2013 APCO EMERGING TECHNOLOGY FORUM

OVERVIEW:

1. **TRENDS IN GOVERNMENT AND PUBLIC SAFETY**

2. **MOVING TOWARDS INTELLIGENCE LED POLICING, A BETTER COMMON OPERATING PICTURE AND SITUATIONAL AWARENESS**
   - Real Time Crime / Crime Analysis Centers
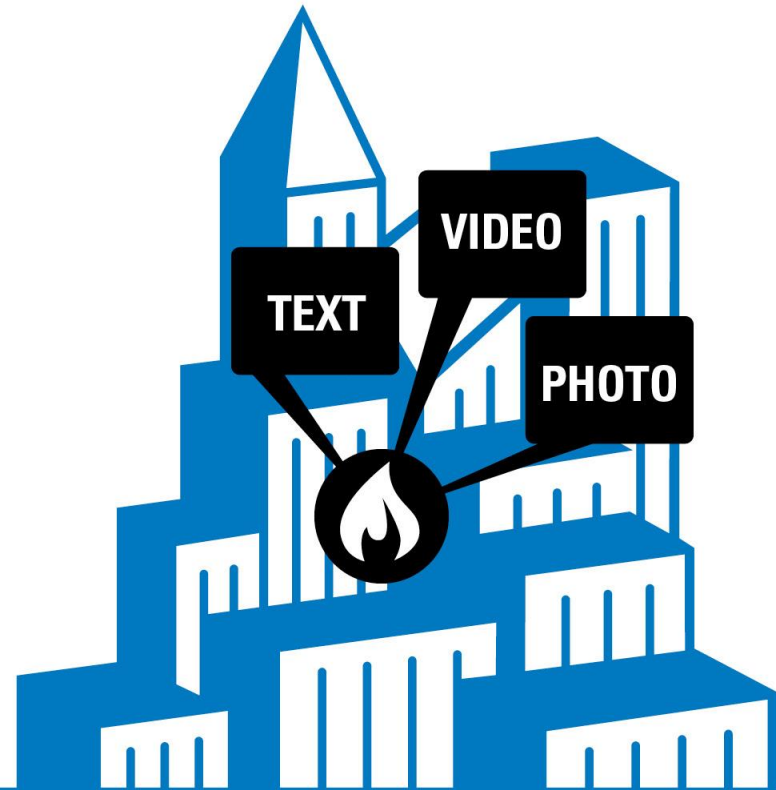   - Intelligent Data Portal

"It's not the strongest of the species that survives, nor the most intelligent, but the one most responsive to change"
(*Charles Darwin, On the Origin of Species 1859*)

TRENDS IN GOVERNMENT

TAP YOUR BEST SOURCE OF INTELLIGENCE
THE CITY ITSELF

72% OF GOVERNMENT IT LEADERS WANT THE ABILITY TO USE VIDEO AND TEXT MESSAGES PROVIDED BY CITIZENS[4]

4 IN 10 GOVERNMENT LEADERS

PLAN TO INVEST IN CLOUD SERVICES
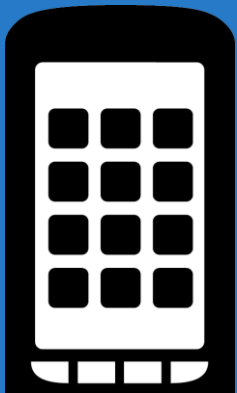**OVER THE NEXT TWO YEARS[2]**

MISSION CRITICAL

89% OF PUBLIC SAFETY DECISION MAKERS SAY

DATA IS JUST AS CRITICAL AS VOICE

THE AMOUNT OF DATA CIRCLING THE WORLD IS EXPECTED TO BE **UP 48%** FROM THE PREVIOUS YEAR

THE FUTURE IS PREDICTIVE POLICING

70%

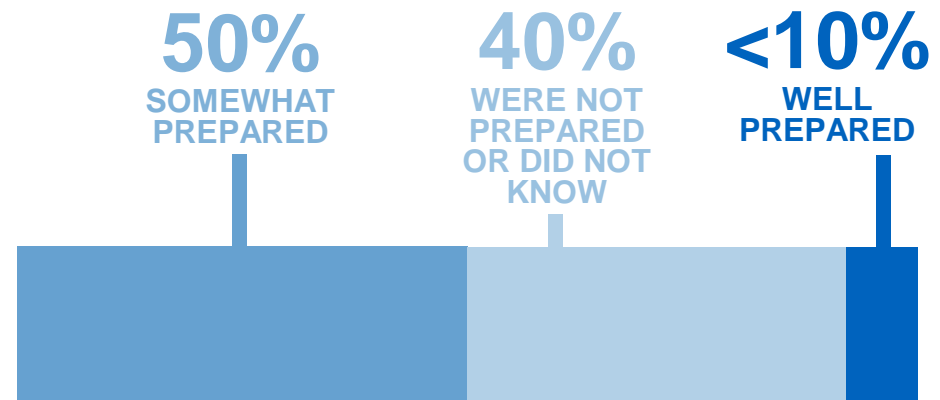**OF LAW ENFORCEMENT AGENCIES ARE EXPLORING PREDICTIVE POLICING**

90%

PLAN TO INCREASE ITS USE OVER THE NEXT FIVE YEARS

A VIEW FROM THE CUSTOMER'S SEAT

WHAT IS THE CURRENT NARRATIVE IN GOVERNMENT?

- Make what is feasible optimal… not…make what is optimal feasible.

- Motorola Public Safety Industry Study – **How well prepared are agencies to implement their next generation technology vision:**

Homeland Security — Interoperability Continuum

50% SOMEWHAT PREPARED

40% WERE NOT PREPARED OR DID NOT KNOW

<10% WELL PREPARED
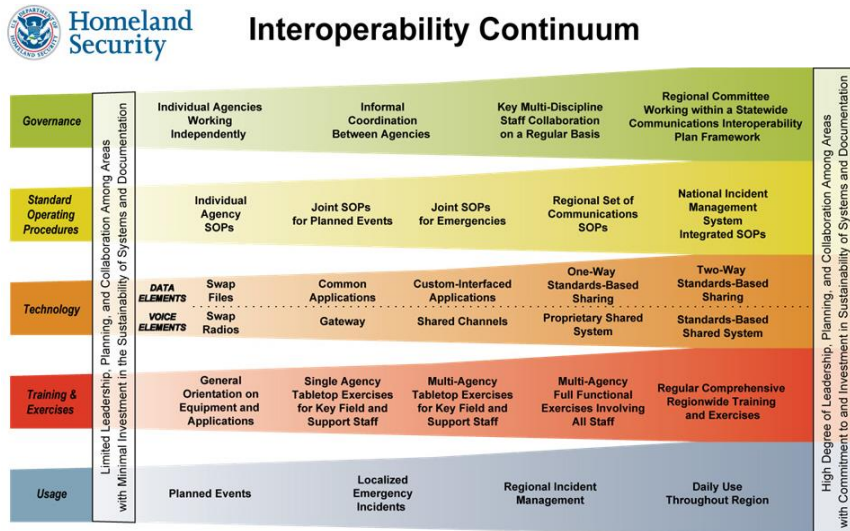
REMEMBER: This a business initiative and not an IT project – the IT solution is an investment in performance and business outcomes.

CHIEFS PLANS TO ACQUIRE/EXPAND
LAW ENFORCEMENT/PATROL OFFICE CAPABILITIES

| Capability	Don't Have, but Plan to Acquire	Have and Plan to Expand	Total	% High[1] Importance
Sharing Multi-Media Information	28%	52%	80%	42%
Mobile Electronic Citations	32%	46%	78%	45%
Mobile Access to CAD/Field Reporting	8%	67%	75%	**85%**
License Plate Readers	20%	55%	75%	33%
Mobile Suspect Identification	33%	40%	73%	49%
Command Center Access to Streaming Video	33%	38%	71%	35%
Training While In The Field	14%	56%	70%	57%
Identifying Officer Location via GPS	28%	40%	68%	56%
Mobile Access to Law Enforcement Databases	3%	64%	67%	**82%**
View Video In Single User Interface	40%	25%	65%	54%
Mobile Evidence Collection	14%	48%	62%	57%
In-car video Recording	12%	44%	56%	58%

■ Don't Have, but Plan to Acquire ■ Have and Plan to Expand

[1]Importance to meeting Police Chief's overall priorities.
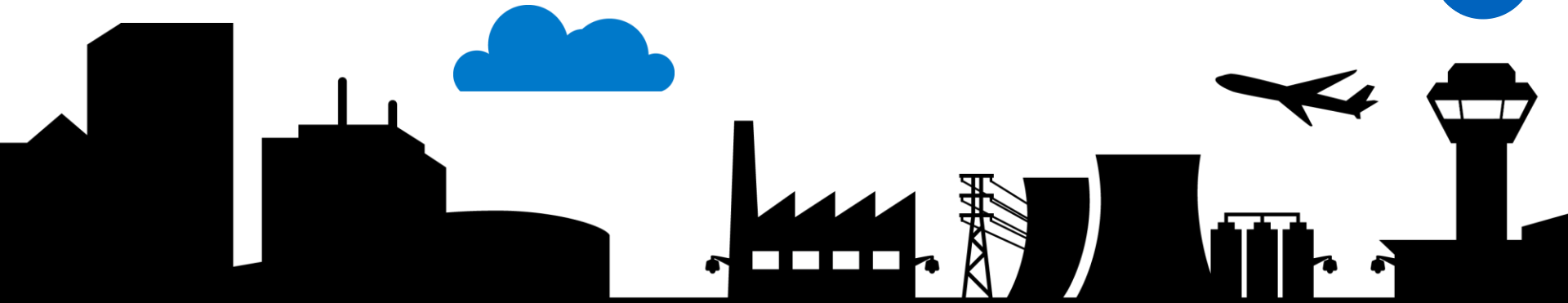
ESCAPING THE CYCLE
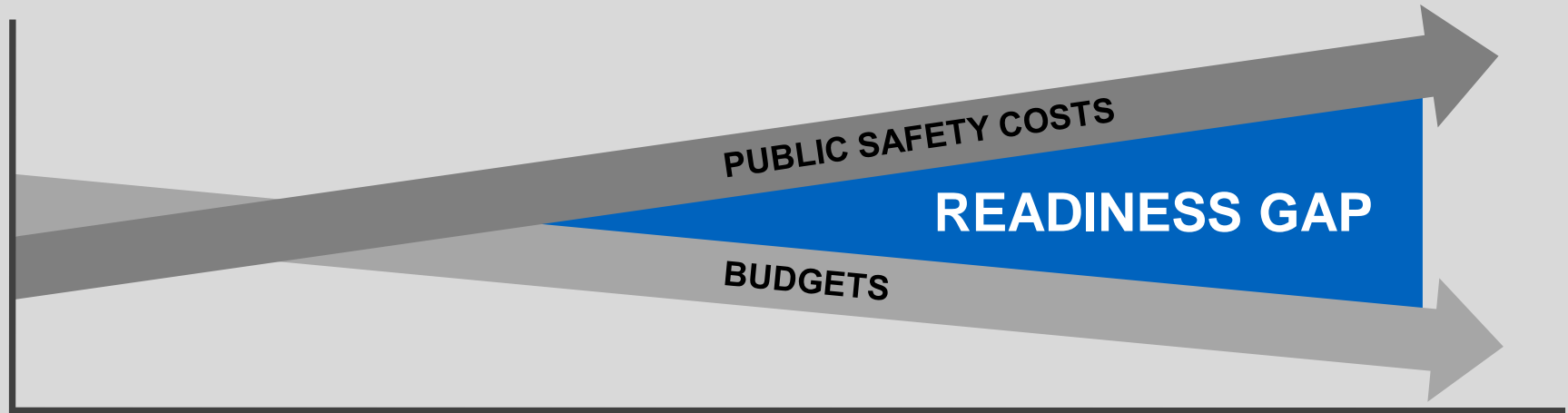
MAKING THE CITY SAFER IS AN IMPERATIVE

1 ▶ 70

Every homicide that occurs in the city results in a population decline of 70 citizens

$1 ▶ $5

Every dollar of public safety investment has been shown to return five dollars of economic results

IN SUMMARY:
THE FUTURE LOOKS LIKE THIS

PUBLIC SAFETY COSTS

READINESS GAP

BUDGETS

- **INCREASING COMPLEXITY**
  - Rapidly changing IT environments
  - Fragmentation (IT, policy, programs, $)

- **THE REQUIREMENT TO DEMONSTRATE ROI**

- **MULTI-PURPOSE INVESTMENTS**

- **KEY PERFORMANCE INDICATORS (KPIS)**

- **THE NEED FOR TRUSTED ADVISORS TO SORT THROUGH THE GROWING COMPLEXITY**

- **A CHANGE IN THE STATUS-QUO**
  - Public safety mission critical architecture
  - Public safety IT ecosystem helping simplify network management
  - Purchasing, maintaining and migrating

THE STREET NEVER STANDS STILL
THREATS INCREASE, RESOURCES DECREASE AND YOU'RE ASKED TO HOLD THE LINE
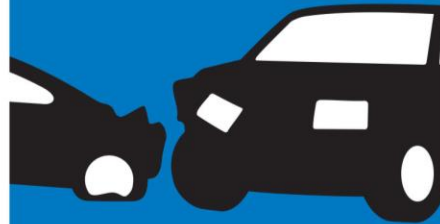
EVENTS ARE PLANNED

THE WORLD CONVENES

ACCIDENTS HAPPEN

DISASTERS STRIKE

SAFER CITIES.
THRIVING COMMUNITIES.

TECHNOLOGY MUST SOLVE KEY CHALLENGES IN THE FIELD, IN COMMAND AND CONTROL AND IN THE NETWORK OPERATIONS CENTER

PROCEED WITH INTELLIGENCE
STAY AHEAD OF WHAT'S NEXT WITH MISSION-CRITICAL INTELLIGENCE

CONNECT WITH THE CITY
TAP YOUR BEST SOURCE OF INTELLIGENCE: THE CITY ITSELF

MANAGE THE COMPLEXITY
IT IS THE ONE LINK THAT STRENGTHENS ALL OTHERS

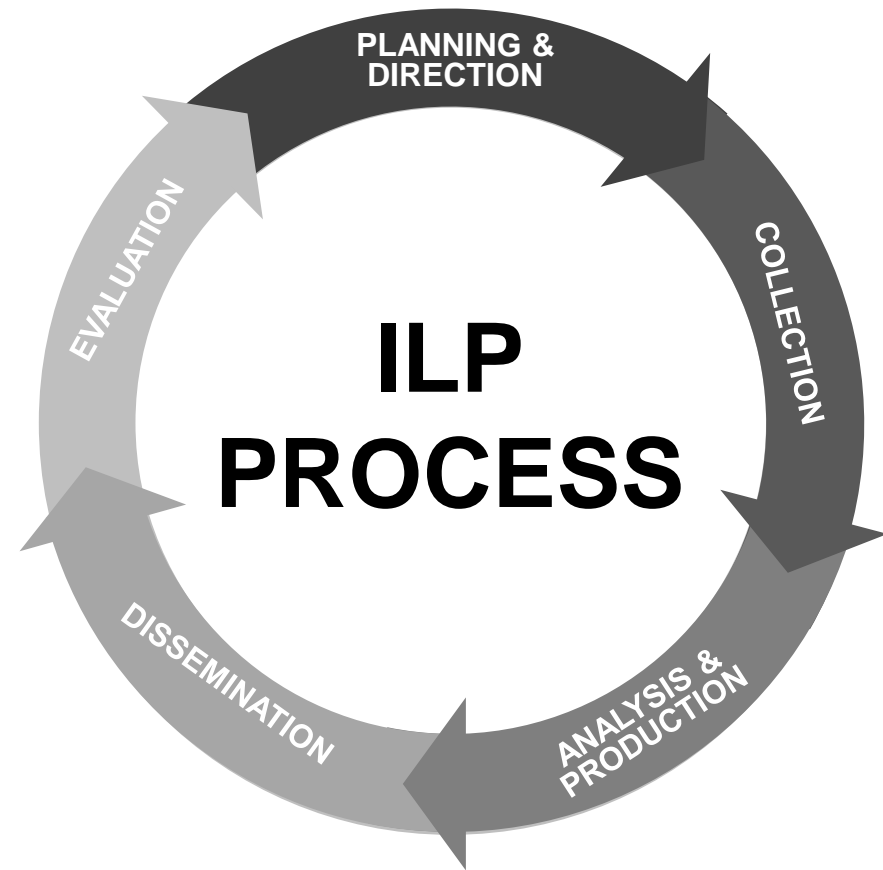# REAL-TIME CRIME CENTERS CRIME ANALYSIS CENTERS

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

ILP PROCESS — cyclical diagram: PLANNING & DIRECTION → COLLECTION → ANALYSIS & PRODUCTION → DISSEMINATION → EVALUATION

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)

ANALYTICS CONTINUUM
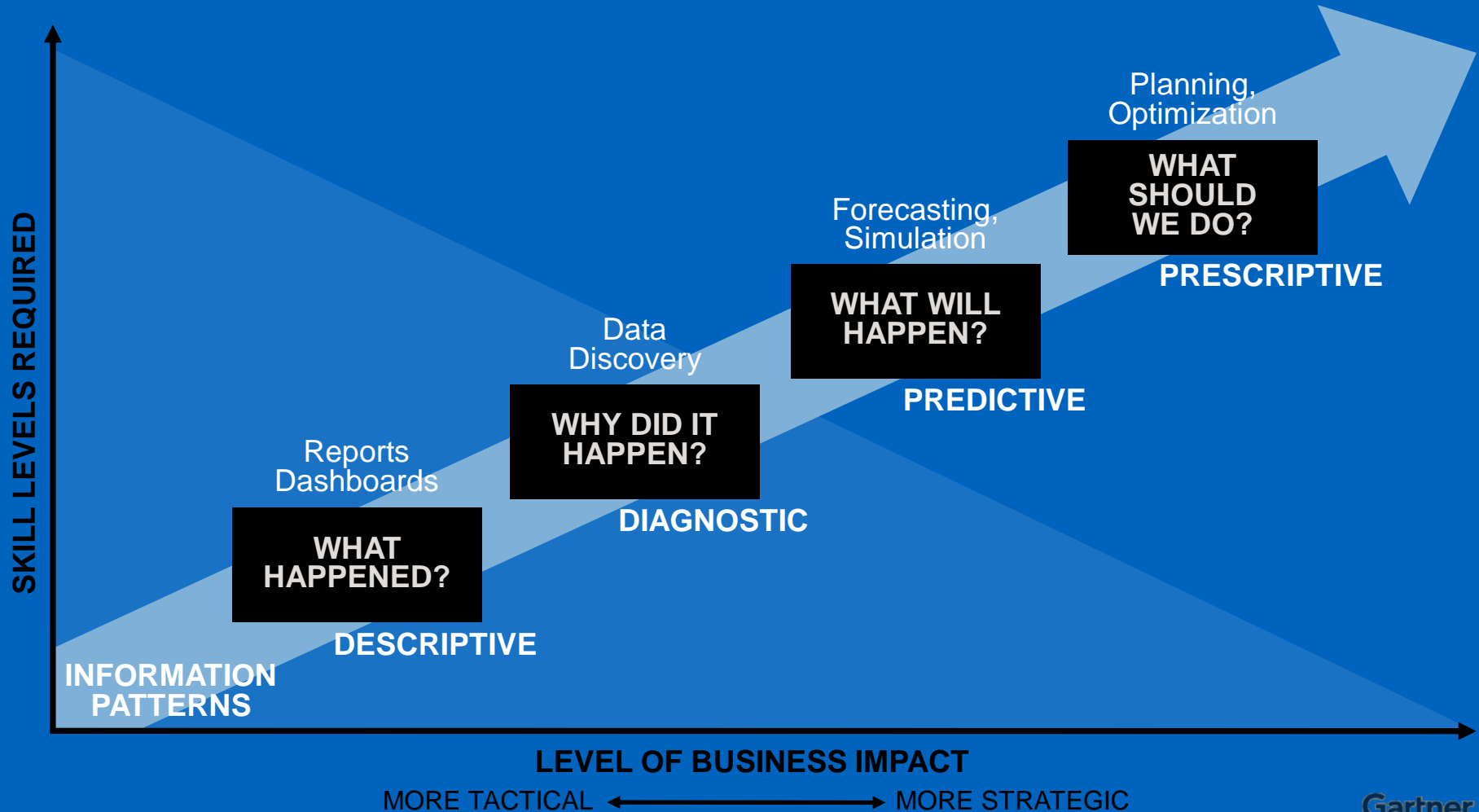
WHAT IS A REAL TIME CRIME CENTER?

CALL TAKING

DISPATCH

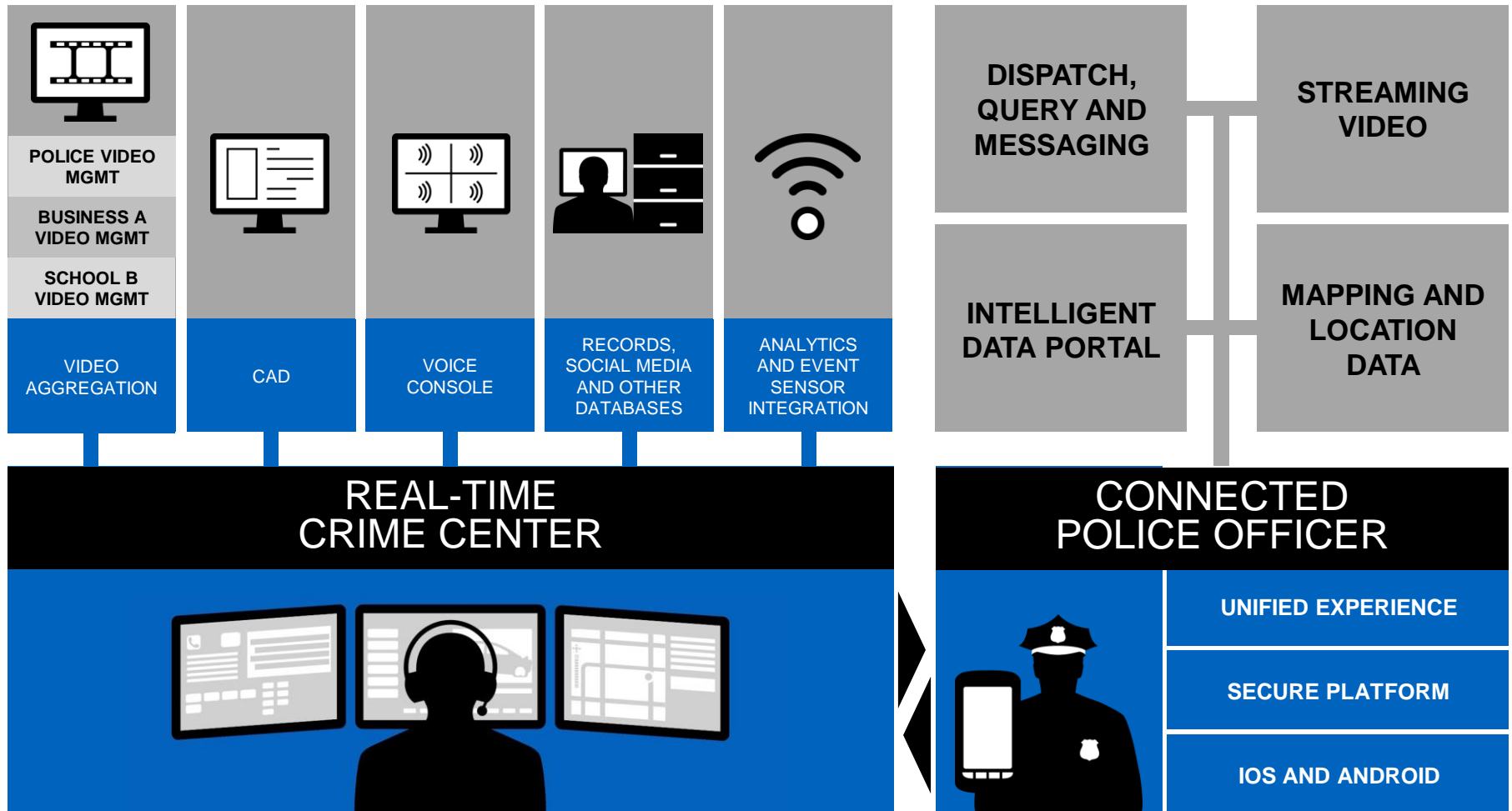**EMERGENCY OPERATION CENTER (EOC)**

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

RTCC AND CONNECTED POLICE OFFICERS

POLICE VIDEO MGMT				
BUSINESS A VIDEO MGMT				
SCHOOL B VIDEO MGMT				
VIDEO AGGREGATION	CAD	VOICE CONSOLE	RECORDS, SOCIAL MEDIA AND OTHER DATABASES	ANALYTICS AND EVENT SENSOR INTEGRATION

REAL-TIME CRIME CENTER

DISPATCH, QUERY AND MESSAGING	STREAMING VIDEO
INTELLIGENT DATA PORTAL	MAPPING AND LOCATION DATA

CONNECTED POLICE OFFICER

UNIFIED EXPERIENCE

SECURE PLATFORM

IOS AND ANDROID

INTELLIGENT DATA PORTAL

INTELLIGENT DATA PORTAL

UNIFY, MOBILIZE AND IDENTIFY YOUR DATA
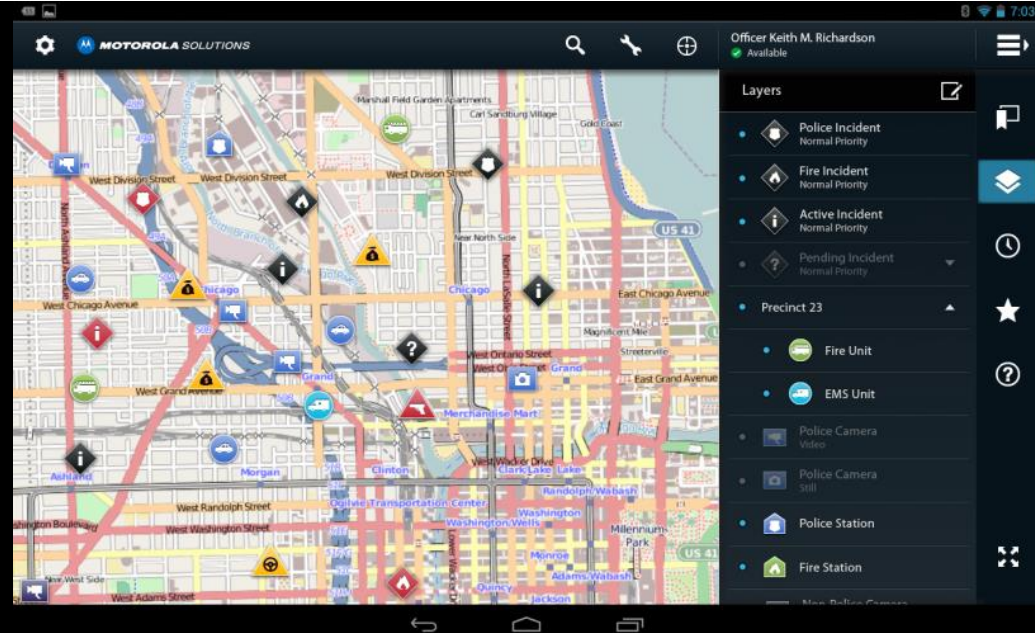
- **MAPPING OF DATA, EVENTS, ALERTS, SENSORS, PEOPLE AND ASSETS IN ONE VIEW**

- **HIGHLIGHTS POTENTIALLY RELATED DATA IN VICINITY**

- **ALWAYS UP-TO-DATE FOR ON-DEMAND VIEWING**

- **HTML5 CLIENT WORKS ON ANY DEVICE, OPERATING SYSTEM AND NETWORK**

- **HOSTED, LOW-LATENCY CLOUD BASED SOLUTION**

INTELLIGENT DATA PORTAL CONNECTS

CITY FLEET LOCATIONS	REAL-TIME TRAFFIC	CITY SOCIAL MEDIA	SURVEILLANCE CAMERAS
NG911 CRIME REPORT	311 SERVICE REQUEST	INTELLIGENT TRAFFIC LIGHTS	SENSOR MONITORING
ASSET MONITORING	STREET CLOSURES	UTILITIES WORKLIST	INCIDENT HISTORY
WATERWAY MANAGEMENT	PRE-PLAN LAYOUTS	HOSPITAL BED STATUS	ENVIRONMENT SENSORS

- CAD Incident View
- Agency GPS Tracking
- Exec. Resource Monitor
- Analytics
- Bio-Monitoring
- Sensor Monitoring
- Location Awareness
- CrimeView Heatmap

USE CASES
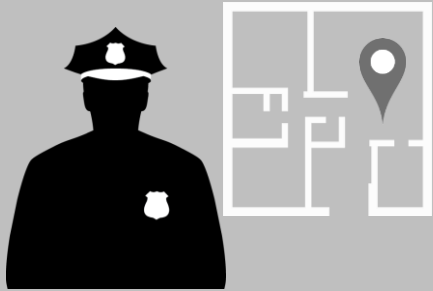
BETTER INFORMATION, SAFER OUTCOMES (TACTICAL)

Public Safety Responders In The Field need location-based information to be more proactive about developing situations and to keep them safer. Intelligent Data Portal provides the officer to ever-changing situations, nearby hazards and alerts from multiple data sources

ONE OPERATING VIEW (OPERATIONS)

Incident Commanders and RTCC staff can view key data from various data systems that previously required separate applications and interfaces. They can now sign-on to one application reducing their need to switch between multiple applications. Enables cross-agency information sharing and enhanced situational awareness
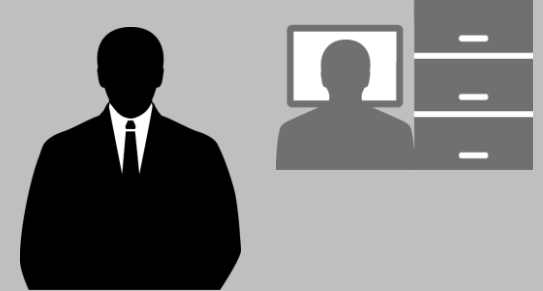
CRIME ANALYSIS AND SUPERVISION (STRATEGIC)

Investigators and officials can view the location-based mapping of hot spots and repeat incident reporting to enhance investigative abilities and provide easy oversight.

OPERATIONAL USE OF AN INTELLIGENT DATA PORTAL
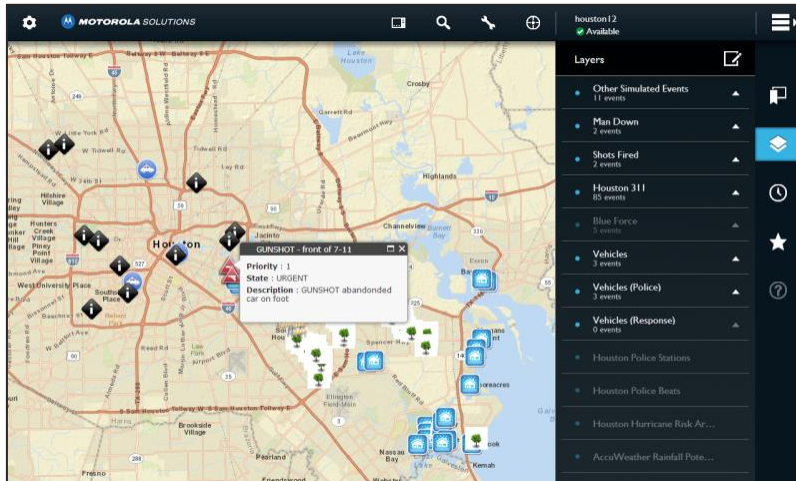
IDP CORE

- **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
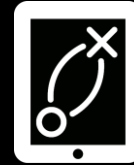- Zephyr Bio-Monitor
- Bio monitoring

SUMMARY

1. Consider Professional Services Engagements as Part of Your IT Investment
- A Lot of Products Out There
- Understand Needed Capabilities, Goals and Operational Impact

2. Create, Know and Drive Key Performance Indicators (KPIs)

3. Think About a Maturity Model and Evolution Now for Your Strategic IT Investments

4. Don't Forget the People and Process Parts, They May be Harder Than the Technology

5. Document from the Beginning, Build Small Wins and Grow

"There are many ways to measure innovation, but perhaps the most elemental yardstick, at least where technology is concerned, revolves around the job that the technology in question lets you do."
- *Where Good Ideas Come From*, Steven Johnson

THANK YOU

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