Optimize Government Outcomes by Leveraging Technology

League of California Cities Annual Conference
October 17, 2019

Introductions

Moderator
• James R. Lewis, City Manager, Pismo Beach

Panelists
• Purvi Bodawala, Sr Financial Analyst, City of Thousand Oaks
• Bryon Horn, CIO, City of Fresno
• Gaurav Garg, CIO, City of Santa Clara
What We’ll Be Discussing

• The Value Proposition
• Digital Outcomes
• Business Continuity
• Legislative Update
• Smart Cities
• Small and Smart Cities

What We’ll Be Discussing

Format
• Brief Discussions
  ▪ Issues
  ▪ Best Practices
  ▪ Take-aways
• Multiple Speakers
• Q and A
  ▪ In Person
  ▪ Send questions via Twitter to #CityITQuestions
The Value Proposition of Technology

Why YOU really need to care…

• Enhanced efficiency through technology lowers staffing costs/needs (PERS, Benefit Costs, Hiring Difficulty, etc.)
• Reclaims physical space
• Empowers/engages the citizenry
• Access builds trust
• Motivates and retains employees
• Security and response needs more necessary than ever
The Value Proposition

Why YOU really can’t afford to ignore it…

• Citizens have expectations of technology and expect to interact using it.
• Evolution of business processes
• Competition with other agencies
• Changing protocols and formats
• Workflow Management/Cost and Resource Controls
• Security
• Business cycles

Digital Outcomes

Purvi Bodawala
Senior Financial Analyst
City of Thousand Oaks
Modernizing Government

[Diagram showing pie chart and maps with data points]
Modernizing Government

Direct contact with City staff through mobile and public website interfaces

Government Transparency

Police
Non-Financial Data

Crime Statistics

<table>
<thead>
<tr>
<th>Crime Statistics</th>
<th>Types of Crimes</th>
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<tbody>
<tr>
<td>%</td>
<td>Types of Crimes</td>
</tr>
<tr>
<td>3%</td>
<td>Burglary 10.8%</td>
</tr>
<tr>
<td>2%</td>
<td>Burglary 11.7%</td>
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</tbody>
</table>

This city is so great... response time to requests is quick, which helps keep Thousand Oaks looking beautiful and feeling safe. Thank you for staying on top of these quality-of-life issues... it really does make a difference!
Government Transparency

City Manager
Commitment to our Community

9b. Department Reports
Citywide Performance Measures Initiative

We’re Making Our Community Even Safer
- Violent Crime down 28%
- Residential Burglaries down 25%
- Sexual Assaults down 29%
- Commercial Burglaries up 10%
- Property Crime down 7%
- Traffic Accidents down 36%

We’re Responding to More Calls
- 7% increase in all calls over two years.
Government Transparency

Electronic Signatures

Coordination and approval from the City Clerk and City Attorney’s Offices
Electronic Signatures

- Saves shipping costs
- Save staff time in tracking down documents
- Quicker turnaround time

Modern perception of doing business with the City

- Signing vendor contracts
- New Hires
Business Continuity and Legislation Update

Bryon Horn
Chief Information Officer
City of Fresno

Business Continuity/Disaster Recovery

• What is Business Continuity?
• How does it differ from Disaster Recovery?
• What do these mean to City Services?
What does this have to do with IT Anyway?

- Anything? Everything?
  - Police? Fire? Other services?
  - Includes Cyber Outages – especially Ransomware
  - What Service Doesn’t include an IT system?

What is Considered a Disaster?

- IT Disasters
  - Server Outages, Network Outages, Internet Outages, Cyber Attacks
  - Any system outage or inability to provide a City Service
- Regional Disaster
  - Floods, Earthquakes, Fire, Weather
  - Different regions have different threats
You need a plan …

- FEMA/NIMS compliant
- Considers IT resources – IT will need 2 plans
  - Regional and Local (Internal)
- Plans to include
  - Activation, Essential Functions, Continuity Personnel, Records Management, Facilities, Delegation of Authority, etc.
  - Identify critical functions – i.e. communications, support Police & Fire, Streets, etc.

Things to Include

- Identify local and regional threats
  - Flood, fire, earthquake, power, etc. – Cloud Threats?
- Identification of critical City Services
  - No one answer – each City is Different
  - Communications Outages – internet, radio, power, cyber.3
- Not an easy task
  - Every Department needs involvement - Fire probably already has an Incident Command System (ICS)
  - FEMA Worksheets and Sample Plans
- IT needs to have similar objectives for supporting Citizen Services
How to Plan

• Fresno’s Plan
  ▪ Being revamped
  ▪ City Manager Driven – Fire leading - IT at the table
    • Based on FEMA/Worksheets, etc.
    • Every Department has a Plan
  ▪ IT Critical Functions
    • Email, Voice, Cell, Radio, Internet, Network
    • Identified services, what to do in emergency and alternate modes for providing
    • The City needs to be able to communicate!

Fresno’s IT Business Continuity Plan

• Fresno’s IT Plan includes
  ▪ Continuity Plan
  ▪ Essential Functions
  ▪ Business Process Analysis
  ▪ Continuity Facilities Suitability and Functionality
  ▪ Continuity Facilities MOA/MOU
  ▪ Continuity Communications and ability to support Essential Functions Fully
  ▪ Non-Headquarters IT Functions
Fresno’s IT Continuity/Disaster Recovery Plan

• Fresno’s IT Plan includes
  ▪ Identification of critical systems from a City Operation Perspective
  ▪ Major, Minor and Moderate incidents (and procedures for each)
  ▪ Communication outages, server outages, application outages
  ▪ How to communicate with City personnel
  ▪ Alternative services
  ▪ How to recover

Fresno’s IT Disaster Recovery Plan

• City Communications considered #1 Priority
  ▪ Ensure communications
    • Voice, Radio, email
  ▪ Redundant sites
  ▪ Generators in Key sites (in case of Power Outages)
    • Provides for work productivity and a place to go if outages occur
  ▪ Not a lot of cloud (yet)
    • Multiple Internet Connections
    • Redundant connectivity
Key Takeaways

• Create a Plan
  ▪ IT needs to be involved
  ▪ Operational plan for internal operations
• Regional Plan for broader emergency
• Ensure FEMA Compliance
  ▪ www.FEMA.org
  ▪ www.Ready.gov
• Coordinate with Neighboring Cities/County
• Plan needs to be communicated and/or software to support

Legislative Updates for IT

• MISAC’s position
  ▪ MISAC is not a lobbyist – it is merely looking out for the best interest of its members.
  ▪ Leverage partnership with the League of CA Cities and the California Special Districts Association (CSDA)
  ▪ MISAC will send letters of support or opposition as desired by its members
• What’s in play?
  ▪ There are 96 Bills that include IT concerns
• Why should you care?
  ▪ Systems will need to be implemented/changed to support bills
  ▪ State generally does not include funding
Bills High on MISAC’s Watch List

- **AB 459 – Artificial Intelligence**
  - Requires reporting of Artificial Intelligence usage in State Government Services

- **AB 477 – Emergency Preparedness**
  - Requires Cities integrate Accessibility (ADA)/have representation of such into their emergency plans

- **AB 510 – Local Government Destruction of Records**
  - Provides for a one-year destruction of video, telephone and/or radio communications

- **AB 654 – Public Records: Utility Customers Personal Information**
  - Disclose customer utility information for education and scientific information

- **AB 1184 – Public Records: Writing Transmitted by Electronic Mail**
  - Requires a 2 year retention of email

- **AB 1190 – Unmanned Aircraft State (UAS) and Local Regulation limitations (Drones)**
  - Prohibits local agency from creating laws prohibiting the use of UAS and allow the enforcement of FAA regulations

- **AB 1555 – Police Radio Communications Encryption**
  - Requires law agencies to provide encrypted communications to a duly authorized representative of any news service, radio station or network under certain circumstances

- **Federal HR 530 – FCC Order/Small Cells – restoring local control**
  - A law that states certain actions by the Federal Communications Commission shall have no force or effect

- **AB 1366 – Voice Over IP Protocols**
  - Extends the Public Utilities Commission’s prohibition of regulation of Voice over IP (VOIP) and Internet enabled service except as required or delegate by federal law
Smart Cities

Gaurav Garg
Chief Information Officer
City of Santa Clara

The Center of What’s Possible

- Known as The Mission City
- Incorporated 1852
- ~129,604 Residents
- 40% Foreign-born
- 57% Bachelor’s degree or higher
- 18.41 Square miles
- 1,116 Full time employees
- $900M City budget
The Center of Innovation

Santa Clara...is undergoing an extraordinary transformation!
The Center of Development

- **Downtown Revitalization and Precise Plan**
- **Westfield Valley Fair Mall Expansion**
- **Nvidia (Phase 2)**
- **Tasman East – Housing Developments**
- **City Place**
- **Kyli Project**
- **Next phase of Santa Clara Square**

**Related Santa Clara**

- 240 Acres
- 9.2M SF total project
- 5.4M SF office
- 700 hotel rooms
- 1,680 residential units including 400 serviced apartments and nearly 170 affordable units
- 1.0M SF retail, food & beverage, entertainment
Three Lines of Service

City of Santa Clara

Silicon Valley Power

Stadium Authority

Silicon Valley Power

• Santa Clara’s full-service electric utility
• Region’s lowest combined utility rates: 21% to 41% below PG&E
• Ranked 8th in the nation for Green Power purchases
• All residential load is met with 100% carbon free resources
Smart City

A Smart City connects data, technology and sensors to city services and people with the goal of improving the quality of life and strengthening the community.

Smart Cities

What Issues?

• Response to quality of life, sustainability, traffic congestion, climate change, safety and security, energy, aging infrastructure, healthcare, pollution

• Technology moving faster than the urban planning process. Where to Start?
Five major strategic focus areas in support of council objectives:

- Digital Infrastructure
- Applications Modernization
- Geographic Information System
- Citizen Engagement
- Cybersecurity
Foundational Connectivity

- Dark Fiber Leasing Program
- 45 on-net data centers & colocations
- Connects City facilities and schools
- Utility poles and LED streetlights
- Outdoor Distributed Antenna System
- Free Outdoor Public Wi-Fi: Backhaul for Advanced (Smart) Metering
- Santa Clara is the 8th most connected city in California (broadbandnow.com)

Applications Modernization

<table>
<thead>
<tr>
<th>Tolerate 78 - 50%</th>
<th>Invest 47 - 30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eliminate 5 - 3%</td>
<td>Migrate 26 - 17%</td>
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</table>

156 Total Apps

Technical Integrity

Business Value
GIS: Smart City Platform

• Location is the common denominator
• When you know where everything is you can visualize and understand how it connects and interacts with everything else
• Model the City, play various scenarios, make informed decisions

The Digital Twin

Enable communication, coordination, engagement, transparency

Open Data Portal

• map.santaclaraca.gov/data – launched May 2016
• Open Data Geospatial Portal for public access to authoritative data
• Self service up-to-date open data available
• City staff not spending time fulfilling GIS data requests anymore
• Furthers transparency and engagement
• 17 currently and growing machine-readable GIS datasets
Levi’s Stadium

Public Safety
Emergency Services

Traffic Management
Common Operational Picture

Multiagency integration, coordination and management

Multidisciplinary approach, same operational picture, including when different command and control locations are being used.
Transportation Management

- Fiber to Intersections
- Video Monitoring
- Signal Synchronization
- Digital Signage
- Public Traffic Cams
- Traffic Cam app
Electric Transportation

Ready to Roll

• Over 600 Public Charging spaces and growing

City has installed

• 49 at Tasman Garage
• 7 at City Hall
• 8 at the Libraries
• 6 at the Convention Center
• and more coming

Adding EVs to City Fleet
The Low Carbon Fuel Standard (LCFS)

- Administered by California Air Resources Board, established in 2007
- Requires those who import or produce fuels over a certain carbon intensity to purchase credits from others to offset the associated emissions
- These carbon credits are generated by the distribution of low carbon transportation fuels such as electricity
- Proposed SVP budget estimates $2.4M from LCFS credits for the fiscal year

<table>
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<tr>
<th>LCFS Credit Price Dec.</th>
<th>Volume of credits traded in</th>
<th>Total value of credits traded in</th>
<th>Percent of credits from credits derived from Electricity as a fuel in</th>
<th>Value of credits derived from Electricity as a fuel in</th>
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<td>Dec. 2017</td>
<td>$101</td>
<td>13,333,000</td>
<td>$2.1B</td>
<td>$695M</td>
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<tr>
<td>Dec. 2018</td>
<td>$183</td>
<td></td>
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SVP Blockchain Pilot Objectives

- Develop and implement a Proof-of-Concept (PoC) system to track LCFS credits and trades
- Utilize Power Ledger’s Energy Blockchain platform to connect energy assets at the Tasman Drive municipal parking garage
- Work with CARB and other stakeholders to validate process and demonstrate potential value of a tokenized LCFS credits
- Enable engagement and transparency for SVP and CARB
- Provide the City of Santa Clara the opportunity to begin exploring the potential for blockchain technology within its ecosystem
Smart City Challenge

- Holistic view across city operations for citizen centric outcomes
- Balance broader smart city view in phased manner with opportunistic/pragmatic view with small executable projects
- Change is hard. Top down leadership.
- Community outreach and stakeholder engagement
- Procurement to encourage innovation
- Fail fast as a means to success
- Public-private partnerships. Outcome based business model
- It’s about improving the quality of life and community!

Small and Smart Cities

James R. Lewis
City Manager
City of Pismo Beach
Small But Smart City Assessment

Assessment and planning is key to success

• Where are you headed?
• Where is biggest benefit?
• What amount of change can you handle?
• What partners do you have?
• What resources you have to invest and what resources might you grow?

How Can Pismo Be A Better City Today?

The City of Pismo Beach aims to be a Better City Today by using technology to collect, communicate, and analyze data to improve the design and operations of its core systems and programs, as well as citizen and tourist engagement, for greater efficiency and effectiveness; the city’s sustainability, resilience, bottom line, quality of life and visitor experience will improve as a result.
Have Partners and a Process

We partnered with ENGIE

Their Unlock Process™ was used as a guiding framework to uncover City priorities, opportunities, and strategies to improve the utilization of technology and data in Pismo Beach.

Unlocking Opportunity In Pismo Beach

Unlock Priorities
Evaluation of Pismo Beach through:
- Online research reviewing 19 City documents
- City staff survey: 29 responses
- 10 stakeholder interviews with executive staff and community leaders

Mapped findings onto a City 360 Scan

Unlock Possibilities
Facilitated a workshop with approximately 20 City staff and community leaders on August 14, 2018

Discovered that citizen engagement, transportation and water infrastructure were the primary opportunity areas for improvement

Unlock Partnerships
Developed a roadmap to serve as a prioritization and implementation guide for the 5 City projects identified in the workshop and developed:
1. Smart Parking Strategy
2. Smart Water Meters
3. Improvements to the City Website
4. Pomeroy Promenade Enhancement Project
5. Highway Digital Signage
City 360 Scan

We developed the City 360 Scan as a framework to provide a holistic and measurable view of “better city” readiness and maturity.
ASSESSING PISMO: 360 Scan Results

FOCUS! Where We Are Focusing

• Transportation
• Parking
• Recycled Water/Utilities
• Citizen Engagement/Web Content
KEY FINDINGS & OPPORTUNITIES: 360 Scan

CIRCULAR CITY
Pismo Beach has stressed water conservation as a key priority, through recycled water, customer education, and replacement of inefficient infrastructure.

RESILIENT CITY
With the adoption of more technology, the City has set goals around IT security and further leveraging digital resources to improve public safety, such as boosted emergency and Advisory alerts on social media.

PRODUCTIVE CITY
Pismo Beach enjoys a robust local economy, though reliance on tourism has generated challenges such as congestion and limited amount of low- and moderate-income housing.

CONNECTED CITY
During peak tourism times, parking and congestion are key issues for residents and visitors. Increasing pedestrian accessibility and multi-modal transportation are also City goals.

INCLUSIVE CITY
In recent years, Pismo Beach has prioritized citizen engagement and communication with residents and visitors, particularly online.

ATTRACTIVE CITY
The City’s economy is reliant on visitors; approximately 46% of the City’s revenue is generated from a transient occupancy tax.

Pismo Beach City 360 Roadmap

This sequence of projects was strategically determined based on project readiness, current City parks, and staff capacity.
Annual Conference

THANK YOU!

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