



SEAMLESS CONNECTIVITY: A TRUE COMPETITIVE EDGE

MOTOROLA SOLUTIONS 2021 MANUFACTURING SURVEY REPORT

ADDRESSING EVOLVING MANUFACTURING CHALLENGES WITH TECHNOLOGY

The manufacturing sector is entering a new era in which connectivity – between machines, people, facilities, and data – represents the ultimate competitive advantage. Unified communications technology will be a key enabler of this connected workplace, with the ability to advance three connected goals: safety, efficiency, and productivity. That's why many forward-looking businesses are transitioning toward systems and devices that enable a seamless exchange of information.

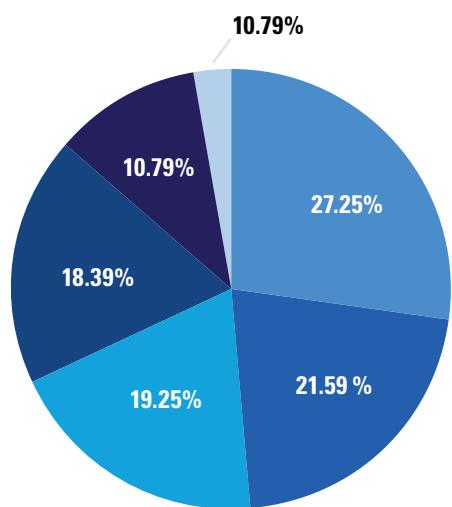
To learn more about how manufacturers are strengthening their communications technology to support a more connected workplace, Motorola Solutions conducted the 2021 Manufacturing Communications Survey.

This year's survey queried approximately 1,500 U.S. respondents, ranging from C-level executives, to senior and middle managers, to specialists and coordinators. Their job functions included logistics, warehousing and distribution, maintenance and engineering, IT, administration, sales, marketing, and finance, security, and operations. The survey covered a large cross section of industry specialties, including chemical manufacturing, construction, food and beverage production, industrial and medical manufacturing, and transportation equipment production.

The findings highlight a business sector in transition. One moving toward a world of greater connectivity, automation, intelligence, and innovation that experts dub "Industry 4.0." This world will be built on unified communications technology and industry leaders are already demonstrating its benefits for both people and productivity.

1500+ RESPONSES. REPRESENTING A RANGE OF INDUSTRIES AND JOB FUNCTIONS. AT COMPANIES OF ALL SIZES.

Respondent Industry Specialty



■ Construction

■ Chemical Manufacturing,
Metal Industries and Goods

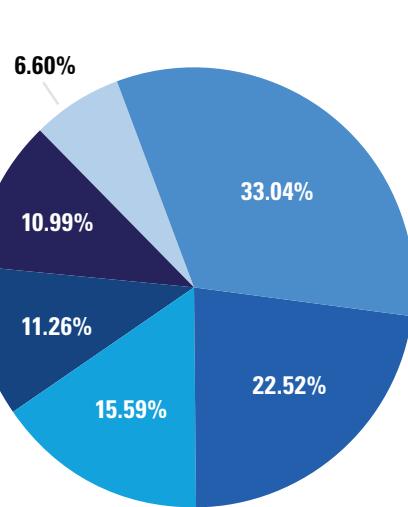
■ High-Tech, Industrial, Electrical,
Medical Equipment and Pharmaceuticals

■ Food and Beverage Manufacturing

■ Transportation Equipment Manufacturing

■ Other

Respondent Job Function



■ Information Technology

■ Logistics management,
Warehousing and distribution

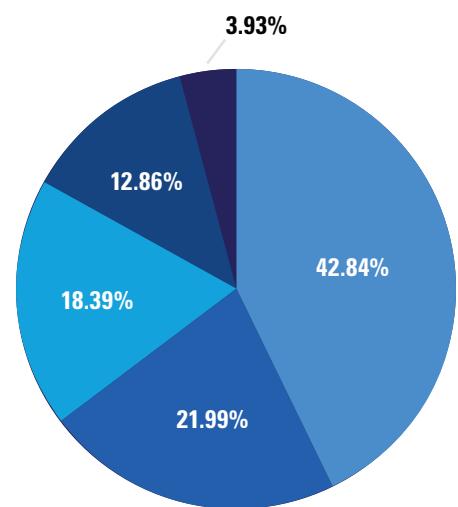
■ Admin, Sales, mktng, finance

■ Security, safety

■ Maintenance/Engineering

■ Facility/Plant/Production Operations

Respondent Company Size



■ 51-100 employees

■ Less than 50 employees

■ 101-500 employees

■ 501 - 2500 employees

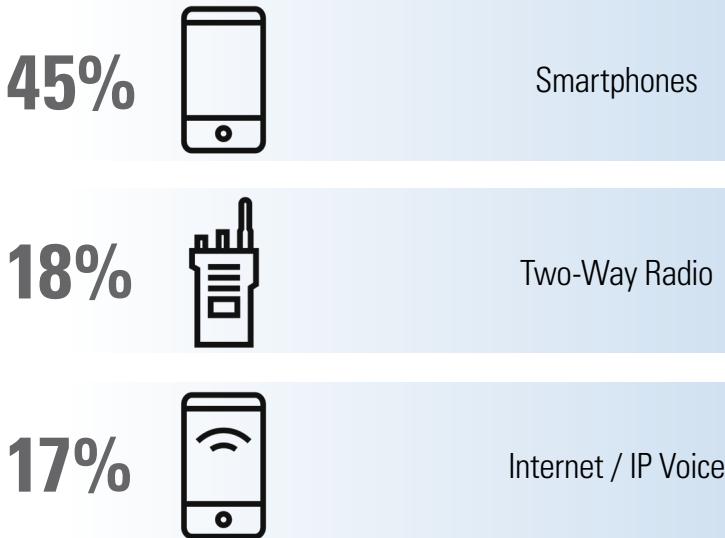
■ 2500+ employees

RISE OF SMARTPHONES HIGHLIGHTS NEED FOR SMARTER, MORE CONNECTED DEVICES

In 2019, roughly the same percentage of manufacturing workers cited either smartphones (35%) or two-way radios (32%) as their primary communications device. This year, those percentages diverged, with smartphones now cited by 45% of respondents as their main form of voice communications vs. two-way radios at 18%. Internet/IP Voice-enabled devices were selected as the primary source of communication by 17% of respondents.

This shift reflects the increasing demand across all sectors for next generation devices with 'smart functionality' that enable workers to easily and quickly communicate while also using apps to accomplish dedicated tasks. The manufacturing sector, however, requires both functionality and durability. That's why the ideal communications device for this sector may be a type of hybrid device: a rugged, reliable two-way radio that offers the features and data capabilities of a smartphone.

PRIMARY FORM OF VOICE COMMUNICATIONS



MOTOTRBO™ ION SMART RADIOS: GO ALL ON

The MOTOTRBO Ion smart radio is the first business-ready rugged communication device with all-on voice and broadband data capabilities. It enables you to stay connected across networks and devices, unify business-critical data and workflows, and ensure the capabilities your workforce needs to be at their best are always on.

[Learn more.](#)



The number of workers using more than one device on the job has jumped to 90%.

PROLIFERATING DEVICES STRAINS INTEROPERABILITY

Regardless of the primary communication devices used, most workers continue to rely on multiple devices, each for specific purposes, making interconnectivity between these devices a critical goal. In 2019, 81% of workers were using more than one device for communications on the job. In 2021, that number has jumped to 90%. Out of that group using multiple devices, 78% use two or three devices and the other 22% use four or more.

The number of respondents citing the value of connecting all of their devices also rose, from 91% in 2019 to 99% in 2021. With near universal agreement on the importance of connectivity, manufacturers are increasingly investing in digital devices and mobile applications that enable instant communications between workers using any device, anytime, from anywhere.

WAVE™ AND THE TLK 100: BUILT FOR THE JOB.

The WAVE™ two-way radio allows for rapid reliable deployment anywhere the job takes you. Communicate instantly across platforms, networks, and between radios and smartphones. With nationwide push-to-talk, you can bridge multiple job sites, facilities, and operations without needing to set up or maintain complicated infrastructure. [Learn more.](#)



DEVICE DURABILITY AND RELIABILITY STILL A TOP CHALLENGE

The manufacturing industry's unique work environments make device reliability particularly important for safe, efficient operations. Any interruption to instant communication can put workers and production at risk. So, it's no surprise that the two most cited communications challenges were device durability/reliability and audio quality.

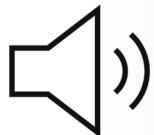
Proactive radio maintenance continues to be critical in preventing operational disruptions and downtime. This includes staying on top of software and feature updates and fixing any issues before they become emergencies. Maintenance service subscriptions can help transfer the burden of maintenance to a competent third-party.

The third most cited communication challenge was the integration of data applications, further highlighting the difficulty of integrating communications among different devices.

TOP COMMUNICATIONS CHALLENGES



Durability/Reliability



Audio Quality



Integration of Data Applications

PROTECT YOUR RADIOS FROM UNEXPECTED DOWNTIME

To keep you safe and connected, your radios and infrastructure need to be kept up-to-date and protected. Essential Services include premium features that ensure continuous security, performance and enhanced functionality of your radios and infrastructure. With Premier Services, you transfer radio operations to our experienced managed services professionals to reduce your risks and maximize radio performance.

[Learn More.](#)



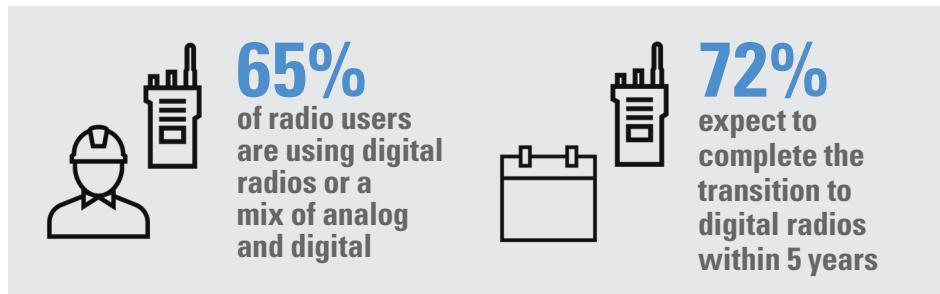
DIGITAL TWO-WAY RADIOS BECOME THE NORM

Nearly half of survey respondents have transitioned to digital two-way radios. An additional 16% are using a mix of digital and analog. Digital adoption is set to continue to increase, with 50% of those still using analog indicating they will be switching to digital in the next 12 months and another 20% of analog-users intending to switch within five years. This highlights an acceleration in digital adoption from 2019, when only 60% of respondents planned to make the transition within five years.

Digital radios offer better voice quality, stronger coverage, and longer battery life. Yet, the move to digital is about more than performance. With digital radios, manufacturers can access a range of integrated applications, analytics, and communications capabilities that transform operations. Today's digital radio applications include a universe of options for video and security, dispatch, work ticketing, and many more solutions that enhance security, efficiency, and productivity.

More than half of analog radio users intend to transition to digital in the next 12 months.

DIGITAL VS. ANALOG TWO-WAY RADIO USE



ADVANCING MANUFACTURERS' TOP PRIORITIES WITH NEXT-GEN TECHNOLOGY

Digital radio offers powerful advancements for the manufacturing sector. But it is only the beginning. There are a host of new communications systems and integrations that will improve the industry's ability to enhance efficiency, productivity, and, most importantly, safety.

When asked to name the top priorities for their communications systems respondents cited protecting staff and customers with safety features as the most important. Yet, they assigned nearly equal importance to maintaining communications uptime, device security, automatic alerts, and durable and intelligent accessories for communication devices, which are all critical to supporting both people and productivity in the workplace.

TOP COMMUNICATIONS TECHNOLOGY PRIORITIES



Protecting staff and customers with safety features



A maintenance plan to optimize communication uptime



Having a secure device for data applications, voice and streaming video



Automatic alerts



Durable and intelligent accessories for communication devices



REIMAGINING SAFETY AND SECURITY

Whether in the office or on the assembly line, the best defense against adverse incidents is a good offense. From video security and analytics to artificial intelligence, technology is helping staff do their jobs more safely by proactively addressing issues before they become larger problems. That's why adoption of security technology is on the rise. Approximately half (52%) of manufacturing facilities already have access control technology and the other half plan to add this capability in the next five years. Similarly, video security is already in use by 41% of respondents, with another 42% planning to adopt it in the next five years.

Video analytics are currently used by only 8% of respondents, making them a likely growth area in the years ahead. As advances in artificial intelligence and analytics transform video security, they are providing unprecedented visibility and insight using less resources. Additional advances enable integration between video security and communications technology, enabling real-time alerts to unfolding incidents sent directly to the devices your teams use most. Early adopters are detecting threats earlier, minimizing incident response time, preventing incidents, and maximizing the value of other security investments.



TECHNOLOGY FOR A SAFER WORLD

We believe that safety, efficiency, and productivity are deeply interrelated. That the technologies that make us safer can also make us better at everything we do. We've made that vision real by creating the first ecosystem to unify the technologies that keep us safe on one single platform—voice, video, data, and analytics. [Learn More.](#)

REIMAGINING EFFICIENCY AND PRODUCTIVITY

As the manufacturing industry rapidly evolves and operations become more complex, manufacturers require a range of features and applications beyond voice communications to keep pace. When asked to select the top three radio features that would improve workplace operations and day-to-day efficiency, respondents most cited the addition of text to speech, Bluetooth connectivity, and enhanced privacy. Interest in Bluetooth and text to speech, specifically, more than doubled from 2019 to 2021.

MOST DESIRED RADIO FEATURES



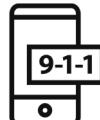
Text to Speech



Bluetooth Connectivity



Enhanced Privacy



Emergency Call



Wi-Fi Connectivity

When it comes to applications that would improve operations and efficiency, respondents cited work order management, followed by indoor location tracking, and barcode scanning. Voice communications remain the cornerstone of a safe and efficient workplace, but these additional features and applications are giving manufacturers an unprecedented edge when it comes to streamlining and improving operations.

MOST DESIRED APPLICATIONS



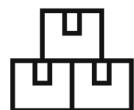
Work Order Management



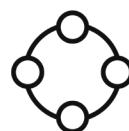
Indoor Location Tracking



Barcode Scanning



Inventory Tracking & Management

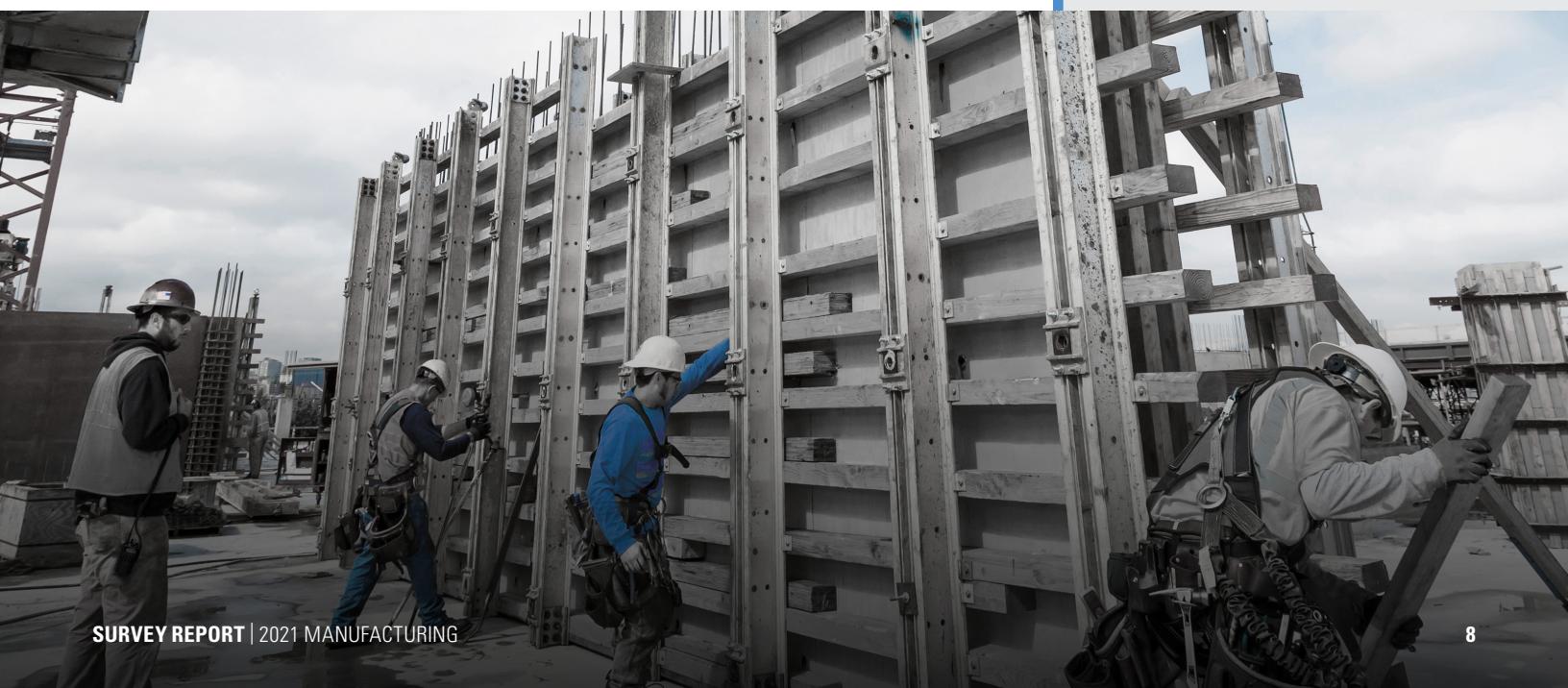


Internet of Things (IoT)



A UNIVERSE OF APPLICATIONS AT YOUR FINGERTIPS

Motorola Solutions digital radios have access to a universe of applications, including many purpose-built for manufacturing and your unique business needs. Find applications for dispatch, work orders, ticket management systems, and more. [Learn More.](#)





NETWORK COVERAGE STILL A TOP BARRIER TO THE CONNECTED WORKPLACE

A more connected workplace requires reliable communications and data across every level of operations. Yet, 60% of respondents say that coverage is still their number one network challenge (up from 52% in 2019).

Nearly all (98%) of workers have experienced connectivity issues, with 59% saying they have trouble getting or staying connected to the network on a daily or weekly basis. That leaves IT focused more on connectivity issues than strategic technology goals that matter most to the business.

60%

of respondents cite coverage as their #1 network challenge.

59%

of respondents experience connectivity issues daily or weekly.

BOOST YOUR NETWORK WITH NITRO

Nitro offers enterprise-grade private LTE that outperforms Wi-Fi, while providing unmatched simplicity and control. Nitro is the first fully-managed CBRS platform that combines private LTE data with business-critical voice. Deliver seamless, secure, high-fidelity voice conversations across your campus or across the country with MOTOTRBO voice interoperability, and connect up to two devices to your CBRS-enabled portable two-way radio via Wi-Fi. [Learn more.](#)



LACK OF RESOURCES HINDERS IMPROVEMENTS TO COMMUNICATIONS TECHNOLOGY

Technology's ability to transform safety and enhance operations holds exciting promise for the manufacturing sector. Yet, the majority of survey respondents listed a few common constraints to improving communications and security technology including a lack of personnel, the burdens of legacy systems, and budget issues.

The key to solving these challenges will be finding ways to do more with less and integrated technology can play a key role by streamlining operations and boosting productivity. Increasing safety while reducing incidents also helps optimize limited budget. In addition, building a unified communications ecosystem can be implemented over time and structured to take advantage of a facility's existing infrastructure.

TOP 3 CHALLENGES TO IMPROVING COMMUNICATIONS AND SECURITY TECHNOLOGY



Staffing Challenges



Burdens of Legacy Systems



Budget Issues

THE NEW ERA OF SEAMLESS CONNECTIVITY: BRINGING MANUFACTURING COMMUNICATIONS INTO THE FUTURE

For manufacturers, safety, efficiency, and productivity are tightly connected goals, all of which rely on seamless connectivity. As the manufacturing sector embraces "Industry 4.0" and the increased automation and intelligence it promises, companies have the opportunity to meaningfully advance all three of these goals.

The 2021 Motorola Solutions Manufacturing Survey highlights that forward-looking manufacturers are looking to unify voice, data, video, and analytics across machines, people, and facilities. They understand that a solid foundation of seamless communications and data gives them a real competitive edge today, one that is likely to only grow in the years ahead.

To learn more and explore how we're bringing manufacturing communications into the future, visit:

www.motorolasolutions.com/manufacturing.



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