



# Memorandum

**TO:** SMART CITIES AND SERVICE  
IMPROVEMENTS COMMITTEE

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**SUBJECT: SAFE CITY STRATEGY STATUS  
REPORT**

**DATE:** April 27, 2022

Approved

Date April 28, 2022

## **RECOMMENDATION**

Accept a status report on coordinated Safe City Strategy efforts applying technology and data to improve public safety within the Police Department, Fire Department, and the City Manager's Office of Emergency Management.

## **OUTCOME**

The Committee will be aware of and provide feedback on coordinated Safe City technology and data efforts between the Police, Fire, and Information Technology departments, as well as the City Manager's Office of Emergency Management

## **BACKGROUND**

On March 29, 2016, City Council adopted the San José Smart City Vision<sup>1</sup> to work towards making San José 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. Absent a formal Safe City Strategy, the Police Department, Fire Department, Office of Emergency Management, Department of Transportation, and Information Technology Department advanced initiatives consistent with the Smart City Vision. Disaster and emergency management experiences including the February 2017 San José Flood, 2019 Public Safety Power Shutoffs, and 2020-2021 COVID-19 Pandemic gave importance and urgency to coordinated and clear Safe City objectives.

<sup>1</sup> City Council Meeting Synopsis for 3/29/2016, Item 3.8: <https://www.sanjoseca.gov/Home/ShowDocument?id=57360>

To organize and prioritize investments, the Police Department, Fire Department, Office of Emergency Management, Department of Transportation, and Information Technology Department made recommendations through the City's budget process, as well as through the annual Technology Budget Coordination reviews between departments and the Information Technology Department. Applying an Objectives and Key Results (OKR) framework, the departments agreed on three Safe City objectives wherein technology and data improvements maximize City capabilities:

- **Communications and Interoperability**—Enable the Police Department, Fire Department, Office of Emergency Management, and partners to communicate and collaborate.
- **Operational Effectiveness**—Advance the performance 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.

Previously, City staff reported to the Public Safety, Finance, and Strategic Support Committee on departmental initiatives, many of which are now in operational use. Of note, all public safety departments identified the importance of investing in advanced uses of data analytics to their missions into the future.

Safe City initiatives have been significant since the adoption of the San Jose Smart City Vision. Specific completed projects include:

### ***Fire Department***

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

The Fire Department initiated efforts as part of its 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: (1) provide near-real-time information on key business metrics and key indicators in order to help focus on performance and improvement, and (2) mature 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 Emergency Medical Services (EMS) response time compliance and high-level budget and performance measures dashboards that replaced old and slow manual processes. Capabilities were presented at the Committee's February 20, 2020, meeting<sup>2</sup>.

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<sup>2</sup> PSFSS Committee for 2/20/2020, Item (d)4, 2:01:

[https://sanjose.granicus.com/MediaPlayer.php?view\\_id=52&clip\\_id=11513](https://sanjose.granicus.com/MediaPlayer.php?view_id=52&clip_id=11513)

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

The 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.

**(3) Enhancements to Computer Aided Dispatch Interface with County Communications – Status: In Use since 2020**

The City of San José and County of Santa Clara each operate separate public safety Computer Aided Dispatch (CAD) systems. An interface between the two systems allows exchange of fire and medical event information between the Fire Department Communications Center and Santa Clara County Communications. Historically, dispatchers were required to follow up each event exchange with a phone call to verify receipt. City Audit 19-01 Recommendation #4 proposed, "To eliminate the need to call the County to confirm every ambulance dispatch, the Fire Department should work with the County of Santa Clara to prioritize automated ambulance dispatching." The City and County worked together to implement enhancements in April 2020, which provide automated acknowledgements, greatly reducing the number of verification phone calls required.

**(4) Implementation of "Off-hook" Answering – Status: In Use since 2020**

City Audit Report 19-01 noted that Police Department and Fire Department Communications Centers utilized differing methodology to answer incoming emergency calls, with Fire Department ring times averaging over five (5) seconds more than Police. Specifically, the Police Department had calls automatically connect to a call taker's headset, while calls in the Fire Department produced an audible ring, which required manual action to answer. Recommendation #1 stated, "Fire Communications should implement technology to automatically connect calls to call takers' phones through off-hook answering." Implementation of this recommendation reduced Fire Department average ring times to under one second, thus reducing Fire Department call answering times by approximately 5 seconds as envisioned in Audit Report 19-01.

**(5) Fire FirstNet iPad Replacement – Status: In Use since 2022**

The Fire Department received funding from County of Santa Clara Fiscal Year 2022 EMS Trust Fund and replaced the end-of-life iPad inventory with FirstNet-ready iPads in March 2022. These devices serve as a key tool to improve reliability and resiliency of the electronic patient care reporting for first responders to sort, summarize, and transmit data during patient contact to the hospital before arrival, thus enhancing patient care. The new devices are compatible with FirstNet and allow first responders to access the network with higher priority and preemption to communicate information quickly.

**(6) Avenza Maps – Status: In Use since 2022**

As part of the Fire Department iPad replacement efforts, Avenza Maps Pro software was installed. This geographic information systems (GIS) tool allows personnel to import specialized, classified, and proprietary georeferenced maps and add critical information such as GIS tracks, symbols and photos. This allows field crews to share up-to-date maps quickly as emergency situations evolve for better response times, situational awareness, and safety.

***Police Department***

**(7) Omega CrimeView Dashboard – Status: In Use since 2016**

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

**(8) CrimeView Advanced Reporting Module – Status: In Use since 2016**

The Advanced Reporting module is a business intelligence tool, utilized by both Police sworn and civilian personnel, to query Computer Aided Dispatch (CAD) data and display analytics. It provides a minimum workable replacement for the previous CAD data interface and allows fast querying of data via multiple parameters. It also provides reliable, targeted, and task-specific statistical reports. Immediate access to CAD data is crucial for intelligence purposes and for follow-up investigations.

**(9) Evidence Collection with Axon Capture – Status: In Use Since 2020**

In August of 2020, the Police Department transitioned to an evidence collection application by Axon called Capture. While in the field, Officers and Community Service Officers (CSOs) leverage their City-issued FirstNet cellphones to capture picture and video evidence, uploading to the Police Department's evidence repository. Axon Capture also allows officers, detectives, and CSOs to send a community member an evidence upload link via text or email, which allows them to directly provide their videos and or photographs to the Police Department's evidence repository. The officer in the field receives an email notification of the upload, reviews and approves the evidence, which is automatically tagged with the case number and case details. Before Axon Capture, officers and CSO's would need to download the evidence to a thumb drive, fill out necessary evidence booking paperwork, and then drive back to the department to book the evidence. The benefits of the new solution are increased evidence access, faster collection of evidence in the field, improved evidence handling the Police Department's repository, decreased evidence processing effort for Officers and non-sworn staff, and increased field time for Officers.

**(10) Business Intelligence – Status: In Use since 2021**

The Business Intelligence project is a joint initiative between the Police and Fire Departments, which includes an internal data warehouse to store and make available key sources of data, as well as an analytics tool that provides live visualizations and key

performance metrics required by the departments' leadership. The benefits have been two-fold in that business intelligence (1) provides near real-time information on key business metrics, and (2) the effort matures the information technology of the organization by creating data sources that support automating recurring reports for decision support.

Microsoft's Business Intelligence Tool, commonly known as Power BI, turns source data into coherent, visually immersive dashboards, which bridges the gap between data and decision making. In February 2021, the Police Department's Bureau of Technical Services (BTS) Crime Analysis Unit (CAU) published several internal dashboards for Command Staff. Following is a list of the major dashboards and their publication date (some contain sensitive information):

- 22-Year Uniform Crime Report dashboard (February 2021)
- Computer Aided Dispatch (CAD) Dynamic Response Time dashboard – last 24 hours, 7-days, and 30-days (February 2021)
- CAD Response Time Report – Previous Fiscal Year (February 2021)
- Records Management Systems Uncleared Property dashboard (February 2021)
- CAD Quarterly Program Manager Response Time dashboard (February 2021)
- Hate Crimes and Incidents dashboard (July 2021)
- Domestic Violence dashboard (August 2021)
- CAD Bi-Weekly dashboard (November 2021)
- Bureau of Field Operation Quarterly Division Report (November 2021)
- Gang Investigations Incidents (April 2022)
- Traffic Investigations Unit Traffic Fatalities (April 2022)

In March 2022, the Police Department released a suite of public-facing dashboards for community access and use. The Department worked with the Digital Privacy Officer to review the platform and ensure no personal information was accessible or released on the front-end or back-end of the dashboards. The public-facing dashboards are accessible on the Police Departments SJPd.org webpage<sup>3</sup> and include the following reports:

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<sup>3</sup> San Jose Police Department Police Dashboards: <https://www.sjpd.org/records/crime-stats-maps/police-dashboards>

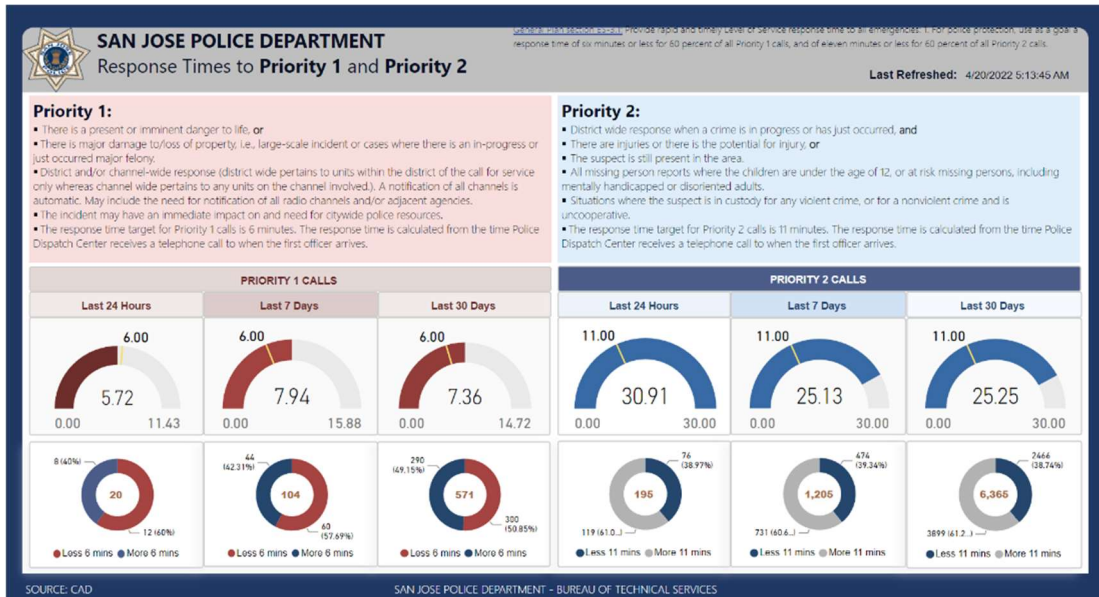
# SMART CITIES AND SERVICE IMPROVEMENTS COMMITTEE

April 22, 2022

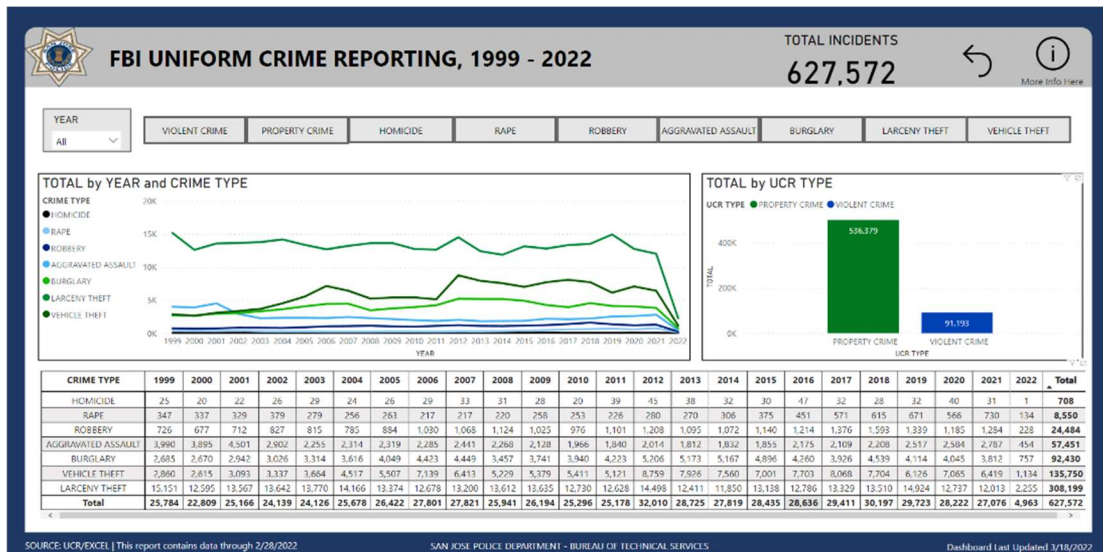
## Subject: Smart City Roadmap: Safe City Strategy Status Report

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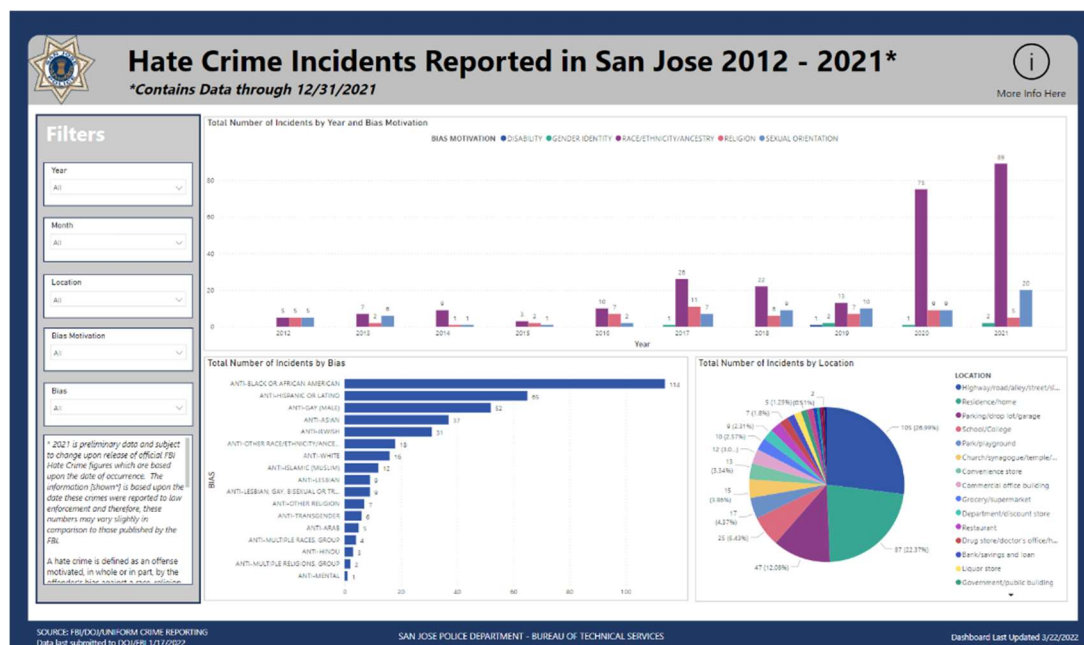
### Police Response Times for Priority 1 and Priority 2 Calls for Service:



### FBI Uniform Code Reporting 1999-2021:



## FBI Uniform Crime Report Hate Crimes:



Each individual dashboard includes a page dedicated to answer Frequently Asked Questions (FAQs) and to inform community members on the intricacies of the data, as well as the terms used. The SJPD.org Police Dashboard webpage includes a guide on how to navigate the dashboards.

**(11) Mobile Data Computer Refresh – *Status: In Use since 2021***

Replaced the end-of-life mobile data computers (MDCs) environment in 450 police fleet vehicles, including marked patrol cars, CSO vehicles, and unmarked vehicles. The MDC equipment is an essential part of the Police Department's secure mobile computer network, which supports Field Patrol operations and allows patrol officers to communicate through a Department of Justice-compliant application network for Police Dispatch and Records. This is the basis of inter-unit communications in daily Police operations handling calls for service and major catastrophic events.

The hardware refresh replaced the MDC, computer docking station, modem, antenna, and all necessary wires/power supplies in every vehicle and apparatus. Additionally, the new modems utilize the AT&T FirstNet broadband network, providing the Department with the ability to Uplift broadband services for priority and preemption in disaster scenarios. Each patrol car also carries a secondary active broadband carrier for coverage and redundancy.

The Police Department and Public Works Fleet Division completed installing the hardware in 450 patrol cars in June 2021. The project improved the reliability, resilience, and cybersecurity of the Police Departments field mobile data environment.

**(12) Crimemapping.com – Status: In Use since 2016 updated in 2022**



The Crimemapping web-based tool provided the public with the ability to access and view crime activity in neighborhoods using Police Department Records Management System (RMS) data. These data do not contain personal information and addresses are aggregated to the block level. The public can create queries with access to the most recent 180 days of data, as well as share results. Data are refreshed every 24-hours.

As of March 2022, the Police Department began working with the vendor to include the Department's CAD calls for service data and RMS data, and increase the frequency of the data refresh to every four hours. The vendor anticipates completing the work by June 2022.

**(13) Computer Aided Dispatch - Mobile Responder – Status: In Use since 2022**

The CAD 9.4 upgrade included Mobile Responder, a situational awareness application. Police Executive Staff, Traffic Enforcement Unit (TEU), and the Airport Support Unit (ASU) Air3 were provided access to CAD information that was previously only available on an MDC, typically in a Police vehicle. With the Mobile Responder implementation, staff members can utilize their FirstNet device, cellphone, or tablet, to access incident information from anywhere cellular or internet connectivity exists.

***Office of Emergency Management***

**(14) Mass Notification System – Status: In Use since 2017**

The mass notification system, "Alert Santa Clara County" (Alert SCC) increased the City's ability to alert and notify San Jose residents in emergencies. The City coordinates Alerts, Notifications, and Warnings with the Santa Clara County Office of Emergency Management, which sponsors the system.

Depending on the circumstances, notifications are delivered to recipients who have opted-in to AlertSCC or Nixle, have a Wireless Emergency Alert capable cellular telephone, and/or are in proximity to a deployed long-range acoustical device. The goal of the program is to enable emergency alerting and messaging to 90% of the population within 10 minutes of notification initiation. The program was funded with \$1.18 million on a 6-year contract issued by the Santa Clara County Office of Emergency Management for the benefit of all jurisdictions in the County. The service requires a full time City coordinator in the Office of Emergency Management. The position is currently funded by an Urban Area Security Initiative (UASI) grant.

In the last year, community warnings were issued for eleven (11) vaccination events, five (5) gas leak incidents, one (1) potential flood incident, and one (1) Police action event. Assistance with public education on how to enroll in the AlertSCC system is a 2022-2023 priority that will benefit from joint efforts by Mayor and Council District offices, the Communications Office, and the Office of Emergency Management.

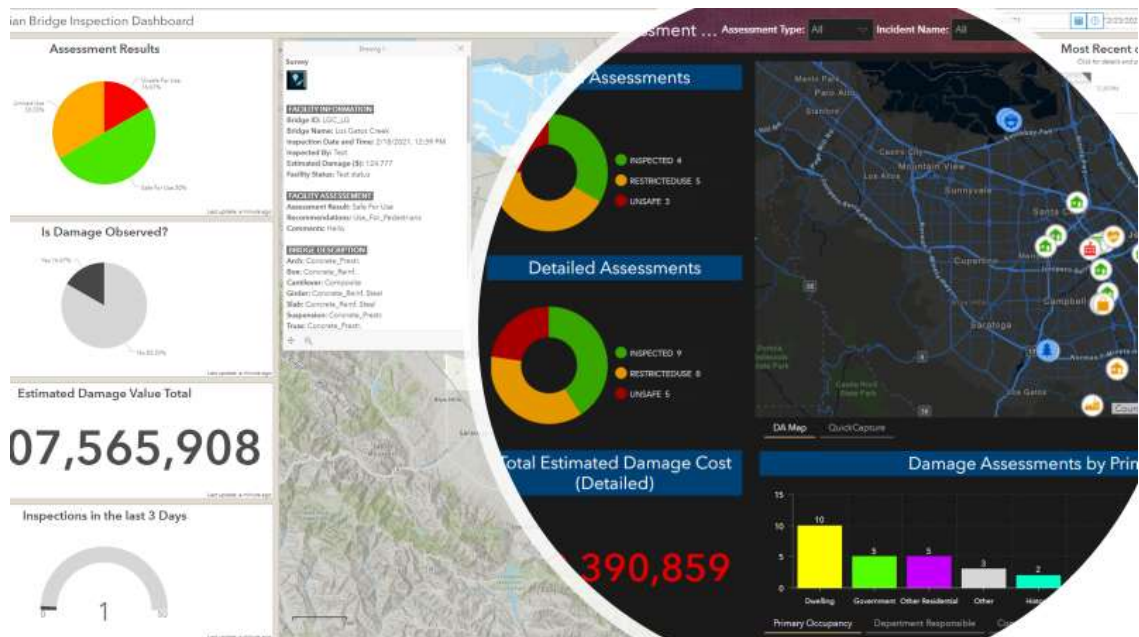


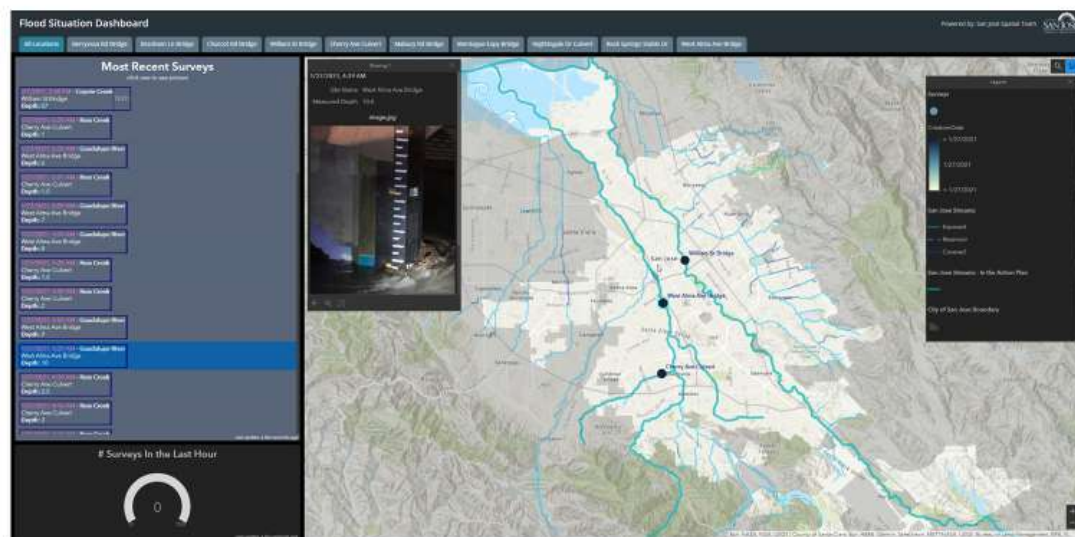
### ***Multi-Department***

#### **(15) Emergency Management Geospatial Data (Emergency Management/Public Works) – *Status: In Use since 2019***

Shared geospatial systems enhance coordination in the Emergency Operations Center (EOC) and communications internally and externally. The primary focus has been on improving damage assessment, shelter management, and flood operations data management. This initiative provided automation tools that facilitate collection of information, visualization of disaster status and impacts in areas of the community, and internal and external communications related to damages and restoration. In the COVID-19 pandemic response and recovery and Public Safety Power Shutoff emergencies, City geospatial systems were relied on heavily internally, by partners, and by other government jurisdictions.

Emergency Management and Public Works staffs made significant investments in the City's Emergency Management Geospatial Systems infrastructure and software, completing a \$150,000 grant-funded project to deliver damage assessment and shelter solutions. OEM will seek additional grants to expand the tools. The following two screenshots are examples:





**(16) RapidSOS (Police Department/Fire Department) – Status: In Use since June 2019 for Fire**

RapidSOS provided a web-based application, which can be used to help locate cellular 9-1-1 callers or Text-to-9-1-1 users who cannot provide their location, or are unsure of their location. This is accomplished by leveraging the “NG911 Clearinghouse”, a nationwide Location Information Server that delivers faster, more reliable locations from supported wireless devices. The clearinghouse also houses additional data from a variety of integration partners, augmenting situational awareness and response.

**(17) Text-to-9-1-1 (Police Department/Fire Department) – Status: In Use since 2019**

Text-to-9-1-1 is the ability to send a text message to reach 9-1-1 emergency call takers from a mobile phone or device. Implementation of Text-to-9-1-1 provides an additional means of access to emergency services, including improved support for the City’s deaf and hard-of-hearing community. Text-to-9-1-1 serves as an alternate method of reporting emergencies. Making a voice call to contact 9-1-1 during an emergency is still preferred when possible.

Following a “soft launch” in January 2019, the Police and Fire Departments joined other local jurisdictions in a joint media event announcing availability of this service in September 2019. Public education includes guidance on use of text to contact 9-1-1:



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

As directed by the City Council in the Mayor's March Budget Message for Fiscal Year 2016-2017, one-time funding of \$1.2 million was allocated to provide a Centralized Emergency Vehicle Preemption (CEVP) service at all City signalized intersections to improve response times to fire and medical emergencies. CEVP replaced legacy per-intersection preemption with a geo-aware design that pre-cleared intersections in advance, and at significantly lower cost. Per an analysis conducted in 2019<sup>4</sup> 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. This initiative won a Smart 50 Award for innovation and transportation management.

**(19) FirstNet Police Deployment (Information Technology/Public Works/Police  
Department/Fire Department) – *Status: In Use Since 2020***

FirstNet is the nationwide emergency communications network established by Congress after the September 11, 2001, terrorist attacks. FirstNet is secure, resilient, and physically separate from the commercial network used by consumers – with a dedicated frequency (band 14) and physical network infrastructure. Most FirstNet antenna sites have at least multi-hour battery back-up. Some sites are supplemented by back-up diesel generators with more generators being installed over time. AT&T works to restore cellular sites within two (2) to 12 hours if a site loses power, with portable 72-hour back-up generators for larger sites. This is in addition to the FirstNet rapid deployment Cellular on Wheels (COW) platforms that are available by request and delivered within seven hours to restore network coverage when needed.

When the local COVID-19 disaster response began in early 2020, the Police Department prioritized the deployment of FirstNet phones to all levels of sworn and non-sworn personnel. In April of 2020, over 1,300 FirstNet phones were deployed throughout the

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<sup>4</sup> Centralized Emergency Vehicle Preemption Data Story: <https://stories.opengov.com/sanjoseca/published/SqEngKNh5>

organization, resulting in increased productivity for officers, allowing more time in the field, increasing communications with citizens, and providing use of multiple mobile applications to streamline operations.

Additional applications have been deployed to the Police Department, Fire Department, and Office of Emergency Management to improve efficiency and information flow for disasters. The original FirstNet project charter outlined a replacement cycle for cellular phones every three years. As the City's lead adopter in 2020, the Police Departments and Information Technology Department are working through the Fiscal Year 2022-2023 City Budget Process to fund replacement of Police FirstNet phones in late-2022.

**(20) Silicon Valley Regional Communications System (Police Department/Fire Department/Emergency Management/Public Works) – Status: In Use since 2020**

In 2020, departments migrated to the new regional communications system to replace the City's aging radio infrastructure. The Police Department migrated in March and the Fire Department in July. The City of San José was one of 20-agencies that joined a Joint Powers Authority to build and maintain a state-of-the-art public safety-grade radio system to be used throughout Santa Clara County. The system utilizes the 700/800MHz spectrum, supporting improved data transmissions, multi-agency mutual aid response, and communications security between public safety organizations in Santa Clara County and regional cooperating agencies. This is the core radio network used by all police and fire agencies in Santa Clara County, providing a common communications platform for interoperability for the first time in the history of the region.

**(21) Digital Privacy Program (Information Technology) – Status: In Use since July 2021**

The City's Digital Privacy Policy<sup>5</sup> was authorized by City Council in 2020 and effective July 1, 2021. It provided direction for responsible and effective use of data by the City to improve the community's safety and services.

Over 70 projects have been reviewed for privacy requirements since October 2021, and new technologies and data uses are required to undergo a privacy review before purchase and/or implementation. Most privacy reviews are triaged the same day departments contact the Digital Privacy Officer. These reviews have enabled departments to use technology while mitigating privacy risks for key City needs such as improving traffic safety, managing youth intervention programs, and streamlining affordable housing applications.

Additional information on the Digital Privacy Program and privacy reviews was presented to the Smart Cities and Service Improvement (SCSI) committee in February 2022<sup>6</sup> and to the Public Safety, Finance, and Strategic Support (PSFSS) committee in March 2022<sup>7</sup>.

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<sup>5</sup> City of San José Digital Privacy Policy:

<https://www.sanjoseca.gov/home/showpublisheddocument/80514/637750765655100000>

<sup>6</sup> Link to item (d)3 for the Smart Cities and Service Improvements committee meeting on February 3, 2022:

<https://sanjose.legistar.com/LegislationDetail.aspx?ID=5381557&GUID=6AF73AE0-79E7-453E-A365-B9D984474BBD>

<sup>7</sup> Link to item (d)4 for the Public Safety, Finance and Strategic Support committee meeting on March 17, 2022 -

<https://sanjose.legistar.com/LegislationDetail.aspx?ID=5466662&GUID=A9F3AFC2-FD0F-4FC6-A918-D4EEF70B802C>

**(22) Police and Fire 9-1-1 Communications Centers Computer-Aided Dispatch Hardware and Software Upgrade (Police Department/Fire Department) – *Status: In Use since 2022***

In February 2022, the Police Department and Fire Department shared 9-1-1 Communication Center Computer Aided Dispatch (CAD) software was upgraded to the latest version. The upgrade included a full hardware replacement of 23 servers, 128 desktop computers, and 625 patrol car/fire apparatus Mobile Data Computers (MDC). The project improved reliability, resiliency, and cybersecurity of the Communication Centers environment.

**(23) RapidDeploy RadiusPlus (Police Department/Fire Department) – *Status: In Use since February 2022 for Fire***

The RapidDeploy RadiusPlus mapping solution utilized in Police and Fire Communications Centers provides enhanced access to detailed location data for 9-1-1 calls made by supported wireless devices. An overview displaying the locations of all active 9-1-1 calls within the City of San José also provides enhanced situational awareness and precision in response. This solution is provided to all Public Safety Answering Points (PSAPs) by the California Governor's Office of Emergency Services.

## **ANALYSIS**

Aligning with the shared 2021 Safe City objectives of Communications and Interoperability, Operational Effectiveness, and Disaster Readiness and Resilience, active initiatives for the Police Department, Fire Department, and Office of Emergency Management approved for the City's current fiscal year include:

### ***Fire***

**(1) Fire Information Technology Master Plan (Fire Department)** – Funding was approved by City Council in the 2020-2021 Adopted Operating Budget to hire a consultant to develop an information technology master plan for the Fire Department. An RFP was conducted and awarded to Gartner, Inc., in December 2021.

- **Target:** Create a master plan that will safeguard and improve the efficiency and effectiveness of the Fire Department's information technology systems to meet the needs of San José citizens, provide real-time critical incident information to first responders during emergencies, and maximize performance.
- **Status:** Funded at \$300,000. The project is in progress and is anticipated to be completed by Fall 2022.

**(2) Dual Cellular Network Connectivity (Fire Department)** – This initiative equips the Fire Department's current inventory of apparatuses with dual cellular network routers to switch between FirstNet and Verizon connectivity based on network availability, with FirstNet as the primary network to use the priority and preemption feature. Through the 2019-2020

Adopted Operating Budget, funding for this project was included in the FirstNet Emergency Communications Network allocation.

- **Target:** Install routers and antennas in all Fire apparatus to enable greater network coverage and service redundancy to access critical incident information for emergency responses.
  - **Status:** The project is in progress and is anticipated to be completed by Fall 2022.
- (3) **Fire Mobile Data Computer Refresh (Fire Department)** – This initiative replaces the end-of-life mobile data computers (MDCs) for 125 Fire apparatus. The MDC is an essential part of secure communications and response for the Bureau of Field Operations, and is supported by FirstNet data connectivity to provide priority and preemption for first responders.
- **Target:** Improve the reliability and resiliency of the Fire apparatus mobile data environment.
  - **Status:** Funded at \$859,000, appropriated through the Fire Construction and Conveyance Tax Fund in addition to funds awarded through County of Santa Clara EMS Trust Fund and the Urban Areas Security Initiative (UASI) grant programs. Installations began in November 2021, with 72% completed as of April 2022. Remaining devices are in procurement with grant funds. The project is planned for August 2022 completion.
- (4) **Computer Aided Dispatch Interface Replacement (Fire Department)** – The County of Santa Clara is in the process of replacing their existing CAD system with a modern Hexagon CAD platform. This will require development of a new interface to connect the City of San José's Hexagon CAD system to Santa Clara County's Hexagon CAD system. One-time funding was appropriated through the 2020-2021 Annual Report. Hexagon issued a scope of work for the new interface in April 2022 and development is expected to begin in mid-2022. Discussions between the Fire Department and Santa Clara County Communications has indicated mutual interest in including expanded capabilities in this interface, such as ability to exchange updates regarding existing events and the ability to exchange status information regarding emergency response units. These additional capabilities would further reduce the need for redundant confirmation calls between the jurisdictions' dispatch centers.
- **Target:** Continued exchange of CAD data between Fire Communication and Santa Clara County Communications.
  - **Status:** Funded at \$130,000. The project is expected to be completed by end of 2022.
- (5) **Closest Unit Dispatch (Fire Department)** – This initiative will dispatch Fire resources based upon apparatus proximity to an incident rather than fire station location and area. With the Dual Network Connectivity project in progress and expected for August 2022 completion, Closest Unit Dispatch is the next effort to address the travel time segment of the Fire Department's response times performance standards.



- **Target:** Improve the Fire Department's travel time to emergency incidents.
- **Status:** This project has not started.

### ***Police***

- (6) Electronic Citation System (Police Department)** – In 2008, the Police Department began using an electronic citation (eCitation) solution to issue traffic citations. The eCitation system is a stand-alone hardware device optimized for officer use in the field. Over 10+ years, the software and hardware devices have been replaced and upgraded, but are now legacy technology—larger, more cumbersome to operate, and with slow data connectivity compared to current options. In September 2021, the Department worked with Purchasing to issue a Request for Proposals (RFP) for a modern solution that could expedite the ticket writing process on a cell phone, eliminating the cost for the stand-alone device and wherein the cellphone camera can scan driver's licenses to pre-populate ticket fields, reducing the number of errors on tickets. Modern solutions also include robust reports and/or metrics, and the ability to share data, such as with the Departments Records Management and Santa Clara County Court System.

In November 2021, the RFP was awarded to Crossroads Software. Police Department staff have completed configuration, initial testing, and training of the Police Department Traffic Enforcement Unit (TEU) as the pilot team. Ultimately, the new Crossroads eCitation system will be used by all officers at the Department with the goal of improving the efficiencies and accuracy of citations.

- **Target:** Improve the efficiencies of officers writing tickets.
  - **Status:** Pilot team is currently testing the application. Goal is for full Department rollout by Fall or Winter 2022.
- (7) Predictive Policing Solution (Police Department)** – This initiative would have provided 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 initiative was slated to be re-procured. A predictive type policing solution was backlogged given other Police Department priorities and will not be pursued at this time.
- **Target:** Project cancelled.
  - **Status:** Project cancelled.

### ***Office of Emergency Management***

- (8) Measure T – Emergency Operations Center (Emergency Management)** – This project was approved by voters in November 2018 and provides for the issuance of \$650 million in General Obligation Bonds to fund a variety of emergency readiness-related infrastructure projects throughout the City. Funding included a new Emergency Operations Center (EOC), wherein City leaders gathers to manage response to major disasters. The Fire Training



Center facility and EOC are currently under construction on a joint site in the vacant lot located on Senter Road.

- **Target:** Design and build of a stand-alone EOC capable of surviving local hazards.
- **Status:** Funded at \$25 million for design and construction and \$2.5 million for equipment. Move in is expected in March 2023.

### ***Multi-Department***

**(9) New EOC Technology (Emergency Management/Information Technology) –** Emergency events have increased in number and criticality, including the City’s first sustained multi-activations. The City of San José Emergency Operation Center (EOC) is a critical part of the City’s overall resilience, including emergency preparedness, response, and recovery. The EOC is in a secure facility wherein City departments and other members of the Emergency Organization can communicate, collaborate, and coordinate the emergency response, allocate resources, and support management functions throughout all phases of emergencies and disasters.

- **Target:** Implement resilient connectivity, communications, compute, collaboration, and analytics capabilities to support critical operations in disaster events. Enable effective disaster response and recovery, including situational awareness for decision-making and the ability to communicate well with responders, the community, and partners.
- **Status:** From April 2022 until March 2023, the Office of Emergency Management, Information Technology Department, Police Department, and Fire Department will coordinate budgeting, procurement, and implementation of EOC technologies and support for the new EOC and Fire Training Center (FTC) buildings.

**(10) FirstNet (Information Technology/Police Department/Fire Department/Emergency Management) –** This project 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 \$1.8 million. Over 4,100 devices (98%) are deployed/in-process, and full implementation of the remaining 64 devices has a target of July 2022 for completion, depending on supply chain and staffing availabilities.

**(11) Measure T: 9-1-1- Call Center Renovation (Police Department/Fire Department) –** This initiative was approved by voters in November 2018 and provides funding to expand the current Police and Fire Communications Centers into the building space that will be vacated by the Office of Emergency Management when they move to the new Emergency

Operations Center. This expansion will increase physical capacity for emergency call processing and dispatching through the addition of workstations, as well as provide increased classroom space to support training needs. Best practices in Emergency Communications Center design are considerations.

- **Target:** Expand facilities in consideration of increased need due to historic rise in call volume, which is projected to continue.
- **Status:** Funded at \$2.9 million for design and construction, it is projected that this project requires an additional \$4 million in funding to address additional phases of work, including relocation of a conference room, new quiet rooms, a lactation room, a copier room, and storage rooms. The project team is working with contracted architectural firm to prepare for construction bid process. Project completion is expected by Summer 2024.

**(12) Motorola 10-Year Radio Upgrade Agreement (RUA) (Police Department/Fire Department/Emergency Management)** – This initiative replaces end-of-life portable and mobile radio equipment. While the Silicon Valley Regional Communications System is complete, the City’s portable and mobile radio equipment purchased between 2012 and 2016 are at their end-of-life and no longer supported by Motorola. Over 2,000 radios are in need of replacement.

The City entered a 10-Year, \$11.5 million, Radio Upgrade Agreement (RUA) to replace radios that are at or near the end-of-life and no longer supported. This RUA locked 2021 pricing to purchase approximately 1,600 public safety radios. However, there is still an ongoing budget shortfall for the remaining 422 radios (approximately \$4.22 million at 2022 pricing) that are at end-of-life that were not funded.

- **Target:** Maintain common, reliable, and secure radio communications through access to the regional interoperability radio system supporting Police, Fire, OEM and mutual aid response with updated, serviceable mobile and portable radios.
- **Status:** The 2022-2026 Adopted Capital Improvement Program (CIP) provides funding of \$8.9 million over the 5-Year CIP. The City is currently using the RUA and the existing budget to replace end-of-life, out of support, public safety radios. The 2023-2027 Proposed CIP considers an additional one-time transfer from the General Fund of \$2.0 million bringing the total 2022-2023 proposed budget of \$4.0 million for radio replacements. In years 2023-2024 through 2026-2027, ongoing transfers from the General Fund support a radio replacement budget of \$900,000 per year.

**(13) Compact Rapid Deployable Cell-On-Wheels (Police Department/Fire Department/Public Works)** – This item adds a portable, satellite capable cell tower that can be delivered using a conventional trailer hitch. These devices support FirstNet operations in poorly covered rural areas during large-scale emergency incidents such as floods, earthquakes, wildfires, and/or utilities public safety power shut off events. Public Safety currently relies on FirstNet to deliver mobile solutions to coverage issues within the City’s jurisdiction. FirstNet has a 7-hour response requirement for any request to deliver a satellite capable cellular vehicle or Cellular-On-Wheels (COW) upon request. There are currently seven (7)

COWs in California. A Compact Rapid Deployable COW can be set up and in service within 15 minutes upon arrival at an incident. It is smaller than a FirstNet COW but will support operations within a 1-mile radius until longer-term assets can arrive in disaster situations.

- **Target:** Enable communications restoration and/or enhance interoperability communication between first responders during large-scale emergency incidents.
- **Status:** Funding through the Urban Areas Security Initiative (UASI) grant programs is pending to procure six devices by 2024— one for the Police Department and five for the Fire Department.

**(14) Mobile Operations Satellite Emergency Systems (Emergency Management/Fire Department)** – This item adds a versatile, mobile communications terminal with numerous deployment scenarios, including: emergency communications for first responders (firefighters, police officers, forestry personnel, health and safety workers); emergency notifications via WiFi when communications are down; rapid communications restoration when cell towers are burned down or inoperable for any reason; secure data transmission for Fire Department or Emergency Operations Center activities during other disasters and emergencies. Funding was awarded in Fiscal Year 2021-2022 from the California Governor’s Office of Emergency Services to procure one unit.

- **Target:** Enable communications restoration and/or enhance the City of San José’s emergency communications capabilities during large-scale emergency incidents.
- **Status:** Funded at \$2.2 million. Procurement of the unit is currently underway and expected to be received by end of 2022; deployable after training in early-2023.

**(15) Next Generation 9-1-1 (Police Department/Fire Department)** –The California Governor’s Office of Emergency Services 9-1-1 Emergency Communications Branch is in the process of deploying IP-based backhaul throughout the state to support Next Generation 9-1-1 (NG911). The network is designed with multiple layers of redundancy and is expected to increase reliability over the legacy phone circuits historically used for 9-1-1 call delivery. IP-based call routing will also enable more dynamic call routing options than were previously possible, including the capability to designate overflow call routing pathways. The Police Department and Fire Department Communications Centers are scheduled for implementation in Phase 4 of the project, which CalOES projects to begin in September 2022. Preparation work by state-contracted vendors is in progress. Another element of NG911 deployment is the development of Cloud-Native Customer Premise Equipment (CPE). Multiple vendors have contracted with CalOES to offer NG911 capable CPE compliant with CalOES requirements. CalOES certification of these CPE solutions is required before PSAPs can initiate procurement. The Police and Fire Departments are monitoring status of this effort.

- **Target:** Increase the reliability and capabilities of the 9-1-1 system.

- **Status:** CalOES is driving the timeline of this project. Police and Fire Communications are scheduled for implementation in Phase 4 of the backhaul portion of this project which CalOES anticipates beginning in September 2022.

**(16) Text to 9-1-1 Technology Transition (Police Department/Fire Department)** – This initiative will add value by offering Text to 9-1-1 inside the RapidDeploy platform which is already used by the Police and Fire Department Communications Centers for its RadiusPlus mapping feature. The California Governor’s Office of Emergency Services 9-1-1 Emergency Communications Branch administers a contract for provision of Text to 9-1-1 to PSAPs. With the contract transitioning to a new provider, the Police and Fire Department Communications Centers will need to transition from the current Comtech web-based Text to 9-1-1 platform to RapidDeploy’s platform. In the future, it is expected that Cloud-Native CPE will further integrate Text to 9-1-1 into a single call handling solution for voice calls and texts.

- **Target:** Transition Text to 9-1-1 service platforms in accordance with CalOES requirements.
- **Status:** CalOES is driving the timeline of this project. This transition was previously scheduled for March 2022 but was delayed due to a technical issue. A reschedule date is not yet known.

**(17) 9-1-1/3-1-1 Improvements (Police Department/Fire Department/Information Technology)** – This initiative used data science, service redesign, public campaign, call handling technology, hiring and recruitment, and position re-classification initiative to shift city service calls by redirecting non-emergency city service request 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>8</sup>, subsequent Civil Grand Jury Report<sup>9</sup>, and City Council direction to those reports. 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.

- **Target:** Improve 9-1-1 emergency call handling to consistently meet or surpass benchmarks mandated by the California Governor’s Office of Emergency Services 9-1-1 Emergency Communications Branch.
- **Status:** Funded at over \$1.2 million over the past two fiscal years. Data science analysis, call handling redesign, public awareness campaign design, San Jose 311 (SJ311) rebranding, and virtual call handling agent work is complete. Execution of the public awareness campaign was held due to onset of the COVID-19 pandemic and virtual agent is to be expanded.

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<sup>8</sup> City Audit of 9-1-1 and 3-1-1: <https://www.sanjoseca.gov/home/showdocument?id=38067>

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

Between FY2019-2020 and FY2021-2022 (projected), residents have increased SJ311 utilization by almost 120,000 calls per year, a 27% increase. Despite the increased adoption of SJ311 however, 9-1-1 response threshold performance has not significantly improved for the Police public safety answering point. Additional analysis is underway to identify additional improvement opportunities, along with an SJ311 public awareness campaign that was held in 2020, when COVID-19 response began.

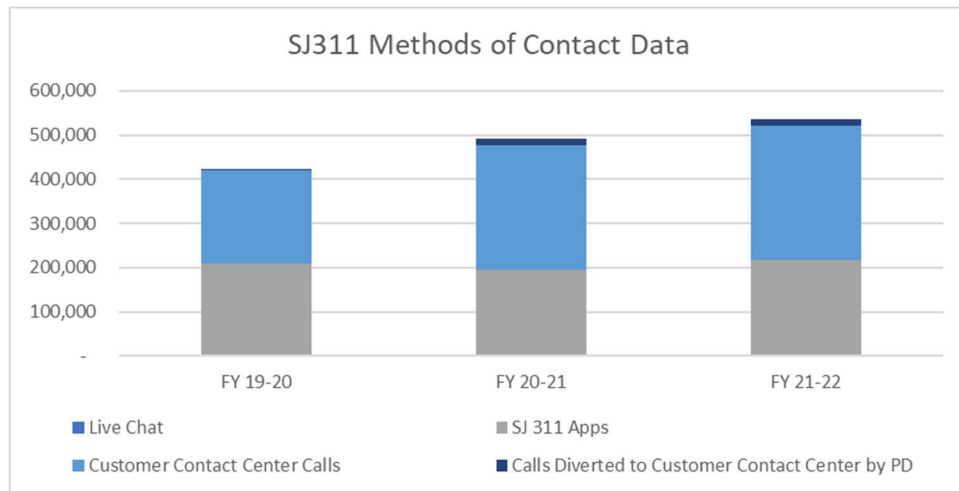


Figure 1: SJ311 Utilization

Additional opportunities still exist to transition remaining non-emergency City service requests away from the Fire Department. This includes identification of an alternate reporting solution when Police Department employees observe non-emergency city service needs, as this circumstance currently results in additional work for both the Police Department and Fire Department Communications Centers. Additionally, Fire Communications currently monitors sanitary sewer and stormwater pump station alarms. The Fire Department secured a consultant to conduct a workforce optimization study to assess staffing levels and organization structure of Fire Communications; the report is anticipated to be complete by end of 2022.

## **CONCLUSION**

The City's investments in public safety tools and effectiveness are significant. Since the adoption of the San José Smart City Vision's in 2016, City staffs completed 23 Safe City technology and data projects. Another 17 are active.

The impact of Safe City objectives has been to set clear focus on (1) operational improvements that drive enhanced decision-making and responsiveness for first responders and (2) cross-departmental capabilities that reinforce disaster response and recovery. Since 2017, local and global disasters have proven Safe City investments over the course of a flood, utilities failures, fire risks, a global pandemic, and shifts in crime.

New and transformative questions are also emerging: How does the City of San José incorporate equity into the delivery of public safety services? How will the use of artificial intelligence, algorithmic tools, and sensor technologies safeguard against bias to maintain public trust while also addressing recent trends in crime and traffic safety? How will technology help optimize limited resources in the City’s public safety services? And how will the City remain prepared for multiple disasters being managed concurrently? Aligning with these vital questions, the Fire Department is investing in a Fire Information Technology Master Plan while the Police Department is applying technology to its Policing Reform efforts.

Given priorities from the 2020-2021 City Roadmap, the City Manager’s Enterprise Priorities, and the operational priorities of public safety departments, the City of San José is redefining City services with new perspectives. Keeping San José safe is core to that direction. For 2022-2023, the Safe City cross-department objectives will be:

- **Equity in Public Safety**— e.g., Community Emergency Response Team (CERT) training and outreach; equity through privacy controls in public safety technology; and precision use of sensing technologies for crime prevention and transportation safety.
- **Planning and Resource Optimization**— e.g., Working within budget limitation; radios and supportive long-term budgeting; use of data to improve operations.
- **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 cyber disasters.

The City is aligning strategy, resource planning, and management to ensure Safe City initiatives are focused and successful. Indeed, current investments span projects totaling over \$50 million. Wise and coordinated funding of staffing, telecommunications, field computing, geospatial services, and data analytics are key to balancing the City’s resources with the service levels the community requires. That coordination and the prioritization of scarce resources necessitates a One Team approach between the Fire, Police, Emergency Management, Information Technology, and Public Works departments. The many successful initiatives to date and level of coordination detailed in this report reflect clear dedication to the Safe City mission.

## **EVALUATION AND FOLLOW-UP**

Police, Fire, Emergency Management, and Information Technology Departments are coordinating. All funding requests for public safety technology and data initiatives are addressed with the City Manager’s Budget Office through the annual budget process, in the context of Citywide priorities.

## **CLIMATE SMART SAN JOSE**

The recommendation in this memo has no effect on Climate Smart San José energy, water, or mobility goals.

### **COMMISSION RECOMMENDATION/INPUT**

This report was not presented at a Commission.

### **CEQA**

Not a Project, File No. PP17-009, Staff Reports, Assessments, Annual Reports, and Informational Memos that involve no approvals of any City action.

### **PUBLIC OUTREACH**

This memorandum will be posted on the Smart Cities and Service Improvements Committee Agenda website for the May 5, 2022, meeting.

### **COORDINATION**

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

/s /  
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Police Department

/s /  
RAYMOND RIORDAN  
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/s /  
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