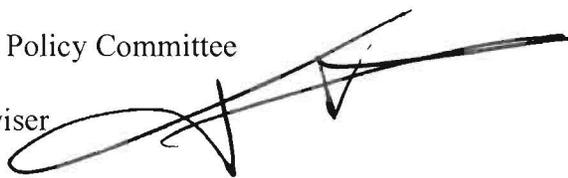


Worksession

**MEMORANDUM**

March 22, 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  
Uma Ahluwalia, Director, HHS  
Joe Beach, Director, Department of Finance  
Jennifer Hughes, Director, Office of Management and Budget (OMB)  
Mary Beck, CIP Manager, OMB  
Dieter Klinger, Acting Chief Information Officer, DTS

**Summary of Staff Recommendations**

1. **Approve** the Executive's recommendation **for \$13,688,000** in FY13 for continuing the modernization of County systems, standing up an Enterprise Service Center structure, and initiating new needed systems in Tax Assessment and HHS key system modernization. This will include the components already approved by the Committee as well as the HHS Process & Technology Modernization (P-TechMod) Initiative.
2. Request that the HHS P-TechMod Initiative be reviewed every six months by the cognizant Committees of the Council, with clear milestones and financial reports provided.
3. 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.

## 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 FY13. Details of the original request are on © 1-2.

The Committee reviewed this request on February 13, 2012 (see packet on © 1-13) and agreed to support it at the requested \$10,753,000 level for FY13. However, the Executive has submitted a modification to the TechMod PDF #150701 (on © 14-15) that increases the total cost of the effort to \$113,621,000 from an initial level of \$104,791,000. This \$8,830,000 increase is due to the decision to request the funding of a “Process and Technology Modernization” Initiative (P-TechMod) within HHS, a project which was already presented to the HHS Committee on March 1, 2012.

The details and budget outline for this element of the TechMod initiative are on © 16-27. HHS Director Ahluwalia, as well as other members of the Executive Branch, will be available to present this effort and address questions. Staff supports this request and, at this early stage of development, understands that many of the questions raised may not have clear answers. In order to allow the process to move forward while permitting the Committee to exercise proper due diligence, staff recommends a six-month review cycle for the P-TechMod project to begin in the Fall of 2012. This review should include financial progress as well as a reengineering review and target setting for the HHS department.

## Proposed questions for Committee

Council staff developed a series of questions to gauge the degree of need and the current status of the projects within the TechMod initiative.

1. Are there **synergies** between the ERP/MC311 side and the HHS side? For example, the Change Management team, the file servers, the database administrators can be shared resources or duplicated across several projects. Would the cost be higher for HHS if we did not have these synergies?

In the IT world, there is a recognition that a sharp distinction needs to be drawn between managing IT resources such as data centers or file servers and managing access to information that may reside there. This argument is vital in understanding the potential for inefficient investments in public safety and health areas, where the existence of policies dealing with access (FBI requirements and HIPAA mandates, for example) may have been inadvertently confused with a requirement to invest in separate physical resources. This becomes important as more agencies migrate information systems to cloud computing.

2. We learned from MC311 that swim lane analysis can lead to real cost savings IF we do a careful front end job. Where are the equivalent “as is” and “to be” analysis and management commitment in the plan? Is the Executive committed to a target for the “efficiencies” spoken of in the new PDF?

3. Are there systems to be retired once TechMod HHS is deployed? What will the impact be on staffing on the IT side? On the operations side? And if we cannot answer these questions now, what is the **process** expected to address them in the future, and the role of the Committee in that process? And the milestones?

The last two points raise the question of changes that may arise. In order to properly manage these changes, the Executive branch may want to consider a Change Roster, where the different types of change possible through the project (no change, cost increase, cost avoidance, and cost reduction) are identified, and proper managers for each such change are identified. In this manner, the change to be brought about can be managed proactively towards a final objective.

4. Are there any state reimbursements foreseen throughout the lifetime of the project to offset development costs? The federal disbursements, of course, come through the state, but there are always ways to leverage grants and external funding in general – something that HHS has already done admirably in other projects.

Worksession

**M E M O R A N D U M**

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	104,736	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
<b>Total</b>	<b>104,791</b>	<b>60,805</b>	<b>18,907</b>	<b>25,079</b>	<b>10,753</b>	<b>7,859</b>	<b>6,467</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

### FUNDING SCHEDULE (\$000)

	Total	FY11	FY12	Total 6 Years	FY13	FY14	FY15	FY16	FY17	FY18	Beyond 6 Years
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
<b>Total</b>	<b>104,791</b>	<b>60,805</b>	<b>18,907</b>	<b>25,079</b>	<b>10,753</b>	<b>7,859</b>	<b>6,467</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

### 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	
<b>Net Impact</b>				<b>30,004</b>	<b>192</b>	<b>1,982</b>	<b>2,108</b>	<b>8,574</b>	<b>8,574</b>	<b>8,574</b>	

#### 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.

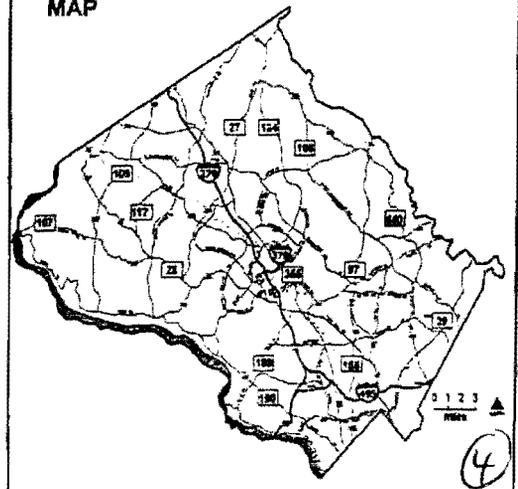
Tax Assessment Billing System: The current system is over 30 years old, is only internally supported, and is used for the collection of over \$2 billion in revenues annually.

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	9,486
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 FY16-18. 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**

**ZylImage 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.

6  
3

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  
④

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.
<b>TOTAL</b>	<b>\$80,979,000</b>	<b>\$79,712,780</b>	<b>\$9,486,700</b>	

\$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:**

<b>Oracle Learning Management</b>	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.
<b>Enterprise Reporting</b>	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.
<b>Hyperion Budgeting</b>	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.
<b>Tax Assessment</b>	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.
<b>Property Management</b>	Centralize and integrate Oracle EBS tools for managing property lease/contracts, space management and intelligently manage county real estate portfolio.
<b>Identity Management</b>	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.
<b>ZylImage Integration</b>	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.
<b>Infrastructure</b>	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.

**Attachment C**

**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:**

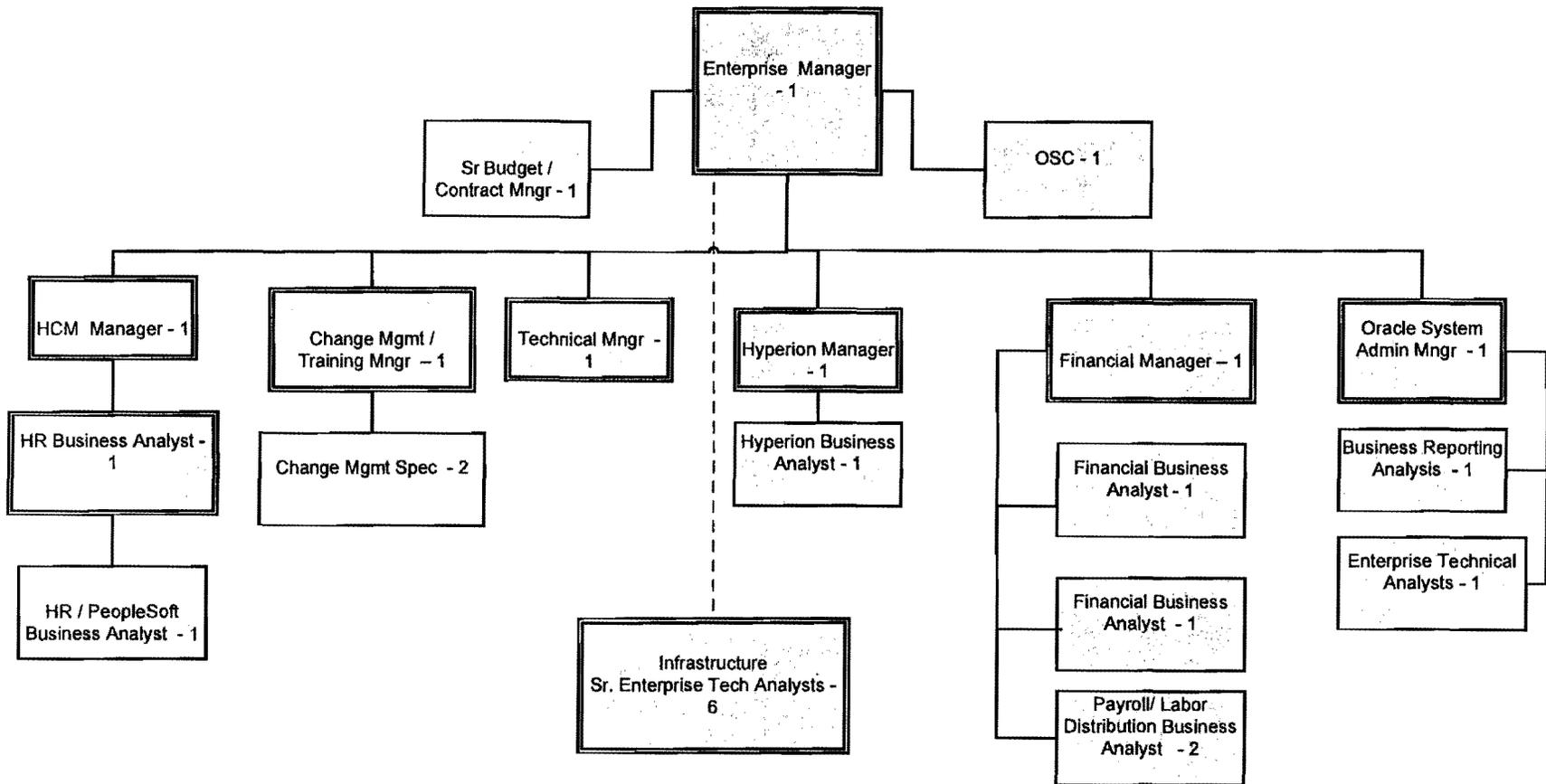
Revised list of approximately 266 IT systems identified for possible retirement with the implementation of ERP. The following is a summary

<b>1 department application</b> was replaced by Mctime.
<b>8 departmental applications</b> were replaced by MC311.
<b>7 Department IT systems</b> are no longer in use. The Department determined these systems were no longer needed.
<b>56 applications retired</b> with the implementation of ERP to date
<b>71 applications</b> are in the process or being considered in future phases.
<b>81 applications</b> 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.
<b>42 applications</b> identified are unclear if ERP will retire or be replaced. The ERP team will work with departments to determine if Oracle is the solution.
<b>3 applications</b> 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

① ②

2/8/12

# 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

March 14, 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	113,565	60,805	18,851	33,909	13,688	11,104	8,667	450	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
<b>Total</b>	<b>113,621</b>	<b>60,805</b>	<b>18,907</b>	<b>33,909</b>	<b>13,688</b>	<b>11,104</b>	<b>8,667</b>	<b>450</b>	<b>0</b>	<b>0</b>	<b>0</b>

### FUNDING SCHEDULE (\$000)

Current Revenue: General	65,140	37,549	4,040	23,551	8,955	7,961	6,635	0	0	0	0
Federal Aid	1,059	0	0	1,059	352	389	264	54	0	0	0
Land Sale	2,634	2,634	0	0	0	0	0	0	0	0	0
Short-Term Financing	44,788	20,622	14,867	9,299	4,381	2,754	1,768	396	0	0	0
<b>Total</b>	<b>113,621</b>	<b>60,805</b>	<b>18,907</b>	<b>33,909</b>	<b>13,688</b>	<b>11,104</b>	<b>8,667</b>	<b>450</b>	<b>0</b>	<b>0</b>	<b>0</b>

### 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
<b>Net Impact</b>				<b>30,004</b>	<b>192</b>	<b>1,982</b>	<b>2,108</b>	<b>8,574</b>	<b>8,574</b>	<b>8,574</b>

#### 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. The HHS technology modernization involves the product identification and modification and implementation of an enterprise Health and Human Services system that includes the following components: intake and eligibility; common client index; document imaging and electronic records; case management and billing capabilities for health and human services; a portal for legacy and enterprise systems; a data warehouse; and self-service kiosks for use by clients and partner agencies.

#### 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 including implementation of the Health and Human Services system.

#### 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

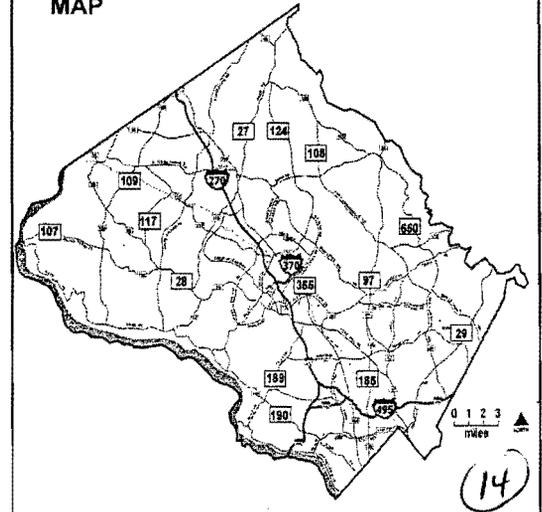
#### APPROPRIATION AND EXPENDITURE DATA

Date First Appropriation	FY07	(\$000)
First Cost Estimate		
Current Scope	FY13	113,621
Last FY's Cost Estimate		80,979
Appropriation Request	FY13	12,421
Appropriation Request Est.	FY14	11,104
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  
 Maryland Department of Human Resources  
 Maryland Department of Health and Mental Hygiene

#### MAP



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

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.

Health and Human Services: This technology modernization effort will ensure ongoing viability of key processes, replace outdated and vulnerable systems, create staff operating efficiencies and produce a high return in terms of customer service and accountability to our residents.

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 FY16-18. 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.



# Process & Technology Modernization Initiative



March 26, 2012  
Uma S. Ahluwalia, Director



# Business Needs

- Reliance upon disparate data systems including a number of systems owned, operated and maintained by other government agencies.
- Data from these systems is often duplicated and does not correlate to or integrate with county based systems.
- Utilize 143 tools and systems. These tools are not integrated and workers are unable to see a holistic view of a single client across the various programs and systems.
- Information is provided and entered multiple times.
- Records are primarily paper-based.
- Uses non-profits and contract agencies to deliver services. Must integrate the business, data, and security needs of using external entities.
- The affordable care act will introduce new business process, systems, and changes that must be accommodated.



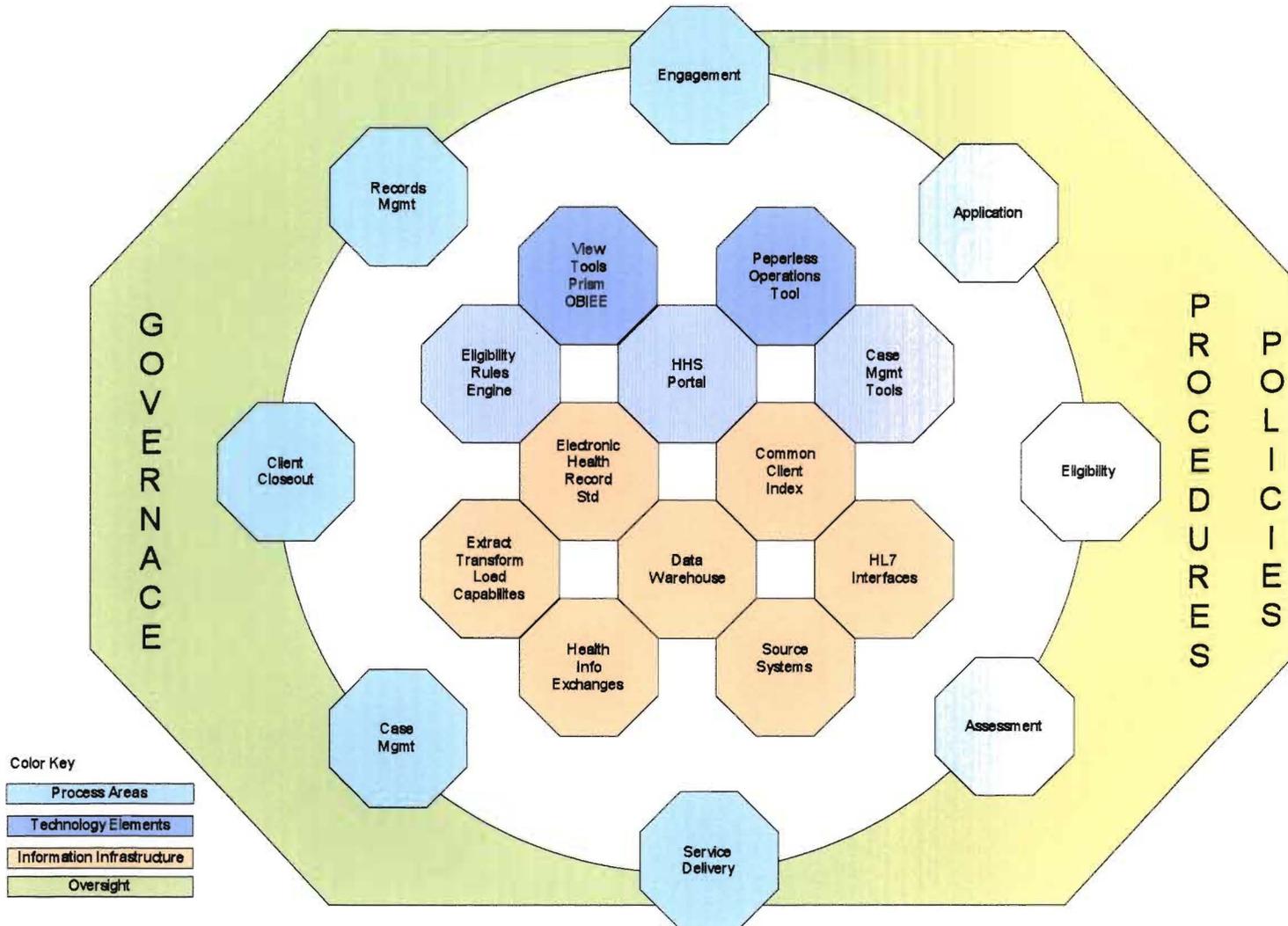
# What is Process and Technology Modernization

- Process and Technology Modernization (PTM) is a multifaceted, multi-year initiative focusing on re-engineering core business processes within the Department and incorporating state of the art technology and methodologies to support redesigned workflows.



# Process and Technology Modernization (P<sub>TM</sub>) Overall Solution View

8/31/2011



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## Work to Date

- Developed and revised business processes and policies including:
  - Universal Screening Tool
  - Face Sheet
  - Confidentiality Policy
  - Scheduling Tool
  - Customer Service Protocols
- Developed an integrated Practice Model including protocols for integrated case management of clients
- Completed Vision mapping
- Evaluated the current IT environment
- Completed preliminary HIPAA assessment



## Work to Date

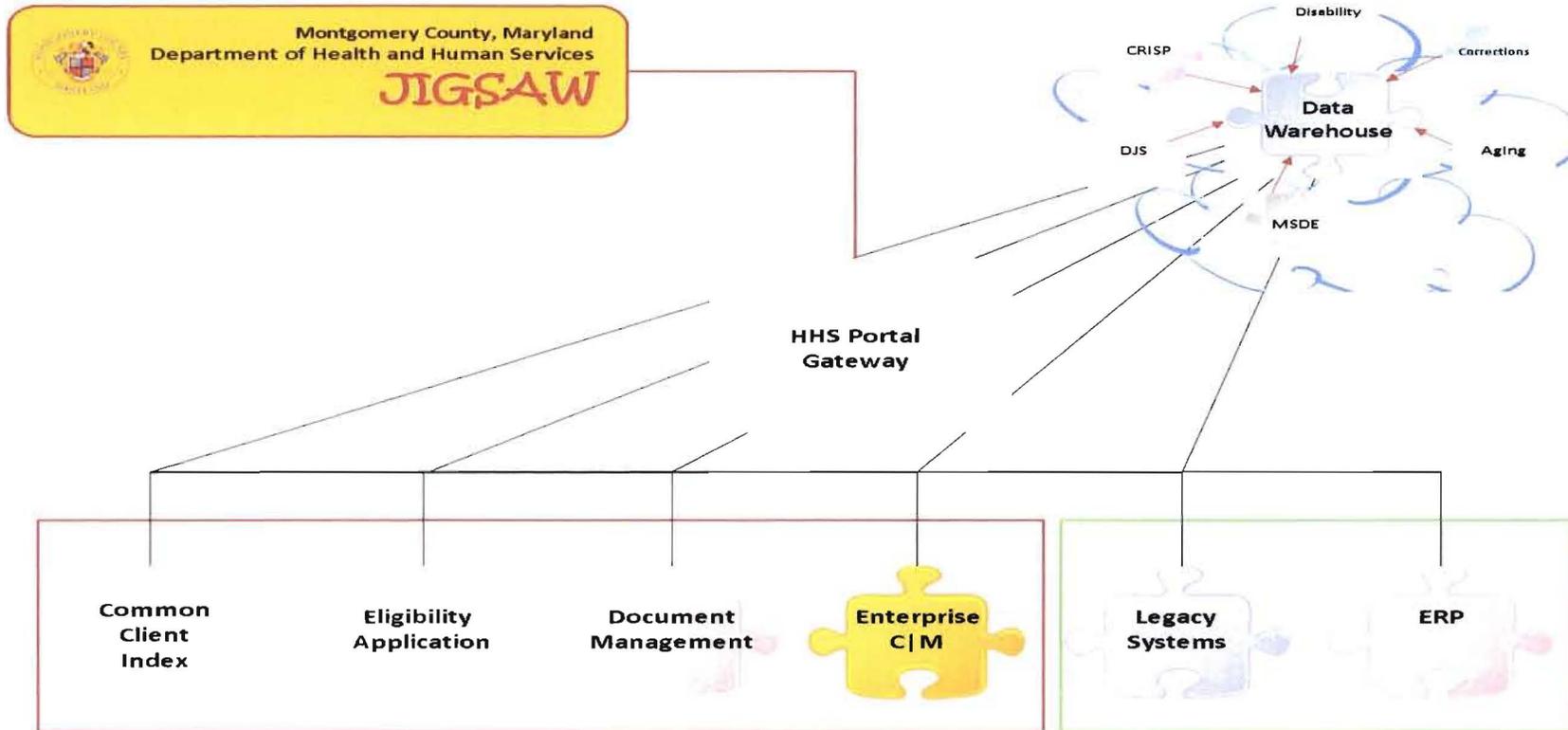
- Completed a solicitation for a business process re-engineering effort. Work will commence in February 2012
- Contracted for a Program Manager
- Completed a proof of concept for common client index
- Completed a proof of concept for eligibility
- Worked with the Department of Human Resources and the Department of Mental Hygiene to evaluate ways to leverage state resources and investments



# Current Activities

- Defining how the operating model will be affected by the Affordable Care Act and develop integrated business process
- Conducting a Business Process Re-engineering effort
- Completing a review of technology solutions. Solution will include the following functions:
- Defining the technical solution and architecture
  - Process engineering
  - Common Client Index
  - HHS Portal
  - Universal Eligibility engine
  - Data Warehouse
  - Case Management
  - Document Imaging

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## Upcoming Activities

- Acquire the necessary contractor support, software, and hardware to roll-out the selected solution
- Initiate construction and implementation



# Cost to Date

Hardware/Software	Contractual Support	Contractual and Business Models
\$ 369,367	\$ 480,800	\$ 964,475
<b>Total</b>		<b>\$ 1,814,642</b>



# Total Funding Needed

Module	FY 13	FY 14	FY 15	FY 16	Total
Project Mgmt	400,000	400,000	475,000		1,275,000
CCI	455,000	225,000	175,000		855,000
Eligibility	505,000	415,000	190,000		1,110,000
Digitalizing	875,000	720,000	555,000		2,150,000
Case Mgmt	0	600,000	225,000	195,000	1,020,000
Gateway	545,000	545,000	270,000		1,360,000
Data Warehouse	155,000	25,000	55,000		235,000
Other		315,000	255,000	255,000	825,000
Total	2,935,000	3,245,000	2,200,000	450,000	8,830,000



# Total Funding by Source

Source	FY 13	FY 14	FY 15	FY 16	Total
Current Revenue	352,000	352,000	418,000		1,122,000
Short Term Financing	2,230,800	2,503,600	1,518,000	396,000	6,648,400
Federal Reimb.	352,200	389,400	264,000	54,000	1,059,600
Total	2,935,000	3,245,000	2,200,000	450,000	8,830,000



# Benefits

- Smooth consistent processes across department
- Reduced administrative effort to serve clients
- Data requested as needed and only once
- Cross systems view of client activity
- Automated eligibility
- Paperless operations
- Integration and interoperability with State Systems
- Ancillary systems are no longer needed
- Reporting data & tools
- 42 CFR 170 EHR compliant