Background

Fairfax County continues to attract successful businesses and good employers, particularly in the information technology (IT) industry, despite the difficult economy with lowered property values. A high percentage of citizens are well-educated, information technology knowledgeable, employed well, and hard-working. *They expect County services to be effective and efficient.*

County Government agency responses to both past revenue challenges and citizen concerns are aggressive and effective. Maintaining and improving services while reducing budgets depends heavily on the extremely valuable capability of the County's IT. The budget challenge for FY2011 looms large across all departments; their required changes assuredly will increase requirements on IT. However, *following previous cuts, additional FY2011 cuts threaten IT operations and services effectiveness.*

An emerging concern is the departure of a substantial number of experienced County employees, particularly at leadership levels. With lower experience levels but often higher technology awareness, agencies may well expect IT solutions but not understand key County IT processes. Three important cost-savers are:

- New project use of existing Fairfax information technology capability,
- Collaborative use of IT providing for interrelationships of various County functions, and
- Employing application IT purchased through County IT purchasing arrangements.

To achieve good results with reduced funding, FY2011 budgeting must balance carefully agencies' functional requirements and DIT capability. E*nsuring DIT involvement in all project decisions is critical.*

Return on Investment in Fairfax County Information Technology

During years of revenue challenge, ongoing well-implemented information technology strategy has positioned the County well for maintaining service levels and responding to new obligations. Despite its own anticipated and unanticipated workload challenges, DIT has been extremely supportive and creative in addressing projects and service needs.

To enable stronger budget trade-off decisions in the tough years ahead, it is time to begin to evaluate County-wide return on agencies' and DIT IT investment (ROI) in every aspect of County business. The complete analysis matrix would include:

- What is spent for service in agencies and DIT now?
- What new spending requirements are in agencies and DIT?
- What is the effect on revenue and service to citizens?
- What are the most cost effective future spending alternatives?

ITPAC initiated ROI evaluation by interviewing major IT-implementing departments for information on their experiences. This is a very preliminary effort. Additional research to systematically determine the exact value and cost to the County in dollars involved is needed. Some of the examples of ROI follow.

Department of Tax Administration (DTA): DTA is praised by business, the public, and other County agencies for service, collaboration and results. DTA credits agency effectiveness to close relationship with DIT to vet and support solutions and appropriately-employed IT applications.

Revenue collection and cost savings results include:

- ***$3M 2009 tax time staff savings with automation.***
- ***10 fold revenue increase with less staff using online and automated service:***
    - ***$591M in 2009 processed through Lockbox.*** *Staff time saved and deposits sped* by automated check processing and depositing
    - ***$104.6M revenue in 2009 processed by Govolution.*** *Revenue acquisition sped and collection resources decreased* by online credit card, debit card, and e-check service.

Citizen services and operational results include:

- ***6-8 week response to same day response through email.*** Rapid DTA response to citizens and County agencies for greater partnerships.
- ***Upgraded inter-agency operations through new IT infrastructure.*** INET and well-managed server/database systems speed secure interaction for collection information for DTA and operation data for other agencies:
    - Land Development Service: Permitting and fee collection.
    - Circuit Court: Deed changes for property taxing.
    - GIS: Location information for billing.
    - Finance Department: Revenue posture reports.

County IT Infrastructure—Enterprise Platform Management, I-Net: County agencies praise the effectiveness, support, and efficiencies of the IT infrastructure. Government IT Industry experts continually applaud the cost-effectiveness of the enterprise provision of top performance, energy efficiency, and critical security.

Enterprise Technology Infrastructure cost saving results:

- ***$5,400,000 savings per year at least through planned server consolidation***
    - Approximately $3000 per year savings per each virtualized server
    - 1826 servers to 28 server

Initial virtualization possible through Federal "green" computing funds:

- ***$14,000,000 energy savings per year eventually for total planned virtualization***
    - 90% server energy saving per year for total planned virtualization.
        - Estimated savings in energy use per server $8,000 per year
    - Savings to be seen in Facilities budget

- ***Two staff saved in End-User Support using on-call plan***
    - 24X7 operation with single shift

Communications technology, I-Net Fiber Network results:

- ***$4,200,000 annual network cost saving with I-net versus third party***
    - Annual I-Net cost $2.2M for commercial class up-time versus third party cost of $6.4M.

- ***Value*** of performance, security, capacity anecdotes:
    - Reduction in GIS update time from 6 hours to 15 minutes
    - Cascades to improvements for other agencies
    - Causes staff time savings for multiple departments
    - Allows current staff to address growing workloads
    - Bandwidth capacity growth 2470% and site growth 225% with no staff increase
    - Commercial class up-time
    - No tampering tolerance effectively enforced

Information Protection and IT Security (ISO) results:

- ***24,000,000 malicious attempts reported and prevented annually.***
    - Staff handles 1207 incidents per day.
    - Availability, performance, security, and cost-saving results.

Courts, Video Arraignment: Judges, Sheriff's Department, and attorneys praise video technology and DIT partnership for improved arraignment process effectiveness as well as increased personnel and citizen safety. Escalating workload for Sheriff's personnel, judges, and attorneys greatly reduced with remote arraignment and courtroom technology.

Initial cost-saving estimate for remote arraignment alone: $109,200.

- 5580 travel miles to transport defendants or recover suspects eliminated July through October.
- Staff and travel funding for July through October measured, annual dollars estimated on that basis.
- Effectiveness and safety results for remote arraignment include:
    - ***0 "use of force incidents from detainee transport over 2 ½ years.***
        - Staff and public safety increased due to decreased potential for detainee escape or bad behavior in court or between jail and court.

Tax payer money saved by processing more cases in less time.

- 10 to 20 deputies per day reduced to 2 to 4: Deputies required to transport defendants reduced to at most two to four per day infrequently.
- Remote video witnesses speed scheduling and save time/money for courts and witnesses.
- Courtroom technology facilitates evidence availability and viewing, process scheduling, and proceeding recording.

Due process improved through video conferencing and courtroom technology.

- Improved participation due to reduced travel requirement for courtroom participants.
- Evidence and testimony normally unavailable became usable.
- Courts are now able to more effectively collaborate with juvenile support systems, County and state law enforcement, and each other.

Geographic Information (GIS): Agency data facilitates faster, more accurate operation by over 25 County agencies and eliminates much staff travel. ***Staff time saved both ways can be reallocated and should be cost estimated.*** An integral part of DIT, GIS contribution to effective and efficient County operation is touted by collaborating agencies such as DTA, businesses, and citizens. County business results include:

- ***Staff time saving and improved data for County agencies through 15 minute data updates.*** Currency of data significantly improved from 6 hours to update requiring overnight to 15 minutes done frequently through implementation of online service with I-net.

- ***Over 25 County agencies expand services and operations but save IT resource and staff with GIS data online.***

- Meeting 5 minute response time limits with 98% staff time saving achieved by Fire and Rescue stations through analysis of GIS data.

- Computer Aided Dispatch for 911 works with GIS to allow personnel to target response and achieve better outcomes.

- Virus and other emergency health responses more effectively planned by Health Department using GIS data to determine most efficient coverage.

- More accurate police deployment through access to GIS data for crime analysis and prediction.

- Newly feasible Planning and Zoning regional transportation analysis support and assistance with large design projects such as Tyson's Corner with GIS data and access services.

- Department of Transportation improved efficiencies using data to predict commuter use of Park and Ride, locate/manage potential facilities, determine connector bus demographics and routing and safety as well as employer services commute alternatives.

- Public Works and Environmental Services for refuse vehicle routing that received state award for flexibility and cost savings.

- Park authority uses data for location and activity planning.