

# Memorandum

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

**FROM:** Dolan Beckel

**SUBJECT:** FIRSTNET DEPLOYMENT UPDATE      **DATE:** February 6, 2020

Approved

Date

30 JANUARY 2020

## RECOMMENDATION

Approve the FirstNet Deployment Update Report on the status of the deployment pilot and the approach and timelines associated with full deployment.

## EXECUTIVE SUMMARY

Emergency management and preparedness is a team sport which is dependent upon reliable communications between first responders, other responders in the field, and government leadership. Advances in technology have made reliable data and voice communications using smart phones and other devices an essential complement to the voice only public safety radio network.

The City of San José has engaged in a public private partnership with AT&T to deploy 4,545 new FirstNet devices operating on the FirstNet public safety broadband network to all first responders (Police, Fire, Emergency Management) and extended primary responders (City staff and leadership engaged in response and recovery) by the end of 2020.

Instead of issuing “just another phone” to emergency responders, the City of San José has focused on the user experience and the ability to push out information, access to mobile apps, maps and other assets through mobile devices to augment disaster response along with highly secured communications devices.

The pilot of the FirstNet deployment (a Smart City Roadmap Project) is currently in red status due to changes to the initial schedule as a result of pilot lessons learned and the lack of an identified city-wide product owner for FirstNet.

## **BACKGROUND**

Public Safety is a top San José Community and Council priority as reflected in recent surveys and Council actions. Emergency Management and Preparedness is a key component of public safety and is a top Enterprise Priority for the City. Effective communications during emergencies and disasters is foundational to protecting safety and saving lives. FirstNet provides just that foundation.

FirstNet is a nationwide wireless broadband network for first responders built and deployed through a public-private partnership between the federal government and AT&T after the award to AT&T through a competitively bid process. In addition to frequencies used by the general public, the FirstNet network also uses a wireless frequency (called Band 14) for use only by emergency responders during emergencies and disasters. This provides the best possible voice and data communications during emergencies and disasters by avoiding the congestion of the public cellular network. First responders gain priority on the broadband network and preemptive access by removing commercial users at the time of need. This will enable our first responders to make voice calls and to utilize mobile application services such as optimal transportation routes, text alerts, Geospatial Information, and other data centric services that can't be provided by voice (radio) communications alone.

The FirstNet solution is available on a wide range of devices including:

- Smart phones (e.g. Apple iPhones, Motorola LEX L11 mission critical phones. etc);
- Cellular enable tablets (e.g. iPads);
- Hotspots (to extend connectivity to other devices via Wi-Fi); and
- Vehicle modems/mobile hotspot routers (currently in all police and fire vehicles).

FirstNet has the potential to add the greatest value when deployed to all emergency responders on a citywide and regional basis. This promotes maximum connectivity across emergency responders and minimizes operational costs. FirstNet is complementary to the Silicon Valley Regional Communications System (SVRCS) which provides emergency responders a voice communication P25 radio network (analogous to walkie talkie communications) on a regional basis. FirstNet complements SVRCS by providing data communication for information such as visual maps that cannot be communicated by a voice.

## **Initial Assessment**

The City of San José worked closely with AT&T to test the quality of the FirstNet network for over a year including support for the 2019 College Football Playoff National Championships. After a successful initial assessment of FirstNet, the City and AT&T engaged in an interest-based negotiation on the deployment of FirstNet in San José.

### **Interest Based Deployment Negotiations**

AT&T's FirstNet interests in San José are:

- Supporting a Citywide deployment to minimize complexity for all parties;
- Working with a large City that will partner with FirstNet to iterate to improve as new features are deployed; and
- Showcasing San José as a model case study to motivate other cities to deploy on a citywide basis.

San José's interest in FirstNet are:

- Keeping our communities and emergency responders safe, protecting property, and safeguarding the environment;
- Increasing emergency responder productivity;
- Enabling effective communications during emergencies and disasters;
- Reducing per person communications operations spend through volume discounts;
- Further leveraging existing Public Private Partnership to maximize FirstNet and 5G investment in San José;
- Promoting public safety innovation; and
- Ability to push out information, access to mobile apps, maps and other assets through mobile devices to augment disaster response along with highly secured communications devices.

The City and AT&T have agreed to a citywide deployment that meets both parties' mutual interests and provides the best municipal pricing in the nation to San José through significant volume discounts on devices, data rates, and software.

The City of San José is the first city in the nation to deploy FirstNet across all "primary" emergency responders (Police, Fire, and Emergency Management) and all "extended primary" emergency responders (department operations centers, council members, district disaster centers, and other leadership and field personnel required to communicate during a disaster). The City and AT&T expect this deployment to be a model for cities seeking to minimize complexity and maximize the opportunity of having all emergency responders on a dedicated network with modern smart devices.

### **ANALYSIS**

AT&T, the Information Technology Department, and other city departments are collaborating on the process to issue new devices, return existing devices for buy-back credits, and configure new devices for special features such as calling groups and push-to-talk.

Primary and extended primary responders are being issued new FirstNet enabled devices to be used for conducting city business including during disasters and emergencies. The primary and extended primary responders may retain their personal cell phones for personal use only.

The total deployment of FirstNet devices is shown Figure 1: *Device Deployment Totals*.

Figure 1: *Device Deployment Totals*

<b>Office, Department, or Organization</b>	<b>Number of FirstNet Phones</b>	<b>Number of Other FirstNet Devices</b>	<b>Total FirstNet Devices</b>
Police	1352	1072	2424
Fire	144	565	709
Emergency Management including EOC	25	100	125
Department Operations Centers	850	371	1221
Council District Emergency Operations	55	11	66
<b>Total</b>	<b>2426</b>	<b>2119</b>	<b>4545</b>

**Phased Deployment**

Keeping with innovation themes of “iterate to improve” a multi-department team is executing the FirstNet deployment in four major phases occurring over 13 months:

- **Phase #1** - Initial pilot-was rolled out with limited devices for PD, Fire, ITD, OEM, CMO;
- **Phase #2** - Subsequent pilot to increase key learnings from additional organizations;
- **Phase #3** - Roll-out for all devices at scale; and
- **Phase #4** – Post deployment support.

The scope and schedule for the FirstNet deployment timeline is shown in Figure 2: *Deployment Timeline*.

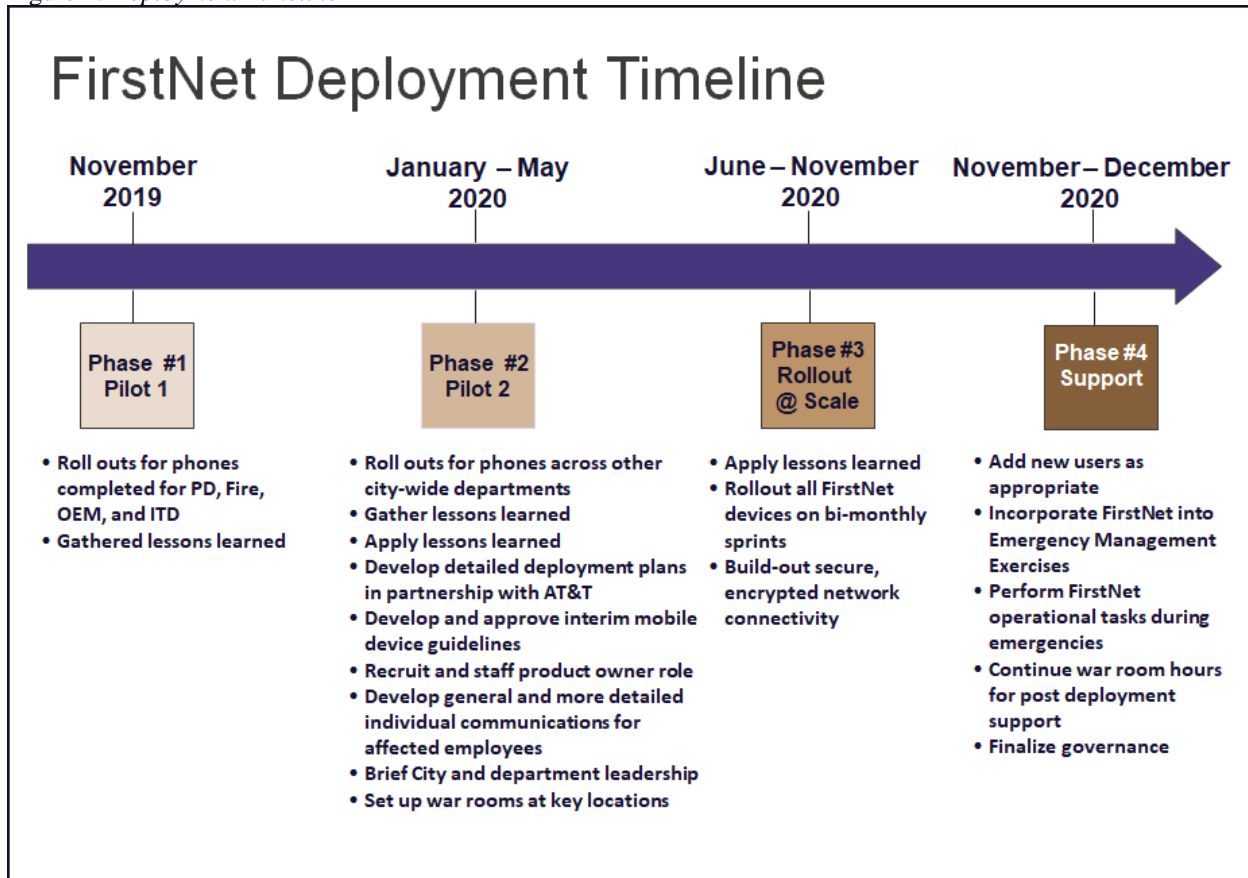
**Lessons Learned So Far**

- **Select the Right Tool** – Departments evaluated and selected the appropriate brand of device. Rather than forcing a single device across the City, each department will be equipped with the device most appropriate to their tasks during an emergency or disaster. The Police Department and Civic Innovation performed extensive “crash testing” of various devices to ensure usability, extensibility, and durability.
- **Focus on Security and User Experience** – First responders must be equipped with more than “just another phone.” Advanced mobile device management (MDM) software was identified and procured to both improve device security and the user experience with applications. MDM keeps data protected and ensures the City retains control over

confidential information. For example, if a mobile device is lost or stolen, MDM can remotely lock and wipe all data. MDM also allows the City to push out information, access to mobile apps, maps and other assets to augment disaster response along with highly secured communications devices.

- **Create Interim Guidelines** – Staff desired clarification on expectations for users while the full deployment informs final policies related to mobile devices.
- **Create General and Individual Communications for Affected Employees** – The cultural shift of having separate business and personal phones was more impactful than perhaps expected. Staff and City leadership desired additional city-wide communications on the FirstNet deployment. Also, more detailed individual communications around interim guidelines for users, including but not limited to, appropriate usage, device configuration by the user, and support processes will be required for deployment at scale.
- **Manage Resource Contention** – The FirstNet deployment and the Silicon Valley Regional Communications System (SVRCS) contended for the same staff members especially within the Police Department. The Deployment Timeline shown in Figure 2 has been aligned with the SVRCS project to mitigate any future staff contention and allow the Police Department to complete deployment by the end of the year and leverage the best in nation fixed time-frame pricing with AT&T. The need for a full-time City-wide product owner for the at scale deployment was identified as a currently missing key element for success.

Figure 2: Deployment Timeline



**EVALUATION AND FOLLOW-UP**

The City first tested the San José FirstNet network and devices for several months. For the city-wide rollout, there is a phased implementation allowing for iterative evaluation and feedback to AT&T. Over 50% of the Bay Area FirstNet infrastructure build has occurred in San José as a result of the City’s Public Private Partnership with AT&T. The City will continue to work with AT&T to identify any areas for improvement in the FirstNet network deployment and device capability as phased implementation and testing occurs. Since the FirstNet devices and network operate on existing spectrum and Band14 spectrum, no existing functionality will be lost as a result of a phased implementation.

Given the cross departmental nature of the FirstNet deployment, the Information Technology Department will be primary point of contact responsible for managing the relationship with FirstNet, including evaluation of the program and follow-up.

The Information Technology Department and the Office of Civic Innovation and Digital Strategy will provide an annual report to the Smart Cities and Service Improvements Committee. The

report out will include the progress made and the ongoing performance measures on the effectiveness and efficiency of the roll out.

Upon successful rollout, Departments are responsible to follow-up and discontinue any City-issued Sprint and Verizon data/voice plans including their MDM subscription plan.

### **PUBLIC OUTREACH**

The Office of Emergency Management and the City Manager's Office have discussed San José's support for a regional-wide deployment of FirstNet to other agencies and jurisdictions given the wide area impact of earthquakes, floods, and other emergencies and disasters within Silicon Valley and the larger San Francisco Bay Area.

This memorandum will be posted on the City's website for the February 6, 2020 Committee Agenda.

### **COORDINATION**

This memo was coordinated with the City Attorney's Office, City Manager's Budget Office, Police Department, Fire Department, Public Works Department, Office of Emergency Management, Information Technology Department, Office of Employee Relations, and City Manager's Office of Administration, Policy, and Intergovernmental Affairs.

### **FISCAL/POLICY ALIGNMENT**

Any City employee who is a primary or extended primary user may need to use two phones (personal only and FirstNet phones). At this time, any employee who receives a FirstNet phone and is currently receiving the stipend(s) provided for in the current Cellular Telephone Policy will continue to receive the stipend until further evaluation of the stipend occurs.

The City's FirstNet Project Team is configuring all FirstNet devices to comply with any existing City and departmental security, data privacy, and retention policies, and will be kept compliant as future requirements evolve.

### **COST SUMMARY/IMPLICATIONS**

The FirstNet Deployment is anticipated to have startup costs of \$1.8 million for device acquisition, equipment installation, network development, and telecommunications voice and data plan charges. Increased costs of \$400,000 for telecommunications voice and data plan charges are anticipated ongoing in addition to the current City costs due to added phones for

police officers, fire engines and squads, and for the Mayor and Council Districts offices. Additional costs for telecommunications voice and data plan charges can be attributed to additional modems, laptops and hot spots for the Police Department, Office of Emergency Management, and Council Districts to allow a larger breadth of coverage for emergency responders.

The 2019-2020 Operating budget includes \$1.8 million for 2019-2020 net costs. A total of 2,615 existing phones, devices or stipends will be replaced with a FirstNet compatible phone or device. The existing funding for the 2,615 phones, devices or stipends will be reduced by the net difference between the current allocation and the cheaper FirstNet rate. The savings from these sources will be reallocated to offset the 1,930 additional/new devices where funding sources allow. The Administration will bring forward future budget actions to reallocate budget to the appropriate departments and funding sources. Given the number of variables in this project, the Administration will closely monitor progress of the FirstNet deployment and return to the City Council with recommended adjustments, as necessary.

### **CEQA**

Not a Project, File No. PP17-003, Agreements/Contracts (New or Amended) resulting in no physical changes to the environment.

/s/  
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For questions on the FirstNet deployment, please contact Dolan Beckel, Director, Office of Civic Innovation and Digital Strategy, at (408) 535-8260.