



# Memorandum

**TO:** PUBLIC SAFETY, FINANCE AND  
STRATEGIC SUPPORT COMMITTEE

**FROM:** Robert Sapien, Jr.  
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**SUBJECT:** SEE BELOW

**DATE:** February 5, 2021

Approved

Date

2-8-21

**SUBJECT: SMART CITY ROADMAP: SAFE CITY STRATEGY STATUS REPORT**

## RECOMMENDATION

Accept a status report on the Smart City Roadmap: Safe City Strategy regarding the applied use of technology and technology improvement opportunities within the Police Department, Fire Department, and the City Manager's Office of Emergency Management.

## BACKGROUND

On March 29, 2016, City Council adopted the San Jose Smart City Vision<sup>1</sup> to work towards making San Jose the most innovative city in North America by 2020. The Smart City Vision included five areas of concentration: (1) a Safe City, (2) an Inclusive City, (3) a User-Friendly City, (4) a Sustainable City, and (5) a Demonstration City.

The Safe City pillar specifically noted work toward improving response "through predictive analytics" and "reducing traffic accidents by targeting 'hot spot' areas," among the outcomes. One-time funding of \$150,000 was appropriated in the Fiscal Year 2018-2019 Budget to hire staff to develop an overarching, multi-department Safe City Strategy, with the Office of Civic Innovation, Fire Department, Police Department, and Office of Emergency Management collaborating. Civic Innovation onboarded a FUSE Fellow in April 2019 to lead this work. However, the fellowship concluded before a Safe City Strategy was drafted and multiple attempts at hiring staff expert in public safety were not successful.

<sup>1</sup> City Council Meeting Synopsis for 3/28/2016: <https://www.sanjoseca.gov/Home/ShowDocument?id=57360>

Absent a formal Safe City Strategy, staffs pivoted to prioritizing work that could make incremental progress towards Safe City outcomes. The Police Department, the Fire Department, the Office of Emergency Management, and Information Technology Department focused first on foundational investments in coordinating budget requests in recent fiscal years. Additionally, based on experiences with the February 2017 San Jose Flood, 2019 Public Safety Power Shutoffs, and 2020 COVID-19 Pandemic, disaster readiness and resilience took on additional importance under the Safe City umbrella. More recently, the Information Technology Department transitioned into a coordination role for Safe City efforts as the Office of Civic Innovation was prioritized onto COVID-19 pandemic response.

Previously, City staff reported to the Public Safety, Finance, and Strategic Support (PSFSS) Committee on departmental initiatives, many of which are now in operational use. Most recently, at the Committee's February 20, 2020, meeting<sup>2</sup>, staff reviewed the Fire Department's progress with Data Analytics and Business Intelligence. Staff provided a demonstration<sup>3</sup> of "BI" use to improve response time compliance, automate performance measures and expense reports, and augment decision-making through dashboards showing effectiveness in inspections/permits and turnout times by unit company. Both the Fire Department and Police Department noted the importance of continued investment to advancing the use of data analytics in their missions.

Staff reports related to Safe City projects included:

**(1) Business Intelligence Tool (Fire Department) – Status: In Use since 2019**

San Jose Fire Department initiated efforts as part of the Response Time Work Plan to augment and expand its business intelligence capabilities. This included both the construction of an internal data warehouse to store and make available key sources of data, as well as business intelligence tools that provide live visualizations and key performance metrics to department leadership. The benefits are two-fold in that business intelligence (1) provides near-real-time information on key business metrics and key indicators in order to help focus on performance and improvement, and (2) the effort matures the information technology of the organization by creating data sources that support automating recurring reports with quality data. In turn, the business intelligence solution improved data-driven decisions by use of dashboards to monitor City and County EMS response time compliance and high-level budget and performance measures dashboards that replaced old and slow manual processes.

**(2) Fire Station Alerting System (Fire Department) – Status: In Use since 2020**

San Jose Fire Department utilized funding of \$1.5 million to upgrade the Department's 2004 fire station alerting system with newer automated technologies replacing the analog telephone circuits with an Internet Protocol (IP) network infrastructure. The new system automates key dispatching steps, resulting in reduced call processing times, thereby improving overall response times.

<sup>2</sup> PSFSS Committee for 2/20/2020: [http://sanjose.granicus.com/MediaPlayer.php?view\\_id=2&clip\\_id=11513](http://sanjose.granicus.com/MediaPlayer.php?view_id=2&clip_id=11513)

<sup>3</sup> PSFSS Committee presentation on 2/20/2020: <http://sanjose.legistar.com/gateway.aspx?M=F&ID=2a8914b6-3e5a-4dde-94b1-e201764958c4.pdf>



**(3) Central Emergency Vehicle Preemption (Fire Department/Transportation) – Status: In Use since 2019**

As directed by the City Council as part of their approval of the Mayor's March Budget Message for Fiscal Year 2016-2017, one-time funding of \$1.2 million was allocated to provide a central emergency vehicle preemption (CEVP) service at all signalized intersections to improve response times to fire and medical emergencies. CEVP replaces the historic per-intersection preemption with a geo-aware design that pre-clears intersections in advance, and at lower cost. Per an analysis conducted in May 2019 of all emergency trips across the City's 935 intersection since CEVP go-live, the implementation of CEVP showed an average reduction of 20-28 seconds per emergency trip.

**(4) Omega CrimeView Dashboard (Police Department) – Status: In Use since 2016**

Sworn staff can now immediately access Computer Aided Dispatch (CAD) and Reported Incident data via automated reports, web dashboards, and customized alerts. Additionally, Crime Analysis analysts use this data to assist the Bureau of Investigations, and Captains in the Bureau of Field Operations use the data to identify crime trends and answer questions at community meetings.

**(5) CrimeView Advanced Reporting Module (Police Department) – Status: In Use since 2016**

This module is a business intelligence tool, utilized by both sworn and civilian personnel, to query computer aided dispatch (CAD) data and display analytical reports. It provides a minimum workable replacement for the previous Computer Aided Dispatch (CAD) data interface and allows for querying via multiple parameters in the CAD data. It also provides reliable, targeted, and task-specific statistical reports. The immediate access to CAD data is crucial for intelligence purposes and for follow-up investigations.

**(6) Crimemapping.com (Police Department) – Status: In Use since 2016**

This web-based tool provides the public with the ability to access and view crime activity within their neighborhoods using the Records Management System data (note: data does not contain personal information and addresses are by block). The public can create queries with last 180 days of rolling data and share results.

## **ANALYSIS**

The City does not have a formal Safe City Strategy after experiencing difficulties hiring expert staff. The Police, Fire, Office of Emergency Management, and Information Technology departments used the City's budget process, as well as the annual Technology Budget Coordination reviews between departments and the Information Technology Department, to organize and prioritize investments. Applying an objectives and key results framework, the

departments focused on the following Safe City technology initiatives across Fiscal Years 2019-2020 and 2020-2021:

- **Communications and Interoperability**—Enable the Fire Department, Police Department, Office of Emergency Management, and partners to communicate and collaborate.
- **Operational Effectiveness**—Advance the effectiveness of public safety operations through data and integrated technologies.
- **Disaster Readiness and Resilience**—Implement information and communications solutions that enhance response and recovery in disaster scenarios.

Aligning with those objectives, the active initiatives below support specific key results and were approved by City Council in the City's budget processes:

1. **FirstNet** (Civic Innovation/Information Technology/Police/Fire/Emergency Management) which deploys the national high-resilience, common public safety broadband network for City use. Communications devices are assigned to City staff and installed in city-owned vehicles. In addition to regular communications, the devices augment situational awareness with information, maps, and applications in the field to support special events, incident command management and disaster response and recovery.
  - **Target:** Provide high-resilience communications and situational awareness solution for all staff involved in special events, incident command management and disaster response and recovery.
  - **Status:** Funded at \$1.81M. Almost 3,000 devices are deployed/in-process, and full implementation has a target of December 2021.
  - **PSFSS Committee Demonstration:** At the February 18, 2021, Public Safety, Finance, and Strategic Support Committee meeting, staff will demonstrate the uplift process for FirstNet phones that prioritizes them on the resilient and fast cellular network. Staff will then show the mobile apps, maps, and software tools that FirstNet phones provide First Responders in the field. The team will conclude with how the flow of information enhances the Emergency Operations Center's (EOC) awareness and decision-making via dashboards used by EOC sections.
2. **Mass Notification System** (Emergency Management) which increases the City's ability to alert and notify San Jose residents in the event of an emergency. The City coordinates Alerts, Notifications, and Warnings with the Santa Clara County Office of Emergency Management, which sponsors the Alert Santa Clara County (Alert SCC) mass notification system via a contractor used in many jurisdictions across the nation. Dependent upon the circumstances, notifications are delivered to recipients who have opted-in to AlertSCC or Nixle services, have a Wireless Emergency Alert capable cellular telephone, or are in proximity to a deployed long-range acoustical device.
  - **Target:** Enable emergency alerting and messaging to 90% of the population within 10 minutes of notification initiation.
  - **Status** Funded at \$1.18M (6 year contract) by the Santa Clara County Office of Emergency Management for the benefit of all jurisdictions in the county. The



service does require a full time City coordinator, currently funded by the Urban Area Security Initiative grant. In the last year, community warnings were issued for the SCU Fire, Civil Unrest, and recent storms. Assistance with educating the public on how to enroll in the AlertSCC system is a current priority that will benefit from joint efforts by Mayor and Council District offices as well as by, the City Manager's Communications Office, and the Office of Emergency Management.

3. **Measure T** (Emergency Management) approved by voters in November 2018, provides for the issuance of \$650 million in General Obligation Bonds to fund a variety of important infrastructure projects throughout the City, including a new Emergency Operations Center (EOC) where City Leadership gathers to manage response to major disasters. The EOC uses technology to gather information about the situation occurring, create action plans to address the emergency, and communicate with City staff and residents. The Fire Training Center (FTC) Facility and EOC will be constructed on a joint site in the vacant lot located at 1591 Senter Road.
  - o **Target:** Design and build a standalone EOC capable of surviving local hazards.
  - o **Status** Funded at \$21.5M for construction and \$2.5M for equipment. Groundbreaking scheduled for 3/11/2021.
4. **Emergency Management Geospatial Data** (Emergency Management/Public Works) which creates geospatial systems to enhance coordination in the EOC and communications internally and externally. The primary focus has been on improving damage assessment, shelter management, and flood operations data management.
  - o **Target:** Provide automation tools that facilitate the collection of information, summarizing impacts, and facilitating internal and external communications on damages and restoration.
  - o **Status:** OEM made significant investments in GIS infrastructure and applications, recently completing a \$150,000 grant funded project to deliver damage assessment and shelter applications. Continued effort and staff are needed to operationalize these tools.
5. **9-1-1/3-1-1 Improvements** (Police/Fire/Information Technology) which was a data science dive, service redesign, public campaign, call handling technology, hiring and recruitment, and position re-classification initiative to shift city service calls by redirecting non-emergency contacts from the Police and Fire Public Safety Answering Points (9-1-1) to the City Customer Contact Center. The goal is to improve the Police and Fire Department 9-1-1 call answering times. The initiative added urgency after the release of a City Audit Report<sup>4</sup>, subsequent Civil Grand Jury Report<sup>5</sup>, and City Council direction to those reports.

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<sup>4</sup> City Audit of 9-1-1 and 3-1-1: <https://www.sanjoseca.gov/home/showdocument?id=38067>

<sup>5</sup> Civil Grand Jury of Santa Clara County report on San Jose 9-1-1 and 3-1-1 Call Answering Time: [https://www.sccourt.org/court\\_divisions/civil/cgi/2019/CGJ%20SJPD%20Final%20Report%20-%2006.18.19.pdf](https://www.sccourt.org/court_divisions/civil/cgi/2019/CGJ%20SJPD%20Final%20Report%20-%2006.18.19.pdf)



- **Target:** Improve 9-1-1 emergency call handling to consistently meet or surpass national response benchmarks.
  - **Status:** Funded at over \$1.2M over the past two fiscal years. Data science analysis, call handling redesign, public awareness campaign design, San Jose 311 rebranding, and virtual call handling agent work is complete. The City benefitted from partnering with Google.org, which donated a team to the City for six months to help complete the deep data, technology, customer-centric design, and public communications work. Execution of the public awareness campaign was held due to onset of the COVID-19 pandemic and the virtual agent is to be expanded. Assessment of impacts on response times is planned for mid-2021.
6. **Silicon Valley Regional Communications System** (Public Works/Police/Fire) which is the San Jose portion of a 19-agency replacement of the public safety radio systems used in Santa Clara County with one that uses the 700/800MHz spectrum, supporting enhanced data transmissions, multi-agency mutual aid response, and communications security. This is the core radio network used by all police and fire agencies in Santa Clara County. While the system itself is complete, The City purchased portable and mobile radio equipment between 2012 and 2016 which are at end of support requiring replacement.
- **Target:** Provide a common, reliable, and secure radio communications supporting Police, Fire, and mutual aid response.
  - **Status:** The City's 2020-2024 Proposed Capital Improvements Plan includes funding of \$13.0M. Public Works, Police and Fire Departments are currently working with the Budget Office to identify a procurement mechanism to replace some of the original portable and mobile radio equipment which are at end of support.
7. **Police Mobile Data Computer Refresh** (Police) replaces the end of life mobile data computers (MDC) environment in 450 police fleet vehicles: marked patrol cars, Community Service Officer (CSO), and unmarked vehicles. The MDC equipment is an essential part of the Police Department's secure mobile computer network which supports Field Patrol operations, allowing patrol officers to communicate through a Department of Justice (DOJ) compliant server network with Police Dispatch and Records Systems. It is the basis of inter-unit communications in daily operations handling calls for service and major catastrophic events. The hardware refresh includes replacing the MDC, dock, modem, antenna, and all necessary wires/power supplies. Additionally, the new modem will use the AT&T FirstNet broadband network; therefore, providing the Department the ability to uplift the broadband service to provide the end-users priority and preemption and will continue with the secondary broadband carrier for coverage and redundancy. The refresh improves the cybersecurity of the field computing environment with the replacement of old operating systems.
- **Target:** Improve the reliability and resiliency of the Police Department's mobile data environment in their vehicles.
  - **Status:** Funded at \$4.3M. Funding was allocated in July 2020 and hardware ordered September 2020. Vendors experienced delays due to COVID-19. The

Public Works Fleet Division started installation on patrol cars on November 17, 2020, and estimate completion of marked patrol cars by April 2021 and CSO and unmarked vehicles by July 2021.

- 8. Predictive Policing Solution** (Police) which provides patrol staffs with an accessible resource to proactively predict and prevent crime, identify areas of high risk for proactive patrol, and deploy resources accordingly. The initial vendor solution selected through procurement was unable to deliver on contracted outcomes and the initiatives will be re-procured.
- **Target:** Reduce crime through proactive presence in areas of the community based on data insights, trends, and data bias safeguards.
  - **Status:** This project is currently on hold until the new Police Chief has been selected and reviews the project scope.

## **CONCLUSION**

The utility of creating a Safe City Strategy will be of even greater importance in the years ahead. New and transformative questions are emerging: How does the City of San José incorporate equity into the delivery of public safety services? How will use artificial intelligence, algorithmic tools, and sensor technologies safeguard against bias to maintain public trust? How will technology help optimize limited resources in the City's public safety services? And how will the City remain prepared for natural, health, cybersecurity, and infrastructure disasters, possibly concurrently? Reinforcing these vital questions, San Jose Fire Department is investing in a Fire Technology Master Plan; San Jose Police Department is applying technology to its Police Reform efforts; and the Office of Emergency Management is overseeing construction of a new, purpose-build Emergency Operations Center that incorporates hybrid virtual EOC capabilities, informational dashboards that enhance EOC decision-making, and community engagement tools that reach across language and cultural barriers more effectively. These combined efforts will help reshape the respective departments.

Given priorities from the City Council, 2020-2021 City Roadmap, City Manager's Enterprise Priorities, and operational priorities of the public safety departments, the City of San José is redefining City services with new perspectives. Keeping San Jose safe is core to that direction.

Though not a formal Safe City Strategy for 2021 and beyond, the following coordinated themes have emerged in the directions set by the Mayor, City Council, and City Manager's Office in late 2020:

- **Equity in Public Safety**— e.g., Police Reform Plan; Community Emergency Response Team (CERT) training and outreach.
- **Planning and Resource Optimization**— e.g., Working within budget limitation; radios and supportive long-term budgeting; use of data to improve operations.



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- **Disaster Readiness and Resilience**— e.g., Emerging from the COVID-19 pandemic; pandemic cost recovery; maintaining readiness for next and all disasters; public education and engagement; staff training/readiness; readying for cyberdisasters.

The City still requires a strategy, resource plan, and management oversight to ensure these important initiatives are focused and successful. Safe City investments have been significant to date and it will be essential to continue funding additional staffing, infrastructure upgrades, and related needs in areas such as telecommunications, field operations computing, geospatial and data analytics, as funding allows, to meet the current and anticipated demands of the community. Coordination of public safety initiatives and the prioritization of scarce resources in the City budget process across Fire, Police, and Emergency Management needs will determine the City's ability to define, meet, and communicate San Jose's Safe City vision.

### **COORDINATION**

This memorandum was coordinated with the City Manager's Budget Office, and the City Attorney's Office.

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