Office of Information Technology

CONTENTS

Executive Summary .................................................................................................................... 2
Our Vision .................................................................................................................................. 3
Our Mission ............................................................................................................................... 3
Core Values ............................................................................................................................... 4
Key Success Factors .................................................................................................................. 4
SWOT Analysis ......................................................................................................................... 5
Strategic Goals .......................................................................................................................... 6
  Increase County-Wide Service Levels ..................................................................................... 7
  Optimize Technology Infrastructure and Resources ............................................................... 8
  Streamline Operations and Align Workforce .......................................................................... 9
  Manage Budget/Functional Cost Containment ....................................................................... 10
Strategic Initiatives .................................................................................................................... 11
  INITIATIVE #1: Information Technology Departmental Support & Service Delivery ............... 12
  INITIATIVE #2: Expand Data Management ............................................................................ 15
  INITIATIVE #3: Secure & Protect .......................................................................................... 19
  INITIATIVE #4: Modernization .............................................................................................. 21
EXECEUTIVE SUMMARY

Dauphin County, PA is the 15th largest county in Pennsylvania by population that includes cities of Halifax, Harrisburg, and Hershey. The purpose of the Information Technology Department is to provide efficient, accurate, reliable, secure, and cost-effective technology for Dauphin County in alignment with the County’s goals and objectives. To achieve these goals, we embrace and implement technology solutions that improve business response to our people, streamline internal business processes, and provide high quality services.

This strategic plan that will map out our approach to meet and stay ahead of the challenges of major emerging technology needs and trends facing the County in the next three years. We will routinely evaluate and adjust this document as needed. It will guide us as we define, develop and maintain a portfolio of technology solutions that can effectively be supported to meet business expectations, ensure continuous improvement, and serve people.

This strategic plan assesses the County’s need for technology enhancements, demonstrates an actionable plan to deliver new services, and allows for a prioritized roadmap of technology efforts. We want to put in simple, understandable terms for our approach to business and technology projects for building collaboration with our people and our Information Technology department. This plan also aids with approach to developing this strategic plan including our analysis of our department’s strengths, weaknesses, opportunities and threats. We will then detail our long-term goals and objectives and highlight a few initiatives that will help us achieve success in these areas.

Our Information Technology department will continue to standardize our IT service and delivery through governance processes and procedures. Our team recognizes that the future is filled with change and we need to continue promoting emerging and current technologies to simplify, reduce long term costs and provide efficiencies for our support people, communities, and County.
**OUR VISION**
Increase alignment of information technology services and support with current County government policy goals through utilization of high-quality, cost-effective and progressive technologies while encouraging innovation.

**OUR MISSION**
With applied Innovation, equip all County clientele with effective, reliable and secure technological infrastructure together while integrating collaborative and goal-oriented technology services.
CORE VALUES
This set of core values reflects our Information Technology services department in support of all county employees and citizens.

Diversity, Accountability, Unity, Professionalism, Honesty, Innovate, Nurture

KEY SUCCESS FACTORS
Customer Engagement - is mutually beneficial business value to the company and the customer, having a steady feedback loop process with our people is critical to ensure our team is deploying appropriate technologies meeting county’s needs and objectives.

Enterprise value focus - strive maximum asset utilization for serving multiple county departments. This approach allows opportunities to reduce pricey software licensing costs, improve training, provide lifecycle management, and enhances our relationships with vendors.

Fit for purpose - technologies align with county government objectives. As a county government we often have technologies that are mandated from other government programs or services, in these cases we will adapt and identify/address gaps to any missed business needs for our people.

Managed data - apply security and confidentiality guidelines properly safeguard structured and unstructured data throughout the full lifecycle needs for all county departments.
SWOT Analysis

Both internal and external environments are closely reviewed by the Information Technology services department to develop an outlining list of strengths, weaknesses, opportunities and threats. This list will be used to develop strategic goals highlighted throughout this document.

**Strengths**
- Invested in both cloud and on premise solutions providing flexibility for countywide processes
- Reliable and scalable network or server infrastructure
- Staff longevity and knowledge of current state
- Support all County-wide departments

**Weaknesses**
- Limited service monitoring and automation
- Many standalone departmental applications and services
- Siloed project management disciplines

**Opportunities**
- Emerging technologies to increase operational efficiencies
- Engage department and government officials to showcase departmental offerings
- Provide training offerings such as Online Learning and Lunch and Learn sessions

**Threats**
- Silos in maintaining software licensing and having Information Technology fiscal oversight
- Duplication of technologies causes higher expense
STRATEGIC GOALS

To fulfill our vision and mission, the Department of Information Technology has established the following strategic goals. These goals drive the efforts of the County technology community and are used for planning, prioritizing and coordinating services and supports across all County departments.

- Increase County-wide Service Levels
- Optimize Technology Infrastructure and Resources
- Streamline Operations and Align Workforce
- Manage Budget/Functional Cost Containment

The Dauphin County Information Technology Department (DCIT) serves an immense range of needs – from providing citizens access to online forms to managing software demands of all County departments. As a steward of taxpayer resources, DCIT is committed to effectively utilizing these resources to meet County needs. Furthermore, the rate of development and innovation in information technology challenges us to develop a comprehensive set of goals to focus our strategy in a cost-effective manner. These strategic goals drive planning and decision making in the department, enabling us to provide quality work products and superior service delivery to the County.
**INCREASE COUNTY-WIDE SERVICE LEVELS**

Information technology provides the foundation for all County departments to serve their clients. Each department requires both IT support - infrastructure to sustain daily activities, and IT services - applications aligned with department agendas, to achieve quality service levels. To increase service levels, information technology will ensure the most effective use of existing best practice solutions. IT will also work in collaboration with County departments, assessing current capabilities and resources to coordinate the right technology solutions, current and future, to help achieve their goals. When similar needs exist across various departments, IT will identify and deploy centralized solutions and toolsets to optimize enterprise shared services. This mutual-use of solutions and capabilities results in both increased service levels as well as financial benefits for the County.

Increasing County-wide service levels involve optimizing enterprise shared services and customizing current and future technology solutions to meet individual department needs.
OPTIMIZE TECHNOLOGY INFRASTRUCTURE AND RESOURCES

To manage fiscal pressures and meet increased demands for technology services and supports, IT will optimize information technology infrastructure and resources. By investing in solutions that optimize infrastructure and resources, including personnel, the County prepares to adapt to the changing demand for technology services. To reach this goal, IT will manage the growth of decentralized computing solutions without constraining the needs of departments, and IT will also continue to develop secure backend infrastructure to meet current technology requirements. This prepares the County for future Cloud Computing and Shared Services initiatives, reflecting the transition to “Software as a Service.” Major infrastructure components such as servers, storage systems, data communication connections, power supplies, environmental controls and security devices will be viewed as utilities, with computing capacity made available on as needed basis.

Optimizing technology infrastructure and resources provides the opportunity for better service, enhanced security and disaster recovery services as well as reduced costs.
STREAMLINE OPERATIONS AND ALIGN WORKFORCE

At the County level, information technology currently faces critical modernization projects, shifting department needs and a movement toward “Software as a Service.” To successfully support these projects and to keep pace with technology evolution, IT infrastructure will include a dynamic workforce. Staff needs to be trained and deployed to address the functions, specialties and key tasks required under new ways of operating.

As a large percentage of the technology workforce nears retirement age, the IT department also faces significant challenges in recruiting and retaining information technology personnel. To meet the demands and expectations of the future technology environment, the County will collaborate with human resource professionals to address current challenges and identify future challenges to prepare the technology workforce to successfully support the County.

Building the information technology workforce of the future will include progressive training for personnel, analysis of the workforce and effective succession planning.
MANAGE BUDGET/FUNCTIONAL COST CONTAINMENT

The rapid rate of development and innovation in the information technology demands new, upgraded infrastructure, projects and solutions. These efforts also demand funding, and as a conscientious steward of taxpayer resources, we will balance expansion of services within a consistent budget and staffing level. We will both manage our budget as well as establish outside revenue sources to provide financial flexibility within the department. Then, IT projects will be carefully chosen and prioritized with strategies for saving money and reducing or avoiding costs in mind. Each initiative undertaken by IT needs to realize an effective return on investment.

The constant evolution of information technology also provides the opportunity for IT developments to be cost-cutting measures. For example, Dauphin County recently completed a virtualization project, reducing physical infrastructure and therefore data center and energy costs.

We can deliver new service opportunities within budgetary guidelines by establishing outside revenue sources, effectively prioritizing IT projects and using technology evolution as a cost-cutting measure.
STRATEGIC INITIATIVES

Dauphin County Information Technology has established four strategic initiatives vital to the achievement of our strategic goals and fulfilling our vision and mission. These initiatives are the main projects that both provide a framework for the achievement of our goals as well as detail how they will be achieved. Each initiative aligns with one or more of the strategic goals, and many of them overlap with each other. This reflects the collaborative and complicated nature of information technology.

- Information Technology Departmental Support & Service Delivery
- Expand Data Management
- Secure & Protect
- Modernization
INTIATIVE #1: INFORMATION TECHNOLOGY DEPARTMENTAL SUPPORT & SERVICE DELIVERY

The primary and most important goal of all information technology and staff members is the direct support of departmental operations in the delivery of daily department’s services to the public. Information Technology services must plan and prepare for worst case scenarios such as catastrophic events that may affect any ability to provide a wide-range of services to County residents and businesses. To accomplish this goal, we will continue to look at planning and investing in appropriate technologies, such as Cloud services, to improve and reduce the potential negative impact on County operations and emergency services. Additionally, Information Technology services will adopt industry standards in IT Service Management, such as ITIL and CobiT to follow a cohesive set of best practices and have service level management processes that quantify and clearly demonstrate the true value of IT services. Information Technology will explore needs to predict and to respond to incidents before service disruptions.

KEY OUTCOMES

STRATEGIC IT PLANNING

Strategic planning provides vision and a roadmap for information technology’s current and future projects. Documents such as this strategic plan can serve as a reference for elected officials, department leaders, vendors and citizens regarding the purpose and future capabilities of IT. Strategic planning allows for better alignment of services and support with County goals, increasing service levels and ensuring efficient allocation of resources.

The Strategic IT Planning initiative outcome aligns with the following strategic goals: Increase CountyWide Service Levels and Manage Budget/Functional Cost Containment.
CULTURE OF INNOVATION

Innovation is the core of information technology. Innumerable possibilities exist for projects and applications, and technology evolution warrants constant project improvement and infrastructure upgrades. By taking a strategic approach to innovation, we can align our workforce to encourage progressive thinking in an innovative environment. With focus on the creation of growth strategies, new services and other emerging technologies, like big data analytics, we will improve all aspects of information technology operations, services and supports.

The Culture of Innovation initiative outcome aligns with the following strategic goals: Increase Countywide Service Levels, Optimize Technology Infrastructure and Resources, and Streamline Operations and Align Workforce.
Cloud Computing is a movement to “Software as a Service,” a strategy in which many IT services will only be used on an as-needed basis, much like utilities. This type of system allows IT to meet fluctuating demands in technology capacity, increasing the efficiency of our infrastructure, but requires that we update that backend infrastructure to create scalable and elastic IT-enabled capabilities. The results of implementing this new computing system include increased availability of services, enhanced security services and disaster recovery services. These all contribute to efficient use of taxpayer dollars.

- Increased availability of Services
- Enhanced security and disaster recovery services
- More efficient use of taxpayer dollars

The Cloud Services initiative outcome aligns with the following strategic goals: Optimize Technology Infrastructure and Resources, Streamline Operations and Align Workforce and Manage Budget/Functional Cost Containment.
INTIATIVE #2: EXPAND DATA MANAGEMENT
Drive enterprise development of applications through comprehensive business process reviews. Allow streamlining of Services Continue to monitor and enhance established business process management methodology of continuous improvement. Utilize a blend of approaches to streamline processes and reduce overhead in resources. Establish regular partnerships with County departments to ensure data management objectives are in-line with their business needs.

**KEY OUTCOMES**

**BUSINESS INTELLIGENCE AND BUSINESS ANALYTICS**
We will optimize our applications and technologies for gathering, storing, analyzing and providing access to data in order to help enterprise users make better business decisions. With the continued development of Business Intelligence solutions, we can enhance statistical reporting with more powerful decision-making tools. We will expand our resources to support big data management and analysis, emerging technology that has the potential to change operations and generate significant value for County departments and the citizens of Dauphin County. Build and maintain critical business intelligence partnerships with County departments.

The Business Intelligence and Business Analytics initiative outcome aligns with the Manage Budget/Functional Cost Containment strategic goal.
Mobile services are the technology of the future. By expanding our delivery model with devices, applications and wireless infrastructure, we can create a mobile, dynamic workforce. A mobile workforce provides the capability for County service improvements. By optimizing our provision of mobile services, we can ensure that users have access to the Internet and data on any computer from anywhere in the world, while still maintaining security. Mobile services are the key to flexibility of IT expansion and therefore key to improvement of County services.

The Mobility initiative outcome aligns with the Increase County-Wide Service Levels and Optimize Technology Infrastructure strategic goals.
Dauphin County provides critical services to agencies and citizens. In the event of an emergency, whether a natural disaster, such as flooding or winter storms, or a man-made disaster, like terrorism, Dauphin County cannot afford to halt activities. It is the duty of the information technology department to ensure protection and provision of access to critical technical infrastructures and resources. We will have a planned course of action using functional disaster recovery strategies, such as maintaining two separate data centers that act as backup and recovery sites for each other, to ensure County operations are able to continue in any circumstances.

The Disaster Recovery/Business Continuity initiative outcome aligns with the Increase County-wide Service Levels strategic goal.
**Enterprise Content Management (ECM)**

Enterprise Content Management (ECM) solutions provide robust functionality to control and analyze information. Transitioning to an ECM can help our county improve customer service, streamline processes, enhance employee productivity, track information, comply with regulations, eliminate unneeded information on servers and in filing cabinets, and implement business continuity measures. The main goal of ECM implementation is to have transparent content sharing by making different and unlike applications (for example, web content management, and records management) interoperable. Cost savings can be made by reducing printing and off-site paper storage retention.

The Enterprise Content Management initiative outcome aligns with the Optimize Technology Infrastructure and Resources, Streamline Operations and Align Workforce and Manage Budget / Functional Cost Containment strategic goals.
INITIATIVE #3: SECURE & PROTECT

The goal of the County’s IT security services is to ensure confidentiality of information, integrity of data, systems and operations, technical compliance with local and state regulations, and to conform with specific departmental needs following HIPAA, PCI, and other privacy guidelines. It is our security practice to limit security events with appropriate and applicable identification, authentication, authorization, access control, and monitoring controls.

**KEY OUTCOMES**

**INTRUSION PREVENTION**

Dauphin County primary concern is protecting infiltration to our systems, staff members and all county-wide assets running within our network. Intrusion prevention will identify potential threats allowing for faster security response. Due to the nature of a security exploit or event it is difficult to limit the impact from an attack, however, intrusion prevention has ability to take immediate action. Additionally, all county-wide network assets have up-to-date AntiVirus software.

The Intrusion Prevention initiative outcome aligns with the Increase County-Wide Service Levels and Optimize Technology Infrastructure and Resources.
The increasing breadth of our information technology services causes increasingly complicated security risks. In 2014, Dauphin County IT joined the Multi-State Information Sharing and Analysis Center as we raised the level of our readiness and response to threats. We also have a detailed “Incident Response Plan” to define the roles and responsibilities in the event of any security incident. We will continue as leaders among the County governments in this field by optimizing our security frameworks to protect data and applications against external and internal threats. By utilizing risk assessment strategies and security enhancement tools, like continual diagnostic monitoring and digital forensics, as well as implementing new technical security education and awareness initiatives, we can strive to secure the County assets at the highest possible level.

Purpose of a security policy to management

- Support the County
- Defend the County

The Cyber Security Leadership and Awareness initiative aligns with the Optimize Technology Infrastructure and Resources strategic goal.
INITIATIVE #4: MODERNIZATION

Modernization is important to deliver the necessary levels of security, functionality and efficiency to help county departments. Technology has changed and will continue to change the way county reaches out and communicates with citizens, modernization will help deliver better services to the county. Additionally, Dauphin County has an increased demand for automation and integration to allow data sharing across multiple departmental systems.

**KEY OUTCOMES**

**ROADMAP**

IT modernization begins with assessing our county is in terms of legacy systems and innovation. Developing a modernization roadmap is critical, as it presents a comprehensive view of our county’s technology strategy in terms of governance, financial, and lifecycle management functions with methods for closing any technology gaps. The roadmap should highlight high-level requirements, integration needs, security risks and operational support measures for minimum of 12 months.

The Roadmap initiative outcome aligns with the Increase County-Wide Service Levels, Optimize Technology Infrastructure and Resources and Manage Budget / Functional Cost Containment strategic goals.
Dauphin county has emphasized the importance of reducing the number of IT services to maximize assets and consolidate. Our county has invested in many cloud services and will continue to explore off-premise offerings for potential cost savings. Developing modernization to address structure, policies, processes and decision making will require transformation. In doing this, we will embrace technologies to streamline, simplify and reduce to cost of IT solution.

The Transform initiative outcome aligns with the Increase County-Wide Service Levels and Optimize Technology Infrastructure and Resources.
LIFECYCLE / REFRESH

Modernization has created a need for establishing a lifecycle management program for hardware and business applications. This level of systems development would allow for increased support, limit legacy systems proliferation, standards and customizations. Our hardware used to serve county employees will operate on current operating environments supporting vendor lifecycles. Cost management considerations such as leasing should be a factor.

The Lifecycle / Refresh initiative outcome aligns with the Increase County-Wide Service Levels, Optimize Technology Infrastructure and Resources and Manage Budget / Functional Cost Containment strategic goals.