ASTRO 25 LIFECYCLE MANAGEMENT

ARMER
Allied Radio Matrix for Emergency Response

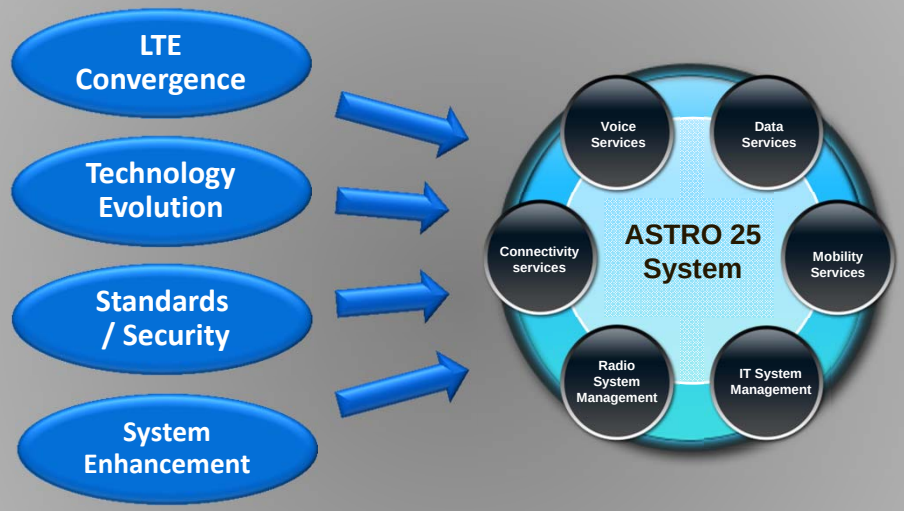
ASTRO 25 – Engineered for the Future

ASTRO 25 platform is designed for extended support and growth with no planned end of life

ASTRO 25 Platform

2005 2010 2015 2020 2030…

Motorola is committed to invest in on-going updates for long-term sustainment and improvement of the ASTRO 25 platform



Regular System Releases deliver key updates to the Infrastructure Technology

Benefits for our customers

1. Protects Customer investments in their ASTRO 25 system by enabling successive updates that incorporate latest technology advancements
2. Standard updates keep the system fully supportable / serviceable
3. Predictability and cost containment over the lifespan of the system

ASTRO 25 is an LMR system built on an IT network, leveraging both Motorola and third-party technology to deliver an integrated system

- Standards based solution
  - Conformance to networking, computing and communications standards (i.e. IP, Unix, P25)
  - P25 standards provide simpler interoperability
- Leverages third-party OEM expertise
  - Customer owned IP transport network can be leveraged in system design
  - Faster delivery of new features and functionality due to compressed Motorola development cycle
- Motorola engineering
  - Comprehensive systems integration of both Motorola manufactured and third-party products
  - Five nines reliability
  - Scalable solutions

SECURITY THREATS BY THE NUMBERS

THREATS ARE ON THE RISE IN 2012

IN THE SECOND QUARTER OF THIS YEAR:

- Spam increased by **54.8%**
- Malware by **52.4%**
- Virus outbreaks by **90%**

SOURCE: ELEVEN

MOBILE MALWARE IS INCREASING

New mobile malware samples identified in the last quarter of 2011: **under 1,000**

Malware samples identified in the first quarter of 2012: **more than 6,000**

SOURCE: MCAFEE

ANDROID A PRIME TARGET FOR MALWARE

Out of more than 8,000 known malicious mobile programs, nearly 7,000 run only on Android.

SOURCE: MCAFEE

ANDROID MALWARE INCREASED 3,325% IN 2011.

SOURCE: JUNIPER NETWORKS

63% of those malware samples steal information, such as GPS coordinates, text records, and browser histories.

SOURCE: JUNIPER NETWORKS

37% could covertly text premium numbers, driving up your phone bill.

SOURCE: JUNIPER NETWORKS

EVEN MACS ARE VULNERABLE TO INFECTION

The number of Macintosh-targeted threats **more than doubled** in the first half of 2012.

SOURCE: MCAFEE

The Flashback trojan infected more than **half a million** Mac OSX machines.

SOURCE: SOPHOS

MOST ATTACKS ARE FROM KNOWN THREATS

Less than 1% of infections come from "zero-day" exploits – attacks where the malware is too new to be recognized by your antivirus program.

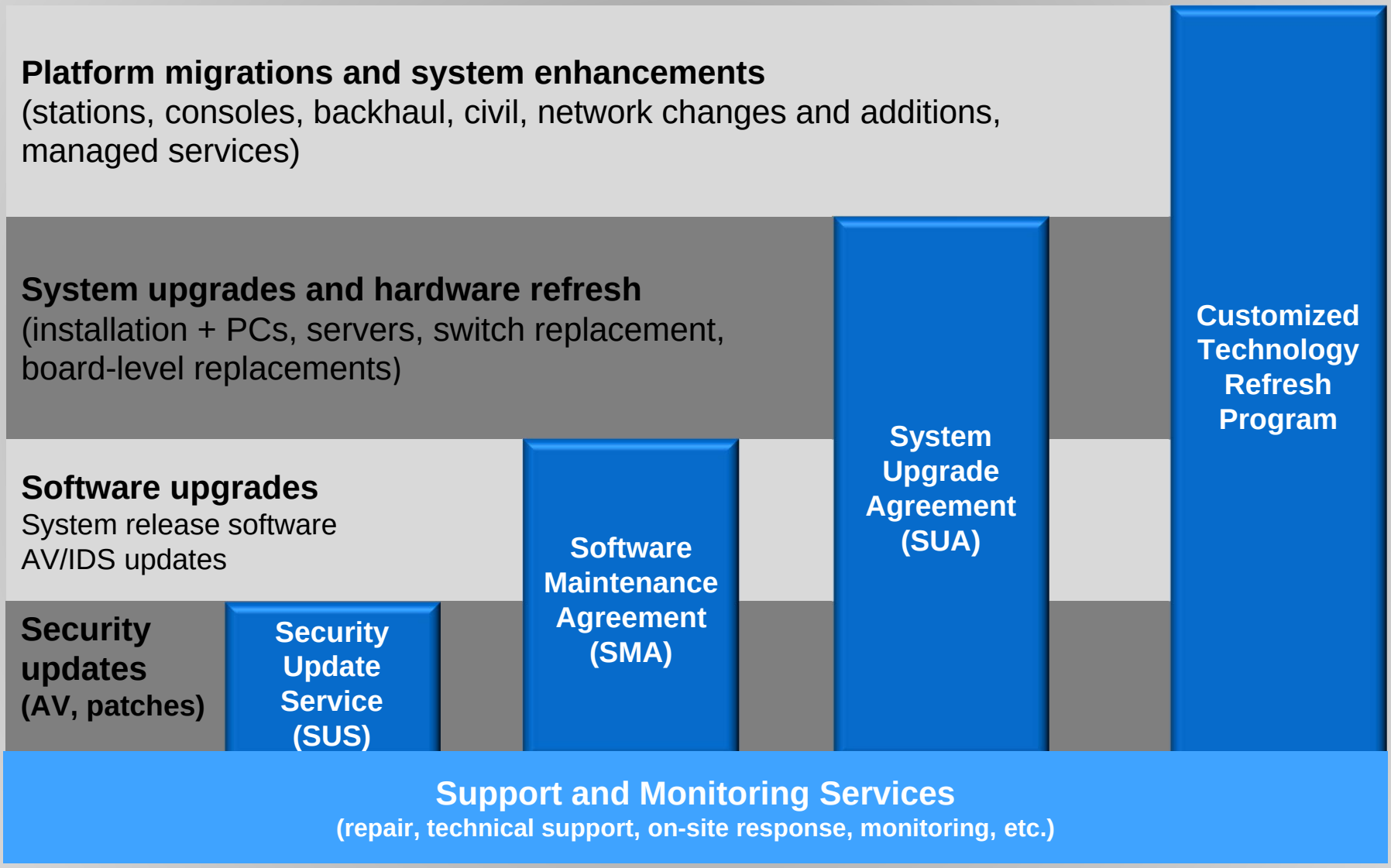
SOURCE: MICROSOFT SECURITY INTELLIGENCE REPORT, VOLUME 11

NO. 1 CAUSE OF INFECTIONS: HUMAN ERROR

45% of infections were caused by users tricked into doing something that they shouldn't have done.

OOPS

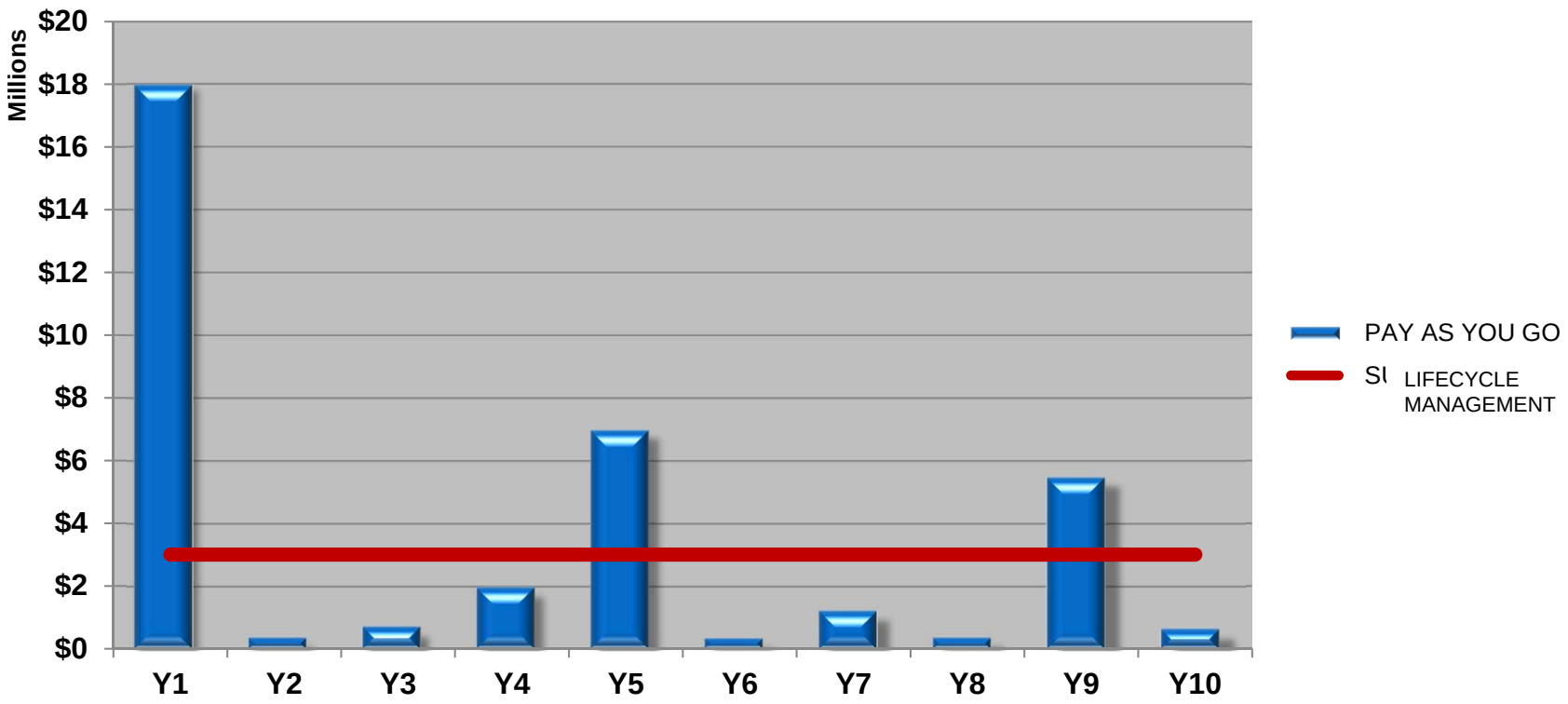
The Solution: Lifecycle Management Suite



The Value Proposition of Lifecycle Management

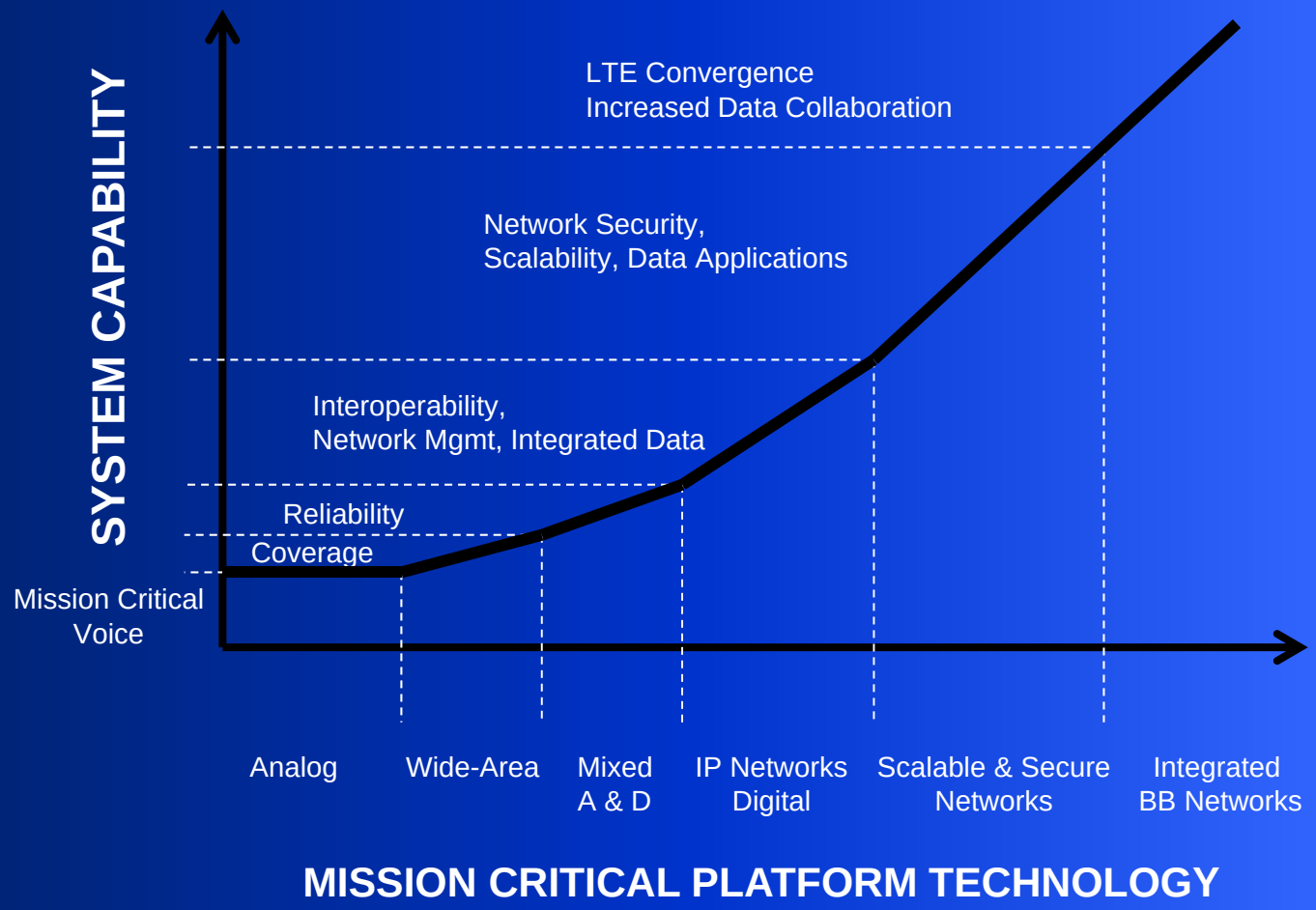
COST SAVINGS

PREDICTABLE EXPENSES



ASTRO25 FUTURE VISION

Evolution of Motorola Mission-Critical Technology



Significant Growth in Capabilities over the last 25 years !

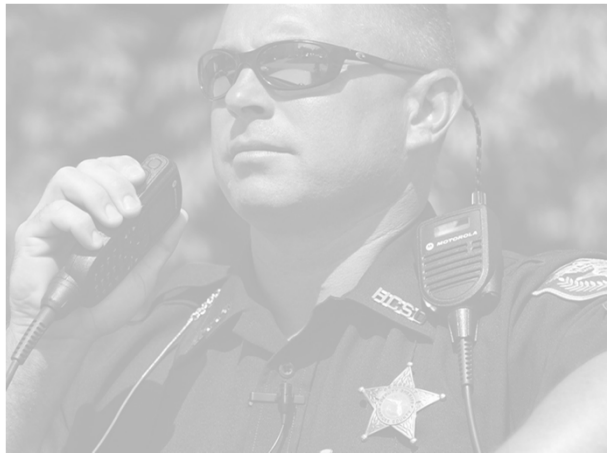
ASTRO® 25
LEADING P25 APPLICATIONS PLATFORM

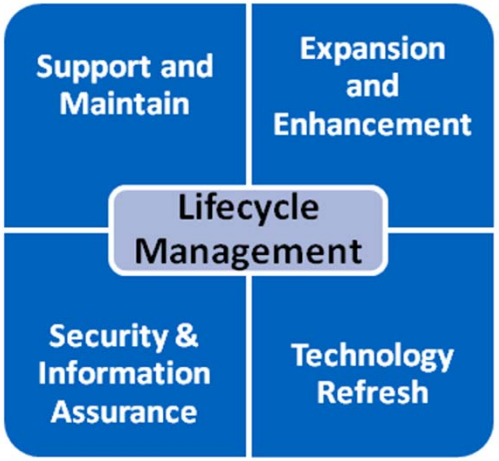
EMAIL	SCADA	VEHICLE LOCATION	12/16 LEAD ECG	FIRE STATION ALERTING	COMPUTER AIDED DISPATCH	APPLICATION PARTNER ECOSYSTEM
OVER THE AIR PROGRAMMING	PERSONAL LOCATION	IMAGE SHARING		VEHICLE TELEMETRY	BIOMETRICS	INTRANET ACCESS
IN-VEHICLE MAPPING	PTT AND TELEPHONY VOICE	SEARCH LICENSE PLATES (H73 5364)	TEXT OVER RADIO	OVER THE AIR REKEYING	REPORT WRITING	BOLO ALERTS (WANTED)

LIFECYCLE UPGRADE AUTOMATION

MAXIMIZES THE VALUE OF YOUR SYSTEM WHILE MINIMIZING THE IMPACT OF NETWORK UPGRADES

- **Reduces the duration of upgrades**
- **Simplifies the upgrade to keep the ASTRO 25 system current**
- **Leverages modern it technology and tools**
- **Facilitates regular upgrades to ensure you have access to the latest capabilities and features with each release**





LIFECYCLE UPGRADE AUTOMATION

MAJOR IMPROVEMENTS

- System Audit and Repair/Replace
- Faster, more reliable upgrades through automation
- Fewer personnel required on-site
- Addition of Satellite Server to allow Motorola to push software upgrades into the network
- Safer and Faster upgrades

MY SOFTWARE FEATURES

NEW CAPABILITIES

- SIMPLIFIED LICENSE MANAGEMENT
- LICENSING & FEATURE ACTIVATION
- MANAGE FEATURES
- VIEW FEATURE LIST
- VIEW ENTITLEMENT IDS
- FEATURE ACTIVATION
- DOWNLOADABLE SOFTWARE TRIAL PERIODS
- MANAGE DEVICES
- VIEW DEVICE LIST
- ADD A DEVICE
- DOWNLOAD DEVICE LICENSE FILES
- EMAIL DEVICE LICENSE FILES
- VIEW PURCHASED & AVAILABLE FEATURES FOR A DEVICE

PERSONALIZED… ***FLEXIBLE…*** ***INTUITIVE…***

MY SOFTWARE

SIMPLIFIED LICENSE MANAGEMENT

PESONALIZED ACCOUNT-DRIVEN CONTENT

INTUITIVE LICENSE ACTIVATION PROCESS

SELF-SERVE & QUICK ACCESS

VIEW FEATURE EXPIRATION & MANAGE UTILIZATION

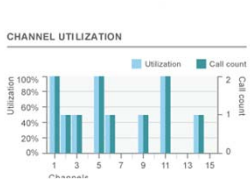
SAVE TIME
MINIMIZE EFFORT
REDUCE COMPLEXITY

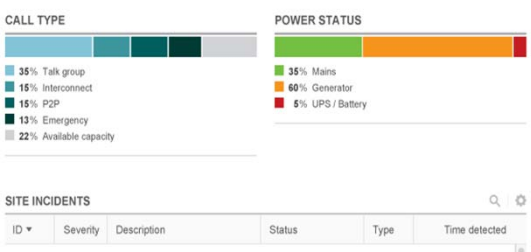
FLEXIBLE DEPLOYMENT OPTIONS

MY VIEW

COMPLEXITY MADE MANAGEABLE

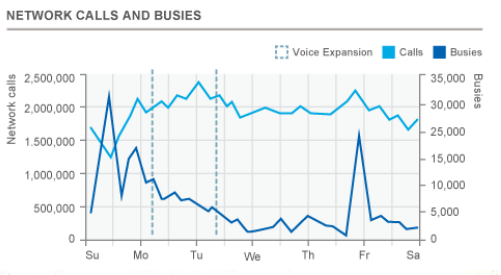
CONSOLIDATED VIEWS OF MULTIPLE INPUT SOURCES





INTUITIVE USER INTERFACE

QUICK VIEW OF SYSTEM STATUS



VIEW

NETWORK HEALTH

WORK TICKETS

COVERAGE STATUS

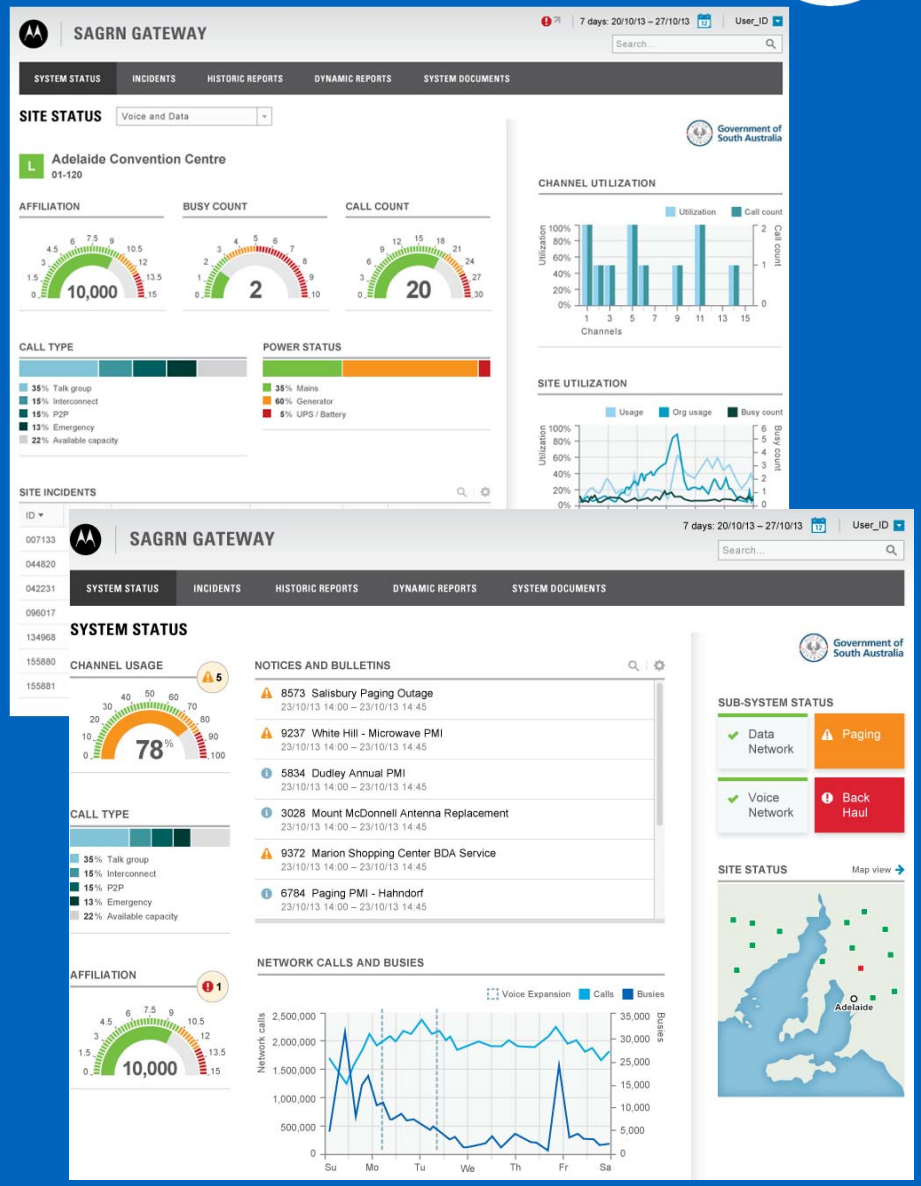
AVAILABLE ANY TIME, ANYWHERE WITH A INTERNET CONNECTION

FLEXIBLE FEATURE OPTIONS

MyView Portal

NEW CAPABILITIES

- CONSOLIDATE INPUTS FROM:
  - NETWORK MANAGEMENT
  - GENESIS
  - HP OPEN VIEW / NETCOOL
  - REAL-TIME COVERAGE
  - WORKFORCE MANAGEMENT
  - HISTORIC REPORTS
  - TROUBLE TICKETS
  - SYSTEM DOCUMENTATION
- MYVIEW LICENSING & FEATURE ACTIVATION



APX CPS Radio Management (RM)

ENHANCED CAPABILITIES

- **APX CPS RM allows users to manage and program multiple radios**
- **Radio codeplug database can now be stored on a server. This allows remote programmers to access and program radios**
  - Removes the need for multiple computers locally storing codeplugs
  - Automates downloading of needed information without manual intervention
- **Share codeplug template across multiple radios**
- **Changes to codeplug template can be automatically applied to all affected radios**
- **Schedule programming jobs ahead of time**
- **Provides basic fleet mapping capabilities such as; viewing, editing, sorting, grouping & filtering**

SUBSCRIBER PORTFOLIO

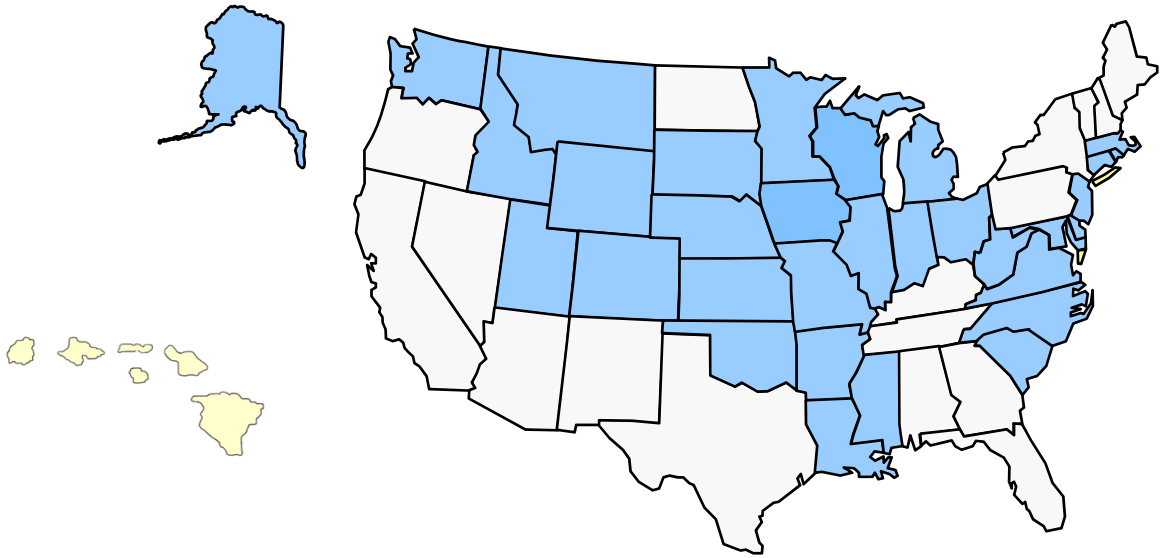
ENHANCEMENTS BEING CONSIDERED

- **Faster Codeplug Update Programming**
- **Increased Control Channel Capacity**
- **PTT Timeout without Voice**
- **Geo-fence Talkgroup Select**
- **P25 Digital Paging Encode / Decode**
- **RF Modem on Portable**
- **Group Data**
- **Mass Text Alert**
- **Real-time and Historical Health and Status of Radios**

Inter SubSystem Interface

- With emerging ISSI technology, your Project 25 (P25) system can provide enhanced support for radio users who roam beyond their home networks, whether you are sending help to other jurisdictions or welcoming personnel from other agencies to your community. ISSI can interconnect P25 trunked systems over a large geographic area, allowing dispatchers, commanders, and responders to talk on the same interoperability talkgroups even if they are working hundreds of miles apart.

STATEWIDE PUBLIC SAFETY TRUNKING SYSTEMS



- Alaska
- Arkansas
- Colorado
- Connecticut
- Delaware
- Idaho
- Illinois
- Indiana
- Kansas
- Louisiana
- Maryland
- Massachusetts
- Michigan
- Minnesota
- Mississippi
- Missouri
- Montana
- Nebraska
- New Jersey
- North Carolina
- Ohio
- Oklahoma
- Rhode Island
- South Carolina
- South Dakota
- Utah
- Virginia
- Washington
- West Virginia
- Wyoming

THE CONVERGENCE VISION

ASTRO 25 – LTE CONVERGED ARCHITECTURE

UNIFIED P25 AND LTE CORE

UNIFIED NETWORK MANAGEMENT

UNIFIED TRANSPORT, APP SERVERS

COMMON SERVER ARCHITECTURE

A FUTURE-READY P25 SYSTEM ON A UNIFIED IP ARCHITECTURE

OFFERS A SEAMLESS ENTRY POINT INTO PRIVATE LTE BROADBAND

AND THE ABILITY TO OPERATE THE ACCESS TECHNOLOGIES AS A SINGLE SERVICE

THAT WILL DELIVER PTT AND MULTIMEDIA SERVICE FROM A STATE-OF-THE-ART IT PLATFORM

Challenges

- **Budget planning is different between local and state**
- **Budgets are planned three years or more in advance for capitol projects**
- **Methodology to determine priorities of the “wish list”**
- **Reconciling different “needs” versus “like to have” among regions**
- **Cost to locals versus the benefits to each entity**
  - Software upgrade costs
  - Maybe additional costs or hardware investment
  - Assigning cost to the cost causer