

Lumen Predicts 2022



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Infrastructure the Comeback Kid of 2022

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Our analysis of the top nine network providers in our marketplace (including Lumen) offers some interesting future insights. Projected revenues should bottom out in 2021, followed by a consistent level of growth led by managed services and new technologies for the rest of the decade. Good news!

New AI technologies are coming. Legacy network solutions are in a state of flux and featuring shorter than ever shelf lives. A growing number of enterprises are shifting to either hybrid IT models or jumping “all-in” by sending their apps and data to the cloud.

My prediction for 2022: The real winner in a world defined by change is the bedrock of technology—“smart,” low latency infrastructure that links to the cloud.

- It offers centralized control for managing security.
- It gives enterprises the capability to adjust traffic consumption themselves.
- Applications ride on top of the platform, giving network providers a beachhead to quickly deploy new solutions to their portfolios.
- Autonomy and network flexibility allow IT leaders to rethink their own resources, better manage costs, and turn to us for managed services.
- Infrastructure can even help enterprises address their green, carbon footprint objectives.

S&P Global Market Intelligence^[1] puts it this way. Just as organizations struggled to adapt to the Internet more than 20 years ago, a similar pattern is emerging as they embrace a cloud native platform. Infrastructure will drive this transition. It may not be the sexiest thing in town, but the pandemic made it clear that you don’t think much about humble “old” infrastructure **until** you need it. The need is growing, making infrastructure the comeback kid of 2022.

^[1] Source— Copyright © 2021, S&P Global Market Intelligence - 451 Research, LLC and/or its Affiliates, *The Big Picture: 2022 Information Technology Industry Outlook*, November 2021.

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Empathy becomes the Rx to keep client relationships healthy

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The COVID pandemic forced enterprises to view the concept of health in a whole new way. In fact, it became an important unit of measurement, equally applied to employee care, fiscal responsibility, and overall client management.

When the pandemic struck, I was serving as the chair of the Global Leaders' Forum. I had a front row seat to see how top wholesale carriers took significant steps to ensure the sustainability of their clients as they struggled with supply line disruptions and distributed workforces. You could see the shift as the needs of the customer (and their own employees) became paramount at the height of the crisis. That approach is here to stay.

My prediction for 2022: Enterprises will seek bottom-line results by using empathy to better understand and improve the health of their stakeholders.

- An enterprise that practices empathy acts to intimately understand the needs and concerns of both employees and customers by walking in their shoes.
- New technologies are making it easier for companies to use data to grasp the overall health of their client relationships, so they can take proactive steps to keep them strong.
- Companies who pay attention to customer health will see higher NPS scores and better revenue performance.

An empathetic approach to understand and improve client health is a core component of

customer centricity, in which businesses place the needs of their clients at the center of everything they do. Enterprises directly benefit from healthy customers and healthy relationships. It keeps them healthy, too. And it leads to healthy growth.

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Public sector CIOs take center stage in 2022

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There are many developments that will most likely shape the technology landscape for the public sector. Specifically, the opening of 2021 saw the real fallout of the Solar Winds attack on America's IT infrastructure, which heightened an already tense public sector environment around cybersecurity.

As 2022 begins, cybersecurity remains top of mind for public sector IT. With a hyper focus on security, skilled personnel are needed to help implement innovative practices to secure hybrid workforces and citizen-centric services. A seasoned CIO or CTO who understands how to meet an organization's unique IT needs will hold the undivided attention of not only their leadership, but citizens and the media as well.

My prediction for 2022: Public sector CIOs are rockstars and their concerts will sell out.

As security permeates the citizen experience, CIOs and CTOs will continue to be at the center stage.

Here's a good example of their key role: Solar Winds was a "supply chain attack,"

exploiting vulnerabilities in a piece of software that contributes to a larger solution. This changes the equation for public sector IT people in determining what is trusted and what is suspect, shining the spotlight on their work. For state and local governments, this high-profile event added to their ongoing concerns around ransomware attacks taking infrastructure and vital data hostage around the nation.

Looking forward, at the federal level, implementation of the Trusted Internet Connections 3.0 (TIC) guidelines will really begin in earnest. Across the public sector, Endpoint Detection and Recovery (EDR) and Virtual Security Operations Centers (vSOC) will be key additions to raising the resiliency of public sector cybersecurity. Zero Trust Architecture that builds custom profiles for each user and access point will become increasingly important, especially as the public sector workforce adopts a hybrid approach to where they work.

A new year dawns: Hope will replace challenge

After navigating all the ups and downs of the last two years, I sense a return to optimism in the public sector conversations I'm having with customers. Global uncertainty has given way to perseverance, collaboration and determination to help shape a data driven, citizen-centric future. Lumen people are proud of how we have helped employers and communities in a year of challenge. We are looking forward to the hope and opportunity of the new year – and that's a future I look forward to securely embracing as we begin 2022.

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Crystal Ball Sees Fiber Internet as Digital Nomad Superpower

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As small businesses regain their footing, they now face a new issue: The [growing difficulty of finding qualified workers](#). While the Great Resignation has presented many employers with unique challenges, these challenges can be overcome in the digital space.

Digital Nomads to the rescue

A Digital Nomad is a person who uses technology to connect with their employer virtually and can work remotely from literally anywhere – foreign countries, public libraries, coffee shops – in the internet-connected world. According to a recent survey by MBO Partners, the [number of digital nomads in the U.S. surged almost 50% in 2020 to 11 million](#).

My prediction for 2022: Digital Nomads will rescue small businesses with the right technology.

Digital Nomads possess the tech-savvy skills to give small businesses an advantage, but they must have a strong fiber network to do it. This means businesses have to re-prioritize their digital “oasis” to attract and leverage the skills of the people who can truly make them competitive.

How can fiber internet connections help today’s small business owner?

- Employees can work where they live rather than live where they work.
- Through reliable high-speed connections, nomadic work can replace many traditional jobs, including information technology, education and training, consulting, coaching, research, sales, marketing and PR, as well as creative services and video production.
- Fiber connections allow nomadic workers to quickly and consistently save and access information in the cloud as they move to various locations.
- The security that comes with fiber internet services is vital to the transient worker and for protecting their employer’s information.

The future is bright for remote work and small businesses can maximize limited budgets by employing workers in less expensive labor markets. Digital Nomads are poised to help small businesses compete and grow, armed with the right technology and the strength of a trusted broadband leader.

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When your ISP becomes your BFF

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The pandemic has proven internet connectivity is a solid and immovable piece of our human experience. The speed and connectivity we expect at work are now just as important at home. "Home" is now more than a living space. Home is your second workplace. It's also your backup learning institution and first choice for an entertainment venue.

If home is your new "desert island," what one thing would you bring with you?

My prediction for 2022: People stranded on a desert island will choose a technology-leading Internet Service Provider (ISP) over music, books or even a best friend.

Broadband technology helps us feel more connected to all the things that matter most in our lives. It makes us smarter, more efficient and gives us a sense of belonging. Where once this connectivity might have been considered a nice-to-have, it's now a modern-day necessity.

Our industry has made significant progress with automation and self-service options that let consumers and small businesses do business with their ISP how and when they prefer. Yet consumers need easily accessible technology they can trust to further that progress. For example, Quantum Fiber offers:

- A powerful app and digital online experience that puts you in control – a relationship YOU manage
- Ultra-fast Gigspeed to stay connected with the pace of your life – and all the people in it
- 99.9% network reliability* – just like a good friend
- No annual contracts – you stay only if you're happy
- Fully online, dedicated, around-the-clock support in just a few clicks – a support system that won't let you down

So what would you take to your desert island? Choosing a reliable, innovative ISP may be the smartest choice of all – because you don't have to give up your music, books or even your best friend.

**Based on network uptime or availability*

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Simplicity is guiding light in 2022

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In 2021, businesses both large and small turned their attention to supercharging the digital experience for their customers. Today, consumers expect all businesses deliver the seamless digital experience already mastered by their favorite tech savvy companies—an experience backed by a flexible network, increased security and low latency. But what will customers demand tomorrow? I think it's going to be more simplicity.

My prediction for 2022: Having the best solutions isn't enough. Winning technology companies also need to make their solutions as simple as possible for their customers.

Businesses will embrace simplicity as an overarching theme of their technology ecosystem. Here's what this trend could mean for Channel Partners:

- **Customers reliance on channel partners will continue to grow.** Security threats, rapidly evolving technologies, the global pandemic, and other forces will continue to drive business customers of every size to seek trusted tech advisers — channel partners — to help simplify and manage their IT infrastructure, data and communications.
- **NextGen channel partners will emerge.** We are at the dawn of a new technology era, and the rapid growth of advanced tech such as NFTs, blockchain, crypto, and the metaverse will drive the need for advanced expertise partners in the channel. The opportunity for these NextGen partners is incredible.
- **Digital partner experience (PX) and customer experience (CX) becomes the standard.** The partner and customer experience continues to be improved and optimized via digital and self-service tools. The market expects easy access to manage services and data—its why Lumen is investing and focused on transforming to deliver exceptional PX and CX utilizing digital and mobile.

As a result of embracing more simplicity, we can expect investment in digital marketplaces to escalate. The race is already on to develop robust digital marketplaces where customers can acquire technology solutions quickly, efficiently and at a competitive price. A few providers and partners with excellent marketplaces will start to emerge from the crowd and will eventually dominate the technology market. Our goal is to have Lumen be one of them.

The importance of the indirect channel to the growth for technology providers, like Lumen, has never been greater. We are living in challenging times. As partners on your digital journey, it's our goal to simplify the way we do business, with the right human support, and the ability to act as a guiding light in your digital world.

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API marketplaces will dominate network automation in 2022

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Enterprises and their technology partners share the same basic goals—better customer experiences at a lower cost and at an accelerated pace of innovation. But establishing a platform to support this type of environment is only one piece of the puzzle. It's equally important to create a catalyst for delivering digital experiences that serve as the dominant way for both consumers and businesses to consume services.

APIs (application programmable interfaces) will be a key first step to achieving this. Basic processes, such as inventory, performance management, change management, change requests, alarming, and trouble tickets are only table stakes. A more dynamic environment will be needed to ensure that carriers become true partners with the enterprises they serve.

My prediction for 2022: API marketplaces will become the primary means for delivering peer-to-peer connectivity

- API marketplaces will provide peer-to-peer environments that encourage new partnerships built around system integration and the consumption of services.
- APIs will enable enterprises to dynamically adjust bandwidth, storage, policies, and traffic patterns in real time.
- Sales and support teams will shift their focus from human intervention to machine and code-driven solutions.
- Machine-to-machine interactions free up human interaction for things that matter more.

Making the tasks of our customers more convenient and efficient is at the heart of what we do at Lumen. And while it is a good experience to enable customer-driven changes through a digital experience, it is even better when adjustments are made in real-time

based on the dynamic changes in the environment. Having network infrastructure and cloud capabilities that provide this freedom to allow businesses to adjust their technology stack on demand is a critical differentiator.

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Privacy will coexist with convenience

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Around the globe, we've seen how technology has made possible a global information economy, creating incredible convenience and benefiting people and businesses. As a result, we've also seen increased attention given to data privacy and security concerns.

As organizations increase their privacy and security efforts to meet growing market and regulatory demands (for example, addressing bad actors eager to target networks utilized for hybrid work), we can expect companies to spend a large part of the next twelve months building compliance programs aimed at protecting everyone's data.

My prediction for 2022: Businesses will increasingly look to technology for privacy solutions.

In our connected global economy, data wants to move freely. But there are borders and rules that regulate how, when and which data can be shared, with new laws and enforcement of existing laws a frequent topic of discussion at the state, federal and international level. Facing a future of more regulation, and tighter budgets, companies will turn to technology to better comply with customers' privacy and security expectations and the ever-dynamic regulatory landscape

- **Automation will help take the guesswork and human error out of compliance.** Compliance automation, often through use of artificial intelligence, can help remove human error from key aspects of compliance. Other technical innovations, such as homomorphic encryption, differential privacy, and federated learning, have the potential to make headway as new privacy enhancements.
- **The demand for privacy engineers is surging** as organizations work in earnest to integrate privacy requirements into product design and business requirements. Privacy Engineering, building upon Privacy by Design and Default, is a growing field that could not only improve data privacy but also help create better products that benefit companies' bottom lines. In response, managed services have become a cost-effective option for some organizations eager to expand their privacy practices and expertise.

Today, people around the world are more concerned about how their personal information is used—what used to be an afterthought is now a priority. Yet privacy and convenience need to coexist at the intersection of technology and data. Organizations that weren't on top of the ever-changing privacy landscape before 2022 will have a hard time catching up.

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Making the digital watercooler “a thing” in 2022

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Dynamics between employees drastically changed when enterprises moved to a hybrid workforce in response to COVID. No more sharing smiles or high fives in hallways,

watercooler chats about Monday Night Football, or happy hour conversations after work. Can the lack of human interactions put remote workers at a disadvantage? Businesses are experiencing a biased workforce as work from home employees are no longer on a level playing field with colleagues who have daily social connections with their managers.

My prediction for 2022: E-Messaging will be replaced by See-Messaging as collaboration tools step up to level the playing field for employees.

“A recent [Gartner® survey](#) reveals 64% of managers believe that office workers are higher performers than remote workers and are likely to give in-office workers a higher raise than those who work from home.”* Businesses simply must bridge that dangerous divide, which ultimately can drain a company of stellar employees who simply don't feel connected or rewarded. Collaboration tools will help lower that percentage and create a more balanced, unbiased view across the workforce. I predict:

- More businesses will be investing in best-of-breed meeting, messaging and calling tools to help them better connect with and measure employee performance.
- Face to face communications will increase as employees skip the emails and phone calls and opt for video calls using Zoom, Microsoft, Cisco and Amazon collaboration technologies.
- Workforce data will be more important in 2022. Businesses will turn to the enhanced collaboration reporting and analytics tools to track the work and progress of their employees.

Collaboration tools were imperative when the world turned to virtual meetings, but the stakes will be higher in 2022. Businesses will need to find new ways to interact and create a fair, hybrid workplace or risk losing good talent to companies that are fully remote.

Welcome to the era of the digital watercooler.

*Smarter with Gartner, “9 Work Trends that HR Leaders Can't Ignore in 2021”, April 26, 2021.[<https://www.gartner.com/smarterwithgartner/9-work-trends-that-hr-leaders-cant-ignore-in-2021>]

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