



Fairfax County
VIRGINIA



SECTION 4
MANAGEMENT CONTROLS
AND PROCESSES

MANAGEMENT CONTROLS AND PROCESSES

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SECTION 4 MANAGEMENT CONTROLS AND PROCESSES

4.1 IT MANAGEMENT FRAMEWORK

Background

In FY 1994 the Fairfax County Board of Supervisors created a citizen Information Technology Advisory Group (ITAG) to study the use and management of Information Technology (IT) by the County government. The ITAG was composed of eight private sector executives from Fairfax County based companies. Two committees supported the ITAG, one made up of staff from their own corporate organizations and the other comprised of County staff.

The work of the ITAG resulted in the creation of the Department of Information Technology (DIT). By consolidating several separate County organizations already involved with application programming, infrastructure, data center operations, telecommunications, Geographic Information Systems (GIS), mapping and technical training, the Department of Information Technology was formed. The new DIT also included centralized resources for system security, standards, architecture, e-government, technology planning and administration. ITAG also recognized that larger County departments would still need to retain some IT staff in addition to utilizing central DIT resources, and that agency business specific projects such as technology based industrial systems or small scale point solutions would be better handled by the agency rather than DIT. For these instances DIT would serve as a consultant, mentor or project partner. However, departmental IT standards, planning and budgeting would continue to follow the direction set by the County to ensure consistency and investment value.

ITAG further recommended that:

- *The County create a Chief Information Officer (CIO) position to oversee DIT and technology Countywide*
- *The CIO should report directly to the County Executive as a Deputy County Executive level position*

- *IT be treated as an investment and given consistent funding annually*
- *The CIO be responsible for IT planning County-wide and the expenditure of major IT project funds*
- *The County create a funding mechanism to ensure IT employees are trained properly and their skills are kept up to date*
- *An annual IT plan is written to detail IT direction, projects and project portfolio budgets.*

When ITAG recommended the technology modernization fund, it recommended that the County provide funding of approximately \$20 million per year for investment in IT in order to sustain the Board's goals for service efficiencies and effectiveness at optimal cost. This fund provides money for the software, hardware and services included to deliver the projects. The modernization fund represents the County's enterprise wide and key departmental projects, which are closely tied to business process improvement and strategic goals.

Based on the initial ITAG recommendations, the following initiatives have been implemented:

- *Centralization of the major IT functions for the County (FY 1995)*
- *Creation of a CIO function (FY 1995)*
- *Standardization of technology investments across the County (FY 1995)*
- *Annual technology project review as part of the budget process (FY 1995)*
- *Creation of a technology modernization fund (FY 1996)*
- *Funding for technology training (FY 1996)*

- *Project steering committees, formal project reporting and governance framework (FY 1996)*
- *Creation of a permanent private sector advisory group (FY 1998)*
- *Creation of an internal Senior Executive IT steering committee (FY 1999)*
- *Launch of an internal project management certification program (FY 1999)*
- *Creation of an enterprise technology architecture committee (FY 2001)*
- *Creation of an IT Investment Portfolio management position in DIT (FY 2002)*
- *Creation of an enterprise technology architecture function in DIT (FY 2002)*
- *Development of strategic planning alignment process (FY 2003)*
- *Strengthening and reorganization of IT Security leadership and capability (FY 2003 and 2004)*
- *Merger of information architecture, web services and document management functions (FY 2004)*
- *Establishment of Architectural Review Board in DIT (FY 2005)*
- *Reorganization to establish resource capability that addresses regional homeland security interoperability requirements, and creation of a position dedicated to integrated Public Safety and Emergency Management strategy (FY 2005)*
- *Establishment of a Public Safety IT Governance Board (2005).*
- *Re-designated CIO position as Deputy County Executive (DCE) for Information Departments and designated Director of DIT as Chief Technology Officer (FY 2006)*
- *Established E-Gov Executive Committee (FY 2007)*
- *Created Customer Service function for enhanced Help Desk end-user tech commodity devices in DIT (FY 2007)*
- *Established Services-Oriented Architecture Team (FY2007)*
- *Adopted ITIL Framework for Service Support (FY 2007)*
- *Established Deputy Director to enhance executive capacity on IT service delivery and operational efficiency, and emergency support initiatives (FY F2007)*
- *Establish Court Technology Leadership position and Governance structure (FY2007)*
- *Enhance Change Management and Configuration Management Processes (FY2008)*
- *Released new strategic plan and updated Systems Development Life Cycle Standards (FY2008)*
- *Established Leadership for National Capital Region Interoperability Initiative (FY 2007)*
- *Legacy Replacement System (County and Schools) Steering Committee (Fy 2008)*
- *Develop Technology Strategy Map (2008)*

Executive Governance

The Deputy County Executive (DCE) is responsible for the overall direction of technology and information initiatives. The Board of Supervisors has expanded the role of the DCE since the position was created as CIO in FY 1995. Today, the DCE is responsible for a broad range of information-related departments.

The Director of the Department of Technology is also the County's Chief Technology Officer (CTO). The CTO develops strategy, policy and processes for technology county-wide. The CTO creates the agenda for IT and communications technologies, and directs the activities in the Department of Information Technology.

The Senior IT Steering Committee is the County's executive technology oversight body, providing policy, asset and resource authorization and guidance for the County's IT program. This group includes the County Executive, Deputy County Executives, Director of the Department of Information Technology/CTO, and Director of the Department of Management and Budget. The committee gets additional input from the county's Senior Management Team made up of all agency heads. The committee meets monthly to look at specific IT initiatives, opportunities and issues, sets the County's IT strategy based on the Board of Supervisors' direction, and approves the annual IT investment plan which is delivered by the CTO to the ITPAC for its endorsement. The annual ITPAC agendas provides information about both existing portfolio initiatives as well as planned

initiatives and opportunities, most of which require IT investment support in either upcoming or future budget planning cycles.

The e-Government Steering Committee provides guidance and direction for new capabilities provided via the Web and other public access channels. The DCE is the chair and champion of this committee, which includes the CTO, E-Government Manager, Directors of the Department of Cable Communications and Libraries, and the Office of Public Affairs. The committee considers the impact of emerging trends such as the public's adoption of social networking and other information mechanisms in forming the County's strategy for enablement of and governance over related e-Government initiatives.

Finally, major investments such as the Public Safety Information Systems project and Legacy Systems Replacement project have governance boards typically chaired by the sponsoring Deputy County Executive with membership including the affected directors of sponsor departments and the CTO. These boards/committees oversee, provide guidance and resolve related policy issues to their agencies project manager(s) and teams to ensure scope and delivery.

Project Investment Prioritization and Execution

The Senior IT Steering Committee establishes funding priorities for technology projects. Based on changes in social and economic paradigms, and state mandates that must be fulfilled, the following priorities are adopted as guidelines for project funding decisions:

- ▶ Mandated Requirements
- ▶ Leveraging of Prior Investments
- ▶ Enhancing County Security
- ▶ Improving Service Quality and Efficiency
- ▶ Ensuring a current and supportable Technology Infrastructure

The process is managed by the IT Project Portfolio Office in the Department of Information Technology. For each fiscal planning cycle, Initial project recommendations are submitted by County departments as part of the annual budget process. A two-phase approach was implemented to assist in the preparation and evaluation of information technology project proposals submitted for funding. Project proposals must meet the following requirements:

- *Submission of viable projects: minimize project requests that may be beneficial to County business conceptually, however lack substantive information in critical project areas such as staffing plans, technical architecture, project deliverables and benefits;*
- *Ensure that proposed project timeframes, areas of responsibility and funding accurately reflect County procurement, budget and existing IT project commitments, as well as clearly identify the impact of the project on agency business and technical staff, and agency operations;*
- *Identify potential savings by utilizing exiting County-owned technologies or by jointly reviewing similar individual project requests to minimize IT software and hardware duplication and leverage technology investments already made;*
- *Ensure that proposed project schedules are feasible, and/or that ongoing projects are within scope and budget, and are on schedule.*

Early in the process, agencies are requested to submit both a business and technical viability analysis for each proposed project. The business analysis, reviewed by staff from the Department of Management and Budget (DMB), includes such factors as business objectives, return on investment (including cost savings, cost avoidance, enhanced revenue, non-quantifiable service benefits, staff savings and staffing efficiencies), indicators to measure success, estimated costs, business related risks and alternatives to the proposed project.

The technical analysis, reviewed by staff from the Department of Information Technology (DIT), includes such factors as proposed system architecture and its compatibility with the County's technical architecture standards, impact on existing systems, data conversion and electronic interface requirements, and staffing requirements for development, enhancement and maintenance of the project. After review by DMB and DIT, recommendations and suggestions for improvement are made to the project sponsors. Following the submittal of final project proposals, interviews for a final review are conducted by DIT and DMB senior management, who then make funding recommendations for consideration by the Senior IT Steering Committee. This process is guided by the five information technology priorities established by the Senior IT Steering Committee.

The Senior IT Steering Committee reviews the recommendation for inclusion in the County Executive's annual proposed budget. ITPAC's recommendations are included as part of the Budget Adoption process. ITPAC develops a letter supporting the strategy and themes for the proposed project funding package to the Board of Supervisors. The Board makes the final decision on funding based on alignment with the Board's goals and recommendation of the County Executive.

As stated previously, IT funding in the modernization budget represents the strategic and enterprise-wide initiatives for the County. If during the project review process a project is identified that is not strategic, does not have enterprise wide benefits, but does benefit a single department or County function, funding may be placed into departmental budgets. The department can then use these funds to undertake the project internally with existing staff or contract for services if necessary. Agencies can request that DIT manage the project if that is the best course. Departmental projects must follow the established IT standards, methodology and architecture requirements with DIT providing advisory consultation, infrastructure resources, and/or standards compliance.

Once projects are approved for funding, a steering committee is created for each project. This committee can vary in size and membership, based on the dollar value and the strategic importance of the project. A project manager is selected from the department sponsoring the project and a technical project manager is assigned from DIT and/or the user agency's technical group if one exists. Project managers are required to hold regular meetings and report progress and issues. All projects must follow the County's standards and project methodology as defined by the DCE in the IT standards. Formal architecture standards have been developed that provide further guidance to the project managers. This process is managed by the IT Portfolio Manager in DIT.

The County formally certifies project managers through a project management certification course developed by DIT, which certifies project managers to lead projects at different dollar thresholds. Once certified and assigned to an approved project, the project manager's compensation may be adjusted to reflect enhanced organizational contribution. The certification focuses on project reporting and administration, contract negotiation and management,

technical architecture, business process redesign, task planning and other topics. Certification is also required for technical project managers. DIT assigns a Technical Project Manager that works with the agency Project Manager to approve the technical solution, help develop the schedule, coordinate implementation activities in DIT, and execute the technical solution. The Technical project manager is involved in the solution selection process and contract negotiations.

In addition to the Project Steering Committee, DIT may conduct periodic project reviews to track progress and support conformance to standards. DIT has established the Architectural Review Board to assist agencies in determining viability of solutions and compatibility with architectural standards and the county's infrastructure as a part of the solution competition and acquisition process. This includes members participating on Selection Advisory and Technical Advisory panels. Major IT projects with increased risk, higher strategic value, or a material degree of external visibility may receive oversight in tracking project performance and technical guidance from the PMO function in DIT.

Project investment prioritization and execution is based on the following elements that work together to create an enterprise wide process and focus for IT in Fairfax County. The process is inclusive of all agencies and ensures that selected IT solutions align with the enterprise strategic goals:

- *Executive Management*
- *Private sector and internal County board of directors roles*
- *Executive IT Steering Committee*
- *County-wide planning and review of technology investments*
- *Focus on standards, training and certification*
- *Project Steering Committees*
- *Collaboration between agencies and DIT*
- *Portfolio management*
- *Architectural Review Board*
- *Skilled project management*
- *Performance management*

In any organization, a wide range of business processes and practices support all information technology projects directly or indirectly. They are integral to both the development and the delivery of flexible, cost-effective and reliable solutions. The following sections provide a brief description of three of these processes, which have been crucial to the successful implementation of information technology solutions in the County's service environment. These processes are:

- *Strategic Planning Process*
- *Information Technology Architectural Planning and Execution*

- *IT Investment Portfolio Management*
- *Systems Development Life Cycle Standards; and*
- *Information Technology Project Management Program*

Each process is briefly discussed in terms of its origins, its larger operational context, the primary functions performed, principal business benefits achieved and future directions.

4.2 STRATEGIC PLANNING PROCESS

In FY 2004, DIT assembled a Strategic Planning team of staff across the IT organizational specialties to gather input on values, needs, and expectations related to the future provision of information technology solutions and services. The team was organized into external communications team, internal communications team, and IT research and development team. The resulting efforts of this initiative complemented the annual process for development of the IT Plan and operations of the Department of Information Technology.

The focus of the planning process is to ensure a comprehensive approach to IT across the enterprise, taking into consideration a number of important influences (both internal and external) of relevance to the organization. Influential factors include changing requirements and channels for G2G interaction, the need for business integration and interoperability for cross-cutting county initiatives, the rise of e-government opportunities, industry and economic trends, and similar imperatives. The strategic thinking and planning process provides a framework to make decisions around alignment of IT resources to meet the needs of county government. The Strategic Plan provides the County forethought for long term technology commitments and allocation of limited resources to achieve business objectives. This process is necessary to keep and update technology, analyze appropriateness of the technology refresh cycles, and the effectiveness and sustainability of technology investments.

Keeping up with the pace of change in technology and using technology effectively to meet government business requirements and expectations are still the most critical challenges facing information



technology providers. Advances in technology enable the workforce to provide better and faster service at a reduced cost, but changes in technology are expensive and complex. New technology must be adopted carefully and integrated wisely into the existing technology infrastructure of an

organization in order to maximize the benefits in a cost-effective manner. To give focus and direction to staff within the technology department and to better plan for the future, a vision statement was adopted that aligns with the County's vision statement:

'We are a skilled, forward thinking and responsive organization that builds partnerships in the delivery of a strong and innovative technology environment. We pursue and embrace opportunities to creatively enable and strengthen service delivery throughout Fairfax County.'

Values were developed along with strategic goals and initiatives. To review these values, goals and initiatives, refer to the Department of Information Technology Strategic Plan, October 2003.

Seven major trends impact technology solutions and enrich the County's current technology architecture. These trends maximize IT capability for users and stakeholders while presenting some deployment challenges in the face of IT resource limitations:

1. *The workplace is more mobile, therefore, job functions can be performed without being tied to a physical location.*
2. *Communication, collaboration, and information sharing methods are increasingly automated.*
3. *Information resources must be managed from a full life cycle perspective.*
4. *Security for information and communications systems and privacy of information are critical priorities.*
5. *Technical architectures are facing increased capacity and flexibility demands.*
6. *Citizens require "around the clock" access to information and services through a variety of convenient delivery channels.*
7. *Interoperability requirements drive a need for data standards and open information architecture.*

To accomplish DIT's mission and vision, strategic initiatives are categorized within three strategic focus areas to ensure well-defined purpose. Essential components of each initiative are identified to facilitate the development of agency policies and processes as DIT seeks to achieve its key objectives. The successful adaptation of these strategic initiatives positions DIT to provide an effective technology infrastructure and efficient customer service support. The overall outcome promotes County agencies working together with partners, maximizes County agency resources to provide diverse government services and optimize accessibility to county constituents and customers.

Collaborative initiatives are focused around governance structure and processes, technology rollout, interoperability framework, technology portfolio management and marketing. **Customer Service Delivery initiatives** are designed to improve customer service delivery and increase customer satisfaction and improve continually the quality, responsiveness and cohesiveness of products and services delivered. The third set of initiatives, **Staff Improvement initiatives**, revolves around resource allocation of personnel and skills ownership and accountability.

A major challenge is the development of comprehensive performance measurement systems. Working to overcome these challenges is a strategic priority as the importance of developing performance measurements is fully recognized. Projects have been launched for both initiatives and performance measures that will result in improvements and alignment with the intended direction of the department and the County over the next three to five years. DIT is in the process of refreshing its strategic plan and developing a balanced score card approach. Key elements of the updated plan will include more focus on the strategic direction of the agencies served, and how agency strategies will necessitate changes in DIT's future infrastructure plans and the deployment of DIT resources.



4.3 ARCHITECTURAL PLANNING AND EXECUTION

DIT is faced with the constant challenge of staying nimble while aligning the County's information technology strategy with the agencies' evolving business requirements. Rapid changes in business requirements can outstrip the capabilities of the IT infrastructure. Whether it takes an upgrade, an enhancement or a completely new system to meet new business requirement, it is DIT's job to deliver the solution — on time and within budget.

Disparate decisions and infrastructure investments can easily create a complex and fragile computing environment that is intolerant of change. Given the rapid pace of today's business innovation, no agency can afford to be locked into an environment that is resistant to change. There is an industry-wide emphasis to shift toward developing operational agility. In that effort, the modern IT function has to lower the cost of future changes while managing the total cost of ownership for each solution.

IT Architectural Planning breaks out of this loop by creating an adaptive architecture that “engineers out” everything that inhibits change, while “engineering in” a high tolerance for the unanticipated. Specifically, an IT Architectural Plan maximizes the effectiveness of IT, while minimizing the risk associated with IT investments, and sets a clear direction for the future acquisition and deployment of information technology in Fairfax County. IT Architecture introduces a set of architectural best practices to guide IT in the process of designing a flexible technical infrastructure, which frees the organization to provide an IT environment that will meet business requirements and address business issues.

Execution of the IT Architecture Strategic Plan insures the following benefits:

- *Better alignment of IT assets with business goals to create a shared enterprise-wide vision*
- *Supercharging the infrastructure with leading-edge technologies and “on-demand” capacity*
- *Developing a consistent framework for future technology decisions*
- *Making more effective IT investments and optimizing IT funding processes*
- *Resolving emerging business problems while leveraging the existing technology investment*
- *Reducing unnecessary database, hardware and application software redundancy, thereby providing the potential to reduce the cost of IT(DIT recognizes that some redundancy is necessary and beneficial to promote availability, reliability, and recovery of systems)*
- *Promoting data sharing between agencies and across IT platforms; improving interoperability and the potential for agency resource sharing*

In FY 2001, a Strategic Architecture Committee composed of DIT and technical and/or business representatives of County departments was formalized. Committee members selected had knowledge of contemporary information technology (IT) direction and the role IT plays in the vision or mission of their agency.

The purpose of the Architecture Committee is to address information technology (IT) architecture issues Countywide and to propose IT architectural

goals, standards and guidelines for consideration in implementing IT projects and initiatives throughout the County. In addition to assessing conformance of proposed solutions, the committee's review process provides an opportunity to emphasize the need for interoperability of systems and processes that cross agency or functional lines.

The Committee also works with County departments to ensure that participation and inclusion in decisions that affect the annual IT planning process. Responsibilities of the Committee include:

- ▶ Provide information technology architectural leadership to Fairfax County Government in supporting the on-going development of a strong, flexible, interoperable and secure technology environment.
- ▶ Ensure an integrated view between the County's architectural direction and technology initiatives and implementation plans.
- ▶ Work closely with DIT and other County IT groups to identify IT architectural issues related to business

needs and IT projects, and propose approaches to address them.

- ▶ Propose IT architectural plans and standards to DIT, the DCE and the Senior IT Steering Committee for Countywide implementation.

In FY2005, a new organizational team was created within DIT to provide oversight of all County architecture and infrastructure standards, policies, and directions. The responsibilities of the **Architecture Review Board** include application development architecture, infrastructure and information architectures, security architecture, emerging technology, process and data modeling, integration and interoperability methodologies, technical standards, and SDLC compliance. ARB's role is extremely important and valuable given the need to leverage solution platforms and processes across the enterprise and provides scalability, repeatable processes, and seamless interoperability for achieving cross agency business initiatives and county-wide initiative goals.

4.4 SYSTEMS DEVELOPMENT LIFE CYCLE STANDARDS (SDLCS)

The County published Standards for documenting the development and implementation of applications. The original standards included written means of conveying information about the planned application, to allow for controls, performance, data integrity, appropriate infrastructure and operational procedures required to place the application into production.

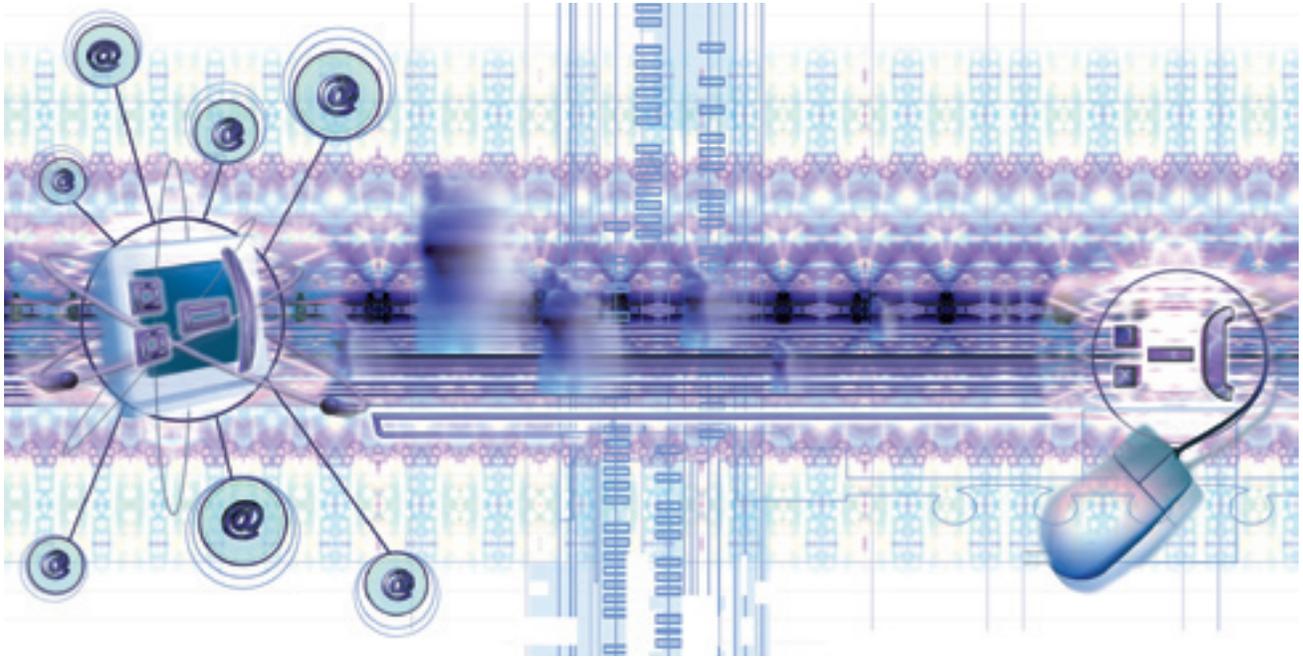
As new technologies emerge and become part of the County's systems portfolio new application development techniques and application architectures using the newer and emerging technologies are required. These SDLC standards were enhanced in 2007 to include updates and additional components. As part of the document update, the SDLC will incorporate new development, wireless and interoperability standards, updated security standards, reviews for e-government and GIS, and requirements for Continuity of Operations (COOP) plan and related disaster recovery information as a requirement for deployment of any new system.

The Systems Development Life Cycle Standards form the basis for making the development of applications a consistent, repeatable process. The SDLCS provides a framework for application developers as to what

are the important procedures and universal requirements necessary to complete an application. As an example, web applications must conform to Section 508 and ADA requirements, which enable the use of assistive technology such as screen readers for the blind.

The Standards apply to all applications developed for use by Fairfax County Government. These include, but are not limited to, enhancements on legacy applications, client server; WEB based applications, wireless technologies, communications systems and taxonomies. All staff and contractors developing and maintaining applications for County Government must comply with the Standards. In order to assist non-technical staff in using them, a glossary is included on the Web site.

A value implicit in the SDLCS is the importance of using the expertise of the project manager to select the appropriate outputs. While a minimum number of document deliverables are mandatory, the manager must select others appropriate to the individual project. Furthermore, SDLCS promotes accountability. The last phase of the Standards, the Evaluation Phase, includes a post-implementation review to ensure that the project has met its requirements and



lessons learned on how the application development standards can be improved. Periodically, selected IT projects are reviewed internally by DIT business and technical staff. In addition, the Fairfax County Internal Auditors will review randomly selected projects.

Description of the Standards

The eight phases of the Fairfax County Systems Development Life Cycle are:

1. Preliminary Plan
2. Define Requirements
3. Design
4. Develop
5. Test
6. Implement
7. Support
8. Evaluate

Each phase contains multiple steps. Each step has one or more outputs. In the Design phase, for example, the step Design Technical Architecture has five outputs, two of which are: Check list for Technical Architecture Installation and Network Infrastructure Plan. The description of each deliverable document includes its purpose, content, recommended techniques and tools, and, where appropriate, a template or sample.

The first step in following the Systems Development Life Cycle Standards is for both the technical project manager and user project manager, to complete a check list selecting which outputs are relevant to their project. A core set of outputs is mandatory for the different types of development. For example, for Web development, project managers must complete the following:

- *Project management plan [Outputs 1.2.1, 2.6.1]*
- *Statement of scope [Outputs 1.2.2]*
- *User requirements [Outputs 2.7.1]*
- *A data model (if there is a database) [Outputs 2.3.1, 3.2.1]*
- *A process model [Outputs 2.1.1, 2.2.1, 3.1.1]*
- *And a test plan [Outputs 5.1.1]*

The project manager and Division Director approve the completed outputs. In addition to the eight phases described above, the Web site contains the Checklist and a Glossary of terms used in the Standards, and an Introduction. The Glossary facilitates the use of the Standards by the user staff involved in application development. The Introduction covers how to access and use this document. It includes: the purpose of the standards, what they are to be used for and how to use them, a suggested sequence for completion, recommended input documents and a sample of available commercial tools. The Introduction also contains

a checklist of all the outputs from which project managers will select those relevant to their project. Because of the variation of size, type and platforms of applications, the DIT and user agencies' Project Managers start the development of the application by selecting outputs applicable to that particular project. The selections are scrutinized and approved by both DIT and user agencies' management.

The standards can be found on the Fairfax County Web Site on the Department of Information Technology Main page at the following address: www.fairfaxcounty.gov/dit/sdlcs.htm

The Systems Development Life Cycle Standards form the basis for making the development of applications in Fairfax County a consistent, repeatable process. The SDLCS provides a framework for application developers outlining the important procedures

necessary to complete an application. Using SDLCS as a starting point, the Architecture and Planning team leads the effort to re-formulate a methodology on what procedures should be followed, and how they should be executed. The methodology will expand upon this. Each year, staff will go through a process of review and refinements to the SDLCS as necessitated by changes in technologies. Ensuring the quality of applications provides consistent and all encompassing standards that apply to all phases of application development. The Architecture and Planning team integrates the application development process standards, and the technology architectural standards that affect the development of systems including identification of standards that need to be updated and where new standards need to be developed.

4.5 IT PROJECT MANAGEMENT TRAINING PROGRAM

Managing an information technology project to successful completion on time and within budget is extremely challenging, even for experienced IT professionals. Successful completion of complex initiatives is dependent upon project managers possessing not only knowledge and understanding of the highly technical aspects of an IT project but also the skills associated with managing projects in a dynamic environment. An IT Project Manager specification (position series) is included within the County's personnel classification system.

During the late 1980's and early 1990's the County's internal audit office reviewed several information technology projects, and recommended that the County:

Establish a Countywide IT Project management-training program in consultation with IT Project Management professionals. Provide training to both DIT and agency personnel prior to undertaking extensive IT projects." AND "— establish industry approved guidelines for assignment to the role of IT project manager.

This need was further highlighted in late 1996 in a consultant's report released on December 17, 1996 entitled, "Renewing Fairfax County: An Organization and Staffing Evaluation of Fairfax County Government." On March 7, 1997, the Acting County Executive's

response to the Board of Supervisors about the study included:

- (1) *"The DIT will establish an Information Technology (IT) Project Manager training and certification program within 3 months —, with certification of a cadre of IT Project Managers within 6 months." AND*
- (2) *"DIT and agency personnel would not be assigned project management responsibilities until certification requirements have been completed. Curricula will include classroom and on-the-job training elements."*

In early 1997, the Department of Information Technology (DIT) reviewed other organizations' project management practices and conducted a survey of County information technology managers to determine the type of knowledge and skills needed to enable County staff to function effectively as project managers. Based upon the results of the review and survey, a County project management training program and the associated course content was designed and implemented.

In 2001, the County's IT Project Management (ITPM) training program was redesigned to include the project management core competencies outlined in the Project Management Institute's (PMI) body of knowledge (PMBOK). PMI is the recognized leader and

credentialing organization for project management professionals. Fairfax County's new ITPM training program has incorporated current industry approved ITPM practices to ensure sound high quality project outcomes. Additional enhancements are made each year as technology and best practices evolve. Additional focus has been placed in recent years on managing risks, IT security, organizational change management, and business process redesign.

The new and improved training program consists of ninety-six (96) hours (12days) delivered over the course of 8 weeks by County staff and a project management professional. The overall objective of the IT Project Management course is to provide IT project managers with a foundation in basic project management concepts, principles, and practices to effectively and efficiently manage IT projects.

The core content areas covered are:

- *IT Project Management Fundamentals*
- *Project Leadership and Communication*
- *IT Project Plan Development*
- *Microsoft Project*
- *Solutions Delivery Framework for Information Systems*
- *Project Budgeting and Cost Management*
- *Information Security, Risks and Controls*
- *Project Procurement and Contract Management*
- *Project Risk Management*
- *The Technology Delivery Process*
- *Business Process Redesign*
- *Information Systems Audit and Control*
- *Group Presentation & IT Systems Case Study*
- *Best Practices and Lessons Learned*

Training is provided to those individuals who are currently, or will soon be managing an information technology project. Staff are identified by their agency director and selected through a formal nomination process. The training program is currently institutionalized and is normally conducted once a year. Approximately two hundred and fifty (250) County of Fairfax and local government IT professionals have completed the program and met certification requirements.

The Fairfax County IT Project Management Certification is awarded to participants in recognition of full participation in the ITPM course. The County's certification is customized for its IT Project Management operations. Certification is based upon class participation and achievement of the course objectives. The project manager acquires a clearly defined set of core competencies related to ITPM by attending all IT project management classes in their entirety. This includes the successful completion of a hands-on Microsoft Project desktop training course. Certification in IT Project Management is the basic requirement for managing all levels of IT projects in Fairfax County. Once certified, an individual is given direct responsibility and authority for all phases of the project management process from initiation to closure. Support for applying project management methodology is available to new project managers who may benefit from mentoring.

Project management success is the completion of IT projects that are delivered to customers in the allocated time period, within the budgeted cost, and at the user's specified performance level. The use of effective project management skills is critical to the successful completion of IT projects. The County's IT Project Management training program provides the methodology for achieving high quality IT results utilizing County and contracted resources effectively and efficiently. Working with DIT, graduates of the IT Project Management Certification program have established a Project Management Forum to share information about on-going projects, experiences and ideas, and to refresh knowledge and assist making improvements to the Certification curriculum.

In FY 2006, DIT began developing and delivering a new series of one-day seminars to Fairfax County Project Management personnel. The ITPM Seminar Series, also known as the ITPM "refresher", provides the opportunity to offer follow-up training for those IT project managers that took the classes prior to 2001 and others as needed. The goals of this initiative are to hone existing project management skills, increase the likelihood that County projects will be completed within allotted time and cost constraints and improve each project manager's ability to identify and mitigate project risks. This series of independent, interactive seminars, allows 25 students per day to learn about and practice current project management techniques. Also, the brevity of each seminar allows the County to train a larger group of personnel by scheduling more than one seminar session per topic as demand may warrant; to offer seminars more

than once during the fiscal year; and to allow project managers the opportunity to “refresh” themselves in specific topic areas as needed. DIT has developed plans to develop a full curriculum of Seminar Series classes.

The first Seminar Series topic areas delivered were IT Project Integration and IT Project Communications. It is critical that IT project managers have tools available to move quickly to establish project guidelines, create initial project documents, and organize themselves and the project team for success. Because communication happens naturally between most project stakeholders, many Project Managers do not consider formal communications planning in

developing an overall project plan. A hypothetical case study project is included as part of the new Seminar Series.

Program enhancements are planned for FY 2008 and FY 2009 to provide new tools and techniques for managing projects that have enterprise-level impact, influence, or reliance. The County's increased focus on providing training and certification in the application of project management techniques to information technology projects is a critical and proactive effort directed at ensuring successful application of information technology to assist the County in meeting the needs of its citizens in the 21st Century and beyond.

