



CITY OF
HAYWARD
HEART OF THE BAY

**COUNCIL TECHNOLOGY
APPLICATION COMMITTEE**

NOVEMBER 16, 2011

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**CITY COUNCIL TECHNOLOGY APPLICATION COMMITTEE MEETING
WEDNESDAY, NOVEMBER 16, 2011
CONFERENCE ROOM 4A
4:30 P.M. – 5:30 P.M.**

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 19, 2011
[Minutes October 19 2011](#)
2. Website Update
[City Website CTAC Report](#)
3. Geographical Information Systems (GIS) Update
[GIS Report](#)
4. EBRCSA Update (Oral Report Only) – Councilmember Henson

COMMITTEE MEMBER ANNOUNCEMENTS AND REFERRALS

ADJOURNMENT

NEXT REGULAR MEETING – TO BE DETERMINED

****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. All Council Meetings are broadcast simultaneously on the website and on Cable Channel 15, KHRT. ****

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Council Technology Application Committee (CTAC)

Meeting Minutes of October 19, 2011

Members Present: Olden Henson, Bill Quirk, Mark Salinas

Staff: Kelly Morariu, Clancy Priest, Garrett Contreras

Guests: Mike Mucha, Government Financial Officers Association (GFOA), Simon Wong, Tri City Voice

Public Comments: Technology Services Director, Clancy Priest responded to comments from Councilmembers Olden Henson and Bill Quirk regarding connectivity of the Downtown Wi fi. There is an antenna on the rooftop of City Hall and connectivity reaches all the way to Shark Shack and other downtown locations. There have been reports of some difficulty with connectivity where people have had to shut down and turn it on again before it would connect. We're looking into some of these connectivity problems and also the repeater that is located at the kiosk that has a heat problem.

1. Approval of Minutes:

Minutes of July 1, 2011 Approved

2. Enterprise Resource Planning (ERP) Status Report:

Technology Services Director, Clancy Priest, updated the committee on the status of the ERP Project and reported that the project is moving along. The RFP has been released to a number of vendors (approximately 18-20) and the City received three returned proposals. One of the three vendors fell out of the process because they did not meet the criteria and we were left with two vendors that were valid and had usable proposals. The two vendors were New World Systems, who is the City's CAD/RMS vendor, and Tyler Technologies. Staff has been working through the process of evaluating their proposals and brought teams together concerning each of the different modules. The City held two one week processes where the vendor came in and demonstrated to various groups which consisted of subject matter experts within the City to be evaluated. The first week of demonstration was from New World Systems and the following week was Tyler Technologies. They had a scripted process developed with GFOA to get all the different functionalities that we, particularly at the City, were looking for in an ERP and they concerned all the different modules.

GFOA will help the City with going further into this; GFOA met with every department and mapped out what our current workflow as part of the change management process. Some of that new business process depends on which firm we choose and which software package we choose because they all have their caveats on the way that they do their work flows and the way the software functions. Once we've made our choice, GFOA will be helping us map out the business change and how to facilitate the change with City staff.

On the budget side, for the prices of the software, we have worked and investigated and done our due diligence. We felt that the price will be somewhere between 4 and 6 million and will cover the cost of a Tier 2 ERP. The proposals that did come in are at the same target depending on which vendor is

chosen and which modules are selected. Both of the systems that we're looking at have very robust security and expandability. In the area of the funding, we have 2.5 million set aside in the Capital Improvement Program (CIP). As we get further along in the process, we will be looking into leasing options for the entire project, bits and pieces or may have to look at a lease for the hardware, software and the services that are required and bundling them together as needed. Staff will bring that forward to CTAC and Council as that gets further along. We're trying to accommodate a January 1st or February 1st date for the implementation to begin. Staff may come to Council in November or December with a request to allow the City Manager to negotiate and finalize the contract with the chosen vendor.

3. Project Update on the Public Safety Computer Aided Dispatch/Records Management System (CAD/RMS):

Technology Services Director, Clancy Priest updated the committee on the CAD/RMS project. At the moment we're targeting to go live with our systems on November 15th. We're having some challenges as we get closer to that date and we're addressing those challenges. There have been some technical challenges as far as the mobile client and the mapping on the Fire side. We're currently working with New World on addressing these issues. When we previously ran into some difficulties, one of things that had been done was to suspend the go live date which got the vendor's full attention and to suspend payments until they resolved some of our issues. They have a team out here to resolve issues. The list of go live technical difficulties is down to almost zero which is good. Technology Services will be the department that runs the system. If there is an issue in a department, the department will present that issue to us and we will carry it forward to find out what is going on while working both with the vendor and the department to resolve the issue. As it stands, we are coming in under budget and confident that we will meet the November 15th timeline at this point in time; we will know more at the end of the week.

Member comments:

Councilmember Henson would like an update on the EBRCSA Project at the next meeting and for this item to be a regular standing item. He would also like an update at the next meeting on GIS usage and the status of the Website.

Next Meeting: November 16, 2011 @ 4:30pm

Meeting adjourned at 5:25pm



DATE: November 16, 2011
TO: Council Technology Application Committee
FROM: Technology Services Director
SUBJECT: City of Hayward Website Project Update

RECOMMENDATION

That the Committee reviews and comments on this report.

BACKGROUND

In the 2000/2001 City budget, the Council allocated funds for Webmaster consultant services. The funding was provided to support the expansion and development of the “City’s Home Page.” After interviewing a number of website vendors, the project was out-sourced to InfoLane for design, implementation and maintenance.

In 2002, Technology Services added a Webmaster position and brought the entire web function in-house. Technology Services implemented the first in-house version of the City’s website in 2003 in conjunction with CTAC recommendations.

A complete restructuring of the website was done in 2007, which is still the current format. During the last three years, the site has added an abundance of information, which has caused the pages to become very “busy” in look and feel and is not very user friendly.

DISCUSSION

Technology Services has been restructuring the City’s website with the assistance of the City Council, City Manager, other City staff and the public. The City’s webmaster, Joseph Ochinerro, has begun work on an initial revision.

Along with internal feedback, Technology Services has approached the new website design with user-centered design (UCD) as the methodology for ensuring usability. In broad terms, UCD is a design philosophy and a process in which the needs, wants, and limitations of end users of a product are given extensive attention at each stage of the design process. In order to create a website that meets users' needs, Technology Services will use UCD as a structured development methodology that involves users throughout all stages of website development. This approach

will consider the organization's business objectives and the user's needs, limitations, and preferences.

In order for the City's website to be successful, users must be able to find information or accomplish tasks when visiting the site. No matter what objectives are set for the website, it must carefully balance the needs of users and the needs of the organization. If users don't find the website helpful, they will not use it.

In order to create a user-centered website, the project team has taken into consideration the needs of users throughout each step in the development, including:

- planning the site
- collecting data from users
- developing prototypes
- writing content
- conducting usability testing with users

Staff has attempted to define organizational and user needs, goals, and objectives:

- What are the primary business objectives and how do they relate to the Web?
- Who are the users of our website and what are their tasks and goals?
- What information and functions do users need, and in what form do they need it?
- How do users think the website should work?
- What hardware and software will the majority of users use to access your site?

This methodology will help ensure that any website revision will be user centric versus staff centric. Some of the past revisions to the City's site were too internally focused and contained verbiage that was cumbersome and bureaucratic. The City needs a site that is externally focused with a service orientation.

The concept of website usability has grown in importance to government and is now considered a best practice by website designers that make sure usability is built into the web development lifecycle. This format is being incorporated into e-government initiatives, public-facing websites, web applications, intranets, and hand-held devices to ensure they are highly responsive and meet both agency and user needs.

One of the main components for any revised website format will be the use of Web 2.0 functionality. The term Web 2.0 is associated with web applications that facilitate interactive systems, interoperability and user-centered design. A Web 2.0 site allows users to interact and collaborate with each other in a social media dialogue as consumers of user-generated content in a virtual community. This is in contrast to websites where users are limited to the active viewing of content that they created and controlled. Examples of Web 2.0 include social networking sites, blogs, wikis, video sharing sites, hosted services, web applications and syndication.

Syndication uses standardized protocols to permit end-users to make use of a site's data in another context (such as another website, a browser plugin, or a separate desktop application). Protocols which permit syndication include RSS (really simple syndication, also known as web syndication), RDF (as in RSS 1.1), and Atom, all of them XML-based formats. Many developers have started to refer to these technologies as web feeds, which will be part of our future structure in the City's website.

FISCAL IMPACT

The City will utilize internal City staff and existing resources to complete the project.

PUBLIC CONTACT

Technology Services has met with several outside user groups over the last four months to gather information and feedback from members of the public. The information we have received has been useful during the reengineering process of the website layout and the end-user usability of the site. End-users were asked to take a survey after each meeting to supply data on the likes, dislikes, and suggested changes from the participant's point of view.

Staff has also met with each individual department to receive their suggestions as to what their expectations of the new site will be. The meetings have all been very productive.

SCHEDULE

A schedule has been developed to complete and implement a new website design by the end of calendar year 2011. The user group meeting will be completed by the first week of December and all surveys closed by mid-December. Final site alterations will be completed and approved by the first week of January and the new site will be released at that time.

Prepared and Recommended by: Clancy Priest, Technology Services Director

Approved by:



Fran David, City Manager



DATE: November 16, 2011

TO: Council Technology Application Committee

FROM: Technology Services Director

SUBJECT: Geographical Information Systems (GIS) Status Report

RECOMMENDATION

That the Committee reviews and comments on this report.

BACKGROUND

Prior to the creation of an enterprise GIS, the City of Hayward's digital mapping efforts were performed by four separate departments (CED, Public Works, Police and Fire). Staff realized that the existing approach was ineffective, there was a lack of responsibility for data integrity, difficulty with easy/real-time data access, no standardization, and a lack of skills and resources to keep the data maintained.

In 1998, CTAC decided that it would be in the City's best interest to investigate the development of an enterprise GIS. Staff began to research the potential benefits for operations and for the citizens of Hayward and started developing a city-wide GIS, which became an objective for the fiscal year 2000-2001.

A GIS committee was formed to provide the oversight, coordination, and governance of the GIS effort. The committee met with outside agencies that had an established GIS and held meetings with software and data vendors to learn industry best practices. The committee recommended that ESRI be chosen as the software vendor for Hayward's GIS for several reasons:

- Hayward had existing ESRI software in place
- Many local, state, and federal agencies use ESRI software and Hayward would be able to easily share and consume data with partner agencies
- Hayward was offered a Homeland Security grant for approximately \$65,000 from ESRI

By 2002, the City of Hayward had a work plan established and a data vendor to assist with the conversion from the disparate data sources to one standardized GIS format. Hayward had also applied for and received the Homeland Security grant which paid for the enterprise GIS software (data editing, storage, and display software) and the interactive GIS website development. Contract

positions (GIS Coordinator, GIS Technician) were created to provide the City with full-time staff to work on the GIS efforts.

DISCUSSION

In 2003, the City of Hayward launched the interactive GIS website on the City's intranet and external website. For the first time, staff and citizens were able to look up parcel information and see the various associated spatial data layered on a map where they could control the parameters. At this time GIS staff worked continuously to build the base layers that were not initially converted from older digital or paper sources. Some examples of the new base layers that were built include:

- Zoning information
- General Plan specifications
- Police Reporting Districts
- Fire District layers

Since 2004, the City of Hayward's GIS has continued to grow in terms of data size and quality. The FY 05/06 adopted budget included a new, full-time, GIS Coordinator position. GIS staff has acquired innovative imaging products to help build quality GIS data. Hayward was the first full-city client for Streetview imagery data (acquired in 2004, with updates in 2006 and 2008), and the first to obtain Pictometry oblique aerial photos in Alameda County (also acquired in 2004, with updates in 2006 and 2009).

Once GIS had reliable and standardized data, GIS was tasked to take on greater responsibility. In 2005, GIS became responsible for the maintenance of the Reverse-911 data, combining AT&T data with the address data to create reliable "call out" layers for public safety. GIS also began working on developing the workflow between the Alameda County Assessor and the City which would enable the City to reduce (and in some cases eliminate) data licenses paid to outside vendors for parcel data.

GIS has supported the integration of several enterprise applications over the past several years. In 2008, the pavement management software was tied in to use GIS street data. The Access Hayward application relies on GIS addressing and Community Preservation data to function. Beginning in 2010, GIS became heavily involved with the configuration of the New World Systems CAD and RMS software for Public Safety. As part of this project, GIS data was "upgraded" to become NENA (National Emergency Number Association) compliant.

Because of the high degree of accuracy needed to maintain NENA compliant data, in the near future a Master Address Database will be developed that will increase the accuracy and reduce the staff time required to update address data. After the New World System implementation is complete, GIS data will be used in crime mapping and analysis; it will be possible for crime maps to be made available to the public via the web if the City so chooses. GIS data will also be used at the core of the City's Enterprise Resource Planning (ERP) system. The Interactive GIS website will be getting a new design that will feature the latest GIS server software—allowing for more data layers and greater reporting capabilities. Concurrent with all the past projects, and into the future, GIS will

support all City departments and divisions in their day-to-day GIS needs. These tasks include: basic mapping needs; drive-time/service area analysis; crime analysis, emergency operations data requests; notification lists; etc.

While the GIS implementation has broken down most of the mapping data silos that were present in the City ten years ago, there still are some left to dismantle. GIS in the upcoming years will be aiming to break down the walls between the remaining data sources and bring them into GIS. The City will then have an increased ability to analyze spatial relationships and trends and will also end up with greater web-based GIS presence.

For this to happen, there needs to be more staff involvement in the creation and maintenance of their data. This idea allows for the “data experts” in each department to create data and maps, increases the efficiency in which departmental data gets added to the GIS, and alleviates some strain that is put on GIS Staff so that those resources can be used to help other departments without a GIS operator. Ultimately, some select staff will have to be trained to operate GIS desktop software so they can create and edit (complex) data where the bulk of the other staff would use a web based application to edit their (simpler) data.

The method of having staff operate GIS desktop software is currently in place within the Police Department and Development Services Department. It works well as GIS demand has increased over the years while GIS staffing has decreased. GIS staff helps manage, analyze, and publish the data while also fully supporting the data editors in these departments. This model will be expanding to include certain divisions within Public Works soon and will again expand as more departments take on a complex-data editing role.

For the majority of staff to be able to use a simple web application to create and edit GIS data with a low learning curve, GIS will have to move towards a heavier internet/intranet-based architecture. This will require development of web applications that can support editing and may need to be built by an outside developer, but the city would benefit from such an application. The purchase of expensive licenses for GIS software would be limited to only the staff that maintains complex data, user training will be minimal, and more of the City’s “data experts” will have the hands-on ability to edit their own GIS data at will. The City would be in a better position to be able to allow the public to add data to the City’s GIS map as well—an idea called “crowdsourcing” could allow the City to increase its GIS data holdings without having to greatly increase staff time.

FISCAL IMPACT

The City has invested in the GIS over the last ten years. This investment has been worth the funds expended because of efficiencies gained by staff and public in accessing information in a timely and effective manner at no cost.

- GIS 2001 Capital Project was \$500,000, which built the system from the ground up and paid for hardware, software, and staffing.
- Pictometry System (2004, 2005, 2009) aerial photography and measurement application for \$133,500 which is used by every City department to view and confirm parcels within Alameda County.

- StreetView system (2004, 2006, 2008) for \$141,350 - used by all departments and the public to view the City at a street level with high quality photos and accuracy.
- Full GIS Coordinator position since 2005.

PUBLIC CONTACT

The Interactive GIS website is the primary method with which the public uses and accesses the City's GIS. Since monitoring began in March of 2007, the Interactive GIS website has seen 1.4 million unique visitors. The GIS website is used internally by City staff and externally by citizens and professionals. GIS staff also maintains a web page where a citizen with GIS software can download GIS data for use in their own maps. Another service offered by GIS to the public is one where the public can request a paper copy of popular maps for a nominal fee (Zoning and General Plan maps are the most popular request).

Prepared and Recommended by: Clancy Priest, Technology Services Director

Approved by:



Fran David, City Manager