

DATA ANALYTICS AND REAL TIME CRIME TOOLS

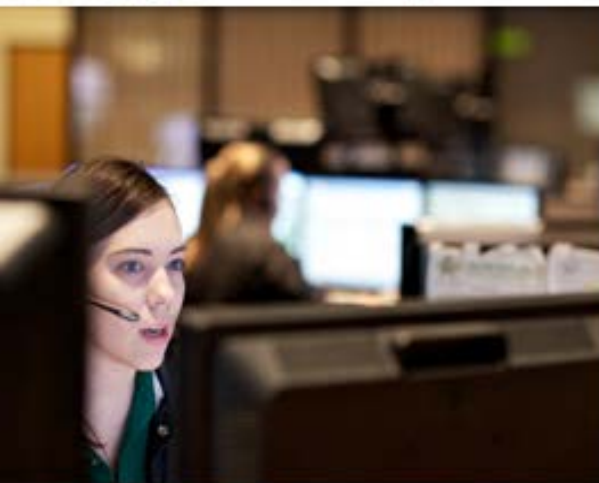
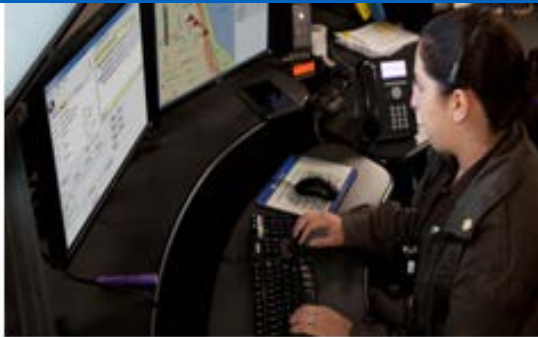
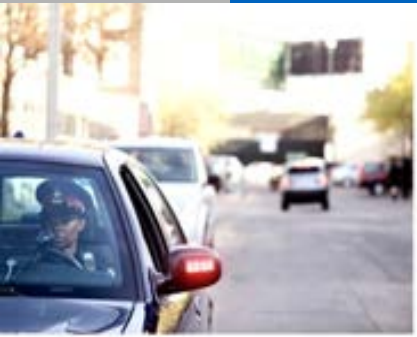
INTELLIGENCE LED POLICING

STEVE BEACH, ENGAGEMENT MANAGER
MOTOROLA SOLUTIONS
NOVEMBER 4, 2014



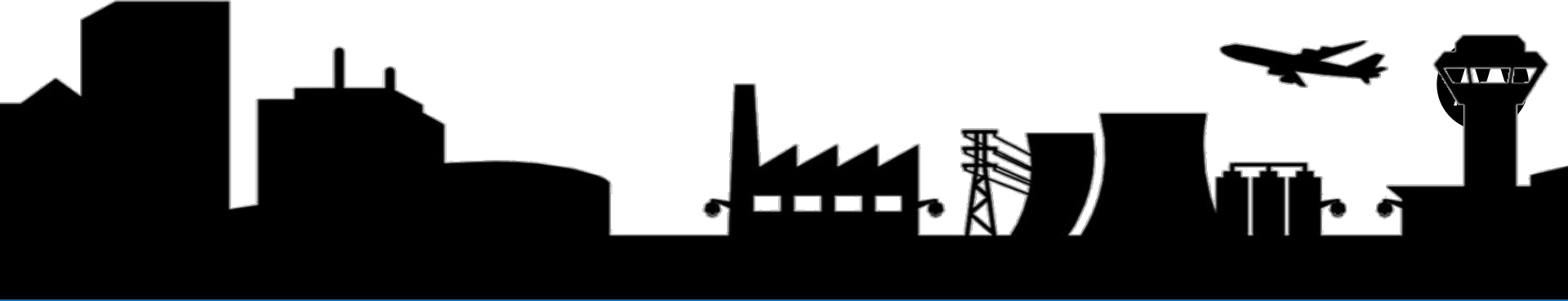


TRENDS IN PUBLIC SAFETY



HOW THE PUBLIC SAFETY LANDSCAPE IS CHANGING

- Interoperability needs
- Rapid multi-agency response
- Power of real-time data
- NG9-1-1 requirements
- Multimedia adoption
- Proliferation of applications
- Cloud based services



INFORMATION IS EVERYWHERE



**CITY FLEET
LOCATIONS**



**TRANSIT
SCHEDULES**



**CITY
SOCIAL MEDIA**



**SURVEILLANCE
CAMERAS**



**NG911
CRIME REPORTS**



**311 SERVICE
REQUEST**



**INTELLIGENT
TRAFFIC LIGHTS**



**SMART
METERS**



**NETWORKED
BIKE SHARE**



**STREET
UPGRADES**



**UTILITIES
WORKLIST**



**BUILDING
PERMITS**



**ZONING
PROJECTS**



**INSPECTIONS
RECORDS**



**HEALTH CODE
RECORDS**



**AIR QUALITY
SENSORS**

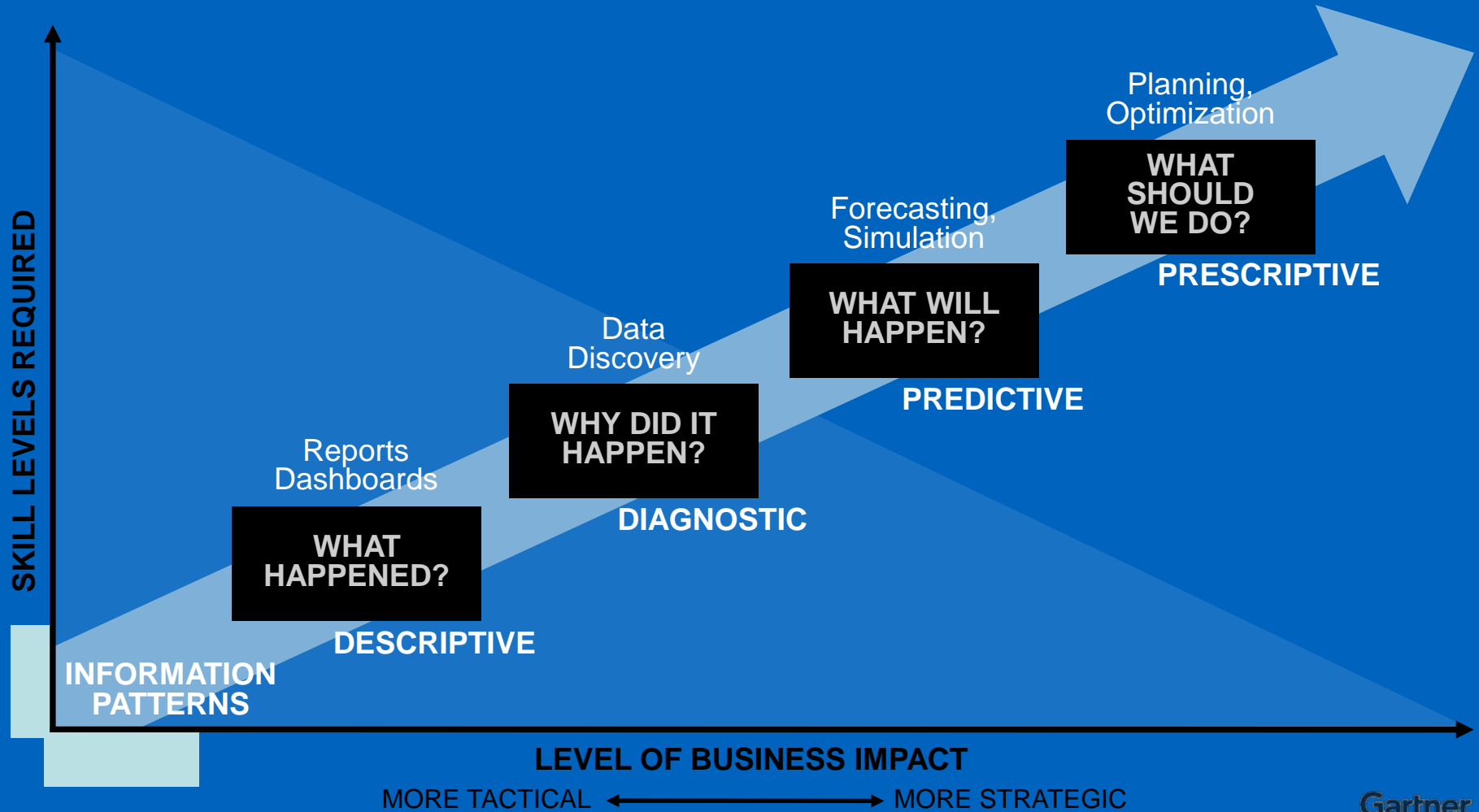


**NETWORKED
METERS**



**CONNECTED
TRASH CANS**

Analytics continuum



The Evolvement of Analytics



A brief history and key highlights

Analysis has been a part of American policing for more than a century. Evolving from pin mapping to comparative data tables; from simple patterns analysis and batch processing on mainframe computers to user interface with real-time analysis.



The Evolvement of Analytics



A brief history and key highlights

Around 1980, a significant conceptual shift toward community-based policing. Emerging from this era of scientific policing was CompStat, led by former New York Police Commissioner (and former Los Angeles Police Chief) William Bratton.

CompStat integrated many of the lessons learned from previous experimentation: a scientific analysis of crime problems, an emphasis on creative and sustained approaches to solving the crime problems, and strict management accountability.

In many ways, CompStat introduced the era of smart policing.



INTELLIGENT DATA DISCOVERY (IDD)

WHAT IT IS

Leverages existing data from an agency's CAD/RMS and displays activity and trends on a map layer

Set of analytics tools that allow agency personnel to create, access and share real-time graphical reports and dashboards

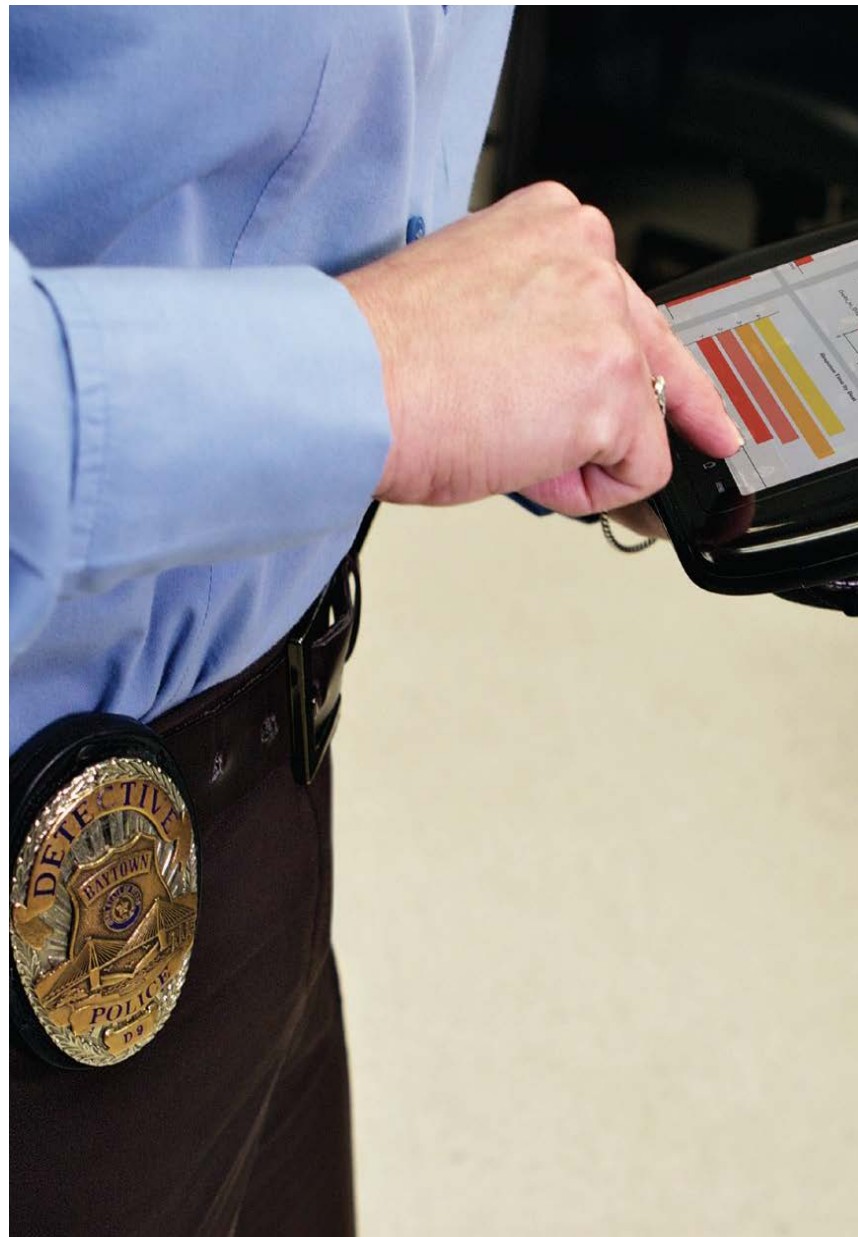
HOW IT WORKS

Data sources are extracted, transformed and loaded into a database

Graphically displayed reports to identify trends, metrics, and historical performance

Personnel can perform quick searches, what-if analysis, and set alerts on certain criteria

Information can be accessed immediately – not just every couple of days



User: Supervisor
User Need: Actionable Intelligence

VENTURA PD USING ANALYTICS



Ventura police use new software to better map, prevent crimes

By Cindy Von Quednow

Posted December 8, 2013 at 4:09 p.m.

Discuss

Print

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PHOTO BY ROB VARELA, VENTURA COUNTY STAR // BUY THIS PHOTO



KEN CORNEY

Police Chief, Ventura Police Department

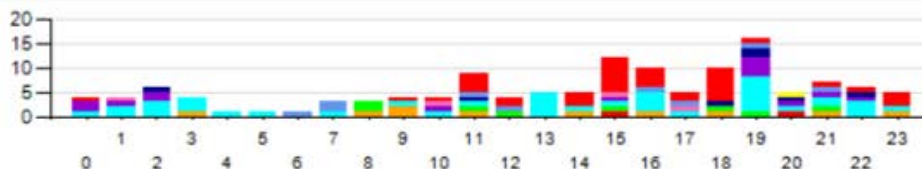
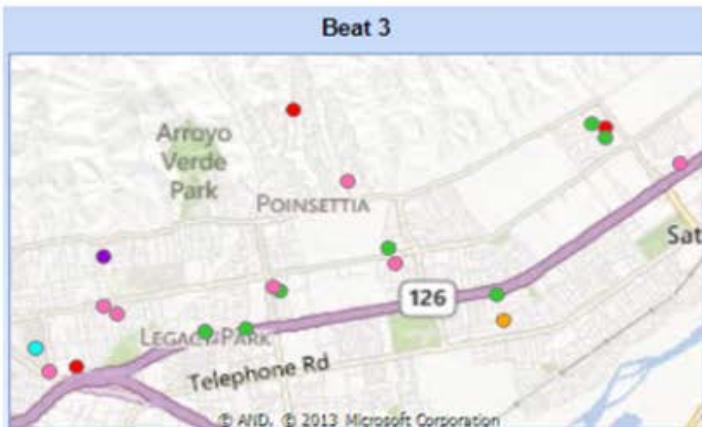
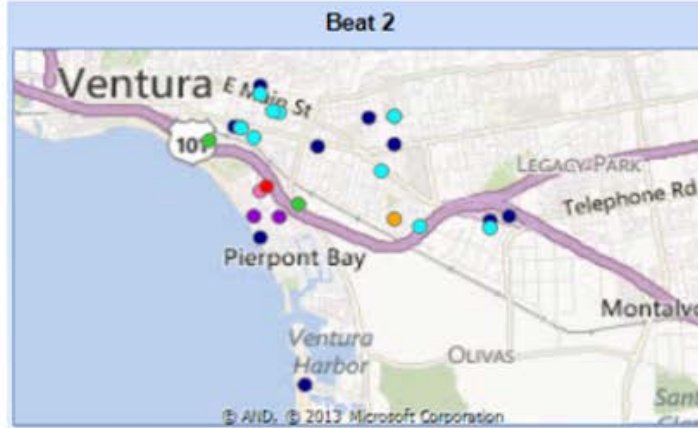
HOTSPOT POLICING – RESOURCE ALLOCATION



INTELLIGENT DATA DISCOVERY



VPD Roll Call Briefing



THEFT
STOLEN
STAB
SHOTS
ROB
DRUNK
DOMEST
BURGV
BURGR
BURGC

Agency

Beats

Performance

24hr

3 day

7 day



Refreshed @ 6/12/2013 13:01

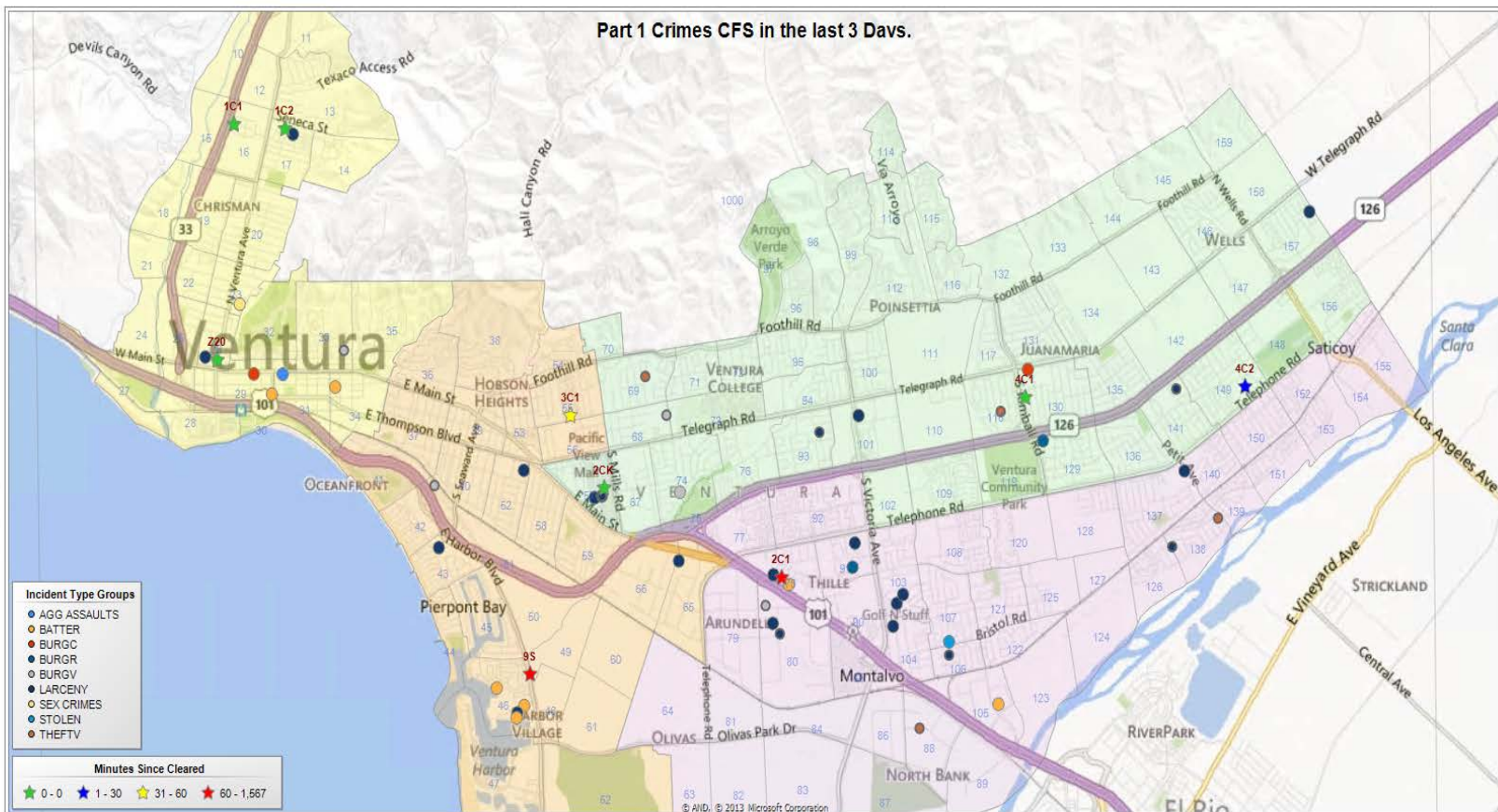
VENTURA PD - DASHBOARD



Home > Intelligence Resource Deployment > Watch Commander Dashboards Rev7(9-12)

Home | My Subscriptions | Site Settings | Help

Motorola Solutions Intelligent Resource Deployment

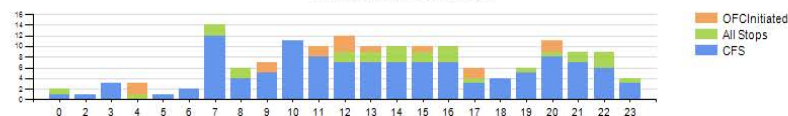


Priority 1 Response Times in the last 24 hours.

- Less than 5 minutes = 3
- More than 5 minutes = 1
- Average Time = 4.0 minutes
- Total Responses = 4

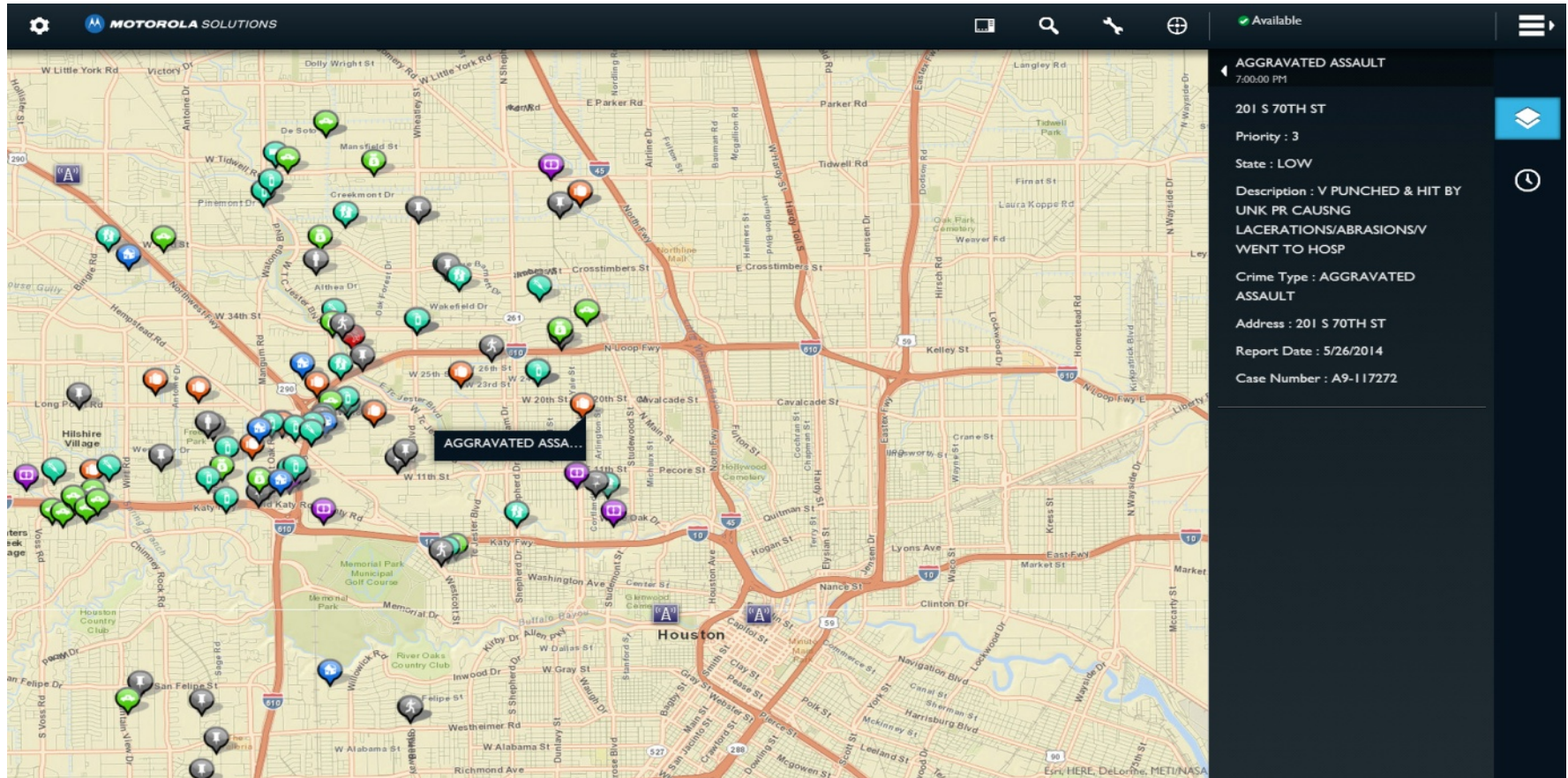


Total Incidents Past 24 hours



Current Time: 20:23 Hrs

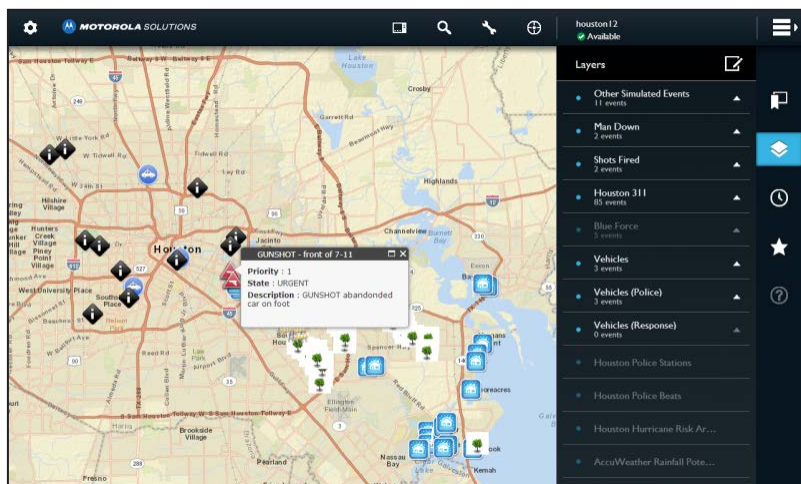
INTELLIGENT DATA PORTAL



CORE SITUATIONAL AWARENESS VIA WEB CLIENT

- ESRI Basemaps (Streets and Satellite)
- Real Time Traffic (Worldwide)
- AccuWeather Static Hi-Res Radar Image
- NWS Weather Warnings
- Current Weather Conditions
- Exec. Reporting Dashboard
- 24/7 Call Support
- Cloud Hosting Fees
- 3rd party Solutions integration

OPERATIONAL USE OF AN INTELLIGENT DATA PORTAL



IDP CORE

- ESRI Basemaps (Streets and Satellite)
- Real Time Traffic (Worldwide)
- AccuWeather Static Hi-Res Radar Image
- NWS Weather Warnings
- Current Weather Conditions
- Publish 2 On-Prem Data Sources
- Exec. Reporting Dashboard
- 24/7 Call Support
- Cloud Hosting Fees
- Solution Maintenance Fees

BEYOND THE CORE SOLUTIONS



OPERATIONS

- Current CAD Incidents Layer
- Radio / Vehicle GPS Tracking
- AIS Ship / Vessel Tracking



TACTICAL

- Collaboration Whiteboard
- Real Time Staging
- Picture / Video Viewing Layer



WEATHER

- Local Storm Reports
- Animated Radar Loop
- Lightning Strike Layer



ANALYTICS PACKAGE

- Patrol Efficiency
- Calls For Service
- Predictive Unit Monitor
- Crime Heatmaps
- Response Time Metrics



ENVIRONMENT

- Earthquake Reporting
- Wildfire Perimeter Layer
- Hurricane Tracker
- Flooding Impact Zones



SENSOR

- Radiological, Biological, Environmental Sensor
- Zephyr Bio-Monitor
- Bio monitoring

VIDEO STREAMING

REAL-TIME VIDEO STREAMING

LIVE VIDEO OVER MOBILE BROADBAND

- Truly live, real-time video, without buffering
- Unified User Interface - Any source, any client

INTELLIGENT VIDEO DISTRIBUTION

- Measures bandwidth and adapts
- Optimized with Public Safety LTE prioritization
- Retrieve once, send anywhere

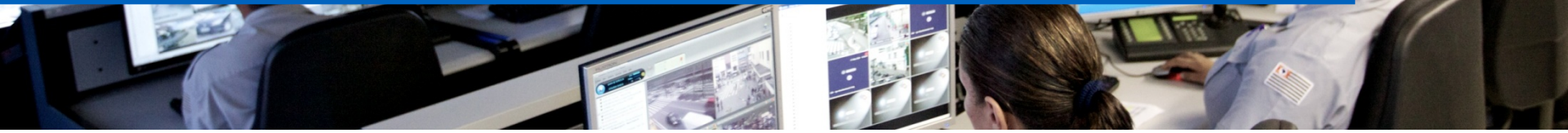
DESIGNED FOR PUBLIC SAFETY

- Intuitive user interface
- Presence-based video sharing model
- Security features to prevent video leaks



REALTIME VIDEO INTELLIGENCE

WIRELESS VIDEO SHARING AND ACCESS SYSTEM



Utilizes QOS to deliver reliable video experience
Data rate adapts to client and available bandwidth

Accepts video from public and private sources
Enables live video from in-car DVR

Select camera views by name or from a map

Fixed cameras & In-Car Video



INTELLIGENCE LED POLICING

REAL TIME CRIME CENTER

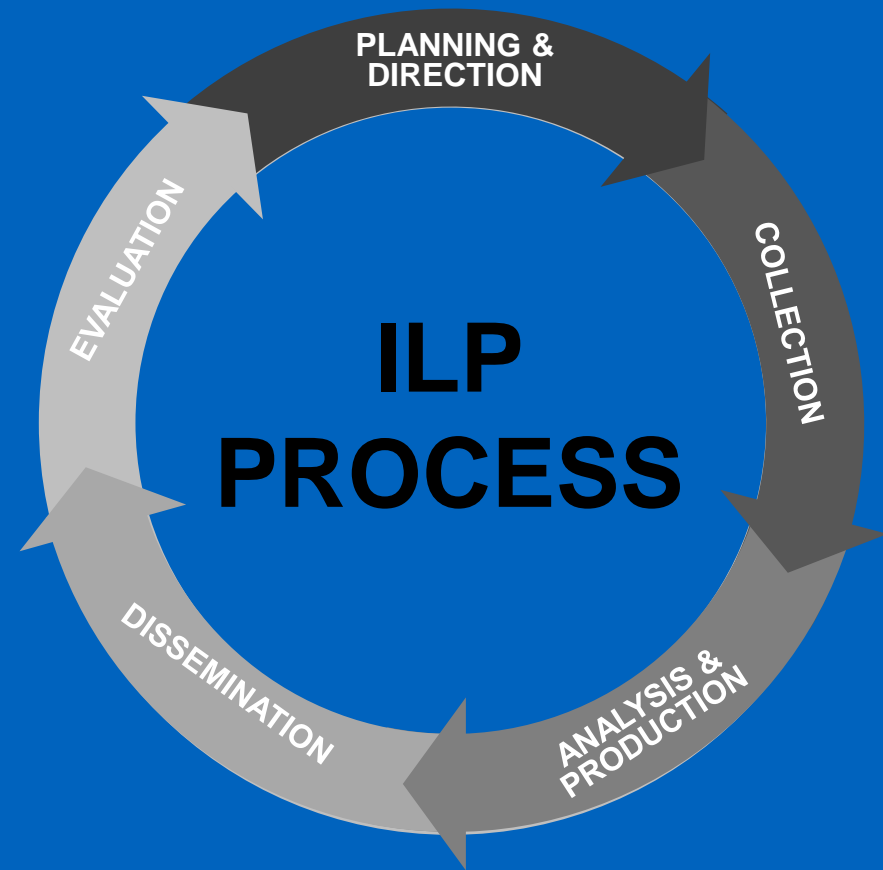


INTELLIGENCE-LED POLICING



RTCC & INTELLIGENCE LED POLICING

- Integration of multi-media and data into operational workflows is becoming the norm and expected form of policing
- Agencies are adopting the ILP model for their build-outs
- ILP enables crime reduction, disruption and prevention through both tactical and strategic data and information analysis.
- RTCC is key to deliver on the MSI 'Safer Cities, Thriving Communities' value proposition



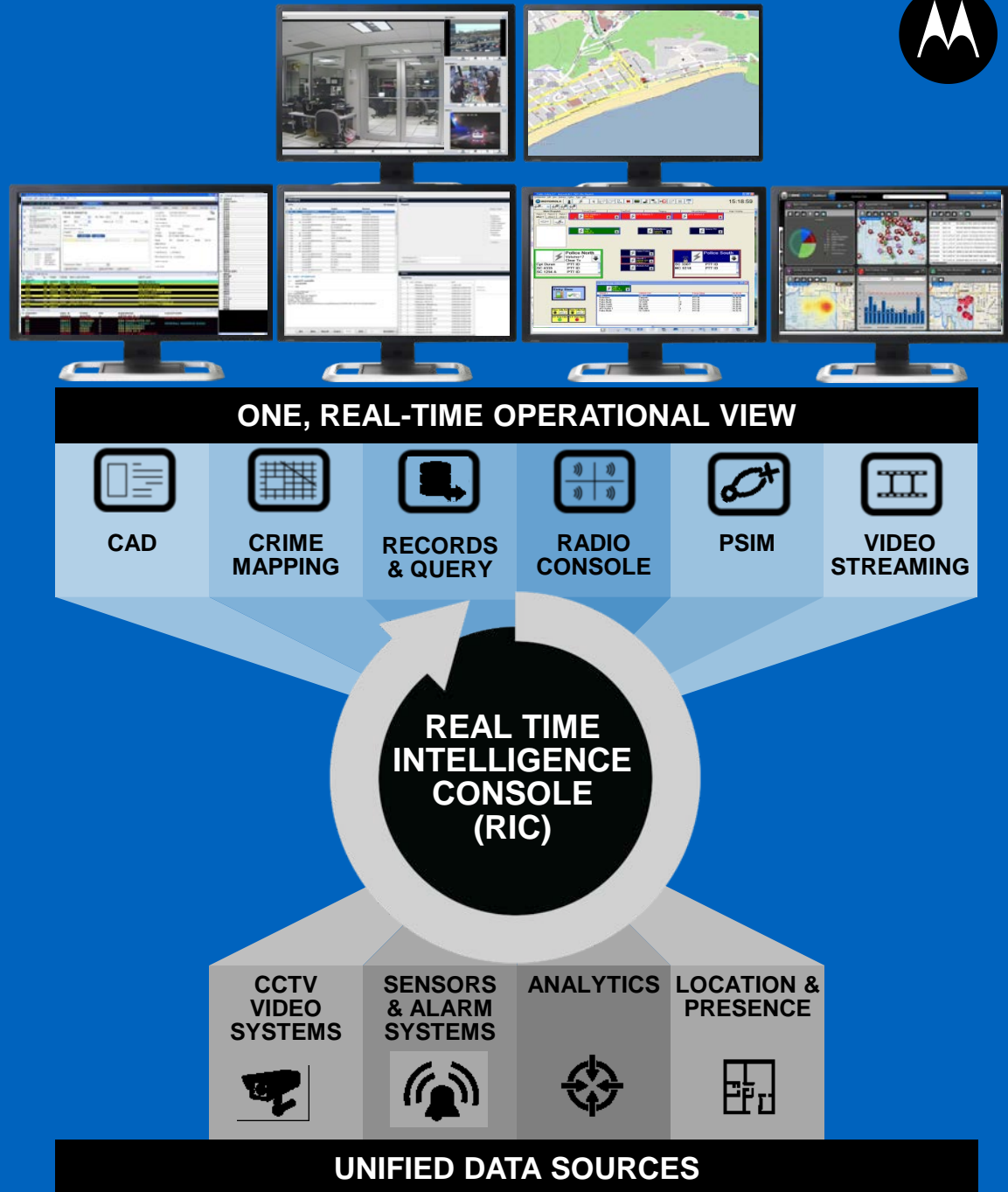
Intelligence led policing is a business model and managerial philosophy where data analysis and crime intelligence are pivotal to an objective, decision making framework that facilitates crime and problem reduction, disruption and prevention through both strategic management and effective enforcement strategies...

(Ratcliffe, 2008)

REAL TIME CRIME CENTER

OFF THE SHELF
APPLICATIONS BRING
TREMENDOUS POWER TO
THE SOLUTION

THE RIC PUTS THOSE
APPLICATIONS INTO ONE
COMMON USER INTERFACE



WHAT IS A REAL TIME CRIME CENTER?



CALL TAKING

DISPATCH

**EMERGENCY
OPERATION
CENTER (EOC)**

**FUSION
CENTER (FC)**

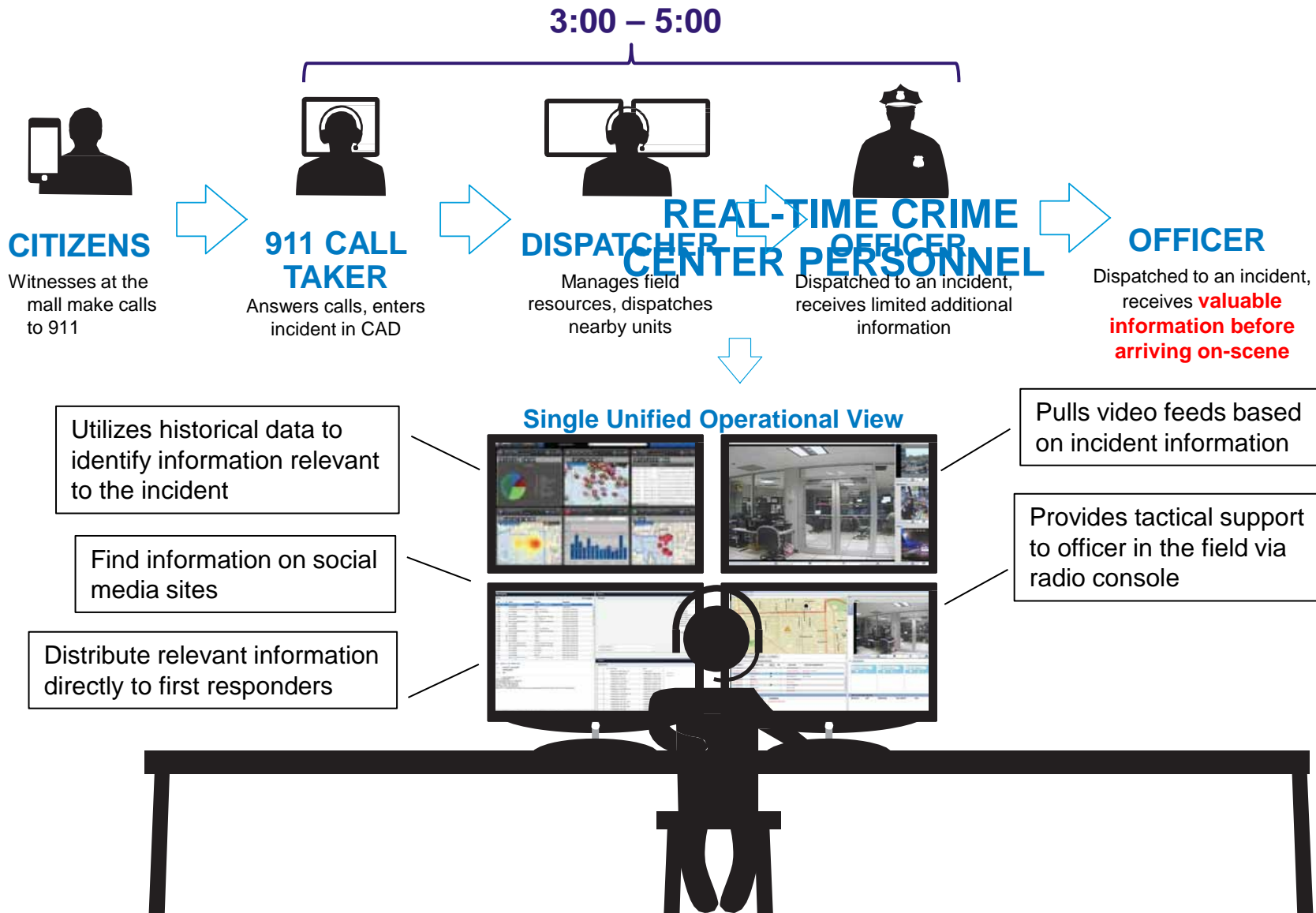
**REAL TIME
CRIME
CENTER**



- Converges multiple data sources to aid in the decision-making process
- Staffed by Crime Analysts and Criminal Investigators to handle real-time incidents
- Provides data analysis for instantaneous access to required information
- Enables data merging to identify patterns and trends in criminal activity
- Includes the “data wall” that allows officers simultaneous incident monitoring convergence



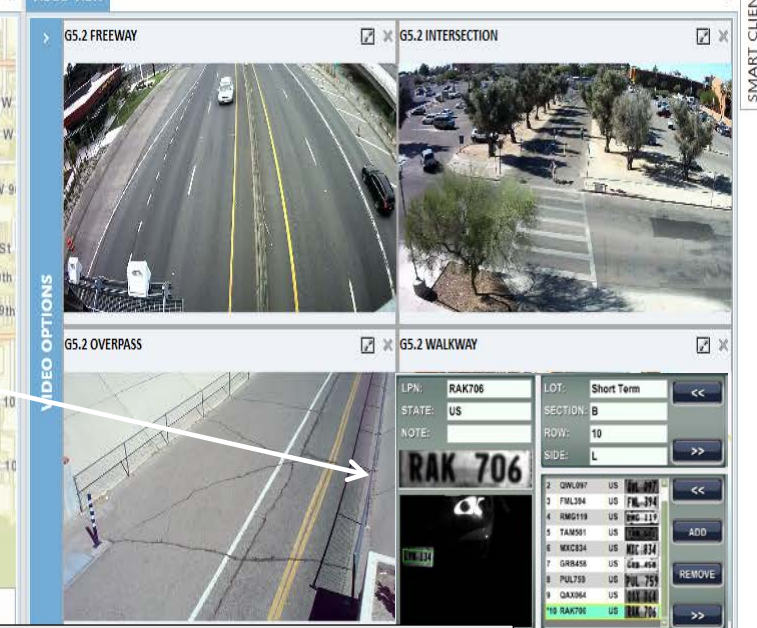
Enhanced Incident Response Workflow



MAP VIEW



VIDEO VIEW



A Real Time Intelligence Console should unify multiple applications (CAD/RMS, Video, Mapping, ALPR, Radio), on one screen and enable intelligence sharing

11:12:37 AM	Gun Shot	98th & Vicksburg Ave	Intersection	✓	1	LAPD	G521513
7/25/2014 10:27:01 AM	ALPR	Century Blvd	Fixed ALPR reader on eastbound Centry	✓	4	LAWA	ALPR2
7/10/2014							

ALARM DETAILS : 7/25/2014 10:27:01 AM ALPR CENTURY BLVD

ATTACHMENTS	SOURCE INFORMATION	ASSOCIATIONS	Email All	NEARBY CAMS	Play All	ADDITIONAL ACTIONS
plate.jpg	Plate region : CA Plate text : NJG629 Was plate misread : false Was plate manually entered : false Plate decode confidence level : 1 Site name : LAWA Notes from plate reader : Eastbound Detailed Description : Automated license plate reader identified a license plate that is on the NCIC hit list. GPS DETAILS : Latitude : 33.9454 Longitude : -118.386 Altitude : 0	LACY		G5.2 INTERSECTION G5.2 OVERPASS LAX Terminals G5.2 FREEWAY G5.2 WALKWAY		

TG-1-Police

Captain Lacey Emergency Alarm 11:36:01 AM

Captain Lacey Radio PTT 11:35:13 AM

EMT Raji Radio PTT 11:35:12 AM

Captain Lacey Radio PTT 11:35:11 AM

EMT Raji Radio PTT 11:35:10 AM

Captain Lacey Emergency Alarm 11:34:56 AM

Captain Lacey Radio PTT 11:34:56 AM

Captain Lacey Emergency Alarm 11:32:11 AM

TG-5-Ambulance

Captain Lacey Radio PTT 11:35:35 AM

EMT Raji Radio PTT 11:35:34 AM

Captain Lacey Radio PTT 11:35:32 AM

EMT Raji Radio PTT 11:35:31 AM

Captain Lacey Radio PTT 11:35:30 AM

EMT Raji Radio PTT 11:35:28 AM

Captain Lacey Radio PTT 11:35:27 AM

EMT Raji Radio PTT 11:35:20 AM

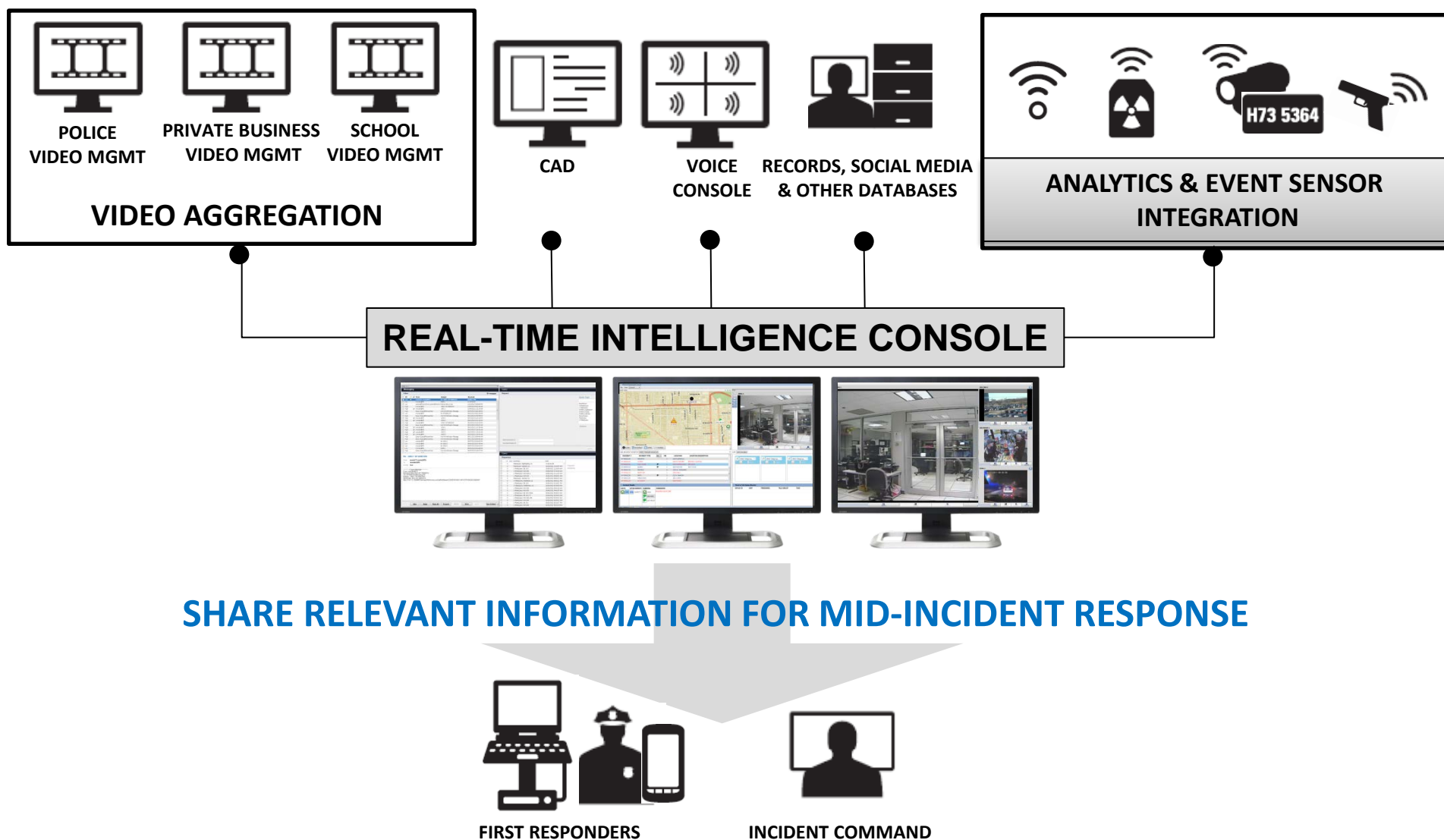
Mute All Audio Monitor General + New Tile Tile Views Tone off

PUSH TO TALK STATUS MONITOR

DEVICE	RESOURCE	STATUS	TIME
Captain Lacey	TG-1-Police	Emergency Alarm	11:36:01 AM
Captain Lacey	TG-5-Ambulance	Radio PTT	11:35:35 AM
EMT Raji	TG-5-Ambulance	Radio PTT	11:35:34 AM
Captain Lacey	TG-5-Ambulance	Radio PTT	11:35:32 AM

(7/25/2014 11:31:59 AM) TG-5-Ambulance: Resource is now ready to send and receive audio.

REAL-TIME INTELLIGENCE CONSOLE





TOMORROW'S RTCC/COMMAND CENTER WORKFLOW



ASTRO[®] 25
ADVANCED
MESSAGING



PREMIERONE[™]
CAD



PREMIERONE
NG9-1-1 CALL
CONTROL



REAL-TIME CRIME
CENTER



PREMIERONE
HANDHELD



IN-VEHICLE

EQUIPPING FIRST RESPONDERS WITH INTELLIGENCE ON THE GO



QUESTIONS?