LOS ANGELES FIRE DEPARTMENT

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FIRE CHIEF

August 18, 2015

| BOARD OF FIRE COMMISSIONERS |
| FILE NO.   **15-098** |

TO: Board of Fire Commissioners

FROM: Ralph Terrazas, Fire Chief

SUBJECT: FIRE CAD FEASIBILITY ANALYSIS - PRELIMINARY FINDINGS AND RECOMMENDATIONS

| FINAL ACTION: _____ Approved | _____ Approved w/Corrections | _____ Withdrawn |
| _____ Denied | _____ Received & Filed | _____ Other |

SUMMARY

On November 25, 2014, the Los Angeles City Council approved the establishment of a Public Safety Technology Team (PSTT). The goal of the PSTT was to create a joint Los Angeles Fire Department (LAFD)/Los Angeles Police Department (LAPD)/Information Technology Agency (ITA) team to focus on large-scale technology initiatives as prioritized by both the Fire Chief and Chief of Police. The team was to be led by the Chief Information Officer (CIO) for Public Safety, who was to be a direct report to both the Chief of Police and the Fire Chief.

The focus of this effort has been twofold. First, an effort has been made to identify ways in which LAFD technology can be improved. Second, an effort has been made to identify public safety platforms that are common to both police and fire to determine if a shared platform might be recommended. Such recommendations will not only depend on specifics pertaining to the technology (e.g., resultant cost savings and efficiencies by sharing infrastructure, hardware, licensing, support and maintenance costs, etc.), but also on whether it makes operational sense to do so (i.e., can both agencies successfully accomplish their core missions while also recognizing benefits such as shorter response times, more efficient deployment of resources, etc.).

In an effort to identify common public safety platforms, the Fire Chief and the Mayor's Office requested that an analysis be performed to determine whether the LAPD Computer Aided Dispatch (CAD) system can be extended to meet the needs of the LAFD.

Analysis

The LAPD currently utilizes the Motorola Premier CAD (PCAD) platform. While PCAD

is not the most recent CAD offering from Motorola, the PCAD platform is still supported by Motorola. The LAPD does plan to upgrade to the most recent Motorola CAD offering (Premier One or P1), however, it delayed this effort until the initial analysis of the existing PCAD platform could be completed.

To determine whether the LAPD PCAD platform could meet the needs of the LAFD, the CIO for Public Safety requested that LAPD CAD experts and Motorola PCAD experts perform an analysis. As such, Motorola engineers and managers spent several days side-by-side with LAFD dispatch staff and management, to gain a high-level understanding of the LAFD's dispatch requirements. Motorola engineers and managers also participated in field ride-alongs to become familiar with how those in the field interact with the Fire CAD via the Mobile Data Computer (MDC). At the conclusion of the analysis, Motorola recommended against extending the LAPD PCAD platform to the LAFD.

Initial Findings

The following is a summary of the initial findings from the analysis:

- The existing Fire CAD performs more than what are considered typical CAD functions. It also performs certain Fire Station Alerting (FSA) and phone system functions.

- The Fire CAD cannot be replaced by any Commercial Off The Shelf (COTS) CAD, until the FSA and phone functions are replaced with standard COTS products.

- By the time the phone and FSA issues are resolved, the current LAPD PCAD platform will be outdated. As such, the LAPD should proceed with its upgrade to the most recent Motorola P1 CAD platform.

- While work proceeds to separate the FSA and phone functionality from the LAFD CAD, Police and Fire should move to a single phone system to reduce the current switching time required for Police to transfer a call to Fire (estimated at 3 to 10 seconds; 7 seconds on average).

- While the LAPD upgrades to Motorola P1 CAD and work proceeds to separate the FSA and phone functionality from the LAFD CAD, an effort should be made to document LAFD dispatch requirements in detail and determine whether the Motorola P1 platform will meet the needs of LAFD.

- The current Radio Network Controller that transmits data from the existing Fire CAD to the MDCs in the Fire vehicles is outdated and will not be able to transmit data from a modern CAD.

Next Steps

Given the findings summarized above, the following next steps have been recommended:

- **9-1-1 Phone System** – It is estimated that by combining the Police and Fire 9-1-1 phone systems to a common platform several seconds will be saved (AT&T is currently running the data to determine the estimated number of seconds), as re-routing of the call through multiple phone switches will be eliminated, and the time it takes to transfer a call between the two agencies will be reduced.

- Estimated Cost: To Be Determined (TBD); awaiting proposal from AT&T

- Estimated Timeline: 10 to 12 months

- **Fire Station Alerting** – The LAFD FSA functionality is currently performed by two different systems. The current LAFD CAD performs approximately half of the functions. A COTS FSA by Locution performs the other half. It is recommended that LAFD implement the full Locution COTS solution and remove all FSA functionality from the current LAFD CAD.

  - Estimated Cost: TBD

  - Estimated Timeline: 12 to 18 months

- **Phone Functions in Current LAFD CAD** - The current Fire CAD is integrated with a hardline phone system that connects to the fire stations and is integrated with certain FSA functions. This functionality should be removed from the Fire CAD and connected to the COTS FSA or 9-1-1 phone system instead. This aligns better with a standard 9-1-1 technology platform and will minimize any complications with a replacement of the Fire CAD.

  - Estimated Cost: TBD

  - Estimated Timeline: 12 months

- **Police CAD** – While the phone and FSA projects are in progress, the LAPD will upgrade from its existing Motorola PCAD to the most current version of Motorola P1 CAD.

  - Estimated Cost: approximately $6 million (as opposed to $30-50 million for a new system)

  - Timeline: 18 months

- **Fire CAD** – While all of the activities above are in progress, a third-party consulting group, Gartner, will spend several months detailing the Fire CAD requirements, while evaluating business processes and potential efficiencies.[1] These detailed requirements will then be used in two ways:

  1. The requirements will be included in a Request for Information (RFI) for Fire CAD solutions, which Gartner will help prepare; and

  2. Gartner will conduct an analysis of the requirements against the functionality of Motorola P1 CAD.

At the end of this process, the LAFD will understand the landscape of COTS Fire CAD solutions available on the market. At that point, the City can decide if LAFD should become a subscriber agency on the LAPD P1 CAD platform, or if Fire should release a Request For Proposals for an entirely separate CAD. Regardless of which of the two paths the City decides to take, all of the tasks described above must be performed for Fire to move to any modern CAD.

  - Estimated Cost: TBD

  - Estimated Timeline: 18 to 24 months for LAFD to become subscriber to LAPD P1 CAD (can run concurrently with LAPD CAD upgrade, as much of the time is for analysis and design); 36 to 48 months to move to new COTS CAD.

- **Radio Network Controller (RNC)** – The RNC transmits data from the Fire CAD to the MDCs. The current Fire RNC is obsolete, cannot be sustained, and will not be able to transmit data from a modern CAD. The Fire RNC must be replaced with an updated system.

  - Estimated Cost: TBD

  - Estimated Timeline: 18 months

Timeline

The attached chart depicts the estimated timeline for the implementation of the six proposed system replacements/upgrades. These time estimates may be extended

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[1] At the suggestion of the Fire Commission, a third party was identified to provide project management and quality assurance services during the course of the CAD analysis. Gartner was selected primarily due to their experience as it pertains to public safety CAD systems and that Gartner does not manufacture or sell products/systems, but rather focuses on research and evaluation of IT markets/products/systems.

depending on the time required up front for the procurement/contracting process and contract negotiations with the vendor(s).

All of the proposed projects can run in parallel. Before the Fire CAD implementation can be completed/go live, however, the other five projects must be completed.

RECOMMENDATION
That the Board:
It is recommended that the Board receive and file this report.

Board report prepared by Maggie Goodrich, Chief Information Officer, Los Angeles Police Department.

Attachment

Estimated Timeline for Implementation

July 2015   July 2016   July 2017

Combine PD/FD 9-1-1 Phone Systems (10 months)

Fire Station Alerting (12-18 months)

Move Phone FSA functions from CAD to 9-1-1 Phone System (10-12 months)

Police CAD Upgrade (18 months)

Fire CAD Upgrade (24-36 months)

RNC Replacement (18 months)