



KEEPING PRODUCTION MOVING WITH INTEGRATED PLANT COMMUNICATIONS

SHORTER LEAD TIMES AND HIGHER EXPECTATIONS

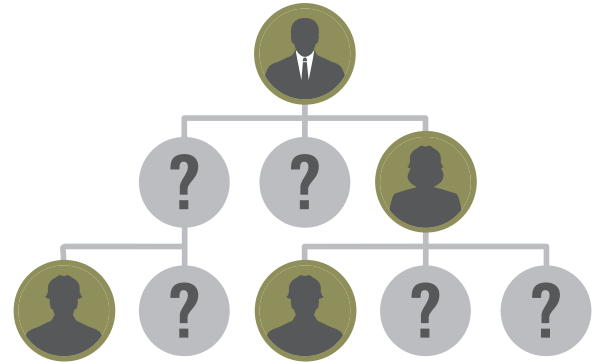
Manufacturers are feeling the pressure to hit their production targets in a highly competitive global market. To maintain their edge and maximize their profits, they've made operational efficiency a top priority. Yet up to 20 percent of profits are being lost to unplanned downtime¹. Adding in the nearly 600,000 skilled manufacturing jobs unfilled in

the U.S., it's even tougher to ensure peak efficiency and productivity². In today's aggressive marketplace, there's no room for continual delays and costly disruptions to production.

Whether they're managing a single food processing facility or a string of multinational automotive plants, manufacturers are looking for new ways to improve performance, increase safety, optimize resources and run their operation smoothly.



UP TO 20%
PRODUCTION LOST
TO DOWNTIME¹



UP TO 600,000
UNFILLED POSITIONS
IN U.S. MANUFACTURING²



OVER 75% MANUFACTURERS WITH A SERIOUS SKILLS SHORTAGE³

DOWNTIME IS AN EVER-PRESENT AND EXPENSIVE THREAT

Manufacturers know that downtime is detrimental to plant performance. A stalled production line upsets workflow and can jeopardize customer relationships. Equipment failures – from malfunctions to aging machines – cause expensive disruptions. The longer it takes plant personnel to respond and repair equipment, the more damaging the interruption. This can create a domino effect that results in missed deadlines, lost revenues and disappointed customers.

When downtime occurs, any communication delays are costly. If workers don't have access to vital real-time information or only find it at a fixed station, downtime will be prolonged. If they must rely on additional personnel to handle a situation or are stretched too thin, their ability to react quickly and make informed decisions is compromised.

Unplanned downtime creates higher safety risks and the potential for worker injury. Real-time communication helps mitigate those risks. Devices such as two-way radios have been effectively used in plants for years to coordinate response and improve safety.

ACCELERATING THE RIGHT INFORMATION TO THE RIGHT WORKER

While the threat of downtime is ever-present, manufacturers can prevent it from happening by being proactive. By giving employees the information they need where and when they need it, management can act in real time. This is particularly important as customer, regulatory and operational demands intensify.

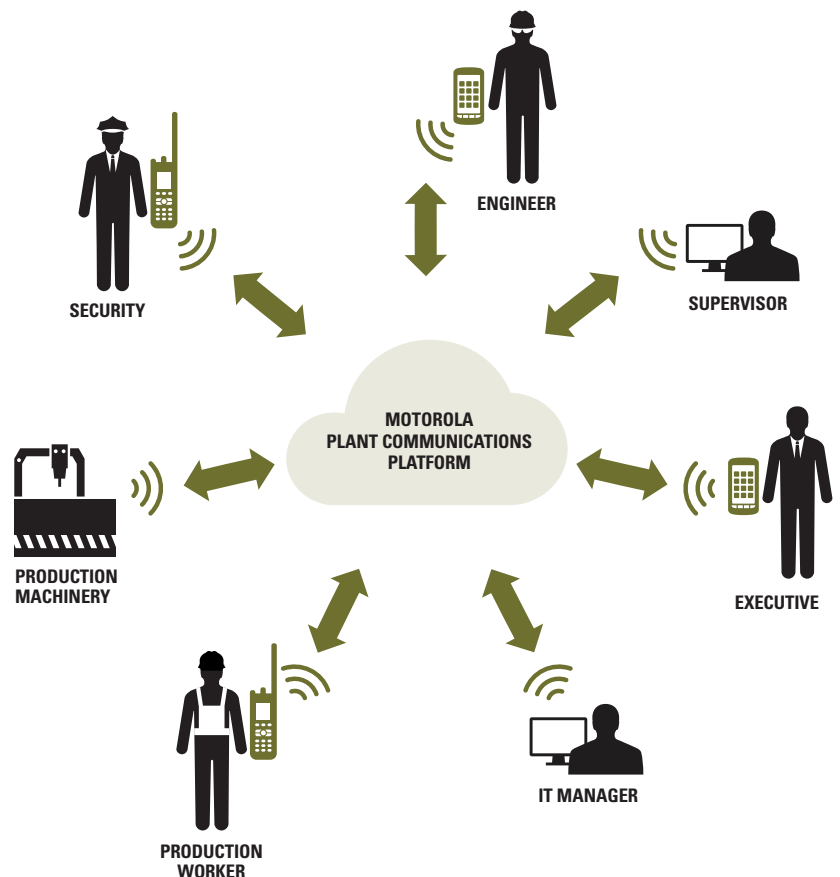
Traditional plant communication systems such as overhead paging, no longer meet the needs of manufacturers. Rather than relaying the right information to the right team, they blast out the same message to everyone. Two-way radios, which provide targeted one-to-many communication, are used by virtually every department in manufacturing: from technicians to drivers; supervisors to security; even connecting personnel outside the plant using other devices.

Radios integrate voice and data to link people to each other, people to machines, machines to people, and machines to machines. Plant management can efficiently and affordably connect everyone, anywhere they go – even if a smartphone or tablet is their main communications device.

ALMOST 50% OF MANUFACTURERS SAY DIGITAL RADIOS REDUCE DOWNTIME BY 10 TO 20%⁴

INSTANT GROUP COMMUNICATIONS

Virtually everyone – from the smallest workshop to the largest manufacturing plant – can benefit from Push-To-Talk (PTT) technology across their entire operation. MOTOTRBO™ delivers instant communications to connect and empower your workforce. And now the WAVE™ Work Group Communications solution allows you to interconnect radios with other devices – like consumer-grade smartphones, land lines, tablets and PCs. More employees can connect, communicate, and collaborate.



OVER 75% OF MANUFACTURERS WANT TO CONNECT WORKERS ANYWHERE⁴

OVER 90% OF MANUFACTURERS WANT TO CONNECT RADIOS TO SMARTPHONES⁴

OVER 50% OF MANUFACTURERS WANT TO CONNECT RADIOS TO LAPTOPS AND TABLETS⁴

IMPROVING PRODUCTIVITY WITH SEAMLESS COLLABORATION

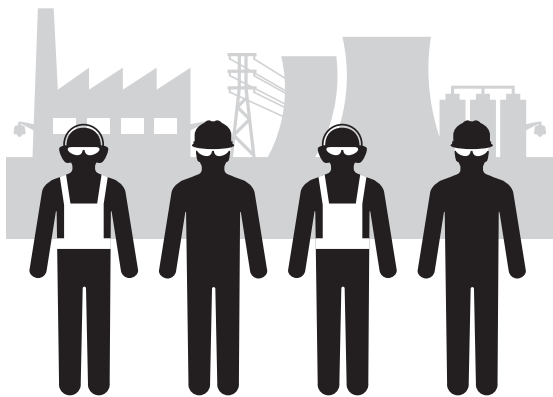
There's virtually no area of a plant where using two-way radios doesn't improve throughput and productivity: enhancing employees' ability to collaborate and act on real-time information. Digital technology delivers better coverage and clearer voice – essential for noisy environments with internal barriers and obstructions.

Because digital radios offer greater capacity and advanced applications, manufacturers can connect more workers across an expansive footprint and link those in multiple sites. Solutions for alarms and alerts with Programmable Logic Controllers (PLCs) and integration with other devices and networks provide an even wider array of communication options.

Radios improve plant collaboration so production problems can be resolved quickly and operations streamlined for maximum workflow and revenue. Manufacturers in the 2015 Motorola Manufacturing Survey say two-way radios are of greatest value for increasing collaboration. Accelerating problem resolution and improving worker safety round out the top three benefits of radios by almost 60 percent of respondents.⁵

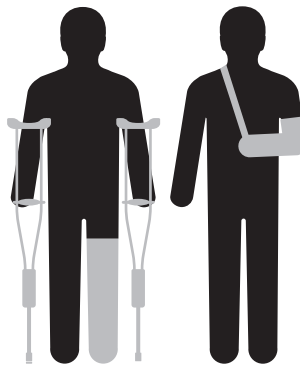
INCREASING SAFETY THROUGHOUT THE PLANT

Twelve million workers were employed in U.S. manufacturing in 2013, and nearly 434,000 reported injuries⁶. Digital radio communications can help keep them connected and safer. Innovative text-to-speech features allow workers to receive text messages while keeping their eyes on the task. Man down applications send an automatic emergency alert if an individual falls or is inactive for a certain period of time. WAVE Work Group Communications software enables workers to use their radio to talk directly with the safety team and local emergency responders on their radios, smartphones or PCs.



12 MILLION⁶

PEOPLE EMPLOYED IN U.S. MANUFACTURING IN 2013



ABOUT 434,000⁶
PEOPLE REPORTED INJURIES ON THE JOB



ALMOST 4 OF EVERY 100⁶
PEOPLE ARE INJURED EACH YEAR

ACHIEVING GREATER GAINS WITH INTEGRATED COMMUNICATIONS

Developing and deploying an integrated plant communications platform delivers significant benefits to manufacturers, including:

Cutting capital and operating costs by reducing the number of networks and devices

Optimizing employee communication by providing the right device for the right need

Increasing employee productivity through real-time access when and where it's needed

Enhancing employee safety by increasing communication capabilities and mitigating risk

Improving plant productivity by streamlining voice and data communications and accelerating information

Making better decisions based on real-time information to respond to changing conditions

Decreasing up-front equipment costs because each employee only needs one device, but can communicate with everyone on different devices

Protecting existing investments in technology while enabling cost-effective extensions for mobile voice and data

Enhancing data security by increasing control over information between devices/workers and disabling or wiping clean missing devices

Reducing strain on IT resources to deploy, manage and maintain multiple networks and systems. Devices can be provisioned, deployed, updated and more without dropping them off for IT support.

WHEN EVERYONE CONNECTS, PRODUCTION KEEPS MOVING

Manufacturers are discovering that when they integrate plant communications, they resolve equipment issues and reduce unplanned downtime faster. Not only is equipment running at full speed, but employees are communicating and collaborating more efficiently. Despite disruptions that occur, they are making huge strides in meeting targets, decreasing costs and exceeding customer expectations – all while protecting their safety and enhancing productivity.

We work closely with manufacturers to enhance safety, minimize downtime and differentiate themselves from competitors. Our integrated digital communication solutions are designed for the heavy-duty, high decibel plant and supported by an expert partner network. When manufacturers connect with Motorola, production keeps moving.



SOURCES

1. Costs of Downtime in the Manufacturing Industry, eMaint Enterprises, December 2014
2. The Future of Manufacturing Report, IDC, February 2014
3. Accenture 2014 Manufacturing Skills and Training Study
- 4, 5. Motorola Solutions 2015 Study: Innovations in Plant Communications
6. Employer-Reported Workplace Injuries and Illnesses – 2012, Bureau of Labor Statistics, November 7, 2013 (<http://www.bls.gov/news.release/pdf/osh.pdf>)

Contact your local Motorola representative or visit www.motorolasolutions.com/manufacturing

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