

Broward County

Business Case for ERP



January 2010

Contents

- Foreword 3
- Executive Overview 4
- Background 7
- System Assessment 8
- Process Assessment..... 9
 - Current Process Costs 9
 - Business Process Inefficiencies 11
 - Cost of ERP-related Inefficiencies..... 12
- ERP Requirements and Estimated Costs..... 14
 - Functional Requirements..... 14
 - Projected Software Modules 15
 - Implementation Deployment Plan 16
 - Estimated 5-Year Costs 17
- Anticipated Returns on Investment 19
 - Critical Business Needs Addressed 20
 - Improved Business Operations 20
 - Lower Business Process Costs 21
 - Quantified Savings 21
 - Potential Additional Savings..... 24
- Strategy for Realizing Savings 25
- Strategy for Funding ERP 27
- Implementation Readiness 28
 - Staffing Planning..... 29

Foreword

An Enterprise Resource Planning system (ERP) is software that replaces many standalone systems of individual departments and offices – such as finance, budget, purchasing, project and grants management, payroll and human resource management – and integrates the functions into a single, automated system that runs off a single database.

“Today, more than ever, public managers are realizing that new technologies such as ERP systems can enable organizations to process transactions more efficiently and effectively. ERP systems, for example, integrate all facets of the business across all departments and functional processes. This capability provides significant advantages over legacy financial and administrative systems, which are often comprised of a variety of separate systems and databases that perform the various accounting, payroll, and maintenance operations tasks within an organization. Using separate, non-integrated systems requires expensive and inefficient manual intervention to perform transactions. Modern ERP systems can also reduce the complexity of accessing, viewing, and managing the vast sums of information collected and disseminated by public sector agencies. In addition to creating new opportunities for reshaping core internal functions, such as how accounting, purchasing, and payroll activities are performed, these systems also enhance the ability of how public sector agencies conduct business with external stakeholders, such as customers and suppliers. As a result, public sector management is being transformed. “[*Broward Technology Needs Assessment: An Evaluation of Broward County’s Financial and Human Resources Management Systems, Government Finance Officers Association, July 2007. p. 4*]

Executive Overview

Software technology typically evolves around current organization structures and legacy business processes. Broward County is no different than many governments and private enterprises in this naturally occurring technology evolution in which software is implemented and enhanced around current business processes. Over the last 20 years, Broward County has operated successfully with decentralized management of many of its core business processes in Finance, Procurement and Human Resources. The legacy systems installed over the last decade were designed to complement these processes and structures and have served the organization well in enabling it to meet its ongoing goals year after year.

Today, however, there are new environmental factors facing the County that require a re-evaluation of our core business processes and the software applications that support them. New external environmental factors facing the County include:

1. **Reduced tax revenue** – For the first time in 20 years Broward County Government has been challenged with an 18% reduction in property tax revenues over a three year period. This has forced the County to re-evaluate its current business processes and organization structures to identify the most efficient approach to meeting these new fiscal challenges.
2. **Quest for Excellence** – Broward County has a reputation for being one of the top counties in the United States that continues to invest in initiatives that will help to maintain its reputation as a local government leader. The County has adopted a Sterling management approach to assist the organization in standardizing processes and to institute ongoing continuous process improvements. This continuous quest for operational excellence is what sets the County apart from other counties and has made Broward County an attractive place to live and work.
3. **eGovernment** –As internet and computer usage continue to grow in Broward County, the need for a transparent, open and online government continues to grow as well. Employees, elected officials, business partners and constituents need local government to provide self help service tools online. The ERP solution will enable Broward County to provide online service tools such as self service for employees, online solicitation tools for vendors, and standardized eGovernment tools for constituents.
4. **Green Environment** – Being in South Florida with its emphasis on environmental protection and sustainability challenges Broward County Government to be a leader in providing more environment- friendly services through the use of technology. Environmental influences include a stronger demand for electronic documents, enhanced online reporting and search capabilities, more online communication tools, and an overall reduction in the consumption of energy used by local governments.
5. **Regulatory Requirements and Accountability**– State and Federal regulatory requirements continue to grow in the areas of HIPAA Compliance, records management, project tracking, and Federal

Stimulus and other grant tracking and reporting. Broward must find a way to comply with new and existing requirements with a smaller workforce.

Efficiency through Process Standardization and Automation

In order for Broward County to meet the efficiency demands of the upcoming decade, standardization of its core business processes needs to occur across the enterprise. Non-value added processes need to be removed and replaced with a more integrated approach to managing core processes in Accounting, Purchasing, Payroll and Human Resources. An investment in modern ERP technology will provide a foundation for more standardized and automated processes. Not only will an ERP serve as the foundational tool set for standardizing core processes, it also will enable automation of many manual processes through a more integrated technology that promotes one time data input and reuse of data across the enterprise.

Shared Services for Future Processes

ERP software provides tools and a foundation for eventual support of key business processes as shared services. Once processes are standardized, they can be provided to operating agencies as a complete service and eliminate the need for agencies to underwrite additional business staff and tools. Providing business functions as shared services also results in a more performance-driven organization because both the service providers and the receiving agencies become focused on performance metrics and scorecards.

Maximizing the Return on Technology Investment

Whether we move toward an integrated business system or perpetuate our independent systems, we must continue to invest in technology. At a minimum, our existing financial and HR/payroll systems are due for upgrades in order to be supportable by the software vendors. Beyond this, critical needs for systems to better manage time and attendance, grants, capital projects, supplier diversity and learning will require additional investment. The key is to make capital investments that will return substantial long term benefits to the County. An ERP will bring broad-based functionality and modern tools that can enable efficiency and transparency for many years to come. Investments in outdated systems or in new independent systems will perpetuate labor intensity and system fragmentation, and our leaders will continue to be hampered in accessing the information they need to manage the County on a timely basis.

Conclusion

Broward is a \$3.3 billion annual operation that is supported by many paper-based, labor intensive systems. ERP will mean using proprietary, multi-module software applications to improve, standardize and automate a wide range of government operations including purchasing, finance, accounting, human resources, payment collections, inventory oversight, customer service, order tracking, resource planning, management control and operational control. Implementing ERP will require a massive, multi-year project that will integrate processes across functional departments and agencies and substantially reduce, if not eliminate, manual, paper-based systems. As large and difficult as that sounds, however, public sector adoption of ERP now has mainstream acknowledgement of its ability to get utilization and benefits that rival private sector ERP accomplishments.

Today's environment demands that Broward manage more with less. However, in the past three years we have removed resources, including over 1300 positions, and we expect to continue experiencing budget cuts for at least another year. The only way to preserve current services and be able to handle increased business workloads when the economy improves is to address our current system deficiencies. An ERP will provide many modern tools that will enable us to maintain and improve service to our customers. It will enable the integration of core business processes and facilitate consistent, integrated reporting with fewer resources. This in turn will enable additional oversight and accountability. Once integrated and automated, these processes will be monitored by Management through the use of online reporting tools and on demand dashboards.

ERP systems provide for policies and procedures to be built into the system and updated as necessary. This will greatly reduce our dependence on policy and procedure manuals for knowledge transfer and provide a much more efficient means to handle knowledge retention, especially as experienced staff retire. ERP systems also come with built-in audit and security controls that have been implemented and tested by other county governments. These will enable more efficient and effective accountability of the core business processes. By examining an ERP solution now, Broward County will receive the benefit of many years of development and testing by these other counties.

Next Steps

It is staff's recommendation that we move forward to discover what variations of ERP and their costs are available to the County. This can most easily be accomplished by issuing the solicitation for software and implementation services and studying the responses.

In these remarkable times and given our extreme economic and governmental challenges, we need to understand all of our options, including the option of a revolution of our processes. However, should the solicitation response show that the ERP revolution is not right for Broward, then we will explore efficiency and cost savings through a more gradual evolutionary process by enhancing our existing tool set, perhaps with some new ideas garnered from the solicitation responses. In any case, the time to begin is now.

Background

In 2007, Broward contracted with the Government Finance Officers Association for a Technology Needs Assessment, specifically an evaluation of Broward County’s financial and human resources management systems. They found that the County has numerous independent and aging business systems that are not meeting our needs. They recommended that we seriously consider implementing Enterprise Resource Planning (ERP) software in order to eliminate inefficiencies and provide much greater functionality for all county operations.

Building on this recommendation, in January 2009, Broward County selected EquaTerra, Inc. to serve as our Third Party Assurance (3PA) Provider and as the County’s Project Manager for implementation of an ERP system. EquaTerra also was engaged to assist the County in analyzing our business processes, developing a Return on Investment analysis and Total Cost of Ownership for an ERP system, defining County-specific requirements for an ERP System, developing solicitation documents for software and a system integrator, and assisting in evaluating potential software and system integrators.

A 12-step ERP methodology was adopted by the County for planning and implementation of an ERP. It allows for incremental decision points to evaluate and validate information and/or results prior to taking each successive step toward ERP implementation. These decision points and the steps of the methodology are presented below. Work completed to date constitutes Steps 1 – 4. This report presents the planning that is in place and analysis to support the current decision point which is to proceed with a solicitation for software and implementation services and pricing.

✓	DECISION POINT: Select an Independent ERP Advisor to provide guidance and analysis services
✓	1. Analyze/Quantify Cost of Current Processes
✓	2. Identify/Quantify Cost of Inefficiencies
✓	3. Define Future Processes, ERP Requirements and Business Case
✓	4A. Prepare Solicitation Documents for ERP Software and Integration Vendor(s)
	DECISION POINT: Solicit and evaluate proposals for ERP Solutions that meet defined requirements
	4B. Solicit for and Select ERP Software and Integration Vendor(s)
	DECISION POINT: Select vendors for software and implementation services for negotiation
	4C. Negotiate with Selected ERP Software and Integration Vendors
	DECISION POINT: Award ERP Solution Contract and Complete Implementation Planning
	5 - 12. Plan, Design, Train on, Test, and Implement Phase 1 systems
	Repeat Steps 5 - 12 for next phase of implementation

The business case for a Broward ERP is based upon assessments from two different perspectives: a system perspective and a process perspective. The System assessment examines the extent to which our systems meet our critical business needs. The Process assessment builds on the System assessment and examines the cost and efficiency of our processes. Together they present a compelling case for modernizing our technology and streamlining our processes in order to operate more efficiently and cost effectively.

System Assessment

The assessment of our business systems and business requirements was undertaken in 2007 by the Government Finance Officers Association. They found that “the lack of interfaces between multiple systems in the current environment, the lack of an effective reporting tool available to end-users, the dependence on [an] antiquated and out-of-date, paper-based environment, and the inability of current systems to adapt and change with new demands have left the County with an array of inefficient, time-consuming, and manual business processes.” The key weaknesses identified from a systems perspective and key impacts of these weaknesses are summarized below.¹

1. Lack of System Integration and Real-time Data

Lack of integration between the financial (Advantage) and HR systems as the following impacts:

- The transfer of data between the systems requires manual intervention by the information technology office.
- Many of the County’s business functions are supported by a series of independent systems, which results in inconsistent access to information.
- Data lacks timeliness, and therefore reliability, stemming from the inability to directly access the required systems and inflexibility in the extraction and reporting of information.
- Data that is transferred between the systems is predominantly at the aggregate level, forcing users to go to the primary system to obtain transaction detail.

2. Inefficiencies Due to Redundant Data Entry and Manual Processes

- The existence of multiple standalone systems and reliance on desktop applications like Excel and Access result in redundant data entry efforts because information is taken out of one system and entered into another.
- Also, there are a host of manual processes that support certain business functions.

3. Reporting Tools are Substandard for County Needs

- The current systems lack sufficient querying tools, and the small number of standard reports in the Advantage system do not meet overall County needs.
- Most non-standard reports requested by Management and Commissioners require intervention by the IT Department and/or manual development by agency staff.

These weaknesses and associated impacts comprise key system problems and inefficiencies that need to be overcome. Detailed reports from the GFOA Needs Assessment are available separately.

¹Summarized from Broward Technology Needs Assessment by GFOA, Chapter 2, pp 10-13, July 2007.

Process Assessment

To assist the County in understanding its current processes and placing a cost on the inefficiencies identified by the GFOA analysis, EquaTerra assessed how business processes are conducted in the current environment and how much each process costs. The assessment of County processes utilized the Activity Based Costing method to identify all resources throughout the county that are involved in key business functions, not just resources in central service agencies like Accounting or Human Resources. Process refers to all activities that are performed in order to complete a transaction or deliver a service regardless of the organizational unit in which the person doing the work is located. The countywide cost of processes includes the applicable time of staff in a central support agency plus the time spent by operating agency staff completing other parts of the process. For example, paying an employee may involve personnel in several sections of operating agencies as well as in the central payroll office. The time spent by everyone who touches the time and attendance and payroll tasks is counted in order to assign a cost to this process.

Current Process Costs

Placing a cost on processes is difficult to accomplish without automated systems. Information for the Activity Based Costing analysis for Broward was developed from two sources: FY2009 employee survey results and FY2009 budgeted personnel and operating expenses. Employee surveys were customized for each department so that time could be allocated among key business functions as well as the services and operations specific to each agency. Time allocations were accumulated for all business processes and direct service processes provided by operating agencies. Operating expenses that could be directly traced to a process were assigned to that process, and all remaining expenses were allocated proportionately (excluding expenses such as capital outlay, debt service, transfers to non-profit organizations, reserves, and cost allocation charges). Using this Activity Based Costing method, the Broward County Operating Budget is distributed as follows:

FY2009 Operating Budget	\$2,563,893,501	
Total excluding County Commission, Elected Officials & Judicial	\$1,775,782,701	
Countywide Processing Costs (Direct Service and Business Processes)	\$855,084,647	Personal services and operating expenses identified through ABC Analysis
Balance of Operating Budget	\$920,698,054	Key expenditures include capital outlay, debt service, transfers to non-profit organizations, reserves, and cost allocation charges

Direct Service Processes and Business Processes were quantified through the Activity Based Costing Analysis. Business processes are the focus of this report; they can be divided into central, independent and other business processes.

Central Business Processes

The Process Assessment was focused primarily on those business processes that are supported by a central system. The Advantage Financial system and Cyborg HR/Payroll systems are the major systems that are operated centrally, although they may not be used currently by all county agencies. The functions or processes that are served to some extent by central systems include: accounts payable, accounts receivable, budgeting, purchasing, general accounting, facilities management, payroll and human resources. Estimated savings from an ERP have been made only for these business processes because there is a countywide system that can be analyzed for improvement potential. Technology support of these central processes exists within county agencies beyond that which is provided centrally. For this analysis, all county technology costs are included in this category.

Independent Business Processes

A number of other county business processes either are not supported by Advantage or Cyborg, or agencies have chosen not to use those systems. The key processes that operate independently in the county are: Contracts / Grants Administration, Employee Expense Reporting, Fixed Assets and Property Accounting and Construction/Program Management. Independent means that the process is supported by a different system or by 'shadow' systems such as standalone spreadsheets and databases. These processes are very likely to benefit from the functionalities in an ERP, but savings have not been estimated because there is no countywide system or process that can be analyzed for improvement potential.

Based on the Activity Based Costing analysis, the central supported business processes currently cost ~\$134 million countywide. This is approximately 15% of the countywide process costs including direct services, and 4% of total business process costs and resources (excluding capital expenditures, debt service, etc.).

The independent business processes that typically are supported by separate agency spreadsheets and databases account for another 2% of total county process costs and FTE resources. The most substantial of these in terms of resources is Contract/Grants Administration/Project Management which accounts for 83 FTEs.

Table 1: Current Countywide Business and Direct Service Process Costs

Process Categories	Current Process Costs	FTE	%
Central supported business processes	\$133,593,781	1,008	15%
Independent business processes	\$15,749,654	101	2%
All other business processes	\$29,767,058	179	4%
Total Business Process Costs & FTE	\$179,110,493	1,287	21%
All direct service programs & associated support	\$679,187,994	4,842	79%
FY2009 Total Countywide Process Costs & FTE	\$855,084,647	6,075	100%

The remaining business processes include risk management and document management functions. Records/document management accounts for ~73 agency FTE which represents 1% of total county staff. This is primarily the result of paper-based records retention practices.

Business Process Inefficiencies

When processes are inefficient, they deliver a lower level of service to users and customers while consuming a greater proportion of total operating dollars. Processes consume different amounts of time and resources. Process inefficiencies are a function of many factors including systems and their functionality, the extent of process automation and the extent of process standardization. Other factors such as leadership and employee progression opportunity also may contribute to process inefficiency, but they are not addressed by an ERP.

To aid in quantifying the cost of some of the current inefficiencies, the performance of four key Broward business processes was compared to the performance of a wide range of organizations to determine the amount of improvement that potentially could be achieved with an ERP. Performance metrics that are commonly used to compare the performance of ERP-related central business processes were drawn from several sources.

- Performance metrics from organizations that had been evaluated using the same Activity Based Costing methodology used in Broward. These data represent large and small, public and private organizations with and without ERP systems in place.
- Performance metrics drawn from the databases of national organizations such as Gartner, Hackett and Forrester.

The data were blended to facilitate order-of-magnitude comparisons. The metrics in Table 2 present: 1) Central Agency performance based on the staff/resources from the central agency that has primary ownership of the process (Accounting, Revenue Collection (now Records, Taxes & Treasury), Purchasing, Human Resources), and 2) Countywide performance that adds operating agency staff who also commit time to the process. For these metrics, the performance for Broward central service agencies falls at or below the median performance categories. However, when the countywide costs or resources are included, most of the metrics fall well below the median levels of performance.

Table 2: Key Business Process Comparisons For The Central Service Agency And The County As A Whole

Enterprise Metrics	Broward Central Agency Measure	Broward Countywide Measures	Median Performance Comparisons
Invoices processed per A/P FTE	5,348	1,778	11,470
A/R cost per \$1000 of Revenue	\$2.23	\$3.79	\$2.40
Human Resources Staff To Employee Ratio (%)	0.9%	2.4%	0.6%
Purchase orders processed per FTE	672	158	4,830

The County's level of performance is not unreasonable to expect given the system and process weaknesses that have been documented by GFOA and EquaTerra. In these same key process areas, 94% of the combined business tasks are manual and operate on a variety of independent systems. To compensate for the inadequacies of our standalone, non-integrated systems, multiple controls have been put in place to ensure responsible business transactions. While these controls add security to

outdated systems and processes, they increase the time and resources consumed by already cumbersome systems.

Table 3: Estimated Reduction in Manual Tasks and Number of Standalone Business Systems

Processes/Functions	# of Business Tasks	% Tasks Currently Manual	% Tasks Future Manual	# of Current Systems	# of Future Systems
Accounting	219	91%	24%	2	1
Human Resources	337	98%	46%	10	3
Purchasing	45	88%	42%	3	1
Revenue Collection**	69	84%	16%	12	10
Combined	670	94%	36%	27	15

**Includes Treasury and Accounts Receivable (AR) processes, excluding AR processes driven by state guidelines (i.e., Auto Tags, Fishing & Hunting licensing)

Cost of ERP-related Inefficiencies

To place a value on the ERP-related inefficiencies of our central business processes, EquaTerra assessed the system and human resource costs that could be reduced with the functionality of an ERP. A wide range of cost drivers were taken into account including availability of technology, extent of manual and duplicative processes, current process flows compared to the flows in an ERP, associated controls and extent of standardization, current organization structure, comparative performance, and the functional requirements needed to overcome Broward’s critical unmet business needs.

The costs of ERP-related inefficiencies were quantified in the following manner:

- Value of maintenance expense associated with systems replaced by an ERP: Maintenance expenses were quantified for current financial and HR systems that would be replaced with an ERP
- Value of staff support costs associated with systems replaced by an ERP: Technology staff support costs were quantified for those systems that would be replaced by an ERP.
- Value of central staff savings if median level benchmark performance was achieved: EquaTerra compared the performance of central business processes to the performance of other public and private, large and small organizations with and without ERPs. Then they estimated the resources that would be required for Broward to support these processes based on current transaction volumes. The difference between current resources and the resources required at a median performance level is considered to be the inefficiency that could be eliminated with an ERP.
- Value of operating agency business resources that could be eliminated/redirected if critical business needs are met: County departments and agencies operate standalone, non-integrated systems, databases and spreadsheets in order to overcome the inadequacies of the current financial and HR systems. These systems all require staff to maintain the systems and to extract and reconcile information in order to produce reports and manage operations. If system inadequacies can be addressed with an ERP, the need for many of these resources would be eliminated.

Based on this assessment, the value of central business process inefficiencies that could be addressed with implementation of ERP functionality is estimated to be \$21.6 million. This is 16% of the current \$133.5M cost of our central business processes referenced in Table 1 (finance, purchasing, HR, etc.) and

3% of countywide process costs (business processes plus direct service processes). This value excludes inefficiencies that could be overcome in functions such as document management that consume 1% of total county resources, or contract/grants management, employee expense reporting and agency fixed assets and property accounting that represent an additional 2% of countywide process costs. These latter functions are not supported by any single system and are operated independently in county agencies; consequently there is little basis for quantifying current inefficiencies. Even though they cannot be quantified, it is clear that an automated system with full functionality will generate operational benefits and savings over the existing stand-alone systems.

Table 4: Estimated Cost of Central Business Process Inefficiencies

Basis of Value Estimates for Central Business Process Inefficiencies		Value	FTE
Retirement of Outdated and Standalone Systems	Value of maintenance expense associated with systems replaced by an ERP	\$1,224,002	NA
Miscellaneous System Support	Value of staff support costs associated with systems replaced by an ERP	\$1,764,125	19
Accounting, Revenue Collection, Purchasing and Human Resources central service agencies (FASD)	Value of staff savings if median level benchmark performance was achieved	\$1,968,279	29
Operating Departments and Other Central Business Agencies (Facilities, Risk, County Records)	Value of operating agency business resources that could be eliminated/redirected if unmet needs are met	\$16,631,172	216
	Total	\$21,587,579	264

Because business processes are highly decentralized in Broward County, the costs of inefficiencies and the targeted savings are attributable not only to central service agencies but also to operating agencies. There are many reasons for this. In some cases, operating agencies have separate standalone systems for the same processes. In other cases, shadow systems have been created to satisfy needs that are not met by the countywide systems. In yet a third set of cases, processes are highly manual and require a high level of human intervention to handle routine processing.

ERP Requirements and Estimated Costs

Functional Requirements

The cost of an ERP depends on the functions to be included in the system. Broward’s vision is for an integrated, enterprise-wide system that supports all of our business functions. Close to 4,000 requirements have been developed to address the broadest possible set of functions that typically are part of an ERP. Some functions such as utility billing, licensing and traffic engineering may not be part of all basic ERP software; however, they are included in our requirements list to give us the opportunity to examine software options that incorporate the maximum functionality. All functional requirements identified by the County for the standard finance, purchasing and HR/payroll areas are included in EquaTerra’s compendium of ERP functionality in existing ERP systems. This suggests that the central service functionalities needed by Broward County can be met with minimum customizations which otherwise add cost to an implementation.

The functional requirements categories that are included in the proposed solicitation for Software and Implementation Services are listed in the following table:

Table 5: Functional Requirements Categories for Broward Solicitation

Functional Requirements Categories for Broward Solicitation			
Technical			
General Ledger	Purchasing	Human Resources	Projects
Budget	Inventory	Payroll Administration	Grants
Treasury	Facilities	Time And Attendance	
Accounts Payables	Fleet	Learning Management	
Accounts Receivables	Utility Billing	Benefits Administration	
Fixed Assets	Licensing		
	Traffic Engineering		

It is essential that we recognize at the outset of this initiative that years will be required to meet all of our unmet needs and realize our vision of an integrated, enterprise-wide system. The key to realizing our vision is to take the first step toward change. Starting implementation will allow us to begin that change and break the cycle of unmet needs and standalone, non-integrated systems.



Each Department provided input to the detailed set of ERP requirements to ensure that they can maintain or improve business process functionality from an ERP Solution. This allows us to solicit for solutions that meet all functional requirements. Depending on pricing and the functions that can be addressed by proposers, we can determine how much we want to implement, how much we can afford and over what period of time.

Projected Software Modules

The software modules and associated software maintenance fees that were projected to be purchased for a Broward County ERP were identified by aligning Broward’s ERP requirements with typical ERP modules. The following modules are anticipated to be implemented in a phased approach over a period of approximately 3 years.

Table 6: Assumed Software Modules

Process Area	Software Modules
Financial Processes	<ul style="list-style-type: none"> • General Ledger • Accounts Receivable • Accounts Payable • Billing • Asset Management • Cash Management/Treasury • Planning and Budgeting • Expenses
Supply Chain Processes	<ul style="list-style-type: none"> • Purchasing • E-Procurement, Catalog Management • Supplier Management • Strategic Sourcing • Inventory/Warehouse Management • Facilities Maintenance • Fleet Management • Utility Billing and Business Licensing
Human Resource/Payroll Processes	<ul style="list-style-type: none"> • Payroll • Time and Labor • Human Resources • Compensation • Benefits • Recruiting • Employee Performance and Development
Capital Project Processes	<ul style="list-style-type: none"> • Project Costing • Project/Portfolio Management • Grants • Contract Management
Training Processes	<ul style="list-style-type: none"> • Learning Management • Learning Development
Decision Support Processes	<ul style="list-style-type: none"> • Portal Management • Data Warehousing • Manager/Employee Self Service • Performance Scorecard • Ad-Hoc Reporting

Implementation Deployment Plan

Once the software modules were identified, the implementation deployment plan was projected. This plan is based on analysis conducted to compare all implementation deployment plan approaches with one another to determine the timeline and sequence of implementation. Also critical was to determine the feasibility of rapid deployment or pilot as a potential option.

To determine an appropriate pace of implementation, different models for implementation were reviewed. The following four were evaluated:

- Big Bang: Implementation of all modules in one phase
- Modular: Implementation of one module at a time
- Best of Breed: Implementation of one or more or part of modules in one phase
- Best of Breed: same as above with a Pilot at the Airport

The comparison is demonstrated below in Table 7. Based on this comparison, the best option would be the Best of Breed option which has the lowest cost and the highest potential ROI.

Table 7: Comparison of Implementation Deployment Plan Approaches for Broward County

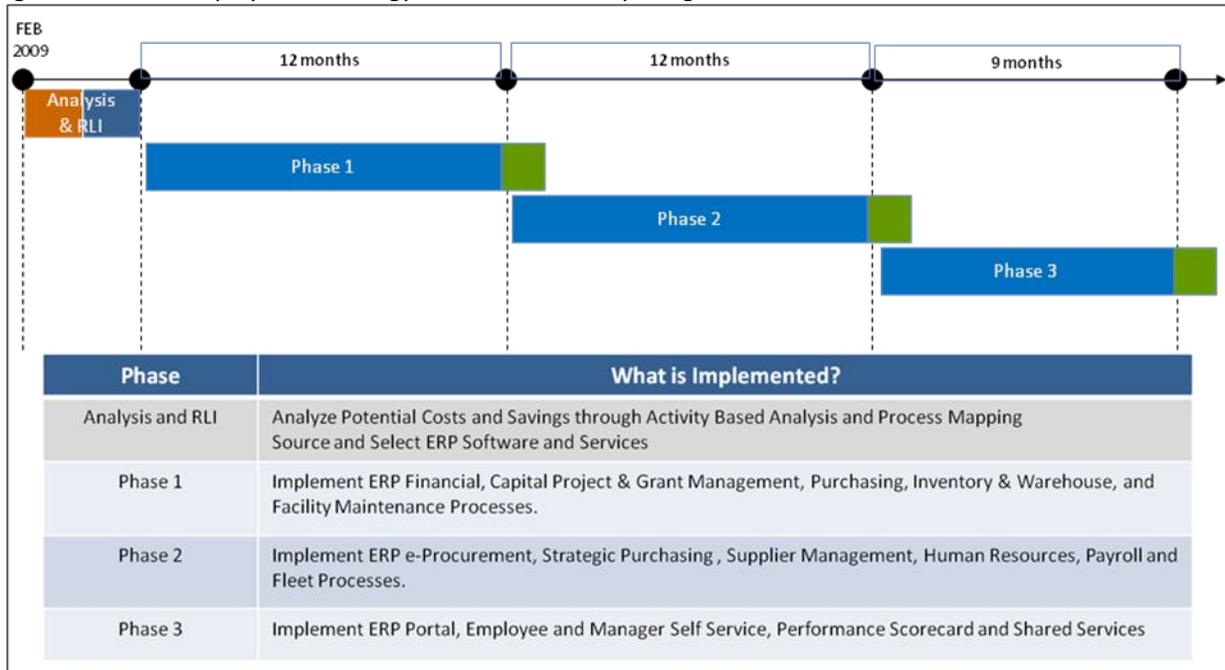
Deployment Model	Cost Driver	Comparative Evaluation
Big Bang	<ol style="list-style-type: none"> Return on Investment Cost of Implementation User Adoption Time Frame to Results for Airport 	<ol style="list-style-type: none"> ● (2nd Best ROI) ● (Most Costly) ● (Worst Implementation Pace) ● (18 months for Airport)
Modular	<ol style="list-style-type: none"> Return on Investment Cost of Implementation User Adoption Time Frame to Results for Airport 	<ol style="list-style-type: none"> ● (2nd Worst ROI) ● (2nd Most Costly) ● (Best Implementation Pace) ● (24 Months for Airport)
Best of Breed	<ol style="list-style-type: none"> Return on Investment Cost of Implementation User Adoption Time Frame to Results Airport 	<ol style="list-style-type: none"> ● (Best ROI) ● (Lowest Cost) ● (Medium Pace, Spaces out Change) ● (12 Months for Airport)
Best of Breed (Pilot)	<ol style="list-style-type: none"> Return on Investment Cost of Implementation User Adoption Time Frame to Results Airport 	<ol style="list-style-type: none"> ● (Worst ROI) ● (2nd Lowest Cost) ● (Pilot then all modules, Big Bang) ● (7 Months for Airport)

- Highly Favorable to Broward County
- Favorable to Broward County
- Slightly Favorable to Broward County
- Not Favorable to Broward County

The Broward Implementation Deployment Plan was designed to meet key needs by County departments like the Aviation Department, without requiring a pilot, which would be more costly. The phases also allow implementation at a pace that is manageable for the County. Figure 1 presents the Phased Deployment Strategy for Broward County using the Best of Breed model to implement the most critical and most beneficial aspects of ERP as Phase 1.

Once the Implementation Deployment Plan was finalized, the timeline for each phase was established and the costs for implementation services, both internal and external (vendors), could be projected.

Figure 1: Phased Deployment Strategy for Broward County using the Best of Breed Model



Estimated 5-Year Costs

The Draft 5-Year Total Cost of Ownership that was developed encompasses all expected costs for software and services during and post implementation assuming implementation of all modules and functional requirements that have been specified. No general rules of thumb were used to estimate costs based on ratios between hardware and software. The costs are higher than earlier estimates by GFOA (\$26.7M) and SciCom (\$33.0M), but those estimates did not include the full range of functional requirements that are included now, and they did not all include costs for 3rd Party Assurance, Change Management, Training and Internal Staff Costs. Each of these excluded elements is critical to a successful ERP implementation. The actual costs for the County will depend on the functionality of software packages that are proposed and the levels of effort that are required for implementation.

The cost elements that were analyzed and projected are: Software Licensing Cost; Hardware, Software Maintenance, Application Development, Maintenance and Support, Systems Integration Services, Client Specific Services, Pre-Project Training, 3rd Party Advisory Services, Change Management and Training; and Project Expenses. The final component required to finalize the Total Cost of Ownership, is the actual cost for software and services, which can be obtained only through the solicitation process. Once the solicitation process is complete, the final TCO would be prepared to support vendor selection and contract negotiation.

To recap, the following caveats are important in considering the ERP 5-Year Total Cost of Ownership in Table 8 below:

- Costs, benefits and savings are only estimates at this time.
- Costs will be revised based upon actual pricing proposals from vendors. These will be used to produce the Final 5-Year Total Cost of Ownership estimate.

Table 8: Summary of Draft 5-Year Total Cost of Ownership (TCO)

Major Cost Components	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Software Costs	\$2.9	\$0.5	\$0.5	\$0.5	\$0.5	\$4.9
Hardware and Services Costs	\$15.8	\$16.4	\$8.5	\$0.2		\$40.9
Expenses	\$1.0	\$1.2	\$0.5			\$2.7
Total Cost by Fiscal Year	\$19.7	\$18.1	\$9.5	\$0.7	\$0.5	\$48.5

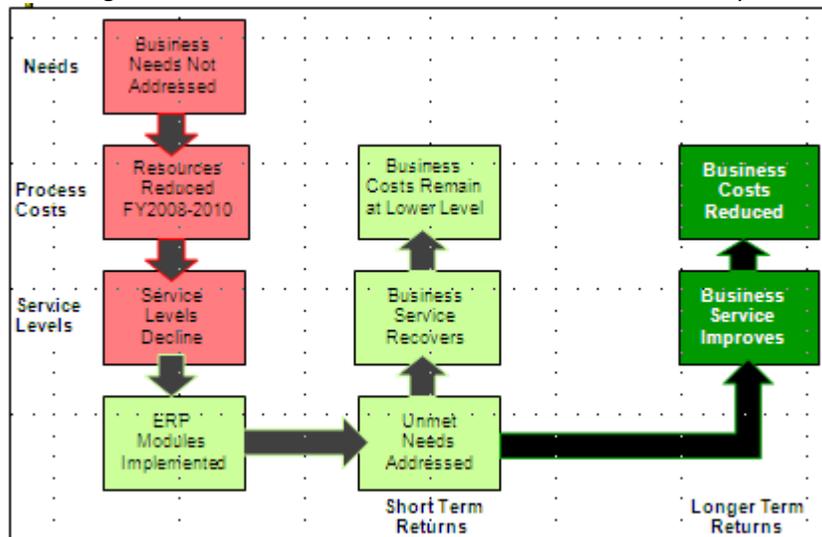
The components undertaken in Year 1 may be regrouped depending upon vendor pricing, but the total cost will not exceed available Year 1 funding. Funding for subsequent years' funding will be addressed through the FY2011 – FY2015 capital program. This is discussed further in the last section of this report on Funding Strategy.

Anticipated Returns on Investment

The Returns on Investment from implementing an ERP in Broward County will address several aspects of our current conditions: business needs, business service levels, and business process costs. Under prior economic conditions, we expected to realize the Return on Investment from ERP implementation in a fairly straightforward way: 1) unmet needs would be addressed, 2) business service levels would improve, and 3) business costs would decline. With the decline in business process costs would come an opportunity to either reduce staff levels or reallocate staff to direct service programs.

The economic decline of the past several years creates a different situation for Broward in terms of how we would realize the benefits of ERP. Figure 2 illustrates the various cause-effect relationships. Between FY2008 and 2010, the County eliminated over 1,300 positions in order to avoid raising taxes in the face of declining revenues. For FY2010 alone, we eliminated about 450 positions, 155 of which were related to the business functions that would be improved with an ERP. This represents almost 60% of the FTE costs associated with ERP-related inefficiencies. Elimination of these staff resources before providing any new or improved tools is expected to reduce business service levels and affect both internal and external customers. Thus, we will be behind the original level-of-service base line when we begin the ERP. In the short term, the improvements from ERP will allow us to recover to the pre-cutback service levels rather than realizing bottom line savings, and business process costs would remain at the

Figure 2: Return on Investment Cause and Effect Relationships



already-reduced cutback levels. In the longer term as new systems stabilize and staff has the opportunity to maximize use of the new tools, additional savings may be realized. These savings may come from economies in purchasing from suppliers as well as from further staff-related efficiencies. Allocation of longer term staff savings that are created would be addressed as part of the annual budget process.

The four key aspects of return on investment (business needs, business service levels, business process costs, minimize direct service cuts) are discussed further in the following sections.

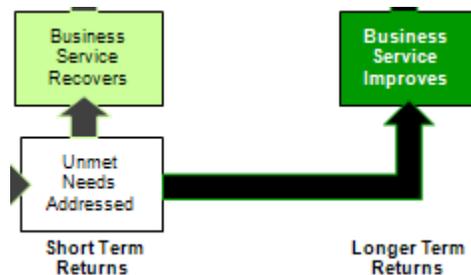
Critical Business Needs Addressed



The initial, most significant returns on investment from an ERP will be overcoming the weaknesses of existing systems and providing much-needed tools and functionality for users and customers of Broward’s business processes. In addition, incorporation of our policies and procedures into the system will greatly aid in knowledge management and retention of critical skills. GFOA identified the following unmet needs that that could be addressed with an ERP.

1. A single, modern system with user-friendly features (e.g., easy navigation, drop down boxes, drill down functionality, validation of data upon entry, etc.) that offers on-line help functions and customized system documentation.
2. Public sector accounting functionality with cost and activity based accounting.
3. Full integration between all modules.
4. Single entry of data and reduction in manual processes
5. Employee self service.
6. User-friendly, user-driven and flexible reporting tools with distributed, securitized access to all users.
7. Thorough, job-specific training on the system, such that users learn not only what they need to do on the system, but the ramifications and the logic underlying the transaction--understanding the big picture, as well as the detailed specifics of each job.
8. Real-time, immediate update and access to the financial and HR data.
9. Elimination of paper-based processes and replacement with automated, online workflows and approvals.
10. Streamlined business processes incorporating established best business practices.
11. Self-service capabilities and other e-procurement and e-government opportunities.
12. Document management so that paper files are not maintained.

Improved Business Operations



When user needs are met with modern business tools and systems, business operations will improve in ways that are both quantitative and qualitative. In the short term, service levels are expected to recover to pre-cutback levels with the already-reduced level of staffing. Elimination of manual processing and standalone systems will allow process cycle times and associated staff time to drop and accuracy to

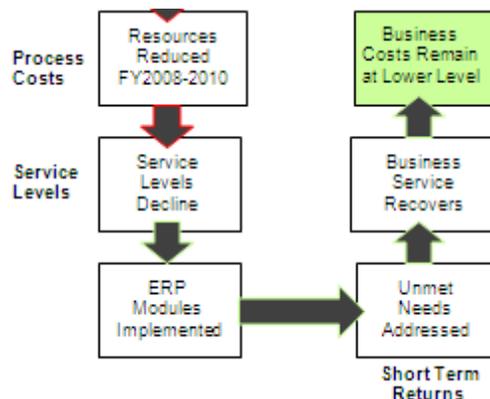
increase. As the new system stabilizes and staff is able to take advantage of the various tools and efficiencies, service levels would improve beyond the 2009 baseline levels.

Other benefits are difficult to document or quantify until the business process changes are made through an ERP implementation, but they are important benefits nonetheless. A few of these benefits would include:

- **Ready access to data** – An ERP will provide much greater visibility to countywide data. This will eliminate some of the need to generate customized management reports. Drill down capabilities will allow access to targeted information without having to include layers of detail in custom management reports.
- **More data driven decision making and reduced stress on the organization** – Ready access to data also will enable more data-driven decision making throughout the County. The reduced need to create custom reports from disparate systems will reduce stress on organization staff.
- **Increased adherence to policies and procedures** – Today the County is heavily dependent on people to know policies and procedures and to review and monitor for compliance. With an ERP, most of the business policies, procedures and controls will be built into the system. This will greatly increase the consistency of our processes and our compliance with policies and procedures.
- **More effective interfaces with external parties** – There are many requirements for County information to be provided to regulating authorities (e.g., State of Florida agencies) and a common, updated technology structure would facilitate these interfaces.
- **Support for succession planning** – The common resources within an ERP system such as a comprehensive training program would also serve to support succession planning within the County.

These more qualitative benefits should be realized throughout the ERP implementation as the system is designed and processes are reconfigured and updated.

Lower Business Process Costs



Quantified Savings

This section presents potential business process savings without factoring in the substantial staff reductions that have been taken as part of budget reductions. This allows us to use the FY2009 pre-cutback process costs as a baseline for measuring future savings attributable to an ERP. The impact of

staff reductions that already have been taken are addressed in the Savings Strategy section later in this report.

As business processes are streamlined and ERP modules are put into operation, the final aspect of return on investment will begin to occur in the form of reduced business process costs. The ERP-related inefficiencies identified earlier in this report were valued at \$21.6 million. As those inefficiencies are eliminated, savings will be generated because fewer resources will be required to operate the processes. The savings will vary among processes because the inefficiencies vary. EquaTerra’s analysis suggests that the inefficiencies valued at \$21.6 million can be overcome with ERP functionality. After processes are subjected to detailed analysis and redesign in the design step of implementation, this estimate may be adjusted. This assessment is based on Broward’s functional requirements for an ERP, the extent of manual and standalone systems, the lack of standardization, complexity of current processes, and current organizational structures,

The estimated countywide savings represent a combination of system cost reductions and employee cost reductions. The savings from system retirements (elimination) are based on current identified paid maintenance costs for 33 systems that would be eliminated with an ERP. They do not include FTE savings that would result from retirement of home-grown systems that currently are maintained in-house. The systems range from the countywide Advantage Financial system and Cyborg HR/Payroll systems of record to small standalone agency databases.

The FTE savings represent 94% of the total targeted savings. The reason for this is that manual processes, non-standard procedures, lack of automation, and lack of integration of systems require a high level of human intervention in order to conduct business processes. When systems are automated and policies and procedures are standardized and incorporated into the automated systems, the need for human intervention for routine tasks and decisions is greatly reduced. Table 9 shows the distribution of targeted savings among ERP phases based on modules scheduled for implementation.

Table 9: Original Distribution of FTE Savings from ERP prior to 2010 budget reductions

	Countywide Process Costs	System Retirement Savings	FTE	FTE Cost Reduction
Current	\$855,084,647		6,075	
Post Phase I (Accounting, Light Supply Chain)		(\$1,016,587)	-186	(\$14,268,970)
Post Phase II (Human Resources, Payroll)		(\$207,415)	-78	(\$6,094,606)
Post Phase III (Employee/Manager Self Service)		\$0	0	\$0
Annual ERP Savings	\$21,587,578	-\$1,224,002	-264	(\$20,363,576)

Figure 3 illustrates the distribution of savings among business processes. The two colors of each bar, combined, represent the current total cost of each process, and the yellow portion represents the countywide savings that should be realized from ERP implementation.

Figure 3: Targeted Savings within Current Countywide Business Processes

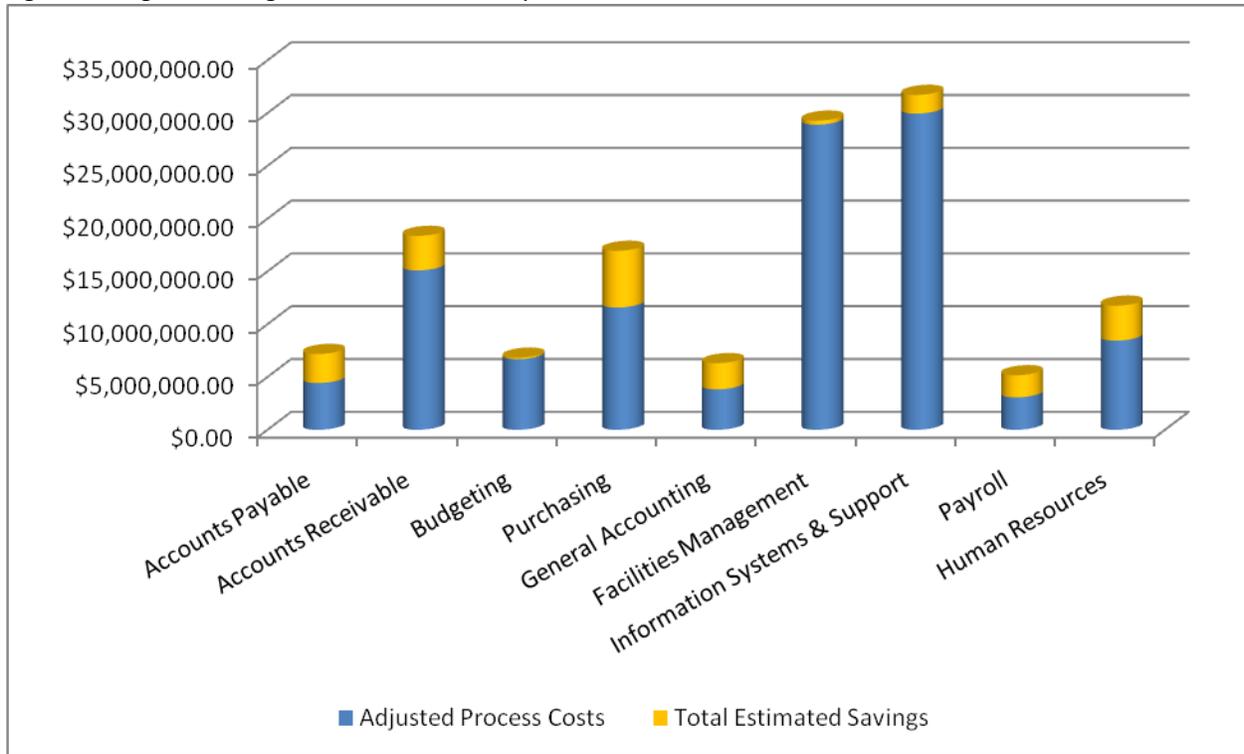


Table 10 presents these countywide savings following ERP Implementation. The savings identified can be traced back to each Department’s Budget. This provides a basis for assessing the results of the ERP Solution by tracking proposed cost savings and projected benefits.

Table 10: Targeted Savings and Post-Implementation Costs of Countywide Processes

Central Supported Business Processes	Current Process Costs	Total Estimated Savings
Accounts Payable	\$7,185,480	\$2,755,694
Accounts Receivable (Cash Collections/Billing)	\$18,372,656	\$3,273,387
Budgeting	\$6,833,266	\$141,863
Purchasing	\$16,955,483	\$5,370,782
General Accounting	\$6,310,629	\$2,480,306
Facilities Management	\$29,281,040	\$376,461
Information Systems & Support	\$31,724,152	\$1,774,125
Payroll	\$5,171,669	\$2,100,934
Human Resources	\$11,759,406	\$3,314,025
Totals	\$133,593,781	\$21,587,579

Potential Additional Savings

Additional savings that are reasonable to expect but that cannot be quantified at this time include the following:

- **Additional purchasing efficiencies with strategic sourcing** – While ERP implementation will produce definitive benefits in purchasing processes, the expansion of these processes to include strategic sourcing could yield additional benefits. These would include:
 - lower item prices due to volume purchasing, and
 - a potential for further automation through an on-line catalog.

Strategic sourcing, as the name indicates, involves a more strategic approach to purchasing by a) analyzing what we are buying and the range of needs across agencies, b) assessing the market for our purchases, the number of suppliers we use and the variation in pricing, and c) identifying opportunities to consolidate our spending and negotiating better pricing. Over the past two years, the Purchasing Division already has begun this type of analysis and developed new master agreements for frequently requested items by multiple users. The master agreements provide already-established economical pricing that can be utilized by all agencies along with a more streamlined process for making the purchases. With an ERP in place, Purchasing can expand this initiative because data would be more readily available for analysis and negotiation with vendors.

- **Common technology platform and common support resources** – Presently numerous applications are utilized to support varied business processes within the County and as a result, no consistent training program or upgrade scenarios exist. Some applications currently in place have not been upgraded due to significant customization. In addition, there is duplicate architecture in place throughout the County for the support of these current applications. With a common technology platform established for these County business processes, there will be common resources available to all agencies and the platform will be maintained on a current level.
- **Reduced cost of independent business processes that are not currently supported by any central systems** -- These processes represent \$19.8M and 2% of FY2009 process costs and include agency accounts receivable, agency budgeting, agency contract administration, agency facilities management, agency fixed assets & property accounting, agency grants administration, agency risk management, employee expense reporting.
- **Reduction in document management needs** – The use of electronic transactions would significantly reduce the production of hard copy documents that must be managed through a document management system.

Strategy for Realizing Savings

Savings from ERP implementation will come from two sources: retirement of systems and FTE savings. Savings resulting from retirement of systems will be realized immediately upon elimination of those systems in Phases 1 and 2. In Broward, these savings are only \$1,224,002 and represent a small percentage of the total estimated savings.

FTE savings normally would be realized only after implementation phases are complete and systems have stabilized. However, nearly 60% of that targeted FTE savings (approximately 155 positions) was eliminated as part of the FY2010 budget reduction as illustrated in the table below. This reduces the savings that could still be realized to \$8.4M depending on budget actions that are taken in intervening years. Whatever savings are realized would be recurring savings in future years.

Table 11: Targeted ERP FTE Savings in Context of FY2010 Position Reductions

FY2009 Positions Eliminated	ERP Savings Target	ERP-related FTEs taken in FY2010	Balance of ERP Target Reductions
Positions	264	155	109
As % of ERP savings target		59%	41%
Value	(\$20,363,576)	(\$11,955,887)	(\$8,407,689)

FTE savings are not likely to be available to be realized until Phase 3 or later following implementation and stabilization of major modules. Prior to that, the County will be recovering from accumulated budget cuts and making the changes required to implement the ERP and realize improvements. The County's strategy for realizing these savings will be to take them through natural attrition over a period of years.

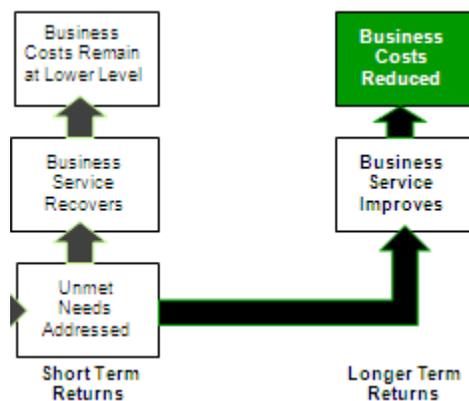


Table 12 shows the County's annual attrition for the past 4 years. Total separations were increasing through FY2007 but started dropping sharply in FY2008. This coincides with the first year of position cuts that now total over 1300. In FY2008, over 100 of the separations (~20%) were positions that would be directly affected by an ERP; but by FY2009 only about 40 of the separations (~10%) were ERP related. This drop is reflective of the number of business and support positions that already have been eliminated during the last 3 years, and it probably also is a result of current economic conditions.

Nonetheless, 40 ERP-related separations per year would provide reasonable flexibility to realize the remaining targeted 100+ FTE savings naturally over a period of 3-5 years.

Table 12: Annual County Attrition

Year	Total County FTEs	Total Separations	Annual Attrition Rate
FY2006	6711	665	10.09%
FY2007	6200	723	11.66%
FY2008	5923	567	9.57%
FY2009	5685	398	7.00%

Strategy for Funding ERP

By investing in an ERP, Broward County will advance an enterprise vision for technology that will enable us to break the cycle of unmet business needs and standalone, non-integrated systems. It is important to recognize that this is a long term investment with the primary purpose of meeting critical needs and providing substantial operational benefits. This investment will be made over a period of at least 3-5 years depending on costs, funding availability and staff capacity to implement modules.

The preliminary 5-year cost estimate of ~\$48M assumes that all potential modules are purchased and implemented. Staff recommends proceeding with the solicitation for software and implementation services to allow us to determine which functionalities will meet our needs and what different pricing might be offered given the current market. If vendor proposals do not adequately address all functional requirements, some modules may be dropped from the project and the costs for software and services would decline accordingly. Substantial recent investments of time and money have been made in systems such as the Harbormaster system at the Port and Maximo at Water Wastewater. The costs and benefits of integrating these systems into the ERP in the short term or longer term will be carefully evaluated and discussed in light of the ERP proposals and pricing from vendors.

To date, capital funds totaling \$22.7M have been budgeted/reserved for the ERP: \$19.7 in General Capital Outlay ERP Reserve and \$3M in Aviation Capital. A preliminary estimate of cost allocation suggests that self-supporting funds would pay for approximately 50% of the total costs, or ~\$24M. These funds will not be budgeted until the project is approved for implementation; therefore, the GCO will fund all of Phase 1 initially. While future phases will be appropriated in GCO, reimbursement from other funds will provide most or all of the necessary revenue to fund these phases. The estimated \$19M General Fund share can be accommodated within the \$19.7M GCO funds reserved for ERP. Current funding availability and the distribution based on current Phased costs are as follows:

Table 13: Preliminary ERP Funding Schedule

Total Estimated Cost of Ownership	Phase 1	Phase 2	Phase 3	Post-Implementation		5-Year Total
Estimated Outlay from General Capital Outlay (GCO)	\$19.7	\$18.0	\$9.6	\$0.7	\$0.5	\$48.5
Funding Identified to date	\$19.7	\$3.0	0	0	0	\$22.7

In summary, the County's ERP Funding Strategy is the following:

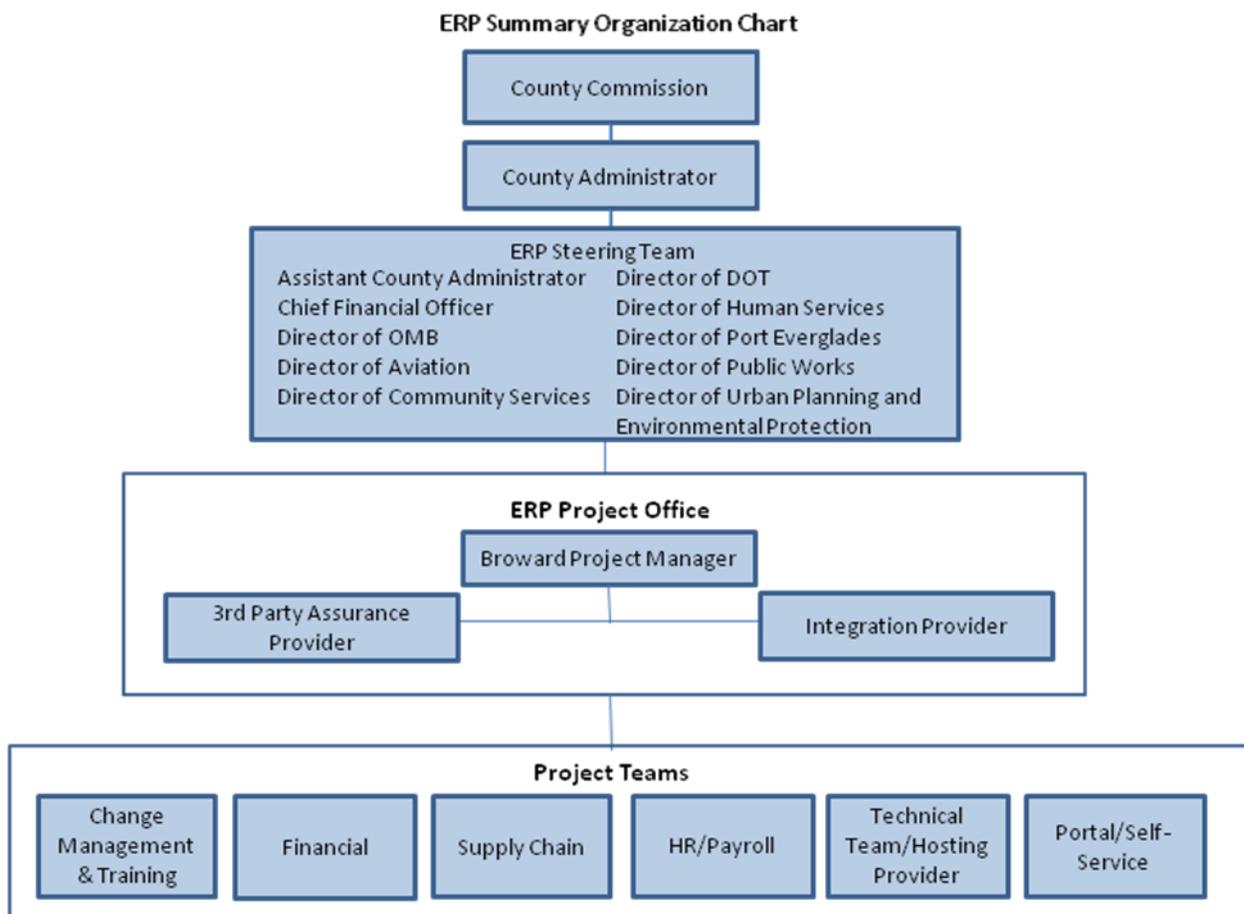
1. Solicit proposals to address the full set of functional requirements.
2. Based on vendor responses and pricing, determine how much we want to implement through ERP and over what period of time we can afford to implement the various components.
3. Revise the initial list of modules to purchase and implementation phasing as necessary to encompass the most urgent elements currently envisioned within Phases 1 and 2.
4. Finalize a funding and implementation plan to be approved along with vendor contracts.
5. Fund the first phase of implementation from the General Capital Outlay Fund. Phase 1 currently is scheduled to include the financial, purchasing and capital project management modules.
6. Self-supporting funds reimburse their shares of costs to the General Capital Outlay Fund.
7. Repeat Steps 5 -6 as subsequent phases are completed.

Implementation Readiness

The ERP Project is an enterprise-wide re-engineering initiative that requires commitment and planning in order to be successful. Work completed to date includes establishing a project organization, governance approach and staffing strategy, documenting and analyzing current state conditions, developing approaches for change management, risk management and training, and preparing for procurement of software and integration services.

Figure 4 illustrates the high level organizational structure for the project. The top portion of the structure would remain for the entire implementation period as would the Change Management and Training Team that will be led by the 3PA Advisor/Project Manager. The remaining 5 teams will be formed and staffed by the System Implementer during applicable phases of implementation.

Figure 4: ERP Summary Organization Chart



The preparations completed to date include the following:

Project Organization and Governance

1. Adopted a strong, enterprise-oriented Governance Model with the County Administrator as Project Champion.

2. Established a Steering Team of ten key department heads/decision makers who are impacted by the implementation and positioned in the organization to make consensus decisions for the County.
3. Established a Project Office in County Administration reporting directly to the County Administrator
4. Appointed an internal Project Director to manage and facilitate countywide project participation and communication, vendor solicitations, and contract administration.
5. Selected an experienced Independent Advisor/Project Manager (EquaTerra) to oversee all work plans and progress, design and manage training and change management functions, manage project risks, and ensure that the County receives the functionality defined for the ERP.
6. Adopted a project organization structure for implementation with detailed roles and responsibilities.

Documentation and Analysis

7. Mapping and analysis of current processes
8. Activity Based Cost Analysis of our processes in order to establish a baseline of current process costs and estimate potential savings from an ERP
9. Generic mapping of future-state processes
10. Detailed functional requirements for a Broward ERP
11. Estimated Total Cost Of Operation and potential Return On Investment from implementing detailed functional requirements

Procurement Preparation

12. Development of procurement documents for solicitation of ERP software and implementation services.

Implementation Planning

13. Developed a preferred sequence for deploying (implementing) ERP modules
14. Developed a preferred approach to deployment: best of breed with no pilot
15. Developed a work plan for multi-year implementation. This will be finalized in greater detail after the System Implementer is on board.
16. Developed approaches for risk management, change management and training.

Change Management and Training Approaches

17. These two project elements are essential for successful project implementation. Detailed approaches for Change Management and Training have been defined and accepted by the Steering Team for use in Broward.

Staffing Planning

18. Approaches to providing County project staff have been developed as described in the following section.

Staffing Planning

The roles typically filled by internal staff during ERP implementation include:

- Functional Leads (individuals who lead functional teams on a full time basis: Finance, Purchasing, HR/Payroll);
- Subject Matter Experts (staff who know the County's business requirements); and

- Technical Experts (staff who know the County’s legacy systems, data structure, and infrastructure).

Functional Leads

Broward proposes to fill the leadership roles for each functional team on the project with an external resource who has deep, across-the-board, knowledge of the business processes in the functional area, as well as knowledge and experience in how it is implemented in an ERP solution. This approach would rely on the expertise of the external resource to push the transition to a new system. The advantages would be that the functional lead would have experience with ERP implementation and knowledge of the functional area without a pre-disposition to re-create the old systems. In addition, this approach would have the benefit of leveraging the County’s Subject Matter Experts (SMEs) on a part-time basis and minimizing issues with on-going operational responsibilities.

Subject Matter Experts (SMEs)

SMEs from the central business agencies and the operating agencies will be required to assist with configuration of the new system. The participation of these individuals is projected to be approximately 1 day per week during the applicable implementation phase(s). SMEs will be required for each of the approximately 20 functional areas. Two core SMEs for each functional are projected to be required from the applicable central business agencies plus 2 each from the 3 enterprise departments and Transportation which have distinct business operations.

- A core SME is someone who is responsible for managing a particular function (i.e. Accounting would typically own Accounts Payable, therefore the Core SMEs for Accounts Payable would come from Accounting). In addition to the Core SMEs, 6 business operations SMEs from each of the 8 operating departments will be needed to oversee system configuration.
- A business operations SME is someone who performs the same function as a Core SME (i.e. Accounts Payable), but performs the function differently than the Core SME or with a different system. By providing this cross section of SMEs, the design of the ERP Solution will take all variations into account when designing a single process. In total, approximately 100 Subject Matter Experts will need to be involved during some or all of the three phases of implementation.

Technical Experts

Broward will need to provide three leadership roles for the Technical Team and depending upon the solution implemented, may also provide up to three (3) Technical Administrators and up to (8) Technical Developers.

- Technical Leaders (1 each for Application Development, Maintenance, and Support Pillar (ADM)):
 1. A leader for Application Development, who focuses on all aspects of custom object design, specification, development, testing and transition to go live.

2. A leader for *Application Maintenance*, who focuses on all aspects of platform design, platform configuration (including instance and migration path design), software installation and ongoing maintenance activities throughout the implementation and ongoing support,
 3. A leader for *Application Support*, who focuses on all aspects of Tier 1, Tier 2, and Tier 3 support design, standup and operation.
- Technical Administrators (up to 3): Positions would provide Database, Operating System (OS), and Security support and would report to the Application Maintenance Leader
 - Technical Developer (up to 8): Positions would provide custom object design, specification, development, testing and transition to Go-Live for each key modular area and for overall portal development.

Staffing planning will advance as the project moves toward implementation.

The time allocation for SMEs and approximate cost is summarized in Table 14 below. The cost for internal staff is not included in the Draft Total Cost of Operations because staff salaries would already included in the operating budget.

Table 14: Total Expected SME Resource Allocation and Salary Cost

TOTAL EXPECTED SUBJECT MATTER EXPERT RESOURCE ALLOCATION & SALARY COST							
	Core SME	Business Operations SME	Total SME	Avg Administrative Salary	Total Avg Salary	Dedicated time 1 day /week @ 3 mos/year .2 * .25 = .05	Total Annual SME Cost
Total Core Agencies	36	0	36	\$ 65,962	\$ 2,374,632	0.05	\$ 118,732
Total Operating Agencies	8	48	56	\$ 80,912	\$ 4,531,082	0.05	\$ 226,554
TOTAL	44	48	92			0.05	\$ 345,286