MOTOROLA SOLUTIONS
Status and updates

THIS IS YOUR
MOMENT
EXPAND & EXCEL

MONDAY 05 JUNE

Introduction to Motorola Solutions	Nicolai Peter Christensen
Status of the Current Supply Situation	
Introduction to MOTOTRBO R2	
Introduction to MOTOTRBO R7	
MOTOTRBO R-series - Why?	James Kenyon
Future Outlook of the Radio Industry	
Cybersecurity	

WE HELP PEOPLE BE THEIR BEST IN THE MOMENTS THAT MATTER

We provide the technologies that connect those in need to those who can help.
To find efficiencies, prevent crises, save lives.

MOTOROLA SOLUTIONS

INTEGRATED TECHNOLOGY ECOSYSTEM

Flexible technology platforms to create a safer world.

LAND MOBILE RADIO COMMUNICATIONS

CUSTOMERS
COMMUNITY

VIDEO SECURITY & ACCESS CONTROL
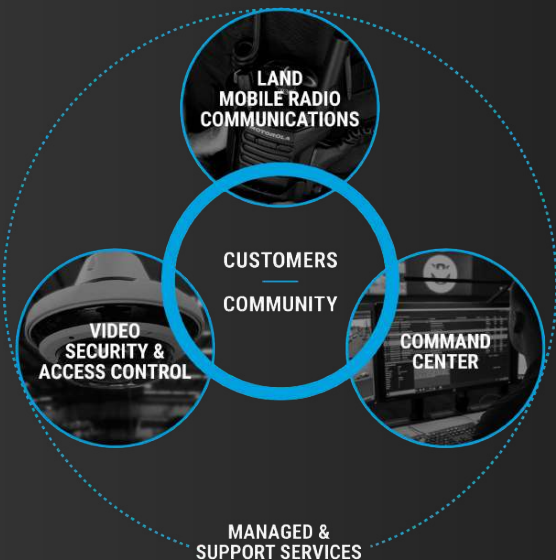
COMMAND CENTER

MANAGED & SUPPORT SERVICES

Motorola Solutions is a global leader in public safety and enterprise security.

We have created the most integrated **technology ecosystem** to help make communities safer and businesses stay productive and secure.

WHAT WE DO

The mission-critical ecosystem for public safety and enterprise security.

LAND MOBILE RADIO COMMUNICATIONS	COMMAND CENTER	VIDEO SECURITY & ACCESS CONTROL	MANAGED AND SUPPORT SERVICES
13K private two-way radio networks	**100M+** incidents managed through our software	**320K** daily hot list alerts	**1.3B** events proactively monitored each day
100K customers around the world	**59%** 911 public safety answering points rely on our software	**40%** enforcement agencies using our video systems	**65%** mission-critical networks using our services

## OUR ECOSYSTEM IS PROVEN IN SUPPORTING OUR CUSTOMERS EVERY DAY

MOTOROLA SOLUTIONS

LAND MOBILE RADIO COMMUNICATIONS

Mission-Critical Voice + Multimedia Collaboration

Protect your push-to-X lifeline.
So you're always connected.

We build infrastructure and devices that enable mission-critical communications, so the lifeline is always in reach. By reinforcing radio with broadband capabilities, we enable the instant voice and multimedia collaborations that keep our users safe and aware when it matters most.
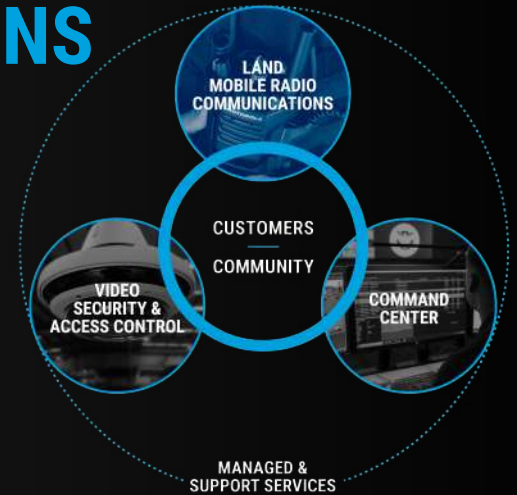
Global leader in every two-way radio standard and LTE solution.

- APCO P25
- TETRA
- Digital Mobile Radio
- Professional Radio Standards
- Public and Private LTE Networks
- Purpose-Built Broadband Devices
- Broadband Push-to-X
- LMR/LTE Interoperability

COMMAND CENTER

Unified Data + Integrated Workflows

Bring clarity to decisions and simplify workflows from emergency call to case closure.

We build software for public safety environments and enable the collaborations where every second matters. By allowing information to flow seamlessly from call to case closure, we reduce the strain on critical personnel and restore focus on the communities our customers serve.

End-to-end software suite designed for the public safety workflow.

- Community Engagement
- Emergency Call Management
- Voice and Computer Aided Dispatch
- Real-Time Intelligence Operations
- Field Response & Reporting
- Records and Evidence Management
- Analysis and Investigations
- Jail and Inmate Management

VIDEO SECURITY & ACCESS CONTROL

Advanced Capture, Analysis + Management

Learn what's happening.
Act with certainty.

We combine AI-powered security cameras, video management software and infrastructure, and access control to advance a security system from passive observation to active response. Our unified video security and access control solutions provide real-time awareness for rapid authentication. We help instantly recognize what's important to make critical decisions in the moments that matter.
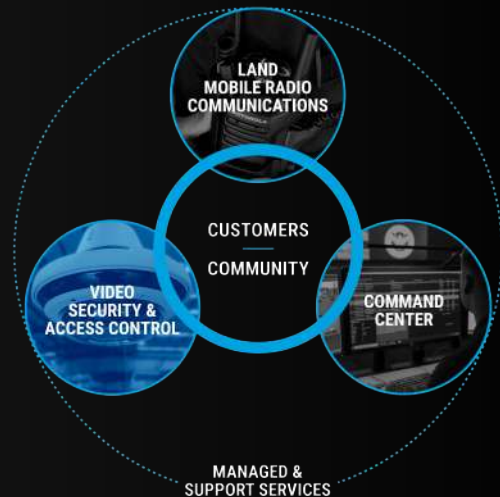
Trusted video and analytics solutions for public safety and enterprise security operations.

- Video Cameras
- Video Recorders and Encoders
- Network Video Management
- Access Control Solutions
- AI-enabled Video Analytics
- Body-worn Cameras
- In-car Video Systems
- License Plate Recognition

OUR SCALE AROUND THE WORLD

100K customers in more than 100 countries around the world.

$9.1B

70%

NORTH AMERICA

30%

INTERNATIONAL

ANNUAL REVENUE 2022

PRODUCTS & SYSTEMS INTEGRATION $5.7B

SOFTWARE & SERVICES $3.4B

MOTOROLA SOLUTIONS

$734M R&D ANNUALLY
6400 PATENTS AWARDED
1000 PATENTS PENDING
—

WE INNOVATE BY OBSESSIVELY LEARNING HOW OUR CUSTOMERS OPERATE

Photo: APX NEXT Customer Feedback Session
Numbers as of December 2021

MOTOROLA SOLUTIONS

PERFECT STORM STILL EXISTS …

Semiconductor Industry

Electronic Lead Times

Environmental Events

Transportation cost / delays

Covid-19

THIS IS YOUR
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EXPAND & EXCEL

MOTOTRBO™ R-series
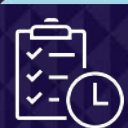## MOTOTRBO R2 and R7

KEY FEATURES

SLEEK & TOUGH

-BUILT TO OUTPERFORM
-SLIM & LIGHTWEIGHT
-FULL-SHIFT LIFE

LOUD AND CLEAR

- SHARP, CLEAR AUDIO
- BE HEARD ABOVE ALL ELSE
- CUSTOMISABLE AUDIO EXPERIENCE

WORK UNINTERRUPTED

-CUSTOMIZABLE USER EXPERIENCE
-IMPROVED BASICS
-SEAMLESS INTEGRATION

MOTOTRBO
R2

MOTOTRBO R2
Our Newest Entry Tier Radio

MOTOROLA SOLUTIONS

ACCESSORY COMPATIBILITY
FOR EASIER ADOPTION

The MOTOTRBO R2 is compatible with a variety of DP1400 audio and charger accessories and DP4000e Series antennas to make adoption easier for existing MOTOTRBO users.

AUDIO

ENERGY

CARRY

ANTENNAS

ALL-WEATHER CONFIDENCE

**TESTED TO MEET MILITARY STANDARDS
BUILT TO SURVIVE THE WORKDAY'S BUMPS AND BRUISES**

- Meets MIL-STD-810 requirements across 11 environmental conditions

- Endures our rigorous Accelerated Life Testing (ALT) program, which simulates up to 5 years of field use

- IP55: Protected from dust particles and low-pressure water jets at any angle

- Ruggedised form factor for impact resilience

- Glove friendly

- -20°C operation with battery

BLOCK OUT THE NOISE

MOTOTRBO R2 SHINES IN NOISY WORK ENVIRONMENTS; YOU WILL HEAR AND BE HEARD FROM ALL CORNERS OF THE WORKPLACE

- SINC+ noise suppression* uses advanced algorithms to single out and eliminate disruptive background noise.

- Communicate with clarity to stay safe near a punch press, pneumatic drill, bulldozer and more.

* SINC+ is a chargeable option

KEEP IT CLEAR

CUSTOMISE YOUR AUDIO TO SATISFY LISTENING PREFERENCE AND ENVIRONMENTAL CONDITIONS

- Select an audio profile to amplify low, middle or high frequencies to suit the listening environment

- Powerful speaker and low distortion ensure your message comes across loud and clear

LOW   MIDDLE   HIGH
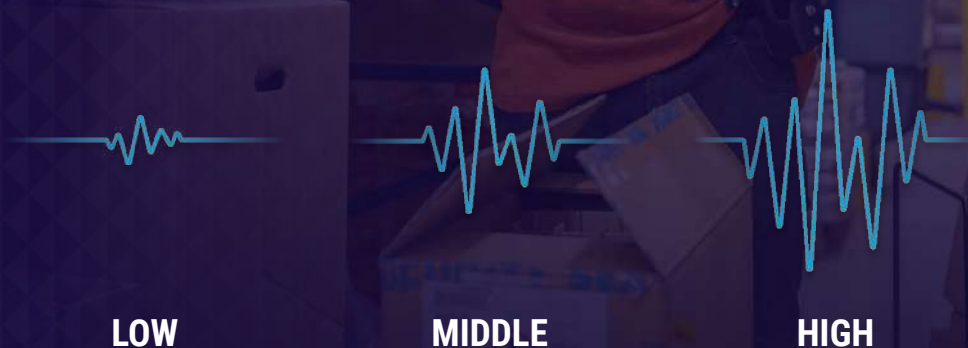
FOOLPROOF
PTT ACTIVATION

MANAGE YOUR DAY-TO-DAY WITHOUT SKIPPING A BEAT

- The contoured, large push-to-talk (PTT) button is quick to locate and activate

- For further convenience, attach the Remote Speaker Microphone (RSM) to communicate without reaching for your belt

KEY HIGHLIGHTS

GENERAL
- VHF (136-174) or UHF (400-480)
- Analogue only, or analogue/digital
  - Analogue only model can be upgraded to analogue/digital[1]
- ETSI TS 102 361-1,-2,-3 / DMR Tier II
- PL / DPL / QCII / MDC1200
- 64 channels
- Up to 26.5 hours runtime[2]
- MIL-STD 810C/D/E/F/G/H and IP55
- Operating temperature with battery -20 °C to 60 °C

AUDIO
- Loudness up to 101 phon
- SINC+ noise suppression[1]
- Automatic gain control
- Received audio levelling
- Acoustic feedback suppression
- User selectable audio profiles

SAFETY
- Lone Worker
- Remote monitor
- Transmit Interrupt

SECURITY
- Radio disable/enable
- Enhanced privacy[1]
- Analogue scrambling
- Secure Enhanced Linux operating system

USABILITY
- Voice announcement
- Home channel reminder
- Pre-programmed text messaging
- 2 programmable buttons
- Voice announcement
- Dual priority scan

SYSTEMS CAPABLE
- Single-site conventional
- Extended Range Direct Mode
- Dual Capacity Direct Mode
- IP Site Connect[1]
- Capacity Plus single site, 2 repeaters[1]

[1] Chargeable option [2] High capacity battery, digital mode 5/5/90 profile

MOTOTRBO™ R7

Our Newest High-Tier Radio

MOTOTRBO
R7

MOTOROLA SOLUTIONS

SHARP & CLEAR AUDIO

HEAR AND BE HEARD MORE CLEARLY THAN EVER BEFORE, THE FIRST TIME

- Adaptive Dual Microphone Noise Suppression for game-changing noise cancellation

- Automatic Acoustic Feedback Suppression cancels out the feedback of other close-by radios

- Intelligent Audio monitors background noise and adjusts speaker volume automatically

- IMPRES™ technology ensures R7 works seamlessly with your Motorola Solutions accessories

BE HEARD
AUDIO SUPPRESSION IN ACTION

https://www.youtube.com/watch?v=nFIyy6WhmMU

BE HEARD
ABOVE ALL ELSE

UNPRECEDENTED LOUDNESS, SO YOUR TEAM CAN HEAR IN ANY SITUATION

- Re-engineered with a more powerful speaker

- 102 phons = 4x louder than a shouting conversation

- Programmable extra loud profile reaches up to 107 phons

DURABLE & ROBUST DESIGN

More robust overall including an **improved side connector** design that prevents the likelihood of failure thus reduces total cost of ownership in the longer run.

Corrosion proof side connector eliminates the need for a dust cover.

BUILT TO **OUTPERFORM**

TESTED TO MEET MILITARY STANDARDS.
BUILT TO OUTPERFORM WHATEVER IS THROWN ITS WAY.

- MIL-STD 810 C,D,E,F,G and H

- IP68: Dust-tight, water immersion up to
  2 metres for 2 hours

- Ruggedised screen for impact resilience

- Housing resists disinfectants and
  decontamination substances[1]

- TIA4950 Intrinsically safe option for
 operation without the risk of ignition or fire

1. Please refer to the MOTOTRBO R7 user manual for a list of tested disinfectants and decontamination substances.

PROGRAM WITH EASE

MINIMISE DOWNTIME, MAXIMISE EFFICIENCY

- Program over the air

- Remote software updates

- Huge productivity savings and allowing users to continue

  communicating throughout the update process.

- Functionality available using Wi-Fi.
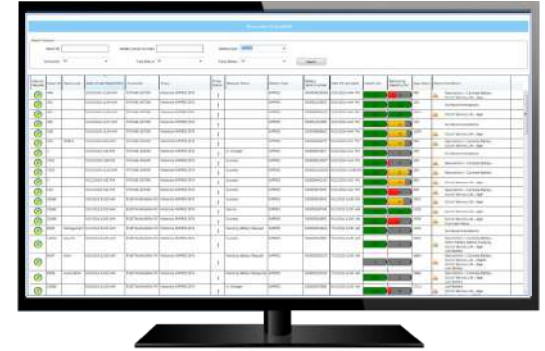
STAY INFORMED WITH
SENSOR VITALS

Prioritise safety with optional radio sensor features.

MOTOTRBO Sensors

- Man Down sensor
- Lone Worker sensor

Industry Standard (IEEE) compatible with 3rd party BLE sensor.

- Heart rate monitor
- Temperature monitor

EXTEND THE LIFE OF YOUR RADIO

NOTIFICATIONS

BATTERY HEALTH
Alerts when the efficiency of the battery is less than 60%

PREVENTATIVE MAINTENANCE
Set a programmable duration when the R7 requires servicing. "Service Recommended"

SOFTWARE UPDATE
Software update notification
Service contract

MOTOROLA

12/09/2021

Zone B
Channel 1

Message
Erin.B

Zones   Contacts

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Available on R7,R2, DP4000e series, DM4000e series, DP3000e series, DP2000e series, DP4000 Ex series

NEW ENHANCEMENTS

R7 ASSET TRACKING
Keep track of what's important quickly and easily.

RFID   **NFC**

R7 DISPLAY WIDGETS
See at first glance battery information from the large, on-screen widget.

57%

EMERGENCY ALERT
Can be manually pressed or activated through a fall alert.

RECORDING TRIGGER
The VB400 is triggered to start recording upon activating the emergency button, fall alert or lone worker.

VB400 Emergency Alert available on R7, DP4000e and DP3000e series.

MOTOTRBO RADIO INTEGRATION

COMING SOON

RECORDING TRIGGER
The VB400 starts recording upon receiving emergency signal from radio.

MOTOTRBO EMERGENCY ALERT
Can be manually pressed or activated through a fall alert.

SERVICE SUPPORT
PROTECTING YOUR INVESTMENT

SUPPORTED WITH SERVICE PACKAGE	NO SERVICE PACKAGE OR SUPPORT
SYSTEM SOFTWARE RELEASES • Latest SW & Security patches available to install	**SYSTEM SOFTWARE RELEASES** • SW upgrade not possible
TECHNICAL SUPPORT • Dedicated Helpdesk • Access to MSI's Global technical support	**TECHNICAL SUPPORT** • Not available
DEVICE COMPATIBILITY • Voice and Features tested for previous three SW releases	**DEVICE COMPATIBILITY** • Voice and feature compatibility not tested
HARDWARE REPAIR • Qualified MSI Technicians • Genuine Parts with warrantied repair	**HARDWARE REPAIR** • Can be more expensive than a Package • SW may need to be upgraded if necessary for repair

SERVICE SUPPORT
PROTECTING YOUR INVESTMENT

SERVICES PACKAGES AT-A-GLANCE

	5YR ENHANCED WARRANTY	5YR ENHANCED WARRANTY with HW Repair **	5YR ENHANCED WARRANTY with HW Repair and Accidental Damage **
Accidental Damage			✓
Hardware Repairs		✓	✓
Standard Hardware Warranty*	✓	✓	✓
MyView	✓	✓	✓
Technical Support	✓	✓	✓
Software Maintenance	✓	✓	✓
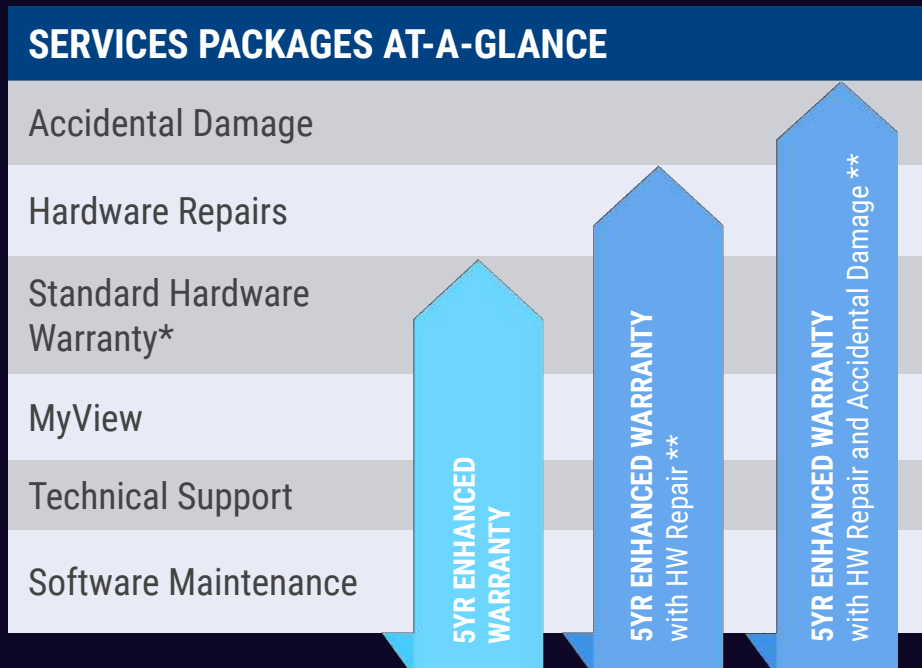
* 2 Years Manufacturing Defects Only
** Optional Add Ons

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Questions?

RADIO EVOLUTION

Refreshing our radio portfolio for the future

2007 — MOTOTRBO Gen 1

2009 — MTP800 Series

2011 — MOTOTRBO Gen 2

2012 — MTP3000 Series

2013 — MTP6000 Series

2016 — MOTOTRBO Gen 2 Refresh

2017 — MTP6650

2019 — TLK 100 / TLK 150

2020 — MXP600

2021 — MOTOTRBO Ion

2022/2023 — MOTOTRBO R Series, TLK 110

THIS IS YOUR **MOMENT** EXPAND & EXCEL

IMAGES NOT TO SCALE

TETRA   MOTOTRBO   WAVE PTX

WHAT'S NEXT? >>

MOTOROLA SOLUTIONS

$5B invested since 2015.

VIDEO SECURITY & ACCESS CONTROL

	2018	2019	2020	2021	2022
		VaaS			Calipsa
		AVMTRAC	FELCO	Envysion	VIDEOTEC
	AVIGILON	WATCHGUARD	IndigoVision	openpath	AVA SECURITY

COMMAND CENTER SOFTWARE

2015	2016	2017	2018	2020	2021	2022
EMERGENCY CALLWORKS	Spillman technologies, inc.	KODIAK	PLANT+CML	callyo	911 Datamaster	RAVE MOBILE SAFETY

CRITICAL COMMUNICATIONS

2019	2020	2022
AVTEC	Polaris Networks	TETRA / BARRETT / FUTURECOM

SERVICES

2016	2017	2020
AIRWAVE	inter export	DELTA RISK
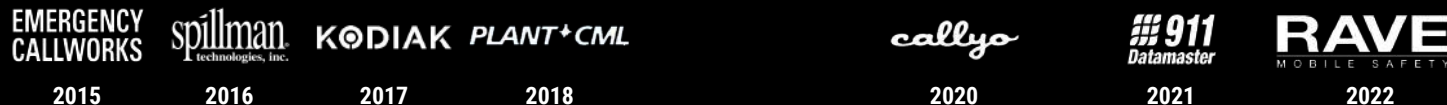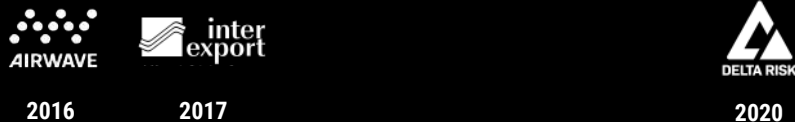
HOW MOTOROLA IS RESPONDING TO CUSTOMERS' NEEDS

MOTOTRBO

REFRESHING OUR PORTFOLIO

R7   R2   Rx

NEW SOFTWARE FEATURES!
2023.01

CYBER SECURITY
NIST Framework
Device Hardening

ORCHESTRATE

VIDEO SECURITY & ACCESS CONTROL

AVIGILON ALTA

LTE PORTFOLIO
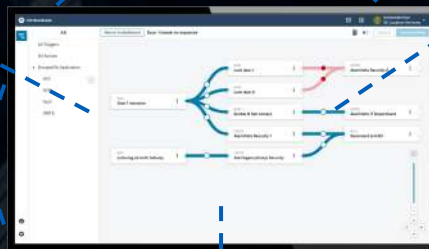
NEW BROADBAND PTT SOLUTIONS!

TLK100   TLK110

MOTOTRBO ION

WAVE PTX

EVOLVE   BYOD

INNOVATING TO GROW OUR LAND MOBILE RADIO SOLUTION

WHY 'R' SERIES?

COLLABORATION CONNECTIVITY

BROADBAND PTT OVER WI-FI BODY WORN VIDEO SMART APP

VOICE AS AN INTERFACE

SIMPLE COMMANDS AND BASIC QUERIES

BETTER BASICS

RELENTLESS FOCUS ON IMPROVING BATTERY LIFE, SIZE, AUDIO, UI….,

SECURITY ENHANCEMENTS

HARDENING OUR SOLUTIONS AND IMPROVING CYBERSECURITY

CLOUD-BASED SOLUTIONS

LEVERAGING CLOUD TO SIMPLIFY SOFTWARE DELIVERY AND PATCH UPDATES

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EXAMPLES OF BREACHES IN THE MARKET

Weekly cyber-attacks have increased worldwide by 7% in Q1 2023 compared to the same period last year, with each firm facing an average of 1248 attacks per week.
Info security group 2023

28 APR 2023 NEWS
Global Cyber Attacks Rise by 7% in Q1 2023

Manufacturing was the most targeted sector for ransomware attacks in 2022, says IBM

Cyber Attack Hits NHS 111 Emergency Line in UK: Telegraph
- Breach affects 85% of the services provided by the hotline
- Patients advised it could take longer for calls to be answered

Lawyers lead 'war game' drills to prepare clients for cyber attacks
Business leaders turn to law firms for advice as data loss and other IT breaches become a growing concern

$4.35M
Average cost of a data breach in 2022
IMB 2022

2 minute read · February 6, 2023 1:02 AM GMT · Last Updated 3 months ago
Italy warns hackers targeting known server vulnerability
Reuters

Holiday Inn hotels hit by cyber-attack
6 September 2022

Nordics move towards common cyber defence strategy
Nordic countries agree to work together to improve their cyber defences amid increasing threat

Securing Energy and Utility Sectors Amid CNI Cyber Threats
The energy and utility sectors face a unique set of cybersecurity challenges at a time when threats towards critical national infrastructure (CNI) are at a heightened level because of the Ukraine-Russia conflict.

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OUR CYBER SECURITY RESILLIENCE
OUR APPROACH

motorolasolutions.com/cybersecurity

CYBER SECURITY COMPONENTS

NIST CYBER SECURITY FRAMEWORK

TLS-PSK AUTHENTICATION

SECURE ENHANCED OPERATING SYSTEM

DIGITAL CERTIFICATES

| 16-bit | 40-bit | AES-256 |

BLUETOOTH 5.2 LEVEL 4 / Wi-Fi WPA3

THE 4 PILLARS OF MOTOROLA STRATEGY

MANAGED & SUPPORT SERVICES

COMMAND CENTER SOFTWARE SUITE

VIDEO SURVEILLANCE & ANALYTICS

MISSION CRITICAL COMMUNICATIONS:

LAND MOBILE RADIO + BROADBAND

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Questions?

THANK YOU

MOTOROLA SOLUTIONS

WAVE PTX
TAKING PTT FURTHER

June 2023
Dan Faulkner | Expansion Technology Sales Director EMEA

MOTOROLA SOLUTIONS

WAVE PTX

LAUNCHED & AVAILABLE

WAVE PTX EMEA Total Activations Since Launch

Q3 '19 Q4 '19 Q1 '20 Q2 '20 Q3 '20 Q4 '20 Q1 '21 Q2 '21 Q3 '21 Q4 '21 Q1 '22 Q2 '22 Q3 '22 Q4 '22 Q1 '23 Q2 '23

- Motorola Solutions launched the **WAVE PTX** service in 2019

- Hosted in **Microsoft Azure** cloud leveraging the secure & scalable environment

- Serving the EMEA & SSA regions with 1000's deployments **throughout the region** delivered by 100's of channel resellers

- Solid growth month on month delivering **recurring revenue** via our trusted channel partners

WAVE PTX

- Network-independent broadband push-to-talk subscription service from Motorola Solutions

  - Combines speed and simplicity of push-to-talk with power of multimedia communications, all at the touch of a button

  - With Land Mobile Radio (LMR) interoperability to reach more team members over a wider area than ever before

  - Helps business and enterprise organisations work more efficiently and effectively

KEEPS TEAM MEMBERS CONNECTED ON-SITE, REGION-WIDE OR EVEN CROSS-BORDER

WAVE PTX PORTFOLIO
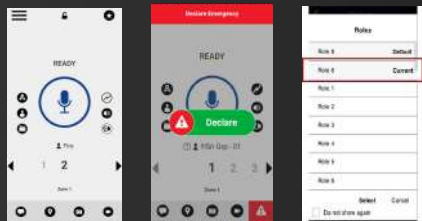
MOBILE APPLICATION

Turn your phone into a PTT handset and get instant communication at the touch of a button

DISPATCH APPLICATION

Login from any Internet connection and manage your mobile workforce from anywhere

LMR INTEROPERABILITY

Seamless voice communication between WAVE PTX users and those on LMR networks

DEVICES BUILT FOR PTT

Purpose-built and specialized devices provide the right fit for each role and budget

WAVE PTX DEVICE OPTIONS

FIND THE RIGHT OPTION FOR EACH NEED

- BYOD - bring your own device and network

  o Turn Android or iOS smartphone or tablet into PTT device with the WAVE PTX Mobile Application

  o Utilize existing networks

- Use purpose-built and specialized devices from Motorola Solutions

  o TLK 100/110/150 (Options for Embedded SIM & SIM Free)

  o Evolve and LEX L11

  o Support for specific 3rd party devices

WAVE PTX MOBILE APPLICATION

NOTHING IS FASTER THAN PTT

- Group & private PTT calling
- Real-time presence
- Location services
- Text messaging
- Push videos, image, and files
- Background calling
- Voice message fallback
- Communication history
- Soft or hard PTT buttons

WAVE PTX SAFEGUARD PACKAGE

ENHANCE SAFETY. IMPROVE SITUATIONAL AWARENESS

Emergency Calling

Ambient Listening

Discreet Listening

Large Talkgroups

LMR Interoperability

Remote User Check

Enable/Disable

Dynamic, Area-based Groups*

*   Dispatch only feature
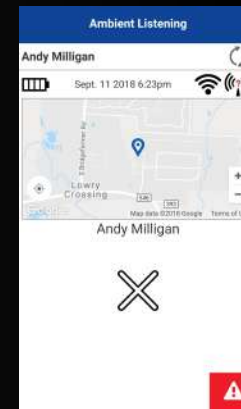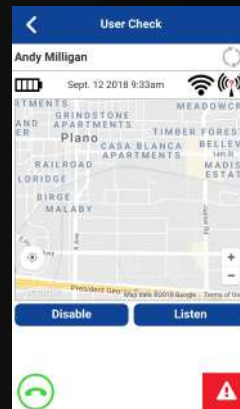
MOTOROLA SOLUTIONS BROADBAND DEVICE OPTIONS

Evolve

SIM Free

TLK Two-Way Series
Radios

Embedded SIM / SIM Free

LEX L11

SIM Free

TLK SERIES TWO-WAY RADIOS

GET THE JOB DONE

TLK 110 and TLK 100 portables and TLK 150 mobile are:

Easy to use and manage

- Communicate instantly and manage talkgroups and subscriptions in real time.

Built for the job

- Get the benefits of WAVE PTX with a rugged two-way portable or mobile radio.

Communicate without limits

- PTT communication available within a building, across town, nationwide or even multi-national.

TLK SERIES TWO-WAY RADIOS

CHOICE & FLEXIBILITY

Embedded SIM or SIM Free devices

EMBEDDED SIM

- EU wide, multi network roaming SIM
- Simple setup via WAVE Admin Portal
- Utilises **WAVE Wireless Service** Subscription
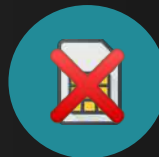
SIM FREE

- SIM card provided by customer/ partner/ distributor
- APNs pre configured into TLK device firmware
- Option to add custom APN via WAVE Admin Portal
- Allows customers to use their own SIM
- Take control of the network coverage & capacity
- Utilises **WAVE SIM Free** Subscription

2019 ———————————————— **2023**

TLK 100

THE FIRST WAVE PTX DEVICE
SIMPLE PTT
CLEAR AUDIO
COMMUNICATION WITHOUT BOUNDARIES

TLK 110

RICHER IN FEATURES
SAFETY AT THE HEART
RUGGED
AI NOISE SUPPRESSION

INTRODUCING TLK 110 PORTABLE

DEDICATED EMERGENCY BUTTON

CHANNEL SELECTION TOGGLE

RUGGED & WATERPROOF (IP67)

LOCATION

AI-BACKED NOISE CANCELLATION

LARGE PTT BUTTON

PROGRAMMABLE BUTTON

2-LINE MONOCHROME DISPLAY

VOLUME CONTROL

LONE WORKER/ FALL ALERT

INTELLIGENT VOX PTT
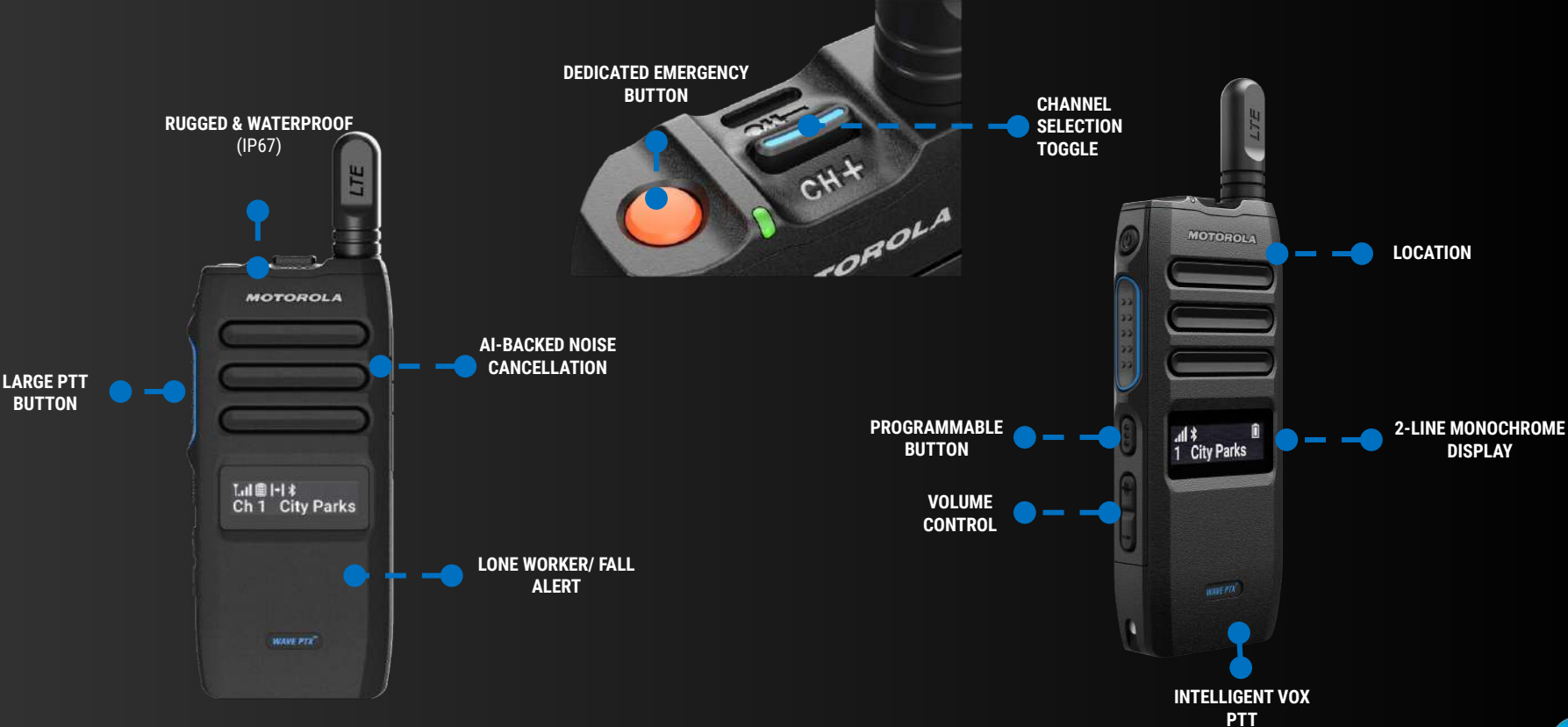
TLK 110 FALL ALERT

GET HELP TO FALLEN
WORKERS

- Identifies when a worker has fallen or stopped moving

- Automatically initiates emergency call to assigned group or individual

- Configurable parameters include angle, movement, pre-alarm and alarm durations

- Provides assurance to workers in hazardous environments that help will be alerted if they fall or are otherwise injured

Private security guard on patrol in remote part of industrial park slips and falls

Guard is knocked unconscious and unable to call for help

TLK 110 detects that the device is at an unusual angle and that movement has stopped

Fall Alert Duration timer expires and an emergency call is initiated to a dispatcher for assistance

Quick, efficient response keeps the guard safe

TLK 110 LONE WORKER

KEEP SOLITARY WORKERS SAFE

- Automatically starts response timer

- If no user activity detected before timer expires, initiates emergency call to right personnel for assistance

- Response timers, reminder timers and emergency contacts configurable for each user

- Solitary workers reassured help will be provided even if they are unable to request it

Refinery valve ruptures spraying solitary worker with noxious chemical

Worker is incapacitated and unable to call for help

Response and Reminder timers expire without any user activity detected, indicating that assistance is needed

An emergency call is initiated to the worker's supervisor who immediately sends help

Quick, efficient response keeps the worker safe

EVOLVE

RUGGED LTE HANDHELD

DEDICATED PUSH TO TALK BUTTON

FIXED LTE ANTENNA

EMERGENCY BUTTON

CHANNEL ROCKER

ON/OFF/VOLUME CONTROL

MOTOROLA

3:20

Zone 1
Channel 1

MOTOTRBO ION | WAVE PTX CAPABLE

BUSINESS READY - VOICE & DATA

- Android platform - Intuitive user interface
- Multimedia capabilities
- Compatible with WAVE PTX Mobile App (full feature list)
- Option for Seamless Roaming with MOTOTRBO (voice only)
- Team PTT across different devices, networks, and locations
- Communicate with devices you already have
- Instantly connected to you team wherever they're located

VOICE COMMUNICATIONS ACROSS NETWORKS

AUTOMATICALLY SWITCH TO BROADBAND WHEN RADIO SIGNAL FADES

AUTHENTICATION, STATUS, TALKGROUPS, AND ENCRYPTION PRESERVED
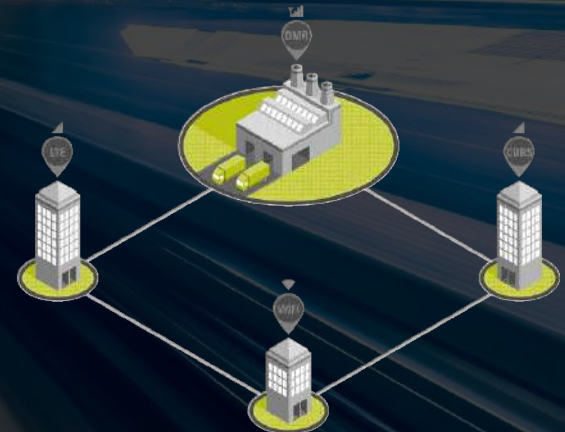
WAVE PTX DISPATCH APPLICATION

DISPATCH APPLICATION

- Web-based solution makes dispatching available from any Internet connected PC

  o No software to install or update

  o Supported on Chrome and Firefox browsers

- Customizable user interface allows dispatcher to undock key functions, such as History, Messages, Monitored Talkgroups, and drag them to a new screen

PTT COMMUNICATION

COMMUNICATE
INSTANTLY

- Reach out to an individual, a group or your entire organization at the click of a mouse

Call activity

Monitored talkgroups

Contacts & talkgroups

Instant personal, Missed call, and Emergency alerts
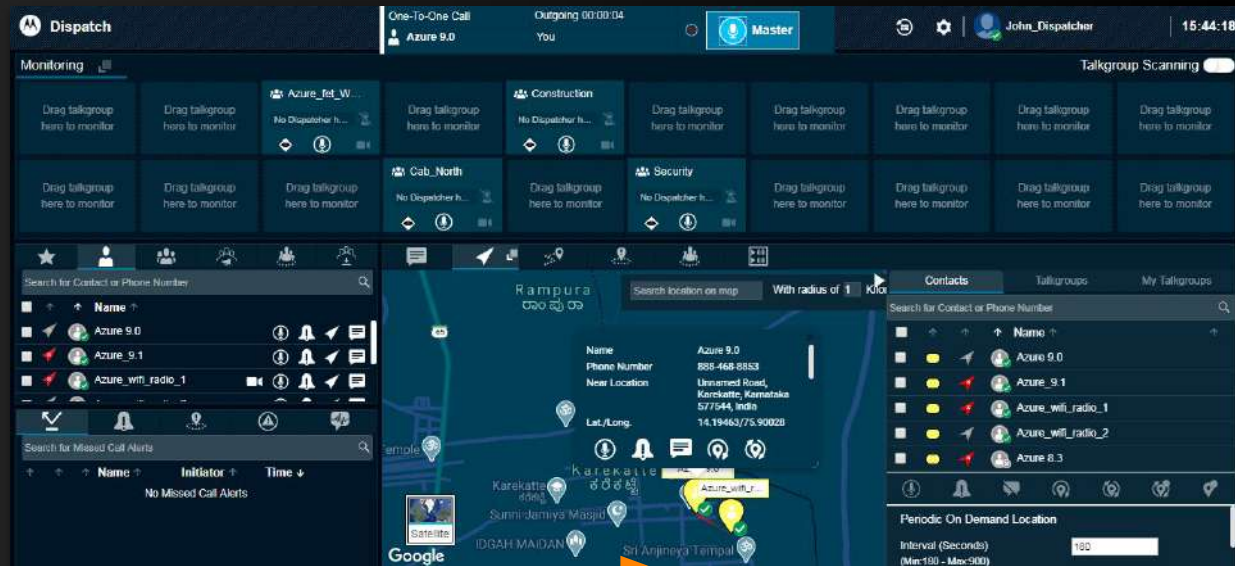
Map display

TALKGROUP MONITORING

- Monitor up to 20 talkgroups

- See activity on all monitored groups

- Select any talkgroup

- Create priority scan list
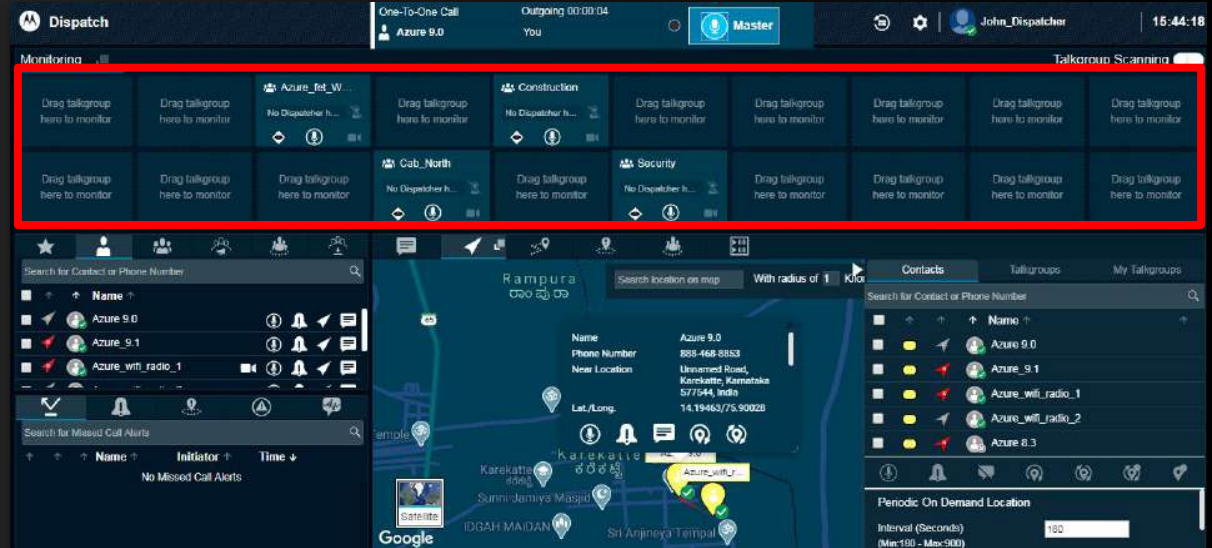
STREAMING VIDEO

Continuously stream video from your device at the push of a button

STREAMING VIDEO OVERVIEW
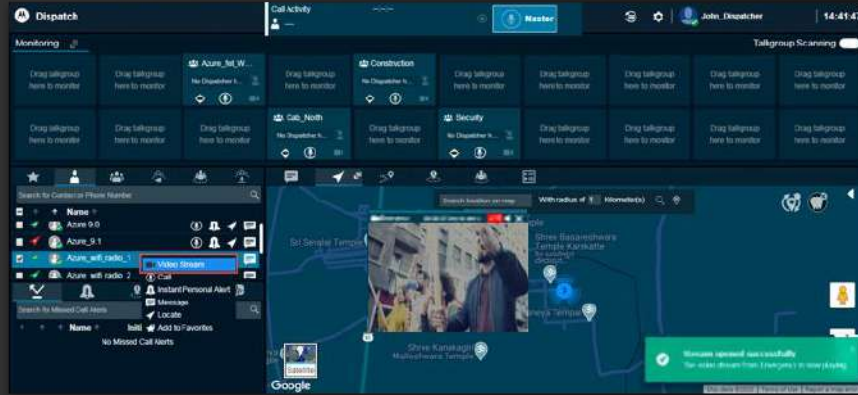
- Push Video – mobile user initiated streaming

- Pull Video – dispatcher initiated video

- Video streamed to individuals, defined groups, or ad hoc groups

- Simultaneously stream video and initiate/receive PTT calls

PUSH VIDEO

Dispatcher

Video Stream

Mobile User

- Users and dispatchers either receive notification of incoming video stream (manual answer) or video barges with tone (auto answer)

- ID provided for user streaming video

- PTT call and video audio can be mixed or call audio takes priority

- Past video streams shown in history

- For dispatchers only, monitored talkgroups show active video streams
  - Dispatchers can switch between active video streams

PULL VIDEO

Dispatcher
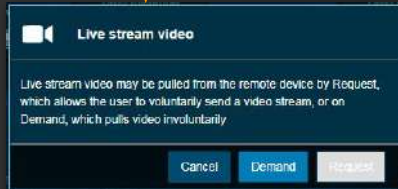
- Available to dispatchers only

- Dispatcher authorized to request video from user

  - *Confirmed Pull* – request is sent and video streaming starts upon user acceptance

  - *Unconfirmed Pull* – video streaming starts automatically upon receipt of request unless prohibited by user

- Monitored talkgroups show active video streams

INTEROPERABILITY WITH LMR NETWORKS

INTEROPERABILITY GATEWAYS

ONE GATEWAY. MULTIPLE CONVERSATIONS

RoIP	Single-Tenant	Multi-Tenant
Simple, quick and supports competitor and conventional radios	More capacity, one gateway per customer	Greater scalability, may serve multiple customers

All support interoperability with TLK 100/110/150, WAVE PTX Mobile app, and WAVE PTX Dispatch

COMPLEMENT LMR WITH WAVE PTX

WHEN YOU CAN'T BRING YOUR RADIO, BRING YOUR RADIO CHANNELS

EXTEND REACH

For PTT communication outside the coverage of the radio system

EXPAND USERS

For those who cannot or will not carry a two-way radio

INCREASE FLEXIBILITY

With one device for PTT and business applications

LMR INTEROPERABILITY

- MOTOTRBO/DIMETRA Express

  ○ Multi-tenant gateway for interop with shared DIMETRA Express/ MOTOTRBO networks, including MOTOTRBO IP Site Connect

  ○ Single-tenant gateway for interop with private MOTOTRBO Capacity Max and Capacity Plus networks

- Radio over IP

  ○ Cubic Vocality gateway for Radio over IP interop with non-MOTOTRBO/ DIMETRA Express systems
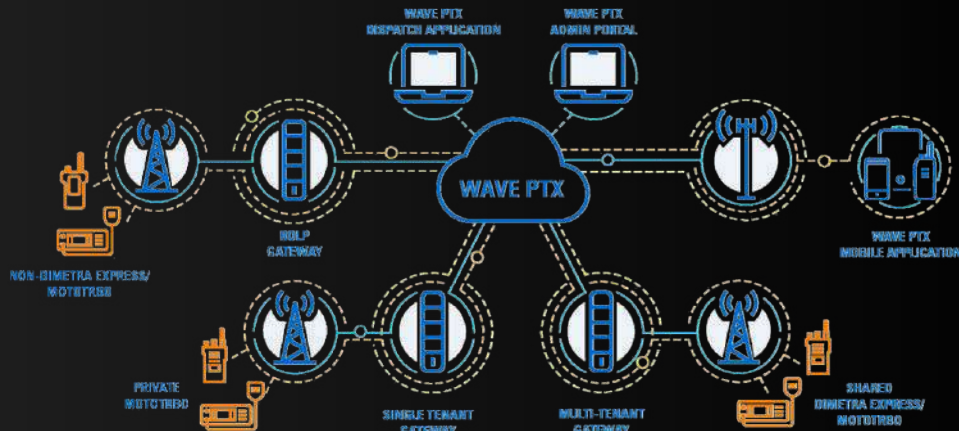
ADMINISTRATION

WAVE PTX CUSTOMER PORTAL

- **Simple & intuitive** user interface

- Access via **Web Browser** (Chrome, IE11 or Firefox)

- **Cloud based** configuration for all users, talkgroup, features

- **Quickly create**
  - Talkgroup and add users
  - Quickly add/ remove features

- **Multi-tenant** hierarchy, different Employees setup with different administration rights

- **Manage subscription** type - assigned different subscriptions to different users (Standard, Safeguard, Addons)

- **Manage specialist devices** (TLKs, Evolve & ION) features & firmware

- **Clone feature** allows for bulk configuration
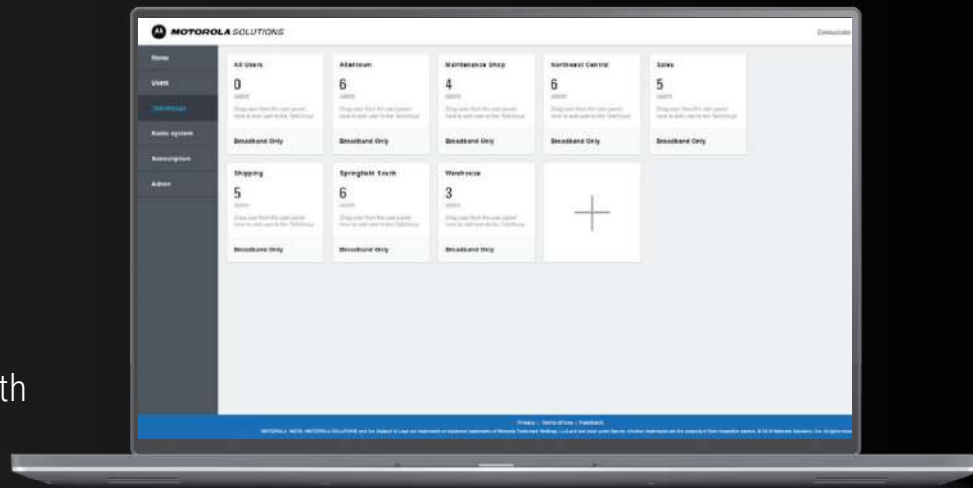
Q&A

THANK YOU

TLK110 | *WAVE PTX POWERED*

COMMUNICATION WITHOUT LIMITS

WAVE PTX POWERED

ENHANCED WI-FI SECURITY
WPA3

AI NOISE SUPPRESSION SYSTEM

GPS SKYHOOK COMPATIBLE

RUGGED
IP67 / MIL STD

EMERGENCY FEATURES

ADDRESSING COMPETITIVE GAP

- ✓ Thin and Lightweight Design
- ✓ 1 Pin Accessory Interface
- ✓ Extra Loud Audio Accessories
- ✓ USB C & Multi Unit Charger Pocket
- ✓ Antimicrobial Housing
- ✓ WAVE PTX Interop Gateway

MOTOROLA

LTE

1 City Parks

WAVE PTX

THIS IS YOUR
MOMENT
EXPAND & EXCEL

WAVE PTX POWERED | WEARABLE

PERSONALIZE & CUSTOMIZE | OPERATE EFFORTLESSLY | DAY-IN, DAY-OUT PERFORMANCE

INT...

Don't share

E...

VOICE ASSISTANT

IP67

- WAVE PTX Powered
- MSI SIM & SIM Free
- Up to 12 hour shift
- USB C & Multi Charging

MOTOROLA SOLUTIONS
Safety Reimagined

THIS IS YOUR
MOMENT
EXPAND & EXCEL

SAFETY REIMAGINED

ORCHESTRATE

AUTOMATE WORKFLOWS. MANAGE OPERATIONS.
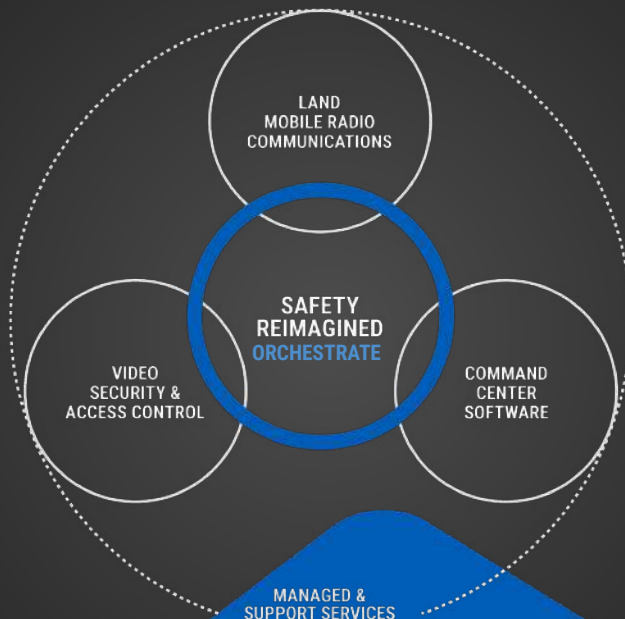DELIVER AN INTEGRATED TECHNOLOGY ECOSYSTEM.

SAFETY REIMAGINED

AN INTEGRATED TECHNOLOGY ECOSYSTEM

Instant voice communications to reliably connect teams across workflows and zones

Video analytics technologies to quickly identify and track points of interest across widespread areas

LAND MOBILE RADIO COMMUNICATIONS

SAFETY REIMAGINED **ORCHESTRATE**

VIDEO SECURITY & ACCESS CONTROL

COMMAND CENTER SOFTWARE

MANAGED & SUPPORT SERVICES

Advanced software and security to centralize command everyday and during emergencies

Support services that are always there maintain systems for today and into the future

Technology unified by Orchestrate built to empower you to address the unique challenges of your operation.

MAXIMIZING INCIDENT RESPONSE

COMPLEX WORKFLOWS, SIMPLIFIED.

DETECT

How do we effectively monitor the widespread areas of our operations?

ANALYZE

How can we recognize events and accurately evaluate situations as they arise?

COMMUNICATE

How do we connect workgroups that need to collaborate?

RESPOND

How do we quickly respond to issues before they escalate?

ORCHESTRATE HELPS BY...

Automatically monitoring remote areas, maximizing resources

Securely harvesting operational data 24/7

Leveraging and evaluating real-time data

Providing actionable alerts based on trigger type

Setting up rule-based workflows

Initiating trigger-conditional logic

Accelerated incident response

Automatically logging of incident information

ORCHESTRATE BENEFITS

SEAMLESS INTEGRATION TO THE ENTIRE SAFETY REIMAGINED ECOSYSTEM

INTUITIVE

Simple workflow design

Access from anywhere, anytime

Minimal training required

INTEGRATED

Expedite detection & response

Create custom reusable workflows

Full visibility across technologies

INTELLIGENT

End-to-end automated workflows

Streamlined processes
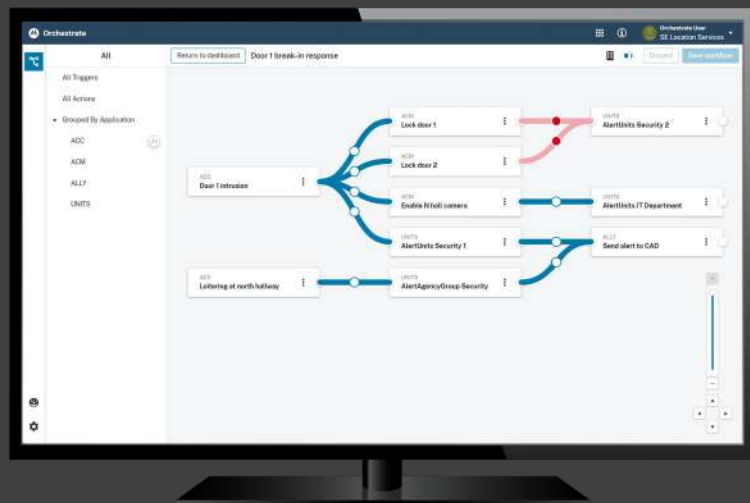
Advanced video analytics triggers

EASY TO USE | **ACCELERATE OPERATIONS** | **AUTOMATE TO SCALE**

ORCHESTRATE - HOW IT WORKS
THE ECOSYSTEM BEGINS WORKING EVEN BEFORE AN INCIDENT STARTS

Easily define and create connections between the products in your ecosystem

1. Define the security triggers and actions that make up your desired automated workflows

Triggers = events originating from sensors, software, devices
Actions = responses to the triggers such as communication to radio or smartphone users or talkgroups as well as incident management software

2. Drag triggers and actions to the workspace and connect them to create a workflow

3. Zoom, pan, scroll, group related triggers and actions for easy viewing and management

Orchestrate has you prepared for whatever comes next

MAXIMIZE EVENT RESPONSE WITH WAVE PTX

AUTOMATICALLY RECEIVE NOTIFICATIONS ON THE DEVICE OF YOUR CHOICE

- Rule-based workflows trigger automatic notification of events

- Receive text message notification on iOS or Android smartphones over LTE or WiFi

- Get right information to right people at right time, independent of network or location

- Reduce response times and enhance situational awareness
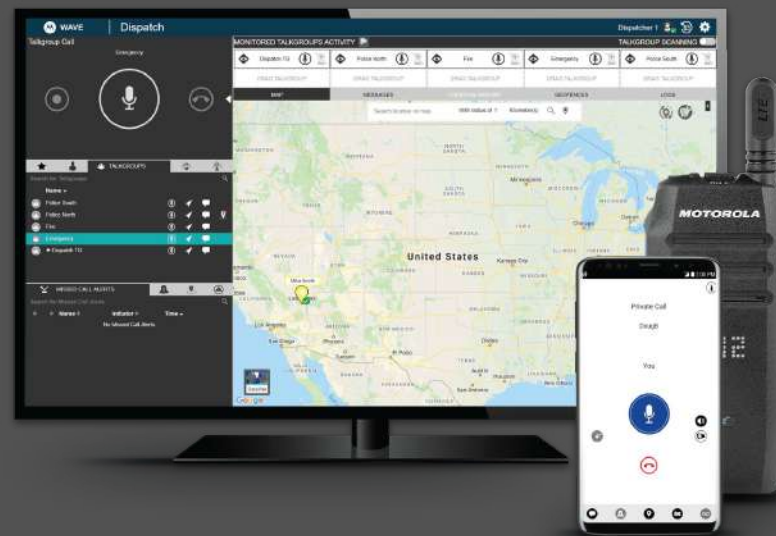
ORCHESTRATE IN ACTION - SECURE DOOR BREACH

KNOW WHAT IS HAPPENING. ACT WITH CERTAINTY.

DETECT

Access control breach recognized

ANALYZE

Situation monitored

COMMUNICATE

Unified communication to multiple teams

RESPOND

Nearby cams monitored & resources dispatched

THE ROLE OF ORCHESTRATE IS…

| **Data collaboration** | **Business rules applied** | **Connect rapidly** | **Accelerated response** |

ORCHESTRATE CUSTOMER PROFILE

If you...

- Currently utilizes LMR and / or Video Security and desires to have their technology communicate with one another

- Has the need to notify multiple radio talk groups to ensure communications across the enterprise

- Recognizes the efficiency, flexibility and security provided by cloud-based applications

- Is aware of the importance of security operations and may or may not have a SOC


ORCHESTRATE: FREQUENTLY ASKED QUESTIONS

GET ANSWERS TO THE MOST FREQUENTLY ASKED QUESTIONS ABOUT ORCHESTRATE BUSINESS WORKFLOW AUTOMATION

FAQ SHEET | ORCHESTRATE   **MOTOROLA** SOLUTIONS

ORCHESTRATE FAQ

ORCHESTRATE CUSTOMER PROFILE

What if You like the idea, but…

- do not match statements from previous page?

- is using some other equipment already?

- want to start "easy" and upgrade later*?
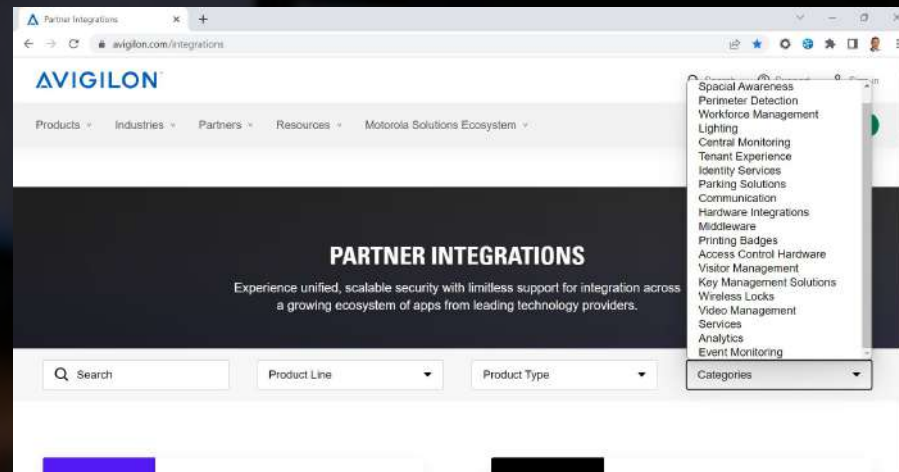
Avigilon has a rich Partner community,

and Orchestrate interfaces to Avigilon and…

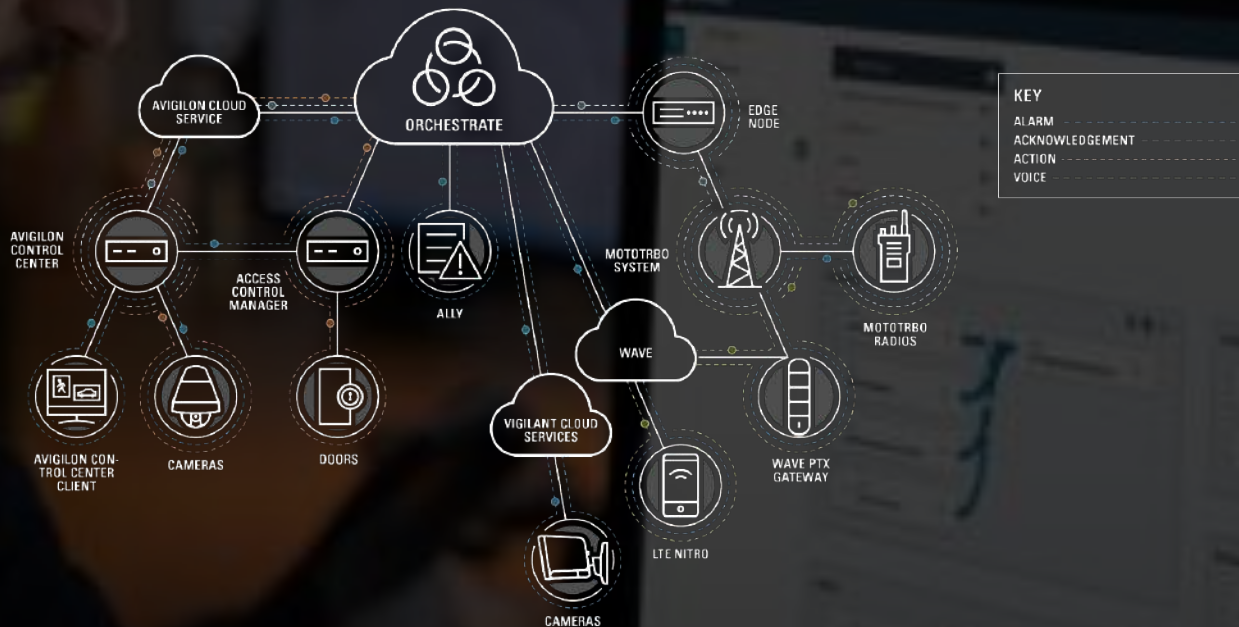*Avigilon Radio Alert can be your "less complex" and "easy" start

ORCHESTRATE TECHNOLOGY ECOSYSTEM
TRANSFORM YOUR PROCESSES WITH BEST-IN-CLASS WORKFLOW AUTOMATION

Orchestrate Components

- Avigilon Video System
- Ally Incident Response Software
- Edge Node
- MOTOTRBO Infrastructure
- MOTOTRBO & WAVE PTX Devices
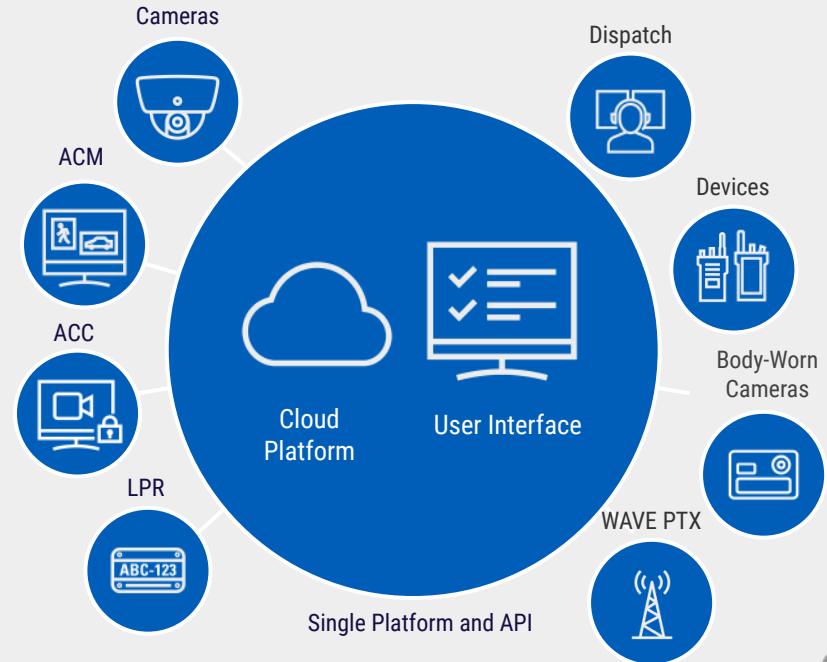- Vigilant Hardware and Software

AVIGILON CLOUD SERVICE

ORCHESTRATE

EDGE NODE

AVIGILON CONTROL CENTER

ACCESS CONTROL MANAGER

ALLY

MOTOTRBO SYSTEM

MOTOTRBO RADIOS

AVIGILON CONTROL CENTER CLIENT

CAMERAS

DOORS

VIGILANT CLOUD SERVICES

WAVE

WAVE PTX GATEWAY

CAMERAS

LTE NITRO

KEY
ALARM
ACKNOWLEDGEMENT
ACTION
VOICE

ORCHESTRATE TECHNOLOGY ECOSYSTEM

TRANSFORM YOUR PROCESSES WITH BEST-IN-CLASS WORKFLOW AUTOMATION

"ONE" USE CASE
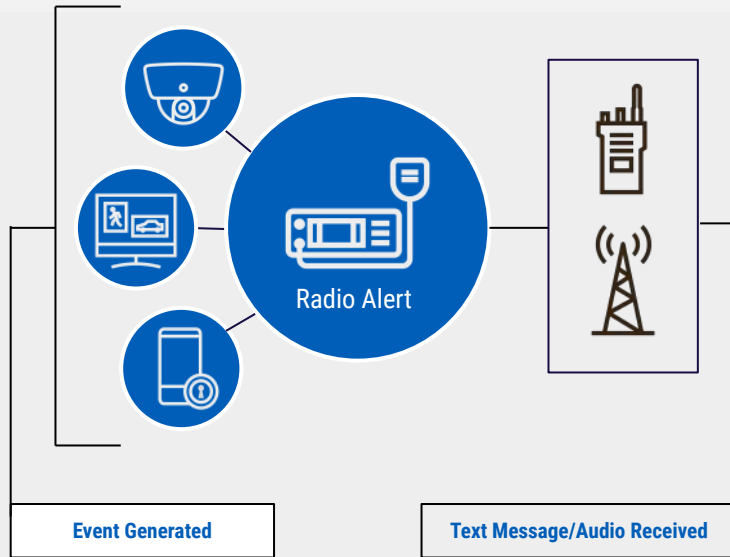
Radio Alert

Event Generated

Text Message/Audio Received

MANY USE CASES

Cameras

Dispatch

ACM

Devices

ACC

Cloud Platform

User Interface

Body-Worn Cameras

LPR

ABC-123

WAVE PTX

Single Platform and API

ORCHESTRATE TECHNOLOGY ECOSYSTEM

TRANSFORM YOUR PROCESSES WITH BEST-IN-CLASS WORKFLOW AUTOMATION

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AVIGILON CLOUD SERVICE

ORCHESTRATE

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VOICE

THIS IS YOUR MOMENT

EXPAND & EXCEL

Questions?

MOTOROLA SOLUTIONS
Body-Worn Video

THIS IS YOUR
MOMENT
EXPAND & EXCEL

THE VB400
BODY-WORN CAMERA

MOTOROLA SOLUTIONS

VB400 BODY-WORN CAMERA
TAKE CONTROL OF THE SITUATION

ALWAYS READY
TO RECORD

INTUITIVE OPERATION
IMMEDIATE RESULTS

SEE THE
BIGGER PICTURE

MAINTAIN
EVIDENTIAL INTEGRITY

ALWAYS READY TO RECORD

TEMPERATURE RESISTANT
Operating temperature from -20°C to +50°C
IP67 ingress rating

SHIFT-LONG BATTERY LIFE
12 hours of continuous recording

SECURE MOUNTING OPTIONS
Klick Fast
Quick Release
Close Fit
Alligator Clip

RUGGED EXTERIOR
MIL STD 810G certification

INTUITIVE OPERATION
IMMEDIATE RESULTS

CONFIGURABLE RECORDING
5 software-configurable buttons
LEDs/beeps/haptic feedback
Power-conserving behaviour

HIGH-QUALITY VIDEO
1080p & 30fps recording
120° horizontal lens
0.2 lux low-light performance

PRE- & POST-RECORDING
2 minutes buffer time

IMMEDIATE FOOTAGE OFFLOAD
No user intervention required

POWERFUL

SEE THE FULL PICTURE

RADIO INTEGRATION

PEER-ASSISTED RECORDING

VB SMARTCONTROL APP

REAL-TIME VIDEO STREAMING
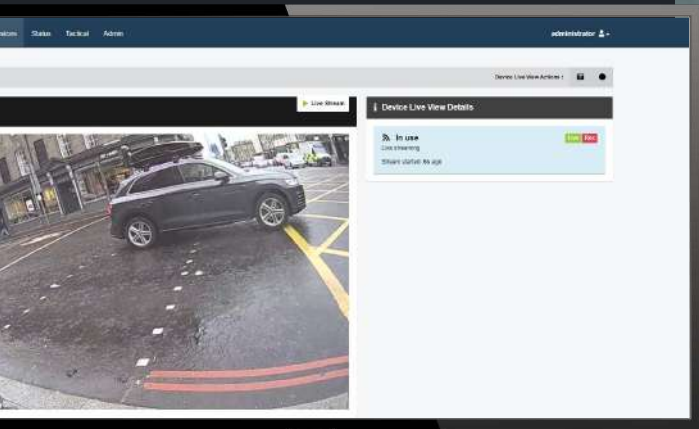
MOTOTRBO RADIO INTEGRATION

COMING SOON

MOTOTRBO EMERGENCY ALERT
Can be manually pressed or activated through a fall alert.

RECORDING TRIGGER
The VB400 starts recording upon receiving emergency signal from radio.

PEER-ASSISTED RECORDING

RECORDING TRIGGER

When configured, an activated camera will trigger an unactivated camera to start recording when it comes within an agency-defined proximity radius.

VB SMARTCONTROL APP

RESPOND.
RECORD.
REVIEW.

- Securely watch and tag footage immediately
- Available for iOS and Android
- Download from Google Play or the App Store

REAL-TIME STREAMING

Stream video from Wi-Fi connected VB400s to VideoManager or connect to almost any video management system (VMS) to view alongside your fixed video cameras.

- Avigilon Control Center
- Milestone XProtect
- Genetec Security Center

MAINTAIN EVIDENTIAL INTEGRITY

Your VB400 automatically encrypts and secures the footage it records - so only authorised users can access it, via our VideoManager software, for processing and review purposes.

SEALED UNIT DESIGN

END-TO-END ENCRYPTION

SYSTEM-SPECIFIC DEVICE KEYS

FOOTAGE VERIFICATION

A COMPLETE SOLUTION

Build a comprehensive body-worn camera programme that minimises complexity for both officers in the field and your administrators managing the system and evidence.

CAPTURE
High-quality evidential video

PREPARE
With redactions, annotations, transcription and tagging

SHARE
With internal and external partners securely
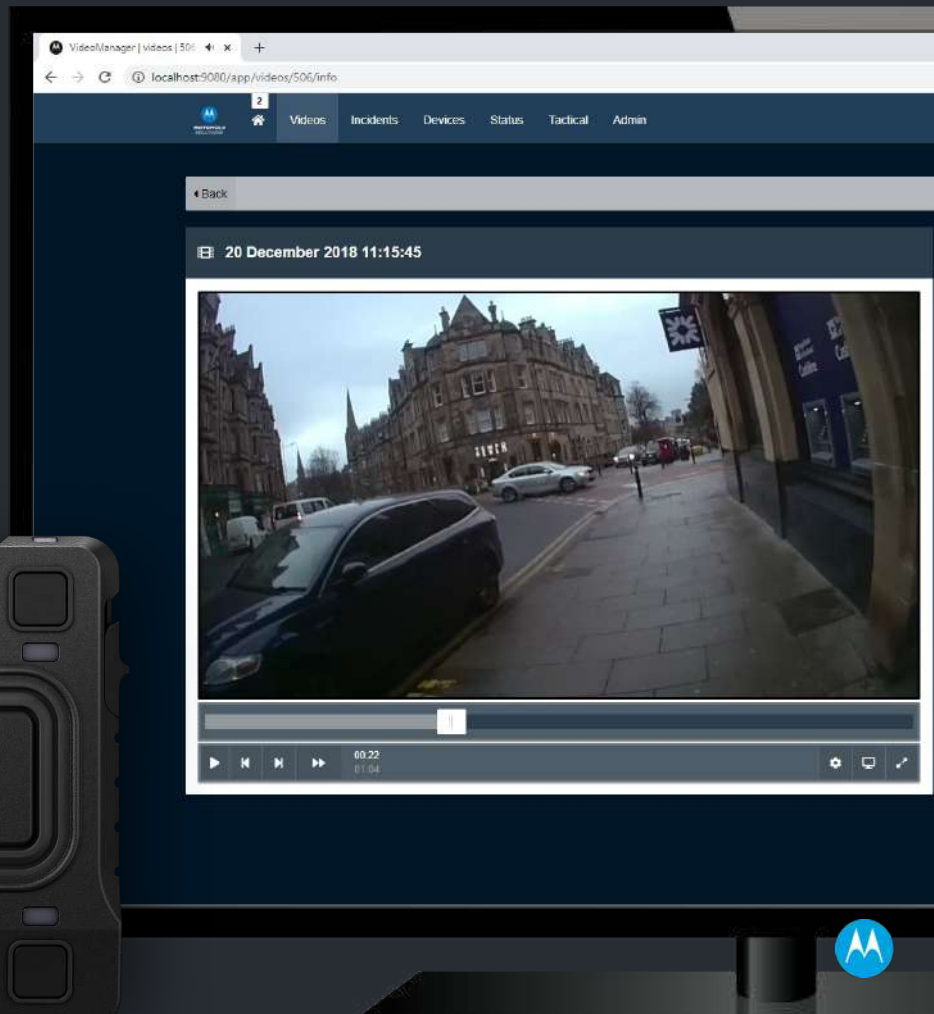
MAXIMISE THE VALUE OF VIDEO

From ingest and organisation to sharing and deletion, VideoManager provides everything you need in one user interface to prepare content.

- Advanced Search Options

- Incident Creation & Bulk Add

- Redaction Editor Suite

- Time-Sensitive Sharing

- Media Import Tool
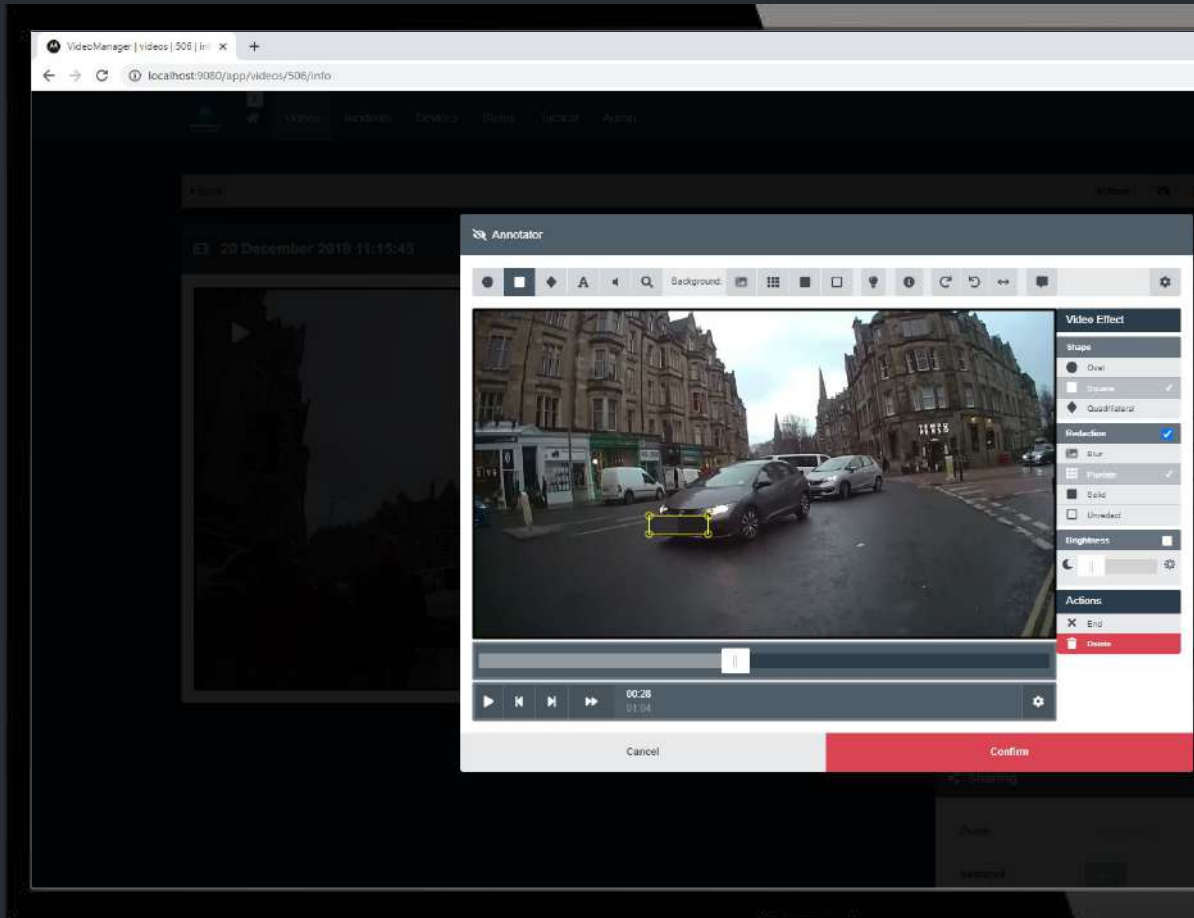
KEEP DATA SAFE & COMPLIANT

Cutting-edge security restricts who can access your system and what they can do on it, while also protecting your media.

- Policy-Defined Retention
- End-To-End Encryption
- Two-Factor Authentication
- Media Viewing Justification
- Export Titles & Watermarks
- Granular Audit Logging
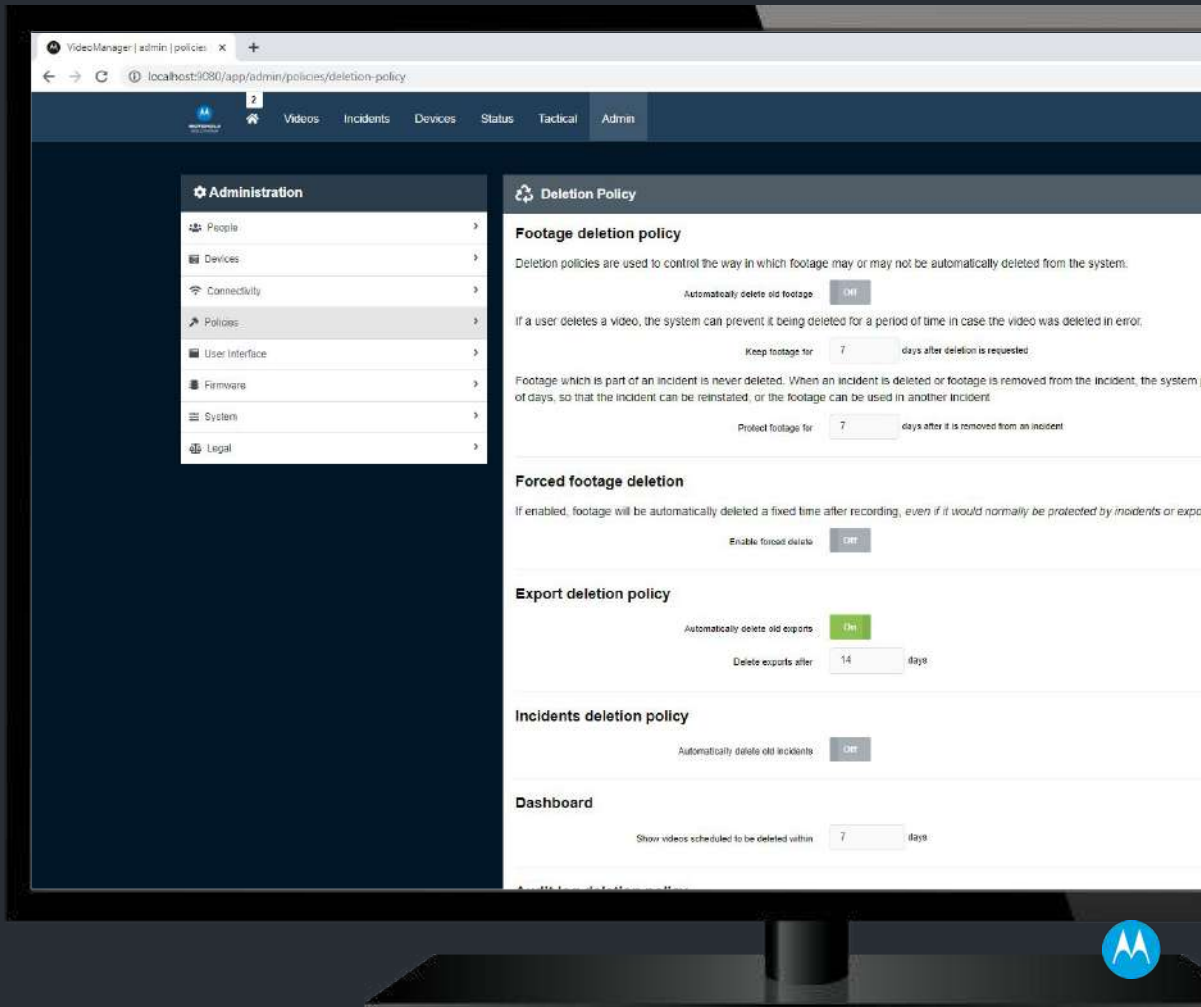
THANK YOU!

MOTOROLA *SOLUTIONS*

slido

Share Your Thoughts!

Click **Present with Slido** or install our <u>Chrome extension</u> to activate this poll while presenting.

THANK YOU

MOTOROLA *SOLUTIONS*