SECTION 4

MANAGEMENT CONTROLS AND PROCESSES

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4.1 Information Technology 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.

Today DIT assists County 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.

EXECUTIVE GOVERNANCE

The overall governance structure is described in Section 1 of this Plan. 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 Chief Financial Officer. The ITPAC (described in Section 1) is a group of technology savvy citizen leaders appointed by the Board of Supervisors to advise the CTO on strategy, the industry, and best practices. The annual ITPAC agendas provide information about both existing portfolio initiatives as well as planned initiative 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.

Major projects such as the Planning and Land Use System Project (PLUS), Courtroom Technology, and Health and Humans Services Integrated Services Initiative 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 Management Office (PMO) in the Department of Information Technology. For each fiscal planning cycle in alignment with annual budget guidelines, initial project proposals 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 technology project proposals submitted for funding. 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;
- Proposed project time frames, 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 using 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 DIT staff, 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 to 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 provides the County Executive input and recommendations on technology issues for consideration as part of the Advertised

Budget input process; the committee also composes an advisory letter to the Board of Supervisors supportive of the strategy and themes contained in the proposed IT project funding package under consideration for inclusion in the County's Adopted Budget.

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 accomplished within in requesting agencies' departmental budgets. 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. Formal architecture standards have been developed that provide further guidance to the project managers. All projects must follow the County's standards and project methodology as defined by the CTO in the County's IT standards.

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 prepare Project and Expenditure plans, hold regular project meetings and report progress and issues. Guidance is provided by the IT PMO in DIT.

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 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 direct oversight in tracking project performance, contract requirements, and technical guidance from the Project Management Office (PMO) function in DIT. As available, the County may offer an IT Project management training program for business practitioner project managers. Knowledge goals focus on project reporting and administration, contract negotiation and management, technical architecture, business process redesign, task planning and other topics.

SUMMARY

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

- Information Technology Architectural Planning and Execution
- System Development Life Cycle Standards (SDLCS)
- 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

After more than a year of work, engagement, development and refinement, Fairfax County leadership presented a detailed Countywide strategic plan to the Board of Supervisors in February 2020. The plan sets a clear, unified, community-driven vision for the next 10-20 years; aligns and integrates existing issue-and department-specific plans; provides a tool for focusing and prioritizing initiatives over the next 3-5 years; and aims to communicate progress on achieving measurable outcomes to all stakeholders.

A driving motivation of this effort was the realization that Fairfax County needs to evolve and find new and innovative ways to serve the community. While the County overall enjoys enviable national rankings in median income and school performance, as well as low crime rates and great parks, there are challenges that need to be addressed. Opportunity varies depending on who you are and where you live in the County, and there is a widening gap between those at the highest rungs of the economic ladder and those who struggle to get by; traffic congestion challenges the region's economic and social vibrancy; higher rents and housing, taxes and other living costs threaten the ability for many to live in the County; and increased growth and urbanization strain the County's natural resources and built infrastructure.

The intent of this strategic plan is to define a vision for our community, to prioritize the actions to address the most critical challenges and to move us toward that vision. Based on extensive community and stakeholder input, nine priority areas were identified:

- Cultural and Recreational Opportunities

- Economic Opportunity

- Effective and Efficient Government

- Empowerment and Support for Residents Facing Vulnerability

- Health and Environment

- Housing and Neighborhood Livability

- Lifelong Education and Learning

- Mobility and Transportation

- Safety and Security

The plan development process included extensive research to review existing documents, previous community input, relevant scholarly work and the latest trends, and to benchmark the work of other communities. Additional targeted outreach to stakeholders and service provider partners was conducted to gain additional insight. Once the research was completed and draft strategies were developed, another round of community engagement was conducted in the fall of 2019. Efforts are now underway to lay the groundwork for implementation following Board of Supervisors' review and eventual adoption. Future budgets and work by County staff will align with the priorities in this plan. Performance management systems will also be aligned to show the community how the needle is moving on desired outcomes and to hold County government accountable for results.

For additional information on the County's strategic planning process, please refer to https://www.fairfaxcounty.gov/strategicplan/

In concert with the Countywide effort, the Department of Information Technology assembled a 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. This effort complements development of the annual IT budget and IT plan, while considering organizational evolution, changes in technology capabilities, and operational requirements.

The Department of Information Technology Strategic Plan can be easily integrated with the Countywide effort as well as One Fairfax, the County's policy committing Fairfax County government and public schools to intentionally consider equity when making policies and delivering programs and services. The IT plan is intended to keep up with the pace of change in technology and using technology effectively to meet government business requirements and public expectations. The plan focuses on four key areas:

- Digital Transformation: Digital transformation drives end to end innovation that includes people, policies, processes, and technology. It enables development of new capabilities that improve efficiencies through automation. These efficiencies will be achieved in a secure manner with a focus on improving citizen services and government business engagement

- Data: Fairfax County is a data-driven organization that leverages data as an asset for continuous improvement and effective decision making. The Department of Information Technology will establish a County-wide data stewardship framework that includes standards, governance, privacy, analytics, and open exchange. As the central IT organization, the technology department will provide pathways, tools, and expertise to promote data-driven insights and develop evidence-based strategies

- Security: Fairfax County is continuously strengthening its information systems and infrastructure by adopting innovative methodologies to improve our overall security posture as well as ensuring that no unauthorized access or use of such data/information occurs. Information Security Office will continue to maintain a robust and aggressive vulnerability and risk management program to continuously assess and validate the organizations security and to ensure compliance with Federal, State and industry regulations and best practices

- Cloud: Fairfax County embraces cloud computing based on business requirements for enabling convenient access via, on-demand networks to a shared pool of configurable computing resources (e.g. networks, servers, storage, applications, and services) that can be rapidly provisioned and deployed with minimal management effort or service provider interactions.

These areas are closely aligned with several of the nine priority areas in the Countywide strategic plan, including Effective and Efficient Government; Safety and Security; and Economic Opportunity. An overarching goal of the Department of Information Technology Strategic Plan is to enhance and build on its long-standing reputation of being a trusted central partnering organization providing reliable services.

4.3 ARCHITECTURAL PLANNING AND EXECUTION

The Department of Information Technology is faced with the constant challenge of staying nimble while aligning the County's information technology strategy with the agencies' evolving business requirements. Architectural planning sets a clear direction for the future development of information technology in Fairfax County.

The **Architecture Review Board (ARB)** was established In FY 2005 in DIT to provide oversight of all County architecture and infrastructure standards, policies, directions, to address IT architecture issues County wide, to propose IT architectural goals, standards and guidelines for consideration in implementing IT projects and initiatives throughout the County. The responsibilities of the 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 (SDLCS) 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 County wide goals.

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 County wide implementation.

DIT also sponsors several user groups that provide for engagement of agencies in architectural and enterprise wide IT capabilities planning and related issues, awareness, and all-hands efforts. Through a variety of forums, these include:

- All IT Analysts forum
- County IT Security Coordinators
- Web Analysts and Communications
- Agencies GIS Analyst