



CITY OF
HAYWARD
HEART OF THE BAY

**COUNCIL TECHNOLOGY
APPLICATION COMMITTEE
NOVEMBER 19, 2014**

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CITY COUNCIL TECHNOLOGY APPLICATION COMMITTEE MEETING
Wednesday, November 19, 2014
Conference Room 4A
4:30 PM – 5:30 PM

CALL TO ORDER

ROLL CALL

PUBLIC COMMENTS: *(The Public Comment section provides an opportunity to address the City Council Committee on items not listed on the agenda. The Committee welcomes your comments and requests that speakers present their remarks in a respectful manner, within established time limits, and focus on issues which directly affect the City or are within the jurisdiction of the City. As the Committee is prohibited by State law from discussing items not listed on the agenda, your item will be taken under consideration and may be referred to staff.)*

1. Approval of Minutes of October 15, 2014
[Minutes](#)
2. Automated License Plate Reader (ALPR) Recommendation
[Staff Report](#)
3. Primary Website Development Recommendation
[Staff Report](#)
4. Staff and Committee Member Status Reports/Updates
5. Review Future Agenda Items

COMMITTEE MEMBER ANNOUNCEMENTS AND REFERRALS

ADJOURNMENT

NEXT REGULAR MEETING –FEBRUARY 18, 2015

****Materials related to an item on the agenda submitted to the Council after distribution of the agenda packet are available for public inspection in the City Clerk's Office, City Hall, 777 B Street, 4th Floor, Hayward, during normal business hours. An online version of this agenda and staff reports are available on the City's website. ****

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[HTTP://WWW.HAYWARD-CA.GOV](http://www.hayward-ca.gov)

November 19, 2014





Council Technology Application Committee (CTAC)

Meeting Minutes of October 15, 2014

Members Present: Al Mendall, Sara Lamnin, Elisa Marquez

Staff: Garrett Contreras, Kelly McAdoo, Mark Guenther, Carolyn Saputo, Nathaniel Roush, Maritza Vargas, Marc Andres, Cheryl Penick, Michael Loconte, Joseph Ochinerro, Scott Anderson, Randy Zhao, Steve Walsh, Jon Mosher, Ryan Hamre, Jeff Smith

Guests: Pam Covington, David Parnell

Public Comments

Pam Covington, Representative for IFTPE Local 21, spoke in support of allowing current in-house staff to support fire technology and providing knowledge transfer and training for staff to support new InMotion routers.

Maritza Vargas, IT Analyst, spoke about IT staff's capability to support the InMotion Routers with training and concerns regarding lack of knowledge transfer from vendor.

Cheryl Penick, Local 21 Hayward Chapter President, spoke in support of InMotion installation by expert vendor with support by in-house staff with training provided by vendor.

1. Approval of Minutes:

Minutes of September 17, 2014 Approved

2. Update on Fire Connectivity: Issues, Resolution, and Timeline

Information Technology Director Mark Guenther shared with the Committee some background information related to fire connectivity. In 2009 the City signed a contract with New World to replace its aging dispatch system with a new one from New World. After a two year implementation effort, the system went live on January 12, 2012. The new system included a mobile client that runs on computer equipment that's installed in Fire apparatus and Police cars. The system we replaced also had a similar client, it was much simpler, but, provided less information. In both models, the mobile client receives dispatch information from the central Computer Aided Dispatch (CAD) server which comes over the public cellular network and is displayed on the Mobile Data Computer (MDC) in either the Fire truck or Police car. For the Fire Department, there is an alerting system in each Fire Station and that system includes a rip and run printer. There is also radio communication between the dispatch center, the station, and the fire engines.

From the very beginning after go-live there were problems with the mobile client. Despite applying software updates that were provided by New World and going from Version 9 to

Version 10, there are still problems. These failures have persisted for almost three years. During this same time, beginning shortly after go live, staff began replacing the Panasonic Toughbook computers in the Fire Trucks with newer models, and replacing the wireless modems with new 4G modems which are faster. Despite these upgrade the problems persisted.

In May 2014, the City contracted with Definitive Networks, Inc. (DNI) to perform a network engineering assessment, identify options and to make recommendations. As part of that assessment, a network issue was identified and corrected, but despite that change, there were still problems. Therefore the recommendation was made to test an alternate router called an InMotion gateway which has two cellular connections, one to AT&T and one to Verizon. The existing modems just have one. After installing and testing in one fire engine, monitoring data showed that about 14% of the time it was falling back to the alternate carrier which helps to resolve some cellular coverage issues that might be causing problems. Based on these results and the successful use of these InMotion routers in neighboring agencies, the recommendation was made to implement those in all of our fire apparatus, which is estimated to take 6-8 weeks to roll out completely.

The next task is to evaluate maintenance and support options. The three options include contracting with DNI to install the equipment and then use in-house staff for maintenance and support. The second option adds contracting with DNI for additional maintenance and support. The third option expands that maintenance and support to other systems at the Fire Departments. DNI provides tech support to other fire departments in the East Bay as outlined in the report. Naturally, there are a lot of logistical and cost issues involved, and the City Manager has recommended that we evaluate those three options while proceeding with the installation of InMotion gateways in all our fire apparatus.

Regarding the New World mobile client software, it is still not clear that the solution to the problem is solely connectivity or solely New World. Staff continues to press New World to fix the issues with their software. New World asserts that other California clients aren't having these issues. Therefore, they have begun to do remote monitoring of the MDC's with advanced logging to help determine the source of the problem.

The Fire Department has requested staff investigate the viability of using a third party mobile client that would receive dispatch information from our New World central CAD server, so that they could determine if functionality exists that better meets their needs.

Regarding next steps, staff intends to bring the final recommendation regarding hardware and support to Council no later than November 18. In the meantime, DNI has agreed to install InMotion routers in two additional fire engines and to place the order and get the installation going for all the rest of the fleet. The Information Technology Department is installing network monitoring software to better monitor the network out to the MDC's.

Fire Chief Garrett Contreras expressed to the Committee how the Fire Department has been extremely patient, very accommodating and as flexible as possible, but they are now at a very critical failure point with technology. They have a responsibility to the community and to members of the Fire Department to change what has been happening for the last three years. He shared with the Committee some of the issues that have been going on for the past three years and expressed that these systems need to work. They need critical information transmitted in a timely manner for firefighter and citizen safety.

David Parnell, Representative of Definitive Networks Inc., described the use and importance of technology for fire departments and his firm's experience with supporting such technology.

Member Lamnin asked if Police units were experiencing similar problems. Jeff Smith responded that they were but the impacts to each department were different. It impacts fire operations more heavily and our goal is to fix the problems for both fire and police.

Member Lamnin expressed concern that the current system may not meet our needs and asked that work continue to investigate both short and long term options. She supports bringing in the expertise to help and to train our staff to be supportive of all departments including fire and police. She asked staff to explore one-year vs. three-year support terms.

Member Marquez asked about the tracking of issues. Mark Guenther answered that better tracking of issues has been implemented but was not previously done thoroughly.

Member Marquez asked about meet and confer issues around contracting out. Kelly McAdoo responded that this is a hardware purchase with a maintenance agreement similar to other areas in Tech Services and is supplemental technical expertise to support our staff and is not a meet and confer issue.

Member Mendall talked about the hope that once the connectivity failures were addressed by installing better equipment with better cellular coverage that other issues that may be contributing to the problems could be discovered and resolved. He expressed his support for continued conversation about long term solutions.

Member Mendall commented that the decision today is regarding supporting the new equipment in-house vs. using Definitive Networks and whether that would free up existing staff resources for other work. Mark Guenther replied that it would potentially but the exact impact would be hard to measure, but the hope is that if these issues were resolved more attention could be directed to other matters.

Member Marquez asked about the impact of using the expert vendor on IT services and staff. Kelly McAdoo responded that this service would supplement in-house staff and adds technical expertise with no staffing implications.

Member Mendall talked about vendor support of the InMotion gateways, who would be the initial point of contact, how this would work with the multiple hardware components involved, that there be a clear understanding and this should be outlined in the contract. Mark Guenther explained that he plans to have in-house IT staff be the initial point of contact, respond, attempt to restore service using existing troubleshooting checklist, and would contact the vendor if it was determined that the InMotion Gateway was suspected as the source of the problem.

Member Mendall said he supports the staff recommendation so that fixing connectivity issues moves forward and allows work on other issues that may be present.

Member Lamnin said she supports the recommendation, but reiterated that staff should explore a one-year vs. three-year agreement, and is a proponent of building our staff capacity but knows that we need to solve the issues quickly.

Member Marquez said she supports staff's recommendation, and would like staff to move forward with better tracking and documentation of issues.

Next Meeting: November 19th @ 4:30pm

Meeting adjourned at 5:30pm



DATE: November 19, 2014

TO: Council Technology Application Committee

FROM: Information Technology Director
Chief of Police

SUBJECT: Automated License Plate Reader (ALPR) Recommendation

RECOMMENDATION

That the Committee reviews and comments on this report.

BACKGROUND

At the Committee meeting held on November 20, 2013, the topic of Automated License Plate Reader (ALPR) technology was introduced and discussed. Since that time, staff from both the Information Technology and Police Departments conducted a sixty-day trial of car mounted ALPR systems: the results and vendor recommendation are contained in this report.

DISCUSSION

Camera recognition technology has evolved to the point where it can be trained to read license plates as the human eye would. This market segment of growth is called Automated License Plate Recognition (ALPR). Unlike the human eye, ALPR is capable of reading thousands of plates per hour. Using ALPR, highly sophisticated and ruggedized cameras capture a picture of a license plate along with the date, time, and location of the scan. This scan can then be compared in real time to a stolen vehicle or criminal investigation “hot list.” If a match occurs, the officer can instantly be alerted of the hit and take appropriate action.

In addition to searching for wanted or stolen plates, a car mounted ALPR system allows for strategic and flexible deployment options. A good example of this is using a patrol vehicle equipped with ALPR to quickly capture the license plates of all vehicles parked on a street where a homicide has just occurred. Capturing this data could be of critical importance in solving the crime because the data could be used to gather leads and utilized for future investigation purposes.

If a ‘hit’ of a stolen or wanted plate occurs, systems can be configured to alert the officer in the car, dispatchers working at the police station, or individual officer smartphones. The key is to design the alerts and alerting system so that officer security is maintained as well as to prevent the interruption of public safety workflows. Officers and dispatchers must be properly trained on the procedure to

follow once they receive a ‘hit’ of a stolen or wanted plate. While every effort is made to make sure that the latest hotlist has been applied to the system, a double-check of the data against the most up to date state and national records must always be done before initiating a car stop.

After analysis of the ALPR marketplace and research of ALPR vendors currently deployed in Bay Area law enforcement agencies, it was determined that Vigilant Solutions and 3M (formally PIPS) offered the best solutions for ALPR. To determine the preferred vendor, a 60-day trial period was conducted by outfitting two patrol cars with ALPR. An officer from each team tested each vendor solution, ensuring that a variety of shifts with various lighting conditions were covered. At the conclusion of the sixty-day trial, the officers filled out a brief survey outlining their experience with the ALPR vehicle. Officers rated the user interface, clarity of plates during the day and night, system accuracy, durability, ability to review plates in the field, versatility, and the overall performance of the ALPR systems: Vigilant Solutions outperformed 3M in each measured category. The results of the survey were tabulated and shared with the Public Safety Technology Committee (PSTC) on June 4, 2014, which elected Vigilant Solutions as the preferred ALPR solution.

Critical features

There are three key features that set this technology apart from other vendors.

Intuitive user interface – Vigilant Solutions user interface provided a clean, easy-to-use, and intuitive design that allowed simple navigation. The well-placed and labeled status indicator lights informed the user that all of the system components were running properly. Additionally, the automatic download of the law enforcement hotlists was an added bonus.

Mobile Hit Hunter – Vigilant employs a private fleet of civilian vehicles across the United States equipped with ALPR to capture license plate data in major metropolitan areas. Over one million plates are scanned each day, and approximately 35 million records are deposited into this private data source each month. The plates captured during this process can be accessed in patrol cars by law enforcement agencies using a feature called “Mobile Hit Hunter.” Agency hotlists are compared against this private data warehouse, and if there are any ‘hits’ within three miles of the ALPR equipped vehicle, then it will show the location of the ‘hit’ on a map. This feature is only offered by Vigilant and received high praise as a law enforcement tool for in-field use.

This feature benefits officers in two ways. First, it is equivalent to having multiple ALPR cars deployed in our city without the added full cost of adding more ALPR vehicles. The private fleet of cars scans vehicles at times and areas when our ALPR cars are not in service which is an added benefit. Second, it provides accurate, timely scans on which officers can proactively solve crime. For example, with the feature enabled, the officer can pull up a map within a 3 mile radius of his or her current location that will show recent scans of stolen vehicles. Using this data, the officer can drive to the location of the scan and potentially recover the stolen vehicle.

LEARN analytics and data sharing – Vigilant Solutions uses a cloud-based solution called LEARN to store the ALPR data captured in the field. LEARN offers the flexibility to mutually share ALPR data with other law enforcement agencies using the Vigilant Solutions, allowing users to pick and choose with whom they prefer to share their data. California users can also share data with the

Northern California Regional Intelligence Center (NCRIC) if desired. NCRIC coordinates the exchange of criminal intelligence, threats, and hazards and facilitates regional communication among Northern California law enforcement agencies. LEARN also offers an analytics engine that allows for searching of full or partial license plates complete with the locations of where the scans occurred.

Another metric which was analyzed during the trial period, was the number of plates captured during the trial, and the hotlist ‘hits.’ These two components of the study allowed staff to gauge what to expect when using an ALPR solution in the field. Based on volume, the results clearly indicate that Vigilant Solutions outperformed 3M, providing further evidence as to why Vigilant Solutions was the preferred vendor.

ALPR Reads and Hits

Vendor	Reads	Stolen Plate Hits	Stolen Vehicle Hits	Total
Vigilant	310,000	224	77	301
3M	113,720	n/a	n/a	69*

**3M reports stolen plate and stolen vehicle hits grouped together*

Vigilant Solutions offers the best user-interface and provided the critical features that the officers preferred. The greater volume of plates captured, as well as the greater number of hotlist ‘hits’, shows that Vigilant Solutions outperformed 3M during the evaluation period. Officer feedback and discussion at the PSTC session on June 4, 2014, further confirmed Vigilant Solutions as the preferred vendor. Additionally, the evaluating officers were able to quickly get up to speed and start using the Vigilant Solutions system. Installation of the system took less than a day and end-user setup was completed remotely using the LEARN cloud-based solution, further speeding up deployment.

Community outreach plan

To properly inform the community about the deployment of this technology, staff recommends the following approach, which covers multiple communication channels:

- Announcement on Police Department website
- Social media announcement utilizing Nixle, Twitter, and Facebook
- Flyer distribution at community meetings
- Press release a few days before technology release

Using these methods provides a wide range of communication to properly message the arrival of this technology. All outreach will be done in accordance with recommended best practices of the Police Executive Research Forum.

FISCAL IMPACT

Preliminary quotes were obtained from Vigilant Solutions and 3M in order to compare costs. The proposed solution is two patrol cars to be outfitted with a three-camera solution. The initial warranty would last for one year, but can be expanded for an additional cost. These quotes are based on a five-year projection, which includes purchasing the cameras in year-one and paying annual maintenance fees in years two thru five. The costs for the physical cameras and accompanying software are roughly the same between the vendors.

Staff will recommend that Council authorizes funding for the Year-1 start-up costs from the Information Technology Internal Service fund balance. Funding for ongoing annual maintenance in subsequent years will need to be included in the provided from the Information Technology Internal Service Fund operating budget.

Estimated Total Five Year Cost

Vendor	Year 1 start-up cost	Year 2-5 annual maintenance	Total
Vigilant	\$ 40,748	\$4,350 per year	\$58,148
3M	\$ 38,290	\$2,800 per year	\$49,490

In addition to these costs, this technology will require City staff time for initial training as well as ongoing maintenance of the system.

NEXT STEPS

Staff intends to ask Council for approval of the purchase at the December 2, 2014 meeting and for the related funding appropriation. If approved, implementing this technology could be accomplished within a few months of contract execution.

Prepared by: Nathaniel Roush, Technology Solutions Analyst

Recommended by: Mark Guenther, Information Technology Director
Diane Urban, Chief of Police

Approved by:



Fran David, City Manager



DATE: November 19, 2014

TO: Council Technology Application Committee

FROM: Community & Media Relations Officer

SUBJECT: Primary Website Development Recommendation

RECOMMENDATION

That the Committee reviews and comments on this report.

BACKGROUND

The City has embarked on a complete redevelopment of the organization's primary web presence. As part of this effort, on April 18, 2014, the City released a Request for Proposal (RFP) for primary website design and development. The detailed RFP set forth a number of criteria for information architecture, third-party application integration, accessibility, and user interface issues. The RFP closed on May 16, 2014, with thirteen companies submitting proposals.

DISCUSSION

An initial review of the proposals revealed a wide range of approaches, price points, and experience levels. A series of finalists were chosen for interviews based on their capacity to produce a reasonable end product and their proposed budget. Following interviews, reference checks, and discussion at this (CTAC) committee, staff was strongly encouraged to explore other options that could offer an open source platform, better customer service, and a more innovative, flexible approach to site construction, maintenance, and ongoing development. Staff identified three contractors of interest and invited these parties to present their solutions in an interview conducted by a panel of four staff members.

Interviews narrowed the field to two. Unable to identify a clear choice, staff proceeded to check a number of references for each of the companies. Unfortunately, an overwhelming majority of the current users of each platform expressed varying degrees of frustration, disappointment and exasperation with the customer service, skill, and pricing structure of each firm. With this information in hand and with encouragement from this Committee, staff decided to reconsider other options before recommending a development partner.

Outside of the original finalists, the field of applicants was exceptionally thin, with most firms underqualified, under-experienced, or unable to offer the desired open source package. After

extensive research into other potential development partners and further refinement of the project's scope, staff identified two firms that offered compelling, competitive solutions. The first was part of the original pool of respondents. The second, which staff ultimately selected, had originally expressed interest in submitting a proposal, but declined to do so due to scheduling conflicts. After reaching back out to this firm and securing a preliminary proposal, staff interviewed each of the finalists in depth. Following the interviews, staff identified a strong consensus choice that fulfilled all of the City's key requirements while offering an inherently flexible open-source platform, a highly accomplished creative team, a track record of success, and a clearly defined development process underpinned by the support of a tightly focused local firm.

Rolling Orange is a leading interactive services agency based in San Mateo, CA. Established in 2000, the Rolling Orange team has developed sophisticated web and interactive solutions to a top-tier list of clients for close to fourteen years. The firm's core philosophy is based on a simple premise: to build exceptional websites for high-level clients. Rolling Orange has developed a strong reputation in the state and local government sector market, building innovative sites for the city of San Francisco, SFMTA, the University of California system, and Bay Area Rapid Transit (BART). This expertise is complemented with experience with higher education, health care, performing arts, and corporate clients.

Rolling Orange offers end-to-end services, everything from strategy, site architecture, visual design, engineering, and interactive media development. The firm's development model is valuable because it eliminates the need for multiple vendors to handle various aspects of the process. Design and development work hand-in-hand so there is no division between the aesthetic and the technical elements of the site production. Moreover, Rolling Orange is well-versed in building high-visibility sites with extreme user loads (BART/SFMTA, among others) using staff's preferred open source solution (Drupal).

FISCAL IMPACT

The cost for the project is \$247,500, which includes multiple work phases, including discovery and strategy, design and content strategy, site build/development, launch and post launch services, as well as 180 hours of support and maintenance on all code delivered to the City of Hayward. The FY 2015 budget included \$125,000 in the Information Technology Internal Services operating fund for the website redesign project. Staff will ask Council to appropriate the additional \$122,500 from the Information Technology Internal Service Fund available fund balance for this purpose.

NEXT STEPS

Staff intends to bring this to Council for approval and related funding appropriation at its December 2, 2014 meeting. If approved, project kickoff would be scheduled for January 5, 2015 with a tentative go-live date of 1/19/16.

Prepared and Recommended by: Frank Holland, Community & Media Relations Officer
Mark Guenther, Information Technology Director

Approved by:



Fran David, City Manager