GIS Deployment Strategies – The Age of Mobile & Web GIS

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Why GIS Implementation?

• Over 80% of all services are location base
• Advancement in technology (iPhone, iPad, android, windows devices)
• Social media
  • Younger work forces – more tech savvy
• Residents are demanding quicker responses to service request
• Increase transparency & accountability
• Increase efficiency & effectiveness
  • Reduction in workforce
Changing Business Processes

- Adopting smarter technologies *(ArcGIS Platform)*
- Incorporating smart devices
- Embracing GIS and Cloud GIS
- Changing existing workflows
  - Move from clipboards
  - Assets mapping
- Provide easy access to critical data
  - Web maps
  - Mobile apps
City of Rancho Cucamonga

- Located in San Bernardino County
- Population – 171,058
- City/Fire Budget - $221,887,760
- FTE - 771
- Daytime Population – 187,567
- Landuse Mix – 40.2 sq.mi
- Parks – 20
- Fire Stations – 7
- Rancho Cucamonga Police Department
- Victoria Garden Mall
Deployment Strategies

• Keep It Simple
• Explain vision in clear text
• Internal/External deployment
• Model solution after existing workflow
• Keep cost low
• Get input from the departments
• Create a language for decision makers
• Link Industrial with professionals
• Build relationships
• Be a storyteller
Public Information Sharing
---Keeping it Simple
Major Improvement Project Update

• Building Storymaps
• Easy to update
• Departments can maintain application without GIS team
• Provides critical information for elected officials
De-centralization of GIS Data Maintenance
Public Works GIS Implementation

- Web Applications
- Office Workers
- Citizen Apps
- Cloud
- Tablets
- Field Workers
- Mobile

CITY OF RANCHO CUCAMONGA
General Inspection Apps

- Sidewalk Inspection Program
- Storm Drain Inspection
- Street Signs Inspection
- Traffic Signal Inventory
- On Call Service Request

- Graffiti Abatement
- Tree Inventory
- Traffic Signs
Traffic Signal Management

- Total of 194 signals maintained
- Signals are inspected for
  - Working condition
  - Cabinet Status
  - MMU Status
  - Detector Status
  - Controller Status
Mobile Field Inspection
Sidewalk inspection Program

- Data driven decision making
- Provides staff with spatial planning tool
- Effective data sharing
- Fast response
Areas of Importance

• School zones

• High pedestrian traffic areas

• Senior centers

• Interface with customer complaints

• Share information with Engineering Department
Catch Basin & Storm Drain Inspection

• Total of 4,024 storm drains
• Inspections are done once a year
Citywide Street Signs Inspection

- Total of 26,949 signs collected and inspected

- Signs are inspected for
  - Reflectivity
  - Sign Type
  - Condition
  - Size
  - Sheeting
  - Post Type
Graffiti Inspection

• Conducted by Public Works and Police Department
• Using the Esri Collector app:
  • Field crew collection and resolve report
  • Increased time efficiency and data visualization
  • Cost effective solution
• Creating web map from the same data and sharing among departments
Police Department
Traffic Enforcement Dashboard

- Provides real-time citation & collision information
- Provide trend analysis
  - Hot spots
  - Time filter
- Smarter traffic enforcement
  - Faster response to speeding request
  - Easy data access by deputies
  - Provide Street speed survey data for court cases
Traffic Analysis App Components

Desktop

[Image of a traffic analysis app interface with options to choose a date and view citations and collisions.]
Benefits

• Data driven decision making
• Provides officers with spatial planning tool
• Plan their daily patrol based on trends
• Effective data sharing among officers
• Prompt response to speeding request
Fire Protection District
Community Risk Reduction (CRR)

Strategic Objective of the Fire District

CITY OF RANCHO CUCAMONGA
Weed Abatement Inspection

- Conducted by Fire District’s Prevention Bureau or Code Enforcement
- Usually takes days to complete the inspections
- Average of 450 parcels
- Using the Esri Collector app:
  - Inspection takes 8 hours to complete
  - Increased time efficiency and data visualization
- Creating web map from the same data and sharing with contractor also eliminated:
  - 15 hours of work generating reports and sending emails
Executive Dashboard App

• Provides up-to-date operational view for all incidents
• Gives incidents statistics
• Historic data analysis
• Incidents photo notification
Executive Dashboard App

Fire Department Dashboard

Police Department Dashboard
Questions