



# **SECTION 4**

## **MANAGEMENT CONTROLS AND PROCESSES**

11000110007

# **MANAGEMENT CONTROLS AND PROCESSES**

## **FEATURED IN THIS SECTION**

<b>4.1</b>	<b>Information Management Framework .....</b>	<b>1</b>
<b>4.2</b>	<b>Strategic Planning Process .....</b>	<b>5</b>
<b>4.3</b>	<b>Architectural Planning and Execution.....</b>	<b>6</b>
<b>4.4</b>	<b>System Development Life Cycle Standards (SD LCS) .....</b>	<b>8</b>
<b>4.5</b>	<b>IT Project Management Training Program.....</b>	<b>9</b>

## SECTION 4

### MANAGEMENT CONTROLS AND PROCESSES

#### 4.1 Information 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).

Several independent county organizations already involved with application programming, systems infrastructure, data center operations, telecommunications, mapping and technical training were merged to the new IT Department. Centralized resources for system security, architecture and standards, e-government, technology planning and administration were added resulting in a full function centralized county government IT organization. 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 the central IT agency. DIT assists these agencies with consultation, mentoring, technical project support, infrastructure provisioning, security, licensing, and policy and standards compliance. All departments must adhere to county IT standards, planning and budgeting and continue to follow the direction set by the county to ensure consistency, cost efficiencies and aggregate technology investment value.

ITAG made further recommendations for IT governance and funding, including:

- 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 countywide 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.

At the time ITAG recommended establishment of a technology modernization fund, it also recommended that the county provide funding of approximately \$20 million per year for investment in technology in order to sustain the Board of Supervisor's goal for service efficiencies and effectiveness at optimal cost. This fund provides money for software, hardware and services required for successful project delivery. 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 have been implemented in on-going development and improvements in the county's IT organization, governance, and support structure:

- 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 incorporated in the countywide 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 established. (FY 1996)
- Creation of a permanent private sector advisory group: Information Technology Policy Advisory Committee (ITPAC) (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)
- Reorganization of IT Security leadership and development of independent IT Security Office in DIT (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 (FY 2005)
- Creation of a position dedicated to integrated Public Safety and Emergency Management strategy (FY 2005)
- Designated Director of DIT as Chief Technology Officer (FY 2006)
- Established e-Gov Executive Committee (FY 2007)
- Established Services-Oriented Architecture Team (FY 2007)
- Adopted ITIL Framework for Service Support (FY 2007)
- Established Deputy Director to enhance executive capacity on IT service delivery and operational efficiency, and manage emergency support initiatives (FY 2007)
- Established Court Technology Leadership position and Governance structure (Courtroom Technology Governance Board (FY 2007)
- Established Public Safety IT Governance Board, and, Public Safety IT Architect (2008)
- Enhance Change Management and configuration Management Processes (FY 2008)
- Released new strategic plan and updated Systems Development Life Cycle Standards (SDLCS) (FY 2008)
- Established Leadership for National Capital Region Interoperability Initiative (FY 2007)
- Established FOCUS Project (County and Schools) Steering Committee (FY 2008)

- Develop Technology Strategy Map (FY 2009)
- 'One Web Team' established; integration of e-Gov staff with Office of Public Affairs web-content functions in adopting new WEB capabilities.
- Study of IT positions and resources county-wide (2011)
- Established best practices SAP Technical Competency Center in DIT to support FOCUS (2012)
- Restructured IT Portfolio Management function to an Enterprise Program Management Office (2013)

### Executive Governance

The overall governance structure is described in Section 1 of this Plan. A Deputy County Executive (DCE) is responsible for the overall strategic direction of technology and information initiatives. The Board of Supervisors 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 and administrative –related departments and initiatives, including the County Libraries, Department of Cable and Consumer Services and the Office of Public Affairs who partner with the Department of Information Technology on public access technology capabilities and the e-government program, and the Environmental Coordinating Committee (includes Green IT opportunities and results).

The Director of the Department of Information 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 Chief Financial Officer. The committee receives additional input on a variety of issues from the County's Senior Management Team made up of all agency heads. The committee meets routinely to look at specific IT initiatives, opportunities and issues, sets the county's IT strategy based on the Board of Supervisor' direction, and approves the annual IT investment plan which is delivered by the CTO to the ITPAC for its endorsement. The ITPAC (described in Section 1) is a group of technology savvy citizen leaders appointed by the

Board of Supervisors to advise the DCE and CTO on strategy, the industry, and best practices. The annual ITPAC agendas provide 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. ITPAC writes an annual letter to the Board of Supervisors with its recommendations and advice on technology priorities as part of the annual county budget process. Members also advise their respective Board members on IT matters.

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 of the committee, which includes the CTO, E-Government Manager, Directors of the Department of Cable Services, Libraries, and the Office of Public Affairs, supported also by the County's IT Security Director and the County Attorney. 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 projects such as the Public Safety Information Systems project, Courtroom Technology, and FOCUS project have governance committees, typically chaired by the sponsoring Deputy County Executive with membership including the stakeholder business departments and the CTO or DIT management. 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 established 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 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 existing technology investments;
- 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) and DIT, 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 DIT, includes such factors as proposed system architecture and its compatibility with the county's technical architecture standards, impact on existing systems and infrastructure, data conversion, electronic interface requirements, and staffing requirements for development and maintenance of the solution. DMB and DIT make recommendations for improvement of the proposals. The final proposals are presented in an oral interview setting conducted by DIT and DMB senior management, who 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, funding in the IT 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 or benefits a major department mission but does benefit a small independent function, funding may be placed into requesting 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 requirement with DIT providing advisory consultation, infrastructure, resources, and/or standards compliance. All technology solutions are required to be brought before the DIT Architecture Review Board for solution technical review.

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 CTO in the county's 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 business practitioner project managers through a project management certification course developed by DIT, which certifies business agency staff to lead projects at different dollar thresholds. The certification focuses on project reporting and administration, contract negotiation and management, technical architecture, business process redesign, task

planning and other topics. The Business Sponsor's Project Manager (PM) is responsible to manage business requirements, project scope, and transition of the business to the new technology capabilities. DIT assigns a Technical Project Manager (TPM) that works with the business sponsor PM responsible to design and 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 (normally) solution provider contract negotiations. The DIT PMO assists with IT contracts development review, and compliance.

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 solution and compatibility with architectural standards and the county's infrastructure as a part of the competition and acquisition process. This includes member's participation 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, contract requirements, and technical guidance from the Project Management Office (PMO) function in DIT.

### Summary:

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 four 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

## 4.2 Strategic Planning Process

In FY 2004, DIT assembled a departmental Strategic Planning team of staff across the IT organizational specialties to gather input on value, need, and expectations related to the future provision of information technology solutions and services, and alignment with county-wide business strategy. 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', 'G2B' and 'G2P' interaction, the need for business integration and interoperability for cross-cutting county initiatives, fast adoption of e-government opportunities, industry and economic trends, transparency and similar imperatives, and industry trends. 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 technology refresh cycles, and the effectiveness and sustainability of technology investments.

Our strategy is based on certain realities: keeping up with the pace of change in technology and using technology effectively to meet government business requirements and public expectations are still the most critical challenges facing information technology providers.

- Information Technology Architectural Planning and Execution
- System Development Life Cycle Standards (SD LCS)
- 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.

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 by DIT 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 opportunity to creatively enable and strengthen service delivery through 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 optimizes accessibility to county constituents and customers.

Internal DIT **Collaborative Initiatives** are focused around governance structure and processes, technology rollout,

### 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. The IT provider imperative is that solutions must be delivered on time and within budget. Rapid changes in business requirements can also overwhelm the capabilities of the IT infrastructure. Disparate decisions and infrastructure investments can easily create an overly complex, ridged and/or 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 inflexible and cannot scale. One of DIT's key goals, well aligned with industry-wide best practices, is to develop operational agility. In that effort, the modern IT function has to lower the cost of future changes while optimizing the total cost of ownership for each solution.

IT Architectural Planning creates an adaptive architecture that "engineers out" inhibitors of change, while "engineering in" a high tolerance for the unanticipated. It also provides for transition to next

interoperability framework, technology portfolio management and marketing. **Customers Service Delivery Initiatives** are designed to improve customer service 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 in a continuous improvement mode.

DIT is in the process of refreshing its strategic plan, balanced score card, and dashboard. Key elements of the updated plan include the strategic direction of the agencies served, and how agency strategies will necessitate changes in DIT's future infrastructure plans, the development of IT resources, and reduction in the overall cost of IT delivery.

generation capabilities which may be internal or external sources and capabilities. Specifically, an IT Architectural Plan maximizes the effectiveness of IT, while minimizing the risk associated with IT execution. DIT's architectural planning sets a clear direction for the future development 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 meets business requirements.

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

The **Architecture Review Board was established** In FY 2005, in DIT to provide oversight of all county architecture and infrastructure standards, policies, and directions. The responsibilities of **(ARB)** include application development architecture, infrastructure and information architectures, security architecture, emerging technology, process and data modeling, integration and interoperability methodologies, technical standards, and System Development Life Cycle Standards (SD LCS) compliance. ARB's role is extremely important and valuable given the need to leverage solution platforms and processes across the enterprise and provide scalability, repeatable processes, and seamless interoperability for achieving cross agency business initiatives and countywide goals.

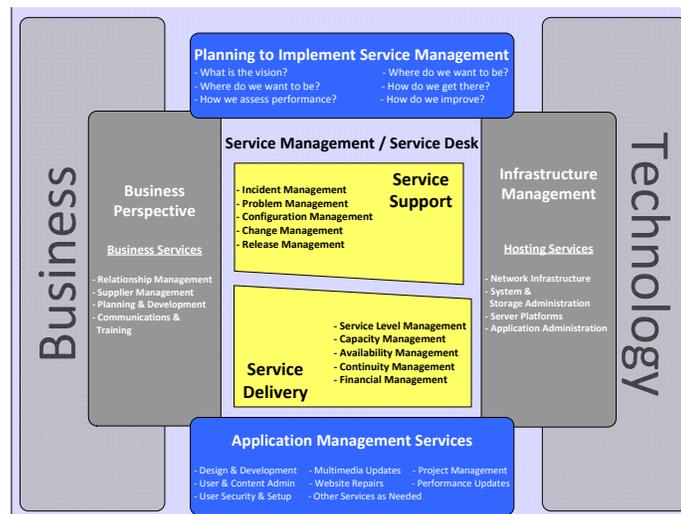
The purpose of the Architecture Committee is to address IT architecture issues countywide and to propose IT architectural goals, standards and guidelines for consideration in implementing IT projects and initiatives throughout the county. In addition to assessing

conformance of proposed solutions, the committees' review process provides an opportunity to emphasize the need for interoperability of systems and processes that cross agency or functional lines.

The ARB also works with county departments to ensure 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 county agencies business sponsors, Project Managers, and 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 adoption and countywide implementation.

Agency IT Analysts work directly with DIT divisions on a routine basis in consulting and execution of agency based solutions. DIT has regular monthly meetings with all IT analysts on key subjects contribution to new enterprise-wide solutions and capabilities and strategy such as messaging solutions, MS upgrade paths, DIT-cloud and service catalogue offerings, remote access, BYOD, other infrastructure, and security.



**ITIL and IT Service Management Framework**

#### 4.4 System Development Life Cycle Standards (SDLCS)

The county publishes standards for documenting the development and implementation activities for technology applications and systems. The standards include means of conveying information about the planned solutions to allow for development methodology, controls, performance, data integrity, appropriate infrastructure and operational procedures required to place the application into production.

The Systems Development Life Cycle Standards (SDLCS) form the basis of making the development of applications a consistent, repeatable process. The SDLCS provides application developers a framework of the important procedures and universal requirements necessary to complete an application. As new technologies emerge and become part of the county's systems portfolio, new application development techniques and application architectures using emerging technologies are assessed. Current SDLC includes new WEB development, wireless application, interoperability, and updated security standards; the process is enhanced for business applications to include reviews for e-government and GIS, and requirements for Continuity of Operations (COOP) plan and related disaster recovery information which is a requirement for deployment of any new system. As an example, web applications must conform to Section 508 and the American Disability Act (ADA) requirements, which enable the use of assistive technology such as screen readers for the blind. The standards are being

enhanced to take advantage of WEB 2.0, open source, and WEB 3.0 and beyond technologies that will further enhance citizen to government engagement, decision support, and transparency. 'Cloud' based opportunities such as Software as a Service (SaaS) are also reviewed for feasibility given the county's security standard is provided.

The SDLCS and architecture standards apply to all applications developed for use by Fairfax County Government. All staff, contractors, and solution providers providing, developing and maintaining applications for County Government must comply with the Standards, which are published.

A value implicit in the SDLCS is the importance of using the expertise of the project manager (PM) to select the appropriate outputs. While a minimum number of document deliverables are mandatory, the PM 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 may review randomly selected projects.



**Description of the Standards and Process**

The SDLCS 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 SDCLS as a starting point, the Architecture and Planning team leads the effort to reformulate a methodology of procedures that should be followed and their execution. The SDLCS is reviewed for updating as necessitated by changes in technologies.

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

The SDLCS also includes requirement for change management processes, system resiliency or disaster recovery options.

Each phase contains multiple steps; each step has one or more outputs. 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](http://www.fairfaxcounty.gov/dit/sdlcs.htm)

**4.5 IT Project Management Training Program**

Managing an information technology project to successful completion on time and within budget is extremely challenging. Successful completion of complex initiatives depends on project managers' knowledge and understanding of technical aspects of an IT project as well as having the skills required for managing projects in a dynamic environment. In the 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 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 1997, DIT reviewed 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 incorporated current industry approved ITPM practice to ensure high quality project outcomes. Additional enhancements are made each year as technology and best practices evolve. In recent years emphasis has been placed on managing risks, IT security, organizational change management, and business process redesign. The training program consists of ninety-six (96) hours (12 days) 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 Fundamental
- Project Leadership and Communication
- IT Project Plan Development
- Project Management Tools
- 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 sixty (260) Fairfax County and local government IT professional 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 hand-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 responsibility for the project management process from initiation to closure. The county's IT Project Management training program provides that methodology for achieving high quality IT results utilizing county and contracted resources effectively and efficiently.

In June of 2008 Fairfax County's IT Project Management Training program was recognized by the National Association of Counties and received the association's annual Model Program Award which recognizes innovative county government programs designed to modernize and streamline county government and increase services to citizens.

The IT Project Management Training program is offered when there are new projects in the IT Plan. In years where there are no new projects funded, DIT does not normally run a full curriculum. It will be evaluated and updated as part of the County Executive's new county-wide employee development and comprehensive training program in FY 2014-15.

In addition, DIT provides training funds for agency-based IT analysts for key technologies.

