



CITY OF  
**HAYWARD**  
HEART OF THE BAY

**COUNCIL TECHNOLOGY  
APPLICATION COMMITTEE**

**NOVEMBER 20, 2013**

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**CITY COUNCIL TECHNOLOGY APPLICATION COMMITTEE MEETING**  
**Wednesday, November 20, 2013**  
**Conference Room 4A**  
**4:30 PM – 5:30 PM**

**CALL TO ORDER**

**ROLL CALL**

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**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.)*

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1. Approval of Minutes of June 19, 2013

[Minutes](#)

2. High-Speed Hayward Fiber Optic Network Update

[Staff Report](#)

3. Enterprise Resource Planning (ERP) System Update

[Staff Report](#)

4. New Technology for Law Enforcement

[Staff Report](#)

**COMMITTEE MEMBER ANNOUNCEMENTS AND REFERRALS**

**ADJOURNMENT**

**NEXT REGULAR MEETING – FEBRUARY 19, 2014**

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*\*\*\*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, 4<sup>th</sup> 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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*Assistance will be provided to those requiring accommodations for disabilities in compliance with the Americans Disabilities Act of 1990. Interested persons must request the accommodation at least 48 hours in advance of the meeting by contacting the Assistant City Manager at (510) 583-4300 or TDD (510) 247-3340.*

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





**Council Technology Application Committee (CTAC)**

**Meeting Minutes of June 19, 2013**

**Members Present:** Mark Salinas, Greg Jones, Al Mendall

**Staff:** Mark Guenther, Kelly McAdoo, Lori Taylor, Morad Fakhrai, Clancy Priest

**Guests:** Jim Morrison, Lit San Leandro

**Public Comments:** None

**1. Approval of Minutes:**

Minutes of March 21, 2013 Approved

**2. High-Speed Hayward Fiber Optic Network**

Information Technology Director Mark Guenther submitted a staff report to the Committee and will also provide a similar report to the Economic Development Committee on July 1, 2013. Jim Morrison, CEO of Lit San Leandro, presented the Committee with an overview of the proposed fiber optic system as well as the details of a similar finished project in San Leandro.

**3. Discussion of Committee Priorities**

Information Technology Director Mark Guenther, submitted a Staff Report to the Committee. The report categorized topics into different external versus internal areas of interest. Some of the external topics include access and infrastructure, as well as online community engagement and communication.

**Member comments:** The Committee discussed potential topics for future Council Technology Application Committee Meetings (CTAC).

**Next Meeting:** November 20, 2013 @ 4:30pm

**Meeting adjourned at 5:30pm**

DATE: November 20, 2013

TO: Council Technology Application Committee

FROM: Information Technology Director  
Economic Development Manager

SUBJECT: High-Speed Hayward Fiber Optic Network Update

## **RECOMMENDATION**

That the Committee reviews and comments on this report.

## **BACKGROUND**

In late 2012, the City was approached by representatives of San Leandro (SL) Dark Fiber LLC to discuss the idea of partnering with the City to create a fiber optic network capable of providing extremely high-speed data communications to Hayward businesses. SL Dark Fiber LLC recently built a similar eleven-mile long fiber optic network in the City of San Leandro (called Lit San Leandro) and wanted to explore whether Hayward was interested in a similar partnership. This proposal was discussed at the June 19, 2013 Council Technology Application Committee meeting, the July 1, 2013 Council Economic Development Committee meeting, and during the worksession at the July 30, 2013 City Council meeting. The proposal received general support from all of those bodies.

## **DISCUSSION**

SL Dark Fiber, LLC has proposed that the City enter into a long term license agreement with a new LLC formed specifically for the purpose of installing fiber optic facilities within the City's existing underground conduit. Under this agreement, the City would basically lease space inside its existing underground conduit for a minimum of twenty years. This new LLC would install and maintain a fiber optic network built inside this underground conduit. Another entity (tentatively named "High-Speed Hayward") would be formed to operate the network and sell very high speed internet service to business and industrial subscribers in Hayward. The long term nature of this agreement is required because of the substantial investment needed to install and manage the fiber optic infrastructure.

It was anticipated that by this point in time staff would have a draft agreement ready to present to this committee. However, there are currently some outstanding issues and concerns with the proposed twenty year agreement and the project in general that need to be resolved before staff can recommend that the City sign a final agreement. Staff is also working to gain an understanding of how this agreement might be influenced by the broader policy goals of ensuring residential and

educational services in our community, and how this project fits into the overall economic development strategy.

Staff is currently working with the City Attorney's Office on additional clauses and/or addenda to the draft agreement to address areas of concern and to highlight some key issues. One key issue is the desire to have some type of written agreement or understanding between the City and the fiber enterprise/operating concern that addresses certain aspects of the operating relationship between the partners.

Another key issue is the desire to have a needs assessment conducted. Staff is considering retaining an outside consultant to conduct such an assessment, which would inform the agreement with the developer relating to priority in fiber installation.

### **FISCAL IMPACT**

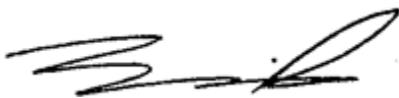
It is anticipated that the cost of a formal needs assessment may be \$20,000 to \$25,000. This could be funded through Community Development Block Grant (CDBG) funds. Regarding installation and operation of the fiber optic system, as previously stated, staff does not yet know the full cost of the system to the City: this will be clarified during continued negotiations. However, other than City staff time utilized to work with the developer during design, construction, and marketing of the new system, there are no other City expenses identified at this time. The system should generate license fee revenue when it reverts to a market rate in future years. As outlined earlier, the primary goal of this proposal is supporting economic development in Hayward. Therefore, the real fiscal benefit to the City would be derived from the impact on improved economic activity and business expansion in industrial sectors from businesses that will be attracted by and benefit from high speed internet connectivity.

### **NEXT STEPS**

The procurement process for professional services related to the needs assessment should begin shortly, and discussions with the developer are ongoing. Therefore, no definitive schedule for next steps can be formulated at this time. Staff is hopeful that a draft agreement may be ready for this committee within four months. The developer has previously stated that construction could begin a few months after a final agreement is executed.

*Prepared and Recommended by:* Mark Guenther, Information Technology Director  
Lori Taylor, Economic Development Manager

Approved by:



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Fran David, City Manager



DATE: November 20, 2013  
TO: Council Technology Application Committee  
FROM: Information Technology Director  
SUBJECT: Enterprise Resource Planning (ERP) System Update

**RECOMMENDATION**

That the Committee reviews and comments on this report.

**BACKGROUND**

In September 2009, the City Council approved a Technology Strategic Plan that included the replacement of the City’s severely outdated financial system with a new, comprehensive Enterprise Resource Planning (ERP) system. In early 2011, the City retained the Government Finance Officers Association (GFOA) for ERP consulting services to assist the City with initial business process mapping, Request for Proposal development and response analysis, structured vendor demonstrations and selection, and contract negotiation. In March 2012, Council authorized the City Manager to execute a contract with Tyler Technologies Inc. for the purchase and implementation of an ERP system called MUNIS. MUNIS will replace the City’s current financial system, which has been in use since 1986. The ERP project implementation phase with Tyler Technologies kicked off on June 26, 2012.

**DISCUSSION**

Project implementation is incredibly complex and touches almost all aspects of City operations. The City retained GFOA to assist with the overall implementation, including general ledger chart of accounts design and business process analysis and documentation. In addition, the City contracted with Technology Management Services (TMS) for comprehensive project management services. Since the beginning of implementation in 2012, staff has worked extensively with GFOA, TMS and Tyler Technologies on the implementation of MUNIS. A summary of our progress is outlined by module below.

## **Core Financials**

Core financials encompasses modules covering purchasing, accounts payable, general ledger, project-grant accounting, budget, treasury, fixed assets, general billing and accounts receivable processes. Subject matter experts and other staff completed the ‘as-is’ (current process) and ‘to-be’ (new MUNIS process) analysis and system configuration tasks.

Entry of live non-payroll financial data into the old FMIS system ended on Friday, June 21, 2013. After completing the final data conversion, the City went live in MUNIS on July 1, 2013. The phased implementation of an online internal procurement process immediately followed, and by the end of August 2013, the City’s internal procurement process was completely online. This on-line process includes:

- direct entry of purchase requisitions into MUNIS by staff
- automatic budget checking to ensure that adequate budget is available for the purchase
- approval of those requisitions by managers and department directors
- routing to Purchasing Division
- approval by Purchasing and conversion to purchase orders
- PDF copies emailed to internal staff and optionally to city vendors (if email delivery was requested)
- online recording of receipt of goods and services
- approval by department directors or their designees of invoice payments

A similar but slightly less complicated online process for the accounts receivable General Billing requests was also implemented. City staff directly enter billing information into MUNIS, which is automatically routed to Accounting Division staff who generate the invoices.

Approximately fifty individual classroom type training sessions have been offered to staff involved with these modules on different subjects at separate times. In addition, there have been many individual, one-on-one training sessions conducted by Finance staff for departmental staff members in need of further instruction and practice.

There have been several implementation challenges and an understandable level of frustration on the part of staff as they adjust to the new system, which enforces entry of correct GL accounts, budget checking and security regarding who can use which codes. This differs from the old paper-based routing process in that the old system did not provide “up-front” error checking, and all errors were reported and corrected by Finance staff (not department staff) when entering data from paper forms into FMIS. Now, MUNIS checks and reports errors at the point of entry, and these errors must be resolved by department staff before processing can move forward.

## **Human Resources/Payroll**

As with the core financial module implementation, subject matter experts and other staff have completed the as-is and to-be analysis and system configuration tasks for the Human Resources/Payroll module. Live data was pulled from the current payroll system and converted into MUNIS in June 2013. Dual updating of both systems has occurred since that time. This is required in order to perform parallel payroll runs to fully test the system. To date, staff has conducted four parallel payroll runs. Finance and Human Resources department staff continue to refine and test the set-up process.

Go-live for Payroll is scheduled for the first pay day in January 2014. At that time, only those functions that the current payroll system performs will be live in MUNIS. Online functions, such as employee timecards and employee self-service, will follow the same phased implementation approach that core finance followed. The intent is to initiate a soft roll-out of the payroll functionality – likely over a 4-6 month period to allow for adequate training, etc. Staff is currently working on a detailed project plan for this implementation.

## **Utility Billing**

As-is and to-be analysis, as well as system configuration tasks are largely complete. The second pass of converted data has been loaded into a test environment and is being verified by Finance staff. In preparation for parallel billing runs, a test environment for the 3<sup>rd</sup> party meter reading system, which includes the hand held readers and the meter reading server, has been set up and configured. Once meter readings have been loaded to MUNIS, a parallel billing run can be conducted. Go-live for Utility Billing is now scheduled for April 29, 2014. This was rescheduled from its original January 2014 date in order to adequately focus on the core financials and payroll module implementations scheduled for the same time period.

## **Work Orders**

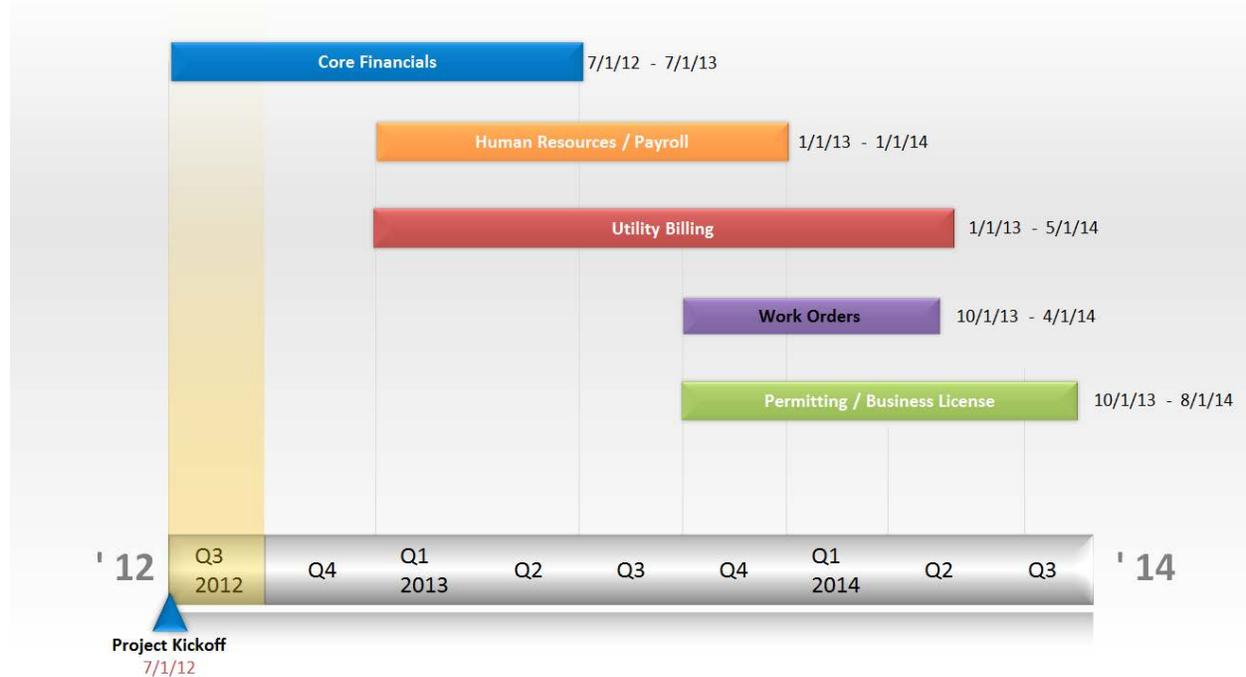
Maintenance Services Department functional leads and subject matter experts are currently working with Tyler implementation consultants on the as-is and to-be analysis for the Work Order module. As was performed for Core Finance and HR/Payroll modules, the design of the new business process will be demonstrated in MUNIS using actual City data (e.g. work requests and vehicle maintenance and repair processes) in a static environment test (SET) in order to verify that the decisions made in the design of the new process result in a working prototype system. Upon successful completion of the static environment test, setup training and actual configuration of the system will be performed by these teams. The scheduled go live date for the Work Order module is April 2014.

## **Permitting/Business License**

The three day project kickoff meetings for each of these integrated modules were conducted in October 2013. Work will begin soon on the analysis, testing, and system configuration tasks. This module will involve staff from the Finance, Development Services and Fire Departments.

The following graphic represents the revised implementation timeline for ERP modules.

## Hayward ERP Timeline



### FISCAL IMPACT

City Council originally authorized a \$4.1 million project budget (comprised of General Fund and enterprise fund allocations) as contained in the Capital Improvement Program budget. Current project expenses are well within the authorized budget. However, as the adjustments are made to the project, including software modifications and temporary staffing, it is possible that additional funds may be necessary. Staff is currently conducting a project budget audit and will provide the Committee with an update when this is complete.

### PUBLIC CONTACT

None.

*Prepared and Recommended by:* Mark Guenther, Information Technology Director

Approved by:

Fran David, City Manager



DATE: November 20, 2013

TO: Council Technology Application Committee

FROM: Information Technology Director  
Chief of Police

SUBJECT: New Technology for Law Enforcement

## **RECOMMENDATION**

That the Committee reviews and comments on this report.

## **BACKGROUND**

Law enforcement technology has evolved at a rapid pace. Two areas of innovation and growth that have experienced tremendous advancement are body worn cameras and automated license plate recognition (ALPR) technology. Staff would like to introduce and discuss these new technologies for law enforcement in anticipation of bringing a formal recommendation for procurement and implementation of these systems to the committee in the near future.

The proliferation of smartphones has empowered citizens to capture high quality video and photos at their fingertips at any moment. As many of us have seen from the news media and social media websites, encounters with public safety personnel have also been recorded and shared using these same devices. Body worn cameras help tell both sides of the incident and protect the city and public safety agency from false accusations and wrongful claims while simultaneously providing digital evidence for public safety personnel to assist in the prosecution of criminals.

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, then the officer can instantly be alerted of the hit and take appropriate action.

## **DISCUSSION**

This discussion section is meant to offer an overview of the technology as well as provide options that should be considered when evaluating and deploying these technologies.

## **Automated License Plate Recognition (ALPR)**

Fixed mounted vs. car mounted – Fix mounted ALPR cameras are designed to be placed in high vehicle traffic areas in order to increase the likelihood of discovering a stolen or wanted vehicle ‘hit.’ 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. For each type of deployment, the data captured can also be utilized for future investigation purposes.

License plate hit alerting – 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.

## **Body worn video cameras**

Audio/Video recording quality – Video evidence recorded at a scene is very powerful in that it captures human emotions that cannot be accurately described in a written police report. The audio and video quality of the recording must be able to accurately pick up voice tone, mannerisms, and facial expressions in various lighting conditions and indoor/outdoor settings.

Pre-record buffer – By the time an officer hits the record button to capture a violation, the act has most likely already occurred. The pre-record buffer solves this problem by capturing on video the 30 seconds that were recorded prior to hitting the record button. This helps the officer tell the entire story as well as gives the citizen an opportunity to review the violation in the field if requested.

In-field viewing – The ability to review body worn camera video in the field has benefits for the officer as well as the citizen. Instant access to digital evidence can assist with an investigation because the officer can quickly share and disseminate critical evidence. Citizens may also want to see the violation that occurred that caused the officer to stop them.

Camera mount options – While the most common mounting option offered by vendors is the center mass or chest camera that attaches with a clip, vendors are beginning to offer more options. Innovations in this area allow the officer to wear the camera in a variety of locations on their person such as glasses, collar, shoulder, or center mass.

## **Common questions with both technologies**

Data retention – The rules for data retention, or how long data must be kept before deletion, continues to evolve. Public safety must achieve a balance between ensuring that the data they have captured is relevant for investigation, yet not so old that the data becomes a liability for the information system where the data is stored. While there is no official data retention rule when it comes to digital evidence, a one year data retention policy is the figure that is often identified as an ideal balance.

Data privacy – With digital evidence, the question of data privacy, or who can view the data, is a concern often brought up by the public. The key with data privacy is choosing a digital evidence management system that enforces security as well as tracks and logs each time digital evidence is accessed. These security and digital auditing measures ensure that users viewing the data have a right and need to know when accessing the data.

Data security - From an Information Technology perspective, the data must be housed and stored in a secure location with limited access to protect data security. In-house and cloud based storage systems can both be designed to accomplish this goal.

## **FISCAL IMPACT**

Each of these technologies will require City staff time for the research, design, setup, and maintenance of these systems. It is also important to consider that in order for these technologies to function optimally, they should be upgraded every two to three years to ensure that the latest innovations are in the field to help reduce and solve crimes. These replacement costs should be built into the purchase model of these systems. An estimate of the total cost of these systems cannot be made until the evaluation and analysis outlined has occurred.

These technologies could reduce costs by reducing the number of paid liability claims against the City and by reducing the number of staff resources expended by Police Department Internal Affairs and City Attorney Department staff spent investigating and researching false claims against the City.

## **NEXT STEPS**

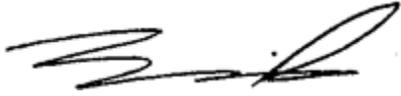
Regarding ALPR, staff has begun to evaluate the ALPR marketplace and vendor ecosystem and request reference information from Bay Area public safety agencies. Once this data has been analyzed, staff will narrow the field down to promising vendors and conduct comprehensive technology evaluations based on criteria such as cost, accuracy, reliability, and alert mechanisms in order to make configuration decisions and arrive at a vendor recommendation and recommended budget for the project.

Regarding body worn cameras, staff has looked at the current body worn camera marketplace and performed some field testing of selected technologies. Analysis of data based on criteria such as battery life, ease of use, comfort, durability, audio/video quality, cost and other relevant metrics will be used to make configuration decisions in order to arrive at a vendor recommendation and recommended budget for the project.

*Prepared by:* Nathaniel Roush, Technology Solutions Analyst

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

Approved by:



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Fran David, City Manager