

CSCMP hottopics

FEBRUARY | 2021

Technology Trends for 2021

*By Jason Juds, Principal
Consultant, Liberty
Advisor Group*

New 5G apps and infrastructure	1
Automation innovations	1
Autonomous driving	1
Nation-state cybersecurity	1
Telehealth/Telemedicine	2
Remote workforce or work from anywhere	2
AI and Robotics	2
Online Education	2
About Liberty Advisor Group	2



*Educating and Connecting the World's
Supply Chain Professionals.™*

2020 was a year rife with disruption because of the COVID-19 pandemic. Technology has proved invaluable as businesses pivot to new operating models, and strive to stay competitive, respond to customer's expectations, and keep secure. Here are our top 2021 technology trends that will create new opportunities for businesses.

NEW 5G APPS AND INFRASTRUCTURE WILL DRIVE TECHNOLOGY AND NETWORK STRATEGIES

5G, the fifth generation of cellular networks and the next generation of mobile connectivity, promises to bring new capabilities that will create opportunities and transform the way businesses operate. 5G is about much more than faster connection speeds; while it is about 20 times faster than 4G, it also offers extremely low latency, reliability, and power while supporting more devices. In 2021, more companies will invest in 5G to deliver highly customized, connected solutions that respond in real-time based on actions and preferences. 5G can transform supply chain robotics systems, autonomous driving, smart cities, connected offices, retail, and much more.

AUTOMATION INNOVATIONS WILL ENABLE CONTACTLESS SUPPLY CHAIN

The COVID-19 pandemic has not just altered the consumer landscape; it has also revealed the shortcomings of existing supply chains. The pandemic has forced many companies to rethink how their products are manufactured and transported across the world. Automation that reduces human contact and enables a contactless supply chain, zero touches from order to delivery, **will offer more reliable and resilient operations with less downtime and disruption.** In 2021, there will be greater adoption of robotic technologies to adapt to changing demands, drive growth, and increase efficiencies and control of the supply chain to avoid future bottlenecks.

AUTONOMOUS DRIVING WILL CONTINUE TO ADVANCE AT A MORE RAPID PACE

Autonomous driving will continue to advance at a more rapid pace. 5G and cellular V2X (vehicle to everything) will accelerate intelligent transport and communication solutions. 5G car connectivity enables vehicles to connect to each other, to the infrastructure, to network services, and to other road users. Today, self-driving features are being incrementally added to vehicles for autonomous control. In 2020, several buses and trucks completed autonomous missions. Tesla's FSD-equipped Model 3 completed and recorded the first instance of a self-driving trip, driving from San Francisco to Los Angeles without user input. Autonomous technology promises to provide safe and accessible transportation in the future.

INCREASINGLY SOPHISTICATED NATION-STATE CYBERSECURITY THREATS TARGET US COMPANIES

The readily available nature and commodification of cyber weaponry and offensive elements have led to the rise of new tradecraft by **nation-states**. The landscape has changed in that cybersecurity attacks aren't coming solely from nation threat agents but even non-state actors. In 2021, the number of sophisticated nation-state cyber threats targeting US companies will rise. Cybersecurity investments will shift from building threat detection defenses, to leveraging intelligence, applied data science and machine learning in order to determine how and when an attack will occur.

About CSCMP Hot Topics

Issues of *CSCMP Hot Topics* may include early results from ongoing research being conducted for CSCMP or other organizations; new supply chain practices, thought-provoking ideas, or emerging trends; discussions of changes in the broader business and regulatory environment that may impact the supply chain and logistics field.



*Educating and Connecting the World's
Supply Chain Professionals.™*

TELEHEALTH/TELEMEDICINE WILL CONTINUE TO DEVELOP QUICKLY

Amid the global pandemic, millions of people have experienced telehealth with a virtual exam for the first time this year. Healthcare delivery has tremendous opportunity, and telemedicine offers more than a safe and convenient experience for patients. In April of 2020, Forrester estimated that over 1 billion telehealth virtual “visits” would be completed by the end of the year, with 900 million or more directly tied to the fight against COVID-19. Additionally, the paradigm shift is expected to grow past the point of crisis to the tune of \$155B by the year 2027 (GrandView Research). [Telehealth](#) no longer requires breakthrough technology invention and is mostly an integration effort of commercially available technology.

REMOTE WORKFORCE OR WORK FROM ANYWHERE IS THE NEW NORMAL

Remote working or work from anywhere (WFA) will change the landscape of the future working world. When the pandemic is over, one in six workers is projected to continue working from anywhere or co-working at least two days a week, according to a recent survey by economists at [Harvard Business School](#). There are many benefits to remote working and WFA, like reduction in real estate costs, access to global talent, and better work/life balance. Questions remain on the impact to personal relationships and mentorship, as well as customer and business partner interactions. In 2021, digital tools and platforms will help distributed workforces work more efficiently, effectively and securely.

AI AND ROBOTICS WILL GAIN A Foothold AND DRIVE MASSIVE EFFICIENCY GAINS

AI and robotic automation are disrupting the world as we know it. From healthcare to fintech, industries are beginning to embrace this fascinating field of computer science. With the global coronavirus pandemic driving mass retrenchments and a shift to remote workforces, the need has never been greater for companies to leverage technology to reduce costs and grow revenue. In 2021, companies will invest significantly in [AI and robotic automation](#) solutions to streamline operations, cut expenses, and uncover unrealized value in many areas. This will drive massive change in industrial automation and manufacturing and will require significant retooling of existing infrastructure, technology, and processes.

ONLINE EDUCATION WILL BE A FOCUS ACROSS THE GLOBE

Technology has fundamentally changed the way learning takes place. Millions of students and professionals throughout the world are turning to e-learning solutions for education. E-learning is transforming teaching through expanded course offerings, flexible learning opportunities, and accelerated learning plans. The future of learning offers flexibility so students can learn what they want when they want. Online learning solutions are more cost-effective, easier to scale, and uses cutting-edge instructional material. It increases educational productivity by accelerating the rate of learning and more effectively utilizes teacher time. With the power of new technologies, education can become an unforgettable experience through leveraging simulations, 3D, and virtual reality. Online learning has shifted the expectation of what can be taught online and give access to the very best material and teachers to places where otherwise unavailable.

ABOUT LIBERTY ADVISOR GROUP

Liberty Advisor Group is a goal-oriented, client-focused, and results-driven consulting firm. We are a lean, handpicked team of strategists, technologists, and entrepreneurs – battle-tested experts with a steadfast, start-up attitude. We collaborate, integrate, and ideate in real-time with our clients to deliver situation-specific solutions that work. Liberty Advisor Group has the experience to realize our clients’ highest ambitions. Liberty has been named as [Great Place to Work](#), to the [Best Places to Work in Chicago](#), and to FORTUNE’s list of [Best Workplaces in Consulting and Professional Services](#).