

Memorandum

TO: SMART CITIES AND SERVICE
IMPROVEMENTS COMMITTEE

FROM: Rob Lloyd

SUBJECT: FIRSTNET STATUS REPORT

DATE: October 26, 2021

Approved

Date

10/27/21

RECOMMENDATION

Accept staff's report on the City's FirstNet Program, including the status of implementation, milestones, billing, challenges, and next steps.

OUTCOME

Provide a report reviewing the progress of the City's adoption of FirstNet, the national interoperable public safety broadband network for first responders, including project status to date and path to completion.

EXECUTIVE SUMMARY

The City of San José ("City") engaged in a direct public-private partnership with AT&T to deploy over 3,900 devices to City staff designated as essential to emergency response and recovery. Led by the Office of Civic Innovation, the initiative proposed to advance the City's Enterprise Priority: Emergency Management + Preparedness, through one of the first large-scale deployments of FirstNet— the nationwide wireless voice and data communications network dedicated exclusively to first responders and public safety personnel.

The \$47 billion FirstNet network is sponsored by the Federal government, overseen by a separate FirstNet Authority Board, was awarded to AT&T for execution, and all 50 states have opted in for services. FirstNet operates on a physically separate network, maintaining high redundancy, security, and service restoration performance objectives. This combination makes FirstNet the communications network least likely to fail, as well as the first to be restored in any disaster.

Over 4,100 devices have been procured and over 3,900 have been deployed including smart phones, tablets, hotspots, and vehicle modems/routers. The devices are used by the City's primary responders – Police Department; Fire Department; Office of Emergency Management;

SMART CITIES AND SERVICE IMPROVEMENTS COMMITTEE

October 26, 2021

Subject: FirstNet Status Report

Page 2

the City Manager, Executive Team, and Office Directors; and Mayor and City Councilmembers. The City's extended primary responders are also FirstNet users, covering all other essential personnel across City Departments and Offices. Exercises began in October 2021 to familiarize staffs with the use of FirstNet capabilities in disaster scenarios. Future Emergency Management training and exercises will build further on the communications, applications, and data tools that departments now have available for crisis situations.

The final devices to deploy are approximately 200 FirstNet connected vehicle modems/routers. These are scheduled to be installed in the last batches of Fire Department and Office of Emergency Management vehicles by May 2022.

With deployment nearly complete, the FirstNet Program will transition from device distribution and project mode to an ongoing program in Fiscal Year 2022-2023. This will include Citywide administration, support, and continuous improvement. Any resources needed for program management, administration, and support will be brought to the City Council through the City Budget Process.

BACKGROUND

In June 2019, the City became the first large municipality in the country to commit to full deployment of FirstNet to strengthen Citywide emergency response communications¹. This includes all "primary" emergency responders – Police, Fire, Office of Emergency Management ("OEM"), and Continuity of Government staff² – as well as all "extended primary" responders that provide critical community services and emergency support through the City's Emergency Operations Center ("EOC") in disasters. The unified communications umbrella enhances situational awareness and relay of information from the field for response and recovery decision-making.

FirstNet was born of lessons learned from the 9/11 terrorist attacks in New York. Assessments of the event identified key communications system failures and defined the critical need for prioritized, resilient, and coordinated public safety communications in large-scale crisis events. Effective emergency management, preparedness, and response depends on reliable communications between law enforcement, fire and emergency medical first responders, field operations staffs, and government leaders. FirstNet is the nationwide emergency communications network established by Congress for this specific purpose.

¹ June 25, 2019 – City Council Meeting. Actions Related to the Purchase of AT&T FirstNet Wireless Communications Services and Devices.

<https://sanjose.legistar.com/LegislationDetail.aspx?ID=3978549&GUID=AE5DFF99-2D90-43FE-9DE8-B5FC113ECE7F>

² Continuity of Government staff include the City Manager, the City's Executive Team and Office Directors, the Mayor, and City Councilmembers. <https://www.twowaydirect.com/firstnet-eligible-primary-and-extended-primary-users/>

SMART CITIES AND SERVICE IMPROVEMENTS COMMITTEE

October 26, 2021

Subject: FirstNet Status Report

Page 3

FirstNet is built and operated by AT&T based on a 25-year, \$46.5 billion public-private-partnership (“PPP”) with the independent First Responder Network Authority (“FirstNet Authority”)³. FirstNet provides the nation’s first responders and other disaster workers with dedicated network coverage, capacity, and prioritized communications in any emergency. In addition to using all of the AT&T network frequencies (called “Bands”), the FirstNet network has a dedicated wireless frequency range — called Band 14 — for sole use by emergency responders during emergencies and disasters. This provides the best possible voice and data communications by avoiding the congestion public cellular networks invariably experience.

The City’s FirstNet voice and data traffic is always prioritized over commercial traffic on the network. Any time the network is congested, commercial traffic is automatically prevented from using the FirstNet network so that capacity exists for disaster response communications. In addition, the City can activate higher levels of prioritization on the FirstNet network during an emergency. This allows devices designated for the most critical communications to function through any type of high-demand event. Authorized agencies and their administrators activate the “Uplift” in conjunction with their emergency communications protocols. These functions and service commitments provide essential assurance that the City’s first responders will be able to connect and stay connected in almost all disaster scenarios.

FirstNet adds the greatest value when deployed to all emergency responders. As of Oct 5, 2021, over 17,000 public safety agencies and organizations across the country were subscribed to FirstNet⁴. This scale promotes maximum connectivity across emergency responders and minimizes operational costs. FirstNet is a complementary communications system to the Silicon Valley Regional Communications System (SVRCS), which provides emergency responders a two-way radio network for voice communication regionally and Statewide. FirstNet supplements SVRCS by providing a voice *and* data communications layer between field units and dispatch centers. Prioritized mobile data enriches information dissemination and collection—pushing visual maps that cannot be communicated by a voice-only system, relay of visual and aural information from the field, and deploying mobile applications and data that aid responders in their response efforts.

ANALYSIS

Deployment Near Completion

FirstNet device deployment is in Phase 4, which is the final phase.

Citywide FirstNet Device Deployment Project Phases:

³ Federal notice of award – March 30, 2017.

https://about.att.com/story/firstnet_selects_att_to_build_network_supporting_first_responders.html

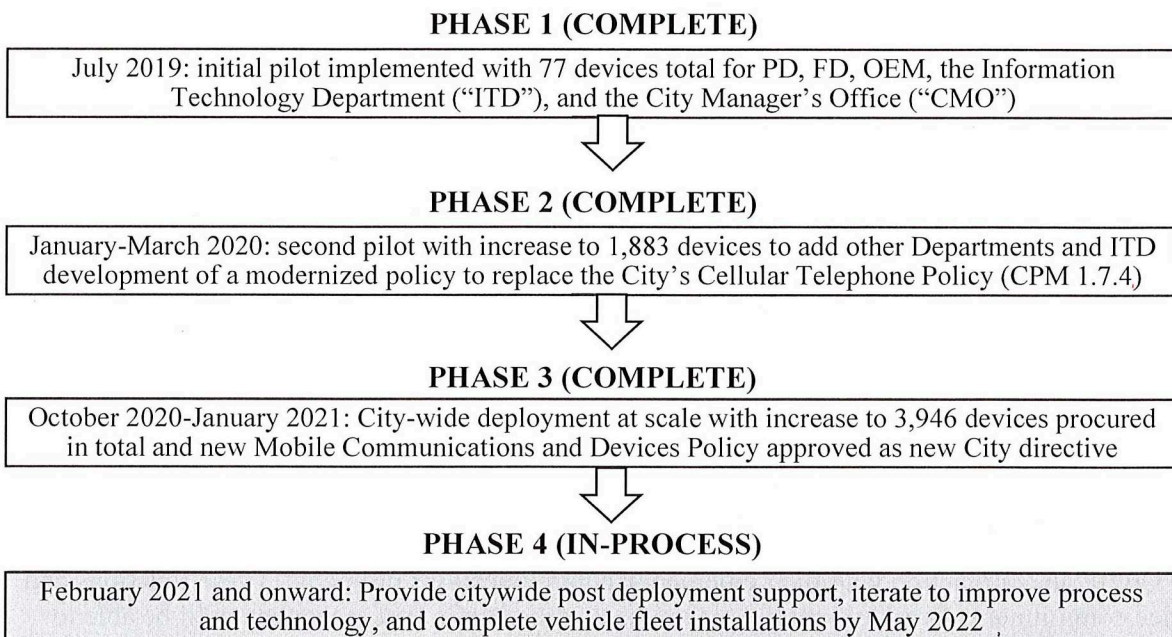
⁴ Informa. Urgent Communications – Oct 5, 2021. <https://urgentcomm.com/2021/10/05/firstnet-buildout-more-than-95-complete-att-exec-says/>

SMART CITIES AND SERVICE IMPROVEMENTS COMMITTEE

October 26, 2021

Subject: FirstNet Status Report

Page 4



Extensive support and joint effort from every City Department made it possible to successfully accelerate and achieve the City’s goal to deploy over 3,900 FirstNet devices Citywide. Special credit goes to the lead departments and offices of OEM, Police, Public Works, Civic Innovation, and Information Technology (ITD) for sustaining progress through the COVID-19 pandemic, fire, and power shutoff disaster declarations.

Over 4,100 devices have been procured and over 3,900 have been deployed (see table below). All smart phones, tablets, and hotspots are now deployed to Citywide staff designated as having disaster response responsibilities. The last devices to deploy, approximately 200 FirstNet connected vehicle modems/routers, are planned for installations as part of the final batches of Fire Department and OEM vehicle deployments scheduled for completion by May 2022. A new, modern Mobile Communications and Devices Policy was issued in August 2021⁵ to support the program. The new policy replaces the previous, outmoded Cellular Telephone Policy, adds elements for FirstNet and use of personal devices for City business, resolves six recommendations from the 2016 City Auditor’s Report on mobile devices⁶, and provides guidance on modernizes roles and responsibilities for administering and optimizing the use of mobile communications in the City.

⁵ City Policy Manual, Chapter 1.7.4, Mobile Communications and Devices Policy.

<https://www.sanjoseca.gov/home/showpublisheddocument/17837/637656707322670000>

⁶ City of San José. Office of the City Auditor Report December 2016. Mobile Devices: Improvements Needed to Ensure Efficient, Secure, and Strategic Deployment. <https://www.sanjoseca.gov/Home/ShowDocument?id=33880>

FirstNet Device Deployments

	Total Devices Procured	Total Deployed	Total Yet to Deploy	Percent Deployed
Phone, Tablet, Hotspot	3,500	3,500	0	100%
Vehicle Modem/Router	642	468	174	73%
Total	4,142	3,968	174	96%

* Deployment data as of October 21, 2021.

Note: 3,900 devices was the minimum need anticipated in the City and AT&T FirstNet partnership agreement.

FirstNet Drills and Emergency Preparedness

In October 2021, OEM and ITD conducted a FirstNet emergency drill with the City's Senior Leadership. Participants included the City Manager, Assistant City Manager, Deputy City Managers, Department Heads, and Office Directors, who experienced how FirstNet devices would look, feel, and be used in disaster scenarios. Staff experienced the "Uplift" process to the highest level of priority on the network, data application pushes, and the speed of the network from their remote work locations. Several data applications were pushed to the phones in real-time to demonstrate the ability to deliver timely and relevant tools to teams in the Emergency Operations Center or the field during an emergency. Captures of that experience are visible in Figure 1 and Figure 2 below.

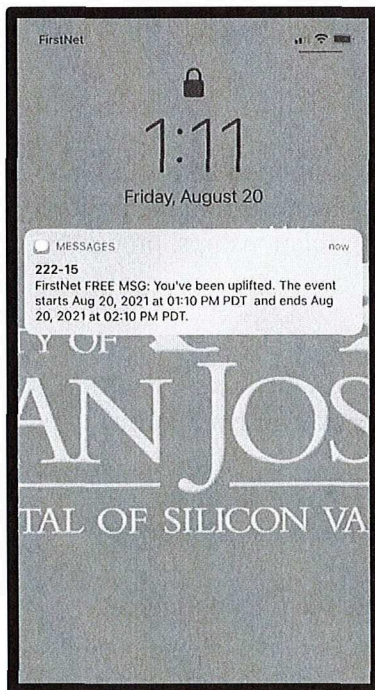


Figure 1: Image of "Uplift" text message on a phone.

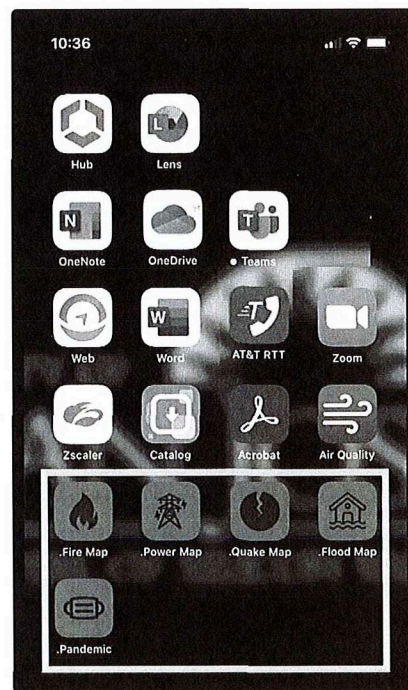


Figure 2: Image of a phone screen with emergency tools highlighted.

SMART CITIES AND SERVICE IMPROVEMENTS COMMITTEE

October 26, 2021

Subject: FirstNet Status Report

Page 6

Lessons learned and input were received from the drill. OEM, Civic Innovation, and ITD are working on those items, including:

- Uplift and mobile application deployment was successful for the majority of departments. A small number that self-manage mobile devices had staff who did not receive one or both successfully. Staffs will work together to resolve these.
- Post-drill Survey comments included requests for some specific commercially available applications. Staffs will review and deploy these where appropriate.
- A small number of Senior Leadership staff do not yet have their FirstNet device activated. Staffs are working to activate FirstNet devices for those individuals.
- Staff identified FirstNet portal improvements that would enhance processing communications requests. Staffs will work with AT&T on these items.
- Senior Management requested higher default priority level for a minimal number of senior staff providing direct support to continuity of government operations. Staffs coordinated with AT&T on this and the action item is complete.
- Department leaders want clear direction from Information Technology (ITD) on eligibility criteria for FirstNet and Office of Emergency Management and on how department employees can be prepared during emergencies and send out fast lane access requests. Staffs will work on providing this guidance and incorporating use into future disaster exercises to be scheduled for January and February 2022. Next audiences include the Mayor and City Council Offices, then extended disaster response Departments and Offices.
- Some essential staff report weak FirstNet coverage where they work or live, limiting usability of FirstNet. Expansion of FirstNet coverage is ongoing and City staff have direct communications with the buildout teams from AT&T. Staff will work with AT&T to address gaps as quickly as practical.

Ongoing FirstNet Integration, Improvements, and Support

With device deployment nearly complete, the FirstNet Program will transition to an operational program. This will require a new approach and structure, using lessons learned from the project to define needs and ongoing management of FirstNet people, contracts, relationships, processes, and technology tools.

Specific program functions identified include:

- Managing Citywide FirstNet orders, bills, and payments for service for over 4,100 devices;
- Identifying ongoing funding for devices with an approximate 3-5 year lifespan;
- Staffing and costs for maintaining the device management platform that administers security, updates, and applications pushes for all FirstNet devices;
- Coordinating with AT&T to address network gaps and calibrate FirstNet portal and billing;

SMART CITIES AND SERVICE IMPROVEMENTS COMMITTEE

October 26, 2021

Subject: FirstNet Status Report

Page 7

- Coordinating between Finance-Purchasing, ITD, and departments to streamline mobile hardware and software purchasing processes;
- Conducting periodic Citywide training and annual emergency preparedness drills spanning City Departments and the Mayor and City Council Offices;
- Seeking, applying for, and managing State and Federal funding opportunities to soften the financial impacts of FirstNet;
- Technical support, monitoring/alerting, and program continuous improvement for departmental requests; and
- Managing fleet vehicle equipment and peripherals exchanges, replacements, and installations.

These supports are necessary to fully realize FirstNet's potential to enhance the City's emergency response operations and deliver the community benefits that stem from effective public safety communications. Additional staff and technology resources are needed to provide these supports and manage the ongoing administration of the FirstNet Program. Further detail on the resource needs will be brought to the City Council in winter 2021 and evaluated as part of the 2022-2023 budget process.

CONCLUSION

With the two-year deployment component of the FirstNet Program nearly complete, the City's primary and extended primary responders have the devices and service to leverage FirstNet's dedicated network coverage, capacity, and prioritized communications. This improves the City's ability to respond, safeguard, and serve the community in any emergency. The final devices to deploy are approximately 200 FirstNet connected vehicle modems/routers, which are anticipated to be complete in May 2022. The FirstNet Program will transition from device distribution and project mode to an ongoing program in Fiscal Year 2022-2023. This will include Citywide administration, support, and continuous improvement. Any resources needed to support the operational program will be brought to the City Council through the City Budget Process.

EVALUATION AND FOLLOW-UP

The Office of Emergency Management, Office of Civic Innovation, and Information Technology Department will provide an annual FirstNet report to the Smart Cities and Service Improvements Committee. The report will include status updates on the FirstNet Program evolution, impact goals and progress, and performance measures Citywide.

CLIMATE SMART SAN JOSE

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

SMART CITIES AND SERVICE IMPROVEMENTS COMMITTEE

October 26, 2021

Subject: FirstNet Status Report

Page 8

PUBLIC OUTREACH

The Office of Emergency Management and the City Manager's Office have discussed San Jose's support for a regional deployment of FirstNet with other agencies and jurisdictions given the area's risks of earthquakes, floods, and other disasters within Silicon Valley and the larger San Francisco Bay region.

This memorandum will be posted on the City's website for the Nov 4, 2021, Committee Agenda.

COORDINATION

This memo was coordinated with the City Attorney's Office, City Manager's Budget Office and Office of Civic Innovation and Digital Strategy, Police Department, Fire Department, Public Works Department, Office of Emergency Management, and Office of Employee Relations.

COMMISSION RECOMMENDATION/INPUT

No commission recommendation or input is associated with this action.

FISCAL/POLICY ALIGNMENT

City employee eligibility and use of FirstNet devices, management, and optimization are governed by City Policy 1.7.4⁷. By default, those employees receiving FirstNet devices are expected to use the device and service as their primary work mobile communications device and to carry it during work hours. Information Technology Department staff administers all FirstNet devices and compliance with City policies and procedures for general use and controls, security, data privacy, and asset management. ITD maintain compliance per City Policies 1.7.2⁸ and 1.7.6⁹ and Council Policy 0-46¹⁰.

COST SUMMARY/IMPLICATIONS

The FirstNet budget was realigned for 2021-2022, with funding eliminated in a Citywide Expense appropriation and moved to departmental budgets to pay for ongoing costs. The Fiscal

⁷ Mobile Communications and Devices Policy 1.7.4:

<https://www.sanjoseca.gov/home/showpublisheddocument/17837/637656707322670000>

⁸ Technology Management and Deployments Policy 1.7.2:

<https://www.sanjoseca.gov/home/showpublisheddocument/76563/637671214995200000>

⁹ Information Systems and Security Policy 1.7.6:

<https://www.sanjoseca.gov/home/showpublisheddocument/17921/637522696317770000>

¹⁰ City of San José Council Policy 0-46: <https://www.sanjoseca.gov/home/showpublisheddocument?id=68053>

SMART CITIES AND SERVICE IMPROVEMENTS COMMITTEE

October 26, 2021

Subject: FirstNet Status Report

Page 9

Year 2021-2022 budget includes a FirstNet Emergency Communications Network Reserve in the amount of \$672,000 and \$210,000 to complete the deployment of FirstNet connected vehicle modems/routers in the remaining Police and Fire department vehicles.

The Administration continues to pursue cost avoidance strategies to reduce fiscal impacts where feasible, such as using lower cost FirstNet service plan options, seeking grant funding, ensuring that non-FirstNet plans are canceled as appropriate, and addressing billing errors for additional charges.

Any resource needs to transition FirstNet fully to an operating program will be brought forth as part of the Fiscal Year 2022-2023 City Budget Process recommended by the City Manager's Office.

CEQA

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



ROB LLOYD

Chief Information Officer

Information Technology Department

For questions on the FirstNet deployment, please contact Abigail Shull, Assistant to the City Manager, at Abigail.Shull@sanjoseca.gov, and Ashish Lakhiani, Products-Projects Manager, at Ashish.Lakhiani@sanjoseca.gov.