

Council Technology Application Committee Meeting

Wednesday, June 16, 2010

4:00 P.M. to 5:30 P.M.

Hayward City Hall

777 B St. Hayward

Conference Room 2A

Hayward, CA 94541

AGENDA

Public Comments: (Note: For matters not otherwise listed on the agenda. The Committee welcomes your comments under this section but is prohibited by State Law from discussing items not listed on the agenda. Your item will be taken under consideration and referred to staff.)

1. Minutes of Wednesday, November 18, 2009
2. Review and comment on the submitted Technology Virtualization Report
3. Review and comment on the submitted Access Hayward CRM Report
4. Review and comment on the submitted CAD-RMS Project Report
5. Member Comments

Distribution:

Mayor and City Council

City Manager

Assistant City Manager

Assistant to the City Manager

Community & Economic Development Director

City Attorney

City Clerk

Finance Director

Fire Chief

Human Resources Director

Library Director

Police Chief

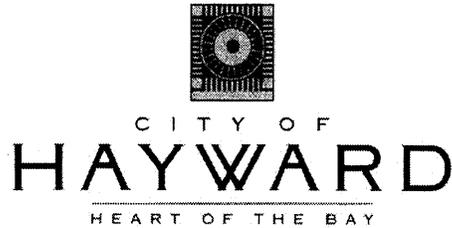
Public Works Director

Technology Services Manager

Daily Review

Post

Assistance will be provided to those requiring accommodations for disabilities in compliance with the Americans with Disabilities Act of 1990. Interested persons must request accommodation at least 48 hours in advance of the meeting by contacting the Assistant City Manager at (510) 583-4302 or TDD (510) 247-3340



Council Technology Application Committee (CTAC)

Meeting Minutes of November 18, 2009

Members Present: Michael Sweeney and Bill Quirk

Staff: Greg Jones, Fran David

Guest: Public Access Employees

Public Comments:

A Public Access employee stated that they are losing a good portion of their viewing audience because of the necessary need for items that are involved in this transition. He can be contacted at 2455 Reina Drive, Hayward, CA 94541 (510) 757-5686. Everyone was asked by the Technology Services Director, Clancy Priest to sign up and leave information with him if they are interested in attending the meeting on Friday at 10:00 regarding the PEG Program.

1. Approval of Minutes: Approved

2. Review and comment on the submitted PEG Report:

Technology Services Director, Clancy Priest, presented and discussed the PEG Report (Public Educational and Governmental Access). The objective with a one year interim agreement is to get some breathing space so that everything can be put together to form a Task Force and getting folks to the table to collect their input. The goal is to have the Task Force together within the next 6 weeks.

3. Discussion of the status of Access Hayward (CRM):

Technology Services Director, Clancy Priest reported that during the 6-7 week soft launch period, they have had close to 2,500 requests.

4. Discussion on the status of the CAD/RMS Implementation Process:

Technology Services Director, Clancy Priest informed the group that they are towards the end of contract negotiations with the vendor.

5. Member comments:

Councilmember Bill Quirk and Mayor Michael Sweeney thanked everyone for coming.

Next Meeting: TBD

Meeting adjourned at 4:34pm



DATE: June 16, 2010
TO: Council Technology Application Committee
FROM: Clancy Priest, Technology Services Director
SUBJECT: Technology Virtualization

RECOMMENDATION

That the Committee review and comment on this report.

BACKGROUND

In order to simplify our congested and rapidly growing environments, Technology Services is actively implementing server virtualization technologies to reduce costs and realize substantial energy savings. Infrastructure simplification through virtualization is the first step in consolidating and optimizing our data center(s), enabling us to become more responsive, highly available, agile, and sustainable.

DISCUSSION

Virtualization is the act of presenting a logical grouping of physical computing resources. Each logical group, or virtual machine, is a self-contained and encapsulated unit that runs its own operating system and application workloads. These complete environments are encapsulated in virtual machines that are independent from the hardware.

Server consolidation business drivers:

- Improve level of uptime
- Lower operational costs without impact
- Improve recovery time from failure
- Energy savings and sustainability by shrinking our environmental/operational footprint
- Disentangle the complexity of our technology environment
- Improve responsiveness of Technology Services to the customer departments
- Ensure technology resources are working on high value projects
- Improve the efficiency/effectiveness of our limited technology staff

Infrastructure virtualization aggregates industry standard servers, and their attached network storage into unified resource pools. Because virtual machines are encapsulated, their configuration and state information can be easily captured and migrated.

Virtualization software provides a simple, proven means for consolidating servers. Each workload that previously required a dedicated physical server can be placed in a virtual machine, making it simple to consolidate multiple workloads onto each physical server. A virtualization solution also makes it possible to ensure that consolidated workloads have exactly the resources they need since resource allocations for each virtual machine can be adjusted as needed, without downtime.

Virtual infrastructure provides a means to contain future server growth. Requests for new servers can be fulfilled by provisioning virtual machines to host servers with underutilized capacity rather than by purchasing new servers. This results in more efficient allocation of resources from a point in time forward, and makes it possible to accurately forecast and strategically manage future growth in computing capacity.

Most organizations today have a very low percentage of redundancy at the server level. At a minimum, critical components need to have a disaster recovery guide to rebuild the server if it crashes. Virtualization offers a highly available solution at a very minimal cost, and a much less complicated solution for management and recoverability.

Virtualization is a big component in allowing our organization to establish a true disaster recovery plan. Virtualization allows each server to be encapsulated into a single file, or a handful of files that can be copied to a backup system or remote site. These files are hardware and software independent.

As of this report a total of 24 existing servers have been virtualized. This has allowed Technology Services to de-commission or re-purpose those hardware systems. An additional 10 existing systems are targeted to be virtualized by October of this calendar year, bringing our total of replaced servers to 34.

In conjunction with the existing systems all new server requests/needs are being virtualized rather than implementing new hardware systems. Again, as of this report and additional 17 virtual network servers have been created to service the various technology needs of our customer departments as well as the entire organization. This will bring our total virtualization to 51 network systems.

Separate studies were performed at City Hall and the Police Department by an outside vendor and Technology Services staff using software and hardware to determine the viability of virtualizing our data center "Server Farms" at City Hall and the Police Department. The initial study was of only our 40 "High Level" network servers that were considered mission critical. The total number of servers within the data center(s) is in excess of 60.

Initial high level study results for City Hall and Hayward PD:

High Level Results City Hall	
Number of Systems Evaluated	27
Assessment Results	
Physical Systems Recommended for Virtualization	26
Number of existing VMs	0
Not Recommended for Virtualization	1
Not Enough Data Collected	0
Assessment Summary	
Proposed Host Quantity	2
Physical Consolidation Ratio	26 : 2
Consolidation Ratio Percentage	92.31%
Physical & Virtual Consolidation Ratio	26 : 2
Consolidation Ratio Percentage	92.31%

High Level Results Police Department	
Number of Systems Evaluated	13
Assessment Results	
Physical Systems Recommended for Virtualization	12
Number of existing VMs	0
Not Recommended for Virtualization	1
Not Enough Data Collected	0
Assessment Summary	
Proposed Host Quantity	2
Physical Consolidation Ratio	12 : 2
Consolidation Ratio Percentage	83.33%
Physical & Virtual Consolidation Ratio	12 : 2
Consolidation Ratio Percentage	83.33%

The below calculation provides a noteworthy overview of energy savings of just the high level servers and how this impacts the environment. To provide these calculations, we leverage certain assumptions noted below. The Carbon Emissions figures come from the U.S. Environmental Protection Agency. These estimations include both the City Hall and Police Department environments.

Go Green Benefits		
Power/Cooling Savings	Current	Virtualized
Power Cost (Annual)	\$12,985.32	\$4,129.18
Cooling Cost (Annual)	\$19,717.66	\$7,333.19
Total Annual Savings		\$26,212.41
Standard Variables	Value	
City of Hayward avg price per KWH	0.17886	
Cooling Efficiency	67%	
Watts to BTU Conversion	3.412	
lb CO2 / kWh	1.57	
Tree/Car and CO2 reference http://www.epa.gov/cleanenergy/energy-resources/refs.htm		
Carbon Footprint	Current	Virtualized
Carbon Emissions in lbs/hr	13.19	4.20
Environment Impact	Savings	
Carbon Savings		11.00
Equivalent - cars removed annually		9
Equivalent - planting 10-year old tree		1378

FISCAL IMPACT

The network server virtualization project is funded by the Technology Replacement CIP fund. In fiscal year 2009/2010, \$103,446 was spent to procure hardware and software to begin our virtualization process. During this period 4 clustered Virtual Host Servers, 2 at City Hall and 2 at Hayward Police Department, were put in place. The storage for the project was addressed by implementing a 24 TB clustered Storage Area Network (SAN) at City Hall and an 8 TB SAN at the Hayward Police Department.

The systems use a mix of both Microsoft Hyper-V and VMWare virtualization software included in the initial procurement. Technology Services staff were trained in the virtualization process by both Microsoft and VMWare as part of our purchase of equipment.

PUBLIC CONTACT

None.

SCHEDULE

Technology Services will continue with our virtualization process on the network server systems. We do not expect a need for an increase in the number of clustered host servers for the next 5 years unless our business process changes and needs increase. If this should occur, funds from the Technology Equipment CIP will be used to address the situation.

We have addressed our storage needs for the near future but have an expectation that the storage may need to be increase within several years to accommodate organizational needs. We will also use CIP funds to meet this need should it be required.

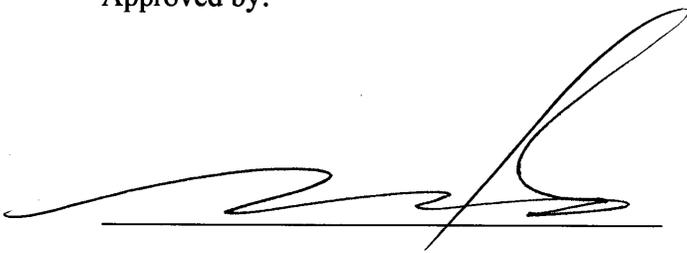
The next steps in our virtualization will be to address our desktop computing needs with a Virtual Desktop Infrastructure (VDI) system. Technology Services will implement a VDI proof of concept system in the City hall computer training room this next fiscal year again using CIP funds.

Prepared by:



Clancy Priest, Technology Services Director

Approved by:



Fran David, City Manager



DATE: June 16, 2010

TO: Council Technology Application Committee

FROM: Clancy Priest, Technology Services Director

SUBJECT: Access Hayward (CRM) Status Report

RECOMMENDATION

That the Committee review and comment on this report.

BACKGROUND

The fundamental concept behind Constituent Relations Management (CRM) is the consolidation of information from separate sources within our organization to provide a single, complete picture. In order to effectively and efficiently manage our customer relationships and provide us with important feedback, we have implemented an automated, web-based, CRM solution from Tele-Works and their certified CRM partner Government Outreach (GO). The City had an investment in the Tele-Works system that controls our web content management and that was expanded into an entry-level CRM system in a cost effective manner. The Tele-Works system allows us to also implement both web-based and telephony-based routing, tracking, and customer call-back.

The implemented CRM system improves organizational performance, including measured efficiency and customer satisfaction. City staff now have the tools to log and track resident inquiries allowing the City to document progress and results. City Departments can now receive immediate feedback about their level of service via customer surveys and through generated reports.

DISCUSSION

Technology Services, along with city departments and the vendors, launched the CRM implementation in June of 2009. We formed two committees to involve both department heads and City staff. The first committee was a working group to help guide implementation as well as educate staff in the particulars of a CRM system. This committee met a number of times to address implementation questions and to form the matrix for routing. The second committee was made up of mostly department heads to assist with keeping our implementation milestones and deliverables on track.

In the course of the implementation, and at a juncture where the system was fairly well configured, Technology Services formed a resident focus group to give us feedback and guidance from a constituent's point of view. This group had five members and met several times to address issues that helped to refine the system.

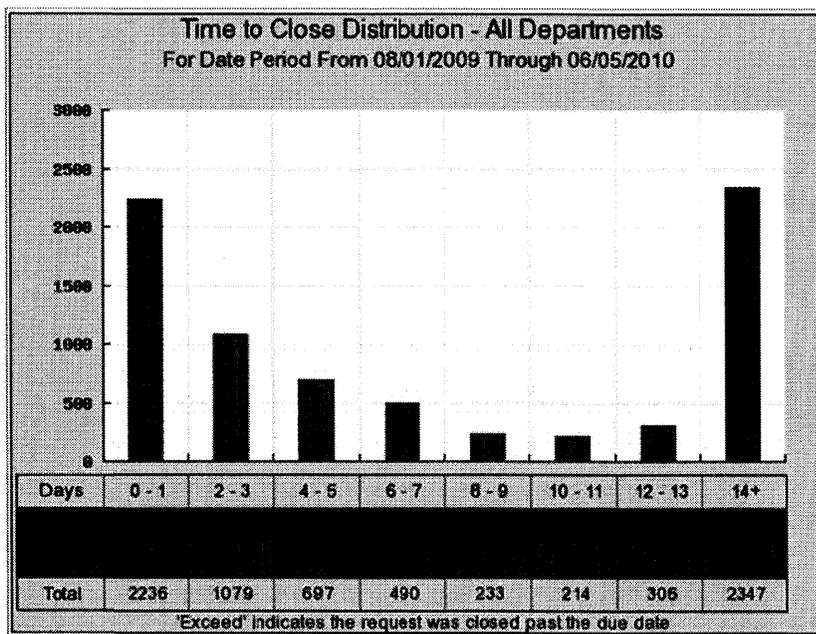
The system was "soft launched" to the public in August 2009. This entailed opening the system to use by residents without an official announcement or publicity campaign. This allowed residents to start using the system and allowed staff to pinpoint areas for refinement. The soft launch period was very helpful to staff and was successful with its objective of enabling staff to correct certain areas of workflow and procedures.

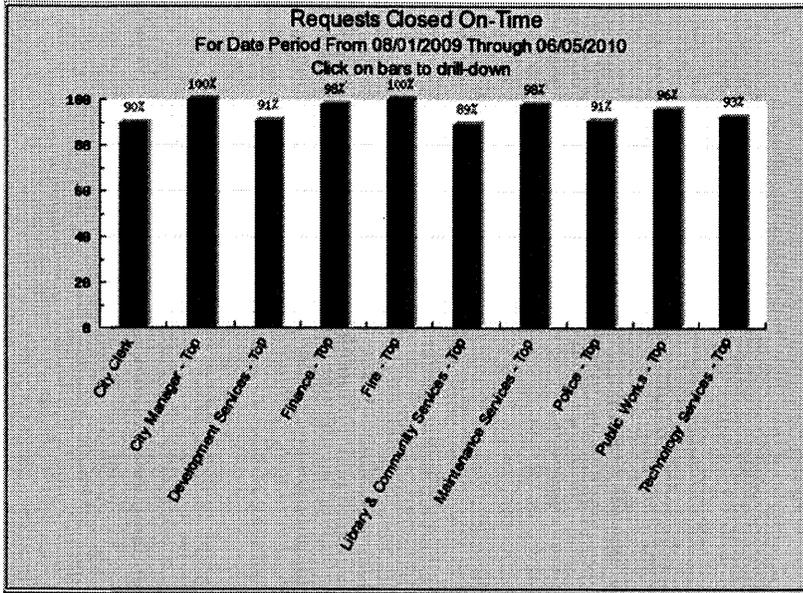
The inserted graphs are the actual graphical report and the excel spread sheet is the equivalent of the report in Excel.

	A	B	C	D	E	F	G	H	I
1	Time to Close Distribution - All Departments - For Date Period Through 06/08/2010								
2	Days to close request	0 - 1	2 - 3	4 - 5	6 - 7	8 - 9	10 - 11	12 - 13	14+
3	Exceeded due date	0	17	15	9	7	4	7	341
4	Met due date	2255	1070	682	481	226	208	299	2003
5	Total Requests	2255	1087	697	490	233	212	306	2344

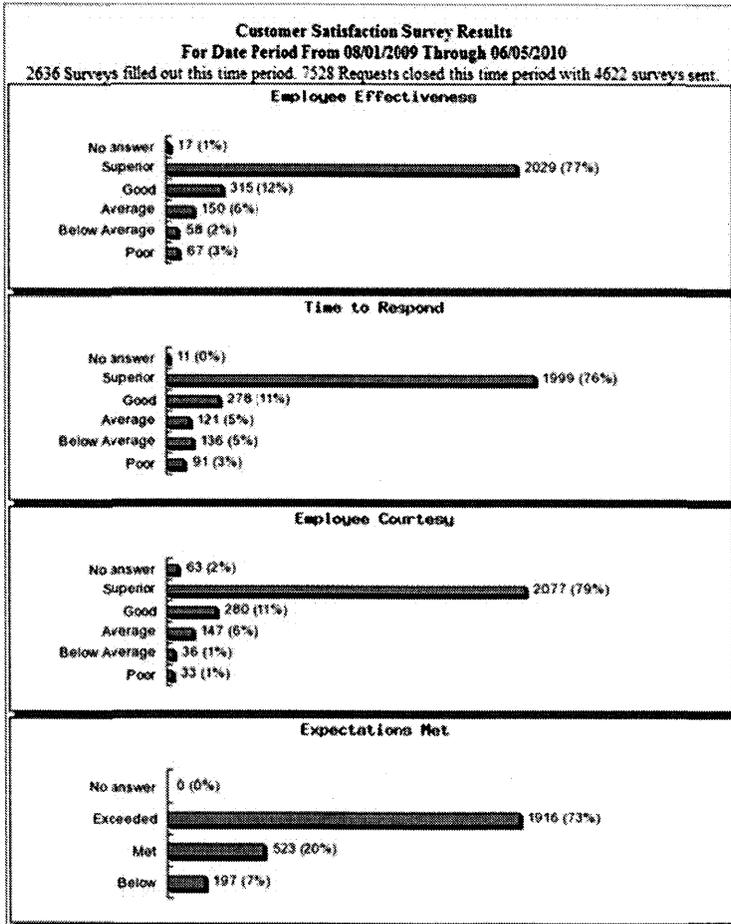
As of this report there have been a total of **9559** CRM requests filed in the system since the start and **8659** have been closed. Therefore 90% of all cases in the system have been closed.

- 94.7% of the requests have met their Level of Service goals.
- 69.2% of the requests have been processed in less than 14 days





Customer satisfaction results to this point:



The on-line results show that of those that responded to the survey 89% found employee effectiveness was above average, 87% found response time above average, 90% found employee courtesy above average and 93% of respondents found that their expectation were met or exceeded.

FISCAL IMPACT

The project has been funded through the general fund with an allocation of \$209,000 and was implemented within the allocated budget.

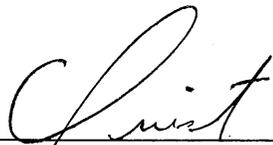
PUBLIC CONTACT

The system was officially released to the public on January 2, 2010.

SCHEDULE

The system will be continually refined to accommodate our residents.

Prepared by:



Clancy Priest, Technology Services Director

Approved by:



Fran David, City Manager



DATE: June 16, 2010

TO: Council Technology Application Committee

FROM: Clancy Priest, Technology Services Director

SUBJECT: Public Safety Computer Aided Dispatch/Records Management System
(CAD/RMS) Project Status

RECOMMENDATION

That the Committee review and comment on this report.

BACKGROUND

In 1989, the City of Hayward purchased a Computer Aided Dispatch System (CAD) and Records Management System (RMS). This system was purchased to provide support for public safety dispatch and the management of the related records and reports that resulted from police and fire responses. That system went live in 1991. In June of 2009 the City Council approved the acquisition of a new CAD/RMS from New World Systems using the procurement process undertaken by the City of Berkeley and piggy-backing on their contract.

DISCUSSION

The Public Safety Computer Aided Dispatch/Records Management System (CAD/RMS) project was begun in July of 2009 after a long process of due diligence by City staff and Council approval for the City Manager to negotiate and enter into a contract with New World Systems of Troy, MI.

Since Council approval, the following project milestones have been accomplished:

Business Process Documentation and Workflow Analysis	9/09 – 12/09
Contract Negotiated and Signed	7/09 – 12/09
New World Workflow Analysis with DeltaWRX	1/29/10
Pre-Kickoff Meeting	2/5/10
<i>Initiation Phase Completed</i>	3/5/10
Project Kickoff Meeting	3/23/10
Build Team Formation	3/24/10
Network Hardware Installed and Tested	3/25/10
Discovery of Applications, GIS Review and Network Review	3/26/10
Site Analysis and Discovery	3/26/10
Comparative Analysis Review	4/16/10

Staff Attendance of New World Systems Users Conference	5/16-18/10
Project SharePoint Site Launched	5/18/10
Project Plan Completed and Accepted	5/19/10
<i>Planning Phase Completed</i>	5/19/10
Met Bay Area New World Agencies to Determine Interface Strategy	5/25/10
Systems Assurance (Software Installation)	5/28/10
Submission of Custom Interface Requirements	5/28/10
Determination of Fire Station Alerting Strategy	11/09 – 6/10
Fire Station Alerting RFP Released	4/23/10
Fire Station Alerting RFP Responses Reviewed	6/1/10
Geofile (GIS) Submitted for Review	6/1/10

As shown in one of the milestones, the City's project management team met with other jurisdictions using or implementing the NWS CAD/RMS. These meetings have been helpful with various issues that are common between these agencies.

The meetings we have had are assisting all of the various agencies with the particular caveats concerning the numerous system issues and interfaces required by Alameda County as well as other public safety agencies that by law we must pass, and receive, information from. We are in the process of creating working groups to address all of the issues concerning these interfaces.

The outstanding issue of the status of the Fire Alerting System to be connected to the CAD system is on-going. As shown in the milestones, Fire Alerting has been addressed through a RFP process. The RFP was cancelled due to the response of only one of six vendors issued the RFP.

The approach that will be used to address Fire Alerting will be to upgrade and maintain our existing legacy hardware at all of our Fire Stations. A comprehensive review of the existing system is being performed by staff, and a vendor will be brought in to perform what changes and upgrades are determined by this process. New World Systems will write an interface between our existing system and their CAD to accomplish alerting.

The project team recommends that we use this scenario until we can determine what the best course of action is to completely replace the Fire Alerting system once technology and Fire Department needs have been refined. The complete replacement of the Fire Alerting system is needed at a future date to ensure the City has a state-of-the-art system that will ensure both reliability and take the Fire Department into the 21st century.

Once this process has been accomplished it will be brought forward to the full Council for approval.

FISCAL IMPACT

The project is currently within the projected budget.

PUBLIC CONTACT

None

SCHEDULE

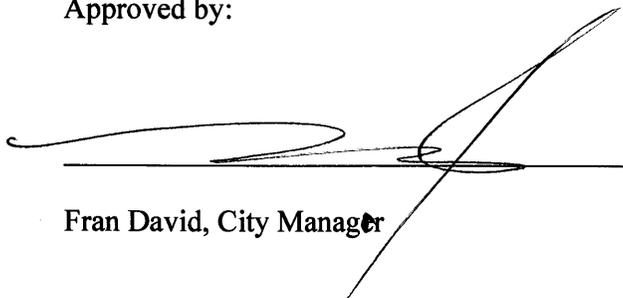
The project was projected to take 12 to 18 months from the date of the contract signing in December of 2009. The revised schedule has the completion of the project in November 2011 which will be approximately 24 months from contract completion.

Prepared by:



Clancy Priest, Technology Services Director

Approved by:



Fran David, City Manager