

CYBER THREATS TO PUBLIC SAFETY



PAUL HILL, MOTOROLA SOLUTIONS
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Agenda

The Public Safety Landscape

The Security Challenge

Cyber Threats to Public Safety

The Solution

Key Takeaways

THE PUBLIC SAFETY ECOSYSTEM



Frontline Responder



Mission-critical technologies - LMR, Broadband, Video Analytics

Incident Awareness

Incident Management

Post-Incident Resolution

**COMMUNITY
ENGAGEMENT**



Citizen

**EMERGENCY CALL
MANAGEMENT**



911 Call Taker

**VOICE &
COMPUTER
AIDED DISPATCH**



Dispatcher

**REAL-TIME
INTELLIGENCE
OPERATIONS**



Intelligence
Analyst

**RECORDS
& EVIDENCE
MANAGEMENT**



Records
Specialist

**ANALYSIS &
INVESTIGATION**



Crime
Analyst

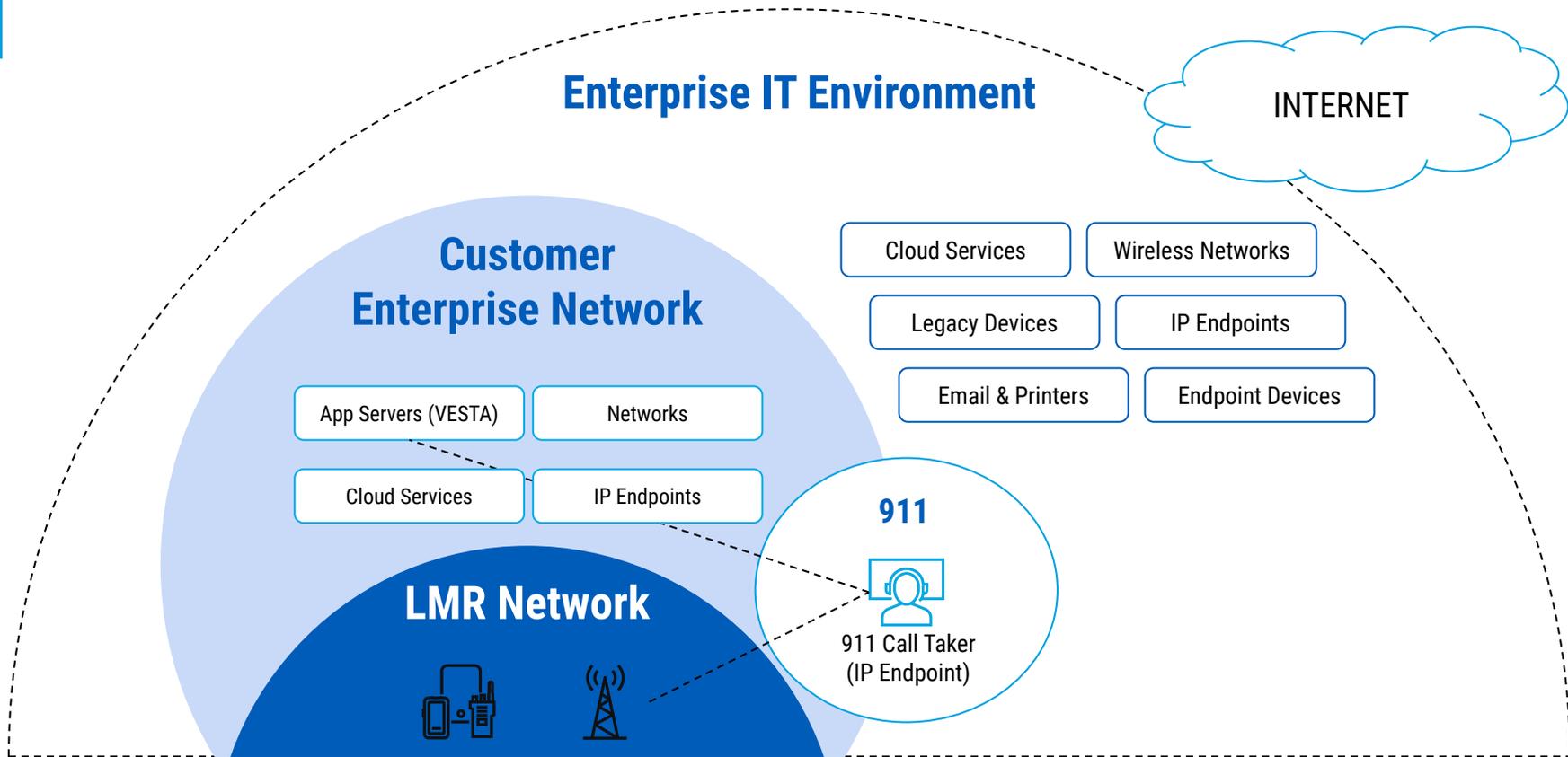
**JAIL & INMATE
MANAGEMENT**



Corrections
Officer

CYBERSECURITY FOR YOUR PUBLIC SAFETY PLATFORM

THE PUBLIC SAFETY LANDSCAPE



THE SECURITY CHALLENGE

DIGITAL TRANSFORMATION

60%

of digital businesses would suffer major service failures due to inability to manage digital risk

Technology innovation & remote operations are increasing the cyber attack surface

INCREASING COMPLEXITY

57

average number of tools that security teams are grappling to manage

Complex & fragmented IT environments have generated visibility challenges, made worse by number of security tools

CHALLENGED RESOURCES

4M

estimated number of unfilled cybersecurity jobs worldwide

Unrelenting pressure to do more with less, difficult to recruit and retain the new tech skill sets



CYBER THREATS OVERVIEW - ENTERPRISE

Cyber attacks are increasing in number and sophistication, costing billions of dollars in a matter of minutes.

Advancement in cyber attack techniques, lack of security expertise, outdated systems, need for remote operations and cloud-based solutions are putting relentless pressure on cyber resilience.



300%

increase in reported
cybercrimes due to
COVID-19 pandemic



\$6T

estimated costs to
organizations due to
cybercrime in 2021



18M+

websites infected
with malware at
any given time



CYBER THREATS OVERVIEW - PUBLIC SAFETY

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Advancements in cyber attack techniques, lack of security expertise, outdated systems, need for remote operations and cloud-based solutions are putting relentless pressure on cyber resilience.



450+

cyber attacks on public safety agencies in the past 24 months



\$18M

cost to Baltimore to recover from a ransomware attack in 2019



24

hours for a coordinated ransomware attack to hit 23 cities in Texas



RISING THREATS TO PUBLIC SAFETY

- Ransomware
- Telephony Denial of Service (TDoS)
- Misconfiguration
- Data Breaches / Data Leakage
- Advanced Persistent Threat (APT) Groups
- Insider Threats

MOTOROLA SOLUTIONS' CYBERSECURITY SERVICES

STRENGTHEN YOUR CYBER RESILIENCE



ADVISORY SERVICES

Risk assessment and consulting, penetration testing, governance and compliance.



MANAGED SECURITY SERVICES

Network and application monitoring, incident management and reporting, security patching, advanced threat detection and response.

NIST-ALIGNED PORTFOLIO



SYSTEM RECOVERY SERVICES

Business continuity and major incident response planning, system recovery, post-incident analysis.



CYBERSECURITY TRAINING

Cloud security, incident response management, risk management and privacy planning, certifications.





**ADVISORY
SERVICES**



**MANAGED
SECURITY**



**SYSTEM
RECOVERY**



**CYBER
TRAINING**



ADVISORY SERVICES



ADVISORY SERVICES



RISK ASSESSMENTS

Discover vulnerabilities and develop a robust cybersecurity strategy mapped to regulatory frameworks



PENETRATION TESTING

Evaluate the security of IT and communications infrastructure by trying to exploit its vulnerabilities



CYBERSECURITY CONSULTING

Expertise, guidance, and augmentation of your IT, communications or cybersecurity teams



GOVERNANCE AND COMPLIANCE

Demonstrate adherence to regulatory cybersecurity requirements in line with organizational needs



-  **ADVISORY SERVICES**
-  **MANAGED SECURITY**
-  **SYSTEM RECOVERY**
-  **CYBER TRAINING**



MANAGED SECURITY SERVICES



MANAGED SECURITY SERVICES

IDENTIFY & MITIGATE SYSTEM VULNERABILITIES



SECURITY PATCHING FOR LMR & EMERGENCY CALL HANDLING

- Pre-testing, validation and anti-malware software updates in line with industry standards
- Flexible consumption models include self install, remote install, reboot support service, onsite delivery



SECURITY MONITORING FOR LMR & EMERGENCY CALL HANDLING

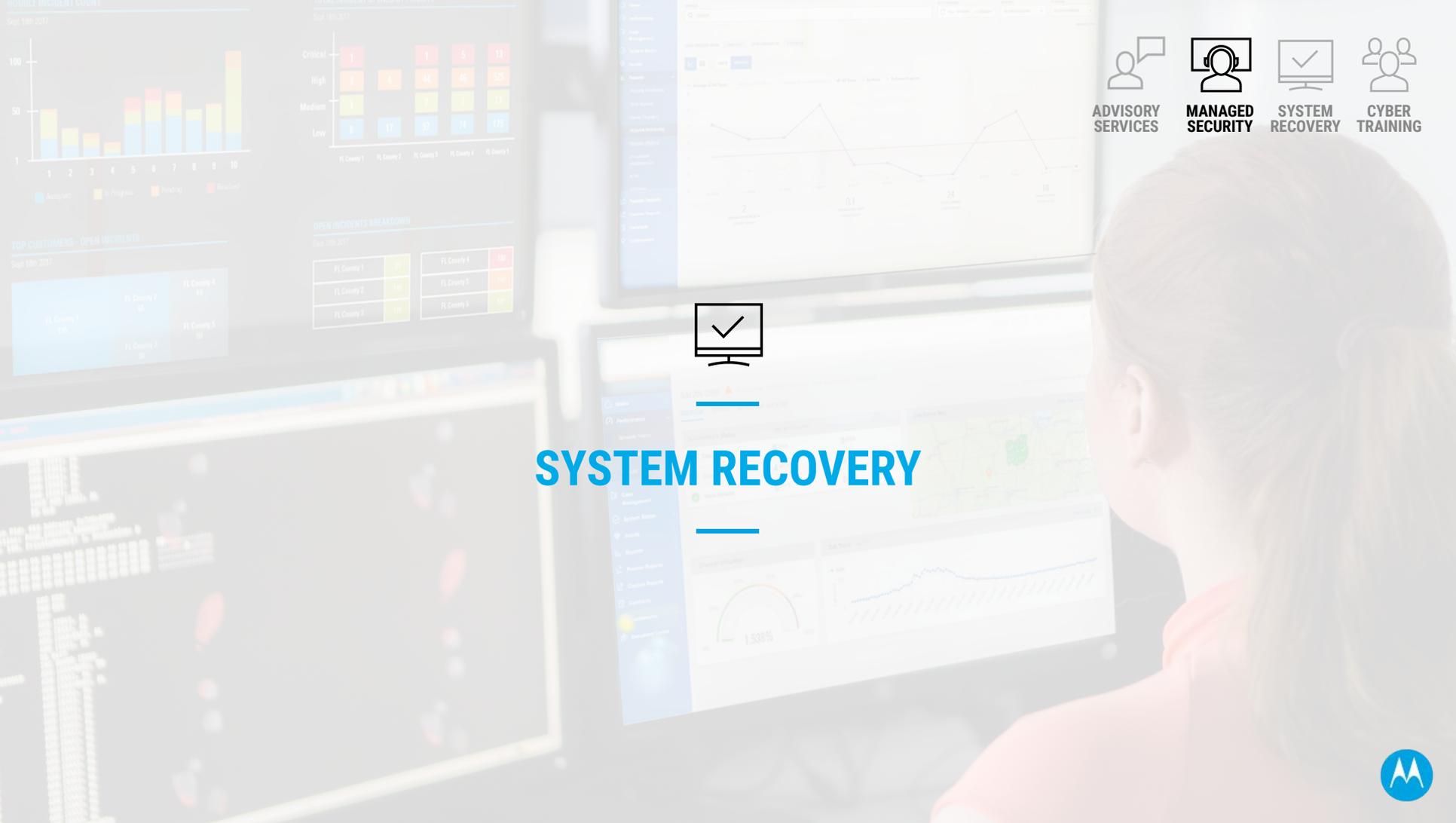
- Assessment of configuration settings against best practices for each environment
- Continuous monitoring of logs to identify management activity and user access
- Enrichment of data streams with threat data and machine learning analytics to identify potential threats



ADVANCED THREAT DETECTION AND RESPONSE FOR ENTERPRISE IT

- 24/7 monitoring for enterprise cloud, network and endpoints
- Cloud infrastructure and SaaS monitoring
- Ongoing threat and vulnerability insights for enterprise networks

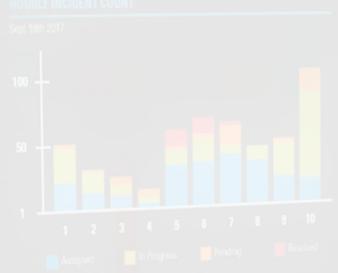




-  **ADVISORY SERVICES**
-  **MANAGED SECURITY**
-  **SYSTEM RECOVERY**
-  **CYBER TRAINING**



SYSTEM RECOVERY



TOP 5 INCIDENTS

Severity	FL County 1	FL County 2	FL County 3	FL County 4	FL County 5
Critical	1	0	1	5	13
High	3	4	41	46	525
Medium	1	0	7	1	9
Low	8	17	97	14	175

TOP CUSTOMERS - OPEN INCIDENTS

Sept 18th 2017

FL County 1	FL County 2	FL County 3	FL County 4	FL County 5
100	60	30	30	30

OPEN INCIDENTS BREAKDOWN

Sept 18th 2017

FL County 1	FL County 2	FL County 3	FL County 4	FL County 5	FL County 6
30	150	150	150	150	150



RESPOND AND RECOVER FROM SECURITY INCIDENTS

SYSTEMATIC AND SWIFT APPROACH TO MITIGATION AND RECOVERY



RESPONSE TO DATA BREACH OR CYBER ATTACK

- Identify key system components and data sources impacted
- 24/7 support from security experts while the incident is ongoing
- Final report of all findings and response efforts



THREAT HUNTING FOR SUSPICIOUS MALICIOUS ACTIVITY

- Analyze network and cloud environments, collect artifacts
- 45 days of in-depth system monitoring
- Final report of all findings and response efforts



POST-INCIDENT ANALYSIS & SYSTEM RECOVERY

- Visibility into system issues through compromise assessments
- Reinstate and improve network controls
- Preventive measures and problem management





ADVISORY
SERVICES



MANAGED
SECURITY



SYSTEM
RECOVERY



**CYBER
TRAINING**



CYBERSECURITY TRAINING



DELIVERED IN THE BEST WAY TO HELP YOU LEARN



CLASSROOM LEARNING AND LABS

In-person and interactive instructor-led training sessions in line with leading and accepted industry-led security practices



ON-LINE TRAINING

Self-directed, self-paced computer-based training that equips you with the skills needed to fight back against modern cyber threats



VIRTUAL INSTRUCTOR-LED TRAINING

Training delivered in a virtual or simulated environment, or when the instructor and learner are in separate locations

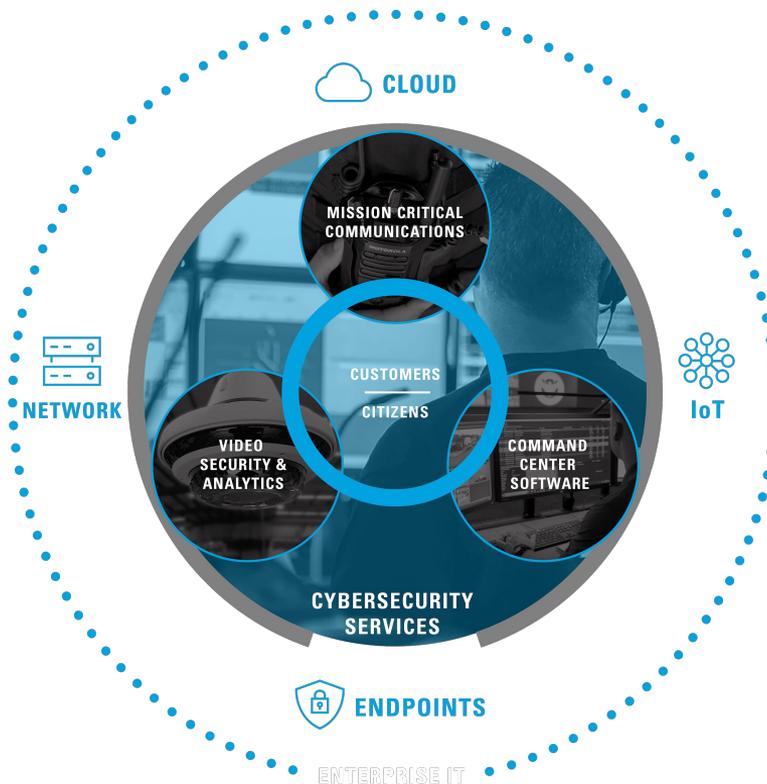


ONE SERVICE PROVIDER FOR YOUR CYBERSECURITY NEEDS.

PURPOSE-BUILT & INTEGRATED APPROACH TO END-TO-END CYBER RESILIENCE

90+

Years of experience in providing mission-critical technologies - LMR, Broadband, Video, Software & Analytics across 100+ countries



20+

Years of developing advanced threat detection and response technologies for sophisticated security incidents



GLOBAL SCALE & EXPERIENCE

ENABLING TECHNOLOGY ECOSYSTEMS TO BE RESILIENT WITH ADVANCED CYBERSECURITY CAPABILITIES

300+

Security experts
focused on 24/7
monitoring & response



PEOPLE

Experts with top industry certifications
work hand-in-hand to ensure system
availability and security

9B

Security events
proactively monitored
each day



PROCESS

Mission-critical ITIL framework
for scalable service operations that can
easily handle peak load

20+

Years of experience
developing cybersecurity
solutions



TECHNOLOGY

Network to security operations, security
orchestration and automation - designed to
accelerate service response

100% co-managed approach for visibility and control



KEY TAKEAWAYS

- The public safety landscape is changing and becoming increasingly interconnected
- The sophistication and regularity of cyber attacks is increasing
- The threats to public safety are specific to the industry
- A holistic, risk based approach is the best way to protect your environment





THANK YOU

