

MEMORANDUM

April 13, 2012

TO: Government Operations and Fiscal Policy Committee  
FROM: Dr. Costis Toregas, Council IT Adviser  
SUBJECT: NDA: Desktop Computer Modernization

Expected to attend:

Dieter Klinger, acting CIO  
Naeem Mia, OMB

Staff recommendation:

1. Staff recommends the **adoption of the Executive's recommended budget for Desktop Computer Modernization for \$5,315,030.**
2. The tablet pilot is just now beginning to produce results; staff recommends a Committee session in the July timeframe to review final statistics, lessons learned, and a plan for moving forward with tablets in the workforce. At the same time, Total Cost of Ownership figures for laptop and desktop computers can be reviewed and replacement cycles validated.

**Discussion**

The Desktop Computer Modernization program (DCM) is part of the Non-Departmental Accounts budget; the FY13 recommendations for DCM are on © 1-2.

After several years of cutback budgets, the average age of desktop and laptop computers increased to the point where concern about the efficiency and even cybersafety of the equipment was in question. In FY12, a significant investment was made in a rejuvenated DCM program, and the results are impressive. In response to staff questions, © 3-8 provide a description of the average age and other characteristics of IT equipment, as well as its distribution by department.

In FY13, the Executive recommends continuing the aggressive replacement program and bringing in 2,200 total new units on top of the 2,000 already replaced in FY12. The results of these two years of replacements would be to bring the number of machines less than 3 years of age to 51% from this year's 41%.

The DCM program is outsourced to a private firm, so their productivity and efficiency numbers should be readily available. Since the argument for replacing equipment on a routinized cycle is intended to reduce the so-called "Total Cost of Ownership" (TCO), the figures for TCO of various types of equipment should be periodically reviewed and contrasted, both with industry standards and other jurisdictions, and estimates should be drawn as to the frequency of replacement. Since such figures are not available currently, it is suggested that a Committee study session be held in summer 2012, where TCO figures can be reviewed to validate the DCM program.

In addition to the replacement program last year, DTS was asked to undertake a fully funded tablet pilot program that would explore the use of tablets in a variety of work settings. Intended to differentiate between laptop replacements and true tablet usage, the pilot is already beginning to provide good results in several MCG departments as well as amongst a small number of Council staff. Circles 5-6 discusses results to date.

<b>FY13 Recommended Changes</b>	<b>Expenditures</b>	<b>FTEs</b>
<b>FY12 Approved</b>	<b>617,510</b>	<b>1.00</b>
Add: Technical Adjustment to Increase the Personnel Costs	2,360	0.00
Add: Technical Adjustment to offset Increase in Personnel Costs	-2,360	0.00
Decrease Cost: Group Insurance Adjustment	-2,470	0.00
Eliminate: Reduction of \$50,000 for Management Audit	-50,000	0.00
<b>FY13 CE Recommended</b>	<b>565,040</b>	<b>1.00</b>

### **Consolidated Retiree Health Benefits Trust (MCPS)**

This NDA provides consolidated funding for Montgomery County Public Schools' contribution to the Retiree Health Benefits Trust.

<b>FY13 Recommended Changes</b>	<b>Expenditures</b>	<b>FTEs</b>
<b>FY12 Approved</b>	<b>20,000,000</b>	<b>0.00</b>
Increase Cost: Additional OPEB contribution	41,931,000	0.00
<b>FY13 CE Recommended</b>	<b>61,931,000</b>	<b>0.00</b>

### **Consolidated Retiree Health Benefits Trust (Montgomery College)**

This NDA provides consolidated funding for Montgomery College's contribution to the Retiree Health Benefits Trust.

<b>FY13 Recommended Changes</b>	<b>Expenditures</b>	<b>FTEs</b>
<b>FY12 Approved</b>	<b>1,000,000</b>	<b>0.00</b>
Increase Cost: Additional OPEB contribution	873,000	0.00
<b>FY13 CE Recommended</b>	<b>1,873,000</b>	<b>0.00</b>

### **Council of Governments**

The Metropolitan Washington Council of Governments (COG) is a voluntary association of major local governments in the Washington Metropolitan Area. COG seeks to provide regional answers to, and coordination of, area-wide issues such as air and water pollution, day care, housing, crime, water supply, land use, and transportation.

This NDA reflects Montgomery County's share of the organization's operation plus special COG initiatives. Additionally, the contribution supports the Cooperative Purchasing Program; the Anacostia Restoration Fund; the Regional Environmental Fund; the Airport Noise Abatement Program; and a membership fee for participation on a regional housing committee.

As in previous years, the Washington Suburban Sanitary Commission will provide Montgomery County's contribution to support the Water Resources Management Planning Program and the Blue Plains Users Program.

<b>FY13 Recommended Changes</b>	<b>Expenditures</b>	<b>FTEs</b>
<b>FY12 Approved</b>	<b>742,940</b>	<b>0.00</b>
Increase Cost: Membership dues assessment	27,560	0.00
<b>FY13 CE Recommended</b>	<b>770,500</b>	<b>0.00</b>

### **County Associations**

This NDA funds Montgomery County membership dues to the National Association of Counties (NACo) and the Maryland Association of Counties (MACo).

<b>FY13 Recommended Changes</b>	<b>Expenditures</b>	<b>FTEs</b>
<b>FY12 Approved</b>	<b>72,710</b>	<b>0.00</b>
<b>FY13 CE Recommended</b>	<b>72,710</b>	<b>0.00</b>

### **Desktop Computer Modernization**

The Desktop Computer Modernization (DCM) program is based on a best practices approach to maintaining a modern and cost effective computing environment in the County. The program reduces the Total Cost of Ownership (TCO) of personal computers (PCs) and laptops through standardization, asset management, and maintenance services. DCM includes the centralized management, support, and maintenance of PCs and targets the annual replacement of approximately one-fourth of managed PCs. The program also includes PC-related training and software. This NDA includes funding for Help Desk support, management,

maintenance, and replacement of PCs.

For FY12, the County Executive recommends resuming the scheduled replacement of desktop computers. Currently 45% of County Government PC's, laptops and workstations are 4 years old or older. 18% are 5 years old or older. These units are at the end of their useful life and catastrophic device failures will increase, with visible negative impacts to both county employees and residents.

Further, Microsoft's Windows XP operating system is at the end of its lifecycle and will not be supported beyond April, 2014. Windows 7, Microsoft's new operating system, requires more robust hardware to operate correctly. Old systems will not work properly with the newest systems (without significant support requirements, expanding support resources) across the network resulting in degraded interoperability and communications. Risk of computer security incidents and compromise will increase, without proactive remediation and modernization. Systems operating Windows XP will not receive any security or product updates when support ends. This makes them highly vulnerable to malicious attacks and presents a security risk to the organization.

<b>FY13 Recommended Changes</b>	<b>Expenditures</b>	<b>FTEs</b>
<b>FY12 Approved</b>	<b>4,815,470</b>	<b>0.00</b>
Increase Cost: DCM - Windows 7 Pro Enterprise licenses	375,000	0.00
Shift: Help Desk - Desk Side Support from Departments	119,560	0.00
Increase Cost: DCM-Software Maintenance - Shavlik Patch Software	3,000	0.00
Increase Cost: DCM- Software Maintenance - Bomgar	2,000	0.00
<b>FY13 CE Recommended</b>	<b>5,315,030</b>	<b>0.00</b>

### **Future Federal/State/Other Grants**

This NDA enables the County to implement new grant-funded programs up to \$200,000 each and provides funds for grant continuations and enhancements without having to process individual supplemental appropriations through the County Council. Upon approval by the County Executive, funds in this program are transferred to the receiving department's grant account.

<b>FY13 Recommended Changes</b>	<b>Expenditures</b>	<b>FTEs</b>
<b>FY12 Approved</b>	<b>20,000,000</b>	<b>0.00</b>
<b>FY13 CE Recommended</b>	<b>20,000,000</b>	<b>0.00</b>

### **Grants to Municipalities in Lieu of Shares Tax**

This NDA funds payments required in accordance with State law. The 1968 Session of the General Assembly revised the tax structure to include a County income tax. As part of this restructuring, the shared tax on banks and financial institutions was eliminated, and a provision was adopted which requires counties to pay annually to municipalities the amount (\$28,020) which had been received by the municipalities in FY68.

<b>FY13 Recommended Changes</b>	<b>Expenditures</b>	<b>FTEs</b>
<b>FY12 Approved</b>	<b>28,020</b>	<b>0.00</b>
<b>FY13 CE Recommended</b>	<b>28,020</b>	<b>0.00</b>

### **Group Insurance for Retirees**

Group insurance is provided to an estimated 4,967 retired County employees and survivors, as well as retirees of participating outside agencies. Employees hired before January 1, 1987, are eligible upon retirement to pay 20 percent of the premium for health and life insurance for the same number of years (after retirement) that they were eligible to participate in the group insurance plan as an active employee. The County government pays the remaining 80 percent of the premium. Thereafter, these retirees pay 100 percent of the premium. Employees hired before January 1, 1987, are also offered the option at retirement to convert from the 20/80 arrangement to a lifetime cost sharing option.

Employees hired after January 1, 1987, are eligible upon retirement for a lifetime cost sharing option under which the County pays 70 percent of the premium and the retiree pays 30 percent of the premium for life for retirees who were eligible to participate in the County group insurance plan for 15 or more years as active employees. Minimum participation eligibility of five years as an active employee is necessary to be eligible for the lifetime plan. The County will pay 50 percent of the premium for retirees with five years of participation as an active employee. The County contribution to the payment of the premium increases by two percent for each additional year of participation up to the 70 percent maximum.

On March 5, 2002, the County Council approved a one-time opportunity for retirees still under the 20/80 arrangement with an expiration date to elect the lifetime cost sharing arrangement. The new percentage paid by the County for those electing this arrangement ranges from 50 percent to 68 percent, depending upon years of active eligibility under the plan and years since



**DEPARTMENT OF TECHNOLOGY SERVICES**

*Isiah Leggett*  
*County Executive*

*Dieter Klinger*  
*Acting Chief Information Officer*

**MEMORANDUM**

**April 10, 2012**

**TO: Dr. Costis Toregas**  
**Council IT Advisor**

**FROM: Dieter Klinger, Acting Chief Information Officer**  
**Department of Technology Services**

*Dieter Klinger*

**SUBJECT: Government Operations & Fiscal Policy Committee – FY13 DTS and DCM**  
**Operating Budget Work session**

Pursuant to the discussion on April 4, 2012, relative to questions about the proposed budgets for DTS and DCM for the upcoming Government Operations Committee meeting on Monday, April 16, 2012, the Executive Branch is pleased to provide the detailed information to be included in the packet and discussed at the session.

If there are any additional questions or clarification required, please don't hesitate to ask.

cc: Naeem Mia, Office of Management and Budget  
Alex Espinosa, Office of Management and Budget  
Helen Ni, Department of Technology Services

**DCM**

For FY13, the County Executive recommends continuing the scheduled replacement of desktop computers. At the start of FY13 44% of County Government PC's and laptops will be 4 years old or older, and 15% will be 5 years old or older. These units are at the end of their useful life and catastrophic device failures will increase, with visible negative impacts to both county employees and residents.

Further, Microsoft's Windows XP operating system is at the end of its lifecycle and will not be supported beyond April, 2014. Windows 7, Microsoft's current operating system, requires robust hardware to operate correctly. Risk of computer security incidents and compromise will increase, without proactive remediation and modernization. Systems operating Windows XP will not receive any security or product updates when support ends. This makes them highly vulnerable to malicious attacks and presents a security risk to the entire organization as a vulnerability to one system can spread to other systems once inside the County.

2,000 PCs and laptops are being replaced in FY12 and 2,200 replacements are planned in FY13. This includes the move to the Microsoft Windows 7 operating system. A distribution of PCs and laptops by age projected for the start of FY13 and start of FY14 reflecting planned replacements is provided below.

**Projected Count of PCs by Type and Age at start of FY13\***

	Age (Years)						Total
	0-1	1-2	2-3	3-4	4-5	Over 5	
<b>PCs</b>	1,994	137	1,121	1,132	2,326	1,124	7,834
<b>Laptops</b>	204	89	99	252	333	219	1,196
<b>Total</b>	2,198	226	1,220	1,384	2,659	1,343	9,030
	24%	3%	14%	15%	29%	15%	100%

\*after 2000 replacements in FY12

**Projected Count of PCs by Type and Age at start of FY14\***

	Age (Years)						Total
	0-1	1-2	2-3	3-4	4-5	Over 5	
<b>PCs</b>	1,924	1,994	137	1,121	1,132	1,526	7,834
<b>Laptops</b>	276	204	89	99	252	276	1,196
<b>Total</b>	2,200	2,198	226	1,220	1,384	1,802	9,030
	24%	24%	3%	14%	15%	20%	100%

\*after 2200 replacements in FY13

**Projected distribution of PCs by Department and Age at start of FY13\***

	PCs under 4 years old	PCs 4 Years and older		PCs under 4 years old	PCs 4 Years and older
BIT	50%	50%	FIN	61%	39%
BOE	85%	15%	FRS	53%	47%
CCL	85%	15%	HHS	76%	24%
CCT	57%	43%	HRC	69%	31%
CEC	31%	69%	IGR	33%	67%
CEX	78%	23%	LIB	50%	50%
CUPF	35%	65%	OCA	25%	75%
DED	34%	66%	OCP	84%	16%
DEP	59%	41%	OHR	3%	97%
DGS	50%	50%	OMB	24%	76%
DHCA	35%	65%	PIO	80%	20%
DLC	19%	81%	POL	47%	53%
DOCR	61%	39%	REC	61%	39%
DOT	56%	44%	SAO	92%	8%
DPS	12%	88%	SHF	23%	77%
DTS	63%	37%	Other	41%	59%

Although Enterprise and Public safety servers are not always replaced on a one for one basis like PCs and laptops, they are a critical component of the infrastructure and also have finite life spans. Therefore servers also require ongoing replacements. The following is a distribution of physical servers by current age.

**Current distribution of Enterprise and Public Safety servers by Age**

	Count	Percent
1-2 years	29	16%
3-4 years	42	23%
5-7 years	60	33%
Over 7 Years	53	29%

The Mobile Computing pilot project currently underway and scheduled to conclude at the end of FY12 has already provided some significant insights, knowledge and experience for the enterprise. One of the most important early findings is that tablets should not be expected to replace laptops or PCs for mainstream business purposes. Rather, they are an additional device to increase mobile productivity. This does not preclude the alternative for certain niche business functions such as field inspections, etc. to be able to move from laptops to tablets as their primary computing device.

Much work has been done in the areas of mobile device support and management. DTS initiated "kiosk" days to promote and make support for mobile devices more accessible to employees. This has included support for both County provided and personal devices. The kiosks have been very well attended and have generated overwhelmingly positive feedback.

DTS and the County Attorney's office have also created user agreements and guidelines for the use of the mobile devices. This has illuminated the need to investigate similar agreements for personal devices used at work. Finally, DTS has enhanced its help desk service to provide support for mobile devices.

DTS is also creating a Mobile Support Web Site to enhance support of mobile devices in the County environment. The site provides user tutorials for mobile devices including informational videos, helpful links, user forums etc.

The pilot and support efforts have made it clear that the old "one PC or laptop assigned to a person" based support model is no longer effective. DTS has started exploring alternatives to move towards a new support model, perhaps "one person with multiple devices"

## DTS

### **Security Strategy**

DTS continues to be innovative and proactive in developing Information Technology (IT) security strategies and maintaining / improving the County's IT security infrastructure, policies and processes. The County's security approach is documented in the **Enterprise Technology Strategic Plan** and the **Enterprise Technical Architecture**.

DTS has been actively working to address the increase of mobile devices, both County provided and personal, that are connecting to the County IT infrastructure.

Given the consumer nature of most devices, the fast pace of change in the devices, and the lack of mature enterprise management tools, connection to the County IT infrastructure is limited to two paths. First, the Virtual Private Network connections already available for PCs and laptops located outside County facilities are now also available to tablets and smart phones. Second, connections to the County's e-mail system are allowed, with the County's infrastructure automatically enforcing timeout, password, and remote wipe security features on the mobile devices.

The mobility support site being developed as part of the Tablet initiative will have a collaborative component for employees to document how they utilize their personal device to accomplish County business. This will provide information DTS to better understanding potential risks of these technologies and develop approaches to maximize the security for these devices.

The current initiative to increase Wi-Fi access in County buildings for mobile devices will also enable enforcement of better security through the planned containment of unauthorized open wireless access points that are inside the County's network. The current tablet pilot (detailed in the DCM response) is contributing to the efforts establish user guidelines and user agreements. DTS has also started to investigate Mobile Device Management solutions. This market is very new and volatile and DTS will be following advancements to determine when solutions become mature and advantageous for the enterprise.

Another security focus area is developing an enterprise identity management approach for use of Montgomery County IT systems, including employees, volunteers, business partners, and constituents. DTS is actively working on a project in concert with Tech Mod to implement an

enterprise identity management solution that will be rolled out in phases over the next year. The identity management solution will allow the County to collaborate with anyone while maintaining strict controls over its sensitive data.

Finally, DTS is looking to cloud solutions as a component to address mobility and security challenges that are emerging. DTS has piloted and has been using cloud services for some time. Some current cloud pilots are described in the next response.

While it is a never ending battle against security attacks and improvements can and should be made, the County's IT architecture and IT project processes have provided the County protection against these attacks. In summary, the architecture provides for multiple layers of security and protection. The IT project review process has an explicit security evaluation and scoring component. The IT review process also includes a recommendation to departments to consider software as a service (SaaS) cloud alternatives. Security assessments are performed on new and existing systems.

Two security focus areas for FY13 will be updating and conducting the County's computer based security awareness training, and developing policies for personal computing devices used at work, also known as bring your own device (BYOD) to protect the County's information resources.

DTS is also continuing to streamline security operations through automation and system integration, including the implementation of a new incident tracking system to track security incidents. This incident tracking system will integrate and automate information from multiple security systems.

### **Cloud and Open Government Data Initiatives**

DTS is engaged in several cloud and open data initiatives that we expect will have significant potential future impact on County business operations and IT infrastructure.

Recently initiated, the Open Government Data pilot will provide constituents access to a broad range of data in a format that enables constituents to display and analyze data in ways never before possible. The data will also enable private sector development and commercialization of Apps, only limited by the creativity of County citizens.

The project is well underway with an approved project charter and data governance process. The initial data sets have been published and soft launch of the site started March 2012. The data governance process, modeled after other successful open data projects, will ensure a smooth and efficient process, including the appropriate management and legal reviews to get data published. To date, eight (8) data sets have been published, two (2) data sets are in process, and five (5) candidate data sets have been identified. We expect to make a public announcement of the site within the next 2 months.

The plan for FY13 includes reaching out to County departments to identify data sets and build the processes for publishing the data on a sustainable basis. DTS plans to leverage the existing Enterprise Services Bus (ESB) to automate the data publishing process wherever possible. The goal is have at least 60 datasets published by the end of FY13.

DTS is also working on two cloud services pilots. One that has been ongoing on limited scale for an extended period is a Google Apps pilot. The other that was initiated recently is a Microsoft Office 365 pilot. Both pilots are intended to evaluate cloud based e-mail, calendaring, basic office tools and collaboration, to determine how they can fit into the existing enterprise and how they can be leveraged and managed to meet emerging business needs.

Google Apps has been used by select DTS staff for an extended period for both e-mail and office productivity. Over past several months, the County web re-design project has successfully used this platform for collaboration among the participants that include both County and non-County personnel. A wider County pilot is planned as technical challenges are resolved that currently prevent seamless interaction with other County users.

Work on a Microsoft Office 365 pilot started last fall. DTS has been working directly with Microsoft to establish the infrastructure to ensure seamless interaction with other County users. Departments will be invited to participate in the pilot when DTS has completed integration and testing of the cloud solution.

The goal of the two cloud services pilots is to collect enough information in time to plan and budget for possible production deployment in FY14.