



EVOLVING MANUFACTURING COMMUNICATIONS TECHNOLOGY FOR A NEW COMPETITIVE EDGE

**THE MOTOROLA SOLUTIONS 2019 MANUFACTURING
COMMUNICATIONS SURVEY REPORT**





BRINGING MANUFACTURING COMMUNICATIONS INTO THE FUTURE

In manufacturing, communication is both a lifeline that ensures safety and a tool for greater efficiency and productivity. But as communication technology continues to transition from legacy analog hardware to integrated digital solutions, what does it mean for your production line and the workers you employ? What investments should you make today and how should you prepare for tomorrow's technology advances? We've been tracking evolving trends in manufacturing communications technology to help you find answers.

The Motorola Solutions 2019 Manufacturing Communications Survey highlights some important and surprising trends. Radio communication remains a critical foundation for manufacturing communication. However, as technology has changed the way we communicate, rather than replacing radio, these advances have made it even more essential as a means of reliable, rugged, and direct connection.

At the same time, more companies are transitioning to digital two-way radios, capable of integrating intelligence driven applications to unify communications among teams. This unified communication connects all devices across networks, allowing workers to instantly communicate with their colleagues in new, intelligent, and helpful ways.

The survey also highlighted the need for more intelligence throughout operations. Intelligent new applications, smart AI-enhanced video security, low power sensor networks and access control have the power to greatly enhance efficiency, productivity, and safety.

Taken together, the findings from our report outline a clear path forward for manufacturing companies looking for a new competitive edge through enhanced business-critical communications.

This year's survey queried almost 400 U.S. respondents in a range of manufacturing job functions including senior and middle management, maintenance and engineering, IT, communications, customer service, and security. Respondents represented a large cross section of manufacturing specialties from chemical manufacturing, to food and beverage production, construction, and industrial transportation equipment manufacturing.



JOB FUNCTIONS HEARD FROM:



Senior and Middle Management



Maintenance and Engineering



IT Specialists



Security



INSTANT VOICE COMMUNICATION, THE FOUNDATION FOR RELIABLE BUSINESS CONNECTIVITY

Today, voice communication is all about connecting instantly, regardless of network, to any colleague you're trying to reach. Two-way radios and smartphones continue to be the primary devices manufacturing workers use on the job.

PRIMARY FORM OF VOICE COMMUNICATION



70% OF RADIO USERS ARE USING DIGITAL RADIOS



ALMOST DOUBLED THE AMOUNT OF DIGITAL RADIO USERS OVER TWO YEARS



50%+ EXPECT TO COMPLETE DIGITAL RADIO TRANSITION WITHIN 5 YEARS



ACCELERATING DIGITAL ADOPTION

Since 2017, the transition to digital two-way radios continues to accelerate. Today, half of respondents have already made the migration. When looking at these users combined with those using a mix of analog and digital, 70% of radio users are using digital two-way radios in some form. This reflects substantial growth in digital adoption. Since our last survey, conducted just two years ago, digital radio use has almost doubled from 27% in 2017 to 51% today. Those using digital two-way radios or a mix of analog and digital grew from 49% in 2017 to 70% today.

In addition, for those that haven't migrated yet from analog to digital, more than half say they expect to complete the transition within 5 years. 27% expect to migrate as soon as the next 12 months.

Clearly, manufacturers recognize the power of going digital. With instant push-to-talk functionality, crystal clear voice communications, and the option to add intelligence driven applications, digital radios get the job done better today, while offering a strong foundation for tomorrow's advances.

RADIO MAINTENANCE: FROM REACTIVE TO PROACTIVE

When it comes to maintaining radios, manufacturers are still mostly reactive, waiting until something goes wrong or it's absolutely necessary to perform service. Almost half of respondents said their company only maintains radios "as needed", such as when something breaks or is past due for an update. 13% said they never perform radio maintenance. Our survey also found that maintenance service is mostly provided in-house or through a local service provider.

This reactive outlook on maintenance can have disastrous consequences, impeding communication and leading to costly disruptions. Fortunately, there's a better way. Two-way radio services take the burden off of in-house staff and enable manufacturers to be more proactive with servicing their radios, ensuring they stay up to date on the latest software, security, and features while fixing issues before they become emergencies and result in unplanned communication downtime.



RADIO MAINTENANCE FREQUENCY

47% of manufacturing workers say they maintain their radios as needed, while **13%** said they never perform radio service.



COMMUNICATIONS MAINTENANCE

- 61%** In-house technicians/IT
- 21%** Local service provider
- 7%** Communications manufacturer
- 10%** Do not know



MOTOROLA SOLUTIONS TWO-WAY RADIO SERVICES

Two-Way Radio Services help you get the most out of your radio investment. We provide expert, reliable management of your communication devices, alleviating the responsibility of maintaining and managing your communications. Plus, you can keep pace with the speed of innovation at a predictable cost. With three levels of service, you can always find the amount of support that's right for your operations.

See How Our Services Can
Optimize Your Devices





TEAM COMMUNICATIONS ACROSS DEVICES

The number and type of devices we use in our personal lives seems to expand every year, from smartphones, to tablets, to computers, and more. Manufacturers are experiencing this at work as well. Workers are almost universally using more than one device to communicate on the job with 81% of respondents saying they use multiple devices. This continues the upward trend we saw in our last survey, conducted in 2017. Manufacturing workers today are using two-way radios, smartphones, landline and IP-based phones, PCs and laptops, and tablets.

With so many communication devices, connecting with colleagues can be a real challenge. Manufacturing workers ranked the ability to communicate with colleagues on any device, as well as the ability to reach workers anywhere, on and offsite, as two of the most important factors in their communications system. They overwhelmingly believe it would be valuable to connect all devices, allowing anyone to communicate using any device.



81%

OF MANUFACTURING WORKERS USE MORE THAN ONE DEVICE TO COMMUNICATE ON THE JOB



91%

OF MANUFACTURING WORKERS SAY IT WOULD BE VALUABLE IF THEY COULD COMMUNICATE USING ANY DEVICE



UNIFIED TEAM COMMUNICATIONS: THE POWER OF NOW

Is your plant operating with the power of now? Keeping up with business today means communicating instantly, without boundaries, with added intelligence, and with confidence. Unified Team Communications from Motorola Solutions makes it all possible, right now. Powered by the WAVE Push-to-Talk Application, Unified Team Communications takes push-to-talk (PTT) beyond the boundaries of radio. It allows plant managers, production supervisors, engineers and other employees who may use smart devices to stay connected to the radio system, without the need to carry multiple devices. Unified Team Communications extends PTT to smartphones, laptops, tablets and PCs, so employees can collaborate and immediately share business-critical data from intelligence driven applications, video, internet of things, and more.

[LEARN MORE](#)

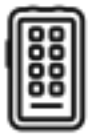
INTELLIGENCE IN EVERY MOMENT

The speed and complexity of manufacturing demands more from communication than simply having a voice conversation. It requires intelligence and useful applications that help automate tasks and expedite assignments. Manufacturing workers indicated that text messaging and alerting, as well as work order and job assignment applications, would be the most helpful on the job. Indoor location tracking, alarm and event management, and Internet of Things powered applications were also popular selections. All of these applications help workers be more productive, efficient, and connected, on top of powerful voice communications.

MOTOTRBO® NITRO™: THE FUTURE OF RADIO IS HERE



TOP REQUESTED APPLICATIONS



54%

Text messaging and alerting



51%

Work order and job assignment



28%

Alarm and event management



26%

Internet of Things (IoT)



25%

Indoor location tracking

CHALLENGES ON THE PLANT FLOOR

Manufacturing workers listed coverage as the most pressing communication challenge they face today. Other top challenges included connecting workers and teams, device reliability, and battery life. Thankfully, new communication technologies are being introduced that empower businesses with ultrafast broadband along with enhanced coverage, all in the rugged form factor that manufacturing environments require.

TOP COMMUNICATION CHALLENGES



Coverage



Connecting workers and teams



Device durability/reliability



Battery life



Audio quality

MOTOTRBO® Nitro™ enables a seamless, Citizen Broadband Radio Service (CBRS) solution by combining business-critical voice and private broadband to get reliable, lightning-fast data flowing securely across every level of your operation. With twice the capacity and up to four times the range of WiFi, Nitro lets you do more with less—maximizing efficiency while minimizing disruption.



ON-PREMISE PRIVATE BROADBAND

Don't bring consumer broadband to a commercial site. With twice the capacity and up to four times the range of WiFi, Nitro lets you do more with less.



LEADING WITH VOICE

Instant voice communications will always be business-critical. Deliver seamless, secure, high-fidelity voice conversations across your entire operation over private broadband.



FULL MANAGEMENT AND CONTROL

Focus less on managing your network and more on leveraging its performance. Remove the hassles of network management while enabling full control of your operation via a cloud-based portal.

Experience MOTOTRBO® Nitro™

SECURITY WITH INTELLIGENCE

When it comes to security, manufacturing operations have unique needs. They often handle hazardous materials and heavy machinery. Any work stoppage can be dangerous and costly. This makes security and safety a top priority. Manufacturing workers listed video surveillance and access control as the top two security capabilities their companies employ. Incident dispatch, tracking, and reporting came in second, and only a staggering 5% said their company leveraged video analytics. This highlights a great opportunity for manufacturers, as advances in artificial intelligence (AI), machine learning, and analytics are helping transform video security, offering more visibility and insight with much less effort.

TOP REPORTED SECURITY CAPABILITIES



66%

**VIDEO
SURVEILLANCE**



56%

**ACCESS
CONTROL**



38%

**INCIDENT
DISPATCH
TRACKING &
REPORTING**



5%

**VIDEO
ANALYTICS**

ADVANCED VIDEO SOLUTIONS FOR MANUFACTURING

avigilon
a Motorola Solutions Company

You need video solutions that fit within your existing workflow, not technology that adds more complexity and time. Avigilon's end-to-end video solutions help simplify your operations by seamlessly integrating with your existing technology investments. Built-in intelligence keeps you focused on what's important. The power to quickly search through vast amounts of HD footage frees up your time, instead of requiring you to watch hours of footage. Deep security adds an extra layer of protection to your data. Avigilon's intuitive platform makes migration and implementation easy, all while working within your budget.

[Discover How Avigilon Can Help Secure Your Operations](#)



NATIONWIDE COMMUNICATION

Today, manufacturing is a national and global undertaking. Business doesn't stop at the plant door and instant communications shouldn't either. With warehouses and distribution centers often across multiple cities and states, manufacturing workers must be able to communicate with colleagues wherever they are.

66%

OF MANUFACTURING WORKERS BELIEVE IT'S IMPORTANT TO HAVE ACCESS TO NATIONWIDE COMMUNICATIONS.



WAVE™ TWO-WAY RADIO TLK 100: RAPID RELIABLE DEPLOYMENT. NATIONWIDE USE.

The WAVE two-way radio, with its tactile one-button functionality, keeps employees safely in contact anywhere the job takes them. Now manufacturing companies are assured instant, clear voice communications from city-to-city and state-to-state, and warehouses always have instant access to colleagues around the country.

Discover WAVE™
Two-way Radio TLK 100



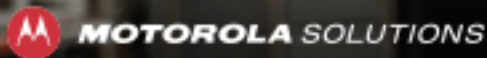
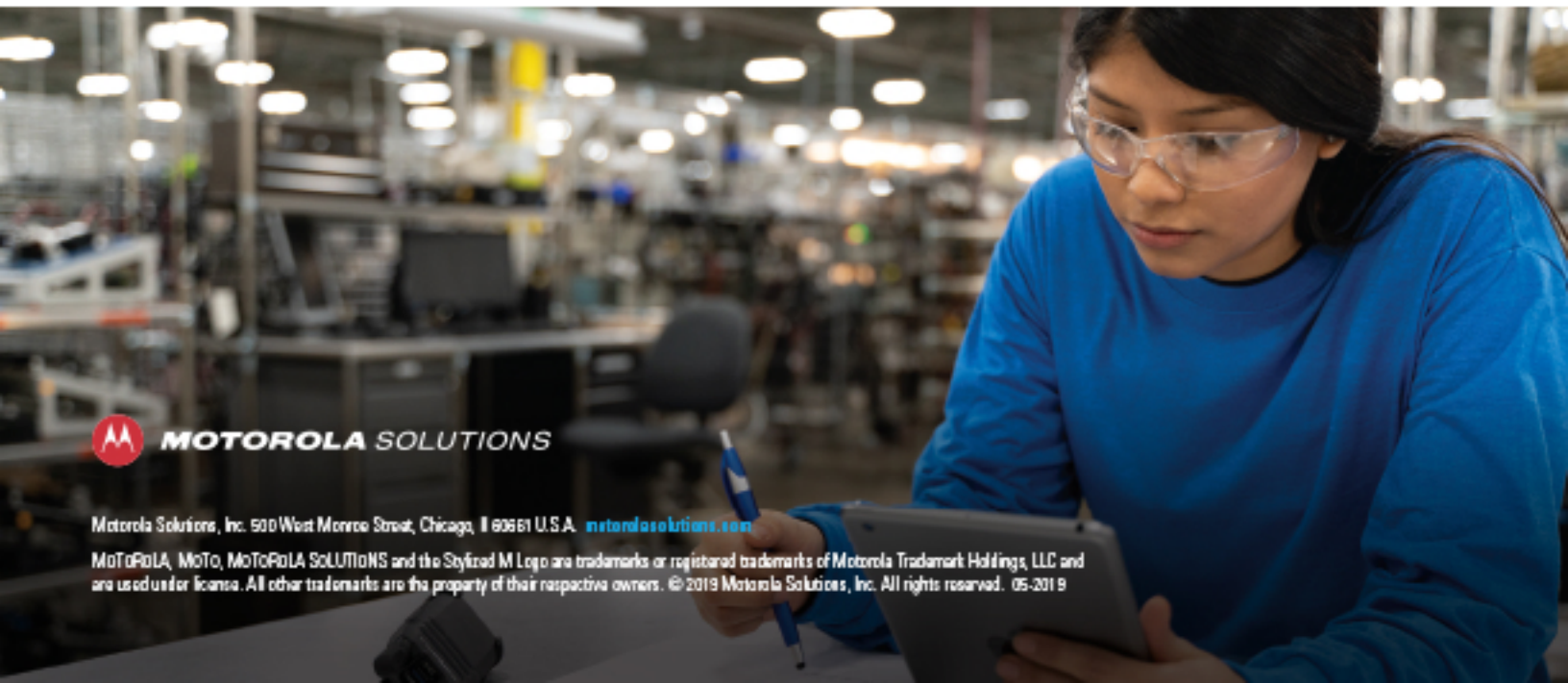
CONNECTED, EMPOWERED WORKERS: A TRUE COMPETITIVE EDGE

The Motorola Solutions 2019 Manufacturing Communications Survey offers an inside look at the way manufacturing workers view communications technology today. They need communications technology that is reliable, allows them to instantly connect to all of their colleagues over any device, extends that connectivity wherever the job takes them, and offers the intelligence that will help them do their job safely and more efficiently.

The continued transition to digital two-way radios and the rise of AI and analytics-powered video and intelligence driven applications is helping meet these communications needs. But as the survey shows, there's still a great deal of progress manufacturers can make to ensure their workers are the safest, most connected, and most productive they can be.

As manufacturers transition from legacy hardware to modern unified communications solutions, empowering their workers with intelligent, reliable connectivity provides a powerful competitive edge. It's one of the best investments you can make today and for years to come.

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



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