



HUMAN CAPITAL MANAGEMENT SOFTWARE:

Most modules now implemented,
but additional costs exceed \$3 million

October 2013

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CITY OF PORTLAND

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October 16, 2013

TO: Mayor Charlie Hales
Commissioner Nick Fish
Commissioner Amanda Fritz
Commissioner Steve Novick
Commissioner Dan Saltzman
Jack Graham, Chief Administrative Officer, Office of Management and Finance

SUBJECT: Audit Report – *Human Capital Management Software: Most modules now implemented, but additional costs exceed \$3 million* (Report #437)

The attached report provides the results our audit of the Human Capital Management (HCM) software within SAP, the City's new business system. The City began using HCM in June 2009 to perform important human resources activities, such as personnel administration, time management, and payroll.

We reviewed the HCM modules and functions in place in 2009, as well as the status of those planned but not implemented at that time. We also analyzed any additional costs incurred for the HCM software since June 2009.

We found that the City made progress toward maximizing its use of HCM. We also found that the City has spent \$3.7 million on HCM since June 2009. These expenditures cover a variety of services, including outside consultants and the correction of modules previously implemented. These costs are in addition to the \$47.4 million the City previously spent to implement the SAP system, as reported in our November 2010 audit, *Business System Software Implementation: Expensive, late and incomplete*.

Although much work remains as the City continues to work toward meeting its goals for HCM, most of the modules not available in 2009 have since been completed or are planned for implementation in the near future.

We appreciate the cooperation and assistance we received from OMF staff as we conducted this audit.


LaVonne Griffin-Valade
City Auditor

Audit Team: Drummond Kahn
Janice Richards

Attachment

HUMAN CAPITAL MANAGEMENT SOFTWARE:

Most modules now implemented, but additional costs exceed \$3 million

Summary

In June 2009, the City began using the Human Capital Management (HCM) software within SAP, its new business system, to manage human resources and payroll processing. At that time, the HCM software did not contain all of the functions that had been planned.

As we reported in our November 2010 audit report, *Business System Software Implementation: Expensive, late and incomplete*, City managers deferred or dropped functions in the new system to meet revised schedule and functionality goals. We stated that the City's project to select and implement SAP cost over \$47 million, more than triple the original planned cost of \$14 million.

Since it began using SAP in late 2008, the City has entered into more than 20 contracts with external consultants to support the new system. These contracts covered all SAP components, including financial, human resources and payroll, reporting, and technical support. The contracts represent costs beyond the \$47 million the City already spent to implement SAP. The additional contracts also included more software licenses and outside services the City purchased, rather than using SAP functions. The value of the contracts included more than \$6 million specifically targeted for HCM. Through June 2013, the City paid out \$3.7 million of the additional \$6.3 million costs it could spend under existing contracts for HCM projects, support, services, and licenses.

We evaluated the City's use of HCM in 2013 compared to the goals it set in 2009 when it prepared to implement the software Citywide. We considered the modules and functions in place in June 2013 compared to the original plan. For modules and functions not yet in place, we reviewed the City's timelines and expected costs for outside consultants and vendors. For modules and functions implemented after the City began using HCM, we reviewed the extra costs to make those features available as intended.

We found that since June 2009, the City has made progress in using the HCM software as its primary payroll and human resources system. Seven of the nine planned modules were not in place or working as intended in 2009. But by 2013, five of the seven had been implemented or corrected, while two remained not implemented. Most of this progress was made after January 2012, when the City hired a new manager for the division that maintains the SAP system.

Today, the City uses HCM to process payroll, maintain employee personnel data, track employee work time, manage City positions and the City's organizational structure, and perform other tasks. However, the City continues to work toward accomplishing its goals for the system. In addition to incurring higher costs as it deferred implementing HCM, the City may also further delay meeting the original goals for the new system – to improve access to information, standardize City processes, and eliminate secondary systems.

Several City bureaus operate and maintain SAP. As the business process owner, the Bureau of Human Resources (BHR) provides oversight of the HCM modules within SAP to ensure that City business requirements are met and employees are correctly paid. The Enterprise Business Solution Division (EBS) maintains SAP functionality for the City and supports BHR and other City SAP users. The Bureau of Technology Services (BTS) supports EBS and handles SAP security, development, and other technical aspects. EBS and BTS sometimes hire outside consultants to assist with these services.

Audit Results

When the SAP system “went live” in June 2009, only two of the four implemented HCM modules and functions worked as intended. Since that time, the City has incurred costs to change functions it previously implemented or for external consultants to provide those services outside of HCM. The City entered into contracts to spend an additional \$6.3 million, and has spent \$3.7 million of this amount. Future projects are also planned to address some of the remaining needs.

Figure 1 HCM modules

Module	As of June 2009	As of June 2013
Personnel Administration	Implemented	
Organizational Management	Implemented	
Time Management	Implemented <i>(did not work as intended)</i>	Implemented <i>(corrected)</i>
Payroll	Implemented <i>(did not work as intended)</i>	Implemented <i>(corrected)</i>
Employee Self Service	Not implemented <i>(planned)</i>	Implemented
Manager Self Service	Not implemented <i>(planned)</i>	Implemented
Benefits Administration	Not implemented <i>(planned)</i>	Not implemented <i>(planned)</i>
Personnel Development	Not implemented <i>(planned)</i>	Implemented
e-Recruitment	Not implemented <i>(dropped in 2010)</i>	

Source: Audit Services Division analysis

Two of nine modules planned were available in June 2009, worked as intended, and continue to meet expectations.

Of the nine modules planned, two were implemented in 2009 and met the City’s expectations – the Personnel Administration and Organizational Management modules. Personnel Administration is used to manage and store employee information, while Organizational Management is used to manage positions and the overall organizational structure.

Two of nine modules planned were available in June 2009, did not work as intended, but are now corrected.

Two of the modules planned and implemented in 2009 did not meet the City’s expectations – the Time Management and Payroll modules. The City uses the Time Management module to manage employee work time and attendance and uses the Payroll module to calculate payroll for City employees. Since the City began using HCM, employees reported numerous problems relating to time management

and payroll. HCM users reported problems with calculating regular, overtime, holiday, and other pay, along with problems tracking sick leave, updating work schedules, and reporting deficiencies.

It also took outside consultants more than six months to program collective bargaining contract changes into SAP after labor negotiations in 2010. The City paid more than \$200,000 in consulting fees for the work. These costs are included in the technical support costs the City incurred since June 2009, as noted in Figure 2.

Figure 2 Additional HCM costs contracted and paid as of June 2013

	Contract Value	Paid
Provide technical support	\$2,450,000	\$2,234,033
Implement modules previously deferred	365,498	357,238
Reconfigure modules previously implemented	1,218,750	873,562
Obtain services outside of HCM	2,304,220	209,832
Totals	\$6,338,468	\$3,674,665

Source: Audit Services Division analysis

Staff members responsible for employee time entry noted that it took longer to perform tasks related to time keeping. Some bureaus added time entry positions or continued to use time management systems separate from HCM.

We were told that when the new EBS manager started in January 2012, there were 155 unresolved help desk requests relating to time and payroll. The City was spending close to \$1 million per year in consultant fees to address the requests, but only resolving 10 to 15 each year. These costs are also included in the technical support costs in Figure 2. Most of these costs and other technical support costs listed in Figure 2 occurred prior to the new EBS manager's arrival.

The EBS manager estimates that 35 percent of the SAP programming previously done for time evaluation and 10 percent for payroll was inaccurate. According to the manager, this meant that for certain payroll conditions and schedules, City supervisors and managers could not rely on HCM to properly calculate payroll. Instead, they used manual calculations or other means to determine appropriate pay.

To address these challenges, the City started a project in October 2012 to re-implement the time evaluation function within the Time Management module. The project was expected to improve the accuracy of both time evaluation and payroll and to resolve almost 250 identified pre-existing conditions.

The Time Management project was completed in June 2013. As shown in Figure 2, through June 2013 the City paid over \$870,000 of the \$1.2 million contract for this project to reconfigure modules previously implemented. According to the EBS manager, the project met expectations, improved the accuracy of both time evaluation and payroll, and was completed under budget.

Five of nine modules planned were not available in 2009, but by 2013, three are available, one is still planned, and one has been dropped.

The City intended to implement five additional HCM modules, but none were available when the City began using its new system in June 2009. For some of these modules, the City made progress on making them available to City employees using HCM. For other modules, the City deferred or changed its goals and obtained the services outside of HCM.

Figure 3 Status of HCM modules not available in June 2009

Module	As of June 2009	As of June 2013	Completion date
Employee Self Service	Not Implemented - deferred	Implemented	Improvements completed in June 2013
Manager Self Service	Not Implemented - deferred	Implemented	June 2013
Personnel Development (learning function)	Not Implemented - deferred	Implemented	May 2013
Benefits Administration	Not Implemented - deferred	Services obtained from outside contractor and contracted through June 2015. Future project to implement this module.	Benefits module possibly implemented by June 2015.
e-Recruitment	Not Implemented - deferred	Services obtained from outside contractor and contracted through December 2015. This module will not meet City needs and the City does not plan to implement this module.	

Source: Audit Services Division analysis

Employee Self Service - One of the modules not ready in June 2009 was Employee Self Service (ESS). At that time, it was available only as a pilot program to certain users. Since then, EBS has rolled out ESS to all bureaus Citywide. As of June 2013, many City employees were able to use ESS to enter their work time, view their pay statements, update their address information, and perform other tasks. Additionally, EBS completed a project to improve ESS by making time entry more efficient for City employees.

However, some bureaus are not able to effectively use ESS. These bureaus include Police, Fire, Parks, and other bureaus where a large number of employees work in the field and have limited access to computers with HCM. Field staff at these bureaus first track their work hours using paper timesheets or other systems, and time entry

staff then input the information into HCM. The City determined that ESS will not meet these bureaus' needs and expects to implement a timekeeping solution outside of HCM to address this gap. This separate time capture project is expected to be completed by June 2014. Costs for this project were unknown as of June 2013, but are expected to include software, licenses, and implementation.

Manager Self Service - The Manager Self Service (MSS) module was also not available in June 2009. As a result, HCM did not require electronic supervisory approval of employee time before issuing a paycheck. In June 2013, the EBS Division implemented MSS, which allows supervisors and managers to electronically review and approve employee work hours entered into ESS. With ESS and MSS fully implemented, City employees are able to use these modules for electronic submission and approval of leave requests and timesheets.

EBS Division staff completed most of the work on the ESS and MSS projects. However, the City incurred \$41,000 in costs for outside consultants to perform some of the leave approval work. These costs are included in the \$357,000 the City paid to implement modules previously deferred since June 2009, as shown in Figure 2.

Personnel Development - When the City began using HCM, the Personnel Development module was not available. The City purchased the training function of this module and some of the user licenses as part of the \$47 million in SAP implementation costs. The City planned to use this module to track required certifications for certain bureaus.

Since June 2009, interest expanded around computer-based training, or "e-learning." E-learning is a teaching and learning system designed to be carried out remotely by using electronic communication. Benefits include greater flexibility and less cost than traditional learning methods.

The Bureau of Human Resources (BHR) previously contracted with a vendor to provide e-learning services. When the vendor stopped supporting the City's version of the learning software, BHR managers considered using HCM, and obtained an external consultant to implement the training function within the HCM Personnel Development module. In April 2012, the City spent an additional \$200,000

to purchase more licenses and maintenance services for the training function. The training license and maintenance costs are included in the \$357,000 the City paid to implement modules previously deferred, as shown in Figure 2.

In early May 2013, EBS announced that the new function, CityLearner, was available. However, employees quickly noted problems with CityLearner that impacted their ability to effectively use it. EBS quickly resolved one issue, but another issue required additional work and testing. Through June 2013, the City paid over \$100,000 in consultant fees for this project, as part of the total costs to implement modules previously deferred, shown in Figure 2.

Benefits and e-Recruitment - Two modules were expected to be available when HCM went live in June 2009. The City purchased these two modules – the Benefits and e-Recruitment modules, but these modules were later dropped from go-live as the City simplified the project in order to meet revised schedule goals. Today, the City obtains benefits and recruiting services from outside vendors.

After the City began using HCM in June 2009, it continued to obtain benefits administration services from an outside contractor. In early 2011, when these services were about to end, BHR reconsidered the Benefits module. This module would enable the City to manage employee enrollment in benefit plans as well as enable SAP payroll to process benefit deductions and contributions through its integration with the Payroll module.

BHR decided to contract with a new external provider in an effort to replace the services previously provided by the old contractor more quickly than implementing the Benefits module. The total amount of the new contract is \$1.25 million for three years, with two optional annual renewals increasing the amount to \$2.1 million – nearly all of the \$2.3 million in total contract value for outside services shown in Figure 2. After seeing a version of this report, BHR managers informed us that as of the end of July 2013, the City had paid almost \$80,000 on this contract and expected to spend less than half of the total contract amount.

According to a BHR manager, the City will look at the viability of using the SAP Benefits module once the service with the new benefits vendor is stable. The EBS Division included the Benefits module as a possible future project in its project schedule, with an estimated completion date of June 2015. As of June 2013, this project had not started.

The HCM e-Recruitment module is designed to manage the recruitment process, including planning and budgeting, and attracting, hiring, and retaining employees. Although the City originally planned to implement this module, the City changed its goals and no longer plans to implement e-Recruitment.

According to a BHR manager, City staff, in conjunction with consultants implementing the City's SAP system, reviewed the City's needs for e-recruiting. The review concluded that the HCM e-Recruitment module would not meet the City's needs. The City contracted with an outside vendor experienced with government employers to provide e-recruiting services through December 2015. Most of the more than \$200,000 the City paid for outside services through June 2013 are toward the City's contract for e-recruiting services, as shown in Figure 2. The costs for the outside e-recruiting services are expected to continue because BHR considers them a better fit for the City than the e-Recruitment module.

Other matters

Although this report is focused on HCM, we noted during our audit that the City was working on another SAP project – reporting. The SAP reporting function allows users to obtain information from the system, depending on selected criteria.

In addition to the nine HCM modules described above, the reporting function was expected to be available when the City began using the financial component of its new system in November 2008, followed by HCM in June 2009. The City did not achieve its initial goals for implementing reports.

When the City started using SAP in 2008, planned reports and reporting functions were not fully available to users. Further, employees were not sufficiently trained on how to use the reports that were

available. While the City was working to implement SAP, City bureaus were told that a future tool would meet reporting needs. HCM and other standard reports were not released to users.

To address the reporting limitations, the City hired an outside consultant to implement "Business Objects" (BOBJ), an SAP reporting tool, and to develop reports. The EBS Division began rolling out this function in April 2011. However, the project was discontinued after approximately 14 unique reports were developed. Thirteen of these reports were financial and one was an HCM report.

According to the EBS manager, the project was temporarily stopped because it was too expensive and the City did not have a strategy for developing reports. The City paid more than \$600,000 for the BOBJ project without having a reporting strategy in place. These costs included the BOBJ software and fees for outside consultants working on the project. This \$600,000 expense is in addition to the HCM costs reported in Figure 2. The EBS manager estimated that each BOBJ report cost about \$80,000 to \$90,000 in consultant fees, and indicated the consultants were not meeting expectations.

The EBS Division and BHR took other steps since 2009 to improve reporting limitations. EBS developed a report tree, which is a hierarchical structure in SAP that enables users to see standard and custom reports. BHR developed custom reports that allow bureaus access to payroll detail. BHR also identified standard reports they thought would be most useful to employees. They placed the standard and custom reports into the report tree, to make them available to City HCM users. The report tree also includes financial reports.

Additional work remains on the City's SAP reporting function. According to the EBS manager, the City still needs to assess reporting needs Citywide and develop a reporting strategy. Once the strategy is in place, they can determine how best to meet City SAP reporting needs. As of June 2013, the EBS manager was working on the strategy. The reporting project is expected to be completed by December 2013.

Conclusion The City has made progress toward maximizing its use of the SAP Human Capital Management software since it began using the software in June 2009. Some modules available in 2009 have worked as intended, while others had to be corrected. Most of the modules not available were completed after 2009 or are planned for future implementation. However, much work remains as the City continues to try to meet all of its goals.

Objective, scope and methodology The objective of this audit was to review the City's use of the Human Capital Management (HCM) component in 2013 compared to the goals it set out to accomplish when it prepared to implement the new system. We compared modules and functions in place in June 2013 to modules and functions originally planned when the City began using HCM in June 2009.

To accomplish this objective, we interviewed City leaders responsible for managing HCM to ensure City business requirements are met, employees are correctly paid, and supporting the City's HCM users. These included the Enterprise Business System (EBS) Division manager and the Bureau of Human Resources (BHR) Operations manager.

We reviewed EBS project schedules, presentations, and meeting minutes. We obtained cost information from invoices and payment data from the City's SAP system. We reviewed division budgets and organizational charts, contracts, and BHR processes and forms. We examined HCM problems reported by City employees using the system, results of a user satisfaction survey conducted by the EBS Division, and an evaluation of the City's use of SAP prepared by an external consultant. We also reviewed information from SAP and other sources to obtain an understanding of the HCM modules, their purpose, and how they integrated with each other.

We conducted this performance audit in accordance with generally accepted government auditing standards. These standards require us to plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

RESPONSES TO THE AUDIT



Office of Mayor Charlie Hales
City of Portland

October 10, 2013

Auditor Griffin – Valade
Portland City Hall
1221 SW 4th Avenue Room 140
Portland, OR 97204

Dear Auditor Griffin – Valade,

Thank you for the opportunity to provide comment on the *Human Capital Management Software: Most modules now implemented but additional costs exceed \$3million*. I appreciate the work you have done in assembling this report which provides an assessment of the City's accomplishments and shortcomings in the implementation of the Human Capital Management (HCM) software.

Your report accurately highlights the mixed results the City has experienced throughout the implementation process.

As is the case with many endeavors of this scale and scope, complications often arise. This project was no exception and throughout implementation Bureau directors were called upon to amend the process in order to deal with these challenges. Many of these initial hurdles have been cleared, and as your report indicates, the majority of the 2009 goals re: module implementation have been met. In the process, the City has moved away from a largely paper based system to an electronic one.

As the City moves forward, the lessons learned from the HCM project can and should be applied to other projects. Toward that end, I have directed our Chief Administrative Officer to produce an After Action Report with "Lessons Learned" to share with all Bureau Directors.

Thank you again for this informational report.

cc: Jack Graham



CITY OF PORTLAND

OFFICE OF MANAGEMENT AND FINANCE

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DATE: October 7, 2013
TO: LaVonne Griffin-Valade, City Auditor
FROM: Jack D. Graham, Chief Administrative Officer
SUBJECT: Human Capital Management Software Audit

Thank you for the opportunity to respond to "Human Capital Management Software: Most modules now implemented." I appreciate the work done by Audit Services in developing the report and its conclusions. Thank you for incorporating feedback from our discussions.

I am pleased that Audit Services recognizes the successful implementation of the SAP HCM modules that meet the City's needs (and the plans for the one remaining module), supports our current efforts, and does not have any recommendations at this time regarding HCM implementation.

Improvements to the Time Management and Payroll modules and several HCM modules have been implemented over the past twenty months by the Enterprise Business Solutions Division (EBS) SAP Support Manager, the EBS team, and our partners throughout the City. EBS has overcome the challenges and frustrations of a few years ago, to successfully bring a broad range of enterprise-wide human capital management functionality to the City.

The following provides some more information that was outside the scope of your review, but helps delineate the changes that have been implemented in the past couple of years.

In June 2009, the City began using the Human Capital Management (HCM) software within SAP to manage human resources and payroll processing. As has been well documented in previous audit reports and other communications over the past several years, there were significant costs and challenges with the City's implementation of HCM.

Challenges with the Time Management and Payroll modules resulted in significant continuing expenditures to address recurring issues after "go live". Consultant work to correct recurring problems with the Time Management and Payroll modules (addressing the symptoms, rather than the underlying causes) accounts for almost \$2 million that was spent in the first few years after implementation, comprising over half of the actual expenditures cited in the audit.

As noted in the audit, one of the most significant changes in EBS was the hiring in January 2012 of a new EBS SAP Support Manager, Satish Nath, with extensive SAP public sector experience. EBS has re-evaluated the City's SAP needs, expanded its work plan, and implemented a variety of operational improvements to deliver on the original goals of the SAP project as well to respond to the evolving needs of our City customers. The EBS SAP Manager and the EBS team (along with BTS) have worked

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closely with the Bureau of Human Resources and customer bureaus to implement significant improvements to HCM functionality.

The Time Management and Payroll Project completed in June 2013 was designed to address the root causes creating the ongoing issues with the implementation of the Time Management and Payroll modules. The one-time investment in consultants for this project not only corrected the 200+ individual problems identified by customers, but also created a stable platform for future enhancements and will reduce ongoing expenditures. The project came in on time, under budget, and has been applauded by customers.

In addition, in the past year and a half, EBS successfully implemented the three additional SAP HCM modules cited in the audit (Employee Self Service, Manager Self Service, and Personnel Development/eLearning) as well as adding new functionality, including the FMLA Workbench and a new ESS Timesheet for ease of time entry which is now being used by over 2500 employees throughout the City.

There are two originally planned HCM modules that have not been implemented. The City determined that SAP e-Recruitment would not meet the City's business needs and has successfully implemented NEOGOV instead. SAP has agreed to provide a credit for the costs of the e-Recruitment module.

In 2013, the City implemented an interim benefits solution with an outside vendor to continue to provide for critical benefits administration functions. The cost of these services is similar to the legacy system that it replaced, and as noted in the audit, is expected to cost half of the potential contract amount described in the audit. EBS and BHR have initiated work to implement the SAP Benefits module.

Outside of HCM, EBS has made other SAP system enhancements in 2012 and 2013, including implementation of the SAP Treasury Module, implementation of electronic vendor and employee reimbursement payments, and improved reporting functionality. EBS has also improved training and change management for employees throughout the City, has developed "in house" skills within EBS, and has reduced reliance on outside consultants and ensured knowledge transfer from consultants to City employees.

I am proud of the work being done by Satish Nath and his team and appreciative of the time and dedication of numerous City employees who have participated in our efforts to improve SAP HCM functionality.

Thank you for your evaluation of our progress.

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Human Capital Management Software: Most modules now implemented, but additional costs exceed \$3 million

Report #437, October 2013

Audit Team Member: Janice Richards

LaVonne Griffin-Valade, City Auditor
Drummond Kahn, Director of Audit Services

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