



The City and Schools of Newport, RI

INTEGRATED ENTERPRISE SOLUTION NEEDS ANALYSIS



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CHAPTER 1

Executive Summary

This report provides an assessment of the City of Newport's need for an enterprise solution by the Government Finance Officers Association (GFOA). Survey results, on-site interviews with Newport subject matter experts, system observations as well as market research and GFOA experience gained from working with similar clients contributed to this analysis and the associated recommendations. Key findings of this report include the following:

- **A technology environment characterized by a “separation of systems”.** For a myriad of reasons including an incomplete implementation of the City's existing Enterprise Resource Planning system (ERP), system limitations and process complications. Newport utilizes a host of technology solutions to enable their business processes. However, this has led to several current problems:
 - Reporting of enterprise-wide and component unit data is very difficult and labor intensive since staff must query data from many disparate systems and incorporate the data into reporting spreadsheets.
 - Data lacks timeliness, and therefore reliability stemming from the inability to directly access the required systems and the inflexibility in extraction and reporting of information.
 - Employees spend an inordinate amount of time maintaining the spreadsheets or accommodating business processes that are designed to accommodate the disparate systems.
 - Not all users have access to the systems; therefore, compounding the perceived problem that reporting data is limited.
 - Newport staff must spend a tremendous amount of time to ensure effective business operations and comply with financial reporting requirements.

- **Low levels of satisfaction among end-users with the current ERP financials application.** While Newport utilizes the ERP application for most of its financial applications, the most striking result from the end-user survey was the low level of satisfaction with this system's ability to perform function specific business processes.

- **Higher levels of satisfaction with “best of breed” systems despite enterprise-wide drawbacks.** Users expressed higher levels of satisfaction with applications designed for specific operational purposes. While these systems enable operational processes well, their lack of integration with the financial system contributes to the problems described above. In addition, two significant risks should be noted:
 - Newport relies on a single consultant to maintain the payroll system (which was first installed in 1978). This is a high-risk situation given the concentration of knowledge in a single person and the critical nature of the program.
 - The application which includes separate tax administration, tax collections, utility billing, sundry billing, parking stickers, rehabilitation loans and permits and inspections modules is supported by a small vendor which only serves

Rhode Island clients. Given the amount of support required and the likelihood that this vendor will eventually decide to cease providing support, this also represents a source of risk to the government.

- **A mature market exists for ERP solutions for smaller governments.** The current market for ERP solutions for smaller governments, as described in Chapter 12, has matured and is rich in functionality and features that should be able to address Newport's current system limitations that have lead to its use of disparate systems. In addition, recent advances in third party hosting of these applications would address Newport's resource constraints in maintaining such complex enterprise systems.

In GFOA's determination, Newport requires an integrated technology solution in order to address current unmet needs and the government's disparate technological environment as described in the findings above. This can best be achieved by implementing a new ERP system.

Given the current market offerings, GFOA recommends that Newport develop a procurement strategy that enables a comparison of ERP systems against the government's business requirements to ensure that the procured system can meet Newport's critical business processes. Best of breed applications can be accommodated in this strategy through the use of interfaces; however, GFOA recommends that Newport use this opportunity to integrate the human resources/payroll, tax, utility billing, permit/licensing and financial systems.

Today more than ever, public governments are realizing that new technologies such as ERP systems can enable organizations to process transactions more efficiently as well as report information more effectively. In such an environment, staff can focus on more value-added activities. With a new ERP system, Newport has the potential to achieve these gains. However, while modern technology can provide public agencies with tremendous opportunities and benefits, the cost and magnitude of these initiatives require careful consideration and planning. The technology strategy and choices of an organization can have a long-term and lasting impact. It is GFOA's intention that this report will assist Newport in making these decisions.

CHAPTER 2

Introduction

This report outlines an enterprise solution strategy for the City of Newport, RI. Based upon an internal review of existing systems and the growing needs of the organization, City administrators determined the capacity of their current systems are no longer sufficient to meet current business needs. The Government Finance Officers Association (GFOA) was engaged to validate the City's initial assessment and to help the organization develop an enterprise systems strategy.

The City's current enterprise computer architecture falls into four categories of system solutions. The main financial system is an older enterprise resource planning (ERP) software package. Although the vendor offers a modern package with more functionality, the City has not been able to update the package because it is heavily customized. The Human Resources Package consists of a Payroll mainframe package that has been extensively customized. Although the City tried to incorporate this functionality into the main ERP solution a number of years ago, the effort failed and the City continues to maintain the two systems separately. The City also purchased several commercial-off-the-shelf (COTS) software packages, which provide specialized functionality such as utility billing and tax collections. These packages have also been extensively customized. GFOA classified the COTS solutions as the third category. The final set of systems consists of the spreadsheets, databases, and other manual records employees keep to support their functions.

The City operates three major lines of business, each with their own unique challenges¹. The City's utilities are responsible for supplying water and wastewater treatment in and around the City of Newport. The water utility is regulated by the State Public Utility Commission and must report activity to the State on a monthly, quarterly and annual basis. The City of Newport School District also has unique challenges. This side of the City government, although accounted for as special revenue fund, behaves like another government within the City. Principals, with semi-autonomous powers must have the flexibility to manage their schools while the District needs to maintain the capability to operate all of the City's schools. Like the Utility Division, the School District must also provide certain reports to the State and Federal governments. The City's primary government is responsible for providing administrative support to the Utility Division and School District as well as providing other services to the citizens. A future enterprise solution must satisfy all three lines of business.

GFOA presents several key findings in our assessment of the City's current enterprise systems. First, users were generally dissatisfied with the older systems because these systems do not provide necessary functionality, analysis capability, and reporting, which had been customized several times to meet critical needs. Second, users were more

¹ For the rest of the report, "Newport" will be used to refer to the entire organization including all three business lines. "The City" will be used to refer to municipal operations; the "Schools" will be used to the public school district and the "Utility" to water and wastewater operations. As needed, the names of specific Newport departments will also be utilized.

satisfied with the COTS solutions, particularly the tax collection software package and the utility billing package. Third, although users kept some records for “easier access to data” or to “accommodate their current business processes”, they were spending an inordinate amount of time maintaining these systems and their jobs could probably be made easier if they had access to the existing systems, better training, and a re-thinking of their current business processes. The software issues can be relatively easily solved by upgrading packages or replacing software; however, change management related to data access or re-thinking business processes will present Newport with greater challenges.

GFOA’s report details the methodology and analysis of the technology and business process in Newport and where the deficiencies existed. GFOA then evaluated the environmental infrastructure and how the strategic five year plan fulfilled some of the unmet needs. The vision of many of the key staff in the city and school was captured, analyzed, options considered and recommendations made. Further, an implementation strategy has been proposed.

GFOA performed a Technology Assessment of possible solutions, discussed the steps necessary to prepare for a new system, proposed a reallocation of resources to support the new system, and recommended a procurement and implementation schedule.

Extensive Market Research was performed of possible vendors, an executive summary of an end-user survey was developed and analyzed, and other documentation has been provided for Newport’s evaluation purposes.

CHAPTER 3

Methodology

GFOA used a tiered approach to gather data for this analysis. A general survey was distributed to a representation of Newport’s user community to identify general issues and requirements. Follow-up interviews were conducted by GFOA analysts with various City departments, which included the School District and the Utility Division. In addition to the interviews, GFOA observed several procedures that involved the current systems, which was defined as existing software, desktop applications, and even paper processes currently being used to support functions. Each of these methods is described briefly.

On-line survey. Prior to site visits, GFOA issued an on-line survey to representatives of the Newport user community to gauge issues and to identify the major functional systems. The survey measured satisfaction of the current systems and also solicited input about what users would like to see in a future system. The survey also asked users to identify their major systems as well as any other system they use to support their job function. Respondent information was kept confidential.

Functional Interviews. Interviews were conducted with Newport departments in joint sessions to gain a better understanding on the use of the systems identified in the survey and to gain a better understanding of the operations and business needs of each department.

Observations. In some instances, GFOA analysts needed to observe business processes and business systems in operation. Special attention was given to processes and systems where subject matter experts reported they were generally satisfied or very dissatisfied with the processes or where further clarification was warranted after assessing the survey data and completing the interviews.

Market Research. The market research GFOA conducted examined how technology can improve business operations, by identifying the solutions available in the market place and becoming familiar with how similar organizations like Newport are using advancements in technology in the government sector. By utilizing GFOA documents and experience as well as a recent ERP vendor survey, the current state of the vendor market will provide the city and schools of Newport with an understanding of the current trends in the ERP marketplace and how the various solutions may or may not meet their business requirements.

The following chapters are based on this research and will guide Newport in deciding whether or not to procure an ERP system. Making an informed decision is critical so that the organization can continue to meet current and future needs while providing enhanced service to the citizens of Newport.

CHAPTER 4

Functional Assessment

This chapter evaluates how well Newport's technology systems are meeting its operational needs. An inventory of current systems is presented followed by an analysis of each functional area based on the results of interviews and group discussions with Newport staff, survey data, industry research, and system observations completed by GFOA consultants. The key objectives of GFOA's research were to learn how the various systems work together, to determine the extent to which the organization's needs are being met by the current systems, and to identify the unmet requirements that a future financial system must address. By analyzing the current system, GFOA believes that Newport will be better prepared to establish strategic priorities in deciding whether to embark on a new ERP project.

Inventory of Current Systems

The City's main technology systems can be divided into financial accounting, human resources/payroll, and operations. The main financial application resides in a networked program called GEMS, which was designed as a commercial ERP package

but functions in Newport only as a financial application. Personnel records accounting and payroll are housed within a VAX mainframe application called ADMINS. Operational systems include the Micromain work management system; Vision, utilized for tax assessment; and Opal, utilized for tax administration, collections, utility billing, sundry billing, rehabilitation loans, parking stickers and building inspection and permits. Table 1 lists what GFOA considers to be Newport's main source systems.

Table 1 Newport Main Source Systems

Categories of Systems	Application	Role
Financial Accounting	GEMS	General Ledger, Accounts, Budget ² , Payable, Accounts Receivable (revenue accounts only), Purchasing
Human Resources/Payroll	ADMINS/VAX	Payroll and basic human resource management
Operational	Micromain	Fleet management and work Order tracking
	Vision	Tax Assessment
	Opal	Tax Administration Tax Collections Building Inspections and Permits Utility Billing Sundry Billing Rehabilitation Loans Parking Stickers

The GFOA end-user survey also documented the extensive use of standalone systems. Stand-alone systems are smaller functional applications or desktop applications used to supplement (or even supplant) source systems. Their widespread use is generally symptomatic of source-system limitations or business process complexities. In 13 of the 14 functional areas surveyed, stand-alone systems were reported ranging from Microsoft Excel spreadsheets and Access databases to functional applications such as the GasBoy fuel and account-monitoring program. A summary of the inventory is provided in table 2.

Table 2 Standalone Systems

Department	Standalone systems used	Reason why standalone system is utilized
Accounts Payable	Excel, Accountability	GEMS cannot meet business requirements; information not reliable; cannot print laser 1099M
Accounts Receivable	Excel, Word	Customer account information is kept in OPAL and rolled up into revenue accounts in GEMS which requires Excel worksheets due to the lack of interface between the systems.
Benefits Administration	Third party software	Provided by health providers. Currently no HR system.
Budget	Excel, Word	GEMS budget module cannot accommodate schools and city. Limited functionality and reporting. Lack of publishing capability. ADMINS and GEMS not interfaced.

² Only the Schools are currently using the GEMS Budget module.

Business Licenses	Access, paper documents, VAX	Lack of electronic workflow (approval routing); lack of integration between databases. Limited tracking ability.
Fixed Assets	Excel, FileMaker	Fixed Assets module never implemented so functionality not available. Most school department staff not part of city network.
Fleet	Gas Boy	Provides fuel account monitoring. Micromain (fleet system) not interfaced with GL
Inventory	Access	GEMS does not allow viewing access of requisitions and PO's by department, account, etc.
Payroll	Excel, AccuPrint, Accountability	No interface to the GL. Limited tracking by system; inability of system to print in a laser format; Unsatisfactory system tracking and production of W-2's and 1099Rs and transmittal files to IRS and SSA. (Accountability performs this functionality better than the VAX system although all information is tracked in the VAX)
Purchasing	Excel, Outlook, Access, NovusVendor, Accuprint	GEMS requisition system not implemented city-wide. Cannot run PO's by department easily. System can not meet business requirements or have forms printing capability
Time & Attendance	Excel	GEMS Payroll never implemented because couldn't meet business requirements. Limited analytical and reporting capability.
Utility Billing	Word, Adobe, Excel	The OPAL System does provide reporting and query capabilities but it is not-user friendly to non-technical users.
Work Management	Excel	Management time not always best tracked via Micromain.

In nearly every case reported in the survey, the existence of these standalone systems is a result of shortcomings and limitations of the primary system. As will be discussed further, on-site visits confirmed that while stand-alone systems enable staff to overcome core system limitations, they result in manual, double-entry of data; provide limited analytical capabilities; require inefficient workflow processes and create little to no audit trail.

Analysis of Current Systems by Functional Area

The utilization of stand-alone systems is symptomatic of core system limitations. To better understand these limitations the survey results of module specific capabilities are first presented followed by a system analysis by functional area.

SURVEY RESULTS³

The end-user survey results provide a comparison of each system's ability to perform required business functions providing a general overview of user satisfaction. For each one of the 14 functional areas, survey respondents were asked to evaluate the core system for how it performed critical tasks. For example, respondents ranked the GEMS system for how it performed the following accounts payable tasks:

- a. Vendor Set-Up
- b. Vendor File Maintenance

³ Just a portion of the survey results are presented in the report. An Executive Summary of the complete survey can be found in Appendix G.

- c. Handling One Time Vendors
- d. Searching for Vendor Info.
- e. Invoice Processing
- f. Payment Processing
- g. Handling Vendor Discounts
- h. Handling Payment Holds
- i. Three Way Matching
- j. Warrant/Check Processing
- k. Vendor Performance Tracking and Analysis
- l. Check Reconciliation
- m. Ability to Store/Retrieve AP Transactional Detail
- n. Travel Advances and Expenditure Processing
- o. 1099 Processing
- p. Recurring Payments Processing

Each task was ranked on a five-point scale with a “1” being unsatisfactory to a “5” being exceptional. Table 3 shows the resulting average score for each functional area in which a core system is utilized and data was reported.

Table 3 Functional Systems by Average

Functional Area	System	Number of respondents	Average	Rank
Tax Administration	Opal	1	5.00 ⁴	1
Accounts Receivable	GEMS/Opal	5	3.60	2
Payroll	ADMINS	1	3.46	3
Work Management	Micromain	1	3.33	4
Utility Billing	Opal	3	3.03	5
General Ledger	GEMS	5	2.12	6
Accounts Payable	GEMS	3	2.01	7
Purchasing	GEMS	3	1.77	8

The rankings are from the highest scoring system (Tax Administration) to the lowest ranking (Purchasing). Of importance to note is that every core system that scored below average (3.0) is part of the GEMS application. Even for the Accounts Receivable system, while it was the second highest system, respondents who ranked the GEMS system scored it lower than those who scored the OPAL system.

It is important to note high levels of satisfaction with the OPAL Tax Administration and Collections modules. In the collections (accounts receivable) function, users were particularly satisfied with the system’s ability to maintain the customer file; search for customer information; facilitate data-entry; and calculate fees and penalties as all of these functions scored an average of 4.0 or higher. While only one person ranked the OPAL tax administration system, it received a score of 5.0 for each function that was ranked.

The Payroll, Work Management and Utility Billing systems demonstrated overall average user satisfaction – there were select functions which garnered less than

⁴ Only one respondent ranked the OPAL Tax Administration system resulting in the disproportionately high ranking. However, onsite interviews and system observations confirmed relatively high user satisfaction with the system.

average ratings for the Payroll and Utility Billing system which are displayed in table 4.

Table 4 Payroll and Utility Billing System Less-than-average Functions

Payroll		Utility Billing	
Time Entry	2.00	Customer File Maintenance	2.50
Labor cost distributions	2.00	Rate Flexibility and Set-up	2.50
		Rate modeling/forecasting	1.00

As stated above, the most striking result from this section of the survey was the low levels of satisfaction users have with the GEMS system's ability to perform function specific business processes. The following functional assessment will provide further detail on system capabilities and a better understanding of system strengths and weaknesses.

SYSTEM ANALYSIS BY FUNCTIONAL AREA

The success of any technical application is largely measured in its ability to enable business processes specific to each functional area. To assess these capabilities, GFOA synthesized the survey results along with its onsite interviews and system observations to determine system strengths and weaknesses. This analysis is provided below for each functional area and is followed by two sets of recommendations. The "Recommended Action" provides GFOA's recommended course of action in regards to replacing, upgrading or maintaining that current system. The "Recommended Steps for Optimization" are actions that GFOA recommends taking, regardless of the recommended action, in order to enhance the technical enablement of Newport business processes. In the following section, these recommendations are then integrated into a single organization-wide recommendation.

GENERAL LEDGER

Description. The primary system of record, or the general ledger, resides within the City's financial system – GEMS. GEMS is a commercial off-the-shelf software package that was installed by the City a number of years ago. The City has a maintenance contract but is not using a current version of GEMS. GEMS was recently purchased by Harris Computer and will not support the version of the GEMS software that is installed in Newport after 5/31/2006.

Survey and Interview Results. The City's general ledger subject matter experts are generally dissatisfied with the system. A critical weakness is the lack of interfaces between the General Ledger and other source systems – primarily the payroll system. Respondents indicate that reporting functionality within the system is the system's biggest weakness. For example, basic reports, such as trial balances, cannot be produced directly from the system. Users must instead run sequence files that must be laboriously rewritten every year as well as maintain separate spreadsheets to produce trial balances and most financial reports. This is problematic not only because it is a

labor-intensive exercise, but also because it requires special training so that there are very few people in Newport with the ability to run these critical reports. Additionally, ad hoc analysis and reports cannot be produced from the GEMS application resulting in a lack of information and extensive manual effort to produce ad hoc analysis and reports. In follow-up interviews, subject matter experts revealed that they do not have any faith in the financial reports being produced from the system. In addition, the chart of accounts has limited flexibility and an excessive number of reports must be run in order to maintain a closing. If offsetting accounts are not set up correctly, the closing crashes without warning. Encumbrances are problematic, carryovers are difficult and there is no audit trail for budget amendments. Working with the system can best be described as labor intensive and frustrating. In describing the positive aspects of the systems, users indicated it was a “comfort zone” as the status quo and that the posting of journal entries is relatively easy.

GFOA Assessment. Newport is still dealing with the aftermath of a partially unsuccessful and partially installed system. The original scope of the GEMS system was intended to include financials, human resources, and payroll. According to City personnel, the implementation of payroll was particularly complex and after several unsuccessful attempts to get this functionality installed, the City decided to not implement this module. As a result, payroll functionality remained on the legacy VAX system. The separation of the systems established precedence for the means of addressing business needs. Today, the City maintains a host of systems to meet various needs.

GFOA found that the “separation” of systems has lead to several current problems. First, reporting of enterprise-wide and component unit financial data is very difficult since accountants must query data from many disparate systems and incorporate the data into reporting spreadsheets. Second, GFOA analysts observed that employees spend an inordinate amount of time maintaining the spreadsheets or accommodating business processes that are designed to accommodate the disparate systems. Finally, not all users have access to the systems; therefore, compounding the perceived problem that reporting data is limited.

These problems are accentuated by and intertwined with the high level of user dissatisfaction, the lack of confidence with the GEMS application and system limitations – whether inherent or due to the partially successful implementation or obsolete application version. As user dissatisfaction grows, disparate systems multiply and the problems discussed above grow worse resulting in even greater user dissatisfaction.

Recommended Action:

- Replace the current General Ledger system with an integrated ERP system. As will be discussed in the next section, a procurement strategy should be developed that allows Newport to evaluate and compare ERP solutions in the market. GEMS can be considered as part of this evaluation; however, it should be considered in the context of a new system, not a “simple” upgrade as will be explained in more depth later.

Recommended Steps for Optimization:

- Integrate as many solutions as possible into one software package whose maintenance contract and version is kept up-to-date
- When new issues are identified, develop functional requirements that can be used to assess whether or not existing systems can address the gap. These requirements can also be used to procure a new system.
- Increase access to systems and establish internal end-user training programs.

BUDGETING

Description. The budget is entered into the GEMS system by Finance once the Council has approved the funding. The actual development process is done manually, primarily through Word and Excel documents that are updated each year for the Council. Departments enter their own budgets into an Excel spreadsheet after receiving guidance from Finance. Meanwhile any forecasting or “what if” scenarios are calculated by hand using Excel until the final budget is published and approved. However, the Schools do partially utilize the GEMS budget preparation module.

Survey and Interview Results. The limitations of the GEMS system creates a need to maintain most of the activity in Excel spreadsheets, and the reports produced related to budget are not easy to interpret. The software does not require the budget to balance, the software has no forecasting capacity, and there is no ability to separate the School and City budgets for reporting. Comparative reports are provided by function, but there is no report of budget to actual numbers for an entire fund. The users sometimes are notified that a budget has been exceeded even though there are funds available. The City and School subject matter experts could not identify one positive feature from the current GEMS system related to budgets.

GFOA Assessment. Many of the observations related to budget are identical to the General Ledger above. GFOA analysts observed that employees spend an inordinate amount of time maintaining the spreadsheets or accommodating business processes that are designed to fill in the shortfalls of the current system. Not all users have access to the budget system and must rely on limited reporting which compound the perceived problems of inefficiency. If funded projects (perhaps from prior years) are omitted during initial budget entry, there is no trigger to alert the user, and very little history is retained. There is no budgeting for grants or pensions because of the limitations of the current system.

Recommended Action

- Procure an ERP system with an integrated budget module that seamlessly interacts with the General Ledger, Purchasing, and Payroll modules.

Recommended Steps for Optimization

- ❑ When new issues are identified, develop functional requirements that can be used to assess whether or not existing systems can address the gap. These requirements can also be used to procure a new system.
- ❑ Increase access to systems and establish internal end-user training programs.

ACCOUNTS PAYABLE

Description. GEMS is used for accounts payable functions. The system will only close out an associated purchase order if it matches exactly or if the user marks that this is a final payment. The system does not support strategic payments whereby invoices can be entered at any time and are automatically placed into the appropriate payment cycle right before the due date in order to take advantage of prompt payment discounts. Due to a temporary cash flow problem, and while awaiting a rate increase approval, Utility payables are prioritized for payment, and are sent to Finance. When payment is approved it is done by direct pay in GEMS or by Purchase Order.

Survey and Interview Results. The comments provided by City and School key users indicate general dissatisfaction with the system. Reporting functionality is the system's biggest weakness and users must maintain separate spreadsheets to produce most financial reports. The users do not have any faith in the financial reports being produced from the system. The system is also unable to track W-9 forms resulting in a manual process and is also unable to enter multiple header information to the same payment. GEMS' inability to print 1099's results in the use of a separate application – Accountability, with which users are satisfied.

GFOA Assessment. According to staff the main weaknesses in the accounts payable module are related to reporting. For example, separate spreadsheets are maintained to capture and report 1099 data. According to staff, GEMS has no capability to report 1099 data on acceptable tax forms. GFOA also suspects that some reporting issues may be related to the inflexibility in the chart of accounts. The Finance Department, for example, reported that it maintains a separate spreadsheet to report Utility AP transactions to the State Utility Commission. This roll-up reporting weakness is similar to the reporting weaknesses related to producing the CAAFR.

Recommended Action

- ❑ Replace the current Accounts Payable module and the Accountability program with the new ERP application. The AP module in this system should have seamless integration with the entire financial system including GL and Purchasing.

Recommended Steps for Optimization

- ❑ Implement an internal training program with an emphasis on maximizing system reporting capabilities.
- ❑ Review the existing chart of accounts and identify potential roll-up designs to meet the Utility and CAAFR reporting requirements.

ACCOUNTS RECEIVABLE AND CASH RECEIPTING

Description. Accounts Receivable is handled in a number of different ways throughout the organization. Revenue accounts are maintained in GEMS along with special detail, fire alarm and industrial pre-treatment program bills. Customer accounts for tax collections, utility billing, and rehabilitation loans are maintained in OPAL and posted to the GEMS revenue accounts by matching them to collections in an Excel worksheet. The schools utilize an Access Database to track their receivables. Bills are printed using AccuPrint. GFOA noted the accounts receivable area to be an area where lack of system detail and support presents a challenge and exposes the Government to significant risk.

Survey and Interview Results. A portion of the subject matter experts rated Opal while the others rated GEMS. The Opal users felt the system was easy to learn, easy to use, and easy to create understandable reports. The GEMS users are faced with a lack of detail and limited canned reports that do not provide enough usable information. They are forced to do all reconciliations in Excel. The aging process and recording and processing of payments are other areas where system limitations have caused user dissatisfaction.

GFOA Assessment: The lack of an integrated system creates significant difficulties – there are a number of different standalone customer databases and spreadsheets, as well as handwritten collections, making it difficult to get a true picture of outstanding receivables per customer at any point in time. Furthermore, The OPAL application currently plays a critical role in the collections process; however, given the company's small size there are significant sustainability concerns despite overall user satisfaction with the system.

The current methods of accounting for some revenue streams make it difficult to perform revenue and cash flow analysis and forecasting and could potentially make it difficult to monitor for suspicious activity (e.g., dips in revenue collections, steadily declining revenues, etc.).

The current Accounts Receivable and Collections system also highlights the negative impact of disparate system on customers. When a citizen applies for a license or license renewal, they must go to several different offices to receive a sign-off certifying they do not owe taxes, bills, fees or have any judgments against them. Such an inefficient process does not reflect well on the local government in the eyes of the customer.

Recommended Action

- ❑ Implement a complete accounts receivable module as part of the ERP procurement strategy.
- ❑ Include requirements in the procurement strategy for a collections module so that Newport has the option to implement this module in the future at a competitive

price. This will result in the possibility for a completely integrated accounts receivable/collections module as opposed to requiring an interface.

Recommended Steps for Optimization

- ❑ Evaluate internal controls and business processes related to accounts receivable.
- ❑ The City should consider implementing a revenue desk where all licenses and permits are issued. The central revenue desk should have access to accounts receivable and collections modules.
- ❑ The Opal system could be used as the accounts receivable sub-ledger (where detail is loaded) until a complete accounts receivable and collections module is implemented. Summary data would then be fed into the Accounts Receivable system, preferably through an interface. (Note: GFOA did not inspect the software license for either system so this option may be cost prohibitive and is also dependent on the functionality of the ERP system eventually procured.)

PURCHASING

Description. Purchase orders and requisitions are maintained in the GEMS system, despite a number of limitations. Departments submit paper requisitions to the Purchasing Officer for processing in the GEMS system and financial approvals. The process will directly lock in funding in the General Ledger and allow the City and Schools to track account balances during the budget year. However, the process is laborious and time-consuming because the requisitions must be approved within the departments and the written approval with the documenting attachments must be sent to Purchasing and verified for proper funding before an actual Purchase Order can be issued. Even with funding available, once a Purchase Order is entered into GEMS, the Controller must personally approve each request before the final P.O. can be issued due to the lack of faith in the GEMS data. A typical purchase order could take as many as five days to be placed with the vendor by which time the funds a department thought that they had available, may actually no longer be available

Survey and Interview Results. The Purchasing module had the lowest user satisfaction of all systems as the subject matter experts listed numerous shortcomings of the system including an inability for vendor communications, difficulty in locating purchases, poor online requisitions and difficulty with change orders. Commodities are not easily tracked because PO forms do not have any requirements and work better if purchases are summarized. The entire process is not user friendly, and most users have little or no access to the system due to its complexity and instability.

GFOA also noted the Purchasing process, while integrated with the General Ledger, is labor-intensive and contains mostly summary purchase information with no details about unit pricing of goods. This abbreviated information occurs because the system does not handle details efficiently and is the method being used processes the

purchase while encumbering the funds more easily. The only way to track unit pricing and compare prior purchases is by again using an Excel spreadsheet.

The current system also lacks modern functionality including online requisitioning, remote access, electronic workflow, end-user pre-encumbrance confirmation and adhoc querying and reporting.

The City demonstration of the Purchase Order/Requisition Process confirmed the survey and interview results.

GFOA Assessment. Newport's procurement process suffers from limited integration and lack of availability at department levels. This leads to a number of other issues including difficulty in tracking encumbrances, timeliness, duplicate data entry, and reconciliation between spreadsheets. It also suffers from a lack of modern functionality, including user-friendly screens and reporting, the ability to perform Vendor analysis and make other strategic sourcing decisions, and the ability to provide e-Procurement functionalities

The vendor file is full of duplicates and incorrect information due to lack of standardization in entering vendor information. Manual processes have evolved to obtain purchases quickly with paperwork as an afterthought. Sometimes purchases and reimbursements are processed through a payment voucher system without issuing any purchase order. Purchasing must then ensure standard items are being purchased that won't conflict with other equipment or standards in the environment.

Recommended Action

- ❑ Implement a new purchasing module as part of the procured ERP system. The purchasing module should have seamless integration with the financial modules including General Ledger, Budget and Accounts Payable.
- ❑ Include online requisitioning with electronic workflow for approval, tracking, editing and approval of requisitions as critical requirements for the new system. The system should also allow for remote access.

Recommended Optimization Steps

- ❑ Clean the vendor file and develop data entry standards for vendor records.
- ❑ Train a wider array of users on the purchasing system.
- ❑ Implement a standard communication policy (i.e., utilize the forms function in the email system to categorize requisitions and variance reporting).
- ❑ Develop standard written policies and procedures to facilitate the reconciling process.

TAX ASSESSMENT

Description. The Tax Assessor values real estate, automobiles and business personal property using a CAMA (Computer Assisted Mass Appraisal) system called Vision.

The system uses table-driven formulas based on the Assessor's requirements to determine land and real estate value. Tables are provided for automobiles and trucks, and to supplement the tables the Assessor uses his own research for luxury and imported vehicles that are not on normal vehicle valuation lists (e.g., Porsche, Ferrari and custom-built equipment).

Survey and Interview Results. While this system was not rated on the survey, on-site interviews found high user satisfaction with the CAMA system (Vision) and the tax administration system (Opal).

GFOA Assessment. A demonstration was held to learn how the Opal System was used to enter property information, owner data, and update as changes are made. The Tax Assessor also demonstrated the Vision System, which is a CAMA (Computer Assisted Mass Appraisal) system. While both systems function very well for Newport's needs, they are not integrated, although a simple import function allows data to flow from Vision to OPAL. The user-friendly screens are efficient and the Tax Assessor is satisfied that this process provides the City with the needed assessment data to do accurate budget revenue forecasting, even with the limited integration. Neither Vision nor Opal are integrated with the GEMS system.

Recommended Action

- ❑ The Vision system should be preserved as it meets Newport's functional requirements and there is a high level of user satisfaction.
- ❑ As described in under the Accounts Receivable function, the Opal tax collections system should be maintained. However, given the sustainability concerns over the application, Newport should include requirements for a tax collections module as part of its procurement strategy so that the government has the option to implement this module in the future should the need arise.
- ❑ Future enterprise solutions should focus on integrating data from Opal.

TAX COLLECTOR

Description. Collection activities of real estate, motor vehicle and personal property taxes are recorded in Opal. The receipting of funds is provided in a spreadsheet form to be manually entered into GEMS. The office also collects payments on CDBG (Community Development Block Grant) loans and interest. Other items paid to the office include a Rooms tax governed by state law, Municipal Court fines with a portion paid to the State, and Parking Tickets. Part of the functions of this office are outsourced (unpaid parking ticket notices, and provision, repair and collection of parking meters.

Economic Development Loans are maintained on Opal but there is a manual process to manage loan payments in arrears.

Survey Results. The OPAL system received high marks from users for its tax collections functionality. Its main weakness is its lack of integration with the General

Ledger, which is contemplated as a future enhancement. Ad hoc reporting was also an area where users found the system somewhat lacking and while the collections area has some lookup capabilities, it must rely on the accuracy of information provided by other Departments. Although not a functional issue, Newport managers expressed concern over long-term support for the system as it is maintained by a small company that only serves Rhode Island customers.

GFOA Assessment. The Tax Collector demonstrated how he receives property information as well as Utility Billing Information in Opal, and collects money, assesses late fees, balances and reports to the Director of Finance for manual entry into the General Ledger System maintained in GEMS. There is no integration between Opal and GEMS.

While the OPAL system functions well, as previously noted, it is not integrated into the General Ledger. The user must also keep a separate screen open for each type of revenue, which limits analysis within the system. Overall, the system meets current needs but has areas for improvement.

Recommended Action

- As in the previous analysis, GFOA recommends that the Opal system remain as a separate, interfaced system with the future enterprise solution; however, as also previously discussed, the ERP procurement strategy should accommodate the potential future replacement of the OPAL system to ensure a maintainable, integrated system.

Recommended Optimization Steps

- The City should discuss with Opal the possibility of uploading/downloading data from the spreadsheets to minimize the data entry effort.

PROJECTS/GRANTS

Description. GEMS is the system utilized to track grants, and this is accomplished by assigning a separate fund for each grant. In addition to utilizing a separate fund per grant, an Excel spreadsheet tracks all grants at the City; while an index card system is used by the Schools. The funding for grants is not part of the budgeting process; however, a five-year capital improvement budget is created with funding sources, which can include grants.

Project Management (such as tracking critical dates or milestones and payments) for construction or capital projects is done outside of the system using various spreadsheets

Survey and Interview Results. Projects/Grants were not assessed separately from the General Ledger function on the survey. However, the Newport's subject matter experts who handle grants and contracts perform the function in a manual fashion using

spreadsheets and paper systems, resulting in laborious processes to enter data, track contracts and ensure compliance with grant requirements.

GFOA Assessment. Since the data is not integrated, it is very difficult for staff to capture cost information for grant-related projects. In a desired state, grant related projects would be tied to a grant source with all costs being tracked through project activities. Under this ideal condition, Newport could “slice and dice” grant information for sponsor requests. Currently, all of this reporting is done through individual desktop applications. One of the most challenging aspects of governmental reporting is the reporting of financial data from the sponsor view. For example, it is not uncommon for sponsors to have different fiscal reporting periods from the receiving agency. Newport staff responsible for grant and restricted revenue reporting have coped with this dilemma by building separate reporting spreadsheets

Recommended Action

- ❑ Procure a new ERP system with an integrated Project and Grant Accounting module.

Recommended Optimization Steps

- ❑ Investigate with GEMS whether or not project accounting is a feature that can be turned on in the existing GEMS application at the City.
- ❑ City staff should compare project accounting reports to determine whether or not there is duplication in effort. Based upon interviews, GFOA suspects that some data is being stored in multiple locations.

HUMAN RESOURCES

Description. The City and Schools are each served by separate Human Resources Departments which are both characterized by the overwhelming use of manual processes and limited computerized tracking systems. Employee history is tracked by utilizing cards where all career changes in position or salary are recorded. Currently, the employment application is handwritten and then any tracking is done in Excel spreadsheets to capture other information, including the job specifications, department vacancies, the job announcement, etc. Standard letters can be generated from WORD templates producing notification letters addressed to applicants. Due to the volume of applicants for public safety positions, the need for testing, and manual processes; a recruiting effort takes approximately five months to complete. For the schools, it can take anywhere from 4 weeks to 4 months. Discipline at the City is tracked in separate Excel worksheets, as are any new positions or changes to positions. Compliance work related to grievances at the Schools is also a manual process.

Human Resources does enter new employees into the ADMINS system for payroll purposes which creates a new employee number. Both departments are responsible for managing the benefits for all City and School positions. In addition, the City HR

Department manages the benefits for the Library and Senior Centers (dental, life and health) in order to maximize the best premiums. This combined effort represents more than 1,000 people and relies on manual process as well as third party Internet systems provided by health providers.

Survey and Interview Results End users expressed dissatisfaction, not so much with the current system so much as with the lack of any system. The VAX produces a roster of all employees who participate in Newport benefit programs and can also calculate employee and employer contributions for reporting purposes; however it has no relevant purpose for benefit administration; it is strictly an accounting system. As described above, all benefit, employee and applicant tracking is done using desktop applications and paper processes.

GFOA Assessment. Human resources is another area where it has been necessary to develop a number of spreadsheet/logs in order to perform necessary business functions. The lack of integration between these many systems results in manual reconciliation and duplicate data entry as well as the inability to quickly assemble summary data, such as position or employee history. In an information intensive environment, such as Human Resources, this has a significant impact on business operations.

It is important to note that there are a number of contracted services within the Schools, and it appeared that the contracted personnel by-pass HR processes including background checks and applications and had limited oversight. This should be verified and further explored by the Schools.

Recommended Action

- ❑ A future Human Resources/benefit system should be an integrated part of the Payroll system to adequately perform benefit administration and compliance.
- ❑ Develop functional requirements to include Human Resource functions, benefit administration and reporting as part of the payroll system.

PAYROLL/TIMEKEEPING

Description. ADMINS is the payroll application installed by the City in 1978 running on a VAX machine. The mainframe is somewhat limited as to the number of different types of pay types (25 different ones for each employee). There are also limits on the number of deductions in the area of the various deferred compensation plan deductions and the fund clearing account. This and some limitations in how deductions can be calculated by the system can create challenges for staff that complete special forms for some vendors who receive deduction payments. Bargaining units, "Council 94" employees and unions all affect the gross salary and deductions when payroll is calculated.

Time is tracked using a variety of means by different departments, but the information eventually ends up on paper forms developed by payroll specialists in the various

departments. This information is sent to the Payroll department for verification and is then entered manually into ADMINS. The Police and Fire Departments transmit their timesheets in the same manner for data entry into ADMINS.

The Schools use the same system to pay their teachers, administrators and “Council 94” administrative staff, but they all have separate rules, number of weeks paid per year, (ranging from 21-26 pay periods) and how leave and benefit time is calculated. They also have different pay rates for various contracts and bargaining units, as well as different benefit leave rules depending on unit and hire date. The process becomes very labor-intensive to calculate and balance.

The Utility tracks payroll on Excel spreadsheets by cost center for required PUC reporting.

Survey and Interview Results. The subject matter experts praised the customization of the ADMINS system because it accommodates every different pay associated with the City and School’s six unions and two administrative groups. All have different salary tables, benefits and leave requirements. Any changes require programming and Newport is fortunate to contract with a talented consultant who maintains the ADMINS system. There is no interface to the General Ledger resulting in the need for massive journal entries every pay period. Newport managers are concerned about security because a user with access to the payroll can directly access all employee files in the system. The security cannot be limited to only the employees directly within certain payroll areas.

GFOA Assessment. The Controller demonstrated the ADMINS application and how it is used to produce the payroll for the City and the Schools. She demonstrated the process for balancing and, since this is a mainframe-type system, the supplemental reports that are done in Excel. The reporting for ADMINS is fragmented and used for balancing purposes only. It requires some system knowledge and strict adherence to written instructions for chronological process. Running one report builds a temporary file that enables another report to be prepared, and this follows through in several steps until the actual payroll is balanced and printed. There is no interface with GEMS, so all meaningful reports or analysis is done on Excel spreadsheets. Journal entries must be made to GEMS for each payroll run.

As with nearly all the Financial and HR functions, payroll is extremely manual and inefficient. (Although staff are very efficient in this laborious process and the system has been highly customized to meet Newport’s requirements) Payroll is also somewhat prone to human error because of the nature in which hours must be verified to pay employees, and the way corrections are made. To compensate for this risk, laborious business processes have been put in place as internal controls. Less than robust security results in the need to limit the number of staff who have rights to operate the ADMINS program. While this is a necessary internal control, it limits the efficiency of business processes. ADMINS has been kept viable by a single programmer which represents a significant risk to the long-term sustainability of the application.

Securepay and Accuprint software are used for encryption and processing of payroll information to fill in the unmet needs of existing applications. Staff has expressed a desire to, at least, explore the opportunity to automate these systems into a more efficient solution although they serve as effective means to overcome the current system's limitations.

Recommended Action

- The City should consider Payroll and HR modules as part of the new ERP system, as long as the Payroll module provides the necessary functionality, online access, and reporting, to ensure integration with GL. Any new system should have functionality to replace the Securepay and Accuprint applications.

Recommended Optimization Steps

- The biggest risk the City faces is that the system is primarily maintained by one consultant. At the very least, the City should identify other consultants that could provide support.
- The City should implement a strategy to catalog and document all of the customized programs in ADMIN.

FIXED ASSETS

Description. All assets with a value greater than \$10,000 for equipment, \$20,000 for improvements and \$25,000 for infrastructure are tracked as Capital Assets. There is no automated system to systematically record capital assets. The general ledger is reviewed quarterly for purchases that should be capitalized which are then maintained in an Excel spreadsheet. Most fixed assets generally relate to construction projects and are moved from the Capital Improvement Plan to the fixed asset inventory when construction begins. Accounting for fixed assets is done in the GEMS system, but unfortunately, it is not an integrated process due to the spreadsheets that are maintained.

Survey and Interview Results. Similar to human resources, users were dissatisfied with the lack of an integrated system and the resulting cumbersome processes required to track assets. They would like fixed assets to be entered as such when purchased and post automatically to the proper accounts, which does not occur with the current system. Asset disposal is also problematic as the gain/loss is not automatically calculated nor posted to the appropriate account. Due to system limitations, all reporting is done through Excel and is labor intensive.

GFOA Assessment. The tracking of fixed assets can be characterized as a manual and cumbersome process. Tracking fixed assets, value changes, transfers and annual depreciation are all manual processes. For example, equipment and vehicles can be accurately taken care of through review of the General Ledger, but other expenditures that must be capitalized are located only through follow up with user departments and

review of purchase orders. Meeting the increasing number of financial reporting requirements, such as GASB 34, are challenging and require an increasing number of excel worksheets. The Fixed Asset business processes are symptomatic of Newport's challenges that have been discussed above – limited application functionality results in disparate systems, which allow staff to meet minimum reporting requirements but prevent optimal business practices.

Recommended Action

- ❑ Incorporate requirements for a fixed asset module as part of the ERP procurement strategy. A critical requirement for any new system should be its GASB 34 reporting capabilities.

Recommended Optimization Steps

- ❑ Tagging and cataloging fixed assets needs be more formalized. The assets need to be tagged after they are received.
- ❑ Policies and procedures need to be written for receiving departments to tag items.

INVENTORY AND WORK ORDER

Description. Inventory is defined as those items under \$10,000 tracked by individual departments. The Water Utility tracks parts for distribution, chemicals and copper tubing. The Schools track school supplies, books, disposables, facilities and repair supplies, furniture, computers, and peripherals. The City tracks vehicles and garage parts, computers, printers and servers. Law enforcement track their medical supplies, ammunition, chemicals, and equipment. Because of the diverse needs of the various departments, schools, public safety area and water utility, there is no central warehouse and most significant inventories are tracked in Excel spreadsheets or on paper history cards. There is also no central location for the inventory information. Schools track smaller inventories and maintenance parts internally.

Schools track all personal computers by teacher assignment and location, and the City's MIS track all personal computers by location and user assignment. Inventory replenishment purchases are handled just as any other purchase.

Micromain (an Access based application) is the system used for all vehicle maintenance tracking, although individual cards are kept on each vehicle serviced in the Fleet Services area for reference. Work orders for fleet maintenance only are maintained in the Micromain database and this system has not been extensively rolled-out.

Survey and Interview Results. The users of Micromain praised its work order management and planned maintenance functionality. The applications main weakness is that it currently serves as a stand-alone system to which not all departments have access. It is not integrated to the general ledger or the project management/accounting

systems. The remainder of the subject matter experts did not comment on inventory management since it is a manual process and each department handles the function differently.

GFOA Assessment. Individual departments are judiciously keeping track of their inventory of supplies, etc. on spreadsheets or in a specialized application for their environment, but there is no uniformity or tie-in to be able to track inventory across the enterprise. Departments perform a physical inventory audit yearly to ensure accuracy and ensure equipment is removed from the inventory when disposed. This is a very labor-intensive and time-consuming process. The Micromain application records usage of parts, for charge back to the various departments, and should interface with any inventory system planned.

Recommended Action

- ❑ The City should look for this functionality as part of the integrated ERP system to ensure integration, eliminate the cost and maintenance of additional vendor and database software, provide online access to local and remote users, and provide a central database
- ❑ Depending on the above evaluation, the Micromain application may be sufficient for the City's work order purposes. In that case the City should consider integrating it into the overall enterprise solution.

UTILITY BILLING AND COLLECTIONS

Description. Newport's water and wastewater utility use the OPAL system for billing and collections related to its 14,839 accounts and two wholesale customers (the Navy and City of Portsmouth). All meter readings are downloaded into Opal (radio and fixed network meter reading pilot programs are anticipated for the future) and the printing and mailing of bills is outsourced by transmitting an electronic file to Listperfect. All citizens of Newport receive sewer use charge on their bill also.

Survey and Interview Results. The subject matter experts began using the Opal system in the past year and find this very effective for their billing needs. The ease of accessing customer information was noted and collections activities and maintaining customer usage and payment history received strong end-user ratings. A significant limitation of the system is its isolation from the GEMS system and as mentioned in the prior section, customer file maintenance, rate flexibility and set-up and rate modeling/forecasting all scored less than average ratings. The biggest concern is any customization requires a programmer, and there is only one available due to the small size of the vendor. As this is a relatively new application, users are still becoming familiar with its functionality. For example, meter department service calls and work order documentation is partially processed through the system but requires improvements and users are noting additional information that should be tracked in individual accounts.

GFOA Assessment. The OPAL system appears to meet end-user needs, although they are still learning how to use the system and understand its potential. The Water Utility needs to be integrated with the General Ledger and Payroll functions, but is able to productively use Opal for billing and inventory purposes. Despite current satisfaction with OPAL, once a new ERP system is in place, there may be issues with integration due to the size of the company supporting OPAL. In addition, reporting capabilities may be limited once integration is accomplished because all the data will no longer reside in the same system, making a query difficult.

Recommendations

- GFOA recommends maintaining this system in the future enterprise solution. Incorporating this functionality into the future solution may be cost-prohibitive. In this case, interfaces with the ERP system should be contemplated. The OPAL software should be referenced in a Request for Proposal as an “optional” interface, in order to prevent the interface requirement from limiting the number of vendors who could propose a viable enterprise-wide ERP solution.

Summary of Key Findings

The above assessment evaluated Newport’s technological systems based on the business requirements of each functional area and noted their individual strengths and weaknesses. However, there are several overarching themes that characterize Newport’s systems.

Lack of System Integration and Real-time Data. The Government’s business functions are supported by several independent systems, resulting in splintered access to information. Data lacks timeliness, and therefore reliability stemming from the inability to directly access the required systems and the inflexibility in extraction and reporting of information.

Inefficiencies Due to Redundant Data Entry and Manual Processes. The existence of several un-integrated applications, and reliance on desktop applications like Excel and Access inevitably result in inefficient business processes. Most departments do not have access to any online inquiry of their financial or payroll information. Disparate information systems result in redundant data entry efforts because information is taken out of one system and entered into another. Even when data can be directly downloaded via automated means, the organization of data and formatting requires significant effort. In addition, there are a host of manual processes that support most business functions in the Human Resource area.

Centralized vs. Distributed Processing. Newport’s current environment largely supports a centralized or limited data entry and processing environment. This means that personnel involved in a specific business process may not be empowered to directly interact with the enabling technology. For example, end users may enter payroll data from manual time sheets into an Excel workbook, which is then forwarded to Payroll for validation before being manually keyed in the system. The process not only

causes duplication of effort, but also has a significant impact on the cost of executing a specific business process. A change in processing strategy would not only reduce transaction-processing time, but also reduce personnel costs per transaction.

Labor Intensive and Limited Reporting Capabilities. Core system limitations resulting in separated systems have been documented throughout this report. While the separated systems allow end-users to meet their immediate business requirements, they result in limited reporting capabilities. With increasing reporting requirements this presents a significant challenge to system users.

Over-Concentration of System Knowledge

Newport has developed elaborate “work around” processes to overcome the system limitations discussed above. As a result, Newport relies on several key staff that have intimate knowledge of the system and processes to ensure business continuity. The use of sequence files by the Accounting staff to create trial balances is an example – only three individuals know how to use these COBOL based computer programming scripts. Another example is the ADMIN system – Newport relies on a single programmer to keep this highly customized system functioning. While such a situation enables business operations, it creates a high-risk environment that must be addressed.

Major Unmet Needs

There were a number of consistent themes throughout each of the functional areas. The unmet needs are summarized below.

- ❑ Full integration between modules
- ❑ User-friendly reporting tools with distributed, secure access to all users
- ❑ Thorough, job-specific training on the system. Users trained not only what they need to do on the system, but the logic underlying the transaction, and effects on the entire process.
- ❑ Efficient system with user-friendly features (e.g., easy navigation, drop down boxes, validation of data upon entry, etc.) that offers on-line help and customized system documentation
- ❑ Real-time, immediate update and access to the financial data for all areas of the organization.
- ❑ Ability to retain historical data in the system for audit purposes.
- ❑ Elimination of paper-based processes and replacement with automated, online workflows and approvals
- ❑ Decentralized entry of transactions with user-defined workflow approval processes
- ❑ Streamlined business processes incorporating established best business practices
- ❑ Self service capabilities and other e-procurement and e-government opportunities

Simply put, Newport suffer from system limitations due to aging technology, a poor implementation of the GEMS system and a proliferation of workaround spreadsheets

that result in duplicate data entry and a significant reconciliation effort. The major unmet needs that are listed above can be met by an integrated approach to enterprise systems. This approach is described throughout the rest of the report.

CHAPTER 5

Newport's Options and Recommendations

As reported to GFOA Consultants, the entire organization desires a new system for financial and human resources/payroll functions. The only exceptions to the replacement model were departments wanting to keep their highly specialized "best-of-breed" systems. GFOA believes that both situations can be accommodated.

SCOPE

It is recommended that Newport preserve the systems that are highly specialized and where the users are generally satisfied. Replacing these systems and incorporating them into an enterprise solution may be cost prohibitive. We recommend that the utility billing system, tax administration, tax collection system, cashiering system and any future student information system (or student management system) be integrated into an overall enterprise system solution rather than be replaced. However, given the sustainability concerns because of the small size of the OPAL vendor and the amount of support required for the OPAL applications, GFOA recommends that Newport include requirements for a tax collections and a cashiering system for its new system so that it maintains the option to replace these systems.

REPLACEMENT OPTIONS

Re-deploy GEMS. Under this option, Newport would build a standard set of requirements, re-configure, and upgrade the current GEMS. The advantage to this option is the City would maintain its current relationship with GEMS, which may be leveraged for some level of price discounts for an upgraded and improved product. However, there are several key drawbacks to this option which include:

- Newport's relationship with GEMS has not been a completely productive one for the government. The original implementation was not entirely successful and several modules, including the Payroll module, were not implemented. As a result, Newport has been forced to utilize an ERP product without total ERP functionality. Newport has also not been satisfied with the support provided by the vendor
- Newport already knows the application has weaknesses and limitations, and staff have professed to having little confidence in the application. With the recent sale of GEMS to Harris, the future plans for this application are not known. A critical shortfall of the GEMS system, as experienced by the City, is the application's lack of necessary functionality in its Payroll module. The City attempted to implement this module but halted the implementation when it became clear that the City's critical requirements could not be met. GEMS has been unable in subsequent discussions with the City to guarantee that an upgraded system with a Payroll

module has the flexibility that is required in the multi-union Newport environment. GEMS' limitations results in external spreadsheets and duplication of data entry that would continue to proliferate, even with some integration between GEMS and Opal. Because G/L and Payroll are the core applications from which all other ERP modules emanate, robust applications are critical to the success of future module integration and business process efficiencies. GEMS General Ledger limitations and incompatible Payroll module, as experienced by Newport are of serious concern.

- Admittedly, many of the limitations experienced by Newport are due to the older version of the GEMS application currently deployed. However, given the incomplete state of the current GEMS application in Newport, a "simple" upgrade is not possible and would likely involve a partial, if not complete, reimplementation.

Procure and Implement an ERP system. The main advantage to this option is that the current ERP market, as described in Chapter 12, offers a rich selection of features and functionality that could most likely address many of the limitations currently experienced by the government and provide a more integrated technical solution. Through an effective procurement strategy, Newport can evaluate these systems against its business requirements to ensure that a new system successfully enables its core business processes. Under this scenario, GEMS could choose to propose a new solution, which Newport can then evaluate in comparison with other solutions on the marketplace. This recommendation allows Newport to "test" the market to ensure its business requirements can be met, which an upgrade to GEMS does not. Given the fact, as discussed above, that the current system has serious limitations and would likely require a complex redeployment, this flexibility is advantageous to the government. The main drawback to this option is the cost as a brand-new system can be expensive to purchase, implement and maintain. This is mitigated by the fact that there would be significant costs to a GEMS upgrade and a new ERP system should create eventual labor savings as a result of business efficiency improvements.

PROPOSED SOLUTION

Procure and Implement an ERP system. Given the current system limitations and user dissatisfaction that has been documented and the capabilities of modern ERP systems, which will be discussed⁵, GFOA recommends that Newport procure an ERP system to replace the current GEMS system and eliminate numerous standalone applications. The most significant drawback to this approach is the upfront cost as a new system can be expensive to purchase, implement, and maintain. However, resultant labor savings as a result of business processes efficiency gains after conversion would make this the most cost-effective solution. Given some funding constraints, Newport would need to carefully manage the scope for this alternative.

⁵ A description and definition of Enterprise Resource Planning systems is provided in Appendix D while ERP market is discussed in more detail in Chapter 11.

Because of the critical need to integrate data, GFOA recommends that the best approach to an enterprise solution is a phased tier ERP solution. Under this approach, a foundation layer of enterprise applications would be established. These systems would be scalable so that more functionality could be added as resources become available. To avoid the integration issues, the systems not part of the ERP scope would be interfaced into the overall solution. Each year, a Steering Committee or Planning Committee would review business requirements that were not implemented. Implementation schedules would be based upon available funding and priorities.

Newport is not alone in the challenges it faces nor if it were to pursue this recommended course of action. Table 4 presents an analysis of local governments of similar complexity as Newport for whom GFOA had conducted needs assessments. While the governments tend to be larger than Newport, ranging from 750 to 5,500 employees and \$100 million to \$372 million in their operating budgets⁶, they are similar in function and complexity to Newport. In that regard, several school districts have also been included in the comparison.

Multiple similarities exist among the compared jurisdiction. First, nearly all of the compared jurisdictions maintained outdated financial systems or multiple systems that were fragmented. As a result operational data was not available in real-time, the accuracy of information was questioned, systems lacked planning and analytical capabilities and duplicate/redundant manual data-entry in multiple systems was common. Fragmented systems also required jurisdictions' staff to expel time, energy, and capital expense on duplicate duties as well as to focus on non-value added activities.

The outdated financial systems also impacted the jurisdiction's IT staff as they were often required to support the business needs of departments by creating or maintaining home-grown systems as well as interfaces between stand-alone applications. In addition, these systems required IT staff, as opposed to business staff, to generate reports upon request. The fragmented systems required increasing IT maintenance and support, which at times proved difficult to manage. In several cases, the fragmented architecture posed security risks. This overall impact resulted in IT organizations being forced to spend an increasing amount of time supporting an outdated financial (and in some cases human resources) system that end-users felt was not meeting their needs to begin with.

In GFOA's experience, the characteristics of the compared jurisdictions' situations are not atypical of most cases. Indeed, the situation is very similar to that identified in this needs assessment for the City of Newport. In each of the cases highlighted in the table, GFOA recommended the jurisdiction procure an ERP system. While this is not always GFOA's recommendation, in cases of fragmentation and obsolescence, and given the business requirements of most local governments, it is often the best recommendation. As can be seen from the table, 5 of the 7 jurisdictions did accept that recommendation and proceed with an ERP procurement process, in which they are in various stages ranging from proposal evaluation to go-live.

⁶ This reflects past GFOA clientele and not the market structure which is better presented in table 8.

Table 5 Needs Assessment of Similar Jurisdictions

Type of Jurisdiction	Employees/ Operating Budget	Issues with financial system	IT Department challenges	GFOA recommendations	Jurisdiction Decision
Consolidated City and County	3,400 / \$372M	Outdated system. Financial management, planning and analysis capabilities lacking.	Fragmented and duplicate data (Legacy systems).	Procure an ERP solution.	Implementing ERP (Tier I)
County	3,000 / \$334M	Lack of integrated systems required manual accounting processes. Relied on standalone systems.	Lacked real-time reporting. Fragmented systems.	Procure a Comprehensive ERP solution.	Implementing ERP (Tier I)
Public School District	5,500 / \$224M	Many manual processes and standalone systems. Financial management, planning and analysis capabilities lacking.	Lacked District technology vision. Multiple stand-alone systems.	Procure an ERP solution.	NA
City	750 / \$57.5M	Challenged to manage business processes, analyzing costs, programs and services due to fragmented system information.	Unhappy with current vendor. Multiple stand-alone systems.	Procure an ERP solution.	Did not procure ERP.
County	1425 / \$133M	Decentralized financial systems because of numerous stand-alone systems. Lacked enterprise-reporting capabilities.	Multiple stand-alone mainframes and fragmented applications. IT security issues highlighted.	Procure an ERP solution.	Currently negotiating with a Tier II ERP vendor.
Public School District	5,500 / \$256M	Lacked an integrated system resulting in inefficient financial operations. Manual operations preventing staff from performing value-added tasks. Lacked enterprise-wide access to information. Multiple stand-alone systems caused redundant data-entry and manual actions.	Reporting, security and workflow issues identified within technology group. Upgrades and patches difficult to install resulting in underutilized hours.	Procure as enterprise system replacement.	Implementing ERP (Tier II)
City	810 / \$100M	System did not support needs for financial management, planning and analysis. Business functions were supported by various stand-alone independent systems resulting in a lack of accurate, real-time data and reporting information. Multiple systems caused redundant data-entry and manual processes.	IT staff overburdened with homegrown systems and report generation. Current vendor would not support current software, as a new version would be released. Duplicate data housed in multiple fragmented systems.	Procure a new ERP solution.	Currently procuring an ERP system.

Implementation Strategy

The biggest risk to GFOA's recommendation is that implementation could stall and the organization could end up not moving forward. To avoid this dilemma, GFOA recommends implementing as much functionality as the organization can afford as early as possible. Business requirements considered "nice-to-haves" should be placed on lower priority; however, they should remain on a schedule to be implemented at some time in the future. A Steering Committee should be established as soon as possible to prioritize the needs and oversee the implementation schedule. The Steering Committee's responsibilities would be to identify funding for the continued implementation; ensure that the appropriate support infrastructure remains intact and is expanded and upgraded as needed; and to review the IT investment portfolio periodically.

To realize the full potential of product offerings, GFOA further recommends that Newport pursue a request for proposals for an ERP package. There are many systems with the ability to support the desired business requirements of Newport. However, the organization's public sector requirements coupled with its requirements to maintain an enterprise fund (utilities) and a school district will require the City to explore packages that can accommodate the public sector, particularly in local and state government. Although this narrows the selection field, the remaining is still sizeable and worth exploring. This can be done efficiently by issuing a request for proposal or request for information for these solutions.

GFOA recommends that the scope for a future system should include:

- General ledger
- Project accounting
- Budget control
- Budget preparation
- Grants accounting
- Accounts payable
- Accounts receivable
- Purchasing
- Human resources
- Payroll
- Fixed Assets/Inventory
- Work Orders
- Business Licensing

Based upon the scope of the desired solution, it is likely Newport's future system will consist of a prime solution with highly integrated peripheral applications. Typically, vendors propose a primary application along with third-party applications that are highly integrated.

Since the new system will require considerable work effort to install and implement, the GFOA recommends the best course of action would be to install the system in stages. Three stages are proposed. The first stage encompasses functionality that must be installed by Newport's next fiscal year. The second stage includes functionality that should be installed within six months after the fiscal year. The third stage includes functionality that could be installed after the second phase. All three phases correlate to the Information Technology Strategic Plan. Although the phases can overlap, it is recommended Newport focus on the first two phases only and then implement phase III after phases I and II are stabilized. This recommendation is being made due to the availability of personnel resources that would be assigned to the project. (It is assumed that Newport will have appropriate funding and staffing to complete phases I and II.)

The following table summarizes GFOA's proposed phases of implementation:

Functionality	Recommended Phase	Comments
Accounts Payable	Phase I	Tied to the General Ledger Implementation Phase
Accounts Receivable	Phase I	Tied to the General Ledger Implementation Phase
General Ledger	Phase I	Core Application as part of Phase I
Grant Accounting	Phase I	Tied to the General Ledger Implementation Phase
Project Accounting	Phase I	Tied to the General Ledger Implementation Phase
Purchasing	Phase I	Tied to the General Ledger Implementation Phase
Workflow	Phase I	This is an overarching feature that should be available as part of the first roll-out
Electronic Timesheets	Phase II	Tied to the Payroll Implementation Phase
Human Resources/Benefits	Phase II	Tied to the Payroll Implementation Phase
Payroll	Phase II	Core Application as part of Phase II
Performance Measurement	Phase II	Tied to the Payroll Implementation as part of Phase II
Opal Integration ⁷	Phase III	The integration with the General Ledger is key to this application.
Business Licensing	Phase III	
Budget Control	Phase III	Tied to the Budget Preparation Implementation Phase
Budget Preparation	Phase III	Core Application as part of Phase III
Fixed Assets/Inventory	Phase III	
Executive	As soon as available	As applications are implemented,

⁷ Because the Opal interface is proposed in Phase III, the current manual business processes would remain in place to transfer information from OPAL to the general ledger. GFOA is recommending the RFP include an optional replacement of OPAL for future consideration.

Dashboard	based on vendor requirements and Newport resources.	giving the decision-makers a quick glance method to view performance is critical to maintain sponsorship and support
Work Orders	Phase IV	
Document Management	Phase V	This technology requires complex hardware and software. It should be one of the last enhancements implemented.

While GFOA is not recommending that Newport replace the Vision or OPAL systems; it may consider including functional requirements for the processes which these systems support in the RFP so the organization can consider systems which in the future could add functionality to the ERP system in these areas should the City decide to replace its current systems. As will be shown in the market research, the public sector ERP market is growing rich with functionality and Newport should have a number of alternatives to choose from.

CHAPTER 6

Technology Demands of an ERP System

Any future enterprise solution will require a stable technology architecture with expansion capability. This section of the needs assessment focuses on demands of an ERP system and the technology strategy that is currently in place at the City. As part of this assessment, the GFOA conducted a survey of systems currently being utilized by staff to complete their job functions. GFOA analysts also conducted interviews of Technology staff to identify technological goals and requirements for future solutions. Finally, GFOA reviewed the City's five-year technology plan to identify any potential gaps as a result of the survey and interviews.

A survey of City departments confirmed that "shadow systems" are currently being used to overcome weaknesses in the existing systems. Most of these other systems exist to address reporting weaknesses. For example spreadsheets are used throughout the City to consolidate data from various City systems and staff spend a large amount of effort feeding these systems with duplicate information.

City Departments have also purchased "best-of-breed" systems to address unique needs. "Best-of-breed" systems are software packages that provide specific functions, such as tax collections. (The City's tax system, Opal, is considered a "best-of-breed" system.) Although "best-of-breed" solutions may fulfill unique and current requirements, they are not integrated and can eventually lead to problems if they are not part of the overall integrated approach.

The City's Information Technology Department has attempted to tie most of the solutions into a single technology strategy, which consists of a rolling five-year technology improvement plan. The five year plan is a "work in progress" and the Information Technology department forecasts up to ten years in internal strategic planning documents. A large portion of the current plan is devoted to setting up a future enterprise resource planning software package (ERP). GFOA agrees with the City's approach to technology planning but also believes the plan should address the timeframe to implement a data warehouse, tie the ERP workflow features to document management/imaging needs, and expand current web-based citizen services. Implementation of an enterprise system will create a foundation for future tools and resources beyond what the current staff and infrastructure can support without long-range budget impacts.

The rest of this section highlights the demands of an ERP system in order to assist Newport with this planning.

Enterprise Database

The City could benefit by integrating data on an enterprise relational database, such as Microsoft SQL Server or Oracle. These database platforms can support various software solutions, including many of the applications currently being used by the City. Although it may not be technically feasible to share systems on the same database, standardizing the data on a common platform increases the likelihood to successfully interface data between systems; thus eliminating the need for some "shadow" systems. The City currently uses Microsoft SQL Server and Oracle platforms. The technology plan contains several ERP project line items, which will enable the City to integrate data.

Data Warehouse

Cities and other government organizations are turning to data warehouses (central repositories of enterprise data) because some enterprise data is almost impossible to extract. A data warehouse permits the organization to store data from different types of enterprise applications into a single database. A powerful query tool permits the users to "mine" or sort through the data, which can be presented in a flat file structure (simple spreadsheet) or in a complex data structure (multi-dimensional cubes). Specialized chunks of the data warehouse, which have been extracted for further analysis, are commonly referred to as "data marts." Warehouses are attractive because they extend the integration capabilities of existing enterprise systems and legacy systems such as ADMINS. Although these systems can be quite expensive, the City should explore various products that are available and include them in the technology plan. They should not be seriously considered until an enterprise solution scope is determined.

Decision Support Systems (DSS)

Not all users will need full access to the enterprise solution. Their interest may only be in analyzing the enterprise data. Most ERP systems offer special reporting tools for these types of users, typically packaged as a DSS tool. This feature analyzes the enterprise data and presents it to users in a relevant management presentation format.

One common example of a DSS report is the “Stoplight” performance report usually given to Council members and executive management staff.

Distributed Open Architecture

The leading enterprise system vendors utilize distributed architecture for their hardware servers, where processing is divided between an application server, a database server, a Web server and the user’s desktop personal computer. The software that the user’s PC requires to participate in the ERP system is called the “client” software.

The current focus of ERP vendors is to make the client (in this case, the end-user’s personal computer) as thin as possible. Under this scenario the typical end-user only requires an Internet Browser, such as Microsoft Internet Explorer or Netscape to access the ERP application. Most processes are handled by the application server (content is delivered to the end-user through XML calls or Java applets). The application server, in turn, accesses the data through an enterprise data server. Although these solutions claim to be very thin, sophisticated users will probably require a “thicker” client that will enable them to run reports through a package that resides on their personal computer (e.g., Microsoft Office, Crystal Reports, etc.).

Some ERP packages distribute the transaction loads (transparent to the end-user) to increase performance by dividing the load between several application servers or through a transaction server. The architecture is designed to increase performance and integration. In cases where organizations have some flexibility in changing parts of their technical infrastructure, the GFOA generally recommends that they place higher priority on software functionality rather than on the technology platform.

Open software based on industry standards and architecture is more capable of interfacing with other software applications and systems. Newport has a number of standalone and point solutions that can still yield utility with an ERP solution, for example, the Opal tax and collections system or the Micromain Fleet Services Division’s vehicle management system. This capability will be an important requirement if Newport decides to leverage existing applications.

Electronic Government

Electronic government or “e-Government” is the public sector’s customer-centric paradigm for providing public information, services, and transactions to all levels of constituents via the Internet and Web. Constituents access information, initiate transactions (e.g., request to fill in potholes on a city street), process tax forms and conduct other similar types of transactions typically handled through traditional mail, phone calls, or on-site visits. Internally, e-Government functions can be used by Newport’s employees for on-line procurement, employee self-service, and other types of services requiring transactions between enterprise systems. Some enterprise solution packages contain e-government capabilities within the base software. Others may require a third-party constituent relationship management (CRM) system that interfaces to the base enterprise solution to accommodate this need. The City’s current vendor management, on-line property tax bill-pay and citizen notification services can be expanded as part of future citizen services planning. E-government functions could be

considered as a final phase of any ERP implementation after all the modules are complete, integrated, and fully functional.

e-Procurement functionality is developing rapidly in all tiers of the marketplace. Basic functions such as on-line bidder registration, delivery and receipt of bids and proposals, and vendor updates such as address or phone number changes are commonplace in all functions with more robust capability such as auctions, shopping cart services, and on-line catalogs which may be found only in higher tier products.

Integration with Office Applications

Most enterprise solution vendors augment reporting functionality with the use of desktop productivity applications, such as Microsoft Office. For example, word processing is used to generate statements and customer communications. Spreadsheets are used for drill-down reports.

Most ERP vendors have established “hooks” with Microsoft Office products and interface to these applications smoothly. Work-arounds may be required for other types of desktop applications. An ERP system generally provides the data in spreadsheet format to allow users to present information in a recognizable manner for various forecasting and reporting needs.

Imaging and Document Management

Most ERP products are capable of storing images or external documents along with each transaction. Public sector organizations such as Newport will typically use this feature, for example, to save an image of an invoice as part the accounts payable transaction.

Relational Database

ERP systems require a strong relational database to deliver performance and functionality. More sophisticated ERP products require a database that supports relational data (fields, rows, records, etc.) that can be queried via standard query language (SQL) or that is compatible with current open programming standards. Middle-market players, such as Microsoft SQL Server, are compatible and now powerful enough to support larger organizations.

The database platform that is chosen may impact the range of ERP solutions that are available. Although MS SQL Server is less costly and retains wider support in the industry, within the past year Oracle has been more competitive in the Middle-market ERP area and worth considering. However, if an organization can afford to re-tool and retrain personnel, then GFOA generally recommends that they assess ERP functionality first and then match the optimum database platform for that product.

In the specific case of Newport, the City seems positioned to consider SQL Server and Oracle. However, the City would need to ensure that the chosen ERP vendor would assume most of the support burden for the database.

Supporting Infrastructure

There is also infrastructure that lies outside of the enterprise solution that must be operational for the solution to run successfully. This consists of an enterprise IMAP-compliant e-mail system such as Exchange, enterprise servers, Web servers, enterprise relational databases, TCP/IP network infrastructure, desktop productivity suites (such as Microsoft Office), and document management software for workflow enhancement

Web Services

The final piece of the enterprise solution involves the user interface. Top enterprise solution providers offer browser interfaces between the user, the underlying application, and the data. These interfaces use the same browser software used to access web sites (e.g., Internet Explorer, Firefox/ Mozilla, Netscape). The browser interface also enables the end user to access other Internet/Intranet/Extranet services simultaneously and, in some cases, integrate these services with the host application. An example of this latter feature is checking the status of an overnight shipment by “sliding” invoice information, that is stored in an enterprise system, to a shipping service’s Website. Sophisticated Web services software also enables users to integrate different enterprise systems into one interface; however, this type of solution can be costly and in some cases sustains bad business practices if the service preserves an outdated system.

Workflow

Workflow refers to the electronic routing of key documents that are produced from a business process or transaction. Older systems have used workflow capabilities to accommodate functions such as purchasing (e.g., routing a purchase order for approval). However, modern systems have workflow capabilities for functions beyond purchasing. Workflow is the major feature of ERP systems that helps governments move to a “paperless” environment. Workflow is driven by system-standard and user-defined business rules. Documents and/or transactions are then routed according to the workflow rules. Workflow requires a workflow engine, which houses the rules and procedures. The workflow engine is usually a built-in feature of ERP software. Moving to a paperless environment often brings the accompanying desire to scan documents electronically and include them in workflow and document retrieval business needs.

Technical Support and Maintenance

Use of the more advanced technologies such as distributed architecture and relational databases create increased demands for technical support. Also, some IS roles may change as a result of an ERP implementation as some responsibilities for functions can be pushed out to internal departments while others require greater central IT involvement or the utilization of the ERP vendor or a third party service.

Training

The greater sophistication of enterprise systems increases the demands for both technical and especially end-user training. Often customers of ERP systems develop training materials describing the system application functionality in the context of the organization’s business processes. While application vendors provide standard training materials, prospective customers should be aware that training material customization

and enhancement may be required to integrate the functional and business process descriptions.

Help Desk.

The implementation of an enterprise system will also increase the volume and complexity of help desk requests, especially upon the initial implementation of a new system. As more applications and tools are implemented, the Help Desk becomes an integral part of the successful use of an ERP system, and the IS department expands or has need to outsource this service to provide reasonable response time to the user community.

Newport's Current Strategic Technology Direction

The technology direction for the City is documented in the City of Newport Information Technology Plan FY 2006-FY 2011. The Information Technology Plan identifies the following Information Technology projects that require operational emphasis over the next five-year period:

1. Implement Pictometry Pilot for Police and Fire
2. Develop/Implement Parking Sticker Application
3. Upgrade for Visions
4. Migrate Opal applications and data to Application Server
5. ERP Disaster Recovery Plan – November 2006
6. ERP GL/AP/AR/Purchase Order Implementation – July 2007
7. ERP HR and Payroll Implementation – January 2008
8. ERP Budget/Asset Management Implementation - June 2008
9. ERP Interface with Opal Tax and Utility Billing – July 2008
10. ERP Business License Implementation – January 2009
11. Municipal Court Application Implementation – May 2010
12. Probate Court Application Implementation – May 2011
13. Rooms Tax Software Implementation – May 2012
14. Final conversion of VAX data and decommissioning – May 2012

The Plan and dates are subject to revision and change, but show a strong direction for integration and phased implementation of enterprise-wide solutions and the need for open architecture. Additional long-range IT planning still “on the drawing board” should reflect those infrastructure, e-mail standardization, document management and data warehouse needs discussed earlier

CHAPTER 7

Vision

Two key reasons why some enterprise system projects fail are lack of vision and lack of a communicated vision to stakeholders. One of the earliest exercises in this assessment was to identify a cross-section of Newport City and School staff and then use this resource to develop and to articulate the elements for a future enterprise solution. Staff representing Newport City and Newport Schools concerns, Newport operations, and Utility Billing were brought together to articulate the vision items. Newport stakeholders were defined as managers and staff of the City, Schools, and Water Utility. Some peripheral data was also gathered from the Public Safety entities because occasionally they performed some of their processes in a more independent fashion.

Newport identified the following elements as major components of a vision for their system. For analytical purposes, the GFOA divided these items into functional and technical categories.

Elements of a successful system serving Newport stakeholders appear below. (Items do not appear in any priority order.)

Functional

General Requirements

- System is intuitive
- Users have access to real-time data and reporting, even at remote locations
- System accommodates automated postings
- Users have access to trend data
- The system supports tickler capabilities, i.e., it will remind users of certain events or non-events
- Security capabilities (security layers)
- Ability to develop customized queries and reports
- Supports the sharing of data (e.g. Same project name across functional modules)
- Supports parent/child data relationships
- Supports user-defined fields
- Uses effective dates
- Ability to compare data with outside data sources (e.g., Federal or State)
- Can sort data on user-defined fields
- Ability to develop group lists (Shared contacts or vendor lists)
- Effective workflow and approval routing

Financial Requirements

- Easier access to project budgets
- Track projects by intelligent numbers
- Easy chart of account maintenance (description, creation, changes)
- Easy-to change chart of account structure with history retained
- Flexible chart of accounts that can accommodate 2 separate entities
- Ability to report financial data by location and/or program
- Supports encumbrance processing accommodating year-end balances
- Ability to export budget data for data analysis
- Ability to produce budget to actual reports with ease at summary and detail levels
- Change order tracking and history retention
- Forecasting Capabilities
 - Budget
 - Enterprise data
 - Cash flow
 - Various Payrolls
- Vendor/Customer performance and history
- Fixed assets tracking (depreciation)
- Project and grant tracking
- Loan tracking (i.e. defaults tracking) and collection processes
- Subsidiary reporting (business unit or department reporting)
- Trial Balance Report including budgets and revised budgets
- Historical data retention
- Central entry and tracking of receivables with tie to collections and billing

Payroll

- Integration with General Ledger
- Salary linked to bargaining units or union requirements
- Deductions follow contractual agreements for percentages or maximum amounts
- Ability to process at least ten different types of payroll with different rules for each
- Cost sharing allocations across various units
- Leave accruals differentiated by bargaining unit and hire date

Purchasing

- Vendor search on actual name and “dba” name.
- Historical vendor data retained (e.g., name change, address change)
- Tracking of vendor required documentation (W-9's) to be sure sufficient information is on file.
- Reports of vendor activity
- Entry of original pricing and discounted pricing for prompt payment, with reporting and tracking of same.
- Creation of a “pre-encumbrance” of funds as requisitions are entered, with department tracking of status.
- Department requisitions entered online should identify like items for pricing

improvements.

- Online bidding
- Online catalog of standard supplies
- Contracts linked to project purchase orders
- Online requisition submission and tracking
- Online PO tracking

Fixed Assets and Inventory

- Linked to original purchase order
- GASB 34 reporting requirements
- Ability to attach digital photo of the asset

Human Resources Requirements

- Master applicant directory with tracking for EEOC reporting
- HIPPA and COBRA reporting and activity compliance
- Applicant skill-set matching against available positions
- Employee records tracked for goals, strengths, grievances
- Exit interview (HR)
- Electronic employee leave records for trending analysis.
- Electronic time entry with approval routing via workflow.
- Web based time entry
- Flexible payroll system for all union contracts, bargaining units, agreements and exception based.
- FLSA compliant
- Federal and state regulation compliant
- Forecasting for step and grade changes based on timeframe
- Validation against known pay scale tables to ensure accuracy in entry
- Automated periodic surveys of certain "Council 94" staff
- Automated link between a pay grade, step, and title
- Flexible for various leave rules such as Workman's Comp, Military, Jury, School Involvement, and FMLA
- Grant reimbursement tracking on benefits
- Automated performance evaluations and goals.
- Automated notice when evaluations are due with follow up until completed.
- Training and certification tracking as well as notification when certifications expire.
- Schools need a link between the Office of Professional Development and the Human Resources office
- Position control flexibility

Fleet Services

- Vehicle fuel card tracking
- Vehicle service tracking and automatic notification for preventive maintenance
- Vehicle maintenance workload assessment

- ❑ Automation of work orders in Micromain System posting to accounting for departmental chargeback

Water Utility

- ❑ Three year tracking of service to include future projections
- ❑ Linkage between budget and PUC Settlement Agreement (or any other contractual financial requirements)
- ❑ Ability to track usage demands for service and analyze for peak compliance.

Business Licenses

- ❑ Extensive number of local licenses require a single point for entry and tracking
- ❑ Linkage so pertinent information is changed once across all license types
- ❑ License history maintenance
- ❑ Direct links to General Ledger
- ❑ Workflow for license approval
- ❑ Automatic calculation of fees and percentage paid to the State
- ❑ Detailed analysis for budgeting

Technical

General Requirements

- ❑ System is web-based
- ❑ System supports drill-down capabilities
- ❑ System can support web reporting
- ❑ Documents, such as loans, deeds, and contracts could be scanned and retrieved within system
- ❑ System supports other document management
- ❑ System contains workflow capabilities (i.e., electronic approvals)
- ❑ System supports easy import and export of data
- ❑ System can interface with geographical information systems (GIS)
- ❑ Barcodes with remote bar card reader
- ❑ Notification for refresh and repair (based on replacement schedule)
- ❑ Advance notification when maintenance contracts are set to expire
- ❑ Upgrade responsibilities lie with the vendor or ASP provider.

Elements of a successful system serving *external* Newport stakeholders appear below. (Items do not appear in any priority order.)

Functional	Technical
<u>General</u> ❑ Integrated data	<u>General</u> ❑ Data access for mail merges

<ul style="list-style-type: none">❑ Improved project information<ul style="list-style-type: none">○ Better access to information○ Dashboard reporting capabilities❑ Ability to provide statistical reporting❑ Easy “Fact Sheet” Production<ul style="list-style-type: none">○ Customization○ Access❑ E-Government (Future capabilities)	<ul style="list-style-type: none">❑ Web Reporting<ul style="list-style-type: none">○ Statistics on customer use of Newport web site○ Ability to collect click-thru stats❑ System support and training❑ Payment of taxes and licenses via web services
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CHAPTER 8

Implementation Readiness

What are the resources required to implement an ERP system? Vendors that serve the small and medium-sized markets have a tendency to use implementation strategies where the client is responsible for most of the work. Vendor consultants are responsible for project management and overall configuration of the system; however, in addition to working with the implementation consultant on the design of the system, the client is primarily responsible for loading the data into the system.

For example, the software consultants may be on-site for one week to show the client how the system works and to ask basic design questions. The consultants will then distribute homework assignments to the client and not return for two weeks. During the consultants’ absence, the client may need to scrub data or prepare electronic spreadsheets to be loaded when the consultants return. This type of consulting relationship is designed to reduce costs. It is most effective when used with specialized software (i.e., software that is designed for specific vertical industries). It is less effective when used to implement more complex software (i.e., software that is designed to serve many vertical industries).

To implement the system effectively, Newport will need to build its internal implementation team now and plan to backfill tasks for personnel temporarily assigned to the ERP project. Minimum personnel for the successful implementation will require a Project Manager, a Financials Lead, an HR/Payroll Lead, and a Technical Lead. Ideally a Change Management Lead, to oversee business process changes and training, and Purchasing Lead should also be added. If Newport cannot identify these resources separately then the Project Manager or Financials Lead should cover them. The Project Manager’s function is to oversee the implementation of the project and to make sure that the project remains on schedule, within budget and within scope. A “Lead” is responsible for overseeing the design for their particular function, managing all assistance assigned to them; and providing post-implementation support. Roles and responsibilities are included in the Appendix.

Technology Consideration. A final consideration is whether or not Newport can technically support any future solution. Newport's Information Technology Department reported they would be willing to support any technology. The IT Department was also amenable to outsourcing some of the technology to support the rollout but they would like to eventually build expertise in-house. Since the IT Department is small, any future solution will need to consider their ability to support a new application as well as continuing to provide support for Newport's current applications.

Summary. In the previous chapter it was recommended that the City procure a commercial ERP software package. However, ERP's impact on existing technology infrastructure is substantial. In this chapter, we outlined the demands of an ERP system. While Newport has the capability and infrastructure to support an ERP system, IT resource constraints are an issue and the City should explore strategies to relieve the burden of the system on the IT staff. Furthermore, the City's information technology plan and growth strategy seem to support future requirements for an ERP solution.

Later in this report (Implementation), we recommend that the City also implement an ERP strategy team. This is essentially a mechanism for the continued growth of the ERP solution. We also recommend that a Help Desk strategy and other sustainability programs be implemented. The strategy team and the sustainability programs should be incorporated into the IT Strategic plan.

CHAPTER 9

Sustainability

Newport will need to ensure an infrastructure is in place to support the system once it is implemented. In this case, infrastructure consists of a Help Desk Process, Technical Team, and a System Strategy Team (or Steering Committee).

Help Desk - The Help Desk process can be simple at first. It should consist of a "leftover" team from the implementation team that can be called upon for trouble-shooting or system enhancement requests. As the system rolls out to internal Newport departments a more sophisticated Help Desk process will need to be in place to meet Newport's high customer service requirements. In this instance, the organization will need to develop a Help Desk process with planned access points, escalation procedures, and service level agreements. Newport should expect Help Desk calls for a new system to be fairly heavy during the first 60 to 90 days after Go-Live. Beyond that, Newport may need to expand their current IT staff or consider outsourced services for prompt user response.

Technical Team – Periodically, the software company will release software patches and fixes for the Newport IS department to apply. In-house teams should be able to apply

most of them, particularly if Newport wants to save on maintenance costs. Testing procedures should be developed as part of the implementation process and used whenever new fixes are applied.

System Strategy Team – Requests for enhancements, system changes, and other requests, such as new reports will need to be prioritized. A system strategy team should be in place to prioritize the requirements, identify funding for the improvements, and scheduling the installation of the improvements. Best practice calls for the System Strategy Team to follow an IT investment portfolio as a guideline for priorities.

CHAPTER 10

Procurement Schedule

As Newport is acutely aware, the success of an ERP system lies in the implementation methodology. The first step in a successful implementation is a thorough and methodical procurement process. In this regard, the following schedule is proposed:

Month	Task
May- June, 2006	<input type="checkbox"/> Functional requirements documented <input type="checkbox"/> RFP Assembled <input type="checkbox"/> Release of RFP <input type="checkbox"/> Evaluation Plan Developed <input type="checkbox"/> Newport Team identified for implementation
August-Sept., 2006	<input type="checkbox"/> Proposals Received and Analyzed <input type="checkbox"/> Software Demonstrations (Two Vendors) <input type="checkbox"/> Team facilities identified for implementation
October, 2006	<input type="checkbox"/> Requests For Clarifications <input type="checkbox"/> Discovery with Two Vendors (Cost Estimates Provided) <input type="checkbox"/> Contract Negotiations Begin with One Vendor
November, 2006	<input type="checkbox"/> Negotiations Completed <input type="checkbox"/>
December, 2006	<input type="checkbox"/> Implementation Begins

As noted for each area that would be included in the RFP, a critical recommendation is the development of functional requirements. These functional requirements document the minimum capabilities that an ERP system must have and will be used not only to evaluate proposers, but eventually will serve as the basis of the contract negotiations and a critical tool in insuring an effective implementation. Therefore, devoting the necessary staff time and resources to development of these requirements as part of the RFP is a key step in a successful implementation. Although the above schedule is an aggressive one and will require the cooperation of the Newport's staff for software demonstrations, decision analysis, and contract negotiations; it is based on a proven methodology that

allows sufficient time for requirements development and facilitates an “apples to apples” comparison of software vendors.

CHAPTER 11

Proposed Implementation Schedule

The schedule below represents an implementation schedule, including completion of “ramp-up” items. The schedule may vary based upon the solution that is eventually purchased by the organization and the installation methodology:

Month	Task
June, 2006	<ul style="list-style-type: none"> <input type="checkbox"/> Build and Implement Steering Committee <input type="checkbox"/> Identify Implementation Project Team <input type="checkbox"/> Identify potential backfill tasks
August, 2006	<ul style="list-style-type: none"> <input type="checkbox"/> Identify implementation team facilities
October, 2006	<ul style="list-style-type: none"> <input type="checkbox"/> Identify tasks that are not dependent upon selection of vendor and begin discussions: <ul style="list-style-type: none"> o What is acceptable conversion strategy (e.g., open balances only)? o Scrub vendor and customer data o Help Desk Planning
November, 2006	<ul style="list-style-type: none"> <input type="checkbox"/> Complete facilities for implementation team
December, 2006 To July, 2007	<ul style="list-style-type: none"> <input type="checkbox"/> Begin ERP implementation project preparation work <input type="checkbox"/> Stage I Implementation <ul style="list-style-type: none"> o General Ledger o Project Accounting o Grants Accounting o Accounts Payable o Accounts Receivable o Purchasing o Workflow
July 1, 2007	<ul style="list-style-type: none"> <input type="checkbox"/> Stage I Go-Live <input type="checkbox"/> Support for Stage I Implementation <input type="checkbox"/> Stage II Implementation <ul style="list-style-type: none"> o Payroll o Timekeeping o HR/Benefits o Performance Measurement o Workflow (Continued)
January 1, 2008	<ul style="list-style-type: none"> <input type="checkbox"/> Stage II Go-Live <input type="checkbox"/> Stage II Support <input type="checkbox"/> Stage III Implementation <ul style="list-style-type: none"> o Workflow (Continued) o Document Management o Budget Preparation

Month	Task
	<ul style="list-style-type: none"> ○ Budget Control ○ Executive Dashboard ○ Fixed Assets/Inventory ○ Opal Integration
July 1, 2008	<ul style="list-style-type: none"> □ Stage III Go-Live □ Stage III Support

CHAPTER 12

Market Research

The City of Newport has a number of choices to meet its financial, human resource and administrative system needs. The previous chapters have documented a need for an enterprise solution. However, when examining how technology can improve business operations, it is critical to understand the solutions available in the market place and be familiar with how similar organizations to the City are using advancements in technology in the government sector. This chapter presents the results of market research, which utilized GFOA research documents and publications, experience from prior consulting engagements, and a survey of ERP vendors. Information is organized into the following sections

- Characteristics of Tier I and Tier II vendors
- Tier II Market
- Application Service Providers
- Comparable Communities
- Market Implications

Characteristics of Tier I and Tier II Vendors

The ERP market can be differentiated into three tiers:

Tier I - These ERP solutions are characterized by having multiple verticals – that is they are designed to be employed by different industries – manufacturing, retail, government, etc. These software systems are considered leading edge in providing functionality. The firms tend to invest a significant amount of resources in the research and development of their systems, which yields increasing improvements and expanded capabilities. Although software solutions from other categories may possess similar functionality, Tier I solutions typically lead the industry and set the functional baseline. While the overall benefit to selecting a Tier I solution is the extensive functionality, these solutions are generally expensive and can be cost-prohibitive for smaller organizations like the City of Newport as well as overly complex. Some implementation firms have created methodologies that allow public sector organizations to obtain a Tier I product with lower financial, time, and human resource costs. The trade-off for these implementation approaches, sometimes referred to as streamlined or template

implementations, is that the organization gives up some degree of choice in exchange for the less expensive process. This category is also characterized by containing fewer vendors including Oracle, Peoplesoft (recently acquired by Oracle) SAP and Lawson (although Lawson also has Tier II characteristics).

Tier II companies target all types of local governments, including schools, general-purpose governments, and special districts. Generally, Tier II firms target governments with operating budgets between \$20 million and \$450 million, and populations between 20,000 and 600,000. These solutions can be referred to as “basic integrated financial systems for the public sector.” These are packages that have all of the basic characteristics of integrated systems (such as workflow, integration between modules, security, flexible chart of accounts, and flexible technological architecture), but they have less advanced capabilities than Tier I systems. However, unlike Tier I solutions, these systems are generally designed exclusively for the public sector and as such, contain public sector specific modules such as licensing and permit and inspection modules. They also tend to require shorter implementation times that are less costly and require fewer staff resources. While this tier has also been undergoing significant consolidation over the past five years, there are more vendors in this category than in Tier I.

Tier III - Solutions in this category are focused on smaller niche markets and may or may not have all the ERP characteristics and functionality described above. These solutions are likely to have a narrower focus on functionality, providing systems for particular specialized business activities such as utility billing or constituent relationship management (CRM).

Based on the City of Newport’s size and the results of the needs assessment, a Tier II vendor will most likely provide the best fit for the organization – thus, the rest of this report will focus on the Tier II market. Appendix A provides a representative list of Tier II vendors and company information – this list is not exhaustive nor does it provide recommendations but is meant to provide the City an introduction to the ERP providers it is likely to encounter in an RFP process.

The Tier II Market

Based on its interviews with City of Newport staff, GFOA developed a survey of Tier II vendors to update its internal market research and probe important questions for the City. The survey was provided to the 13 Tier II vendors from whom GFOA most often sees bids to local government RFP’s. This section presents information from the nine firms who returned completed surveys as well as from supplementary GFOA research. First, more information is presented on consolidation in the Tier II market, specifically in regards to the recent purchase of GEMS. Information is then provided on ERP functionality with more specific information on Tax Administration and Collections, Utility Billing and Business Licenses. Web Enablement is an important consideration for the City and information regarding this functionality is presented next. Finally, the survey

asked vendors about their willingness to take on larger than typical leadership roles during implementation.

Market Consolidation

As noted above, consolidation is a notable feature in both the Tier I and Tier II markets. In the Tier II market larger corporations have recently acquired previously independent software firms. For example, SunGard Data Systems acquired three separate Tier II software firms and Tyler Technologies has acquired two other previously independent firms. Of particular interest to the City of Newport is the recent purchase of GEMS by Harris from Cass Information Systems on December 31, 2005. Founded in 1976, Harris provides financial management and customer information system solutions for local governments and utilities - specifically financial management, utility billing, work order and code enforcement applications.

In GFOA's experience consolidation occurs because firms try to:

- Buy market share – since the ERP market is “sticky” as governments are reluctant to change software firms, buying market share allows vendors to sell their own products to their “new” customers base.
- Tap into the recurring revenue of a product's annual maintenance fee contracts
- Acquire new technology

Harris has issued press releases indicating that it plans to establish GEMS as a Harris division, maintain GEMS' employee base and St. Louis headquarters and provide on-going support, development service and sales for GEMS solutions as well as increase the GEMS client base. Given this, and the fact that Harris has a host of well-regarded products, it seems that the company is most likely buying market share and also exploiting GEMS' revenue base. However, given that Harris does not have a complete ERP solution, it is not out of the realm of possibility that it may try and meld its products with GEMS. However, this strategy is practiced much less frequently in the Tier II market because of the expense and is probably unlikely.

GEMS also responded to the GFOA survey and recently was awarded an ERP contract (following the Harris purchase), which provides further indication that Harris is pursuing a market share strategy. In either case, should the City consider an upgrade to its GEMS system, then it should confirm these suppositions with Harris to ensure a stable future product.

ERP Functionality

Table 6 Survey Results

Module	Percent of vendors that provide modules
General Ledger	100%
Budget Preparation	100%
Accounts Payable	100%
Accounts Receivable	100%
Cash Receipting	100%
Purchasing	100%
Fixed Assets	100%
Project/Grant Accounting	100%
Project Management	100%
Inventory Control	100%
Work Order Management	100%
Human Resources	100%
Payroll	100%
Self-service	100%
Permits and Inspections	78%
Utility Billing	78%
Licensing (Business, Liquor etc.)	78%
Bid & Quote Management	67%
Fleet Management	67%
Parcel Management/Assessment	67%
Customer Requests	67%
Tax Collections	56%
Contract Management	56%
Special Assessments	56%
Treasury Management	11%

This table presents the results from a survey of Tier II vendors conducted in January 2006 by GFOA⁸. Appendix B provides a list of all vendors who were provided a survey and detailed information on their company. Vendors were asked to indicate which of the following modules are included in their ERP suite⁹. As can be seen, of the 9 vendors who responded, 100% can meet basic requirements for core financial, human resource and payroll modules. Extended functionality, such as Permits and Inspections, Utility

⁸ The following vendors provided completed surveys: ACS, GEMS, Harris, Lawson, Microsoft Great Plains, New World, Springbrook and SunGard Pentamation.

⁹ Vendors were asked to indicate with a “yes” or a “no” whether or not their ERP suites included the modules listed in the table. Answers were not verified so the accuracy of the data depends on vendor self-reporting. All functionality claims should be verified through a procurement process.

Billing and Licensing are less standard, but still offered by a majority of vendors. Only Treasury Management functionality was truly limited. However, it is important to note that many of the vendors have developed strategic partnerships with third party firms to provide extended ERP functionality. In some cases where advanced functionality is required by a jurisdiction, utilizing a “best of breed” third party application may be the best solution. For example, if a jurisdiction has a complex utility billing operation, utilizing a Tier II ERP suite with a third party premier utility billing system may be a better fit for a jurisdiction than utilizing the ERP vendor’s own utility billing system, even if they offer one. These types of decisions will be made through the procurement process based on vendor responses to the RFP. Appendix C provides a listing of module by firm.

As described previously, Tier II products are technologically advanced integrated enterprise applications. While they are not as sophisticated as Tier I vendors, they typically can provide the functionality required by smaller governments. Since Tier II vendors focus exclusively on government, a key differentiator between firms in this tier is their extended on-line transaction processing (OLTP) applications such as work orders, inventory, permitting and others.

While this table provides a high-level view of ERP functionality, it is necessary to also understand the requirements that a typical ERP application can meet by module. Appendix F provides the most common requirements for core modules that a typical Tier II ERP vendor can meet with “out of the box” functionality. Of course, the ability to meet more unique requirements and process will vary between vendors.

While staff voiced satisfaction with current Tax Administration and Utility Billing functionality, this could be a consideration for future optimization of an ERP system. In addition there is a significant need for a future Business Licensing application. As such, it is important to consider what functionality is currently available when making a decision on which system to procure.

Table 6, shows not only the percentage of vendors who provide these modules, but also those who indicated partnerships with third party providers.

Table 7 Tier II Modules and Third Party Partnerships

Module	% of vendors providing through own application	% of vendors providing through a third-party partner
Utility Billing	78%	22%
Business Licensing	78%	22%
Tax Collections	56%	44%
Parcel Management	67%	22%

While those who are not providing the module themselves are clearly taking to steps to ensure that functionality is available via third party partners, it is important to note that such partnerships must be carefully evaluated. While the third parties tend to be “best-

of-breed” applications providing advanced capabilities, the durability of the partnership and the level of integration with the ERP product must be considered.

Web Enablement

A key differentiator between Tier I and Tier II firms used to be the extent of web enablement – the ability of users to access the application through a standard web browser such as Internet Explorer or Firefox Mozilla. This is advantageous because it eases the roll-out of the product and can reduce the hardware requirements for users. A web-enabled system also makes the transition smoother for public access to certain information. The GFOA survey confirmed that Tier II vendors have largely closed this gap and embraced this technology as 67% of responding vendors provided some form of web enablement and of those whose product were not web-enabled, most indicated that their product would be enabled in the near future (most by 2007).

While all 67% claimed “100% web enablement” there are important differentiators between firms. First, not all ERP modules may be web enabled. Vendors typically enable their product module by module with the modules used by the most end-users being enabled first. Firms are in varying stages of enabling their entire product – it appeared that two of the nine were entirely web-enabled but most likely, by 2007 most firms will have all of their modules web enabled. A second component of web enablement is whether or not there is web-based reporting available – it appeared that three firms had complete web-based reporting. Again, by 2007 this should become a standard feature. The last “check” for web enablement is whether any software must be installed on the users desktop computers to facilitate enablement (typically java applets or active x controls). It is preferably from an administrator and maintenance point-of-view to not have any software installed on the desktop and based on the survey results, just two of nine firms had achieved this stage of enablement. Most software that was required on the desktop was used for reporting modules.

This survey and GFOA experience indicate that web enablement is available, and will grow increasingly available, in the Tier II market. However, it is important through the procurement process to determine to what degree the product is actually enabled and what the vendor’s future plans for complete enablement are.

Implementation Services

As Tier II firms tend to focus on small and mid-size governments, they recognize cost is a significant issue and have developed their implementation strategies accordingly. They typically use their own staff, as opposed to third party consultants, and the implementation time-line is significantly shorter than a Tier I implementation because there are fewer configuration questions. However, they also typically take a “homework” approach whereby vendor staff onsite demonstrate to city staff how to configure the system and then return to check on the status of the work completed by the government. While this also helps reduce the implementation cost, it can be a strain on local governments with stretched staffing resources as may be the case in Newport.

To determine what other options are available, GFOA asked survey respondents to describe how they can take a greater leadership role during implementation. Responses varied from vendors who had specific methodologies in place to support such types of implementations and references available for successful projects to others who provided vague assurances that additional support could be purchased. This leads one to believe that there is great variation in the marketplace and vendors will have different levels of experience with this type of implementation. Should the City of Newport decide that it would like to pursue an implementation where the vendor takes a larger than customary role in the implementation, specific questions to this point should be included in the RFP. Vendors should be asked if:

- They have specific methodologies for taking a greater leadership role than customary implementations.
- They can provide references for projects where they took this role.

As this appears to be a relatively new area for most Tier II vendors, the City should carefully examine these responses when making their decision.

Application Service Providers

General ASP information:

The City of Newport expressed interest in possibly outsourcing its future ERP system. This would be done through an Application Service Provider (ASP), which provide a specialized service to clients to host government’s enterprise application servers, hardware, software applications, and data remotely. More often, software vendors are providing ASP as an added service to clients. Government’s often don’t have the means (e.g. staff size, staff expertise) to manage and maintain their applications at the government location. A government/organization is in essence outsourcing support and maintenance of their hardware, software applications, databases, and servers to the ASP’s remote location.

Over the past several years an increasing number of Tier II vendors offer ASP services, further evidence of the increasing sophistication and breadth of offerings in this market.

In fact, 89% of vendors surveyed by GFOA offered some time of ASP service. However, there are variations of ASP, which are important to distinguish.

GFOA's research identified three levels of outsourcing: RSP (remote service providers), ASP (application service providers) and BSP (business service providers). RSP's are less intensive concerning outsourcing, BSP are more intensive concerning outsourcing and ASP's fall in the middle spectrum of the two. General characteristics of RSP's include: client hardware is located on-site (at government location) and IT services are provided remotely (database admin, disaster recovery, etc.). ASP's client hardware is located offsite, the ASP owns the hardware, ASP's maintain software applications, and additional services may be provided such as help desks. BSP's have these similar characteristics as ASP's but also include: the client hardware is located off-site and owned by vendor and back-office processes (such as payroll) are provided by the BSP's.

Table 8 ASP Advantages & Disadvantages

Advantages	Disadvantages
<ul style="list-style-type: none"> ▪ Limited qualified IT resources needed. 	<ul style="list-style-type: none"> ▪ Limited control of applications.
<ul style="list-style-type: none"> ▪ Peace of mind – software applications, hardware managed and maintained by qualified vendor. 	<ul style="list-style-type: none"> ▪ Service Level agreements need to be clear and agreed upon by vendor and government. Service Levels must also be monitored.
<ul style="list-style-type: none"> ▪ Latest technology. ASP's utilize the latest hardware and keep software current. 	<ul style="list-style-type: none"> ▪ ASP may partner with other firm to provide services. Verify the partnership doesn't add confusion to government
<ul style="list-style-type: none"> ▪ Additional services often provided (Help Desk). 	<ul style="list-style-type: none"> ▪ Integration with legacy systems can be challenging.
<ul style="list-style-type: none"> ▪ Improved level of service. ASP's often specialize in applications they host. 	
<ul style="list-style-type: none"> ▪ Cost control. Government can anticipate and control costs for an extended period of time. 	
<ul style="list-style-type: none"> ▪ Web-based and client server environments supported. 	
<ul style="list-style-type: none"> ▪ Cost savings. Purchasing hardware, software, and licenses reduced or eliminated. 	
<ul style="list-style-type: none"> ▪ ASP's can support client server and web-based environments. 	
<ul style="list-style-type: none"> ▪ Disaster Recovery services performed by ASP (Addl. Savings). 	
<ul style="list-style-type: none"> ▪ Provider responsible for upgrades. 	

ASP CONSIDERATIONS:

- Technological infrastructure – T1 and possibly T3 connections generally required
- Determining who is responsible for maintaining the communication link between the hosting provider’s data center and the government’s network can be a complex issue.
- Service levels of internet provider especially down-time response and back-up connectivity
- Whether band-width is owned or leased by the service provider and whether it is sufficient.
- Developing an effective service-level agreement with the ASP. The service level agreement should contain performance benchmarks, hardware and software update policies, and term of the agreement (usually 3-5 years) with acceptable exit clauses, which cover transfer of data and documentation of configuration settings.
- Addressing labor relations, as concerns of lay-offs will likely come up in early discussions of the ASP process.

As described above, a key consideration for the City would be its WAN/LAN network infrastructure. Responsibility usually falls on the client (Newport) to ensure proper connectivity to the ASP remote site location. Therefore, Newport will need to investigate if T-1 or T-3 lines need to be installed. A successful ASP is also largely dependent on the Service Level Agreement. Should the City pursue an ASP, it must ensure that its contract is clear, concise and explicit. Specific components were highlighted above but it is important that the City recognize that as with any outsourcing contract, the City will still require skills and staff time to monitor the contract and this should be taken into consideration when weighing the cost and benefit of an ASP. Finally, Newport must determine if state law restricts data to be hosted across state lines.

ASP offers many advantages, and as a result this service continues to grow in the market. Through the procurement process, Newport will be able to better explore the cost and benefits of this service for its particular operations.

Comparable Communities

GFOA has identified a group of communities comparable in operating budget totals and population size to the City of Newport that have selected an ERP system. These communities are displayed in Table 9.

Table 9 Comparable Communities

Jurisdiction	State	Population	Operating Budget	ERP Vendor
City of Stuart	FL	15,000	\$20,000,000	SunGard-Pentamation
Town of Addison	TX	15,000	\$60,000,000	GEMS
City of Clayton	MO	16,000	\$17,000,000	GEMS
City of Ellensburg	WA	17,000	\$62,000,000	Cogsdale
City of Gainesville	GA	17,885	\$76,000,000	GEMS
Town of Canton	MA	21,000	\$62,000,000	Munis
City of DeLand	FL	22,000	\$20,000,000	Springbrook Software
City of South Portland	ME	23,000	\$75,000,000	Munis

City of Seal Beach	CA	24,800	\$19,000,000	Springbrook Software
City of Rochester	NH	28,641	\$85,000,000	Munis
Village of Northbrook	IL	33,500	\$59,200,000	GEMS
City of Highland Park	IL	35,000	\$32,000,000	Eden
City of Twin Falls	ID	37,000	\$30,000,000	Springbrook
Town of Billerica	MA	40,000	\$105,000,000	Munis
City of Wauwatosa	WI	47,000	\$45,000,000	GEMS
City of Mentor	OH	50,000	\$50,000,000	GEMS
Colombia County	WI	55,000	\$61,000,000	JD Edwards
Sauk County	WI	55,000	\$72,000,000	Munis
City of St. Peters	MO	57,000	\$65,200,000	GEMS
Yuba City	CA	60,000	\$24,000,000	SunGard-Pentamation
Glynn County	GA	68,000	\$45,000,000	GEMS
City of Newport Beach	CA	70,000	\$88,000,000	SunGard-Pentamation

Market Implications

The market structure most likely places the City and Schools of Newport in the Tier II category of ERP firms. As described in this chapter, the Tier II market continues to grow increasingly sophisticated while remaining competitive so that the City of Newport will most likely be able to find a strong fit for its enterprise business process needs. As a result, the City needs to develop a comprehensive strategy in order to harness market opportunities. This must include:

CURRENT REQUIREMENTS: While this research determined a general ability among vendors to meet core public requirements, it is essential that the City document its current business requirements through the procurement process to ensure that any selected vendor can meet the City’s current needs and especially any unique requirements. Web enablement and application hosting are also two viable options; however, there is variation in the type of services provided so the City documents its requirements and carefully evaluates proposers.

VISION: The Tier II market is rich with extended ERP opportunities. The City of Newport should not only consider what its current business requirements are, but how it might optimize the system to meet future demands. For example, while Tax Administration may not be a current need, choosing a vendor with a strong Tax Administration module or a feasible partnership with a third party provider, will ensure future options. Jurisdictions with Tier II ERP systems also tend to grow their systems “organically” as their vendor rolls out new modules. Thus it is important to understand the long-term vision of the selected vendor as well.

Available Staffing Resources: As the City knows from its own experience, ERP implementations require extensive staffing resources. The Tier II market shows a growing ability to accommodate limited staffing situations during implementation. However, experience and methodologies vary so, should the City decide to pursue this less-standard approach, it should carefully evaluate the capacity of the proposers. Such a scenario will obviously impact cost, which will of course be a consideration as well.

CHAPTER 13

Summary

Seldom will governments find single solutions for their issues. The reasons for this conclusion vary. Some governments have found that some single solutions are too expensive or too complex to implement. Other governments discovered that a solution already existed in their existing business processes and all that was needed was some tweaking of their current business processes. In most GFOA system selection engagements, governments were able to meet most of their needs through a combination of a single solution complimented with change management or third-party software. In some rare cases GFOA found that a new solution would offer very little or no value to existing processes; and therefore, the status quo became the acceptable solution. Based upon discussions with Newport staff and industry research, the GFOA believes a solution for Newport lies within a base enterprise solution complimented by changes in existing procedures.

Newport managers have conveyed that the City Council and Newport Key Management have placed a high priority on developing integrated approaches to management reporting, customer reporting and economic development information.

It is recommended that Newport pursue the option to look at replacing their existing applications and to incorporate or replace ancillary functionality, existing in separate Newport systems (such as Opal), into the new ERP system. In addition to the new ERP application, the organization should assess its existing electronic tools and identify functions that are under-utilized (e.g., Microsoft Office Workflow).

The future system for Newport is proposed to be installed in three stages. Stage I involves installing base functionality for accounting, and is proposed to be completed by fiscal year '07. Stage II will be used to install HR and Payroll functions. Stage II is proposed to be completed within six months of Stage I. Stage III encompasses Budget Control, Document Management, Fixed Assets and items considered "nice-to-haves". Stage III is proposed to be implemented after Stage II and only if the organization can support it.

GFOA believes that the above plan is a sound one. The procurement schedule is rigorous and will require the staff's full attention over the next few months; however, it is achievable. Building a an enterprise solution for the organization after assessing the ERP market, coupled with adjusting some internal business processes will enable the organization to meet its vision for better management reporting and superior customer service in the future.

APPENDIX A

Scope

For this project, the GFOA was charged with the following tasks:

- ❑ Task 1: Conduct an internal survey on the use and satisfaction of the existing systems.

- ❑ Task 2: Work with City Management to develop an executive vision for the future enterprise strategy.

- ❑ Task 3: Conduct a functional and technical assessment of the City's operations and identify any gaps that may hinder any future enterprise strategy and to outline the requirements for a future system.

- ❑ Task 4: Identify possible enterprise software solutions

APPENDIX B

Tier II Company Information

Company Name	Est.	Date Acquired	Target Market		# of Customers	% Govt. Customers	Smallest Govt. Client	Largest Govt. Client	Annual Sales	# of Employees	ERP product
			Public/Private	Type of Public			Population/Op. Budget	Population/Op. Budget			
ACS www.acs-inc.com	1986		Public	Local, Special districts	10,000	10%	2,000	220,000	\$5B	50,000	Financial Suite
Government e-Management Solutions (GEMS) (Harris) www.gemsgov.com	1983	2005	Public	Local, Utilities, K-12	@100	100%	500/\$	370K/\$	\$6.20	60	GEMS
Great Plains (Microsoft) ¹⁰	1975	2001	Both	Local, K-12, Higher Ed, Federal	30,000 (globally)	10%	12,000/50M	400,000/1B	\$423M (6 mo)	600	Great Plains
Harris www.harriscomputer.com	1976		Public	Local, K-12, Utilities	3000		22K/\$	1M/\$3.34B	\$26.8 M	300	Cayenta Financials
Lawson www.lawson.com	1975	NA	Both	Local, State, Non profits, K-12, Utilities	2200	5%	32K/\$80M	10M/8B	\$335M	1400	Lawson Core Business Software
Municipal Information Systems (Tyler Technologies) www.munis.com	1966	1999	Public	Local, K-12, Non Profits, Utilities	1042	@100%	3,600/\$9.4M	1.1M/\$1.4B	\$172M	350	MUNIS
New World Systems www.newworldsystems.com	1981		Private	Local	221	100%	900/\$23M	950K/\$960M	NA	300	Logos
Springbrook www.sprbrk.com	1985	NA	Public	Local, Non Profit	270	100%	100/NA	250K/NA		60	Springbrook
SunGard Pentamation www.pentamation.com	1969	1999	Public	Local, K-12	700	100%	5000/\$	500K/\$115M	\$45M	300	Plus Series
e-ASG www.e-asg.com	1999	NA	Both	Local, State, Non Profits, K-12	160	53%	20K/\$20M	900K/\$1B		100	Envision Series
Eden (Tyler Technologies) www.edeninc.com	1981	2003	Public	Local, K-12, Non Profits	185	100%	6,000/\$35M	655K/\$185M	\$12M	140	InForum Gold (IFG)
Hansen International www.hansen.com	1983		Public								
SunGard Bi-Tech www.sungardbi-tech.com	1971	1995	Public	Local, State, Fed, k-12, Higher Ed, Non Profits	286	100%	7,700/\$7.4M	3.1M/\$900M		220	IFAS

(Respondents to GFOA survey are shaded in gray. Information for non-respondents is from other sources and may not be as accurate or up-to-date)

¹⁰ Answers reflect the Microsoft Business Solutions division, which is the ERP/CRM business unit.

APPENDIX C Detailed Survey Results – Vendor Functionality by Module

Module	SunGard Pentama- tion	Lawson	GEMS	Harris	New World	ACS	Spring- brook	MUNIS	Great Plains
Accounts Payable	Y	Y	Y	Y	Y	Y	Y	Y	Y
Accounts Receivable	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bid & Quote Management	Y	Y	Y	Y	Y	F	F	Y	T
Budget Preparation	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cash Receipting	Y	Y	Y	Y	Y	Y	Y	Y	Y
Contract Management	N	Y	N	N	Y	Y	Y	Y	T
Customer Requests	Y	N	Y	N	Y	Y	Y	Y	T
Fixed Assets	Y	Y	Y	Y	Y	Y	Y	Y	Y
Fleet Management	Y	Y	Y	F	Y	Y	Y	F	T
General Ledger	Y	Y	Y	Y	Y	Y	Y	Y	Y
Human Resources	Y	Y	Y	Y	Y	Y	Y	Y	Y
Inventory Control	Y	Y	Y	Y	Y	Y	Y	Y	Y
Licensing (Business, Liquor etc.)	Y	T	Y	Y	Y	Y	Y	Y	T
Parcel Management/Assessment	Y	T	Y	N	Y	Y	Y	Y	T
Payroll	Y	Y	Y	Y	Y	Y	Y	Y	Y
Permits and Inspections	Y	T	Y	Y	Y	Y	Y	Y	T
Project Management	Y	Y	Y	Y	Y	Y	Y	Y	Y
Project/Grant Accounting	Y	Y	Y	Y	Y	Y	Y	Y	Y
Purchasing	Y	Y	Y	Y	Y	Y	Y	Y	Y
Self-service	Y	Y	Y	Y	Y	Y	Y	Y	Y
Special Assessments	Y	T	F	N	Y	Y	Y	Y	T
Tax Collections	Y	T	Y	T	T	Y	Y	Y	T
Treasury Management	N	T	N	N	T	F	F	Y	T
Utility Billing	Y	T	Y	Y	Y	Y	Y	Y	T
Work Order Management	Y	Y	Y	Y	Y	Y	Y	Y	Y

“Y” indicates that the module is offered as part of the firm’s ERP suite

“N” indicates that the module is not offered

“T” indicates that the module is offered through a third party vendor

“F” indicates that the module will be offered as part of the firm’s ERP suite in a future release.

APPENDIX D

Enterprise Solution Definition

Enterprise Solution – A Definition

It is generally accepted in the technology realm that any organization using computing resources can be considered an “Enterprise”. According to the Gartner Group and Microsoft, an enterprise solution or “enterprise architecture” encompasses the business perspective (business processes), the application perspective (software), the information perspective (data), and the technology perspective (hardware). When considering enterprise solutions, Governments are typically faced with the following options, in addition to the status quo option: 1) Procurement of a complete enterprise software package; 2) Best-of-Breed solution; or 3) Developing their own or “Home-Grown” solution.

Enterprise Resource Planning (ERP)

ERP solutions comprise of multi-module software packages designed to integrate enterprise business functions and intended to facilitate management of major business functions such as financial accounting, purchasing, human resources, payroll, and billing. The advantage of ERP is that these solutions are highly integrated; they are based upon millions of hours of best practice research (particularly in public sector); and there usually are fewer pieces of technology to manage. The disadvantages include high purchase and implementation costs; dependability upon a single vendor; and complex technology.

Best-of-Breed

“Best-of-Breed” solutions consist of highly focused software solutions. The breadth of this solution is not as large as ERP. For example, a “best of breed” solution may only offer budget preparation functions and nothing else. Customers typically use this type of solution to compliment a larger vision. The advantages of “best-of-breed” include lower costs, easier maintenance, and less dependency upon a single vendor, when used in conjunction with other solutions. The disadvantages include de-centralized data, maintenance of multiple systems, and potential maintenance of multiple technical architectures.

“Home Grown” Systems

Governments that build their own applications, instead of purchasing commercial off-the-shelf (COTS) software fall within this category. The advantages to this solution include highly specialized software and lower cost. The disadvantages include limited incorporation of best practices, limited integration, and higher risk based upon higher dependability upon programmers.

ERP Software

A few years ago, this component was viewed as the “end-all, be-all” of enterprise applications for an organization. ERP vendors tried to package as much of an organization’s needs as possible into one product under an integrated database, code set, and user interface. It was quickly realized that highly specialized vendors offered better functionality for some ERP functions (e.g., e-commerce) than ERP vendors could provide. To overcome the difficulties of integrating different types of product solutions together, ERP vendors began to embrace the concept of “openness”. Open standards, such as Common Object Request Broker Architecture (CORBA), Java, and Extensible Mark-up Language (XML) are now incorporated into major ERP packages. As a result, ERP software has moved into the core of the enterprise solution, where it’s primary responsibility is to capture information about transactions, process data, and deliver content directly to end-users or to other enterprise systems.

Definition: An Enterprise Resource Planning System (ERP) is a commercial off-the-shelf business application. It provides the organization with greater availability to information that, when implemented correctly, can provide the organization with the ability to manage more effectively. Modern ERP systems share ten distinguishing characteristics that set them apart from other types of solutions. These include:

1) Modular Integration. Integration refers to the extent to which different operational functions are tied together in the overall system. Integration is the single most important feature of ERP systems. Many industry experts argue that “integration dominates functionality.” They emphasize that integration is more important because it promises more benefits, it is customer focused, and that systems based on this feature are easier to maintain.

In a true ERP strategy, a single vendor typically provides a solution that is viewed as the “overall best” for the organization as a whole. The vendor itself becomes a technology standard within an organization with the hope that all of the major applications will someday fit under the banner of one vendor. This strategy seeks to reduce the total cost of ownership of enterprise applications. Under this strategy, different applications are fully integrated because they use relational database management software that is common across functions. (See section 2 below for an explanation of “relational database”). Advocates of the strategy would argue that a common database product across applications is a necessary, albeit insufficient, condition for a system to reach true ERP status.

Some would argue that ERP-like performance could be approximated by using what is known in the industry as a “best-of-breed” strategy. Under this strategy, software packages for different functions are linked through programming interfaces, but do not necessarily share a common database. Proponents of the strategy argue that the overall risk of implementation failure is lower (i.e., sub-par performance of one module does not lead to system failure) and the overall functionality is greater (i.e., the “best” individual applications are being molded into one system). Detractors argue, however, the strategy at most produces a “simulated” ERP and is no substitute for a true ERP using a single vendor as the software standard across the organization. This approach also foregoes the lower cost of maintenance of a unified system.

Most enterprise solution vendors augment reporting functionality with the use of desktop productivity applications, such as Microsoft Office. For example, word processing is used to generate statements and customer communications. Spreadsheets are used for drill-down reports.

Most ERP vendors have established “hooks” with Microsoft Office products and interface to these applications smoothly. Work-arounds may be required for other types of desktop applications.

2) Common and Relational Database. Legacy systems fragment decision support precisely because they consist of sub-systems that rely on different databases. In contrast, a common database facilitates the integration of this information into a single information silo. Some leading ERP software packages rely on more than one database. However, because the same database product is used, this situation poses fewer problems than the situation for many legacy systems, where hundreds of separate information silos, based on different database products, comprise the system.

A relational database organizes records into a series of tables linked by common fields. Under non-relational structures, cumbersome but meticulous programming is required to navigate flat file structures. By contrast, relational databases allow querying—the process in which users select columns, rows and named fields—through graphical user interfaces (GUIs), which require little programming experience. Relational databases are also an important system feature that determines the ability of end users to “slice and dice” information for reporting and analysis. In most “true” ERP systems, each field on a panel represents a field in a relational table.

The database platform that is chosen may impact the range of ERP solutions that are available. Newport has indicated that staff expertise is with MS SQL Server. The GFOA would like to note MS SQL Server is less costly and retains wider support in the industry. In the past year Oracle has been more competitive in the Middle-market ERP area and worth considering. However, if an organization can afford to re-tool and retrain personnel, then GFOA generally recommends that they assess ERP functionality first and then match the optimum database platform for that product.

In the specific case of Newport, the City seems positioned to consider SQL Server and Oracle. However, with a database platform such as Oracle, the City would need to ensure that vendor would assume most of the support burden for the database.

3) Client/Server Technology. The underlying architecture of software products affects system functionality as well as the ability to reengineer business processes. Client/server systems are associated with network computing. In the most common mode, the client makes requests (data, analysis, and queries) from the server. The server is ordinarily a networked computer that provides shared services to multiple clients. The client is a desktop computer in an end user department that can have a relationship with different servers. The type of cooperation between the client and the server is described in terms of two, three, or multiple (n) tiers.

In two-tier architecture, the data resides on the server and the application logic resides on the server or the client. In three-tier or multi-tier architecture, the data resides on one server, the application logic resides on a second server or group of servers and limited processing occurs at the desktop, or client. Three-tier design is generally preferred since it can be easily modified for use by different size organizations, is robust, and flexible.

4) Best Business Practices and Process Reengineering. Many private- and public sector organizations state that they model their software after “best” business practices. At the same time, they emphasize that the software is flexible enough to permit redesign

of core operational processes. These are both necessary software features of an ERP system.

5) Workflow Capabilities. Workflow is the automation of business processes within the enterprise system. A goal of reengineering is to eliminate “document handoffs” and excessive layers of approval. Workflow capabilities permit users to define event-driven routings, create automated in-boxes and prioritized cues, and allow background queries to take place with notification to the user and, more generally, streamline processes.

Workflow capability is necessary for many process reengineering and “paperless government” initiatives. Especially in areas such as government purchasing, workflow promises to improve the efficiency of routine transactions. Once a piece of information is generated in electronic format, it can be stored electronically through document management capabilities. . Workflow requires a workflow engine, which houses the rules and procedures. The workflow engine is usually a built-in feature of ERP software.

6) Powerful Development Toolsets. ERP systems are accompanied by built-in administrative and programming toolsets. These toolsets enable developers to configure, modify, and customize software packages. Toolsets also aid in the design of interfaces and system-wide security.

Utilization of toolsets requires specialized skill, although many toolsets are not as programming-intensive as the earlier generation of languages. The administration of security, workflow, and upgrades also relies on toolsets. Most modern systems utilize toolsets to allow users to redefine menus and panels without changing the underlying programming codes or accessing the database. Toolsets allow users to customize the way they view information in a manner that fits their assigned duties. Toolsets also permit developers within an organization to build additional functionality from scratch (e.g., debt management or workers’ compensation capabilities) that may not be available in an ERP system today.

7) Drill Down/Audit Trail Capabilities. Poor drill down and audit trail features are often cited by end users as one of their main points of dissatisfaction with legacy financial systems. Drill down capabilities permit end users to reach the source document that supports a journal entry. Audit trails provide the ability to review all of the history of changes to a record in the database. It is often useful to know which user changed a particular record (e.g., wage rates in a payroll file) and audit trails are the feature that provides this information. ERP audit capabilities record activity by user name, date, time, and transaction. The audit information is also stored in the database.

8) Flexible Chart of Accounts. A common complaint of end users is that legacy systems do not permit the capture of expenditure detail below the budgetary control level.

The chart of accounts (COA) is an important element in determining the overall usefulness of a financial system. The COA supports financial reporting and budgetary requirements. In addition, the COA structure should be flexible enough to incorporate more detailed information often kept outside of the legacy system, while maintaining the integrity of the overall reporting and budgetary structure. A flexible COA structure based on relational database concepts is one element of ERP that can improve reporting and eliminate many “shadow” systems from proliferating in an organization.

9) Advanced Reporting and Analysis. “We know the data is in there, but we can never get it out,” is another complaint end users voice about legacy systems. ERP systems are associated with powerful reporting and information analysis capabilities available system-wide (i.e., end users of the human resources module have the same capabilities as those

using accounting applications). Unlike legacy systems, ERP systems focus less on standard reports and more on “ad hoc” reports that end users design themselves. Reporting features also ease the burden of information dissemination by using automated scheduling and e-mail distribution features.

Data analysis capabilities focus on providing corporate decision-makers with statistical and graphical tools to detect patterns and trends in information warehouses.

10) Web Business Activity. Most government organizations already have Web pages for general information; and significant opportunities remain for transactions to be conducted through the Web. For example, Web applications can broaden an organization’s reach to suppliers and increase the number of bidders. These interfaces use the same browser software used to access web sites (e.g., Internet Explorer, Foxfire/ Mozilla, Netscape).

The browser interface also enables the end user to access other Internet/Intranet/Extranet services simultaneously and, in some cases, integrate these services with the host application. An example of this latter feature is checking the status of an overnight shipment by “sliding” invoice information, that is stored in an enterprise system, to a shipping service’s Website. Sophisticated Web services software also enables users to integrate different enterprise systems into one interface; however, this type of solution can be costly and in some cases sustains bad business practices if the service preserves an outdated system.

ERP has traditionally been viewed in terms of back-office applications such as accounting, purchasing, human resources, and payroll (i.e., “Core ERP” – See Exhibit 4.1). Of course, this is where ERP started, but it is coming to mean much more. ERP has expanded its reach as ERP vendors look for new avenues of revenue growth and customers look to their ERP vendors to fill a wider range of their technology solution needs and enable more significant business improvements. This expanded reach can be understood to comprise “Extended ERP” and “Beyond ERP” solutions.

Extended ERP Solutions

The most visible manifestation of ERP vendors’ increasing footprint has been Extended ERP, wherein ERP vendors extend into other on-line transaction processing (OLTP) applications such as work orders, inventory, constituent relationship management (i.e., e-government), and others. Some vendors have even extended their application into analytical applications such as data warehousing and business intelligence.

However, “Extended” solutions strategies rely on the ERP vendor as the sole provider, and do not address customer needs outside of data-centric applications. This has led to “Beyond ERP” solutions.

Beyond ERP Solutions

“Beyond ERP” solutions allow the ERP package to move beyond applications provided directly by the ERP vendor and beyond purely data-centric applications. Thus, Beyond ERP has two essential facets. The first is “total solution integration” and the second is “beyond data solutions.”

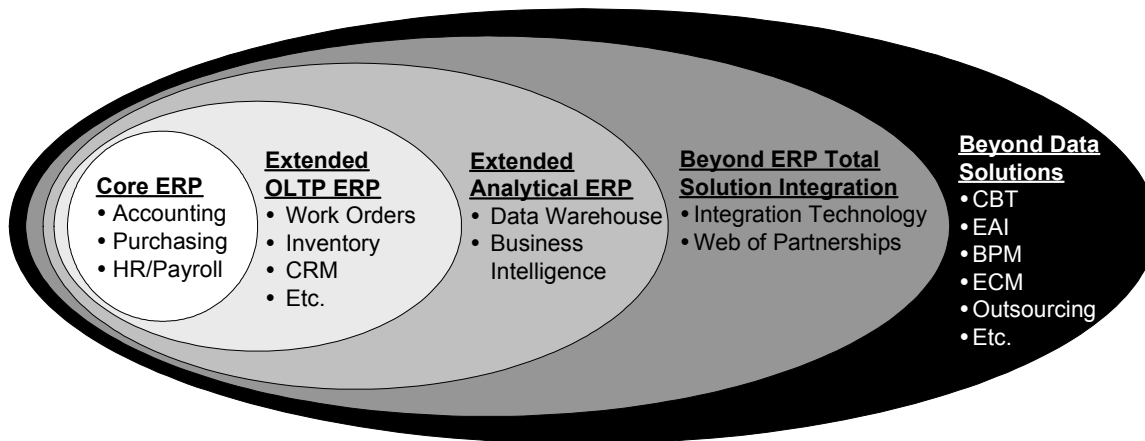
Total solution integration is the ability of ERP to provide a total solution, even if the entire solution is not provided directly by the ERP vendor. This requires ERP vendors to embrace open architecture, programming standards, and integration technologies, such

as Web Services. This allows clients to integrate other solutions with the ERP system, where ERP vendor functionality is found wanting, without compromising data and process integration across the government enterprise. Total solution integration also requires ERP vendors to develop a web of partnerships to deliver solutions it cannot.

To completely realize the ERP vision, solutions beyond the data-centric applications associated with Core ERP and Extended ERP are needed. These Beyond Data Solutions add value in a wide variety of ways, and, as such, ERP vendors would likely have to use partners to deliver all of them. Below are just some of the solutions that can be understood to fall into this category.

- **Computer-Based Training (CBT) Tools:** ERP solutions require a robust on-going training regimen to train new employees, refresh existing ones, and optimize use of the system, generally. ERP vendors can assist by providing CBT tools that allow the creation of self-paced, customized instructional content.
- **Outsourcing Services:** Many organizations are finding that it makes sense to outsource technical support functions, and even some back-office business processes. ERP vendors may be looked to as the outsourcing service provider (this is discussed in greater detail in section X.4).
- **Enterprise Content Management (ECM):** The proliferation of electronic media means organizations are capturing more and more electronic content in a variety of forms, including email, voice, pictures, documents, as well as structured data. All of these forms of content impact business processes (or they would not be captured), and must be managed and integrated with the business process.

Path of ERP Evolution



It is important to note that ERP goes beyond software and system considerations. The non-technical side of ERP often determines the success of an ERP project. Integration of data and common business processes necessitates the redesign of workflows and policies governing data access and capture. Implementation of enterprise systems demands extensive planning and coordination of an organization's human, financial,

technology, and infrastructure resources. A certain degree of organizational change must occur to streamline processes and reduce costs resulting from duplication of efforts. Building on a common database, enterprise systems provide templates for redesigning process flows and tools for customized reports. Thus, each piece of data will be entered once but used throughout the enterprise, and updates of reports can be shared immediately with all authorized users.

Common Components of ERP

The core of an enterprise solution is the ERP software application. Although it can be argued that other tools such as Web services can integrate different types of enterprise data into a single interface, only the ERP software package standardizes data, business rules, and business processes. In fact, some highly specialized enterprise application vendors assume that their solution will be layered on top of an ERP software package. The ERP package can then feed these specialized enterprise components (e.g. GIS) where the data can be optimized for that particular use. Over the years, ERP demands have become more complex requiring a sophisticated set of technology. Typical characteristics of modern ERP software include the following:

A Basic Definition of Core ERP

Core ERP is defined as an integrated financials/human resource administration information system. Core ERP entails a number of essential features.

- *Integration:* Data is shared between applications within ERP.
- *Deep Functionality:* Applications can meet a wide variety of business requirements.
- *Workflow:* Software automates business process execution, i.e., routing tasks and approvals between users.
- *Drill-Down:* Underlying data can be accessed directly from the current screen.
- *Modern Technology:* The system is built using modern programming languages, standards and technical architectures.
- *Reporting:* The system provides end-users with the ability to access system data using modern reporting tools.

APPENDIX E

Roles and Responsibilities

Project Team Role Descriptions

The following roles are typically used on ERP projects. For Larger projects, each role is filled by a different person. For smaller projects (utilizing less complex software), roles and responsibilities are combined into the “Lead” functions. The descriptions of the roles are provided for informational purposes only. It is likely that Newport will combine most roles and responsibilities under the “Leads”.

Project Manager

Description: In conjunction with the Vendor's project manager, oversees the design, configuration, and post implementation support of the new accounting system.

Responsibilities:

Administration

- Works in conjunction with Vendor's Project Manager.
- Manages Newport’s resources to ensure project is on schedule, on budget and that quality expectations are met.
- Manages project level issues to resolution.
- Manages and filters issues to be elevated to the steering committee for resolution.
- Reports and communicates project status to steering committee

Design/Implementation

- Manages and coordinates Newport resources during system design.
- Assists Vendor Project Manager with managing project documents.
- Tracks and manages resolution of functional issues.
- Oversees the development of training materials.
- Oversees change management process.
- Verifies and approves acceptance testing.

Team Leads

Financials Team Lead

Description:

Responsible for Managing the Financials team; overseeing the design process for the financials application; and managing post implementation support for the financials application.

Responsibilities:

- Coordinates work effort, through Project Managers, with HR/Payroll Team Lead, Change Management Lead and the Technical Team Lead
- Manages design of new business processes within the financials application.
- Manages resolution of functional issues related to the financials application.
- Configures software to meet Newport's financial requirements.
- Manages and assists with development of training materials
- Manages and assists with software testing.
- Manages and assists with data conversion.
- Provide post implementation support

Design Management:

Will oversee the following design elements:

- Compliance with GAAP/GASB Reporting
- Organizational Design (e.g., Hierarchies)
- Budget Control/Budget Preparation Process
- Chart of Account Design
- Management Financial Reports
- Accounting Processes

HR/Payroll Functional Lead

Description:

Responsible for Managing the HR/Payroll team; overseeing the design process for the HR/Payroll application; and managing post implementation support for the HR/Payroll application.

Responsibilities:

- Coordinates work effort, through Project Manager, with Financials Team Lead, Change Management Lead and the Technical Team Lead
- Manages team level issues to resolution

- Reports and communicates team status to Project Managers
- Manages design of new business processes within the HR/Payroll application.
- Manages resolution of functional issues related to the HR/Payroll application.
- Configures software to meet Newport's HR/Payroll requirements.
- Manages and assists with development of training materials
- Manages and assists with software testing.
- Manages and assists with data conversion.
- Provide post implementation support

Design Management:

Will oversee the following design elements:

- Organizational Design (e.g., Employee Hierarchies within Proposed Organizational Design)
- HR Forms designs
- Management Reports
- HR Processes

Purchasing Functional Lead (Optional)

Description:

Responsible for Managing the Purchasing; overseeing the design process for the purchasing application; and managing post implementation support for the purchasing application.

Responsibilities:

- Coordinates work effort, through Project Manager and other Team Leads
- Manages team level issues to resolution
- Reports and communicates team status to Project Managers
- Manages design of new business processes within the Purchasing application.
- Manages resolution of functional issues related to the Purchasing application.
- Configures software to meet Newport's Purchasing requirements.
- Manages and assists with development of training materials
- Manages and assists with software testing.
- Manages and assists with data conversion.
- Provide post implementation support

Design Management:

Will oversee the following design elements:

- Purchasing Organizational Design (if applicable)
- Vendor Set-Up/Clean-Up
- Purchasing Items Set-Up
- Contract Set-Up
- Management Financial Reports

Technical Team Lead(s)

Description:

Responsible for managing Newport's technical team resources; overseeing the design process for system environment; and managing post implementation technical support for the entire application including software, hardware, and network.

Responsibilities:

- Oversee creation and support of the development environment, including the Conference Room Pilot, the testing environment, the production environment, and the "live" environment.
- Manages development of technical architecture/production environment including:
 - Database
 - Network
 - Servers
 - Workstations
- Manages resolution of technical issues.
- Oversee technical configuration of software.

Ideal Government Candidate

- Director of the MIS Department
- Understanding of Client/Server technologies.
- Some understanding of Fourth Generation programming.
- Ability to prioritize issues to be elevated to the Project Managers
-

Change Management Team Lead (Optional)

Description:

Responsible for managing new business processes that come about as a result of the implementation of the new system. Manages the development of the training program.

Assists the Financials Team Lead and the HR/Payroll Lead in post implementation planning.

Responsibilities:

- Lead change management portion of process and organizational design.
- Assists Financials Team and HR/Payroll Team with issue resolution.
- Coordinate communication with all Newport stakeholders.
- Coordinate department readiness for new system.
- Manage development & conduct of training.
- Resolve change management issues.
- Assists with development of on-line and off-line forms.
- Assists with development of training materials.
- Assists with post implementation support planning.

Subject Matter Experts (SME)

Description:

A team member for the General Ledger Team, the HR/Payroll Team, the Change Management Team, or the Technical Team. Team members are responsible for making functional and/or department decisions during the design and implementation of the new system. Team members are also active participants in the business process design, configuration of the software, and support of the software. The following is a list of responsibilities by function:

Responsibilities:

General Ledger

- Responsible for developing chart of accounts within new system.
- Assists Budget Department with determining levels of budget control within system.
- Develops crosswalk between old chart of accounts and new chart of accounts.
- Develops procedures for rollovers, carry forwards, period closings and year-end closings.
- Identifies standard reports for new system.
- Develops training materials for general ledger.
- Provides post implementation support.

Budget

- Responsible for developing budget control and budget preparation module.
- Works with GL Team to determine best chart of account design for budget control.

- Develops policies, in conjunction with GL Team, for pre-encumbrance and encumbrance control.
- Identifies standard budget reports for new system.
- Develops training materials for budget control and budget preparation.
- Provides post implementation support.

Accounts Payable

- Responsible for developing vendor records and check processing procedures for new system.
- Develops coding scheme for vendor identification.
- Works with GL Team to develop AP detailed accounts.
- Oversees migration of vendor records into new AP system.
- Develops payment procedures.
- Identifies standard reports for new system.
- Develops training materials for budget accounts payable.
- Provides post implementation support.

Accounts Receivable/Billing

- Responsible for developing customer records and billing procedures for new system.
- Develops coding scheme for customer identification.
- Works with GL Team to develop AR detailed accounts.
- Oversees migration of customer records into new AR system.
- Develops billing procedures.
- Identifies standard reports for new system.
- Develops training materials for accounts receivable and billing.
- Provides post implementation support.

Purchasing

- Responsible for developing bidding procedures, contract procedures, and purchasing procedures in new system.
- Works with GL Team and Budget SME to imbed pre-encumbrance and encumbrance procedures in purchasing process.
- Develops coding scheme for contract numbers and purchase order numbers.
- Develops process for bidding and contract awards in new system.
- Develops process for inspection and payment procedures.
- Oversees migration of contract, vendor, and purchase item data into new system.
- Identifies standard reports for new system.
- Develops training materials for purchasing.
- Provides post implementation support.

Grants/Projects

- Responsible for developing process for recording grant and project activity in new system.
- Works with GL Team to develop coding scheme for funding sources, grant related projects, fee-based projects, and other projects.
- Works with GL Team to develop project and grant account codes.
- Oversees migration of data into system.
- Identifies standard reports for new system.
- Develops training materials for grants/projects.
- Provides post implementation support.

Human Resources

- Responsible for developing human resource management capabilities in system.
- Develops process for tracking job applicants, employee data, and retirement data.
- Develops process for developing benefits administration capabilities.
- Works with Payroll Team to integrate human resources and payroll capabilities.
- Oversees migration of data into system.
- Identifies standard reports for new system.
- Develops training materials for human resources.
- Provides post implementation support.

Payroll

- Responsible for developing payroll procedures within system.
- Works with GL Team to develop accounting procedures for deductions and payment of payroll-related vendors.
- Works with Human Resources Team to integrate human resources and payroll capabilities.
- Oversees migration of data into system.
- Identifies standard reports for new system.
- Develops training materials for payroll.
- Provides post implementation support.

Programmer/analyst

- Designs, develops, and tests changes to design environment, test environment, production environment, and "live" environment.
- Assists functional users with software modifications
- Assists functional users with interface development and develops interface programming.

- Assists functional users with report development, ad-hoc query development, and job scheduling.
- Provides technical support to functional users during conversion process.
- Performs automated conversion

DBA

- Maintains, develops, tests, and refreshes the design database, the test database, the production database and the "live" database.
- Perform system backup/restore
- Monitor and tune database performance
- Develops disaster recovery procedures
- Performs sizing requirements.

Network Specialist(s)

- Develops and supports wide area network and local area network
- Network performance testing
- Configure workstations
- Coordinate rollout of software updates
- Provide general network support
- Develop disaster recovery procedures
- Capacity planning

General Technical Support Team Members

- Build and support the technical environment
- System troubleshooting
- Develop and support job scheduling
- Develop and maintain operational documentation
- Provide technical support to designers/developers
- Implement software fixes and custom modifications
- Migration/source control

APPENDIX F

ERP Modular Functionality

Previous sections of this report have discussed general characteristics of an ERP system. This section describes specific functionality by module that typical ERP products offer that are most relevant to the City of Newport. While each ERP product has unique functionality, generalizations can be made on core modular functionality – although important differences still exist between vendors and should be fully explored through a procurement process. In non-core modules, functionality is still developing and very much dependent on the particular product. This section differentiates between core and non-core modules. While typical functionality is displayed for both, it is important to remember that non-core modules are much more vendor-specific and less standardized. In either case, generalizations are being made that may or may not apply to all vendors in the market. Ability to meet City requirements should be confirmed through an RFP process.

Core Modules

General Ledger

The General Ledger identifies the assets, liabilities and fund balance position of the operation. Monetary transactions are posted in the form of debits and credits. It is the final record from which financial statements are prepared. Typical ERP functionality includes the ability to:

- Meet generally accepted accounting principles (GAAP) for governments.
- Provide for the maintenance of separate funds, each of which is a self-balancing set of accounts with all fund records being processed simultaneously by the common system.
- Provide flexibility in chart of accounts code structure, including multiple lines of description, comments and the ability to print.
- Accept both standard and recurring journal entries, with both the amount and/or account recurring. Allow for manual and automated reversal of journal entries.
- Accommodate and adjust pre-encumbrances and encumbrances
- Perform hard and soft period end closings as well as keep multiple simultaneous periods open.
- Accommodate budgetary controls and produce budget to actual reports.
- Accommodate multi-year grants and projects
- Maintain account balances for the Balance Sheet and subsidiary ledgers
- Allocate charges across the organization
- Perform inter-fund accounting.
- Support encumbrance and pre-encumbrance accounting

Accounts Payable

Accounts Payable represents what a government/agency owes to its suppliers, vendors and other creditors at a given time for goods and services received. It also represents

any outstanding debt that a government/agency has. Typical ERP functionality includes the ability to:

- Maintain a master vendor-file with parent-child relationships.
- Facilitate three way matching via workflow
- Automatic reversal of encumbrances
- Hold payment. Liquidate purchase orders.
- Accumulate year-to-date figures by calendar year, fiscal year, quarter, multi-year, or other user-defined period.
- Schedule invoices for payment based on vendor terms, future dated invoices, etc. including reoccurring payments.
- Allow for decentralized payment approval with centralized check printing.
- Pay multiple purchase orders on a single invoice
- Generate accounts payable check daily, weekly, monthly or on demand.
- Produce a report showing all update activity for a user defined period of time.
- Generate payments (or invoices) to employees based on reconciliation of advances vs. expense reports.
- Facilitate 1099 processing
- Provide 1099 summary and detail information

Accounts Receivable

Accounts Receivable is a component of a government's current asset that consists of money owed on open accounts from private persons, firms or corporations for goods and services furnished by a governmental unit. Typical ERP functionality includes the ability to:

- Maintain a master customer file.
- Design invoices and bills
- Electronically invoice customers.
- Record the number of a customer is past due this year
- Produce fixed or recurring billings based upon contract terms.
- Produce electronic receipt for cash/check payments.
- Produce accrual reports at any point in time.
- Calculate penalties and age past due bills based on jurisdiction rules.
- Facilitate bank reconciliation

Fixed Assets

Fixed assets refers to land, improvements to land, easements, buildings, building improvements, vehicles, machinery, equipment, works of art and historical treasures, infrastructure and all other tangible or intangible assets that are used in operations and that have initial useful lives extending beyond a single reporting period. Typical ERP functionality includes the ability to:

- Tie unlimited number of individual assets to master assets
- Support use of bar-coding and scanning technology.
- For purchasing module to automatically enter fixed asset when fixed asset transaction criteria are met.
- To have different threshold by commodity (e.g., \$750 for equipment, but \$1000 for everything else).

- Enter the following asset categories as well as other user defined categories: land, building, improvements other than buildings, equipment, technology equipment, furniture and fixtures, etc.
- Maintain information about the condition of the asset (e.g., good, idle, obsolete, broken).
- Track all transactions affecting the value of an asset by original source document number and date.
- Calculate depreciation utilizing several GAAP methodologies and updates appropriate asset and depreciation accounts in GL.
- Process mass asset additions and deletions
- Record construction in progress

Purchasing

Activities associated with documenting and placing an order with a supplier of goods or services; buying/obtaining goods and services; also the department responsible for those activities.

- Support encumbrance and pre-encumbrance control for budgeted funds.
- Support decentralized requisition entry with automatic check for available funds
- Automated workflow approval with user-defined business rules
- Reverse encumbrances with appropriate security permissions.
- Maintain a master vendor file with user-definable fields
- Maintain a commodity file.
- Support blanket purchase orders, contracts, price agreements, bids and quotes
- Create multiple purchase orders from a single requisition or one purchase order from multiple requisitions.
- Close the year with open purchase orders and carry forward encumbrances
- Maintain the following “header” data elements in respect to procurement transactions: origin of procurement request (Department, Program & Contact), Requested by, Date requested, Date ordered, Date filled, Shipping address, etc.
- Identify multiple locations for delivery of requisition.
- Monitor requisition processing time and ability to bypass or speed up approvals and print PO on demand, with appropriate security.
- Send, receive, record and tabulate bids electronically.
- Systematically number purchase orders.

Cash Receipting

Cash Receipting provides cash control from the point of payment receipt to bank deposit. Typical ERP functionality includes the ability to:

- Provide for cash receipting and printing of receipts that include: amount due, tendered and change, customer name, customer ID, customer number, invoice number.
- Accommodate receipts via EFT, Lockbox, Cred/Debit Card and other electronic means.
- Accommodate partially payments and overpayments.
- Maintain log of all receipts with control totals.
- Apply revenue to multiple funds and/or accounts.

- Pull up an existing cash receipt and reverse it, with the appropriate accounting effect automatically, with the appropriate approval.
- Prepare daily cash journals (Visa, MasterCard, Discover, AmEx)
- Provide for product master file with multiple codes for interfacing and report sequencing.
- Document method of projecting revenues.

Budget Preparation

Public entities are required by law to develop a spending plan that must be approved by the legislative body. Spend plans then become controls in the accounting system to prevent overspending. Typical ERP functionality includes the ability to:

- Create a base budget for all operating revenue and expenditure accounts using multiple methods including the prior years base, last year's actuals or a percentage increase/decrease.
- Develop budget request templates that are "pushed" via workflow to departments and divisions for budget preparation. Completed requests are then returned via workflow and include an approval process.
- Maintain several versions of a budget and then select one version to be submitted.
- Ability to enter, store, and report performance data linked to budget accounts, program budgets, sub accounts or groups of sub account budgets, including performance measures and results, in an auditable manner.
- Load approved budget into the general ledger as a control
- Facilitate position budgeting
- Facilitate long-term financial planning and forecasting

Grant Accounting

Grant Accounting is responsible for the accounting and management of all grants within the agency, many of which span fiscal years and can have multiple revenue sources.

Typical ERP functionality includes the ability to:

- Fully integrates with other modules of the Financial system
- Track grant application process
- Automatically create a project from a grant.
- Ability to track grant activity over multiple years
- Maintain and apply and indirect cost rate
- Capture all financial grant activity through general ledger and to multiple sources.
- Capture non-financial transactions without impacting the general ledger.
- Add, modify or delete grant information online with audit trail of all changes.
- Establish reimbursable budgets for grants at the grant, grant phase or function, and object level at the user discretion. Reimbursable budgets control expenditures available for grant billing.
- (Cash Management) Generates cash profile for specified grants, projects, or programs for specified time periods. Profiles will detail and summarize all transaction types, which directly or indirectly reflect cash usage or receipts by specified grants or programs and the cash transaction effective dates.

Project Accounting

Capital improvement projects generally span multiple years, involve multiple funding sources and must be carefully monitored. Project accounting is necessary to facilitate comprehensive planning, budgeting and reporting. Typical ERP functionality includes the ability to:

- Provide budgeting capabilities that document and facilitate the annual preparation of the ensuing year capital budget for incorporation into the general ledger and the annual budget document.
- Roll up capital improvement plan budget into a format that will meet the submission requirements for inclusion in the City/County.
- Support the ability to forecast the OBI (Operating Budget Impact) of project based upon a user defined forecasting methodology.
- Create project budgets with multiple funding sources, including but not limited to: Grants, Bonds, General Fund, Federal funds, State funds, County funds, Cash Proffers, Trust Fund/Donations, Fee supported projects).
- Establish projects that may cross funds or budget units.
- Support a hierarchical approach to tracking and reporting projects costs and other user defined fields (i.e., main project, sub-project, task, sub-task) and allocation authority of purchases to others.
- Interface with other project management software

Inventory

Process of managing/controlling the goods, items, property and/or stock on-hand.

Typical ERP functionality includes the ability to:

- Accommodate an unlimited number of stock and non-stock inventory items.
- Ability to purchase items in bulk through purchasing module, issue them to departments and automatically include them in Inventory.
- Ability for users to requisitions items from a central inventory, which are then reserved until pick-up/delivery.
- Establish, maintain, adjust, delete and view inventory stock item records in real time with appropriate security.
- Perform inventory accounting with flexible costing methods.
- Min/max replenishment/reorder planning
- Detailed tracking of inventory
- Provide for multiple warehouses.
- Freeze inventory to prevent inventory action within the building.
- Enter inventory counts from worksheets either manually or by bar code.
- Produce reports by user selected criteria such as: Inventory stock catalog by user defined criteria (e.g. office supplies), Inventory count report, Inventory status report, Departmental charge summary report, usage year-to-date or user defined period, Inventory carrying costs, receiving activity by receiving, Delivery time for warehouse requests)
- Produce Exception report of quantity variances.

Work Order Management

Process of managing work orders for services to be delivered by one internal department to another. Ensures that service tickets are closed when expected, assigned to proper person and department, and managed to expectations. Typical ERP functionality includes:

- Submittal of a work order request via a template with electronic approval routing.
- Track all time, materials, and cost charges associated with the order.
- Track maintenance activity and costs related to facilities, equipment, and services.
- Access full history of work orders and activities against assets.
- Send automated notifications to the requesting department via electronic methods of changes in the work order status.
- Generate multiple work orders from one service request and maintain tracking of the original service requests by location.
- Generate work orders without a service request.
- Ability to track the following information associated with a work order such as: Work order number, Requestor, Location, Date and time of request, Complaint, Emergency, Start date, Status code, Project number).
- Assign work order to one or multiple people.
- Track a group of work orders to a project.
- Perform work order performance analysis

Human Resources

The department and support systems responsible for personnel sourcing and hiring, applicant tracking, skills development and tracking, benefits administration and compliance with associated government regulations. Typical ERP functionality includes the ability to:

- Maintain and manage various personnel information by employee (i.e. personal, academic, certification information; salary; benefit; beneficiary; time of service; performance evaluation; discipline/grievances).
- Maintain current salary tables including step and grade.
- Provide online view of employee's total compensation package (with security restrictions).
- Enable position control.
- Create job openings for new/upgraded positions from existing position control information.
- Maintain job description information for each position
- Track leave accruals
- Process sick banks
- Move positions from one location to another.
- Track the following concerning benefits: Coverage effective dates, Coverage history, Name change history, Dependent information, and Beneficiary information.
- Input and track information regarding HIPAA and certificates of creditable coverage.
- Track different leave types with accumulate concurrently as defined by user for each employee (e.g. STD, Workman's Comp, FMLA, leave of absence).

- Track accidents, injuries and follow-ups on all employees including worker's compensation.
- Maintain and track training requirements for employees, including training for OSHA, workers compensation, and risk management purposes.
- Enable applicant tracking

Payroll

Payroll involves the disbursement of funds to government employees and the management of the myriad withholdings related to taxes and retirement plans. Managing payroll can become quite complicated due to the diverse types of employees a company may employ; full-time, part-time, salaried exempt, salaried non-exempt, contractor, union, etc. Typical ERP functionality includes the ability to:

- Produce default hours for exception based employees based on user-defined profile
- Maintain salary and tax tables
- Support sufficient user defined earning types and deduction/benefit types
- Accommodate a union environment
- Accommodate various attributes such as: Effective and end dates, Calculation rules, Pay increases based on earning factor (formula), Rate based on job class table, Rate based on years of service, Short and long descriptions, Base pay as defined by the user (e.g., base salary plus shift differential plus longevity pay, etc., Hours/unit.
- Support various leave types and related leave approval request processes via workflow.
- Support time and attendance recording
- Ensure sick leave is not use before it is earned.
- Accumulate vacation and sick hours for part time employees according to user-specified criteria (i.e. prorated basis).
- Accumulate earnings and deductions on a weekly, bi-weekly, monthly, quarterly, annual, school year, or multi-fiscal year basis.
- Calculate payroll accruals based on user-defined pay period (e.g., days worked for each contract – days paid in that contract).
- Process end-year accruals
- Accommodate FLSA regulations
- Provide a payroll proof list of all payroll calculations, gross-to-net, before checks are produced, including:
- Process checks, facilitate direct deposit

Non-core modules

Utility billing

Local governments often manage public utilities such as water distribution, wastewater collection and treatment and electrical distribution systems. Customer records and billing is an essential, and often complex, component of these operations. Functionality often includes the ability to:

- Maintain a customer file including usage and payment history

- Design and generate invoices and bills including consolidated bills for multiple accounts
- Calculate fees and penalties
- Accommodates Consumption, Flat-Rate, Based on Other, Assessment, Installment Agreement, Final, and Miscellaneous billings
- Keep multiple billing cycles active at the same time
- Record the processing of payments
- Accommodate different rate structures
- Maintain a rate table
- Facilitate service order generation and management
- Develop meter routes
- Allow for multiple meter types with conversion to standard units and allow for compound meters
- Facilitate multiple methods for meter reading (manual, hand-held devices, wireless, etc.)
- Maintain a meter inventory
- Integrate with the accounts receivable and general ledger modules.

Tax Collections and Parcel Management

As tax funded entities, tax administration and collection is a unique public function that requires separate functionality from standard accounts receivable systems. Property tax administration is the most common type of public financing but sales, income and utility taxes are other revenue sources. Functionality often includes the ability to:

- Maintain customer information file including ownership record
- Manage parcel inventory (real property record including land class and improvements, perform and record splits, mergers and transfers)
- Provide summary and detailed views of parcel's assessed values
- Manage personal property inventory
- Support mass assessment or integrate with CAMA systems
- Accommodate rate table with unlimited number of rates per taxing entity across unlimited number of taxable property types
- Facilitate rate caps and exemptions
- Apply tax millages at various levels in the system and allow maintenance and updating of millages assigned to parcels
- Process billing, collection, and delinquencies including mortgage company tax bills
- Collect and distribute tax billings and payments based on multiple schedules, delinquency dates and processing rules.
- Process liens
- Track multiple owners and generate a bill for each owner.
- Record tax appeals by year and property, owner
- Design and produce bills in-house.
- Consolidate multiple taxes onto a single bill as well as multiple properties.
- Record and access unlimited parcel tax history.
- Accept pre-payments.

Licensing

A key role of local government is administering licenses, which are enumerated in local statute. Examples include business, animal, solicitor etc. Functionality can include the ability to:

- Maintain unlimited license categories based on local ordinance.
- Link licenses to parcels
- Restrict number of licenses available
- Automatic generation of license numbers
- Calculate license fees based on license table and multiple calculation methodologies
- Record payment and integrate with the collections and general ledger modules.
- Track status of approval process
- Facilitate collections, including remote collections and reconciliations.

APPENDIX G

Executive Summary of End-User Survey

City and Schools of Newport, RI End-User Survey

Introduction

Surveys were distributed to subject matter experts at the City and Schools of Newport as part of the GFOA Needs Assessment during November 2005. The surveys results were used to evaluate the "as is" system and begin identifying unmet needs in the administrative technological systems and processes. The survey was divided into five parts:

- I. Inventory of Standalone Systems
- II. Evaluation of Module Specific Capabilities
- III. Evaluation of System-wide Features
- IV. Extent to Which the Current System Meets Departmental Needs
- V. Additional Comments

The results presented here were compiled from the returned surveys. All scales are 1 through 5 with a five being the best. The complete results will be provided electronically. It is important to note that this survey was distributed to and completed by a limited number of respondents due to the size of the organization. Therefore, conclusions drawn from the results are not statistically valid and should be verified through other means such as interviews, system observations, etc.

I. Inventory of Standalone Systems

The survey documented the extensive use of standalone systems. In 13 of the 14 functional areas surveyed, stand-alone systems were reported ranging from Microsoft Excel spreadsheets and Access databases to functional applications such as the GasBoy fuel and account monitoring program. A summary of the inventory is provided in table 1.

Table 1 Standalone Systems

Department	Standalone systems used	Reason why standalone system is utilized
Accounts Payable	Excel, Accountability	GEMS cannot meet business requirements; information not reliable; cannot print laser 1099M
Accounts Receivable	Excel, VAX, Word	Cannot track necessary information; lack of audit trail; lack of interface to GL (from VAX)
Benefits Administration	Third party software	Provided by health providers. Currently no HR system.
Budget	Excel, Word, Admins	GEMS budget module cannot accommodate schools and city. Limited functionality and reporting. Lack of publishing capability. Admins and GEMS not interfaced.
Business Licenses	Access, paper documents, VAX	Lack of electronic workflow (approval routing); lack of integration between databases. Limited tracking ability.
Fixed Assets	Excel, FileMaker	Fixed Assets module never implemented so functionality not

		available. Most school department staff not part of city network.
Fleet	Gas Boy	Provides fuel account monitoring. M4 (fleet system) not interfaced with GL
Inventory	Access	GEMS does not allow viewing access of requisitions and PO's by department, account, etc.
Payroll	Excel, AccuPrint, Accountability	Limited tracking by system; inability of system to print in a laser format; inability of system to track and produce W-2's and 1099Rs and transmit files to IRS and SSA.
Purchasing	Excel, Outlook, Access, NovusVendor, Accuprint	GEMS requisition system not implemented city-wide. Cannot run PO's by department easily. System can not meet business requirements or have forms printing capability
Time & Attendance	VAX, Excel	GEMS Payroll never implemented because couldn't meet business requirements. Limited analytical and reporting capability.
Utility Billing	Word, Adobe, Excel	System does not provide data in a format needed for reporting and has no report designing capabilities
Work Management	Excel	Management time not always best tracked via Micromain.

While onsite visits are required to completely document the utilization of stand-alone systems and their impact on the efficiency of the organization, GFOA typically finds that, while stand-alone systems enable staff to overcome core system limitations, they often require double-entry of data, provide limited analytical capabilities and create little to no audit trail.

In nearly every case reported in the survey, the existence of these standalone systems is a result of shortcomings and limitations of the primary system. These limitations of core systems, which result in the use of these standalone systems, are documented in the following sections of the survey.

II. Evaluation of Module Specific Capabilities.

For each one of the 14 functional areas, survey respondents were asked to evaluate the core system for how it performed critical tasks. For example, respondents ranked the GEMS system on a five point scale for how it performed the following accounts payable tasks:

- | | |
|-------------------------------|--|
| a. Vendor Set-Up | i. Three Way Matching |
| b. Vendor File Maintenance | j. Warrant/Check Processing |
| c. Handling One Time Vendors | k. Vendor Performance Tracking and Analysis |
| d. Searching for Vendor Info. | l. Check Reconciliation |
| e. Invoice Processing | m. Ability to Store/Retrieve AP Transactional Detail |
| f. Payment Processing | n. Travel Advances and Expenditure Processing |
| g. Handling Vendor Discounts | o. 1099 Processing |
| h. Handling Payment Holds | p. Recurring Payments Processing |

Each task was ranked on a five-point scale with a "1" being unsatisfactory to a "5" being exceptional. Table 2 shows the resulting average score for each functional area (8) in which a core system is utilized and data was reported.

Table 2 Functional Systems by Average

Functional Area	System	Number of respondents	Average	Rank
Tax Administration	Opal	1	5.00	1
Accounts Receivable	GEMS/Opal	5	3.60	2
Payroll	Admins	1	3.46	3
Work Management	Micromain	1	3.33	4
Utility Billing	Opal	3	3.03	5
General Ledger	GEMS	5	2.12	6
Accounts Payable	GEMS	3	2.01	7
Purchasing	GEMS	3	1.77	8

The rankings are from the highest scoring system (Tax Administration) to the lowest ranking (Purchasing). Of importance to note is that every core system that scored below average (3.0) is part of the GEMS application. Even the Accounts Receivable system, while it was the second highest system, respondents who ranked the GEMS system scored it lower than those who scored the OPAL system. Comments provided help understand the overall dissatisfaction with the GEMS system:

“1.System is cumbersome to navigate and it is difficult to track down invoice header records quickly. 2.Reports are difficult to read. 3.Receiving screens have bugs that can't seem to be worked out sometimes necessitating liquidation of a PO and re-encumbering. 4.We have to process 1099s on another software which requires us to re-enter data. No tracking available for W-9s. 5.No means for one time vendor processing”.
– *Accounts Payable*

“The account structure has to be separately set up in each fund therefore account numbers and titles are not consistent throughout the various funds. Detail information by type (revenue or expenditure) is adequate but summary information is not available and we cannot determine income or loss without entering all information onto EXCEL spreadsheets. Payroll and billing and receipts systems are not interfaced. All activity is entered through journal entries. The journal entry process is cumbersome and difficult to follow. There is little to no flexibility in the system and all evaluation is done manually outside of the system. There is very little drill down capability. The system is generally inadequate. We make it work only because we have to at this time”. – *Genera Ledger*

“1. Purchasing system has many bugs which have never been worked out. 2. Too little detail on PO's. 3. PO forms have no City requirements listed (ie. City's purchasing, invoicing & payment policies) 4. Sometimes unable to liquidate PO balances. 5. On line requisitioning is nonexistent. 6. Not user friendly.” – *Purchasing*

It is important to note high levels of satisfaction with the OPAL Tax Administration and Collections modules. In the collections (accounts receivable) function, users were particularly satisfied with the system's ability to maintain the customer file; search for customer information; facilitate data-entry; and calculate fees and penalties as all of these functions scored an average of 4.0 or higher. While only one person ranked the OPAL tax administration system, it received a score of 5.0 for each function that was ranked.

The Payroll, Work Management and Utility Billing systems demonstrated overall average user satisfaction – there were select functions which garnered less than

average ratings for the Payroll and Utility Billing system which are displayed in table 3.

Table 3 Payroll and Utility Billing System Less-than-average Functions

Payroll		Utility Billing	
Time Entry	2.00	Customer File Maintenance	2.50
Labor cost distributions	2.00	Rate Flexibility and Set-up	2.50
		Rate modeling/forecasting	1.00

As stated above, the most striking result from this section of the survey was the low level of satisfaction users have with the GEMS system’s ability to perform function specific business processes. System-wide features of the system, as opposed to the function-area specific above, are explored in the next section.

III. Evaluation of System-wide features

This section of the survey sought to assess the capabilities of the current functionality in terms of system-wide features (e.g., technological features and system-wide tools commonly found in modern solutions). Table 4 displays the results for each system-wide feature for each functional area in which there was a primary system and results were reported. An average for each feature and for each area is also shown.

Table 4 System-wide features

	AVG	GL	AP	AR	Tax Adm.	Purchasing	Ben-efits	Pay-roll	UB	Work Mgmt
Integration with Financial Applications	1.88	1.00	3.00	1.50	NA	2.50	3.00	1.00	1.00	2.00
User Friendliness	2.91	1.20	2.00	4.00	5.00	1.67	2.00	3.00	3.33	4.00
Ad-Hoc Query & Report Writing	2.34	1.00	1.33	2.75	5.00	1.67	2.00	1.00	3.33	3.00
Financial Reporting & Analysis	2.13	1.00	1.00	2.67	5.00	1.50	2.00	1.00	2.00	3.00
Security	2.81	2.60	3.33	3.33	5.00	3.33	1.00	1.00	2.67	3.00
Import/Export Capabilities	2.73	1.20	1.00	3.00	5.00	1.67	3.00	2.00	3.67	4.00
Workflow	2.85	1.00	2.00	3.00	5.00	1.67	3.00	3.00	4.00	3.00
Online Help Features	2.28	1.20	2.00	3.00	5.00	1.67	1.00	1.00	2.67	3.00
Access to Required Historical Data	2.98	1.75	2.00	3.75	5.00	1.67	1.00	4.00	3.67	4.00
Drill Down Capabilities	2.53	1.75	1.00	3.00	5.00	2.00	1.00	2.00	3.00	4.00
Audit Trail Capabilities	2.99	1.25	2.33	3.33	5.00	2.33	2.00	3.00	3.67	4.00
Document Management Capabilities	2.74	1.00	2.33	3.33	5.00	2.00	1.00	2.00	4.00	4.00
Average	2.60	1.33	1.94	3.06	5.00	1.97	1.83	2.00	3.08	3.42
Total Respondents		5	3	4	1	3	1	1	3	1

Not surprisingly, the results closely mirror the module specific capabilities from above. Tax administration had the highest average, in fact, the single person who rated this application scored each system-wide feature a “5” with the exception of “Integration with Financial Applications.” Work Management had slightly higher than average scores while Utility Billing and Accounts Receivable had similar average scores. The ADMINS system (utilized for benefit administration and payroll) scored lower in comparison to its module-specific functions. This is expected because the ADMINS system functions almost as a stand-alone system. Its flexibility as a highly-customized system resulted in the higher scores from the previous section but its isolation as a technological application limits its system-wide integration. Again, the GEMS modules (GL, AP, and

Purchasing) scored extremely low. This is ironic given the GEMS system is the only true enterprise system currently being used by the City (OPAL is intended to function as an enterprise-wide system but currently lacks integration to the general ledger).

Importantly, every system-wide feature, when examined from a system point of view, had lower than average scores. The lowest features (with a score of less than 2.5) included “Integration with Financial Applications,” “Ad-Hoc Query & Report Writing,” “Financial Reporting & Analysis,” and “Online Help Features.” However, not a single feature scored higher than a 2.99 and the average was 2.60. Clearly, the City and Schools of Newport’s core technical systems have limited enterprise-wide functionality. This most likely is having a strong, negative impact on business operations, which some of the comments to the survey have alluded to, but must be assessed through onsite visits.

IV. Extent to Which the Current System Meets Departmental Needs

An important measure of the value of any software application, especially primary applications, is their ability to meet departmental needs. The first, and perhaps most critical, need is for these systems to assist departments in meeting the demands of their key customer groups. To assess this, survey respondents were asked to indicate their level of agreement with the following statement, “The Current system allows us to meet the needs of the following groups.” A “1” indicated strong disagreement with the statement and a “5” indicated strong agreement. The results for each of the 10 reporting functional areas for each of the 6 customer groups is reported below in table 5.

Table 5 Meeting the Needs of Customer Groups by Department											
	AVG	Budget	GL	AP	AR	Tax Admin	Purch.	Benefits	Payroll	Utility Billing	Work Mgmt
<i>The Current system allows us to meet the needs of the following:</i>											
Senior Management	2.81	1.00	1.40	1.00	4.67	5.00	1.00	4.00	2.00	4.00	4.00
Operations Personnel in this Department	3.09	1.00	1.40	2.33	4.67	5.00	1.50	2.00	4.00	4.00	5.00
Mayor	2.56	1.00	1.40	NA	4.50	NA	1.00	4.00	NA	3.00	3.00
City Council	2.56	1.00	1.40	NA	4.50	NA	1.00	4.00	NA	3.00	3.00
City Manager	2.79	1.00	1.40	NA	4.67	5.00	1.00	4.00	2.00	3.00	3.00
External Parties	2.89	1.00	1.40	1.67	4.60	5.00	1.10	3.60	2.67	3.40	3.60
AVERAGE	2.81	1.00	1.42	1.78	4.61	5.00	1.08	3.67	2.75	3.46	3.50

Overall, respondents feel that their systems are meeting their customer needs in a less than average fashion (2.81 average rating). According to respondents, the elected officials, including both the mayor and city council members, are being less than optimally served as they each received the lowest ranking (2.56). Operations personnel received the highest score of 3.09. While differentiation exists among customer groups, the main conclusion from the survey data is that the systems only perform average. There is much greater differentiation between departments ranging from high

performing to low performing with the results mirroring previous sections – GEMS modules performing worst while OPAL modules perform much better with the remaining systems clustered around average.

Table 6 displays how respondents felt the system met more specific needs as they related to their department.

Table 6 Meeting Departmental needs

	AVG	Bud	GL	AP	AR	Tax	Pur.	Fleet	Ben.	Pay	UB	Work
Transactions are processed efficiently within the system	3.28	3.00	2.75	2.00	4.33	5.00	2.00	2.00	3.00	4.00	4.00	4.00
I can easily check the status of transactions in the system	2.85	1.00	2.00	2.33	4.33	5.00	1.67	1.00	2.00	3.00	4.00	5.00
The system processes are not too paper-intensive or manual	2.70	1.00	1.25	2.00	3.33	5.00	1.67	1.00	2.00	4.00	3.50	5.00
Information is accessible on a real-time basis from the system	2.85	1.00	2.00	1.67	3.67	5.00	3.00	1.00	4.00	2.00	4.00	4.00
The system generates reports that are useful for planning and decision-making	2.61	1.00	1.50	1.00	3.67	5.00	2.00	1.00	4.00	2.00	3.50	4.00
Departmental staff are more focused on value-added activities and key departmental priorities than processing transactions	2.66	1.00	1.25	2.33	3.67	5.00	3.00	1.00	2.00	2.00	3.00	5.00
The current system is tightly integrated and enables the interchange of data between different business functions	2.30	1.00	1.00	1.33	5.00	5.00	2.33	1.00	2.00	1.00	3.67	2.00
The system allows us to capture the necessary information	3.05	2.00	1.25	2.00	4.33	5.00	2.00	1.00	4.00	4.00	4.00	4.00
The system enables this Department to track performance data regarding personnel, programs and services.	2.42	NA	1.20	1.00	4.50	5.00	2.00	1.00	1.00	1.00	3.50	4.00
Average	2.68	1.38	1.58	1.74	4.09	5.00	2.19	1.11	2.67	2.56	3.69	4.11
Total Respondents		1	5	3	4	1	3	1	1	1	4	1

The results presented suggest similar conclusions to those drawn above. Overall, the systems are performing below average, as reported by respondents, in meeting the operational needs of departments. The least met needs included:

- Enabling the interchange of data between different business functions
- Enabling departments to track performance data regarding personnel, programs and services.
- Generating reports that are useful for planning and decision-making.

GEMS modules continued to perform poorly – each GEMS module scored below a “2” – that is to say that respondents, on average, disagreed with the statements above concerning meeting operational needs. The OPAL products (Tax Admin, AR and Utility Billing) performed much better along with the Work Management system and ADMINS.

V. Additional Comments

Survey respondents were asked to provide additional comments in following areas:

- Major unmet needs of the City and/or functional area.
- Unique departmental requirements that need to be considered in the evaluation of a new system.
- Specific opportunities for process improvements.

- Current or planned IT initiatives
- Additional comments

The comments, which follow, were used to validate the prior sections of the survey and influence the Needs Assessment.

What are the major unmet needs of the City and/or your department for this particular business function?

Need to have a system that is user friendly, web-enabled, and is integrated with GL and purchasing.

Individual departments do not have access to the system in order to review their budget to actual information. Also, the accounts payable and purchasing functions are cumbersome and inadequate so the expenditure and encumbrance information is not current

Current Budget Preparation module is virtually useless for municipal side of the city equation. Control over expenditures is adequate. Query of Proposed Budget is impossible. Council requested scenarios require creation of new Excel schedules.

Financial management systems must be in place to process and record financial events effectively and efficiently, and to provide complete, timely, reliable and consistent information for decision makers and the public. Our current system cannot do this.

1. Interface with other software systems such as OPAL (utility billing) to eliminate the need for manual journal entries, and to provide online access to individual accounts and transactions within each system.
2. The ability to add sub project numbers

This system is so unsatisfactory that it seems pointless to discuss further. We need a fully integrated system that allows us to easily find information, analyze it and report as needed. We need to eliminate the manual processes and the labor-intensive GL is inadequate for tracking data or providing even the most basic reports for day to day operations. Long term projections are not even an option. Departments are frustrated with the lack of information available.

Automate Requisitions Process:

Automatic Funds checking: *Currently, requisitions can be processed manually, with insufficient funds denoted and a transfer must be completed prior to input into PO system. Requisitions are held, and accounts checked daily for changes.*

Obligation after Requisition process: *1. Currently, only an encumbrance is done at PO issuance. 2. Requisitions should be frozen at department level, until accounting process adjustments are completed.*

Combination/Separation of line items: *1. A method is needed if quotes are obtained, and it is in the best interest of the City to split items between two vendors and/or there should be a method of combining requirement from departments for better pricing.*

Payment Methods: *1. The option should be available for issuance of a unit of issue price as well as a total price. A total price example is for Services. 2. The option to assign multi-accounts to one purchase, where two accounts want to split the procurement cost of one item or service.*

Vendor Management: *A module should contain the ability to search for vendors easily; to allow a multifaceted vendor profile, listing remit-to addresses, shipping, Phone, Fax, and Email etc. There is much duplication in our current system. The current system utilizes a vendor number. Ability to automatically generate new vendor account forms.*

Departments cannot access the system for online requisitioning which creates the need for more than one person to enter the information to create a PO. At the department level, a clerk must type the information in Word or Excel or hand type or write the requisition. It then goes to the Department head for approval then to Purchasing for entry in the GEMS system. The only online approval is between the

Purchasing Agent and the Controller. However, viewing the POs online is cumbersome and I actually end up looking at the requisition that came from the department. This whole process from req, to online approval at dept level, to Purchasing to Controller should all be automated and done online.

This department requires a work order and planned maintenance system that fosters communication with all City departments, and accurate accounting of cost per vehicle, dept, etc.

In addition to maintaining a history and generating reports and mailings, we need a system that will allow us to access information in other departments; e.g., before a license can be issued, police, fire, building and zoning must sign off; additionally, the tax collection office must issue a clearance that all taxes and water bills are paid.

If I lived in a 'Perfect AP World' I would have to add the ability to be able to: (1) Track W-9 sent out, returned in my vendor file. The system would also be able to flag (or unflagging) a previous payment's 1099 status as needed as determined by the returned W-9. A report would be available to tell which vendors have not returned those forms. (2) Cross reference and or merge vendor numbers with multiple companies/names/or multiple numbers for a vendor is given in error so that if a vendor activity is run, all of the information for vendor activity is included. (3) Payments off statements can share the same header, but invoice number, date, and dollar amounts can be entered separately resulting in actually being able to find one particular invoice paid with multiple invoices. (4) Payments with discounts available could be entered, and a report could be run showing discounts taken/or lost.

Reporting is poor and does not provide management with the tools necessary for monitoring and/or projecting future budget needs. There is no real time reporting available. The A/P clerk is buried in paper and spends countless hours tracking and matching invoices to PO's. The whole process needs to be streamlined so that processing is more timely and the available information more meaningful to those who rely on it.

Benefit history (changes of plan and date) dependent information and eligibility group name; plan design; eligibility dates subscriber id and group numbers COBRA, HIPPA, FMLA Compliance

Fixed assets should be entered as such when purchased and post automatically to the proper accounts. Our current system is extremely labor intensive and any change requires a complete review of the data. We would like the ability to code assets when we

I would like to be able to review all the purchasing by accounting line item and drill down as needed from there. Or possibly conglomerate accounts.

Lack of interface with the GL is the biggest issue with the current payroll system. Lengthy and complex journal entries must be executed for every payroll (approximately 70 payrolls per year). Also, the inability for users to create reports without the use of a programmer.

City presently can not track, per employee, the specific leave utilization by fiscal or calendar year. The system merely functions as a 'bank of time'

HR is dependent on other departments to get this information in format needed.

Meter department service calls and work order documentation is processed somewhat though the billing/utility system. The work order section needs major improvements. As the departments move forward using this utility software many needs are being brought forward

I believe that work management is a need city wide. An integrated system which can accommodate those particular nuances to each division AND offer integrated financial information would be terrific.

The school department currently uses a 4 part carbon paper system to track work order requests. We previously used an internet based work order system through Schooldude.com. The current system is obviously very limited in nature.

Does your department/agency have any unique requirements (e.g. reports) that must be considered as part of the evaluation of this business function?

The City and School must file a quarterly report with the State that includes original budget, amended budget, actual revenues and expenditures to date and projected year-end revenues and expenditures.

1. Must meet multiple and stringent reporting requirements as dictated by independent auditors, city council, state departments, Public Utilities Commission, and general public.

SBA and Minority codes for example.

To best meet the objectives of maintaining and ensuring a reliable fleet, the system must accurately record costs associated with each vehicle.

To define which healthcare group the employee is eligible and at what point of time.

Payroll deductions need to correspond to billing

The Fixed Asset system must meet GASB34 and auditor requirements.

The Payroll Division must comply with all articles of each of the City and School's 6 labor union's collective bargaining agreements. All of these contracts have provisions that have required extensive amounts of programming with many calculations involved

OPAL provides the necessary functions to maintain motor vehicle information and apply the state mandated MV phase out.

Recently HR has begun tracking attendance in order to identify areas of concern. Information is also used in performance evaluations.

Facilities management liability and risk exposure reduction Parking facilities and financial tracking

Based on your experience/knowledge of the current systems, do you see any specific opportunities for process improvement?

Financial management systems' designs should support city budget, accounting and financial management reporting processes by providing consistent information for budget formulation and budget execution.

Eliminate the need for manual entry of the budget.

To this end we need a system that is complete, reliable, consistent, timely and useful, one that is effective and efficient in its interrelationships with software, hardware, personnel, procedures, controls and data contained within the systems.

The city needs a user friendly system that allows for the ease of data entry, transaction tracking, account reconciliation, and most importantly flexible report producing capabilities.

On-line preparation and approval of payroll, purchasing and journal entries. Reporting flexibility and financial status and reporting capability, capital project and work order tracking and reporting, real-time

analysis of expenditures and encumbrances.

Almost anything would be an improvement over our current GL system. We maintain too many Excel spreadsheets for functions that the system cannot handle.

Process should be totally streamlined with all departments having access to begin the requisitioning process.

All. The manual systems in place are dependable, and easy to use. But a well trained and implemented system will become beneficial soon after start up.

Some form of integrated system whereby they can electronically transmit to my office the form and we can review it or the possibility of the clerk's office having lookup capabilities from my files and they can do their own checking for unpaid taxes/water charges/fines/fees.

The AP process would be greatly improved if we had a system that truly functioned as an AP system. Currently, invoices are entered into the system when they are going to be paid and not when they are received. The reports are so poor that it is actually easier to track open invoices on paper than in the system.

It would be more efficient if reports could be downloaded from the program and designed to meet specific criteria; such as capturing data from a particular customer or project, more detail on invoice information and aging reports.

The benefit of a system in providing the HR staff with a quick summary of an employee's benefits (include effective dates, and history of changes), dependent data, and applicable information in compliance with COBRA, HIPPA, etc.

Would like the ability to review purchases on-line and see the corresponding purchase order, contract, council resolution and other appropriate documentation. Would also like the ability to track capital projects separately. (See budget response for more detail)

All time entry should be decentralized with a clerk in each department doing the data entry for the employees in the respective department. There is much redundancy in the process as it stands. Someone in each department completes a payroll time sheet,

Works fine

Would like to have a system to track an employee's leave utilization of all leave banks made available to the employee. Would like the system, at the user's request, to provide information on number of hours/days used, type of leave, leave trends, etc.

Interface receivables with the G/L

As noted above the City is in critical need of operations systems that tie field effort with financial tracking. At present many departments operate manually or with limited automation. This lack of integration necessitates informal communication.

A system that could provide a city wide calendar of events and activities including rental of facilities would be helpful.

Please list any current or planned initiatives (e.g., cost accounting project) for your department that are related to this specific business function?

We are currently tracking department goals and will likely begin tracking additional performance measures.

Novus Vendor Bid system to add e-purchasing with the web bases application

We have a stand alone product, Micromain, in place. Asset information for all rolling stock has been added to this system. However implementation of this system is not advisable at this time. Staffing is inadequate to train, troubleshoot and fully benefit from an automated system. Too much of a learning curve to overcome with present demands.

Currently, the hr administrative maintains more than four workbooks (excel) in tracking benefit costs and the administration of benefits.

Plan to implement handheld to improve work order entry and information efficiency.

Additional Comments

A new system should be fully integrated.

A new system should be accessible over the internet.

Adequate training and appropriate user support should be provided to the users of the financial management systems, based on the level, responsibility and roles of individual users, to enable the users of the systems at all levels to understand, operate a

I am really looking forward to an automated system for this division. Properly implemented I believe it will have impressive results.

Overall, I would say that our current A/R module is user friendly and basically meets our needs. However, as previously stated, the need for on demand reports without having to create spreadsheets is essential.

Currently, the hr administrative maintains more than four workbooks (excel) in tracking benefit costs and the administration of benefits.

The current Fixed Asset system is very cumbersome. The need for a software product to maintain the City's very numerous intricate fixed assets is essential.

Any system provided to the City in which leave and attendance are tracked is an improvement.