”

Switching to a cloud experience can fast-track your ESG goals because when an IT department switches to a greener, more sustainable cloud technology, the whole company benefits. A manufacturing plant installs IoT devices and leverages cloud-based data tools to improve its utilities consumption and minimize waste, and it expands its production and can reach its environmental goals faster. And when a company switches from storing and analyzing its data in legacy infrastructure to a modern cloud, it chooses a greener solution and sustainable growth for many years to come.



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TECH

Researchers developed COVID-19 vaccines in record time. Here's how the cloud helped make it happen.

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The cloud has had a major impact on data-driven medical research, enabling breakthroughs that otherwise would have taken substantially longer to happen. Such is the case with the massive, orchestrated effort that went into the development of COVID-19 vaccines.

Using cloud computing and artificial intelligence (AI), researchers developed the vaccines in less than a year, and the effort required collaboration by various entities in the private and public sectors — pharmaceutical companies, hospitals, non-profit organizations, and government agencies. The monumental undertaking involved sharing large volumes of data as new discoveries occurred.

The development of these vaccines certainly is a major achievement for the pharmaceutical field. But there are several other examples of how cloud computing supports advancements in medicine, such as wearables devices that connect doctors and patients, storage of medical records, and remote surgery.

Scalability is key

What makes the cloud so attractive to medical researchers comes down to the same characteristics that make it valuable in other fields — elasticity, scalability, and the capacity to handle massive data volumes.

“One of the incredible powers of the cloud is that ability to scale up quickly,” said Adam Glick, senior director of portfolio marketing for APEX Cloud Services at Dell Technologies.

“Processing large amounts of drug discovery and trial data more quickly helps get lifesaving medications to people that need them faster. Imagine that you are in phase 2 trials for a new treatment, or you’re in a much earlier stage doing drug discovery, and you want to analyze the data you’re collecting.

The ability to get data analysis in minutes as opposed to days can radically change the speed of drug discovery and approval, which ultimately mean saving more lives.”

Without access to a cloud infrastructure, Glick added, the time and financial requirements to procure and set up the environment to conduct data-driven research are much higher. And once the project is completed, much of the servers and infrastructure used in the research may sit idle since they’re no longer needed.

But with the cloud, “you can scale up your resources quickly and then you can process the data much faster,” Glick said. This translates to faster development of life-saving drugs and treatments.

“One of the incredible powers of the cloud is that ability to scale up quickly.”

Adam Glick, senior director for APEX, Dell Technologies’ portfolio of cloud services

Providing treatment

The cloud also plays a role in connected medical devices. Currently, 10 to 15 connected devices are used at each hospital bed. The global market for connected medical devices is expected to reach \$158 billion in 2022, up from \$41 billion in 2017.

Remote devices such as blood pressure, glucose, and heart monitors stay connected with clinics and physician offices, maintaining a continuous flow of data that helps enhance patient care.

In some cases, timely data transmission can limit damage to a patient and even prevent death. If a device detects a problem with a patient, it can send an alert to dispatch an ambulance. In stroke and heart attack situations, a quick response can help minimize the impact on a patient.

Data transmitted from medical devices increasingly leverages edge networks, which place computing and analytics close to data sources and users to enable real-time decisions. But data that isn’t used for real-time responses is stored in the cloud, where it can later be useful for research leading to new treatment methods and the development of therapeutic drugs.

Looking ahead

Whether supporting operating rooms, wearable medical devices, or lab workers involved in critical research, the cloud already has proven critical to healthcare.

COVID-19 vaccines illustrate just how important the cloud can be, but as technologies and AI evolve to work together with the cloud, the list of possibilities of what medical researchers can accomplish is growing by the day.

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Discover how APEX, Dell Technologies' portfolio of cloud services, can help your business take IT to the next level.



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