



Memorandum

TO: PUBLIC SAFETY, FINANCE AND
STRATEGIC SUPPORT COMMITTEE

FROM: Dolan Beckel

SUBJECT: SEE BELOW

DATE: February 5, 2020

Approved

Date

2-12-20

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 data and technology improvement opportunities within the Police Department, Fire Department, and the City Manager's Office of Emergency Management, including a demonstration of business intelligence tools.

BACKGROUND

On March 29, 2016, the City Council adopted the Smart City Vision to work towards making San José the most innovative city in the United States by 2020. The Smart City Vision challenged the City to become more data-driven in its work, including a particular focus on broadening the use of data analytics to improve public safety. The Police Department, the Fire Department, and the City Manager's Office of Emergency Management have since been working on a strategy that is focused on:

- (1) Broadening the use of data and data analytics for informed decision making;
- (2) Utilizing digital platforms to improve public safety and emergency response; and
- (3) Protecting the privacy and security of data under the City's care.

Previously, we reported to this Committee on several departmental non-business intelligence technology initiatives, many of which have now been completed and are in operational use. Recently completed, the Fire Department Business Intelligence Tool will be demonstrated to Committee for the first time at this February 20th PSFSS Committee meeting.

Funding was allocated in 2019 to develop an overarching Safe City Strategy with a FUSE Fellow. However, this fellowship did not work out and Safe City Strategy has not yet been developed. The current plan is to collaborate with the Police Department, Fire Department, City Manager's Office of Emergency Management, and other stakeholders to confirm the scope of the Safe City Strategy and renew recruiting efforts in the 2020/2021 fiscal year. In the interim, the public safety departments continue to advance a number of high priority technology improvement projects highlighted in this memo.

ANALYSIS

Completed Projects:

As a reminder for the committee, we previously reported on the following projects, which have now been completed and are in operational use:

(1) Omega CrimeView Dashboard (Police Department) – Status: In Use

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.

(2) Crimemapping.com (Police Department) - Status: In Use

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.

(3) CrimeView Advanced Reporting Module (Police Department) - Status: In Use

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.

(4) Central Emergency Vehicle Preemption (Fire Department) - Status: In Use

Funding was allocated to provide a central emergency vehicle preemption (CEVP) service at all signalized intersections to improve response times to fire and medical emergencies. The CEVP system eliminates the need for installing additional hardware infrastructure at signalized intersections. The CEVP system took one year of planning and design, and an additional year to develop and deploy, with citywide implementation beginning in October 2018, reaching 935 intersections. Per an analysis conducted in May 2019, the implementation of this system reduces average travel time through each intersection from an average of 6-8 seconds to an average of 1 second, a decrease of 5-7

seconds per intersection. This improvement translates to an average of 20-28 seconds per trip, producing time savings that are obviously critical when responding to a house fire or urgent medical issue.

Projects in Development:

We also previously reported on the following departmental initiatives, for which implementation is still ongoing:

(1) Predictive Missions (Police Department) – Status: In Development

The predictive policing module will provide patrol staff with an accessible resource to proactively predict and prevent crime, identify areas of high risk for proactive patrol, and deploy resources accordingly.

- a. The initial vendor solution for this module suffered from several critical issues to which the vendor was unable to provide a satisfactory resolution. These issues included a non-user friendly interface, and no measurable features to gauge usage, recommendation accuracy, or effectiveness of the program.
- b. The Police Department is preparing to release a new Predictive Analytics Request for Proposals (RFP).

(2) Fire Station Alerting System (Fire Department) - Status: In Development

On October 24, 2017, the City Council approved the purchase of an upgraded fire station alerting system. The upgraded fire station alerting system technology automates certain dispatching steps, resulting in reduced call processing times, and thereby improving overall response times.

- a. Under a five-year agreement (Oct. 2017 – April 2024) with the vendor, US Digital Designs, the Fire Information Technology (Fire IT) team is working to deploy this solution.
- b. Fire Department has coordinated with City Information Technology Department (ITD), Public Works and vendors to install software, hardware, and implement the initial solution.
- c. In May of 2019, limitations discovered in the backup wireless network required a modification to the initial architecture.
- d. Fire Department is currently working with the vendors to order, install and configure additional hardware needed to implement the new backup network.
- e. Final installation of equipment and configuration testing of the redundant network is in progress. Once all equipment is installed and testing is completed, Fire Department will be able to set a “Go Live” date. Estimated completion is Spring of 2020.

**(3) Mass Notification System (City Manager's Office of Emergency Management) –
*Status: In Development***

One of the primary focus areas for City Manager's Office of Emergency Management (OEM) has been to increase the City's capability to alert and notify San José residents for emergency events. The City currently actively coordinates Alert, Notification, and Warning functions with the Santa Clara County Office of Emergency Services who sponsors the Alert Santa Clara County (Alert SCC) notification system using a contracted service also in use by many other jurisdictions across the nation.

- a. OEM has partnered with the San José State University (SJSU) Research Foundation to conduct a study to understand the top 3-5 globally most effective and integrated mass warning systems that can provide an emergency alert and messaging to 90% of the population within 10 minutes of notification initiation. The report, dated April 30, 2019, provided several sets of recommendations, including: (i) Immediate recommendations; (ii) Long-term recommendations; and (3) Recommendations requiring coordinating with other Public Agencies.
- b. Using the SJSU Mass Warning Study for the City of San José as a guidepost, OEM is currently working on the following priorities:
 - i. Improving public response by continuing work with Santa Clara County to increase the number of San Jose residents that are signed up for AlertSCC.
 - ii. Improving technology integration by continuing work with Valley Water to institute an early warning system using real-time sensor data for flooding in at-risk waterways in the City.
 - iii. Expanding partnerships with local companies by continuing to pursue technology systems through the Startup in Residence (STiR) program designed to enhance efficiencies in alert and warning for the City.

New Projects

In addition to those efforts reported as completed or ongoing from previous reports on the Safe City Strategy, departments have continued to broaden their use of data in the service of public safety, San José's Smart City Vision, and the City's Digital Privacy Principles of collecting and sharing only the data we need.

(1) Text to 911 (Police Department) – *Status: In Use*

The Text-to-911 program provides a critical alternative for potential victims to contact emergency services when a voice call is not possible or desired, either due to (i) circumstances of the emergency (e.g. home invasion, active shooter); impairments in speech or hearing on the part of the reporter; or (iii) preferences of the reporter. In cases where a voice conversation presents added danger, once City emergency personnel determine that the person is safe, our protocol is to convert text conversations to voice conversations, as voice conversations provide the richest source of information in the shortest amount of time.

- a. Text-to-911 statistics from 2019

- i. Total text sessions: 894 (average of 2.4 sessions per day)
- ii. Number of texters who were in added danger by calling: 5
- iii. Number of texters who were hearing or speech impaired: 4
- iv. Average text session duration: 11.3 minutes

(2) Business Intelligence Tool (Fire Department) – Status: Live Demonstration

The San José Fire Department initiated efforts as part of their Response Time Work Plan to augment and expand business intelligence capabilities within the department. This includes 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 senior leadership.

- a. The goal of this effort is two-fold:
 - i. First, it aims to provide near real-time information to Fire Department leadership, as well as the entire organization, on key business metrics and key indicators to help the department understand and improve its performance.
 - ii. Second, it matures the information technology of the organization by automating the creation of required and recurring reports, thereby saving time for staff and providing a more accurate view of data and metrics on a regular basis.
- b. The business intelligence solution allows for improved data analysis and data-driven decisions by use of illustrations such as graphs and charts. The Fire Department has developed:
 - i. Dashboards to monitor City and County EMS response time compliance.
 - ii. High-level budget and performance measures dashboards to supplant current manual data processes.

Next Steps for Safe City Strategy

Key next steps for the Safe City Strategy include:

- Refining the scope of the Safe City Strategy with the Police Department, Fire Department, City Manager's Office of Emergency Management, and other key stakeholders such as the Information Technology Department and the Office of Civic Innovation and Digital Strategy;
- Securing the appropriate resource to develop the Safe City Strategy including identification of projects appropriate to include in future PSFSS Committee updates; and
- Reporting back to the PSFSS Committee in the spring of 2021 with an update on the Safe City Strategy and appropriate projects.

February 5, 2020

Subject: Smart City Roadmap: Safe City Strategy Status Report

Page 6

COORDINATION

This memorandum was coordinated with the Police Department, Fire Department, City Manager's Office of Emergency Management, Department of Transportation, Information Technology Department, and the City Attorney's Office.

/s/

Dolan Beckel

Director

City Manager's Office of

Civic Innovation and Digital Strategy

For questions, please contact Dolan Beckel, Director, City Manager's Office of Civic Innovation and Digital Strategy, at (408) 535-8260.