

A woman with dark hair and a headset is looking off-camera in a dimly lit room with blurred computer monitors in the background.

THE CHANGING FACE OF NG9-1-1

Tim Miller
Regional Sales Manager - NGCS



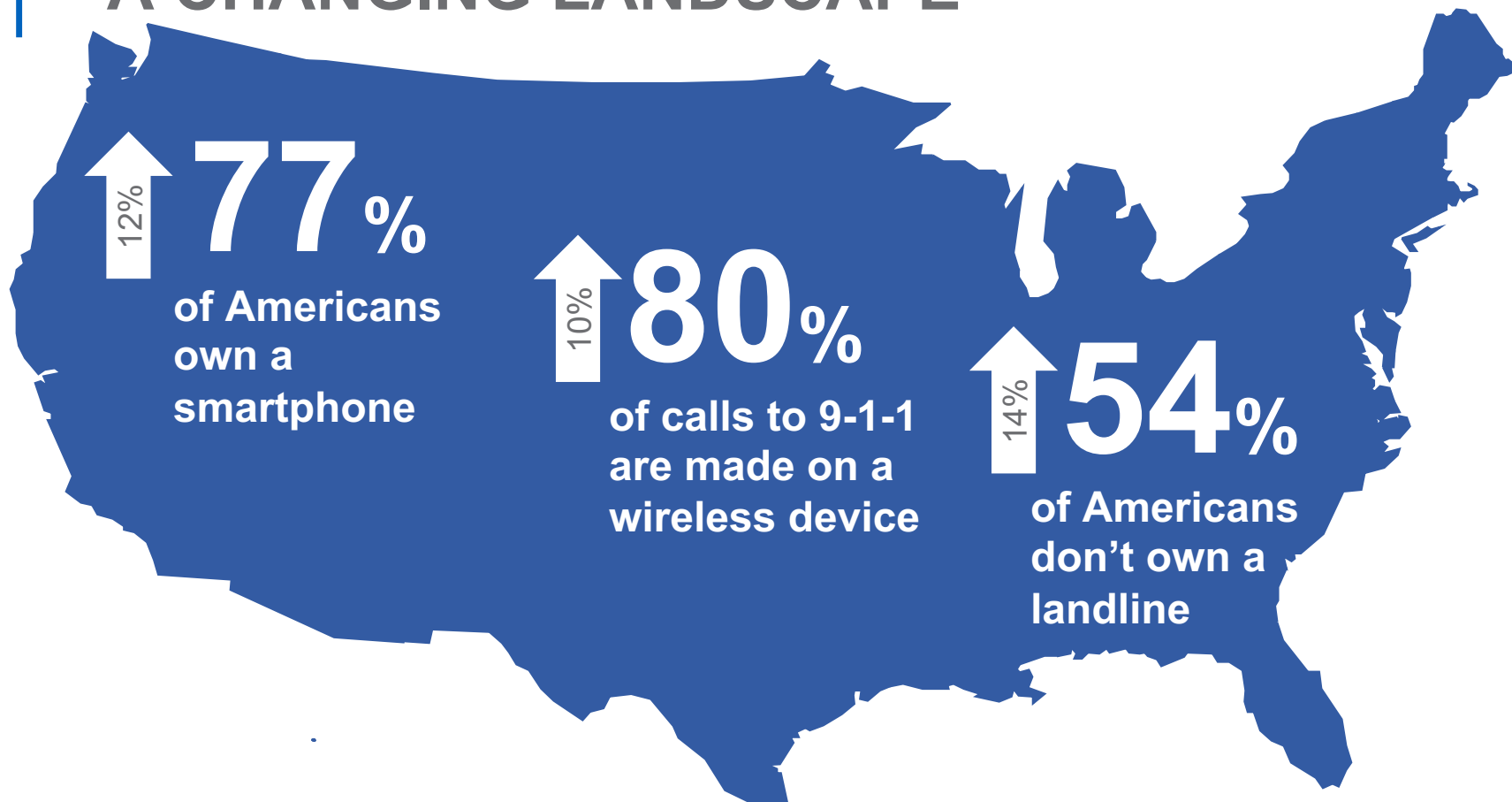
MOTOROLA SOLUTIONS

AGENDA

- A Changing Landscape
- The World of Emergency Incidents
- What Is NG9-1-1?
- What Are the Benefits?
- What's Coming?
- Unified Workflows
- Processing Incoming Data
- NGCS Solution



A CHANGING LANDSCAPE





PUBLIC EXPECTATIONS ARE ON THE RISE

92%

Of citizens want increased information sharing on police services and activities

US Citizen Survey on Local Police Services. Accenture. 2015.

91%

Of citizens are looking for their police forces to provide new ways to report crime

US Citizen Survey on Local Police Services. Accenture. 2015.

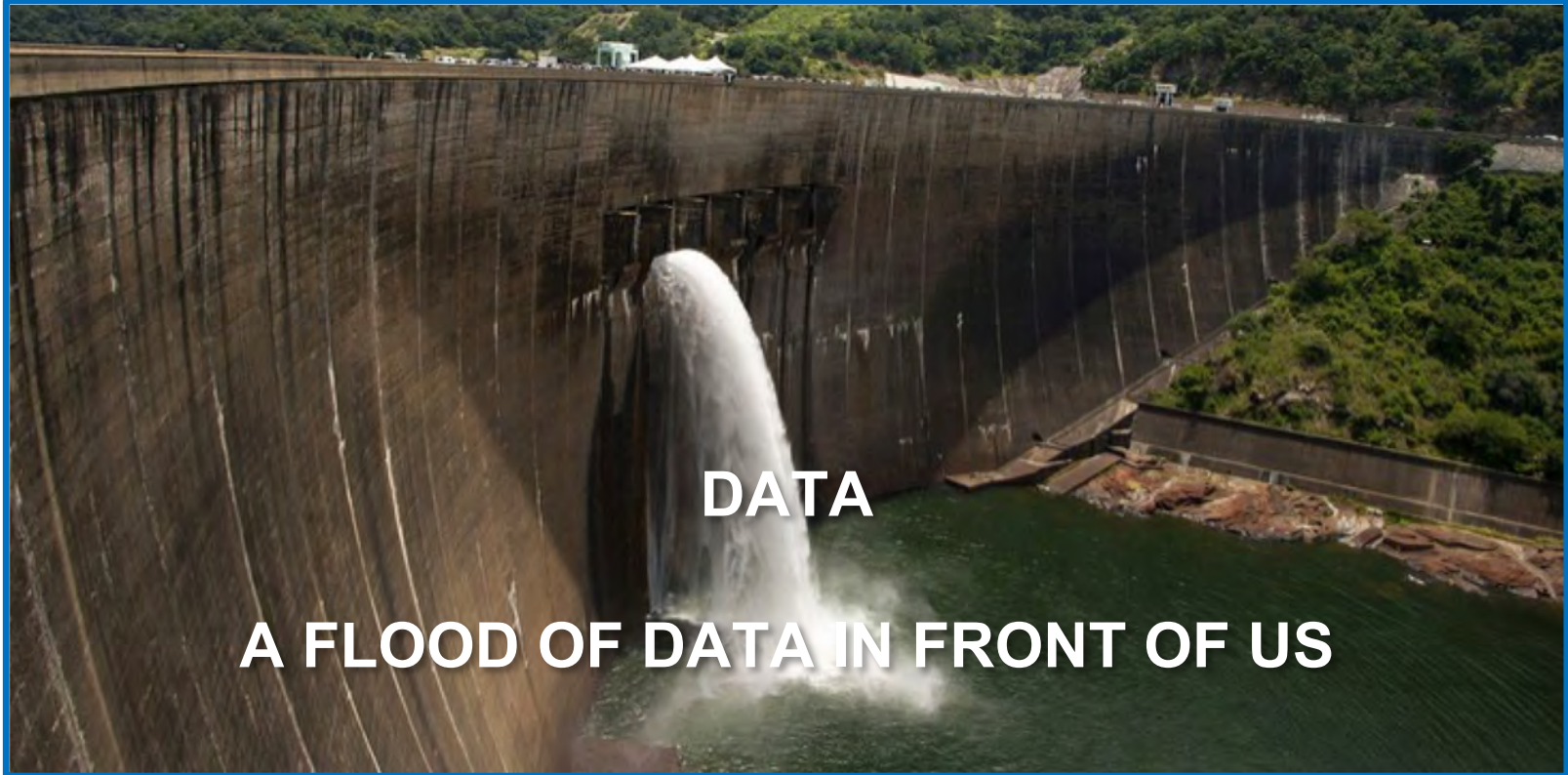
66%

Of citizens believe new technologies can help deliver more effective public safety

What People Want: Accenture Public Service Citizen Survey. Accenture. 2017.



WHAT ARE WE LEARNING?

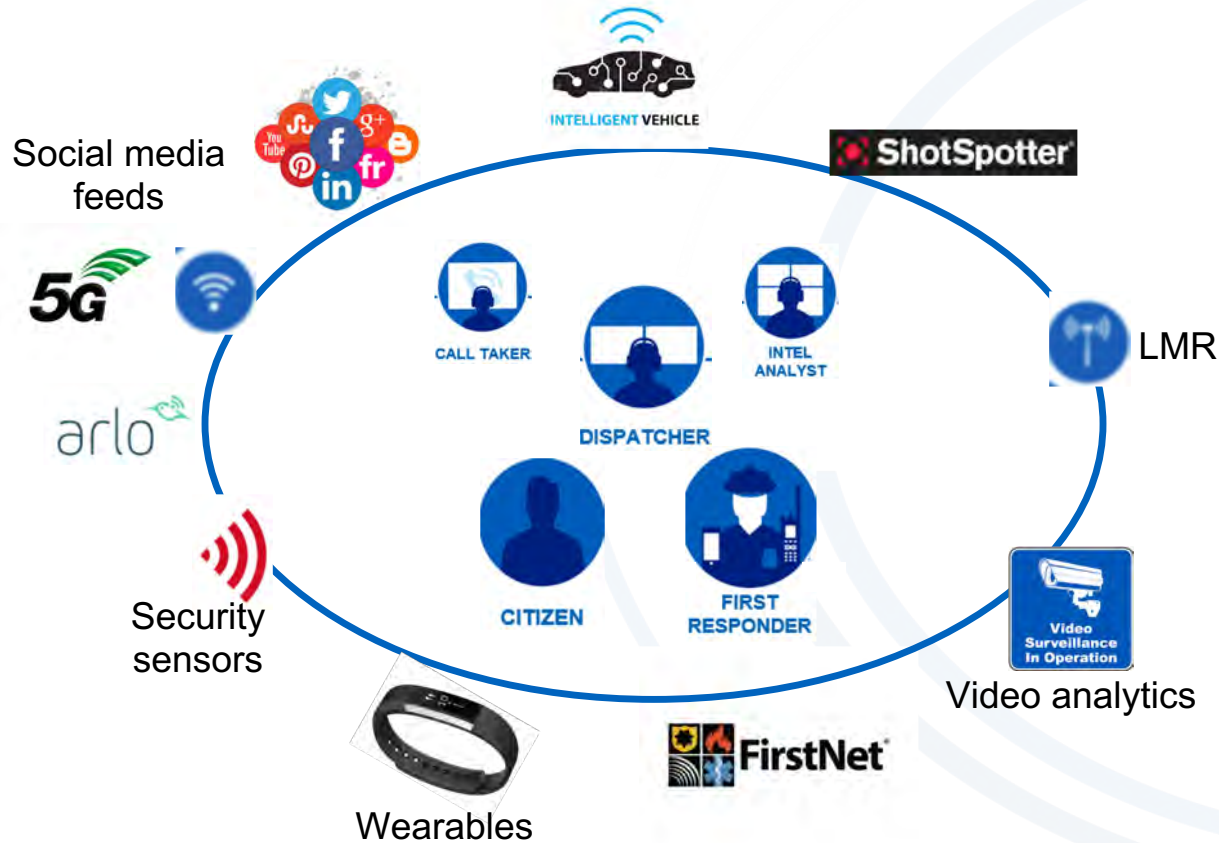


DATA

A FLOOD OF DATA IN FRONT OF US



EMERGEING WORLD OF EMERGENCY INCIDENTS



The workflow is changing from legacy technology pipeline to goal driven collaboration

The collaboration has primary and supporting roles, all empowered with similar technology

PSAPs cannot make this leap in one step. They need evolution, not revolution, with an aggressive, clear, plan

A man with dark hair, wearing a blue t-shirt and a headset, is seated at a desk in a control room. He is looking at several computer monitors. The desk is cluttered with keyboards, mice, and papers. The background shows other people and equipment, suggesting a busy operational environment.

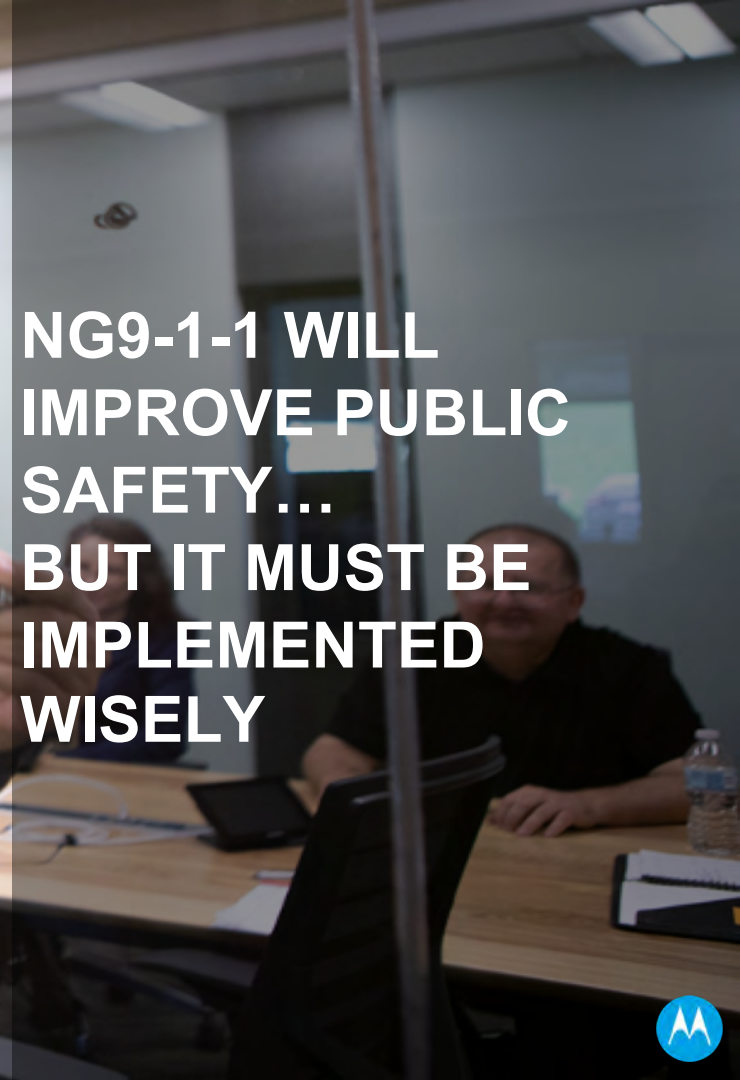
CAN YOU RELATE?

“I’m a little concerned about workflow, and about ensuring that the communication centers, as they gain access to all of this data—will have effective mechanisms to deal with those workflows.”





**NG9-1-1 WILL
IMPROVE PUBLIC
SAFETY...
BUT IT MUST BE
IMPLEMENTED
WISELY**

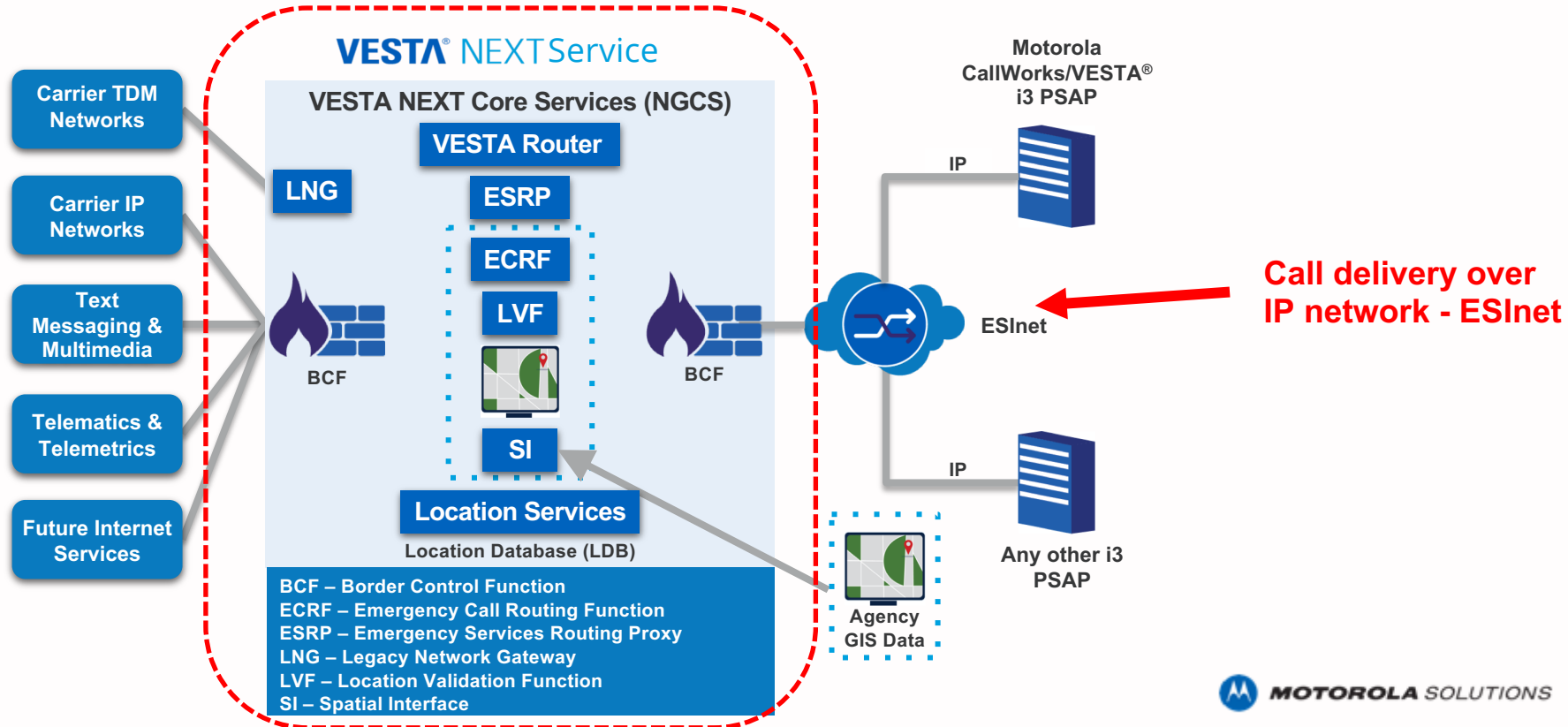


WHAT IS NG9-1-1?



NG9-1-1 IS NEW TECHNOLOGY

Legacy Selective Routers are replaced with NGCS.



IMPROVED RESILIENCY

- New technology – higher redundancy
- Eliminate single points of failure



**CENTRAL OFFICE
SINGLE POINT OF FAILURE**



DISASTER PREPAREDNESS

- Improve disaster preparedness
 - re-route calls anywhere



HURRICANE HARVEY



NG9-1-1 WILL LEAD TO MORE ACCURATE LOCATION

Coming soon...

Geospatial Routing

- Location of the caller will be provided with the call
- Call routing and plotting will be based on callers actual location



A woman with dark hair and a headset is looking intently at a computer screen in a dimly lit office environment. The background is blurred, showing other people and computer monitors.

ARE YOU READY?

- ✓ New information
- ✓ New types of request for service
- ✓ Big Data
- ✓ Artificial Intelligence
- ✓ New systems
- ✓ Transformation from a Public Safety Answering Point (PSAP) to an Emergency Communications Center (ECC)
- ✓ Not just 9-1-1 anymore...



Autonomous Cars



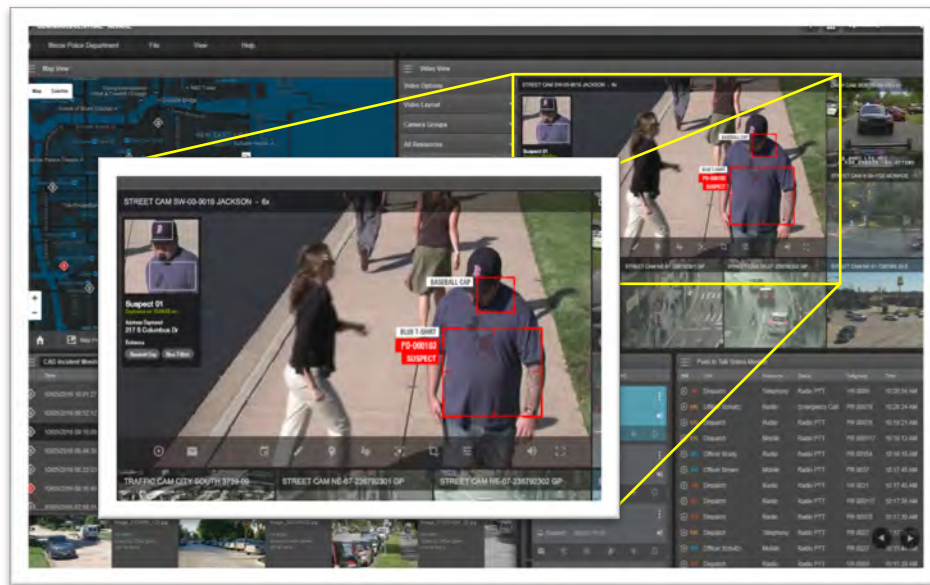
New Requests for Service

RapidSOS



Shared Data

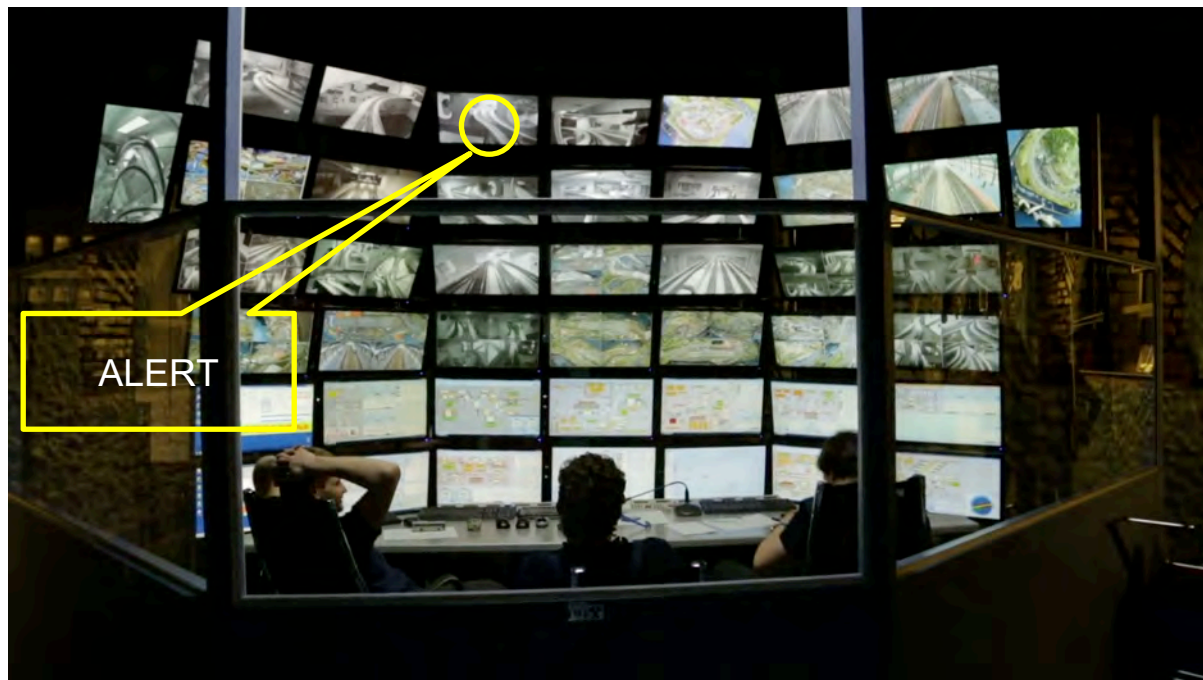
WHAT'S COMING



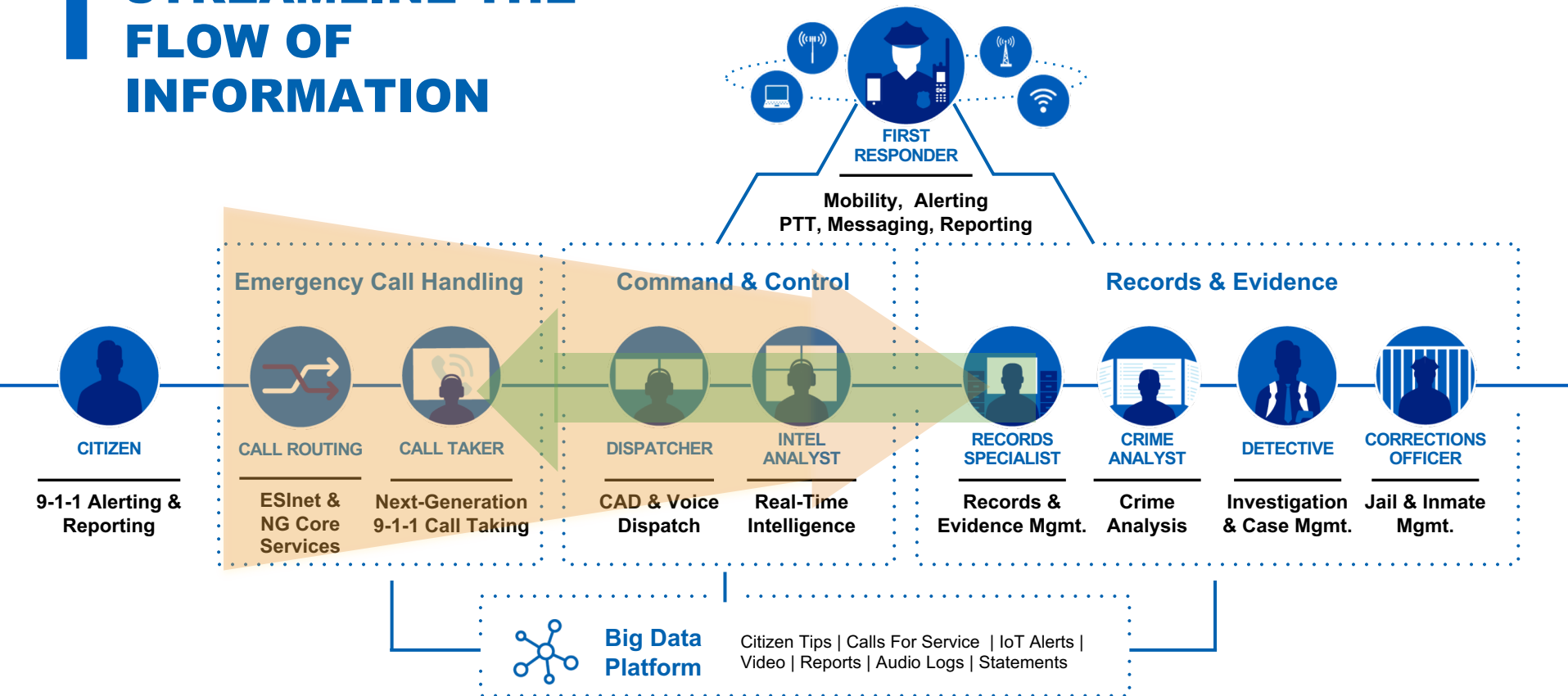
Video Recognition

OUR ROLE

**FILTER DATA
FOR
ACTIONABLE
INFORMATION**



STREAMLINE THE FLOW OF INFORMATION



UNIFIED WORKFLOWS: HANDLE 9-1-1 CALLS IN CAD

1 KEYBOARD & 1 MOUSE



Reduced hardware and simplified processing with one keyboard and mouse.

1

ANSWER CALLS IN CAD



Call Taker answers 9-1-1 call/text within CAD screen and incident created in one click.

2

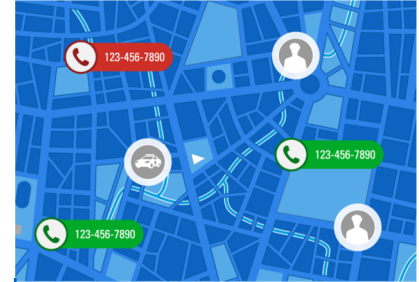
DATA ENTERED ONCE



Information is captured once and transferred to Dispatch and linked to CAD incident record.

3

SINGLE MAP VIEW



View 9-1-1 calls and incident resources from one map to monitor coverage.

4

Answer a call, create an incident and dispatch response in as few as four keystrokes.



ROLE OF TECHNOLOGY RE: PROCESSING INCOMING DATA

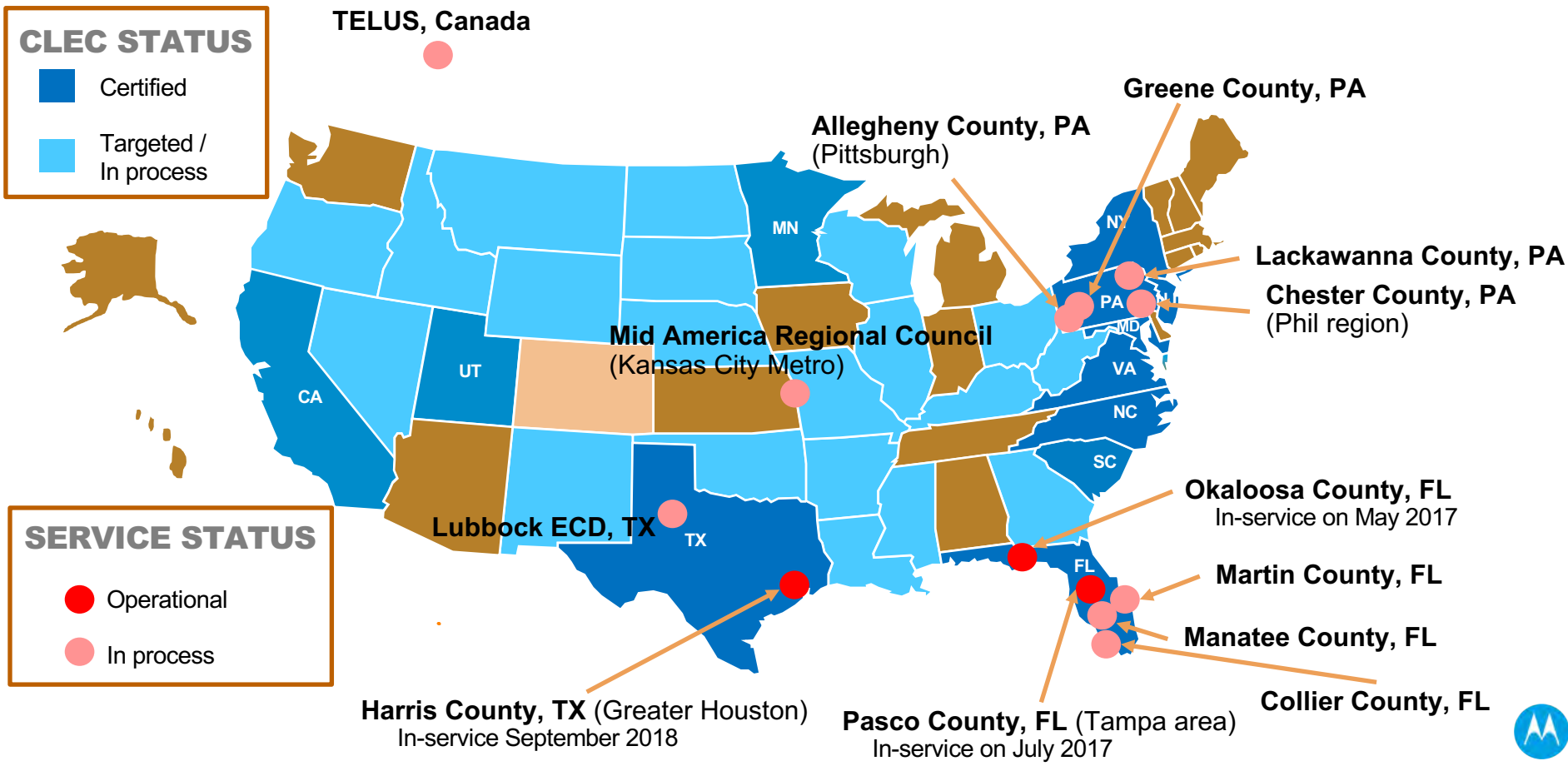
AI Is Closer Than We Think

With all the data in front of us – it will be virtually impossible to sort and react quickly



NG9-1-1 UPDATE

VESTA SOLUTIONS, INC. 9-1-1 SERVICE PROVIDER



VESTA® NEXT NGCS Managed Service

Designed – Engineered – Built for Public Safety



Motorola Solutions: a company solely dedicated to Public Safety.

Standards: NENA i3-compliant geospatial solution.

Offered as-a-service: We do it all – deliver the ESInet, manage the solution. Covered service provider in 12 states, with more planned

Carrier & equipment agnostic: Procure network to stringent requirements with best available providers. Our service works with any i3 compliant call handling equipment.

Support: Network Security Operations Center and Help Desk dedicated to NG9-1-1 support.

GIS Data/Geospatial Routing: Expertise helping you manage and maintain your GIS data for geospatial routing.

Location Database (LDB): Migrate legacy ALI database and provide ongoing maintenance and telco record processing.

Transparency: 24x7 view into your day-to-day operations through our online portal.





THANK YOU



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EXPECT FULL INDUSTRY COMPLIANCE...

ESINET AND CORE SERVICE COMPONENTS

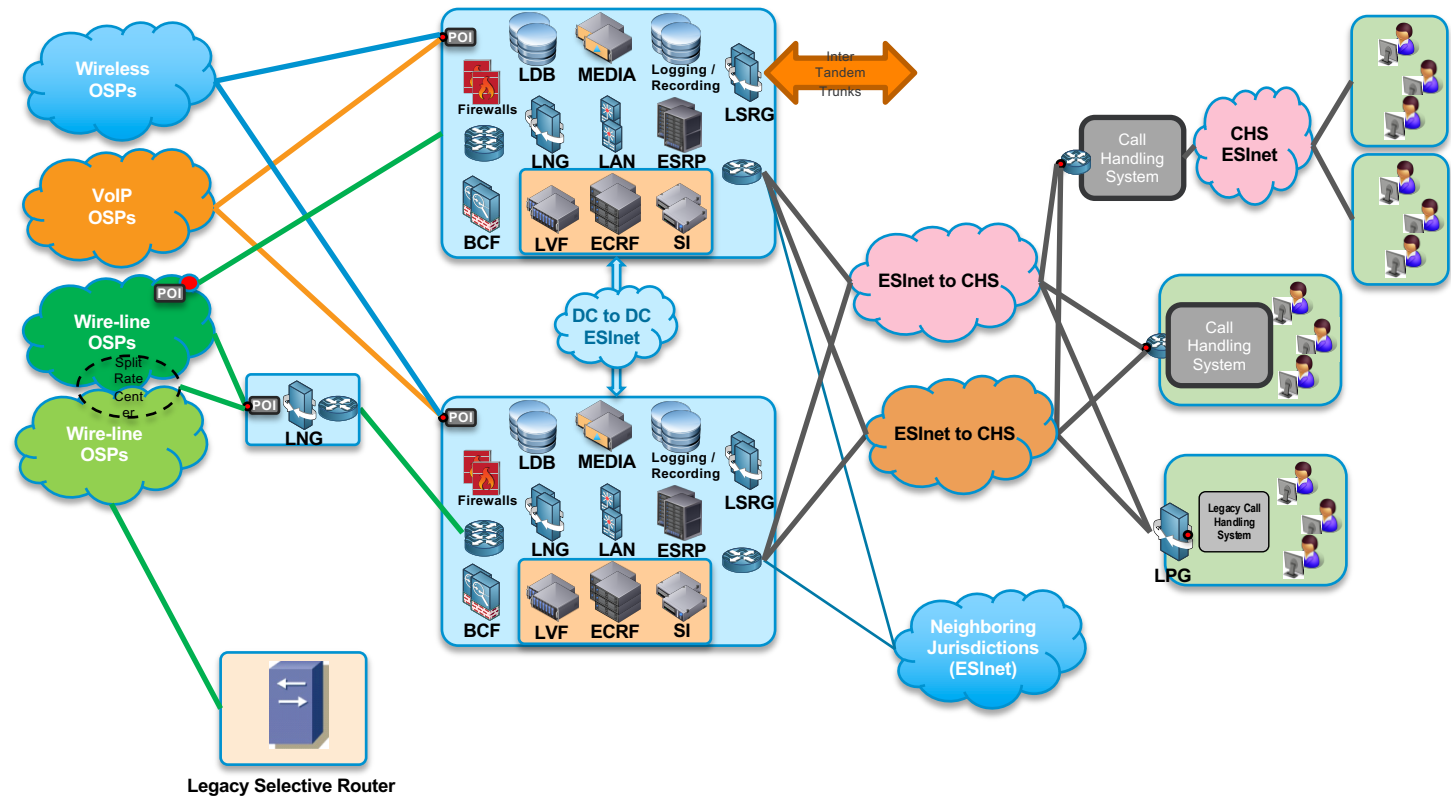
- **Routing Service**
 - Geospatial router that routes 9-1-1 calls to the correct PSAP according to pre-configured routing rules defined by the County's Priority Routing Function (PRF)
 - Migration of existing MSAG (Master Street Address Guide) and ALI databases
 - Develop routing rules for the County (Routing, fallback, transfers abandons, etc)
- **Location Database Service**
 - Provides location information for incoming calls
 - Extract ALI from current providers
 - Load and configure new Location Database (LDB)
 - Provide data management tools to report and manage location discrepancies
- **Routing Infrastructure**
 - Two geo-diverse data centers
 - Legacy Network Gateways (LNGs) for conversion of legacy traffic to IP
 - Session Border Controller (SBC) and Border Control Functions (BCF) provide IP network security
- **GIS Services**
 - Emergency Call Routing Function (ECRF) allows for location based selective transfers and additional location services
 - Location Validation Function – compares address locations against NG911 GIS Data
 - Spatial Interface (SI) – allows for receiving GIS updates
- **Network and Data Centers**
 - Ingress Network
 - Layer 3 Network between Data Centers
 - IP Wide Area Network (WAN)

VESTA® *NEXT* Service

- NENA i3 compliance
- Routing
- ESInet
- Call Handling
- Location Services
- Cybersecurity
- 24 x 7 Network Monitoring
- Dedicated to Public Safety



SOLUTION OVERVIEW

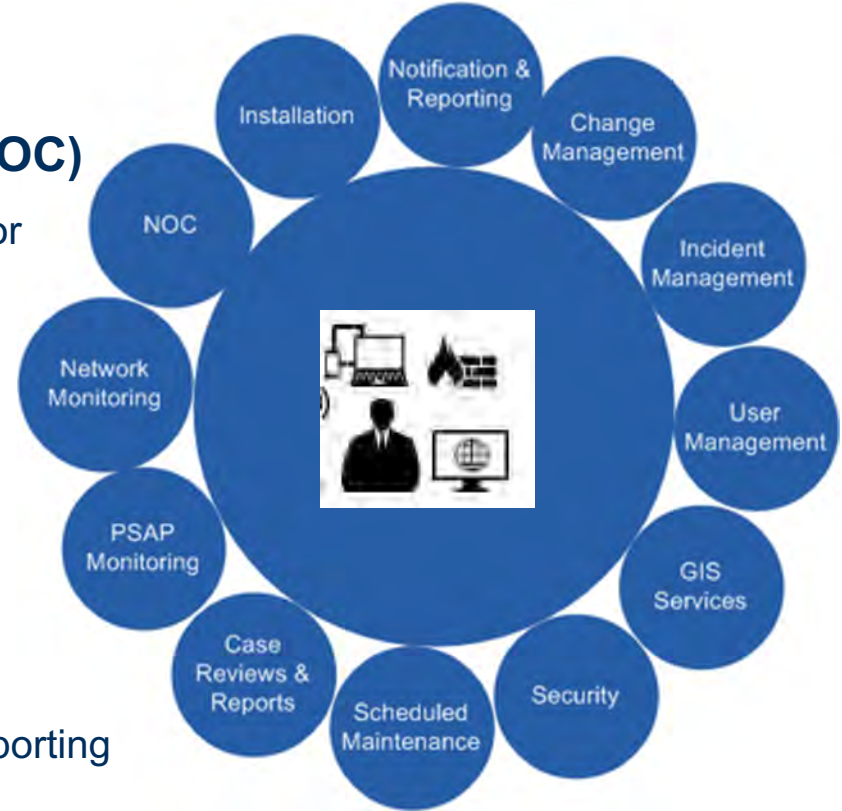


VESTA NEXT NSOC

Network Security Operations Center (NSOC)

24x7x365 secure monitoring and resolution center for NGCS and Motorola Call Handling Systems

- Service Desk
- Notifications
- Electronic ticket submission
- Web portal
- Manages scheduled maintenance
- Coordinates upgrades
- Coordinates FCC regulatory reporting
- Coordinates monthly/quarterly performance reporting



CYBER SECURITY

- Dedicated Cybersecurity Team
 - NENA NG-SEC
 - NIST Cybersecurity Framework
 - External auditors to validated compliance to stringent international standards
- Areas of Focus
 - System Hardening Validation
 - Firewalls and Intrusion Detection
 - Access Control
 - Virus Protection and Patch Management
 - Remote Access
 - Network Security



December 1, 2016.

Dan Zeller, *Director of Cyber Security*
Airbus DS Communications
42505 Rio Nedo
Temecula, CA 92590

RE: Airbus DS Communications – SOC 2 Acknowledgment

Dan Zeller:

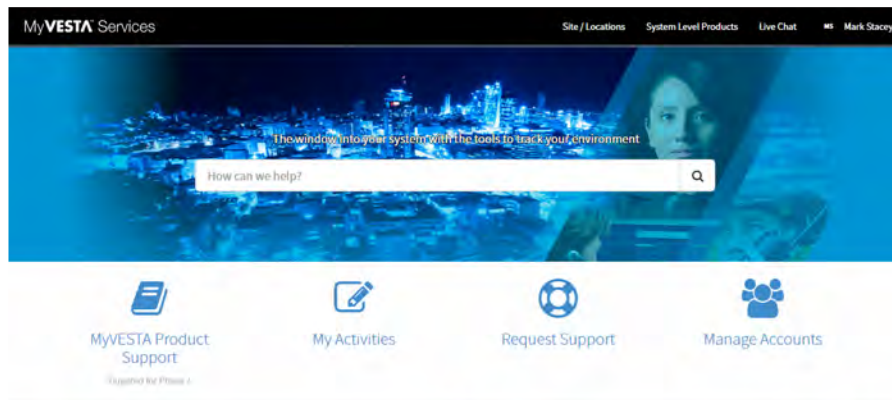
This letter shall serve as acknowledgment that **Airbus DS Communications (AIRBUS)** has engaged **NDB Accountants & Consultants, LLP (NDB)**, a nationally recognized PCAOB CPA firm, to perform a **Service Organization Controls (SOC 2) Type 2** Attestation for AIRBUS for the testing period ending on October 31, 2016.

The SOC Framework embodies the United States set of standards put forth by the American Institute of Certified Public Accountants (AICPA) and implemented in 2011 as a successor standard to SAS70, which had long been regarded as a highly sought after attestation function, based on its coverage of a defined scope of control objectives and its ability over the years to adjust and conform its function for services relevant to User Organizations. AIRBUS's SOC 2 report is expected to include the relevant criteria from the five Trust Services Principles.

- The **Security** of a Service Organization's system.
- The **Availability** of a Service Organization's system.
- The **Processing Integrity** of a Service Organization's system.
- The **Confidentiality** of the information that the Service Organization's system processes or maintains for user entities.
- The **Privacy** of personal information that the Service Organization collects, uses, retains, discloses, and disposes of for user entities.



VESTA® WEB PORTAL



MyVESTA Services Home Page provides customers:

- Ability to **open** new cases and obtain updates
- Access to run **Real-Time reports**
- Access to **Topology Maps**, depicting a Real-Time glimpse of your environment with color indication of health / status
- And Much More...

Case - CS0002908 [Create Case view]

Submit Save Save

Contact type: Phone

Site: Fairfax County E911 Backup - B

System Level Product: Fairfax County PSTOC - A - VESTA 9-

Contract: CNTR0040517 Fairfax County E911 I

Support Service: SPT V-ANLYT ENT/HOST SYR

Service provider: CHANNEL: General Dynamics

Type: Trouble / Issue

Priority: 3 - Medium

Assignment group: TS L3

Assigned to: Matt Carmack

Time worked: 00:04:34 00 04 34

Contact: Mark Stacey

Call back #: (951) 551-0017

Service provider case number: GD-03092005

Short description: Reporting ALI issues at the site

Description: Reviewed the issue with the tech and identified that ALI is intermittent at one workstation.

Submit Save Save

