

Worksession

MEMORANDUM

February 10, 2012

TO: Government Operations and Fiscal Policy Committee
FROM: Dr. Costis Toregas, Council IT Adviser
SUBJECT: Capital Improvements Program - General Government - Technology Modernization

The following are expected to attend:

Michael Ferrara, Executive Director of Enterprise Projects, CAO's Office
Joe Beach, Director, Department of Finance
Jennifer Hughes, Director, Office of Management and Budget
Dieter Klinger, Acting Chief Information Officer, DTS
Patrick Lacefield, PIO
Uma Ahluwalia, Director, HHS

Summary of Staff Recommendations

1. **Approve** the Executive's recommendation for **\$10,753,000** for continuing the modernization of County systems, standing up an Enterprise Service Center structure, and initiating new needed systems in Tax Assessment and HSS key system modernization.
2. The Change Management and Organizational Development office should undertake a "Go live + 12 months" round of interviews with each ERP user department and **develop an analytic report for the Committee** describing the status of implementation, problems not yet overcome, and resource requirements to resolve them.
3. Consider funding the HHS next phase of modernization, since the FY12 investment will conclude and the observations, analyses and strategies found in this first phase may not sustain their effectiveness if an entire year passes by with no additional progress.

Overview

The County began a major initiative in 2008 to modernize government operations with the application of new technologies. This initiative, called Technology Modernization (TechMod), was budgeted at the \$80m level within the Capital Improvements Program (CIP) in 2012. The Executive is recommending continuation of the program and is requesting a total budget of \$105m through FY15, with \$10,753,000 recommended in 2013. Details of the request are on © 1-2.

Staff Questions and Executive branch answers

Council staff developed a series of questions in order to gauge the degree of need and the current status of the projects within the TechMod initiative. These questions and the answers received are provided on © 3-10.

Council staff comments on answers provided on © 3-10

1. Total projects under TechMod

On © 6, the additional funds requested for ERP enhancement are not detailed; however, the critical nature of the system, coupled with the fact that it is by now a system that is operational and without original legacy systems running in parallel to provide back up, indicates that care must be exercised to ensure continuous operation. The MCTime and MC311 completion are a good signal of effective management and successful transition strategy. However, the lack of funds to initiate the deployment of the HHS system on the heels of a \$300,000 expenditure to plan for such development is worrisome. If there are no funds budgeted to continue the development, the analysis already completed may be wasted, as its results may not be relevant in future years. The Committee **should explore the reasons for the lack of new resources** and make sure that the HHS system requirements analysis and Business Process ReEngineering work already done are not wasted.

2. New tasks in TechMod

The Executive's response is self explanatory.

3. Elimination of \$5m Operating Budget Impact as Productivity Gain in the OBI section

The Executive argues on © 4 that productivity gains have already been experienced through absorbing major staff reductions in IT, Fiscal, Budget, Administration, Clerical, Human Resource, and Financial occupational classifications in the FY08-12 timeframe and related savings in the outsourcing arena. However, there is no evidence that savings shown possible through "swim lane" analysis in the development stage of ERP have materialized or even been attempted.

Given the convincing amount of savings that the harsh fiscal reality brought the County, the issue of documenting \$5m in savings in FY13 has perhaps become a moot point. However, when circumstances permit, the "swim lane" analysis will be a good starting point to review current processes, contrast them with pre-ERP implementation processes and their costs, and consider

further modernization of business practices in the departments that are using the new ERP system.

4. MC311 expansion of online capabilities and citizen interaction improvement

The amount of resources committed to TechMod is considerable, yet most of the impact of this commitment is readily seen and felt within the operating departments. The general public will not necessarily appreciate this improvement, as most of the processes are not “outwardly facing”. However, the MC311 system is very much touching residents on a daily basis, and the deployment of stronger, web-based tools for the public to come in contact with the government through MC311 should be a high priority, if not in the CIP program, then within the Operating Budget.

5. Retiring 300 redundant systems

Circle 8 contains an impressive list of systems which have been retired or might be retired because of the \$100m+ investment the County is making in new systems. This retirement includes technology investments and supporting staff functions as well as processes no longer relevant. One hundred ninety-four systems appear to be available for retirement once analysis is complete; the Committee should encourage the administration to pursue these retirements with all deliberate speed.

6. New systems within TechMod

The comment made regarding the HHS system on Question 1 is relevant. The importance of tax assessment to the County’s ability to predict and secure tax revenues is unquestionable, so the investment in a new system should be endorsed without delay.

7. Sustaining Organization post ERP-implementation

The County has invested a considerable amount of resources, time and reputation on TechMod. It is imperative that the Sustaining Organization be stood up and allowed to operate according to best practice so that the investment is safeguarded and expected improvements materialize. If the administration and support of systems under an Enterprise environment are allowed to revert back to their original, stove pipe form, then the County’s efforts to modernize will have failed. It is essential to support this shift, and the Gartner and GFOA consultants’ recommendations reflect the importance of this decision.

Technology Modernization -- MCG -- No. 150701

Category
Subcategory
Administering Agency
Planning Area

General Government
County Offices and Other Improvements
County Executive
Countywide

Date Last Modified
Required Adequate Public Facility
Relocation Impact
Status

January 09, 2012
No
None.
On-going

EXPENDITURE SCHEDULE (\$000)

Cost Element	Total	Thru FY11	Est. FY12	Total 6 Years	FY13	FY14	FY15	FY16	FY17	FY18	Beyond 6 Years
Planning, Design, and Supervision	104,735	60,805	18,851	25,079	10,753	7,859	6,467	0	0	0	0
Land	0	0	0	0	0	0	0	0	0	0	0
Site Improvements and Utilities	0	0	0	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0	0	0	0	0
Other	56	0	56	0	0	0	0	0	0	0	0
Total	104,791	60,805	18,907	25,079	10,753	7,859	6,467	0	0	0	0

FUNDING SCHEDULE (\$000)

Current Revenue: General	64,018	37,549	4,040	22,429	8,603	7,609	6,217	0	0	0	0
Land Sale	2,634	2,634	0	0	0	0	0	0	0	0	0
Short-Term Financing	38,139	20,622	14,867	2,650	2,150	250	250	0	0	0	0
Total	104,791	60,805	18,907	25,079	10,753	7,859	6,467	0	0	0	0

OPERATING BUDGET IMPACT (\$000)

Maintenance				33,786	225	2,015	3,037	9,503	9,503	9,503
Productivity Improvements				-3,782	-33	-33	-929	-929	-929	-929
Net Impact				30,004	192	1,982	2,108	8,574	8,574	8,574

DESCRIPTION

This project provides for the replacement, upgrade, and implementation of IT initiatives that will ensure ongoing viability of key processes, replace outdated and vulnerable systems, and produce a high return in terms of customer service and accountability to our residents. Major new IT systems that have been completed through this project include the Enterprise Resource Planning (ERP) Financial and Human Resources modules, foundation phase of the 311/Constituent Relationship Management (CRM), Electronic Time reporting (MCTime), and related Business Process Review (BPR). Planning activities for the Department of Health and Human Services (HHS) technology modernization of key systems and processes are well underway. The Budgeting module of the ERP system (Hyperion) and additional self service functionality is being implemented now and the workforce component of the Hyperion System has already been completed. The ERP project was implemented to modernize our Core Business Systems to improve the efficiency, effectiveness, and responsiveness of the County Government. The ERP project has provided needed upgrades to the County's financial, procurement, human resource, payroll, and budgeting systems and has streamlined existing business processes. Additional BPR is needed to continue the alignment of County business processes with the new system and related enterprise impacts and to maximize the return on the County's IT investment. The 311/CRM system combined advanced telephony, internet, and computer technology with constituent-focused business processes. Residents are now able to call one number to access County government services. The 311/CRM system includes built-in tracking and accountability features to assure that every call receives a timely response. In addition, the 311/CRM system produces information on County efficiency and effectiveness in responding to requests for information and service requests. This information is used by the Chief Administrative Officer, CountyStat, and operating departments to track and improve performance and customer service. Completion of Phase I of the current MC311 (CRM) included developing an automated service request processing system for the County's Department of Transportation including converting the systems currently used for leaf pick-up, snow removal, tree issues, and street light outages. Phase II of the Technology Modernization project will include modernization of the County's Tax Assessment Billing System. This system is used to annually calculate and bill County residents for County and municipal property taxes, solid waste fees, water quality fees, WSSC fees, and other fees, taxes, and related credits.

COST CHANGE

Increase due to the continuation of staff and contractual resources to complete the remaining project components, provide ongoing system upgrades and modifications, provide the next stage of enterprise wide BPR and improvements, and implement the next phase of project improvements.

JUSTIFICATION

According to a 2004 ranking of major existing technology systems based on their current health and relative need for upgrade or replacement, the County's then current core business systems (ADPICS, FAMIS, BPREP, and HRMS) were ranked as Priority #1, which means "obsolete or vulnerable critical system in immediate risk of failure." These at-risk systems were replaced with a state of the art ERP system which provides a common database supporting financials, procurement, budget, and HR/payroll, and includes system-wide features for security, workflow, and reporting, and up-to-date technology architecture. Montgomery County seeks to set a national standard for accountability and responsiveness in governance and the delivery of services to its residents and businesses.

Tax Assessment Billing System: The current system is over 30 years old, is only internally supported, and is used for the collection of over \$2 billion in revenues annually.

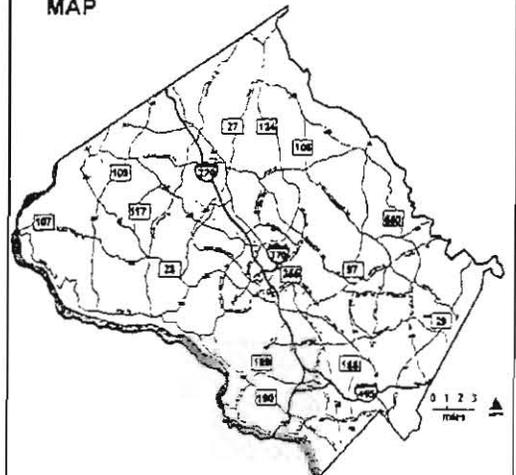
APPROPRIATION AND EXPENDITURE DATA

Date First Appropriation	FY07	(\$000)
First Cost Estimate	FY13	104,791
Current Scope		
Last FY's Cost Estimate		80,979
Appropriation Request	FY13	9,488
Appropriation Request Est.	FY14	7,859
Supplemental Appropriation Request		0
Transfer		0
Cumulative Appropriation		80,979
Expenditures / Encumbrances		70,114
Unencumbered Balance		10,865
Partial Closeout Thru	FY10	0
New Partial Closeout	FY11	0
Total Partial Closeout		0

COORDINATION

MCG efforts are coordinated with applicable agencies during the project planning, requirements gathering, and requests for proposal (RFP) phases.
 Offices of the County Executive
 Office of the County Council
 Department of Finance
 Department of Technology Services
 Office of Procurement
 Office of Human Resources
 Office of Management and Budget
 Department of Health and Human Services
 All MCG Departments and Offices

MAP



Technology Modernization -- MCG -- No. 150701 (continued)

Related plans and studies include the Information Technology Interagency Funding and Budgeting Committee's report of September 30, 2003, and the MCG FY06 IT Budget Overview prepared by DTS.

OTHER

The Technology Modernization - MCG project is intended to serve as an ongoing resource for future IT modernization and related process engineering to the County Government's business systems beyond the currently defined project scope. Future projects may include the following:

CRM - Citizen Relationship Management

Phase II: This initiative will extend the service to municipalities in the County, and other County agencies (e.g. Board of Education, M-NCPPC, Montgomery College). This initiative will proceed based upon interest from these organizations and agreement on funding.

Creation of a Citizen Relationship Management (CRM) program which will develop or convert automated capabilities for all appropriate County services including:

- Case Management
- Events Management
- Field Services
- Grants Management
- Help Desk Solutions
- Point of Sales
- Resident Issue Tracking System
- Work Order Processing System

- ERP - Enterprise Resource Planning
- Business Intelligence/Data Warehouse Development
- Loan Management
- Property Tax Billing and Collection
- Public Access to Contractor Payments
- Upgrade to Oracle E-Business/Kronos/Siebel
- Enhancements to comply with evolving Payment Card Industry (PCI) mandates

FISCAL NOTE

Project funding includes short-term financing for integrator services and software costs. The Operating Budget Impact (OBI) estimates provided above include the costs associated with supporting the Technology Modernization project after implementation including staff returning to their "home departments" from the project office to provide on-going support, knowledge transfer, and to serve as super users, and staff and contractors necessary to support the system, maintenance agreements with software vendors, and costs associated with the "Sustaining Organization" in FY18-18. Establishment of a sustaining organization is needed post implementation to resolve problems, facilitate communication across business processes because of the system integration, produce reports, and re-engineer business processes. The Government Finance Officers Association (GFOA) and Gartner (a premier IT consulting organization) recommend that organizations implementing an ERP also establish an enterprise business support structure (often called a sustaining organization or Enterprise Service Center) after project implementation to maintain, enhance, and focus on: business strategy, functional / technical expertise, software integration, technology, project management and continuous process improvement. Investing in a sustaining organization is key to fully exploiting the capabilities of the new ERP system.

Productivity Improvements achieved through this project include absorbing staffing reductions in the Information Technology, Fiscal, Budget, Administration, Clerical, Human Resource, and Financial Occupational classifications (FY08-12); termination of maintenance agreements for legacy systems; termination of the keypunching contract for the manual timesheet process; and other related savings. Total estimated savings related to this project through FY12 are estimated at over \$36 million including the reduction of over 320 full time equivalent positions in the County Government.

CIP Council Staff Questions February 13, 2012

1. Please provide a Table showing each project included in TechMod, and for each such project, list its total costs to date, recommended investment in FY2013, brief description of what it does/will do and the next major event in the process

See Attachment A & B

2. There is an added \$25m to the TechMod project which was not there in the prior CIP cycle. Please detail the new tasks that are taken on, and distinguish from recommended funding of tasks already in the prior PDF that need additional support in FY13 and beyond

To complete the project \$25m is needed for the following:

While the project was substantially implemented on time, we still experience challenges not uncommon for this type of complex project:

- **Managing significantly different business processes,**
- **Implementing several "first-time" processes,**
- **Correcting unexpected outcomes; and**
- **Entering a transition phase; assuming operational ownership.**

The FY13-18 CIP funding request for is needed to:

1) Complete the following implementations:

Budgeting (Hyperion)

Tax Assessment

Property Management

Enterprise Reporting / Business intelligence

Learning Management

Identity Management

Zyimage Integration

2) Complete the transition of contractor expertise in this very complex system to County staff; and

3) Assume full operational responsibility for managing, configuring and maintaining a new enterprise suite (Oracle e-Business, PeopleSoft, Hyperion and Oracle Business Intelligence Enterprise Edition (OBIEE)).

3. The prior CIP showed expected Productivity Improvements of \$5m and \$15m in FY13 and FY14- forming the foundational argument for funding the TechMod project in the first place. I understand from prior communications that the position of the Executive that these two productivity targets have already been met given the massive cuts in staffing that our County has had to bear in the last 18 months. The figure of \$36m is provided, as well as 320 FTE reductions.

Please detail at least \$5m cuts for FY13 by activity and show the “swim lane” analyses that led to Business Process ReEngineering gains totaling the amount.

Productivity improvements achieved through this project include absorbing staffing reductions in the Information Technology, Fiscal, Budget, Administration, Clerical, Human Resource and Financial occupational classifications (FY08-12); termination of maintenance agreements for legacy systems; termination of the keypunching contract for the manual timesheet process; and other related savings.

The ERP “swim lanes” analysis does not readily lend itself the measurement of savings. A partial list of savings already being realized beyond the staffing reductions and totaling over \$3M is provided in Attachment D.

4. The next stage of MC311 deployment has been discussed, and there is considerable interest within the GO Committee to see expansions of capability in the web interface and the ability of residents to “do it themselves”, whether it is tracking requests or receiving needed information. Is there a “nextGen” MC311 set of tasks within the recommended CIP, and if so what are they? If not, when do you expect to be able to address this enhancement?

The Tech Mod CIP request for FY 13 is focused on completing the ERP and consequently does not include any modifications to the scope of 311. The 311 office continues to look for no-cost or very low-cost opportunities to enhance citizen services.

5. The CAO provided testimony at the start of TechMod detailing some 300 IT systems that would be retired once ERP was made operational. This retirement would have reductions in both contractual services, as well as in-house IT support services (either by DTS or the operating department). Can you provide an update on these reductions by broad system and show dollars saved in equipment, services and FTEs?

See Attachment C

6. If I read the PDF correctly, two new systems are on track to be developed in FY13: Tax Assessment and HHS; please provide any additional “new starts” and a brief paragraph describing these projects (perhaps can be done within Question # 1)

Tax Assessment – Modernization of the County's Tax Assessment System, which is used to annually calculate County and municipal property taxes, solid waste fees, water quality fees WSSC fees, and other fees, taxes and related credits. Completing this component of the ERP is necessary to continue the planned retirement of the legacy Mainframe tax assessment system.

A workgroup has begun planning, identifying requirements and developing timeline for implementation.

HHS – Planning activities are underway for the streamlining and modernization of key systems and process.

7. Please provide a description of the sustaining organization including staffing costs and an organizational chart, and a time you anticipate launching it

The ERP team followed best practices when implementing this complex system. The Government Finance Officers Association (GFOA) and Gartner, two of the leading consulting firms with knowledge of ERP implementations, recommend the creation of an “*Enterprise Service Center*” model for a Sustaining Organization structure following ERP implementation.

Some organizations mistakenly assume that organizational structures that supported older siloed systems can also support integrated enterprise-spanning business applications such as ERP.

However, the “*Enterprise Service Center*” structure forms a critical link between the business functions, the ERP solution, and the information technology and departmental users to:

- Improve business efficiencies;
- Deliver new and improved business solutions; and
- Operate and maintain the integrated ERP solution.
- Complete the transition of contractor expertise in this very complex system to County staff; and assume full operational responsibility for managing, configuring, and maintaining a new enterprise system to include Oracle e-Business, Hyperion, PeopleSoft, Oracle Business Intelligence Enterprise Edition (OBIEE).

See attached Organizational Chart

Response to Council Staff Questions 2/6/12 on Tech Mod CIP
Question 1

Tech Mod Sub-Project	Appropriation thru FY12	Projected Expenditure through June 30, 2012	FY13 Requested Investment	Description of Project:
ERP	\$60,462,400	\$58,399,560	\$5,196,700	Provides for the replacement, upgrade, and implementation of IT initiatives that will ensure ongoing viability of key processes, replace outdated and vulnerable systems, and produce a high return in terms of customer service and accountability to our residents.
MCTime	\$1,992,800	\$2,077,320		MCTime is the County's enterprise wide time and attendance system and was implemented for all County Employees as of August 2010.
Infrastructure	\$6,348,800	\$7,060,900	\$4,290,000	Infrastructure is a combination of human resources, tools, hardware / software and other implementation / operational tasks in support of all projects under Tech Mod.
MC311	\$11,875,000	\$11,875,000		MC311 was established as a one-stop-shop phone number and intake system to meet growing demand for non-emergency requests for assistance. Oracle's Siebel CRM (Customer Relationship Management) and OBIEE (Oracle Business Intelligence Enterprise Edition) are the backbone of the MC311 system utilized by over 1,800 users in more than 30 county departments and divisions.
HHS	\$300,000	\$300,000		Planning activities for modernization of HHS IT system to better support client needs.
TOTAL	\$80,979,000	\$79,712,780	\$9,486,700	

\$1,266,220 carry over to FY13

Attachment B

Questions 1 – Response to Council Staff Questions 2/6/12 on Tech Mod CIP

Please provide a Table showing each project included in TechMod, and for each such project, list its total costs to date, recommended investment in FY2013, brief description of what it does/will do and the next major event in the process

Planned ERP activities/ tasks for FY13 forward:

Oracle Learning Management	Oracle Learning Management is an enterprise learning delivery system that includes: 1) scheduling, 2) registration, 3) learning path development, 4) training history, 5) online learning tools and 6) testing and evaluation.
Enterprise Reporting	Along with the Oracle financials, budgeting, purchasing, and human capital management applications, the County purchased an enterprise business intelligence (BI) data warehouse/reporting tool that maintains summary and detailed information from these modules. The BI tool is designed to address business process questions (e.g., how is my department doing in relation to expenditures against budget) to assist department administrators/managers and senior executive managers in monitoring and decision making activities.
Hyperion Budgeting	Oracle Hyperion is the budget software purchased to develop the County's operating/PSP and capital/CIP budgets. The system will replace OMB's existing budget applications including BPREP, BASIS, FFI, PSP Production System, and the CIP Submission and Analyst Systems.
Tax Assessment	Modernization of the County's Tax Assessment System, which is used to annually calculate County and municipal property taxes, solid waste fees, water quality fees WSSC fees, and other fees, taxes and related credits. Enabling the retirement of the legacy Mainframe tax assessment system.
Property Management	Centralize and integrate Oracle EBS tools for managing property lease/contracts, space management and intelligently manage county real estate portfolio.
Identity Management	A combination of business process and technology used to manage data on IT systems and applications about user. Managed data includes user objects, identity attributes, security entitlements and authentication factors. Enables the provisioning and management of multiple user domains and user access across multiple IT systems.
ZylImage Integration	ZylImage is the County's enterprise image and records management tool. This product will be integrated with Oracle e-Business to leverage the County's enterprise records management platform for documents attached to e-Business transactions.
Infrastructure	Infrastructure is a combination of staff resources, tools, hardware & software. While required for the operation of ERP, it is not limited to ERP or any single enterprise solution. The technology ecosystem required to support these enterprises combines multiple cutting edge technologies/platforms/applications operating with complex interactions and dependencies that require specific hardware, software, and human resources to operate.

Questions 5 – Response to Council Staff Questions 2/6/12 on Tech Mod CIP

The CAO provided testimony at the start of TechMod detailing some 300 IT systems that would be retired once ERP was made operational. This retirement would have reductions in both contractual services, as well as in-house IT support services (either by DTS or the operating department). Can you provide an update on these reductions by broad system and show dollars saved in equipment, services and FTEs?

Potential Retirement of 300 IT systems with the implementation of ERP:

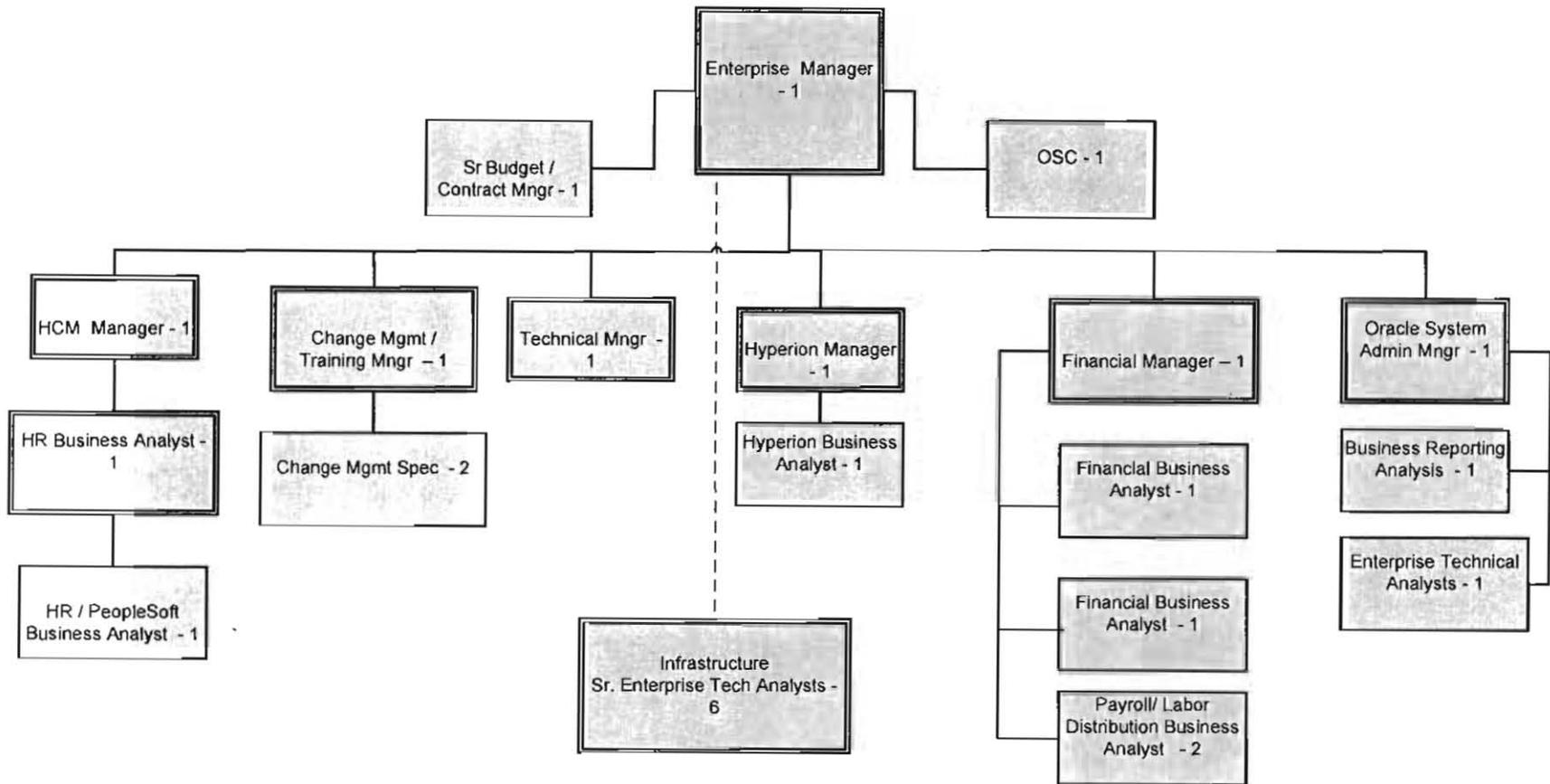
Revised list of approximately 266 IT systems identified for possible retirement with the implementation of ERP. The following is a summary

1 department application was replaced by MCtime.
8 departmental applications were replaced by MC311.
7 Department IT systems are no longer in use. The Department determined these systems were no longer needed.
56 applications retired with the implementation of ERP to date
71 applications are in the process or being considered in future phases.
81 applications identified by department as still needed; in part because these systems have department specific data requirements. As the ERP team gains knowledge and experience with Oracle; we will work with departments to determine if Oracle is the solution.
42 applications identified are unclear if ERP will retire or be replaced. The ERP team will work with departments to determine if Oracle is the solution.
3 applications utilizing ERP and the legacy system for historical data.

At this time we can not identify dollars saved in equipment, services and FTEs. See **Attachment D** for partial list of systems and dollars saved.

Partial Listing of Technology Modernization Productivity Savings and Streamed Line Business Process to date

Eliminate paper timesheet process	\$416,580
Eliminate Merkel Timesheet Key punching contract	\$325,000
Automate of the Retro Pay process	\$ 2,991
Automate of garnishment payments	\$ 3,333
Automate of Requisition Process (electronic signature)	\$ 60,000
Automate of Solicitation Tracking process	\$ 14,000
Eliminate of ADPICS software and maintenance	\$ 70,000
Eliminate of Pre-printed Purchase Orders forms	\$ 1,500
Eliminate paper resumes for County job applications	\$ 12,000
Eliminate annual license fee and support for ePerform	\$260,000
Eliminate maintenance agreements ePAF, UDM, pension and benefit	\$300,000
Eliminate HRMS Integral maintenance agreement	\$175,000
Eliminate PeopleClick applicant tracking contract	\$200,000
Automate Account Code creation process	\$ 5,000
Eliminate Paper Process for Budget Changes	\$ 29,110
Eliminate annual license fees for SAS	\$115,000
Reduce Mainframe After-hours Operations	\$802,810
Reduce Mainframe Disaster Recovery and licensing/maintenance	\$190,000
Implement employee self service web portal	
Implement Budget Controls	
Implement print pay advice statements and W2 forms online	



ERP
 PROPOSED STRUCTURE FY15
 AND FORWARD
 ERP & INFRASTRUCTURE
 (Total Workyears - 26)

Annual Staffing Costs for
 Above:
 FY15 - \$3.6M

19

2/8/12