GO Committee #2
June 17, 2013

Worksession

MEMORANDUM

June 13, 2013

TO: Government Operations and Fiscal Policy Committee

FROM: Dr. Costis Toregas, Council IT Adviser CT SM

SUBJECT: Interagency Technology Policy and Coordination Committee (ITPCC) review

The following are expected to attend:

Sherwin Collette, MCPS Chief Technology Officer and Chair, Chief Information Officer Subcommittee, ITPCC
Sonny Segal, Chief Information Officer, DTS
Mitsi Herrera, Cable and Broadband Administrator, DTS
John Castner, DTS
Representatives from Office of Management and Budget
Gary Thomas, Manager, ITPCC

Members of the ITPCC and ITPCC CIO Subcommittee may also be available for detailed questions.

Staff Recommendations:
1. Review current ARRA grant implementation status and progress made in FiberNet expansion plans.
2. Approve the M-NCPPC proposed effort titled "GIS Data Visualization Project" to be funded from the Interagency Technology Fund (ITF) designated reserve.
3. Identify new areas of interagency collaboration that are of interest to the GO Committee for future technology project development by the ITPCC.
4. Review the process of innovation support through Interagency Technology Fund (ITF) appropriations.

Discussion

The Committee has requested periodic updates from the ITPCC so that progress against promised outcomes can be reviewed and new ideas regarding interagency coordination discussed. This is such an update, focused on four specific items:

1. FiberNet progress using ARRA grant

FiberNet infrastructure efforts recently received a positive boost when the County was awarded a major ARRA grant together with several other Maryland counties. This grant, coordinated and managed by Howard County, has enabled the County to plan for the expansion of the network infrastructure in needed areas and to upgrade equipment.

This grant expires this summer; grant moneys that are not spent will be lost to the County. The Department of Technology Services has provided a status report on the expansion to date and a best estimate of the amount of work yet unfulfilled under this arrangement (see © 13-15).

2. New ITPCC GIS project sponsored by M-NCPPC

The ITPCC has encouraged the development of new interagency projects that can help deploy needed services in an efficient, interagency manner. In the FY14 budget process, M-NCPPC proposed the creation of a GIS Data Visualization project (© 1-12), which was approved by the CIO Subcommittee and the ITPCC principals. Funding for this project in the amount of $70,000 has been designated in the 2014 Cable Plan and transferred to the Interagency Technology Fund (ITF) designated reserve established for the purpose of funding ITPCC projects.

M-NCPPC is expected to transmit shortly a request for a special appropriation for this project, which the Council will then consider. The GO Committee can expedite this process by reconfirming its support for the project.

3. Discussing the pipeline of future projects and how the Committee can contribute

For the last 4 years, while the County's budget was straining at the seams given the "Great Recession" which decimated revenue streams, funding of ITPCC projects was totally eliminated. The $2.2m remaining in the ITF in March 2009 was transferred to help close the County's budget gap for FY10 and not appropriated to ITPCC project priorities as originally intended.

For the first time this year, the Council agreed to transfer $70,000 from the Cable Fund to the ITF in order to fund the first new ITPCC project to be considered (see item #2 above). This reconstitution of the ITF highlights the Council's interest in seeing new projects undertaken through the ITPCC. The ITPCC CIO Subcommittee has agreed to review new ideas and develop proposals for new projects to be undertaken in future years.

This worksession will enable the GO Committee to hear early ideas of project strategies, review the way in which the ITPCC will cast a wide net for project identification and priority setting, and contribute their own sense of needs and opportunities. It is intended that the CIO Subcommittee will develop a full set of possible projects and present these for consideration in future months.

4. ITF strategies and potential leveraging of ITF funds with agency resources

As seen in item #2 above, the current process used for project approval includes a Committee and Council review of each project and direct appropriation to the agency taking the lead in the development. Council staff has begun discussions with the Office of Management and Budget to explore whether ways to reduce paperwork and time delays between project approval by ITPCC and project initiation by the cognizant agency might be found. Organizing an appropriation of an entire work program for the ITPCC with projects not yet scoped but clearly delineated could be one such alternative. Creating an Operating Budget or CIP project that is used as a finding vehicle for all ITPCC projects, obviating the need for individual project appropriation, is another possibility.

The bottom line is to explore the development of a simpler, long-term model for ITPCC project funding. The idea is to have the Council appropriate a sum for ITPCC-led projects yet undecided and delegate that authority to the ITPCC principals (as the ITPCC enabling legislation foresaw). This appropriation could be made within the Operating Budget (perhaps in the ITPCC NDA) or the Capital Budget as an explicit new PDF for ITPCC project funding.

OMB representatives will be able to present their perspective on the potential for such simplification. The interagency nature of ITPCC and the involvement of bi-county agencies (WSSC and M-NCPPC) could make such simplification difficult. Benefits from such simplification, in terms of prompt project implementation and a process more streamlined than the Committee and Council review that is applied to major, multi-million dollar projects, suggest that the Committee at least consider the benefits and probe for ways such a simplification might be tested.

TELE & INFO

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MONTGOMERY COUNTY PLANNING BOARD
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

OFFICE OF THE CHAIR

April 12, 2013

RECEIVED
MONTGOMERY COUNTY
2013 APR 15 PM 2:02

The Honorable Nancy Navarro
President
Montgomery County Council
Stella B. Werner Office Building
100 Maryland Avenue
Rockville, Maryland 20850-2371

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Dear President Navarro:

On behalf of the Planning Department, I would like to request an amendment to the proposed FY 14 budget to add a special project, the GIS Data Visualization Project. This project was approved by the Interagency Technology Policy and Coordination Committee (ITPCC) earlier this year after the M-NCPPC had transmitted our budget to the Council and Executive. The Planning Board supports this project.

This project will be managed by the Planning Department's Center for Research and Information Systems Division in cooperation with the Washington Suburban Sanitary Commission (WSSC) and Montgomery County's Department of Technology Services (DTS). The proposed funding required is $70,000 for cloud based GIS Services, training and supplies as well as to support an intern. The full project description is attached.

I understand that the ITPCC will be including this as part of their April 16th presentation to the Government Operations and Fiscal Policy (GO) Committee on the ITPCC work plan. Thank you for your consideration of this cross agency IT project.

Sincerely,

Françoise M. Carrier
Chair

FMC/PW/cm
Attachment
cc: Isiah Leggett, County Executive

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Interagency Technology Policy and Coordination Committee (ITPCC)

1.3—GIS Data Visualization Project

[January 2013]

Table of contents

Project overview

This project's focus is to engage a broader base of inter-agency subject area experts in demonstration projects that use GIS to improve critical areas of County service delivery.

The County's Geographic Information Systems (GIS) resources are grossly under-leveraged. The County primarily uses GIS as a resource for mapping "where" physical infrastructure is located (e.g. 'where are roads located? where are buildings located? etc.) The County's core GIS resources remain in the domain of technical professionals whose areas of expertise rest within the traditions of surveying and mapping. Consequently, inter-agency GIS efforts have focused on making incremental improvements to otherwise static mapped information. Given recent advances in GIS, the current emphasis on incremental improvements to base map information is inadequate.

GIS has matured, and its focus is rapidly converging on the development of families of interactive web-based analysis tools. Ideally, these tools are designed to engage both policy makers and the public in practical, broadly-scoped decision making. This new paradigm, commonly referred to as "GIS 2.0, encompasses an emphasis on public involvement, web based services, and the appropriate leveraging of social media. The ultimate objective is to proactively apply the "GIS data" within these frameworks that support policy decision-making and service delivery to the public. The GIS Strategic Plan (2011) calls for the development of an inter-agency framework that more strategically leverages the County's GIS spatial analysis capabilities.

1) Develop a common County cloud based "portal" for web based GIS applications.

This site will provide both the public and public sector decision-makers access to easily understood "public facing" web based GIS services and applications. The unifying theme will be deploying applications that improve the delivery of key County services.

2) Launch of an initial inter-agency demonstration project that is accessible via the new GIS portal.

Scope a project to be performed in collaboration with the Montgomery County Food Council. This project would result in an interactive GIS tool that describes the County's current and potential food delivery systems and enhances public awareness and access to these resources. Examples:

- Enhanced public awareness and access to farmers' markets
- Locations and guidance to other food assistance resources
- Guidance to other nodes within the County's local food supply network

3) Establish linkages via the GIS portal that expands the public's ability to visualize and analyze key data elements provided under the County's Open Data Initiative.

4) Provide training for staff across multiple agencies that increases County in house ability to coordinate the interagency development and deployment of GIS web applications.

Project scope

This section is where you clearly define the logical boundaries of your project. Scope statements are used to define what is within the boundaries of the project and what is outside those boundaries. Examples of areas that could be examined are data, processes, applications, or business areas. The following types of information can be helpful.

- The types of deliverables that are in scope and out of scope (business requirements, current state assessment)
- The major life-cycle processes that are in scope and out of scope (analysis, design, testing)
- The types of data that are in scope and out of scope (financial, sales, employee)
- The data sources (or databases) that are in scope and out of scope (billing, general ledger, payroll)
- The organizations that are in scope and out of scope (human resources, manufacturing, vendors)
- The major functionality that is in scope and out of scope (decision support, data entry, management reporting)

The scope of this project includes and excludes the following items:

In scope

- The acquisition of cloud based GIS services suitable for proof of concept testing.
- Design of GIS web portal suitable for hosting the target project and future GIS web applications.
- Development of a single 'demo' web application with the Montgomery County Food Consortium.
- Evaluation of the project - Initial report and recommendations for potential future use of cloud GIS in MC government.
- Identification of pricing, acquisition schedule, and data agreements needed to maintain core County GIS layers.
- The estimates for required staff support is scoped to a limited amount of hours. [Planning (.1 person years) , WSSC (.1 person years), DTS (.1 person years)]

Out of scope

- Project completion is dependent on funding.
- Cloud service acquisition is for evaluative purposes. Cloud resources will only be available for the target project and relegated to the scope of the target project. Other web based GIS projects will be considered post the project evaluation and with the allocation of additional funding,
- During the project timeframe, staff resources will only be available to support the deployment of the web application identified as the target project.
- The demo web application will rely on data supplied via the ITPPC's open data initiative. The development of long term agreements to createt additional base data sources or to maintain existing sources is outside the scope of the GIS Data Visualization component of the project.
- The project is scoped to developing a hosting platform for select "public facing" projects identified and approved by the ITPCC. The proposed portal is not intended to, nor is it capable of, acting as a central location for the rich diversity of GIS web application needed for County GIS operations.

In this section, describe the deliverables of the project. Provide enough explanation and detail that the reader will be able to understand what is being produced. Make sure that the deliverables produced align with what is in scope from the previous section.

Deliverables produced

Deliverable	Description
GIS Portal and Portal Design Standards	Develop standards for a County GIS web portal. Design and deploy this portal to support select ITPCC recommended projects.
"Demo"	Work with a County partner (Montgomery County Food Council) to

Application"	develop an initial "demo" web application for the site.
Acquisition and Evaluation of Cloud based GIS Services	Acquire cloud based GIS services sufficient to support the development project. Produce an executive report that identifies the best practices for the adoption of cloud based GIS. Use the lessons learned from the target project to provide an initial evaluation of the potential costs and benefits of cloud based GIS, for Montgomery County government.
Recommendation for Data Purchases	Provide ITPCC with recommendations for the pricing, acquisition schedule, and data agreements needed to maintain core County GIS layers .

Project estimated cost/effort/duration

The estimated effort and project costs may be depicted in many ways, For example, you may insert an Excel table, insert a Word matrix, or use narrative description.

Also include a brief timeline (or a set of bullets) showing the project start date, major milestones, and end date.

Estimated cost: $70,000

1. **Purchase Cloud Based GIS Services (1- 2 years of service)** — **$ 30,000**
2. **WEB GIS Training – (for ITPCC selected county staff)** — **$ 12,500 (3 staff course, 3 Sr. staff advanced trainings)**
3. **Staff support/ Intern for "Web GIS" 1 year** — **$ 25,000**
4. **Publications/Supplies** — **$ 2,500**

Estimated Total effort/duration:

Approximately 18 months: Feasibility assessment discussions; approval and initiation; planning and design; implementation; testing; cutover; closeout.

Milestone	Date
Start of project	November 2012
Milestone #1—Complete Feasibility Assessment and ITPCC Approval	January 2013
Initial Agreement with non-profit partner (Montgomery County Food Council) on participation and support of the demo "web" project .	March 2013
Task the GIS Policy Group and the County GIS Users Group with the project scope.	March 2013
Secure Project Funding in FY14 Budget	July 2013
Stakeholder Meeting I: Draft written guidelines that define the user requirements for the "demo" web application.	July 2013

GIS Policy Group Work session I: Draft preliminary guidelines and requirements for County GIS portal.	August
Internal Launch of Prototype Site: Deploy Website to Internal Users for Review and Testing	October 2013
Stakeholder Meeting II: Feedback/Recommendations	November 2013
GIS Policy Group Work session II: Draft recommendations to ITPCC for key GIS Data Layers	December 2013
Soft Launch: Deploy Web Site to Select External Users for Review and Testing	January 2014
Preliminary Report: MC Strategic Approaches to Cloud based GIS/Recommendations	February 2014
Go Live on Site	March 2013
Stakeholder Meeting III: Debrief/Closeout	April 2013
Final Report: MC Strategic Approaches to Cloud based GIS/Recommendations	July 2014

Project assumptions

Project assumptions are circumstances and events that need to occur for the project to be successful but are outside the total control of the project team. They are listed as assumptions if there is a HIGH probability that they will in fact happen. The assumptions provide a historical perspective when evaluating project performance and determining justification for project-related decisions and direction. (Remove this comment section from final document.)

To identify and estimate the required tasks and timing for the project, certain assumptions and premises need to be made. Based on the current knowledge today, the project assumptions are listed below. If an assumption is invalidated at a later date, then the activities and estimates in the project plan should be adjusted accordingly.

1. GIS Web Portal Design and Pilot Project will be completed in FY14-- [July1, 2013- June 30, 2014.
2. CIO Subcommittee and ITPCC Approval to proceed;
3. Commitment to provide necessary staff and time resources to perform the project to completion.
4. Approval of funding necessary to complete the project
5. The partner role (Montgomery County Food Council) will be purely advisory, providing guidance and expert opinion on the types of functionality that would be useful if embedded in the web application. The project's management, final deliverable, and approach will be solely determined by the ITPCC and scoped to the resource constraints defined in this project proposal.

Project risks are circumstances or events that exist outside of the control of the project team and will have an adverse impact on the project if they occur. (In other words, whereas an issue is a current problem that must be dealt with, a risk is a potential future problem that has not yet occurred.) All projects contain some risks. Risks may not be able to be eliminated entirely but can be anticipated and managed, thereby reducing the probability that they will occur.

Risks that have a high probability of occurring and have a high negative impact should be listed below. Also consider those risks that have a medium probability of occurring. For each risk listed, identify activities to perform to eliminate or mitigate the risk.

Project risks are characteristics, circumstances, or features of the project environment that may have an adverse effect on the project or the quality of its deliverables. Known risks identified with this project have been included below. A plan will be put into place to minimize or eliminate the impact of each risk to the project.

Risk area	Level (H/M/L)	Risk plan
Funding not approved	H	Seek alternate sources. Terminate project if funding is not available.

Agency resources not available or inadequate.	M	Review project scope; realign to available resources if possible. If not, cancel the project.

Initial Project Team Designees/POC

List the Agency POC contact information for project team members designated by the Project Sponsor/Project Manager to initially staff the project. Amend as necessary as the project is formally implemented.

Agency Name	Name	eMail	Phone
MCG	Sonny Seagal		240 777 2903
MCPS	Sherwin Collette		
Montgomery College	Salvatore DiMaria	Salvatore.dimaria@montgomerycollege.edu	240 567 7596
MNCPPC	Richard DeBose (PM)	richard.debose@montgomerycounty.org	301 650 5612
WSSC	Paul Coverstone	pCovers@wsscwater.com	301 206 8404

DEPARTMENT OF TECHNOLOGY SERVICES

Isiah Leggett
County Executive

Harash (Sonny) Segal
Chief Information Officer

MEMORANDUM

June 13, 2013

TO: Dr. Costis Toregas, Council IT Analyst

FROM: Mitsuko R. Herrera, Cable & Broadband Administrator
Cable & Broadband Communications Office

SUBJECT: ITPCC ARRA Grant Update for GO Committee

Background. In 2010, the State of Maryland, on behalf of the State and a consortium of nine central Maryland counties (collectively, the Inter-county Broadband Network or ICBN), submitted a successful American Recovery and Reinvestment Act (ARRA) broadband grant application. Known as the One Maryland Broadband Network (OMBN) project, the ARRA grant provided $115 million to fund expansion of government broadband networks to over 800 community anchor institutions (*i.e.*, schools, libraries, public safety and govern facilities, public housing, and healthcare and community centers) including 109 in Montgomery County. The State is the primary grant recipient and ICBN is a sub-recipient of $76 million of the ARRA grant. All ARRA grant-funded work must be completed by the August 31, 2013 grant deadline.

In 2011, the ICBN members executed a Memorandum of Understanding (MOU) in which the ICBN members designated Howard County as the ICBN Grant Administrator. In 2012, the ICBN members adopted governing principles and executed a Memorandum of Understanding with the State. Through these MOUs, Howard County became the entity authorized to receive ARRA grant funding and the ICBN members agreed to minimum matching fund contributions. (The ARRA grant required a minimum 20 percent match and to be competitive, the OMBN overall match contribution was 26 percent.) Procurement was centralized within Howard County. Thus ARRA grant and matching funding was directed to Howard County and Howard County had responsibility for issuing RFPs, awarding contracts, receiving and paying invoices, and providing overall project management and administration. Howard County was also responsible for working with the State to provide ARRA compliance and progress reporting to the federal grant managers.

To manage work within Montgomery County, bi-weekly meetings were established with the ICBN project management team. Construction was monitored by the Department of Technology Services and the Department of Transportation Services, which are the two entities that manage overall FiberNet construction, operation and maintenance, and DTS worked through the ITPCC to keep other agencies updated on ARRA ICBN progress. The Department of Permitting Services

authorized the project to proceed as a County project and additional inspection work was performed by the DTS Office of Cable and Broadband Services. Within Montgomery County, the initial ICBN proposal planned to expand FiberNet to 89 elementary schools, 19 Housing Opportunities Commission properties, and the Takoma Park Library, and to provide additional fiber capacity. The grant application also required a $2.6 million matching contribution from Montgomery County.

OMBN/ICBN Budget Issues. The ARRA grant required that projects be "shovel-ready" but also that projects not be possible to complete without the ARRA grant. In a perfect world, OMBN, ICBN, and FiberNet engineering would have been performed prior to the submission of the ARRA grant, but there was neither time nor funding to perform the necessary engineering work prior to the grant submission (nor were local governments likely to have spent millions to engineer projects that had no identified funding source). Thus, estimated project budget and engineering routes were created using cost averaging and best available information. The initial OMBN budget estimate was $136 million. At the request of the federal government, OMBN reduced this budget to $120 million and the federal government then arbitrarily reduced the budget to $115 million. Engineering and construction budgets typically include 10 to 25 percent budget margins to address unanticipated issues. The result of the federal government's reduction of the OMBN budget was that it virtually eliminated the margin to fund unforeseen budget items.

In the grant implementation, several factors emerged that adversely affected the budget. First, when creating the ARRA grant program, Congress did not factor in time or funding for required environmental reviews. ICBN was required to spend 1.3 percent of the budget to facilitate State completion of environmental reviews. Within ICBN, the project assumed that the majority of construction could be done using lower-cost aerial construction and within Montgomery County there was an assumption that there would be no cost to overlash new ARRA fiber to existing FiberNet facilities attached to PEPCO and Verizon utility poles. However, within ICBN, the relatively high cost of using BG&E utility poles caused the ICBN project to significantly increase the percentage of more expensive underground construction. Within Montgomery County, the County funded $451,457 in unanticipated make ready costs to use PEPCO poles with existing FiberNet facilities and $52,037 in Rockville permit fees. The federal grant also unexpectedly required recipients to fund underground utility location costs and the value of in-kind match contribution estimates were lowered because federal rules do not permit benefit costs to be counted towards the value of the labor contribution (benefits are 28 to 48 percent of salary costs in Montgomery County). Finally, within OMBN, the State, in order to address its own budget issues, unilaterally decided to reduce its contributions to ICBN for joint services procured by ICBN.

Within ICBN, the reduced overall budget and growth of unanticipated costs forced the project to cut costs where possible. Sites and portions of the project were prioritized. Additional matching contributions from ICBN members were requested for lower priority or higher cost-per-mile sites as well as for underground utility location costs. On-site construction inspections were eliminated and post-construction inspection was delegated to ICBN members. ICBN contract positions and legal budget were eliminated. Finally, ICBN members were asked to provide additional funding to cover other unanticipated construction cost overruns, such as increased splicing costs, necessary rerouting, and restoration overruns.

Montgomery County ARRA Grant Update. Despite the budget challenges, the Montgomery County implementation of the ARRA grant remains largely on track. The six most expensive sites

and a 5-mile inter-county connection between Montgomery and Howard Counties were eliminated from the grant project. However, subject to final consent from the smaller municipalities within Montgomery County, FY13 Cable Fund restricted capital funding will be used to fund construction of these sites[1] and Howard County will likely fund construction of the inter-county connection as a separate post-grant project. The ARRA grant will be used to create a temporary hub termination that will allow all of the ARRA sites to be activated. Council has approved an additional $2.28 million supplement in the FiberNet CIP in FY14-15 to fund completion of the hub terminations in eight hubs. When this final hub termination work is completed, FiberNet will be able to utilize the extra fiber capacity provided by the ARRA grant-funded fiber construction.

Overall, the County is expected to receive ARRA grant-funded construction valued at $11 million with an additional $3 million match provided by the County. The additional construction funded directly by the County will likely increase this $14 million total cost and value of the ARRA-related FiberNet expansion to $16.5 million.

As of June 13, the current status is as follows:

- 98.8% of underground construction and 96.5% of aerial construction has been completed.
- 1 site is activated, 7 have had fiber testing completed and accepted, 25 are built and spliced and ready for testing, 44 are built and ready for splicing, 4 sites have inside wiring construction completed and are in progress to complete construction of a small portion of the outside plant construction, 19 sites have outside plant construction completed and are awaiting completion of inside wiring construction and splicing, and 6 sites have been work orders issued and are awaiting construction.
- Of 75 sites in which outside construction has been completed, 64 sites, or 85 percent have been inspected and clean-up of minor construction restoration issues is in progress.
- A "Gap List" of remaining construction issues has been created is being worked through with all construction contractors.
- An agreement to transit a Colonial Pipeline crossing and a license agreement to permit Howard County to install the Montgomery-Howard interconnection are still in process.

We anticipate that the County may need to use additional available FiberNet funding to cover some construction cost overruns. Completing all outstanding construction within the next ten weeks remains our biggest challenge and weather, particularly heavy rains, remains an unknown factor.

However, we continue to anticipate that by August 31, 2013, 103 new sites will be activated over FiberNet as a result of the ARRA grant, enabling the County to provide high speed broadband to elementary schools and public housing locations within Montgomery County.

cc: Harash (Sonny) Segal, Chief Information Officer, Department of Technology Services
Dieter Klinger, Chief Operating Officer, Department of Technology Services
John Castner, FiberNet Manager, Department of Technology Services
Marjorie Williams, Franchise Manager, Office of Cable & Broadband Services, DTS

[1] The six elementary school sites are William Tyler Page ($51,518), Broadacre ($55,190), Capt. James Daly ($61,124), Bel Pre ($66,672), Goshen ($68,570) and Dr. Charles Drew ($80,000). The fiber expected to be installed at some of these locations is critical to other FiberNet operations. The engineering and permitted has been completed for these sites. Thus, other FiberNet or restricted capital funding is being redirected to complete this portion of the ARRA grant.