San Mateo County – Office of Public Safety Communications

CAD GAP Project Kick-Off

December 9, 2015

Presentation Overview

- Winbourne Consulting Background

- Importance and Benefits of the CAD Gap Analysis Project

- High Level Overview of

  - Scope of Services

  - Project Methodology

  - Next Steps

- Discussion

Overview of Winbourne Consulting, LLC

➢ Established in 2000

➢ *Supporting public safety clients in more than 300 local, state, federal, and international governments*

Our Lines of Business
Dedicated to Public Safety

Public Safety Emergency Communications

Public Safety Systems

11 MTC

POITT

Mission Critical Facility Planning, Design and Fit-out

Next Generation 911 and FirstNet

Systems Integration and Public Safety Master Planning

WINBOURNE CONSULTING, LLC™

1611 N. Kent St. Suite 802 • Arlington, VA 22209 • (p) 703.584-5350• (f) 703.935.1147 • www.winbourneconsulting.com

Successful Public Safety Solutions Delivery

We have provided consulting and project management services to over 300 public safety agencies in the United States and across the world. Our clients include 8 of the 10 largest public safety agencies in the U.S.

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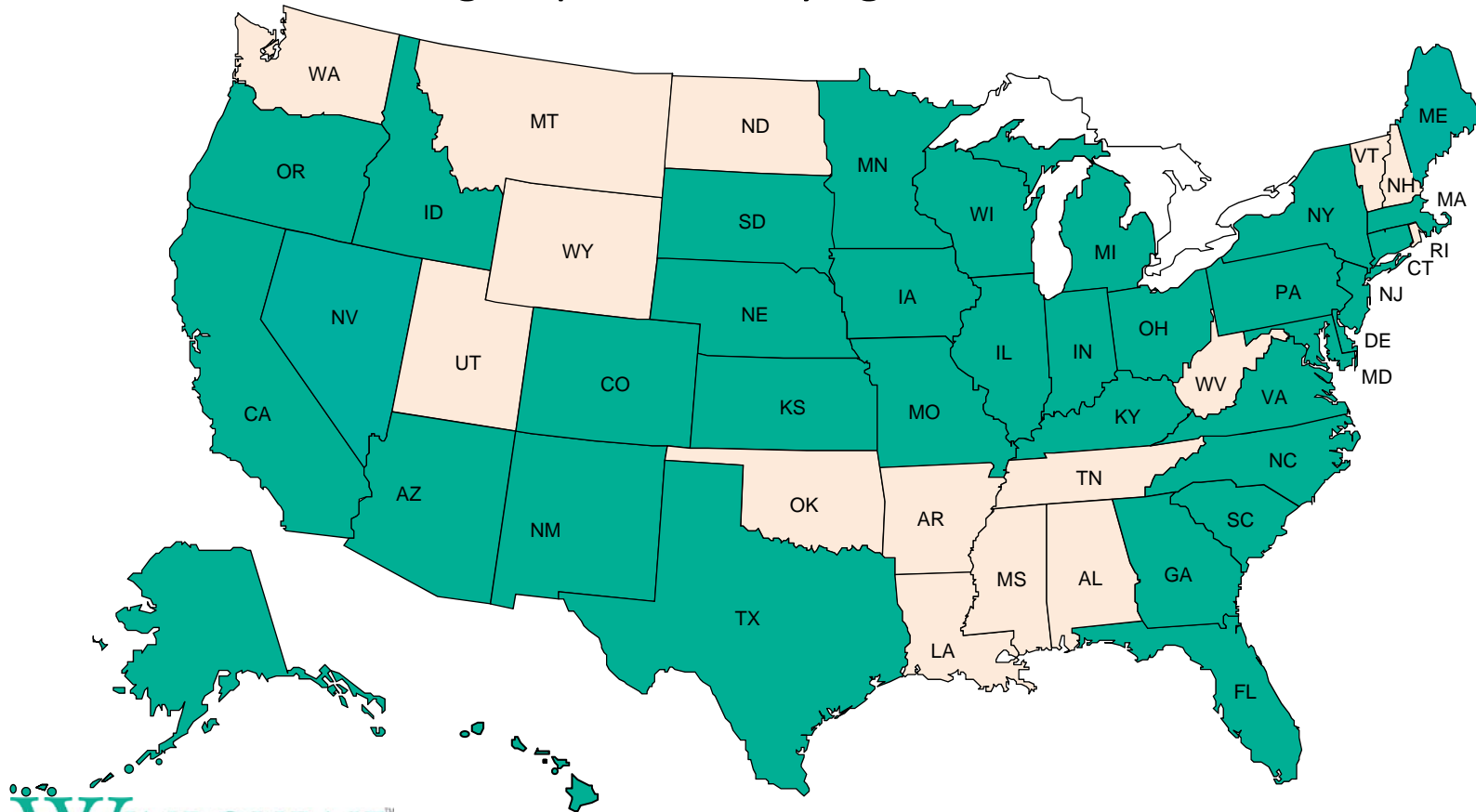
Sample Clients in the United States

Local Governments
- New York City
- Fairfax County, VA
- Virginia Beach, VA
- Cleveland, OH
- Charlotte, NC
- City of Los Angeles, CA
- Lexington County, SC
- Clackamas County, OR
- DeKalb County, GA
- Albany/Dougherty, GA
- Savannah/Chatham, GA
- Dane County, WI
- Hennepin County, MN
- Las Cruces, NM
- Ada County, ID
- Maricopa County, AZ
- Mesa, AZ

Regional Organizations
- Washington, DC COG
- Washington Metropolitan Transit Authority (WMATA)

State Agencies
- Arizona DPS
- State of Connecticut
- State of New Jersey
- State of Virginia DHS

Federal Agencies
- US Department of Homeland Security
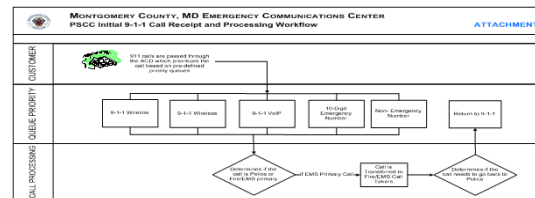- US Army
- US Trade & Development Agency

Our Solutions Oriented Approach

People:

Processes

Technology:

Public Safety Systems

Winbourne Consulting provides a wide array of services to our Public Safety Clients

Areas of Expertise

- **911**
- **PSAP Consolidation**
- **Dispatch and Operational Process Analysis**
- **Public Safety Applications**
  - CAD
  - RMS
  - Mobile
- **IT Strategic Plans**
- **Legacy System Replacement Operations Alignment and CONOPS**
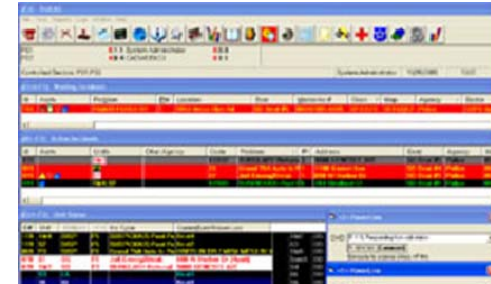- **SOP Development and Training Delivery**
- **Fusion Centers**

Public Safety Systems

Winbourne Consulting provides a wide array of services to our Public Safety Clients

Services Provided

- **Project/Program Management**

- **Needs Analysis**

- **Systems Requirements**

  - Analysis

  - Requirements Definition

  - Specification Development

- **RFP Development**

- **Bid Response Evaluation**

- **System Selection**

- **Implementation Assistance**

- **Systems Testing**

Public Safety Systems

Winbourne Consulting provides a wide array of services to our Public Safety Clients

Services Provided (continued)

- **Technology Assessments**
  - Impact
  - Recommendations
  - Master Planning
  - Staffing Analysis
- **Public Safety IT Strategic Plan**
- **Migrations**
- **Interface Definitions**
- **Operations**
  - Common Operating Picture,
  - Incident Command System (ICS)

PUBLIC SAFETY BEST PRACTICES FORUM
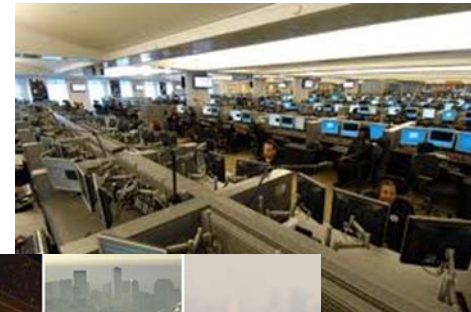
Mission Critical Facilities

We work with the facility design team as the technology consultant

- **Technology Programming**
  - Space and technology requirements
  - Facility concept: redundancy, diversity

- **Design**
  - Schematic Design
  - Detailed Design
  - Construction Documents

- **Fit-out**
  - Integration
  - Project Management
  - Test
  - Cutover

- **Migration Planning**
  - Schedule
  - Risk Reporting and Mitigation
  - Staff/technology movements

Next Generation 9-1-1

Services Provided

- NG 9-1-1 Consulting and Systems Integration
- NG9-1-1 Systems Design
- Legislation and Regulations
- Technology Assessment
- Operations
- Strategic Planning
- Financing and Funding
- Public Private Partnerships

Partners

- AT&T
- Tilson
- TeleCommunications Systems, Inc.
- TMIS, Ltd

NG911—Emerging Trends and New Technologies

Our firm has strong technical capabilities and experienced staff who are familiar with these emerging technical and operational solutions

- Next Generation 911 (NG9-1-1)

- FirstNet—Public Safety Broadband Communications

- Common Operating Picture

- Integration with Transportation Systems
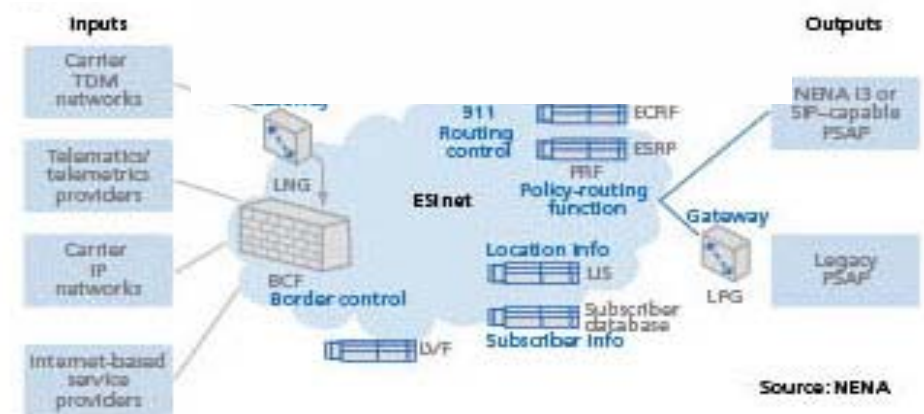
FirstNet
Services Provided

- **Relationship Management**
  - FirstNet, State and Local Public Safety
- **Subject Matter Expertise**
  - Proposal Development
  - Project Deployment
  - LTE and Broadband Data Networks
  - NG9-1-1 and FirstNet convergence
- **Public Safety Liaison**
  - State and Local Public Safety Agencies
- **SOP/CONOPS Development and Writing**
  - SMEs with Public Safety/9-1-1 Communications Policy and Procedure Expertise
- **Transition Planning for First Net Deployment**
- **Public Private Partnerships (PPP)**
 - PPP Experience, Private Investment Financing

Systems Integration and Public Safety Master Planning

We have uniquely developed master plans for nation-wide implementation for public safety systems in over 10 countries

Services Provided

- National Emergency Communications and Emergency Management Design Services

- Non-Emergency Government Services Call Centers

- Systems Integration

- Cost Analysis and ROI Analysis

- Staffing and Personnel Needs

- Operations Planning and Development

- Private Financing and Public Private Partnerships
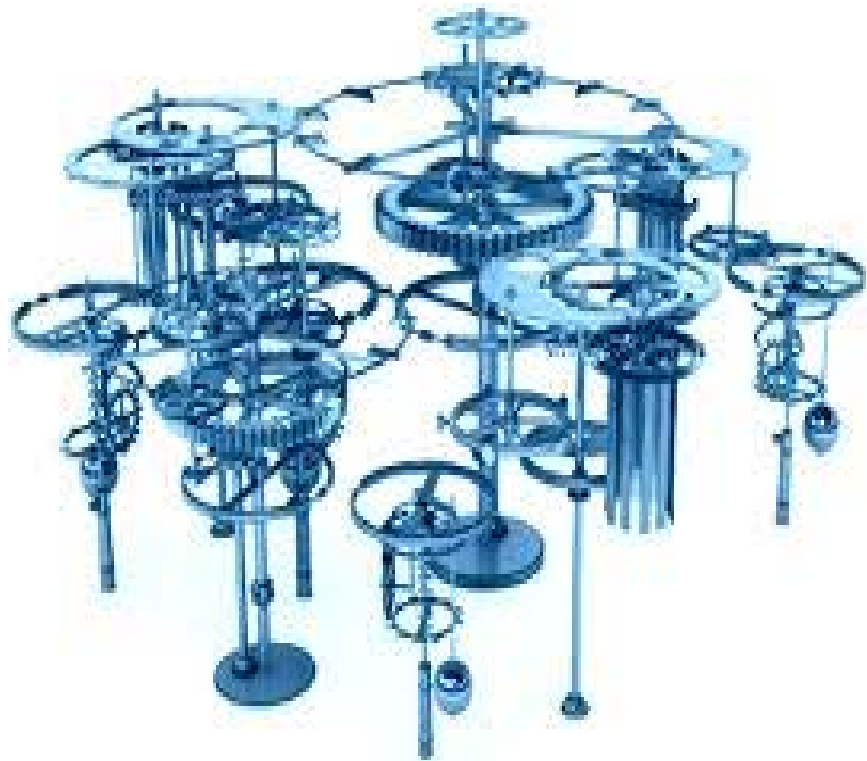
Level Set on what is a CAD System

- Life critical system
  - Citizens and public safety personnel lives depend on it
  - Connects the 9-1-1 caller and responding police, fire and EMS units
  - Requires a life critical standard of care
- Heartbeat and brain trust of all public safety activity 24/7/365
- Central point of mission critical information
- More than just a "dispatch system"
- Not a Records Management System (RMS)

CAD/Mobile Direct Influence on Operations

- Improve public safety communication, collaboration and cooperation
- Improve Public Safety Operations Management:
  - Incident Processing – Time, Accuracy, Quality & Actionable
  - Situational Awareness
  - Command and Control
  - Allocation and deployment of personnel and resources
  - System Status Management
- Enhance employee productivity
- Improve the quality of PSAP, Law Enforcement, Fire, EMS and Emergency Management work products
- Improve safety for public safety personnel and citizens
- Improve Information Management
- Improve internal and external customer satisfaction
- Improve internal and external operational and administrative communication
- Measure the effectiveness of strategies and tactics in a timely manner
- Improve ability for statistical analysis and forecasting
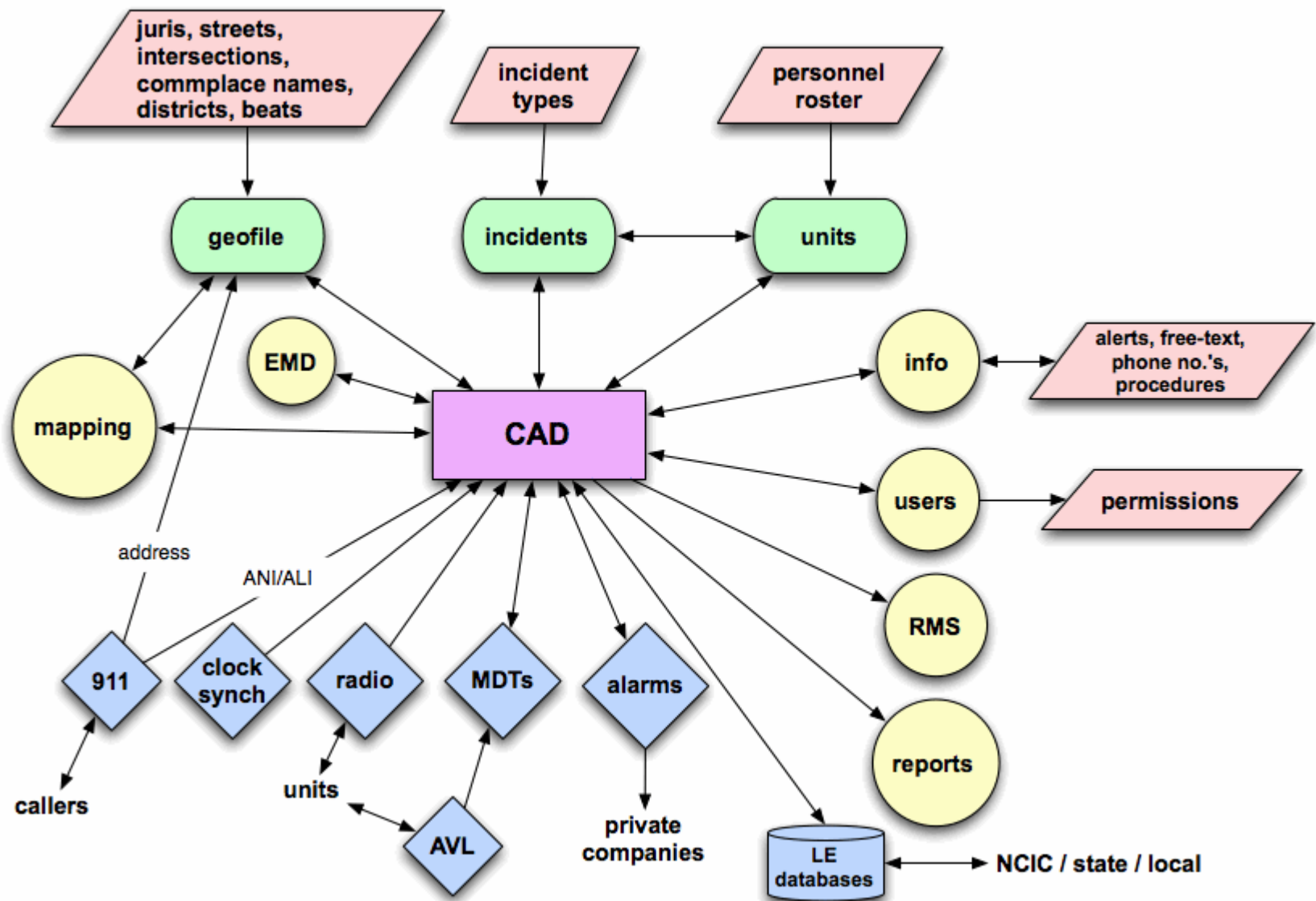
Integrated CAD System

Operations
- End Users
  - PSAP
  - Law Enf
  - Fire
  - EMS
  - Emerg Mgt
- CAD Data Consumers
  - Exec Mgt
  - Field Ops
  - Budget & Planning
  - Crime Analysis
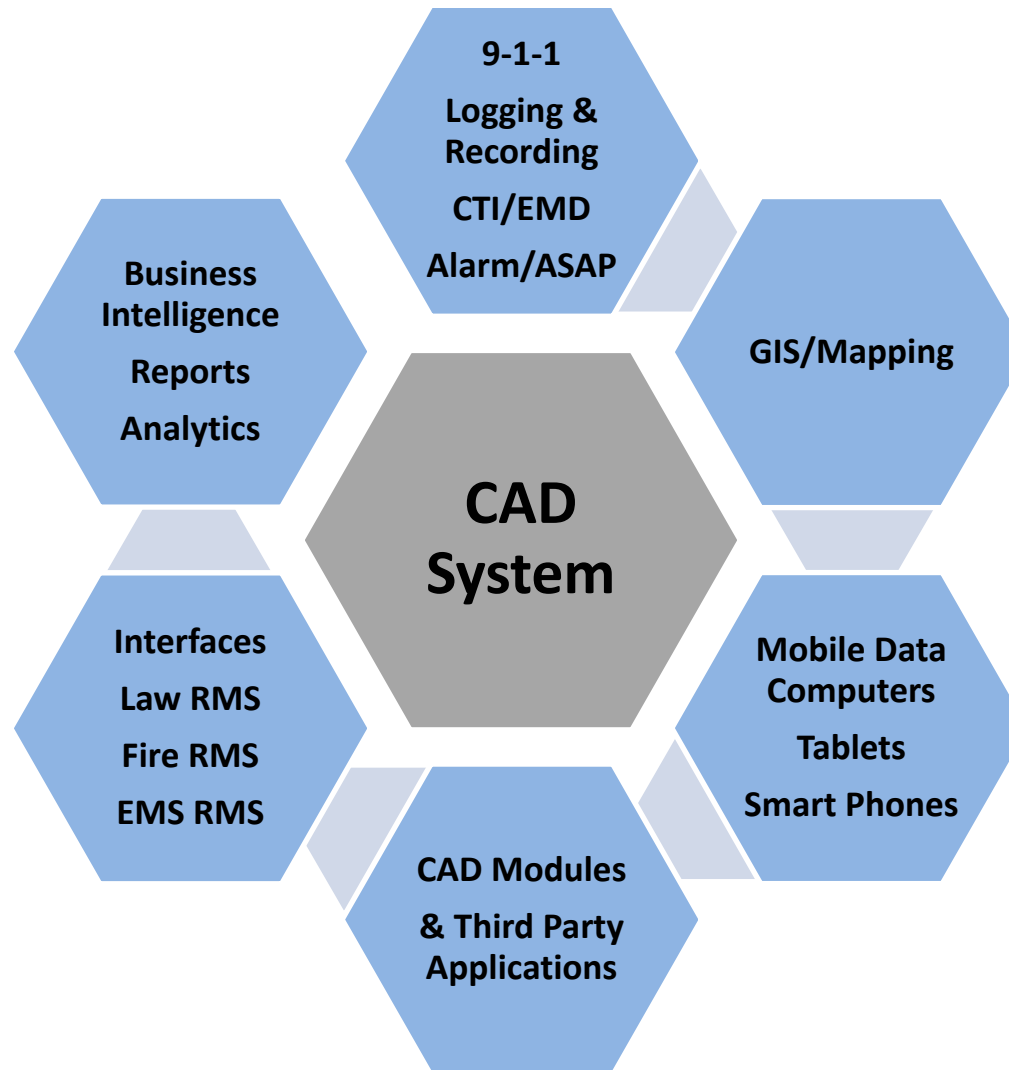
Technical
- Infrastructure
- Data Center
- Data Warehouse
- Networks
  - WAN/LAN
  - Wireless
- Interfaces
- Redundancy
- COOP/back-up
- Disaster Recovery
- Software
  - OS
  - Virus protection

9-1-1
Logging & Recording
CTI/EMD
Alarm/ASAP

Business Intelligence
Reports
Analytics

GIS/Mapping

CAD System

Interfaces
Law RMS
Fire RMS
EMS RMS

Mobile Data Computers
Tablets
Smart Phones

CAD Modules & Third Party Applications

Importance and Benefits of
CAD GAP Analysis Project

Comprehensive Analysis

Project Objectives:

- Obtain accurate, factual and current information to make an informed (data driven) decision concerning the CAD system
- Understand all factors that must be evaluated to determine a strategic plan for the CAD system
- Include all perspectives in the analysis:
  - Executive management
  - PSC personnel – Management to end user
  - Police, Fire and EMS – Management to end user
  - IT – Infrastructure, networks, security, data management
- Determine San Mateo County desired future state performance objectives and metrics
- Gap analysis with current state performance
- Identify all cost factors:
  - Cost Benefit Analysis on various options
  - Return on Investment on various options
  - Total Cost of Ownership

Total Cost of Ownership

The Total Cost of the Program/Integrated System

- Identified areas that may need to be enhanced and/or replaced to successfully implement a new CAD suite of applications:
  - Total number and type of systems and modules to be purchased
  - Technical infrastructure/data center upgrades
  - Local Area Network/Wireless Network upgrade
  - Interfaces to third party systems
  - Data conversion
  - Desktop, laptops and tablets (i.e., Mobile Data Computers)
  - Mobile Data Computer mounting equipment
  - Licenses required
  - Design and configuration process
  - Staffing
  - Overtime (Training)
  - Implementation costs
  - Annual support and maintenance (recurring costs)
  - Replacement Lifecycle

High Level Project Scope Review

Scope of Services Review

- Formal project plan, schedule, tasks, etc. are currently being developed

- Ensure there is absolute clarity regarding:
  - Scope of services contracted
  - San Mateo stakeholders expectations
  - Roles and responsibilities
  - Level of effort required to be successful
  - Key milestone dates

Gap Analysis/Gain-Loss Report

San Mateo SOW Deliverables

- ✓ *Provide a detailed analysis of CAD functionality, capability, and performance*
- ✓ *Provide the nexus of the above rendering to the operations environment and how the existing CAD meets, does not meet or exceeds operational needs*
- ✓ *Detail an analysis of the existing CAD's maintenance records and current life expectancy status*
- ✓ *Report all of the above analysis under 'The Current State' portion of the report*
- ✓ *Report, in detail, what users, administrators and relevant stakeholders identify as the future state of a state-of-the-art CAD System and its nexus to the operational environment*
- ✓ *Provide a detailed itemization of the gaps that exists between current and future states*
- ✓ *Report factors responsible for contributing to existing gaps*
- ✓ *Provide recommendations of remedies to gaps identified*
- ✓ *Provide cost estimates of meeting the desired state, including but not limited to wholesale replacement of the current CAD system and components thereof*
- ✓ *Provide a written draft and written final reports.*
- ✓ *A presentation of relevant material to involved stakeholders and County officials*

Proposed Methodology

| Strategic Plan Goals & Objectives | RFI San Mateo CAD System Current State Analysis | Level Set Best Practices CAD Industry Demonstration | Detailed CAD Market Information | Gap Analysis Gain-Loss Report | Estimated Procurement Costs |
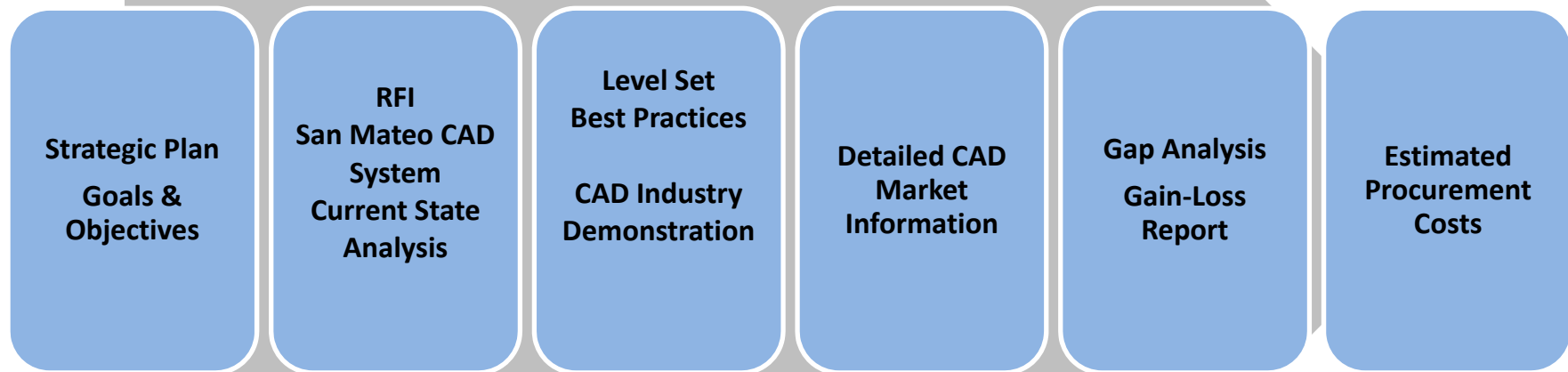
Project Stakeholders

- Office of Public Safety Communications
- 9-1-1/Primary Public Safety Answering Point
- Emergency Medical Dispatch
  - AMR
  - South San Francisco Rescue Ambulances
- 14 Fire Service Departments/Districts
- San Mateo County Sheriff's Office
- Unincorporated areas of the county
- Half Moon Bay
- Millbrae
- San Carlos
- Portola Valley
- Woodside
- Countywide Transit Police
- East Palo Alto Police Department
- Broadmoor Police Department
- County Wide Mutual Aid Communications
- Narcotic, Vehicle Theft and Gang Task Force

- Citizens
- County Executive Management
- County & State Emergency Management
- Alarm Companies
- 9-1-1 MSAG
- Mobile/Special Detail Communications
- Alternate 911 PSAP for Allied Agencies
- Emergency back-up for PD PSAPs
- Probation
- Coroner
- Public Works
- Information Services
- Area Office of Emergency Services
- District Attorney
- Superior Court
- Peninsula Humane Society
- Environmental Health
- Parks
- Building Inspector

San Mateo CAD Project Team

CAD Project Team – Representatives of all major entities:

- PSC Project Manager
- PSC PSAP
- Law Enforcement
- Fire Department
- Emergency Medical Services
- Emergency Management
- Information Technology
- Other stakeholders
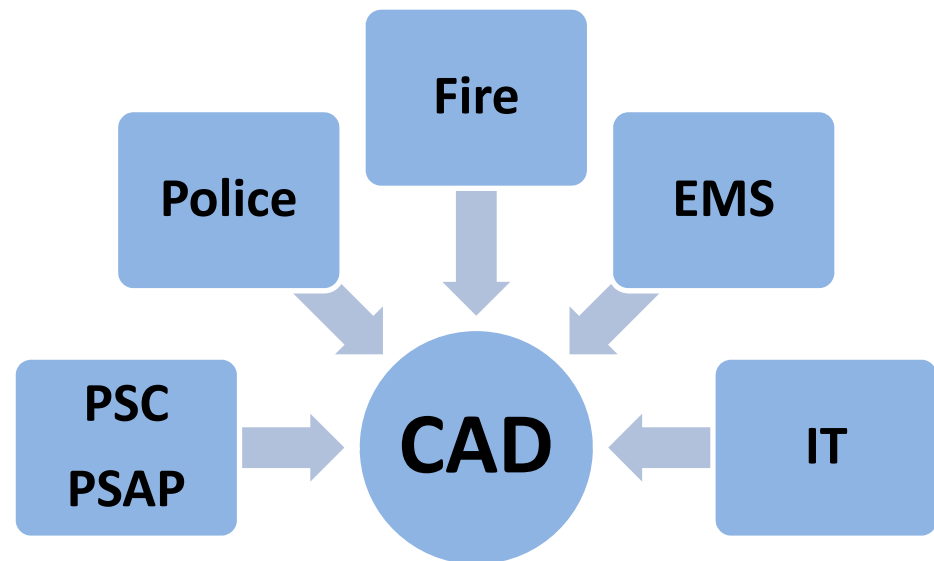
Objectives:

- Stakeholder representation and ownership
- Leverage subject matter experts
- Enhance inter-agency collaboration, communication and cooperation
- Project transparency

Major System/Application Sub-Teams

- Provide input to the CAD Project Team

- Imperative that all stakeholders provide input

- Leverage Subject Matter Experts

- Examples:
  - PSAP
  - Law Enforcement
  - Fire
  - EMS
  - Technical
  - Business Intelligence
  - Other
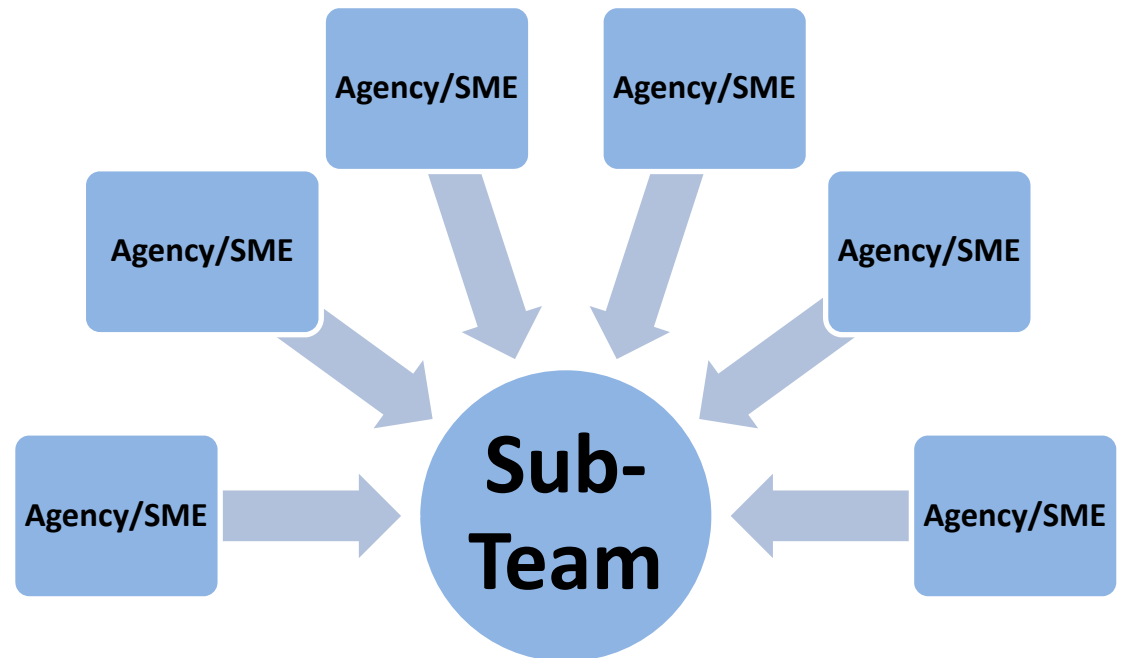
Facilitate Project Workshops

Strategic Vision/Goals and Objectives Example:
- Workshop 1 - PSAP management and staff
- Workshop 2 - Law Enforcement command staff
- Workshop 3 - Fire command staff
- Workshop 4 - EMS command staff
- Workshop 5 - IT Department management
- Workshop 6 - Legacy System administrators
- Workshop 7 - Supervisors and end-users

Process
- Structured questions and discussion
- Collect information for current state, needs assessment and gap analysis
- Spreadsheet tools for requirement/statement traceability

Current State Analysis Phase

Current State Analysis

- Extensive experience with Northrop Grumman PRC CAD systems:
  - Boston Police, Fire and EMS
  - New York City FDNY EMS
  - Fairfax County, Virginia
  - Ada County, Idaho
  - Los Angeles County Fire Department & Verdugo Communications Center
- Experienced dealing with highly customized CAD systems and business processes:
  - Personnel are experts with the current system
  - Long history of workflows and business processes - Comfort zone

Current State Analysis

- Obtain all perspectives:
  - Primary stakeholders - PSAP, Law Enforcement, Fire, EMS
  - Ancillary stakeholders
  - Executive Management, Supervisors, end-users
  - Operations – Field personnel
  - Technical
- Direct observation
  - PSAP
  - Fire, Police and EMS
- Vendor information

Current State Analysis

Vendor and Agency Input

Comprehensive inventory of all relevant systems:

1. Application Name
2. Application Company
3. Version Employed
4. Minimum Mandatory Specifications
5. Last Update
6. Next Update Schedule
7. Lifecycle ("end of Life) of application
8. Objectives of Application
9. Modules/Features Employed and Not Employed
10. Department System Administrator
11. Company Account Manager
12. Company Technical Support
13. Open/Problem Issue and Status
14. History of Application and Reported Issues
15. Roadmap

Current State Analysis

Information Technology

- IT Strategic Plan
- System Performance
- System Reliability
- Data Center Capability and Capacity
- Network Specifications
- Hardware
- Software
- Interfaces
- Databases
- Redundancy, Data Backup and Disaster Recovery
- Data and System Security
- IT Personnel
- System Workload

Modern CAD System Functionality, Features and System Capabilities Phase

Customized versus Commercial Off the Shelf Systems

- <u>Configuration versus Customization – Level set on definition</u>
- The most cost efficient and technical/operational effective solution that will meet and exceed most public safety desired objectives is the leveraging of a Commercial Off the Shelf (COTS) CAD system
- A COTS system provides numerous benefits to all stakeholders including:
    - The system is highly configurable
    - The system has previously been installed and is operating in numerous jurisdictions
    - Best practices and lessons learned can be obtained from the numerous public safety agencies already using the system
    - Single technical infrastructure and requirements
    - Integrated suite of applications
    - Planned upgrade and software enhancement process
    - Vendor provides technical support and maintenance
- <u>"Want" versus a "Requirement"</u>
    - Define – Level set expectations

RFI and CAD System Industry Demonstrations

- Current State versus Future State – Gap Analysis
- Needs Assessment is <u>dependent</u> on adequate knowledge of modern CAD system functionality, features and system capabilities
  - "You only know what you only know"
  - "You don't know what you don't know"
- Objective is to educate stakeholders regarding modern CAD systems
- Focus is <u>not</u> on the companies
- Vendor Demonstration Day(s)
  - Exactly the same as a Request for Information (RFI)
  - Not mandatory to participate in a future procurement (RFP) process
  - Written material to review – Great information source (build a library)
  - 1 ½ - 2 hour block for demonstration
  - Invite all stakeholders

Immediate Next Steps

San Mateo CAD Gap Project Plan

December 7 – 10, 2015

- Project Kick-Off
- Project Plan Process
  - Precise methodology to be employed
  - Milestones and tasks match SOW deliverables
  - Determine Level of Effort for tasks, milestones and phases
  - Roles and responsibilities
  - Project schedule
  - Identify all potential risks to being successful
- Interviews with key PSC personnel

January 11 – 15, 2016

- January 13, 2016 – Fire Chiefs

Discussion