

TRANSPORTATION AND LOGISTICS: COMMUNICATIONS BUYING GUIDE

SOLUTIONS TO HELP YOUR TEAM DELIVER











When it comes to enhancing worker safety, boosting productivity and streamlining operations, communication matters. Organizations across various industry segments — trucking, rail, airlines and airports, and warehousing/distribution — are juggling a mix of communication devices and hindered by gaps in coverage, poor battery life and fragile equipment that cannot withstand harsh environmental conditions.

Customers expect deliveries precisely when and where they want them. Meeting those expectations requires reliable, clear voice and data communications. So drivers can communicate safely without distraction. So assets are tracked to maintain an efficient operation. So well-executed logistics exceed customer expectations.

Unified team communications improve on-time delivery, efficiency and safety for transportation and logistics companies today - but which solutions are right for your specific priorities and needs?

This guide will help you choose the solutions that are right for your enterprise. With a unified team communications system customized around your business, you'll have the power to eliminate the barriers between devices, networks and locations. Now everyone can be part of the conversation.



TABLE OF CONTENTS

	Trucking	. PAGE	4
	Rail		
*	Air	. PAGE	20
444	Warehouse/Distribution	. PAGE	28
Conclusion		. PAGE	36
Bonus Resources		. PAGE	38
Contact Us		. PAGE	40









SOLUTION SET

MOTOTRBO™ Capacity Max

delivers a scalable, highly secure trunked radio communications solution that's perfect for your trucking business. It's built on a distributed architecture for voice and data. Control is centralized, but radio traffic routing is optimized to minimize cost and maximize performance. Supporting up to 250 sites with up to 3,000 users per site, it's easy for you to grow and change your system as your business needs evolve.





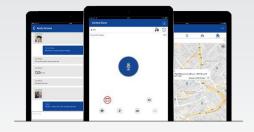
RADIOS

The XPR 5000e Series Mobile Two-Way Radio is designed for skilled professionals who refuse to compromise. It's bursting with next-generation features like integrated Wi-Fi, over-the-air software updates, Bluetooth® 4.0, GPS tracking, and more.

The XPR 7000e Portable Two-Way Radio delivers complete connectivity to your trucking business. This radio goes far beyond the average communication device to meet the high demands of workers on the road. Its next-generation features include enhanced audio quality, improved expandability, better battery life (up to 29 hours), better range, and much more.

WAVE

In today's mobile world, your trucking business requires instant communication that goes wherever your fleet may travel. WAVE OnCloud connects your team at the push of a button no matter which device or network they have. But it doesn't stop there. Go even further with location mapping, and the ability to share photos, videos, locations, and even attach files.















RADIO APPLICATIONS



Fleet Management you can now equip your

fleet with the capability to communicate well beyond voice. You can monitor vehicle data such as current location and speed, route and schedule adherence, fuel consumption, ignition status and more.



Text Messaging to send messages and directions that don't need an immediate response or when voice calls could disrupt those in the field or on the road.



Leverage **Voice Dispatch** to control your mobile workforce from a central location, so dispatchers see who is available using GPS coordinates.

ACCESSORIES

Your trucking business can work even more safely and securely with accessories tailored for maximum ease of use. Our **IMPRES Visor Microphone** mounts to vehicle visors for hands-free communication. And our Long Range Wireless Kit allows workers to maintain critical communications even on remote job sites.



SERVICES

Technology is evolving rapidly, and so is the amount of technology you have to manage. Stay ahead with **MOTOTRBO Services** to lower your total cost of ownership and manage the complexity of your communications needs.

> **MOTOTRBO Services** have 3 components



SOFTWARE UPDATES



PREMIUM FEATURES





USER PROFILES



DRIVERS

Hands-free communication can go the distance with XPR 5000e Mobile Radios backed by Capacity Max. With the IMPRES Visor Microphone, drivers can communicate with dispatch and keep two hands on the wheel and their eyes on the road.



DISPATCH

For seamless communication with drivers on the road, dispatch can rely on XPR 7000e Portable Radios backed by Capacity Max. By augmenting these devices with the Fleet Management Application, they can track vehicle data such as current location and speed, and monitor drivers' routes.



BACK OFFICE

Managers in the office can seamlessly communicate with drivers and with dispatch via the WAVE OnCloud application from their smartphones. No matter the network, device, or location, everyone can be connected.



With Essential Services for your MOTOTRBO platform, IT Managers can manage the complexity of their trucking communications. Go beyond voice with premium features for trucking, like text to speech and enhanced GPS. Extend the life of your communications investment with expert hardware repair. Ensure the security, reliability and functionality of your communications with access to the latest MOTOTRBO software.







SYSTEMS

SOLUTION SET

DMR standards-based **MOTOTRBO Capacity Max**

delivers a scalable, highly secure trunked radio communications solution that's perfect for the regulatory demands of railways. It's built on a distributed architecture for voice and data. Control is centralized, but radio traffic routing is optimized to minimize cost and maximize performance. Supporting up to 250 sites with up to 3,000 users per site, it's easy for you to evolve your system as your business grows.





RADIOS

With over 10 radio manufacturers as part of the Digital Mobile Radio Association and over 100 total manufacturing members, DMR is the global leader in the digital standard for Critical Operations. The DMR standards-based **XPR 5000e Series Mobile** Two-Way Radio is designed for the demanding skilled professional. It's bursting with next-generation features like integrated Wi-Fi, over-the-air software updates, Bluetooth® 4.0, indoor location tracking, and more.

The DMR standards-based **XPR 7000e Portable Two-Way Radio** delivers complete connectivity to your railway. This radio goes far beyond the average communication device. It meets the high demands of workers, no matter their location, with next-generation features such as enhanced audio quality, improved expandability, better battery life (up to 29 hours), better range, and much more.



In today's mobile world, railways require instant communication that goes beyond the railyard, tracks or office. WAVE OnCloud connects your workers at the push of a button no matter which device or network they have. Connect your railways even further with location mapping, and the ability to share photos, videos, locations, and attach files.











RADIO APPLICATIONS



Unified Team Communications means you can now equip railways

with the capability to communicate well beyond voice. With Voice Dispatch, you can control your mobile workforce from a central location. Dispatchers can see who is available and use GPS to know exactly where they are.



and maintain.

With **Location Tracking**, you can monitor train locations in real-time to optimize routes; since the GPS is integrated, there are no external devices to install



Rail Comm offers a new Clean Cab Railroad Radio that clears the

way towards digital voice and data radio applications for railroads. The Clean Cab comes complete with the Association of American Railroads Frequency Allocation Plan and the Canadian Frequency Plan for the 12.5 kHz narrowband channels.



ACCESSORIES

Railway workers can operate with added safety and security with accessories tailored for maximum ease of use. Our Long **Range Wireless Remote Speaker** Mic (RSM) enables workers to communicate up to 100 meters away. The Long Range Wireless **Kit with Vehicular Charger** helps workers maintain critical communications even on remote job sites.





SERVICES

Technology is evolving rapidly, and so is the amount of technology you have to manage. Stay ahead with **MOTOTRBO Services** to lower your total cost of ownership and manage the complexity of your communications needs.

> **MOTOTRBO Services** have 3 components





PREMIUM FEATURES









RAIL YARDMASTER

Keep rail yard operations on track with the XPR 7000e Portable Radio backed by Capacity Max. Communicate instantly with your dispatchers and freight conductors to ensure the safe, productive and timely arrival and departure of trains. With added intelligence from rail applications like voice dispatch and location tracking, you can efficiently coordinate trains for smooth execution of the operating plan.



FREIGHT CONDUCTOR

Communicate seamlessly with the rail yardmaster and signal dispatcher, both in the yard and en route, with the XPR 5000e Mobile Radio backed by Capacity Max. With the long range wireless remote speaker mic (RSM), the freight conductor can communicate without wires for safer and smarter communication.



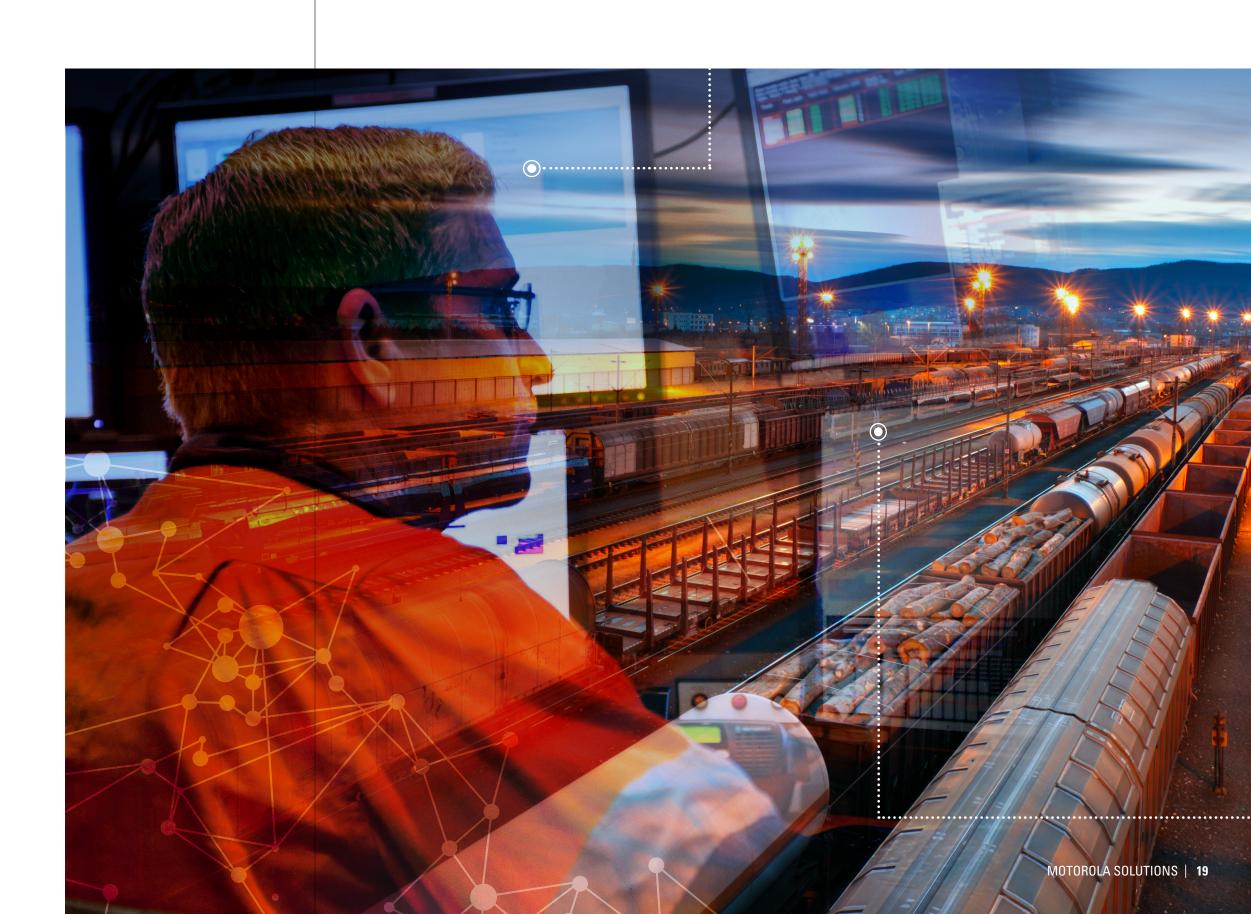
SIGNALLER

Whether off-site or in the office, signal engineers can seamlessly communicate with conductors and yard personnel via the WAVE OnCloud application from their smartphones or laptops. No matter the network, device, or location, everyone can be connected.



П

With Essential Services for your MOTOTRBO platform, IT Managers can manage the complexity of their rail communications. Premium features for rail include noise cancellation and enhanced GPS. Expert hardware repair extends the life of your communications investment. Ensure the security and functionality of your communications with access to the latest MOTOTRBO software.







SOLUTION



SYSTEMS

MOTOTRBO Capacity Max

delivers a scalable, highly secure trunked radio communications solution that's perfect for airlines and airports. The Capacity Max network is built on a distributed architecture for voice and data. Control is centralized, and radio traffic routing is optimized to minimize cost and maximize performance. Supporting up to 250 sites with up to 3,000 users per site, it's easy for you to evolve your system as your business needs grow.



RADIOS

The XPR 5000e Series Mobile Two-Way Radio is designed for the skilled professional who refuses to compromise. It's bursting with next-generation features like integrated Wi-Fi, over-the-air software updates, Bluetooth® 4.0, indoor location tracking, and more.

The XPR 7000e Portable Two-Way Radio delivers complete connectivity to both airlines and airports. This radio goes far beyond the average communication device to meet the high demands

of workers on the job. Nextgeneration features include enhanced audio quality, improved expandability, better battery life (up to 29 hours), and better range.

The sleek **SL 7000e Portable** Two-Way Radio is designed for the empowered airline worker overseeing multiple operations. With a slim and light form factor incorporating high performance integrated voice and data, these next-generation radios deliver smart connectivity to your entire airline.



WAVE

Using your smart device, you can communicate with other airline workers on radios or even laptops or tablets. Communications are protected with standards-based encryption and security protocols to provide privacy and data integrity across the **WAVE** platform which is available in cloud-based or onpremise deployments.









COMMUNICATE WITH ADDED INTELLIGENCE

RADIO APPLICATIONS



Unified Team Communications means you can now equip airlines and airports with the capability to communicate well beyond voice. With Location Tracking, you can monitor user locations in real-time and the GPS is integrated into the radio.



With Work Order Ticket Management, users can assign and accept work orders from any device and location - streamlining efficiency, minimizing downtime, and keeping flight departures on time.



ACCESSORIES

Airlines and airports can operate even more safely and securely with accessories tailored for maximum ease of use. Our **IMPRES Visor Microphone** mounts to visors for hands-free communication. The **IMPRES Noise Cancelling Remote Speaker Microphone** reduces ambient background noise, so it's ideal for noisy airport environments.





SERVICES

Technology is evolving rapidly, and so is the amount of technology you have to manage. Stay ahead with **MOTOTRBO Services** to lower your total cost of ownership and manage the complexity of your communications needs.

MOTOTRBO Services have 3 components



SOFTWARE UPDATES



PREMIUM FEATURES







USER PROFILES



FLIGHT ATTENDANTS

For communication without boundaries, flight attendants can use the WAVE Push-to-Talk application on their smart devices to instantly send messages to gate agents who are using slim and lightweight SL 7000e Portable Radios.



BAGGAGE HANDLERS

To ensure on-time departure, baggage handlers can use their XPR 7000e Portable Two-Way Radios for clear communication. The IMPRES Noise Cancelling RSM mitigates loud background noise from the flight deck so gate agents can PTT to the baggage handlers and be confident they will be heard from any device when additional luggage needs to be checked.



GATE ATTENDANTS

With added intelligence applications, gate agents can assign work order tickets from any device. When passengers need wheelchair assistance at the gate, the agents can use their SL 7000e radios powered by the robust Capacity Max MOTOTRBO radio system to assign a work order ticket to the right personnel.



With Essential Services for your MOTOTRBO platform, IT managers can manage the complexity of their airport communications. Premium features include noise cancellation and Bluetooth audio. Extend the life of your communications investment with expert hardware repair. Ensure the security and reliability of your communications with access to the latest MOTOTRBO software.





SOLUTION

444





MOTOTRBO Capacity Max delivers a scalable, highly secure trunked radio communications solution that's perfect for your distribution business. The Capacity Max network is built on a distributed architecture for voice and data. Control is centralized, and radio traffic routing is optimized to minimize cost and maximize performance. Supporting up to 250 sites with up to 3,000 users per site, it's easy for you to grow your system as your needs evolve.



RADIOS

The XPR 5000e Series Mobile Two-Way Radio is designed for the skilled professional who refuses to compromise. It's bursting with next-generation features like integrated Wi-Fi, over-the-air software updates, Bluetooth® 4.0, GPS tracking, and more.

The XPR 7000e Portable Two-Way Radio will deliver complete connectivity across warehouses and distribution centers. This radio goes far beyond the average communication device with next-generation features such as enhanced audio quality, improved expandability, better battery life (up to 29 hours), better range, and more.



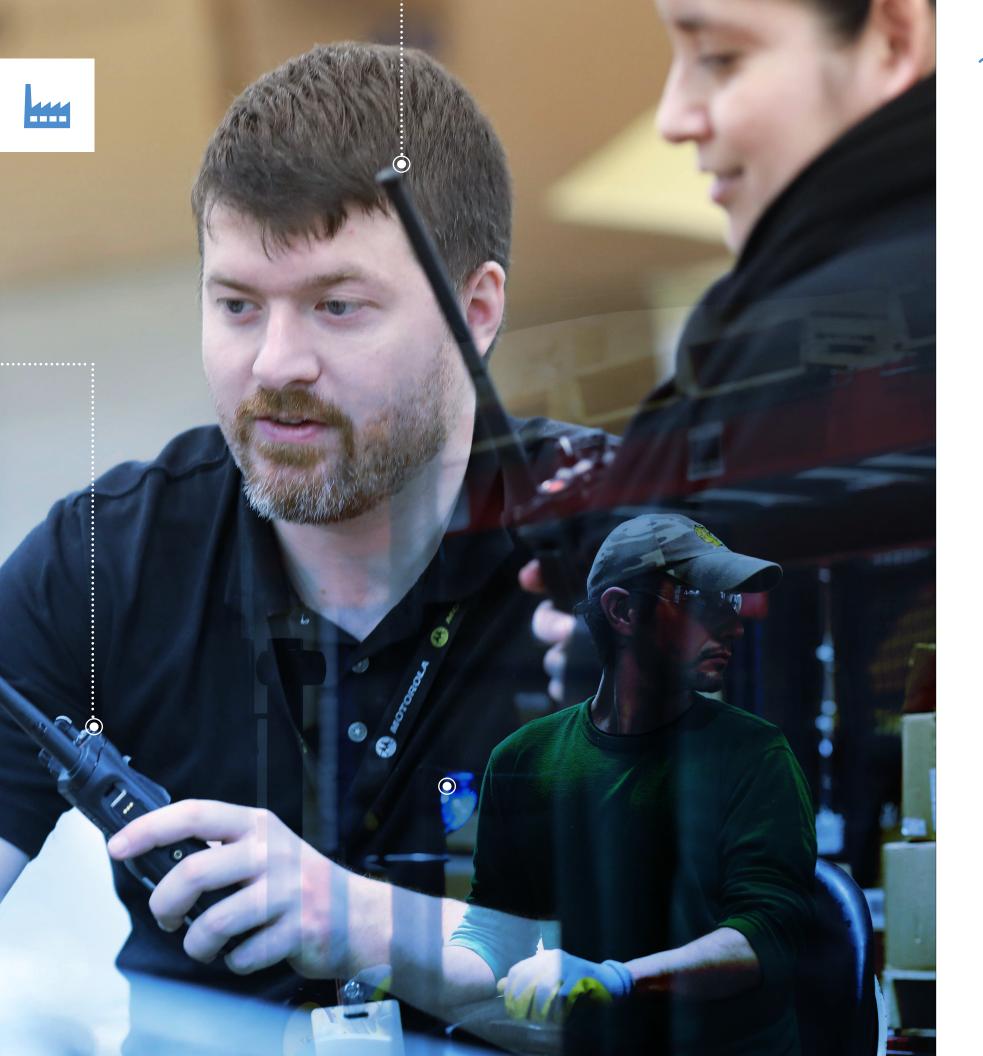
Warehouse and distribution centers require instant communications that go beyond the warehouse, road and office. WAVE, available in cloud-based or on-premise deployments, connects your workers at the push of a button, whichever device or network they have. Connect workers with location mapping and the ability to share photos, videos, locations, and attach files.

















RADIO APPLICATIONS

Unified Team Communications means you can now equip warehouses with the capability to communicate well beyond voice. With Work Order Ticket Management, users can assign and accept work orders from any device and location - streamlining efficiency and minimizing downtime. Use **Personnel Safety** Features, such as "man down" and "lone worker" to indicate that help is needed when a worker cannot call for help.

ACCESSORIES

Improve Warehouse and Distribution safety and security with accessories tailored for maximum ease of use. **IMPRES Temple Transducers** streamline operations with in-line pushto-talk and enable workers to hear without covering their ears, allowing them to either wear hearing protection in extreme noise environments or keep their ears open to external sounds. And the IMPRES Noise **Cancelling Remote Speaker Microphone** is ideal for the loud warehouse environment.

SERVICES

Technology is evolving rapidly, and so is the amount of technology you have to manage. MOTOTRBO Services can help lower your total cost and manage your complex communications needs.

MOTOTRBO Services have 3 components



SOFTWARE UPDATES



PREMIUM FEATURES











DISTRIBUTION SPECIALIST:

As new shipments are received at the warehouse, distribution specialists can utilize the work order ticketing application from their XPR 7000e Portable Two-Way radios and create work tickets for the package handlers to receive and unload the shipment.



PACKAGE/MATERIAL HANDLER:

In order to effectively communicate with all warehouse personnel, equip material handlers with XPR 7000e Portable Two-Way radios, powered by the Capacity Max system. IMPRES Noise Cancelling Remote Speaker Microphones mitigate loud background noise throughout the warehouse and distribution center and keep all package handlers connected.



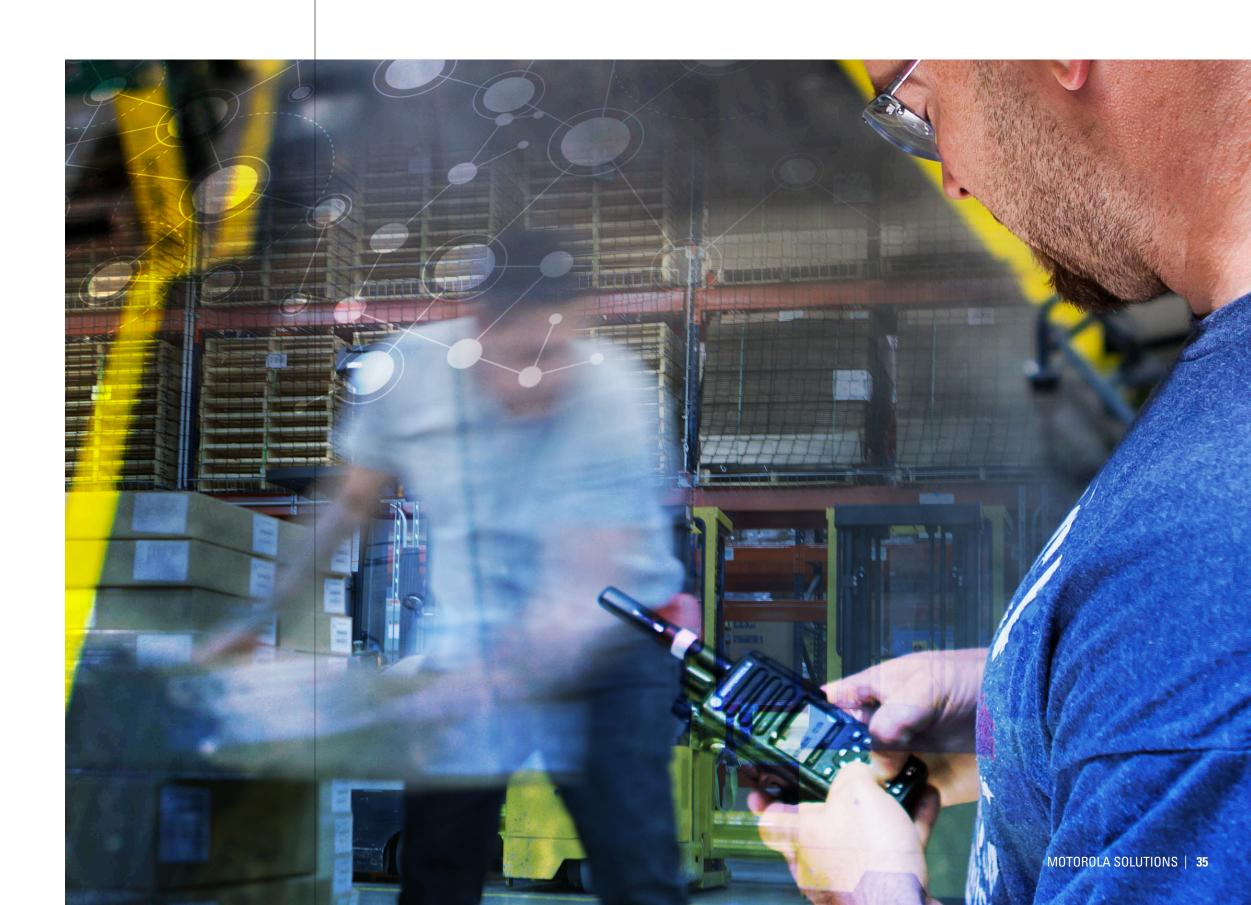
MANAGER:

While in the office or away on business, warehouse managers can still communicate with their entire distribution staff. With the WAVE Pushto-Talk Application on their smartphone, they can communicate with all employees, no matter which device they are using.



П

With Essential Services for your MOTOTRBO platform, IT Managers can manage the complexity of their distribution communications. Expand voice capabilities with premium features like noise cancellation and Bluetooth audio. Extend the life of your communications investment with expert hardware repair. Ensure the security, reliability and functionality of your communications with access to the latest MOTOTRBO software.



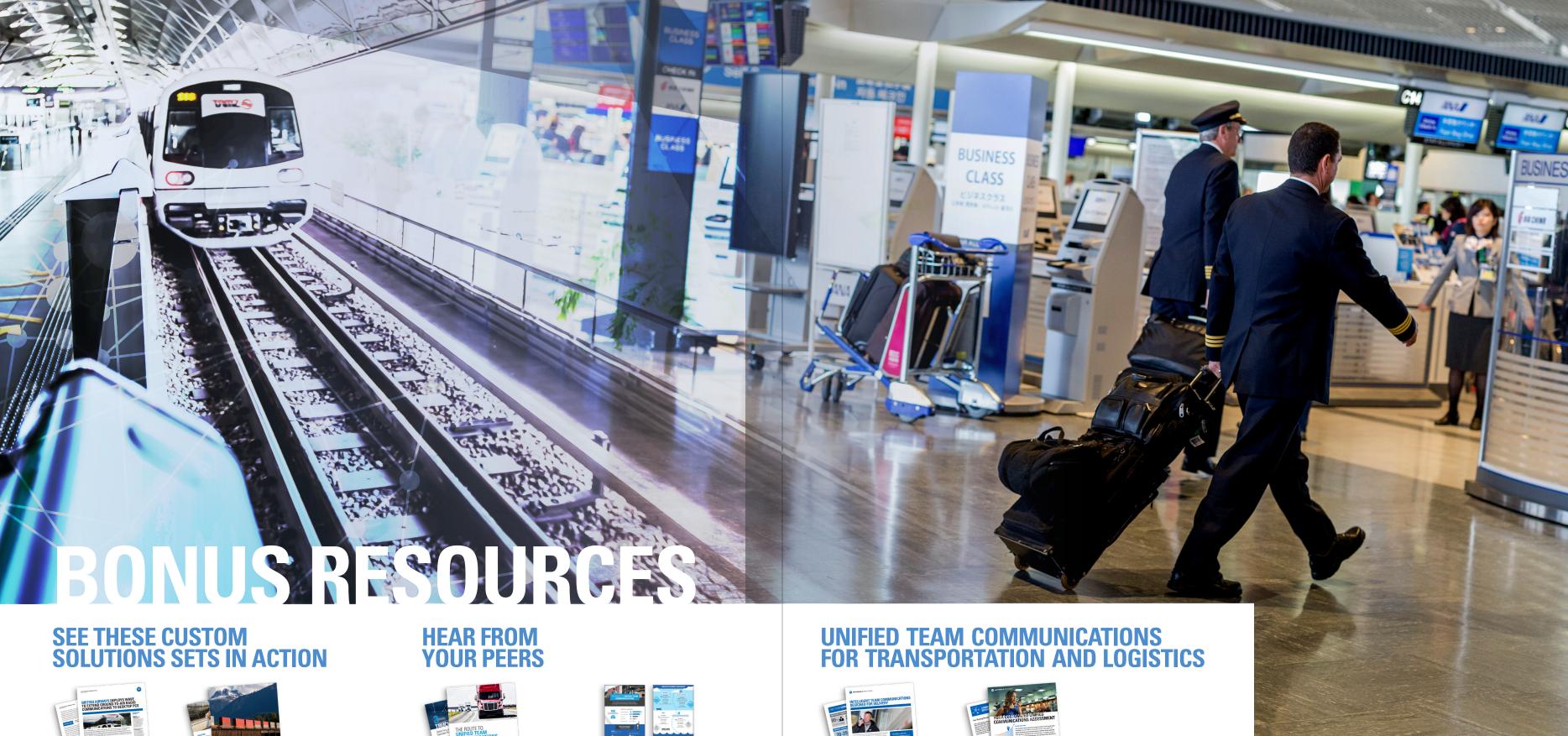
CONCLUSION

Motorola Solutions understands the realities of logistics and delivery, and constantly innovates communications solutions to meet your business needs. Our Team Communications platform includes two-way digital radios, push-to-talk and added intelligence applications, accessories and support services. By seamlessly integrating voice and data into a single, cost-effective solution, your personnel can collaborate more efficiently wherever they work.

The clear, reliable audio and advanced data capabilities of our MOTOTRBO two-way digital radios and high performance, scalable Capacity Max radio system keep your personnel productive and safely connected over a wider area, without interference or distracting static. WAVETM Workgroup Communications enable employees on radios, smartphones, tablets and laptops to communicate seamlessly with one another via instant push-to-talk. Enterprises worldwide are transforming their workplace with the MOTOTRBO digital platform and expertly-integrated systems, applications, accessories and services.

Motorola Solutions helps you connect people, fleets and locations to streamline operations, keep your workers safe, control costs and drive your business further. From road to rail, from the skies to the loading docks, we have communications solutions tailored for every part of your business journey.











Watco Transportation **Services**



2017 Transportation and Logistics Survey Report



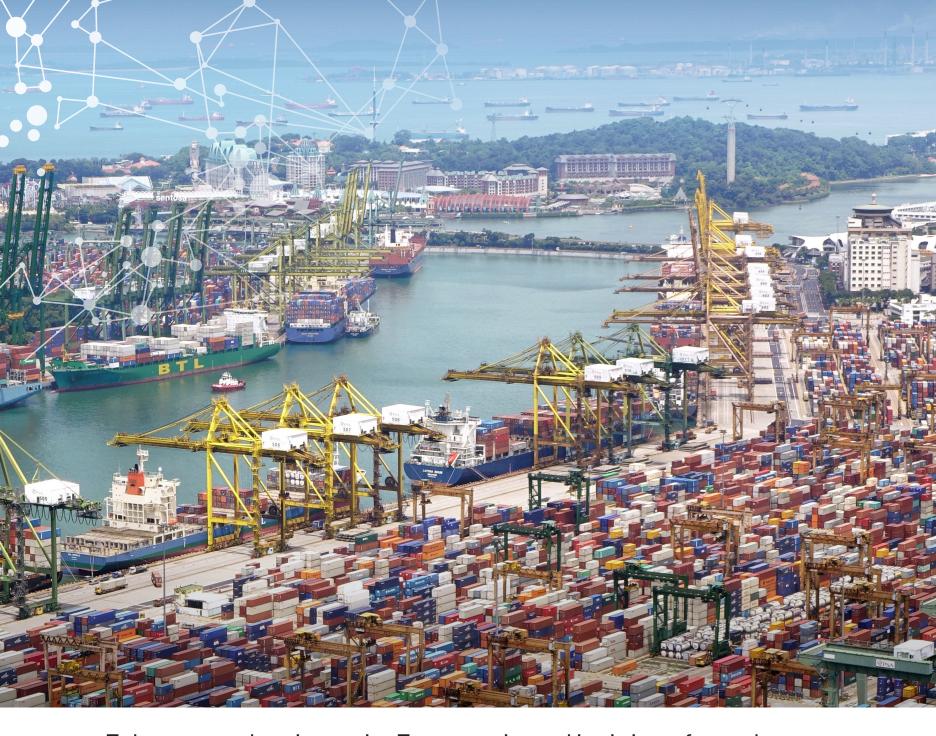
2017 Transportation and Logistics Survey Infographic



Team Communications Solution Brief



Are you a Now or Later communicator? Find out!



To learn more about increasing Transportation and Logistics safety and efficiency through enhanced communication with MOTOTRBO and WAVE, please visit motorolasolutions.com/transportation.

