



LEVERAGING PLANT COMMUNICATIONS TO SLASH DOWNTIME AND SPEED RESPONSE TIME

SHORTER LEAD TIMES. LOWER COSTS. HIGHER EXPECTATIONS.

Manufacturers are feeling the heat to hit their production targets in an increasingly competitive global market. To maintain their edge and maximize their profits, they've made operational efficiency a top priority. Yet in some heavy industrial segments, as much as 30 to 40 percent of profits can be lost annually due to unplanned downtime.¹ Add in the 10 million skilled manufacturing jobs that are unfilled worldwide, and it's even tougher to ensure peak efficiency and productivity.² 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.

HOW CAN MANUFACTURING COMPANIES IMPROVE PLANT PERFORMANCE – ESPECIALLY AS THEY ARE BEING PRESSED TO EXCEED HIGHER PRODUCTION TARGETS, DRIVE DOWN COSTS AND SHORTEN LEAD TIMES?

DOWNTIME IS AN EVER-PRESENT AND EXPENSIVE THREAT

Manufacturers know that downtime is one of the greatest impediments to plant performance. A stalled production line not only upsets workflow, it can jeopardize customer relationships. Equipment failure – from machinery that malfunctions to assets that break down as they age – causes expensive disruptions. The longer it takes plant personnel to respond and repair equipment, the more damaging the interruption. What's more, systems that are not at full speed create a domino effect that can result in missed deadlines, lost revenues and disappointed customers.

When downtime occurs, any delays in communication are costly. If workers don't have access to vital information or can only find it at a fixed work station, downtime will be prolonged. And if they must rely on additional personnel to handle a situation or are stretched thin as they cover a larger area of the plant, their ability to react quickly and make informed decisions is compromised.

Downtime events create higher safety risks and the potential for worker injury, too. Real-time communication helps mitigate that risk. Devices such as two-way radios have been effectively used in plants for years to coordinate response and improve employee safety.



EXPEDITING THE RIGHT INFORMATION TO THE RIGHT TEAM

What can plant management do to minimize costs and delays and drastically reduce downtime? Alert personnel instantly so response time is accelerated and problems rapidly resolved? Connect employees seamlessly and safely so they can coordinate and collaborate across the floor, the facility and the enterprise?

What many manufacturers may not realize is that while the threat of downtime is ever-present, they can prevent it from happening by being proactive. By giving employees the information they need where and when they need it, management can improve their ability to be informed and act intelligently, particularly as customer, regulatory and operational demands ratchet up.

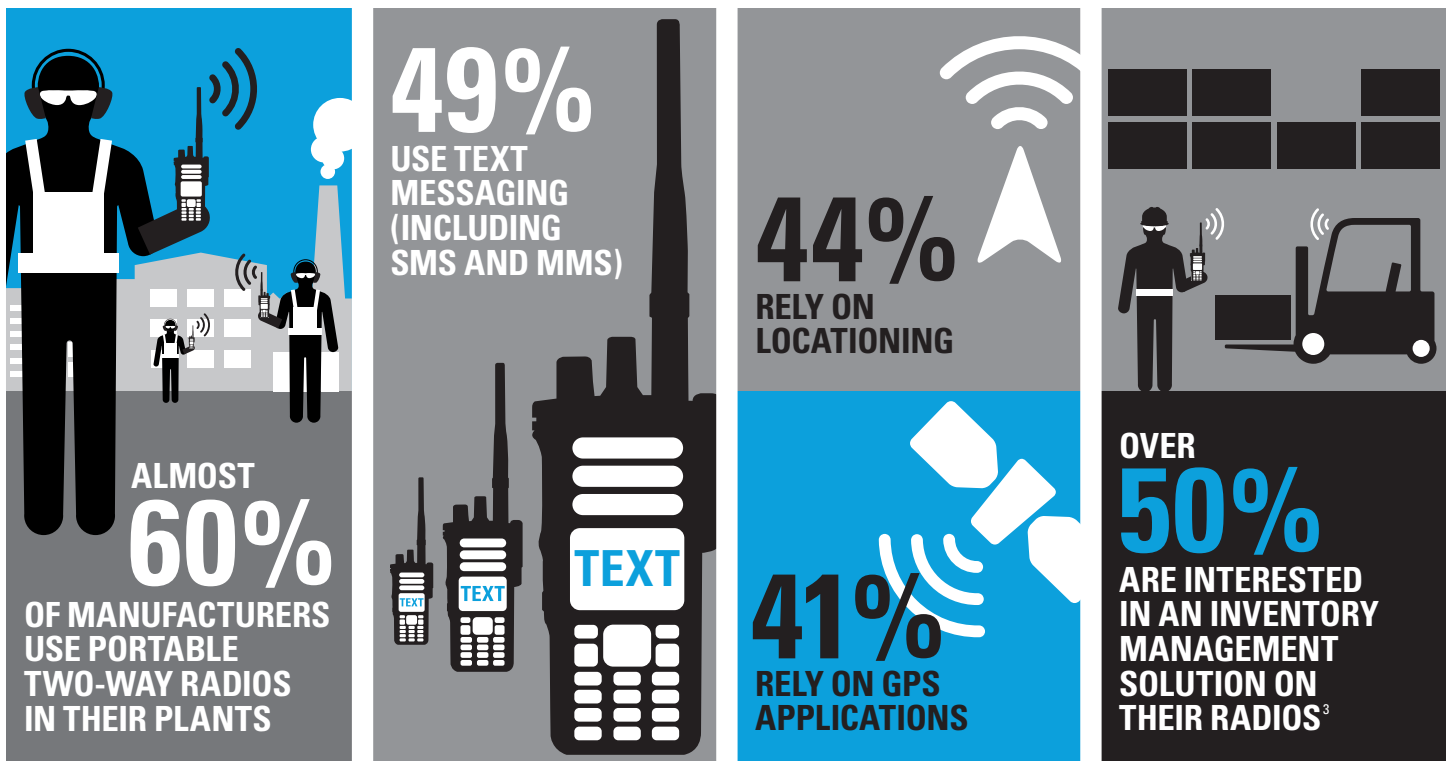
Traditional systems, such as overhead paging, no longer meet the evolving demands of manufacturers. Rather than relaying the right information to the right team, paging systems blast out the same message to everyone. Radios, which were primarily used for safety, security and dispatch, have evolved. Today they are used by operators, technicians, material handlers and more. Radios integrate voice and data to link people to each other, people to machines, machines to people, and machines to machines.

MAKING THE CRITICAL SHIFT TO INTEGRATED VOICE AND DATA

Fortunately, innovative technology solutions are consolidating communications onto a common platform. Manufacturers, large and small, are making the shift to integration of voice and data in their facilities. Now employees with different communication needs – from task-based functions to supervisory duties – can seamlessly interact together.

According to the 2013 Motorola Manufacturing Barometer survey, two-way radios are deployed in three of every five manufacturing enterprises. Plant managers are using ultra-thin, ultra-light portable radios to coordinate tasks, send texts and access other business applications. Line workers are connecting instantly in their noisy environment using two-way portables with crystal clear voice or two-way radios with integrated Bluetooth® along with wireless accessories and noise-cancelling headsets. Technicians are being automatically alerted via work ticket software on their radios as to which equipment is malfunctioning or which equipment needs to be inspected to ensure compliance with new predictive or conditions-based maintenance plans.

Having multi-function devices on an integrated platform can help manufacturing companies minimize overall communications costs by enabling workers to reach one another instantly – even when they have significantly different communication needs. By doing this, they eliminate the need to over-equip employees who only require a certain functionality.



ACHIEVING GREATER GAINS WITH PLANT COMMUNICATIONS

Developing and deploying an integrated plant communications platform delivers significant benefits to manufacturers, effectively 'leaning' the enterprise and ramping up productivity and efficiency. These benefits include:

CUTTING CAPITAL AND OPERATING COSTS

by reducing the number of networks and devices required to support the business

OPTIMIZING EMPLOYEE COMMUNICATION

by providing the right device for the right communications needs

INCREASING EMPLOYEE PRODUCTIVITY

through real-time access to people and information when and where it's needed. Employees focus on their work rather than attempts to locate resources.

IMPROVING PLANT PRODUCTIVITY

by streamlining the flow of voice and data communications and enabling the rapid movement of information

MAKING BETTER DECISIONS

based on real-time information to speed response to changing conditions in the plant

PROTECTING EXISTING INVESTMENTS

in technology while enabling cost-effective extensions for mobile voice and data solutions

ENHANCING DATA SECURITY

by increasing control over the flow of information between devices/workers and disabling or wiping clean missing devices when necessary

REDUCING STRAIN ON IT RESOURCES

to deploy, manage and maintain multiple networks and systems. By using advanced management software, devices can be provisioned, deployed, updated and made available for troubleshooting without dropping them off for IT support

IMPROVING EMPLOYEE SAFETY

by increasing communication capabilities and helping to mitigate risk

DECREASING UP-FRONT EQUIPMENT COSTS

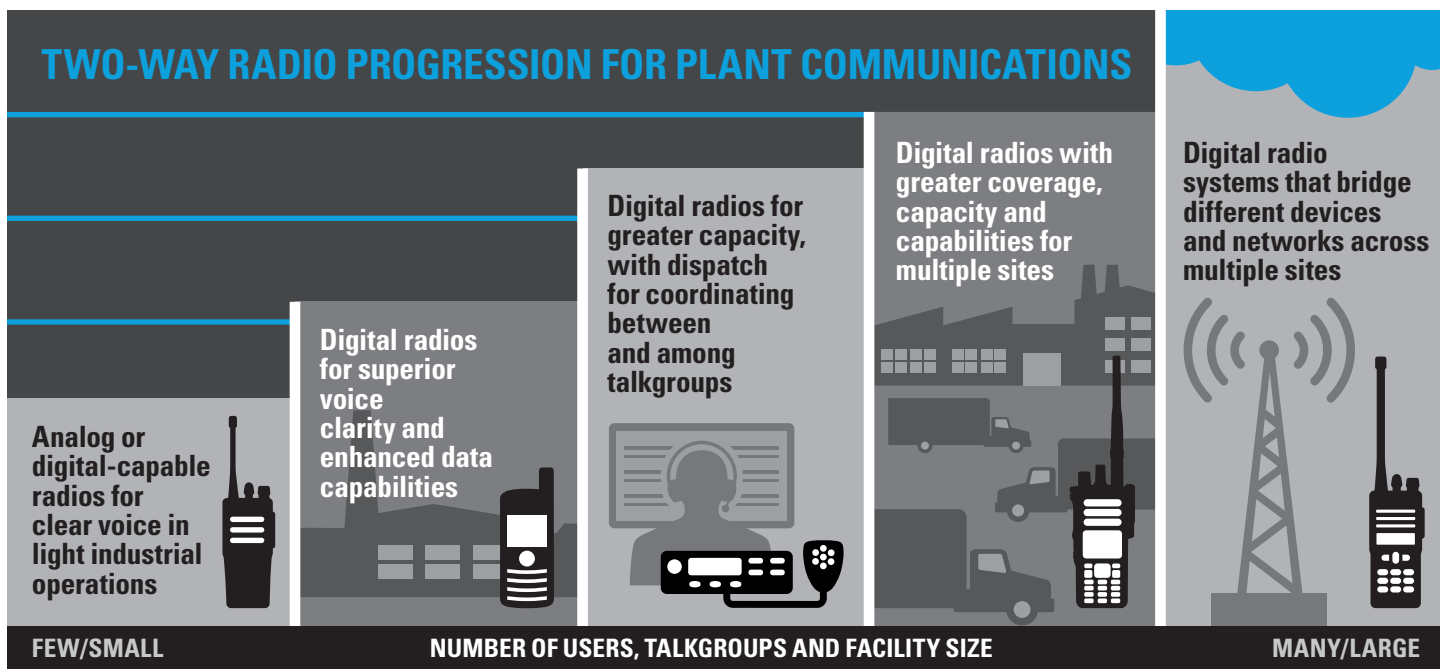
because each employee only needs one device, but can communicate effectively with everyone in the plant



MANUFACTURERS WHO USE MOBILE SOLUTIONS TO INCREASE REAL-TIME COLLABORATION BETWEEN EMPLOYEES **HAVE CUT DOWNTIME BY 27%.**⁴

MAXIMIZING THE PRODUCTIVITY OF THE WORKFORCE

There's virtually no corner of a manufacturing facility where using two-way radios to enhance employees' ability to communicate together and act on real-time information doesn't improve production throughput and productivity. Analog two-way radio systems are ideal for light industrial applications where only voice capability is required. However as you move into larger, heavy industrial use cases, the true value of digital radios begins to shine. Digital technology delivers better coverage and clearer voice – essential for noisy plants with machinery, thick internal walls, concrete barriers and obstructions. Because digital radios offer greater capacity, manufacturers can connect more workers across the expansive plant footprint and link workers in multiple sites, no matter where the location. Plus, solutions are available for alarms and alerts integration with Programmable Logic Controllers (PLCs) and to integrate with other devices and networks, delivering a full spectrum of Plant Communications options for modern manufacturers to consider and deploy.



INCREASING SAFETY AND EFFICIENCY ACROSS THE FACILITY

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 their productivity.

When manufacturers choose Motorola as their technology partner, they get the proven solutions to improve operational efficiency, minimize downtime and differentiate themselves from competitors. Only Motorola has high-performance radios with integrated voice and data designed for the heavy-duty, high decibel environment, manufacturing-specific accessories, a robust wireless communications platform and an expert partner network to make it all happen.

SOURCES

1. "Maintenance Technology"
2. "The Future of Manufacturing: Opportunities to Drive Economic Growth", The World Economic Forum, 2012
3. 2013 Motorola Solutions Manufacturing Barometer Survey
4. "Validating ROI in Enterprise and SMB", Polycom, July 2008
5. 2013 Motorola Manufacturing Barometer Survey

For more information on how to leverage plant communications to slash downtime and speed response time, talk with your Motorola representative or visit us on the Web at motorolasolutions.com/motrbo.

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