SNOHOMISH COUNTY
STRATEGIC TECHNOLOGY PLAN
2017-2020

TECHNOLOGY SOLUTIONS TO SERVE THE RESIDENTS AND
GOVERNMENT OF THE PLACE WE WORK AND LIVE

August 16, 2017
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Introduction and Management Summary

In October 2016, Snohomish County adopted changes to County Code that defined new requirements for a countywide three year Strategic Technology Plan, the first of which would be produced in 2017. This plan addresses strategic technology areas, goals, and specific initiatives, covering the 36-month period from 2017 to 2020.

This represents the first time Snohomish County will establish a technology strategy that defines the following:

- Priority business strategies, goals, and programs within Snohomish County
- Strategic technology areas that will support and advance those county business priorities
- Objectives and potential initiatives to execute on the strategic areas
- Explicit alignment between technology initiatives and business strategies, goals, and programs

Snohomish County in Transition

Snohomish County is in a time of significant change. It is predicted Snohomish County will be one of the fastest growing counties by population in the United States over the next 20 years. An increased population base will require new jobs, expanded services, improved infrastructure, increased access to government, evolving land use practices, enhanced educational options, and growing transportation capacity. At the same time, Snohomish County is moving from a natural resource based economy to one that relies on manufacturing, technology, and tourism. The Snohomish County government must be prepared to diversify even more and ensure that everyone in the county can take advantage of our strengths.

Meanwhile, structural issues impede the financial resources of the Snohomish County government. The county will need to expand services in the context of limited revenue. The county must reconsider both its cost and revenue structures. This includes adopting practices to identify, address, and implement operational efficiencies in the county, while also redefining strategies for investment.

Technology in Transition

In 2008, Snohomish County employed 85 technology professionals in the Department of Information Technology (DoIT), and 3 employees with IT-dedicated job functions outside of DoIT. In 2016, DoIT employed 62 technology professionals, while the rest of the county employs 29 “FTEs” who perform technology-related work.

This transition in the technology operations of Snohomish County occurred without intention or plan, with unintended consequences associated with the county’s ability to operate and invest in software and major business systems. Most notably, this migration of IT work has deteriorated the functional capabilities required
to improve county technology. IT capabilities like governance, technology standardization, project management, resource management, quality assurance and testing, stakeholder coordination, and application portfolio management no longer exist. From an enterprise perspective, Snohomish County’s “IT maturity” has declined to the point that, with a few noted exceptions, Snohomish County cannot create, deliver, or support technology-dependent business initiatives like operational efficiency or outward customer/constituent service.

Going forward, DoIT is transitioning to an “aligned” service model. This approach will mature enterprise IT capabilities to support improvement and investment in technology, enable agencies to purchase IT services from DoIT based on very clear quality and value definitions while retaining control of tactical decisions to support their operations, and improve visibility and decision-making related to total cost of IT operations.

Strategic Areas
Based on the analysis efforts performed, with the objective of aligning technology capabilities, capacity, operations, and services to the business goals and strategies of the county, the county has identified four strategic areas to address with explicit technologies strategies. The strategic areas that will comprise the focus of the 2017-2020 Strategic Technology Plan are as follows:

<table>
<thead>
<tr>
<th>Strategic Area</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portfolio Modernization</td>
<td>The County has mission-critical enterprise systems that are effectively unsupported and cannot accommodate even reasonable changes in functionality. In addition, the county has not yet adopted any common platform or process for rapid development to meet short-term business application needs. The portfolio modernization strategy will address both the enterprise and platform objectives, establish new capacity to support improvements emerging from the agencies (including STEP), and create a governance structure to ensure successful results for IT investments.</td>
</tr>
<tr>
<td>Workforce Empowerment</td>
<td>Emerging business models require enabling and empowering staff to work in multiple locations with flexible tools. The County needs to provide adaptable employee collaboration environments and tools accessible from anywhere, anytime, and enable the use of mobile devices, while ensuring proper security and controls of hardware, software, and data. The workforce empowerment strategy will define and create the platforms, tools, and capabilities necessary for a 21st century labor force.</td>
</tr>
<tr>
<td>Civic Engagement</td>
<td>Simply stated, in order to mitigate the increasing cost of operations, Snohomish County needs to deliver online services and smartphone/tablet based applications to its increasingly tech-savvy constituents. In addition, to further foster partnership and public trust efficiently and effectively, the County needs to adopt new capabilities and tools for communications, content management, and social engagement. A technology strategy focused on civic engagement is key to addressing the emerging expectations of county constituents.</td>
</tr>
<tr>
<td>IT Service Maturity</td>
<td>Snohomish County lacks an IT service model that aligns services, costs, and performance. Working with IT governance, the County must adopt such a model, and define methods for transparently reporting the results of its services. The IT service maturity strategy must include standards that decrease the total cost of ownership of technology while still enabling agency operations. Further maturity requires alignment of IT service to the underlying vendors, and a more comprehensive understanding of the business application portfolio of the county.</td>
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</tbody>
</table>
Business Goals and Strategies

Snohomish County is the third largest county in Washington State, with a population of over 785,000. It represents a tremendously diverse segment of the state, both geographically and economically. As part of the Seattle/Tacoma/Bellevue Metropolitan Statistical Area, Snohomish County is projected to be one of the fastest growing counties in the United States over the next 20 years.

With this projected growth both locally and regionally, the county has challenges related to jobs and economic growth, maintenance and expansion of public infrastructure, land use management, and sustained quality of life improvement for all residents. To this ends, the county has established several goals and programs to strategically invest resources to serve the current and future needs of the region.

Enterprise Goals

In 2016, Snohomish County established multiple goals for government services and improvements. In many cases, new programs have been initiated to address these goals. In all cases, over the next three years the county must leverage technology to support and advance these goals.

<table>
<thead>
<tr>
<th>Goals</th>
<th>Description</th>
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<tbody>
<tr>
<td>Economic Vitality</td>
<td>Snohomish County is one of the fastest growing counties in the United States. The county is expected to grow by 200,000 residents in the foreseeable future. As the regional government, the County must plan for this growth, or it will have a negative impact on our community. This plan must address more jobs, more housing, more transportation, and improved technology infrastructure. In addition, the County is moving from a natural resource based economy to one that relies on manufacturing, technology, and tourism. The county must be prepared to diversify even more and ensure that all residents can take advantage of our strengths.</td>
</tr>
<tr>
<td>Operational Efficiency</td>
<td>Snohomish County cannot rely exclusively on new revenue sources and systemic corrections to the existing tax structure to address budget challenges. The County must address its existing cost structure by adopting operational efficiencies that will improve service, decrease costs, and create capacity for new services and programs. The county has initiated a continuous improvement model that will reshape how the county does business.</td>
</tr>
<tr>
<td>Public/Constituent Services</td>
<td>Snohomish County must improve the delivery of all government services to our residents and local businesses. Through improved use of technology, we can improve our service to the community and improve Snohomish County as a place to work, live, and raise a family. This is true in addressing the greatest challenges facing Snohomish County and our country today, which is the interrelated problems of the heroin epidemic, homelessness, and untreated mental illness. The county must deliver services for them in an efficient, ethical, and timely manner.</td>
</tr>
<tr>
<td>Environmental Sustainability</td>
<td>Snohomish County as a region is very vulnerable to any environmental changes, especially as those changes impact water quality and Puget Sound. Local governments need to start looking very hard at environmental impacts of business and industry in general, at storm water and greenhouse gas emissions specifically, and determine what we can do to ensure a clean environment. With the expected boost in our population over the next few decades, the County needs to think about how to mitigate impacts on our natural environment. This is especially true in the area of transportation and traffic volumes. Addressing not only mass transit alternatives, but implementing technologies that reduce the need for driving for employees and residents alike, must be considered.</td>
</tr>
<tr>
<td>Fiscal Sustainability</td>
<td>Snohomish County is not only a regional government, it is also one of the largest employers in the North Puget Sound area. It is critical for the County to remain fiscally strong, and to leverage technology as a means for efficiency in both revenue collection and expenditure management.</td>
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2017-2020 STRATEGIC TECHNOLOGY PLAN

Enterprise Programs

Snohomish County has initiated certain countywide programs in order to address business objectives at a tactical level. In some cases, these programs support broader strategies, while some are necessary to improve or sustain common operations and services.

<table>
<thead>
<tr>
<th>Programs</th>
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</thead>
<tbody>
<tr>
<td>Economic Development</td>
<td>Snohomish County’s top priority is to ensure the economic prosperity of our region. In 2016, the County Executive established an Economic Development Initiative with sectors in areas of historic leadership and emerging opportunities. This new structure engages with industry leaders to collaborate on policies and strategies to advance targeted sectors of opportunity for the county. The primary focus of the sector team is on driving economic growth and creating jobs. The sectors focus strategically on the development and implementation of strategies and action plans to promote growth in key industry sectors. One important cross-industry and multi-sector priority is manufacturing, since this is an area of particular promise for Snohomish County. One of the nine economic sectors is Technology. As an economic development initiative, in May 2017 the County launched a Smart County Initiative. This initiative will identify and deploy technology services and infrastructure within Snohomish County, including rural and urban areas, and bring innovative ideas to the region from private and public partners to spur economic growth, accessibility, and connectivity for all residents.</td>
</tr>
<tr>
<td>Service, Technology, and Excellence Program (STEP)</td>
<td>In April 2016, Snohomish County launched the Service, Technology, and Excellence Program (STEP). STEP has four goals: Improve customer service; Implement continuous improvement for processes and systems; Provide technology solutions; Expect system-wide excellence. Modeled after the principles of various continuous improvement practices, STEP will allow Snohomish County to re-think how it does business, make customers and employees central to decision-making, and find mechanisms for continually improving its work.</td>
</tr>
<tr>
<td>Customer (Constituent) Relationship Management</td>
<td>County officials care about services delivered to county residents. This is true in the way they attempt to analyze service costs, revenue, utilization, complaints and comments, and other metrics based on parameters like council district or local municipality. At this time, the County does not have the technology to sufficiently receive and manage constituent input and requests, coordinate response to individual, local, or regional concerns, collect/collate this type of data, and/or perform this analysis. The county requires basic technology that can collect, manage, cross-reference, and analyze constituent interactions, be they in person, online, by phone, or in writing.</td>
</tr>
<tr>
<td>Access to Government</td>
<td>In addition to relationship management, the County wishes to make information and services more accessible to residents, partners, and businesses. “Access” can take many forms, ranging from easier interaction to obtain a service, to education and knowledge about services provided in a familiar language. Snohomish County wishes to leverage technology to provide better access to government across all spectrums of the organization.</td>
</tr>
<tr>
<td>Enterprise Records Management</td>
<td>Snohomish County has had significant challenges managing documents and records. These challenges have manifested in several ways, including legal action associated with public records, outdated county operations due to inflexible document control practices, and emerging technology costs related to both digital storage and redundant digital document systems. A lack of tools, combined with policy framework, has stifled the ability of county agencies to address operational efficiencies. It is critical that the county reverse past stagnation and embrace processes and policies that drive the technical adoption of digital records/document management.</td>
</tr>
</tbody>
</table>
Agency and Department Strategies

In response to strategic business objectives that are specific to a particular service or line of business, certain departments and agencies have initiated significant programs that require discrete technology solutions. Many of these programs require technology that either should or could be part of a master technology service, and therefore align to the enterprise technology strategy.

**Departmental Strategies**
- Performance Management
- Operational Efficiencies
- Constituent Services
- Public Transparency/Accountability
- Employee Mobility
- Public Accessibility
- Information Stewardship
- Effective Communications

**Operational Programs**
- Online Facility Reservations
- Timekeeping/Payroll Automation
- Regional Video Communications
- Constituent Newsletter Communications
- Social Media Engagement
- Interpreter Services
- Online Hearings and Event Recordings
- Automated/Digital Public Notices
- Video Collaboration
- Employee Communications
- Property/Geographic Data Management
- Paperless Case File Initiatives
- Animal Control Services Improvements

**Strategic Themes**

In support of all the preceding business goals, agency strategies, regional challenges, and operational changes within and around Snohomish County, several strategic themes have emerged:

1. **Efficient business operations:** Several technology factors impact the ability for departments/agencies to improve business operations, including the architecture of legacy applications, gaps in capabilities and tools, and processes supporting business-to-technology alignment.
2. **Improved resident services:** The County has not focused on delivering resident-facing services using modern tools. As the population changes and grows, mitigating future support costs will require new and automated methods of delivering government services, as well as working with partner organizations to create technology infrastructure required for a thriving economy and population.

3. **Increased overall communication capabilities:** As business practices evolve, the County has both new and greater needs for both resident-facing and employee-driven communications. The County needs to leverage modern tools, platforms, and services to enhance all kinds of communications.

4. **Infrastructure modernization:** Within the County’s technology operations, most software infrastructure has aged to the point of stagnation and requires a refresh in order to support emerging business needs. Throughout the County, as the “industrial age” has given way to the “digital age”, the County needs to assess its role and function in leveraging traditional infrastructure (roads, water management, power, transportation, land management) to provide modern public-facing infrastructure (broadband, wifi, sensor arrays, open data management) to benefit the common good.

5. **IT services reform:** Snohomish County lacks an IT service model that aligns costs, performance, and business requirements. The County needs a new model that supports flexibility, controls costs, delivers reliability, achieves strategic investment, and enables the success of the county’s operations.

6. **Data and record management:** The County has a tremendous amount of data and records, and is beginning to see value in making this information more accessible, discoverable, and usable. Current issues with the storage of information, and associated systems and tools, makes achieving this goal a challenge.

7. **New partnership capabilities:** Whether it involves leveraging infrastructure spending, or creating public/private partnership to drive economic opportunity, the County needs to be a technology partner with other regional organizations.

8. **Cybersecurity:** With increased activity and risk associated with the security of IT infrastructure, data, networks, and assets, cybersecurity is not an optional capability for governments. As a result, cybersecurity is not a strategic option to be discussed and prioritized — it is a mandated function required to protect public interests.
Strategic Technology Areas and Objectives

In alignment to the county’s enterprise goals, programs, and department/agency strategies – and within the context of the county’s current IT operations, organizational structure, and existing technology – Snohomish County will pursue programs and initiatives related to the following strategic areas:

- Portfolio Modernization
- Workforce Empowerment
- Civic Engagement
- IT Service Maturity

Each strategic area is defined below, and several strategic objectives that will address the area are identified. Potential initiatives that would advance the technology strategy and achieve the objectives are identified, including alignment of those initiatives to the county’s goals and strategies.

Technology Strategy 1: Portfolio Modernization

Strategic Area Defined

To enable successful adoption of new business practices, operational changes, and customer service improvements, Snohomish County requires technology that is flexible and supports modular changes to functionality.

Based on the current technical environment, this strategy requires significant investment in the county’s application portfolio, and adoption of standard application platforms. The result will be the replacement of at-risk enterprise systems, the investment in standard platforms, and the implementation of specific tactical systems. Again, these tactical activities must align to a strategy that ensures the resulting systems can be easily changed in the future to support operational efficiencies for departments and agencies.

Portfolio Modernization, therefore, must focus on core systems that drive county revenue and finance, and the global capability to develop future software systems following modular architecture practices. Finally, to manage the limited budget resources, the county requires new disciplines that will align business goals with technology investment decisions, and can oversee effective implementation of IT investment projects.

Strategic Objectives

Successful fulfillment of the following major objectives would demonstrate progress and improvement in this strategic area.

**Enterprise System Modernization**: Modernize/replace the county’s core enterprise systems, prioritizing those applications that support a) revenue management, b) enterprise resource planning (finance, accounting, payroll, budget, and human resources), and c) document/records management.
Critical strategic initiatives/projects required to meet this objective include the following:

- **ERP/Financial Systems Replacement** – Full replacement of all core systems and integrated applications used to manage human resources, finance, payroll, budgeting, accounting, and related functions, including an overhaul of all related business practices.

- **Property Based Systems Replacement** – Replacement of the major software systems that support property valuation, tax assessment, tax and levy collection, and payment processing.

- **Enterprise Document/Archives Management** – Implementation of an enterprise system to manage digital documents and associated business workflows.

- **Auditor Records System Replacement** – Replacement of the primary business system that manages official auditor records.

- **Election System Upgrade** – Replacement of the core elections management systems of the county in alignment to federally certified standards.

**Platform Standardization**: Implement common platforms, technologies, and tools, for the standardized and secure development of tactical and modular business applications. Critical strategic initiatives/projects required to meet this objective include the following:

- **Consumer/Constituent Relationship Management (CRM) Implementation** – Implementation of an application to coordinate, track, and assess constituent communications and service quality.

- **Rapid Development Maturity** – Initiation of a service to rapidly create low-cost applications to serve tactical business opportunities.

- **SQL Server Standardization** – Migration of all systems to a single database standard to best manage cost of operations.

**STEP Initiative Support**: Perform tactical projects to achieve department/agency business goals related to operational efficiency and automation. Specific initiatives supporting this goal may be proposed by departments and agencies over the life of this plan. Such initiatives may originate from formal business process analysis efforts, or ad hoc ideas for operational efficiencies. Other services, like a rapid development capability, will contribute to the ability of the County to execute on these projects.
Technology Strategy 2: Workforce Empowerment

Strategic Area Defined
To support the most flexible options available in improving county services, Snohomish County employees must be able to perform their duties when and where is most appropriate, effective, efficient, and convenient for their jobs, all with total security.

To this ends, the county must implement tools that support flexible access to county resources, information, and systems, along with practices that enable yet control such access. An effective combination of policy, systems, tools, controls, devices, and infrastructure will allow employees to maximize both efficiency and flexibility of operations, and improve services both internal and external to the county.

Capabilities required to achieve this strategy include cloud-based systems and tools, communication infrastructure, and end-point device standards and management tools. To effectively manage such an environment, the county will need policies that define access, and security systems that can control access to infrastructure, systems, transactions, and data.

Strategic Objectives
Successful fulfillment of the following major objectives would demonstrate progress and improvement in this strategic area.

Document and Data Collaboration: Complete the adoption of cloud-based collaboration tools to support distributed communication and collaboration activities across geographically disbursed teams. Critical strategic initiatives/projects required to meet this objective include the following:

- SharePoint Online Adoption – Leveraging the existing use of Office 365 to create maximum flexibility for ad hoc employee collaboration at a minimal cost of operation.
- Business Intelligence and Analytics – Introducing new capabilities to support the analysis of data and improve data-decision business decisions in the County.
- Office 365 Records Archiving – Utilizing the tools native in Office 365 to improve records management.

Flexible Device Definition and Enablement: Define policies associated with devices, including device standards, device administration and control, authorized utilization, and variations in data access and permissions based on device types, location, and connection methods. As necessary, expand the county’s wireless capacity to support
increased volume of devices accessing county resources. Critical strategic initiatives/projects required to meet this objective include the following:

- **Mobile Device Management (MDM)**
  - Enterprise Policy Adoption – Implementing the policies and tools to manage use and access of mobile devices.

- **Standard Device Adoption** – Identifying a standard for mobile devices to ensure a managed cost of operation and performance.

- **Wireless Capacity Expansion** – Managing wireless capabilities to ensure adequate performance for mobile access.

**Mobile Security Management:** Implement tools, technologies, and practices necessary to administer mobility policies and associated security practices. Critical strategic initiatives/projects required to meet this objective include the following:

- **Enterprise Identity Management** – Implementing policies and tools that ensure employee identity and access across devices, locations, functions, and technology environments.

- **Enterprise Data Security** – Creating data security that ensures integrity and protection regardless of access methods.
Technology Strategy 3: Civic Engagement

Strategic Area Defined
Snohomish County has fallen behind other similar government entities in delivering appropriate, effective, efficient, and consistent technology-based services and communications to residents, citizens, and regional stakeholders.

The county must deliver new services to residents through both website and mobile application platforms, and leverage technology solutions to communicate to residents in a proactive and transparent manner. In addition, to support economic development, the county has defined a “smart county” approach that requires the realization of certain technology infrastructure, either by the county or through private and regional partnerships. Delivering such services, deploying necessary infrastructure, enabling self-service access to county-hosted data, information, and records, and proactively engaging with residents (while maintaining data and system security) will enhance trust in Snohomish County government while creating the environment for collaborating about local challenges and issues.

To achieve this objective, the county must implement both application and data platforms that enable resident-facing services, and adopt purposeful use of communication and social media platforms. This strategy requires standardized procedures and tools for data and document presentation, online transactions, website administration, and resident-focused communications.

Strategic Objectives
Successful fulfillment of the following major objectives would demonstrate progress and improvement in this strategic area.

Common Public Platforms:
Implement common tools, platforms, and infrastructure, required to support public data access, Internet of Things (IoT) analytics, and public document access. Critical strategic initiatives/projects required to meet this objective include the following:

- Urban/Rural Broadband – As part of the Smart County initiative, work with partners to define and build broadband access in key regions of the county.
- Public Records Portal – Create a self-service capability for individuals to request appropriate records.
- Open Data Portal – Implement a self-service platform for outside entities to access and use appropriate government data.
• IoT Platform – As part of the Smart County initiative, work with partners to define, deploy, and operate various data collection devices – with shared data governance – in order to facilitate community focused services.

Social and Content Administration: Perform both one-time and continuous improvement to the county website to accommodate a more user-centered design, with universal integration of both online services and social media communications on the site. To support sustained administration and civic engagement, establish an enterprise-level team charted with administration and maintenance of the county website and content. Critical strategic initiatives/projects required to meet this objective include the following:

• eGovernment Service Team – Creating a county function to own and manage the quality of digital communications, transactions, and services delivered to residents.

• Online Service Integration – Continue to evolve the County website to integrate new online services.

• eCommerce Standardization – Implement a unified standard for ecommerce transactions to reduce costs while maximizing utilization.

• Social Media Maturity – Maximize the use of third party platforms to communicate to residents as they adopt and leverage social media.

• County Television Station – Build and launch a television and streaming media capability to better delivery access and information about government.

Mobile Applications: Identify a tactical set of services to be delivered via mobile apps, and develop such apps using a standard toolset. Critical strategic initiatives/projects intended to meet this objective include the following:

• For the Record (FTR) Audio File Access – Provide online access to recorded archives of hearings and court proceedings.

• District Court Case/Matters Online – As appropriate, make available online court records and files for matters occurring in District Court.

• Pet Licensing Mobile App – Create a mobile app for residents to manage pet licensing.
Technology Strategy 4: IT Service Maturity

Strategic Area Defined

As the third largest county government in Washington, Snohomish County requires – and deserves – an effective and efficient IT operation that delivers value and enables the successful operation of all other government agencies and services.

The Department of Information Technology (DoIT) must create an operational model that not only achieves this stated objective, but demonstrates that achievement by aligning services, service quality, and overall technology costs to the services expected – and paid for – by county departments and agencies. This requires a clear description of IT services, definition of associated service levels, monitoring of performance against those service levels, and transparent alignment of rates.

Working with customers through IT Governance, DoIT must develop a service and rate model that provides transparency of services related to costs, scope, and quality. The department must have the systems in place to monitor quality, manage vendors, define future direction, and communicate results.

Strategic Objectives

Successful fulfillment of the following major objectives would demonstrate progress and improvement in this strategic area.

**Service and Rate Model:** Define a new service and rate model, vetted through – and approved by – IT Governance. Establish service levels for all IT services, and create the tracking mechanisms and reports necessary to communicate service performance to customer organizations. Critical strategic initiatives/projects required to meet this objective include the following:

- **IT Service and Rate Model Definition** – Implement a sustainable service model that aligns IT services, capabilities, capacity, quality, and costs.
- **IT Service Desk Maturity** – Improve “tier 1” service to end-users through the IT service desk.
- **IT SLA Formulation and Metric Reporting** – Define and communicate the performance expectations for county technology, identify metrics for monitoring and improving performance, and implement transparent reporting of the metrics.

**Vendor Management Maturity:** Centralize the administration of technology contracts in a manner that supports efficient management, elimination of redundant effort and spending, and coordination of vendor performance/service level agreements. Critical strategic initiatives/projects required to meet this objective include the following:
• Public/Private Broadband Initiative – Work with local broadband carriers to create an initiative to better serve residents and facilitate economic growth.

• Contract Administration Improvement – Coordinate IT vendor contracts in a manner that reduces overall costs.

**Technology Portfolio Maturity:** Create roadmaps for all core technology that ensures future alignment of systems, platforms, and technology to county operations. Include with these roadmaps a model for defining and rationalizing the application portfolio to drive future development, replacement cycles, and software retirements. Critical strategic initiatives/projects required to meet this objective include the following:

• Disaster Recovery Architecture – Define and implement a new IT disaster recovery capability, aligned to the business needs of the County.

• Technology Roadmap Definition – Create and communicate a long-term roadmap for key technologies, platforms, and systems in the County.

• Application Portfolio Rationalization – Define a model for best managing the application lifecycle of software and business systems.

• Sensor Data Platform – Implement and manage sensors necessary to monitor traditional infrastructure and use data analytics to improve maintenance, functions, and services.

• Drone Program Services – Create and implement a service for leveraging drone technology to perform varied business functions in the County.
Appendix 1 – Outline of Strategic Initiatives

IT Service Maturity Strategy

<table>
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<tr>
<th>Objectives</th>
<th>Initiatives</th>
<th>Alignment</th>
<th>Target Start</th>
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</thead>
<tbody>
<tr>
<td>Service and Rate Model</td>
<td>IT Service and Rate Model Definition</td>
<td>Fiscal Sustainability, Tech Coordination and Investment, Performance Management</td>
<td>Q4 2016</td>
</tr>
<tr>
<td></td>
<td>IT Service Desk Maturity</td>
<td>Operational Efficiency, Tech Coordination and Investment, Performance Management</td>
<td>Q2 2017</td>
</tr>
<tr>
<td></td>
<td>IT SLA Formulation and Metric Reporting</td>
<td>Operational Efficiency, Tech Coordination and Investment, Performance Management</td>
<td>Q2 2018</td>
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<tr>
<td>Partner/Vendor Management Maturity</td>
<td>Public/Private Broadband Initiative</td>
<td>Economic Vitality, Public/Constituent Services, Economic Development, Constituent Services</td>
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<td>Contract Administration Improvement</td>
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<td>Disaster Recovery Architecture</td>
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<td>Technology Roadmap Definition</td>
<td>Operational Efficiency, Tech Coordination and Investment</td>
<td>Q3 2018</td>
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<td>Drone Program Services</td>
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<td>Application Portfolio Rationalization</td>
<td>Fiscal Sustainability, Tech Coordination and Investment, Information Stewardship</td>
<td>Q3 2019</td>
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<td>Alignment</td>
<td>Target Start</td>
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</tbody>
</table>
| Enterprise System Modernization        | Property Based Systems Replacement                               | **Operational Efficiency**  
**Public/Constituent Services**  
**Tech Coordination and Investment**  
**Operational Efficiencies**  
**Constituent Services**  
**Property/Geographic Data Mgmt**   | Q3 2016       |
|                                        | Auditor Records System Replacement                               | **Operational Efficiency**  
**Enterprise Record Management**  
**Information Stewardship**   | Q2 2017       |
|                                        | Election Systems Upgrades                                        | **Operational Efficiency**  
**Public/Constituent Services**  
**Enterprise Record Management**  
**Public Transparency/Accountability**  
**Operational Efficiency**   | Q3 2017       |
|                                        | Enterprise Document/Archives Management                          | **Environmental Sustainability**  
**Enterprise Record Management**  
**Access to Government**  
**Information Stewardship**   | Q1 2018       |
|                                        | ERP/Financial Systems Replacement                                | **Operational Efficiency**  
**Fiscal Sustainability**  
**Tech Coordination and Investment**  
**STEP**  
**Performance Management**  
**Operational Efficiencies**  
**Public Transparency/Accountability**  
**Information Stewardship**  
**Timekeeping/Payroll Automation**  
**Employee Communications**   | Q2 2018       |
| Platform Standardization               | CRM Implementation                                               | **Operational Efficiency**  
**STEP**  
**Customer Relationship Management**  
**Access to Government**  
**Constituent Services**  
**Public Transparency/Accountability**  
**Public Accessibility**  
**Effective Communications**  
**Constituent Newsletter Comm**  
**Automated/Digital Public Notices**   | Q2 2017       |
| Rapid Development Maturity (SharePoint, Dynamics) |                                | **Operational Efficiency**  
**Fiscal Sustainability**  
**STEP**  
**Operational Efficiencies**  
**Employee Mobility**  
**Employee Communications**   | Q4 2017       |
| SQL Server Standardization             | Multiple automation/efficiency initiatives proposed by departments and agencies | **Operational Efficiency**  
**STEP**   | 2018-2020 |
| STEP Initiative Support                | Multiple automation/efficiency initiatives proposed by departments and agencies | **Operational Efficiency**  
**STEP**   | 2018-2020 |
## Workforce Empowerment Strategy

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Initiatives</th>
<th>Alignment</th>
<th>Target Start</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document and Data Collaboration</td>
<td>SharePoint Online Adoption</td>
<td>Operational Efficiency, Enterprise Records Management, Tech Coordination and Investment, Operational Efficiencies, Employee Mobility, Information Stewardship, Effective Communications, Employee Communications</td>
<td>Q3 2017</td>
</tr>
<tr>
<td></td>
<td>Office 365 Records Archiving</td>
<td>Environmental Sustainability, Enterprise Records Management, Information Stewardship</td>
<td>Q1 2018</td>
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<tr>
<td></td>
<td>Business Intelligence and Analytics</td>
<td>Operational Efficiency, Fiscal Sustainability, Enterprise Records Management, Tech Coordination and Investment, Performance Management, Information Stewardship</td>
<td>Q2 2018</td>
</tr>
<tr>
<td>Flexible Device Definition and Enablement</td>
<td>MDM Enterprise Policy Adoption</td>
<td>Operational Efficiency, Environmental Sustainability, Enterprise Records Management, Operational Efficiencies, Employee Mobility, Effective Communications, Video Collaboration, Employee Communications</td>
<td>Q3 2017</td>
</tr>
<tr>
<td></td>
<td>Standard Device Adoption</td>
<td>Operational Efficiency, Environmental Sustainability, Tech Coordination and Investment, Operational Efficiencies, Employee Mobility, Effective Communications, Video Collaboration, Employee Communications</td>
<td>Q1 2018</td>
</tr>
<tr>
<td></td>
<td>Wireless Capacity Expansion</td>
<td>Operational Efficiency, Environmental Sustainability, Economic Vitality, Economic Development, Employee Mobility, Effective Communications, Video Collaboration, Employee Communications</td>
<td>Q4 2019</td>
</tr>
<tr>
<td>Mobile Security Management</td>
<td>Enterprise Identity Management</td>
<td>Operational Efficiency, Enterprise Records Management, Operational Efficiencies, Employee Mobility, Information Stewardship, Timekeeping/Payroll Automation</td>
<td>Q1 2019</td>
</tr>
<tr>
<td></td>
<td>Enterprise Data Security</td>
<td>Operational Efficiency, Tech Coordination and Investment, Operational Efficiencies, Information Stewardship</td>
<td>Q3 2019</td>
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## Civic Engagement Strategy

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Initiatives</th>
<th>Alignment</th>
<th>Target Start</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social and Content Administration</td>
<td>eGovernment Service Team</td>
<td><strong>Public/Constituent Services</strong>&lt;br&gt;Customer Relationship Management&lt;br&gt;Access to Government&lt;br&gt;Constituent Services&lt;br&gt;Public Transparency/Accountability&lt;br&gt;Effective Communications&lt;br&gt;Regional Video Communications&lt;br&gt;Constituent Newsletter Comm&lt;br&gt;Social Media Engagement&lt;br&gt;Online Hearings/Event Recordings&lt;br&gt;Automated/Digital Public Notices</td>
<td>Q1 2018</td>
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<td></td>
<td></td>
<td><strong>Online Service Integration</strong>&lt;br&gt;Public/Constituent Services&lt;br&gt;Environmental Sustainability&lt;br&gt;Access to Government&lt;br&gt;Public Transparency/Accountability&lt;br&gt;Effective Communications&lt;br&gt;Regional Video Communications&lt;br&gt;Constituent Newsletter Comm</td>
<td>Q3 2018</td>
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<td></td>
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<td><strong>Social Media Maturity</strong>&lt;br&gt;Public/Constituent Services&lt;br&gt;Access to Government&lt;br&gt;Public Transparency/Accountability&lt;br&gt;Effective Communications&lt;br&gt;Constituent Newsletter Comm&lt;br&gt;Social Media Engagement</td>
<td>Q4 2018</td>
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<tr>
<td></td>
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<td><strong>eCommerce Standardization</strong>&lt;br&gt;Public/Constituent Services&lt;br&gt;Environmental Sustainability&lt;br&gt;Fiscal Sustainability&lt;br&gt;Tech Coordination and Investment&lt;br&gt;Constituent Services&lt;br&gt;Online Facility Reservations</td>
<td>Q1 2019</td>
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<tr>
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<td></td>
<td><strong>County Television Station</strong>&lt;br&gt;Public/Constituent Services&lt;br&gt;Economic Vitality&lt;br&gt;Access to Government&lt;br&gt;Economic Development&lt;br&gt;Public Transparency/Accountability&lt;br&gt;Effective Communications&lt;br&gt;Automated/Digital Public Notices</td>
<td>Q1 2019</td>
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<tr>
<td></td>
<td>Internet of Things (IoT) Platform</td>
<td><strong>Public/Constituent Services</strong>&lt;br&gt;Economic Vitality&lt;br&gt;Environmental Sustainability&lt;br&gt;Economic Development&lt;br&gt;Constituent Services&lt;br&gt;Information Stewardship&lt;br&gt;Property/Geographic Data Mgmt</td>
<td>Q2 2018</td>
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<tr>
<td></td>
<td></td>
<td><strong>Urban/Rural Broadband</strong>&lt;br&gt;Public/Constituent Services&lt;br&gt;Economic Vitality&lt;br&gt;Economic Development&lt;br&gt;Constituent Services</td>
<td>Q3 2018</td>
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<tr>
<td></td>
<td>Public Records Portal</td>
<td><strong>Public/Constituent Services</strong>&lt;br&gt;Environmental Sustainability&lt;br&gt;Enterprise Records Management&lt;br&gt;Access to Government&lt;br&gt;Public Transparency/Accountability&lt;br&gt;Public Accessibility&lt;br&gt;Information Stewardship</td>
<td>Q2 2019</td>
</tr>
<tr>
<td>Objectives</td>
<td>Initiatives</td>
<td>Alignment</td>
<td>Target Start</td>
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<tr>
<td>Mobile and Online Applications</td>
<td>FTR Audio File Access</td>
<td>Public/Constituent Services, Environmental Sustainability, Paperless Case File Initiatives</td>
<td>Q2 2017</td>
</tr>
<tr>
<td>District Court Case/Matters Online</td>
<td></td>
<td>Public/Constituent Services, Environmental Sustainability, Paperless Case File Initiatives</td>
<td>Q3 2017</td>
</tr>
<tr>
<td>Pet Licensing Mobile App</td>
<td></td>
<td>Public/Constituent Services, Customer Relationship Management, Animal Control Services Improvements</td>
<td>Q1 2018</td>
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</tbody>
</table>
Appendix 2 – Summary of Strategic Alignment

Technology Initiatives Supporting Business Strategies and Programs

As indicated in the report, several proposed initiatives support multiple enterprise strategies, enterprise programs, or departmental programs. The following is an analysis of how many different initiatives support each business strategy/program.
Number of Business Strategies/Programs Supported by Strategic Technology Areas
At a higher level of detail, each strategic technology area supports several enterprise strategies, enterprise programs, or departmental programs. The following is an analysis of how many different business strategies/programs are supported by the four strategic technology areas.
Appendix 3 – Initiatives by Fiscal Year and Quarter

The following is the timing of strategic initiatives*. Timing is necessary due to interdependencies, and the availability of technical, business, and financial resources.

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Initiatives Starting by Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td></td>
</tr>
<tr>
<td>11 Initiatives</td>
<td>Already Initiated</td>
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<tr>
<td></td>
<td>Property Based Systems Replacement</td>
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<td></td>
<td>Auditor Records System Replacement</td>
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<td></td>
<td>CRM Implementation</td>
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<td></td>
<td>FTR Audio File Access</td>
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<td></td>
<td>IT Service and Rate Model Definition</td>
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<tr>
<td></td>
<td>IT Service Desk Maturity</td>
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<tr>
<td>Q3 2017</td>
<td>ERP/Financial Systems Replacement</td>
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<td></td>
<td>Election Systems Upgrades</td>
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<td>MDM Enterprise Policy Adoption</td>
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<td></td>
<td>District Court Case/Matters Online</td>
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<tr>
<td>Q4 2017</td>
<td>SharePoint Online Adoption</td>
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<tr>
<td>2018</td>
<td></td>
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<tr>
<td>16 Initiatives</td>
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<tr>
<td></td>
<td>Enterprise Document/Archives Management</td>
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<td></td>
<td>Office 365 Records Archiving</td>
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<td>eGovernment Service Team</td>
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<td>Pet Licensing Mobile App</td>
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<td></td>
<td>Public/Private Broadband Initiative</td>
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<tr>
<td>Q2 2018</td>
<td>Business Intelligence and Analytics</td>
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<td>Contract Administration Improvement</td>
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<td>Disaster Recovery Architecture</td>
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<td>IT SLA Formulation and Metric Reporting</td>
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<td>Internet of Things Platform</td>
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<td>Q3 2018</td>
<td>Online Service Integration</td>
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<td></td>
<td>Technology Roadmap Definition</td>
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<td></td>
<td>Urban/Rural Broadband</td>
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<tr>
<td>Q4 2018</td>
<td>Standard Device Adoption</td>
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<tr>
<td></td>
<td>Social Media Maturity</td>
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<td></td>
<td>Rapid Development Maturity</td>
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<tr>
<td>2019</td>
<td></td>
</tr>
<tr>
<td>11 Initiatives</td>
<td>Q1 2019</td>
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<tr>
<td></td>
<td>County Television Station</td>
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<td></td>
<td>eCommerce Standards</td>
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<td></td>
<td>Enterprise Identity Management</td>
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<td></td>
<td>Drone Program Services</td>
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<tr>
<td>Q2 2019</td>
<td>Public Records Portal</td>
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<td>Sensor Data Platform</td>
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<td>Q3 2019</td>
<td>Open Data Portal</td>
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<td></td>
<td>Enterprise Data Security</td>
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<td></td>
<td>Application Portfolio Rationalization</td>
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<tr>
<td>Q4 2019</td>
<td>SQL Server Standardization</td>
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<tr>
<td></td>
<td>Wireless Capacity Expansion</td>
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</tbody>
</table>

* No initiative is identified to support the “STEP Initiative Support” objective, as it is expected *multiple* related projects will be proposed as identified throughout the life of this plan.
Appendix 4 – Narrative Description of Initiatives

The following is a brief (1-3 sentence) description of each strategic initiative, as identified in the full report. Following the county’s investment practices, each initiative will be more fully described at the time it is proposed for funding.

**Application Portfolio Rationalization:** Define an application portfolio management model, and align applications to the model in order to create the appropriate software maintenance and support lifecycle and funding model.

**Auditor Records System Replacement:** Replace the core records management system of the Auditor, to ensure sustained operations due to the end-of-life status of the existing system.

**Business Intelligence and Analytics:** To improve business operations and decision-making capabilities, the County will adopt and implement standard tools around business intelligence, data analytics, and ad hoc data reporting.

**Contract Administration Improvement:** Many technology vendor contracts are administered in an inconsistent manner, and/or are redundant to other contracts. The County needs to improve overall contract administration in order to best manage IT costs.

**County Television Station:** Snohomish County has the authority to leverage fees collected by cable carriers to cover the capital costs of building and maintaining a county television station. To further augment county communications, and leverage partner programming for economic development and promotion, the County will build and operate a television station and streaming media function.

**CRM Implementation:** In order to provide reliable, consistent, and account service to constituents, the County needs a system to receive, distribute, track, and manage constituent inquiries, questions, comments, and service requests.

**Disaster Recovery Architecture:** Over time, the County has sacrificed the quality of its IT disaster recovery architecture to save money. In some cases, new technology made the disaster recovery model obsolete, but no analysis was performed to determine if new capabilities are required. This effort will define and implement the appropriate disaster recovery model for the County’s enterprise technology operation.

**District Court Case/Matters Online:** Based on applicable laws associated with court case access, make district court case files available for online viewing.

**Drone Program Service:** Create a central, unified capability for flying drones and capturing related video and data to support all applicable county agencies and functions.

**eCommerce Standardization:** Today, the County employs multiple tools – with different cost and operational structures – to perform online financial transactions. This effort will consolidate these services in order to both improve the total cost of operations for online transactions, and create a unified customer experience for individuals doing business with the County online.

**eGovernment Service Team:** Establish a central team to coordinate website, intranet, social media, related content, and integrated online services, to improve overall service to constituents.
**Election System Upgrades:** Modernize the applications that support elector records and registration, based on a new system certified by Washington State.

**Enterprise Data Security:** With government data residing in multiple locations and supporting various operations, data security must be managed at a more granular level. This effort would both classify data security across the enterprise, and implement the tools to manage data access and security to meet the business and security needs of the County.

**Enterprise Document/Archives Management:** At this time, the County does not operate an enterprise digital document management system, and has no system for digital records archiving. This effort would create a system for both functions based on a unified model for digital document lifecycle management.

**Enterprise Identity Management:** As part of a manageable cybersecurity environment, the County requires the ability for employee security credentials to provide consistent access to devices, business systems, shared software, cloud services, and potentially physical environments.

**ERP/Financial Systems Replacement:** The County’s core enterprise financial, HR, and payroll systems do not and cannot support improvement to business operations. To support improvements to operations and services, the County needs to replace the collective ERP environment with a combination of modern software systems.

**FTR Audio File Access:** As part of an effort to upgrade the FTR Gold hearing and court proceeding systems, make the recordings of appropriate public hearings available for online listening.

**Internet of Things Platform:** Create a data aggregation platform, infrastructure, and governance necessary to utilize information and data from sensors, systems, and third parties in a manner that can be used for public applications and services.

**IT Service and Rate Model Definition:** Consistent with industry standard practices like ITIL, and the County’s last IT performance audit recommendations, create and adopt an IT service and rate model that explicitly aligns IT services to the cost/charge for those services. Publish a service catalog that explains the services the rates.

**IT Service Desk Maturity:** Improve the operational capabilities and capacity of the County’s “Tier 1” IT operations throughout the enterprise.

**IT Service Level Formulation and Metrics:** In conjunction with overall IT service improvements, create a unified definition and understanding of the level of service provided by DoIT, including the ability for agencies to order services based on business needs.

**MDM Enterprise Policy Adoption:** As the County seeks to facilitate a mobile workforce, it will require policies that govern the use of such tools and related access to county data. The County will define and adopt policies in order to facilitate this objective.

**Office 365 Records Archiving:** As the County migrates digital documents into the Office 365 cloud environment, the county will adopt the tools, policies, and procedures necessary to automatically archive, manage, and destroy digital records in a manner that fully complies with Washington State law and related retention schedules.

**Online Service Integration:** Modernize the functional design of the County website to incorporate new online services in a manner that creates a new user-centered design and navigational structure.
Open Data Portal: For data that is open to public viewing in a raw format without restriction, host an open data platform that provides both manual and machine access to the data for use by others.

Pet Licensing Mobile App: Create a mobile app for registering and licensing pets in Snohomish County.

Property Based Systems Replacement: Replace the core business systems supporting property assessment, property tax billing, and tax payment collection, with new applications that better support new operations and related constituent for the Assessor and Treasurer.

Public/Private Broadband Initiative: A key driver to regional economic development is ubiquitous access to high speed broadband. At this time, several communities in Snohomish County do not have reliable broadband access. This initiative would work with a local carrier to better serve a targeted community, which may include leveraging County infrastructure to provide such access.

Public Records Portal: Assess the County’s digital records environment, and place appropriate records online in a self-service portal to better serve residence, improve transparency, and reduce costs associated with public records requests.

Rapid Development Maturity (SharePoint, Dynamics): Snohomish County does not currently operate a software development platform that supports rapid development to address emerging opportunities to improve services. This effort will establish such an environment using Platform-as-a-Service (PaaS) products.

Sensor Data Platform: Leverage traditional government infrastructure in order to deploy and operate digital infrastructure, including environmental and data collection sensors, and data management tools. Define, establish, and implement the platform, equipment, and infrastructure necessary to monitor the infrastructure and use data analytics to improve maintenance, functions, and services.

Service Quality Metric Reporting: To ensure transparency of IT operations, define metrics aligned to the service level/quality of IT operations and report such metrics in the appropriate venue.

SharePoint Online Adoption: The County will migrate and consolidate multiple existing storage and collaboration tools – including old on-premise SharePoint sites and outdated file servers – into the county’s established Office 365 environment.

Social Media Maturity: As an enterprise effort, define and implement the policies, procedures, and associated technology tools necessary to leverage social media as a public-facing service.

SQL Server Standardization: To reduce total cost of operation by limiting both licensing and skillsets required in the County, this effort will define a database standard and migrate existing databases to that standard.

Standard Device Adoption: In order to manage total cost of operations within a mobile environment, Snohomish County will adopt standards for mobile devices, hardware, security protocols, and mobile app portfolios.

STEP Initiative Support: As opportunities emerge, the County will adopt and execute technology projects that specifically align to and support the STEP program, specifically when those projects require technology to streamline business efficiency.
Technology Roadmap Definition: In order to best plan, communicate, and document the roadmap for core technologies, create a common definition of a technology roadmap, then create and publish a roadmap for the appropriate environments and systems.

Urban/Rural Broadband: As part of the Smart County initiative, work and coordinate public and private partners to establish broadband access to targeted regions, which may include extending wired broadband service to rural communities, creating high speed wireless mesh networks in urban centers, or both.

Wireless Capacity Expansion: Today, the County’s main campus provides limited wireless capacity to users on a “best effort” basis. In the future, if the majority of employees adopt some level of wireless-enabled work devices, the overall wireless capacity must be expanded to ensure reliable business operations.
Appendix 5 – Snohomish County “Smart County” Initiative {DRAFT}

In May 2017, Snohomish County launched a “Smart County” initiative as part of the Executive’s economic development program. This initiative would potentially make Snohomish County the first Smart County in Washington State, and the second in the nation.

The initiative centers on deploying technology within all areas of Snohomish County, including rural and urban areas. A Smart County would draw innovative ideas to the region from both the private and public sectors to spur economic growth, accessibility, connectivity, and services for all residents.

As this concept evolves, decisions will be made about the extent to which this effort applies to the County’s use, development, and implementation of technology. It is likely that, for many components of the Smart County program, third parties and private partners will implement and manage various technologies with the county only as facilitator.

The following represents a DRAFT structure for the vision, goals, and objectives of the initiative.

---

**Vision**

Snohomish County will leverage public infrastructure and regional governance to create and foster the digital foundation required to promote **thriving communities** for businesses, residents, and partners throughout our county.

**Goals**

Contemporary Communities

Deploy modern technology infrastructure to provide the underlying capabilities required to optimize Snohomish County in the 21st century.

Illustrative Initiatives

- IoT sensor network/array for deployed infrastructure (lights, roads, parking, etc.)
- Countywide gigabit broadband access (fiber, broadcast)
- Data analytics clearinghouse for quality data and data access

Prosperous Communities

Deliver capabilities, infrastructure, connectivity, and data necessary to stimulate economic opportunities in Snohomish County.

Illustrative Initiatives

- 5G small cell communications network
- Urban/metropolitan wifi mesh network
- Living Lab data as a service
- Digital services to innovation zones and startups
Livable Communities
Leverage information and technology to improve the quality of life for Snohomish County residents.

Illustrative Initiatives

- Parking availability and management application
- Homeless/disadvantaged digital services
- Traffic signal optimization
- Healthcare tele-medicine
- Parks trailhead and maintenance management
- Digital neighborhood dashboards
- Expanded and improved civic and government engagement

Sustainable Communities
Apply analytics and intelligence to address environmental challenges and natural resource issues throughout Snohomish County.

Illustrative Initiatives

- Wastewater management and monitoring
- Predictive street light energy management
- Intelligent power grid
- Farmland irrigation management

Safe Communities
Provide law and justice agencies, as well as community groups and individuals, the tools they need to ensure public safety in Snohomish County.

Illustrative Initiatives

- Digital policing initiative
- Non-emergency event reporting app with geotagging
- Predictive emergency management
- Crowdsouce event monitoring
- Pedestrian safety monitoring and analytics
- Online court services

Approach
Adopt a finite set of tactical programs/projects(objects) that represent a set of priorities balanced by community targets, and urban, rural, and regional considerations.

Solicit partnerships across county, municipal, regional, and private stakeholders – providing resources, expertise, financing, governance, and responsibility – to engage in and execute on those solutions.

Coordinate with businesses and residents to embrace and adopt opportunities as created.
Appendix 6 – DoIT Cybersecurity Program

Snohomish County’s cybersecurity program exists to perform, support, and manage the administrative, technical, and physical safeguards required to protect the county’s technology environment. Cybersecurity is not a “strategic” initiative, as it is not an optional activity to be prioritized against competing initiatives.

The three primary goals are:

- Ensure the security and confidentiality of sensitive information.
- Protect against any anticipated threats or hazards to the security or integrity of such information.
- Protect against unauthorized access to or use of such information or assets in a manner that creates a substantial risk of identity theft or fraud.

DoIT’s cybersecurity program includes 11 functions as outlined below.

Security Policy Development and Management
DoIT develops and maintains clear and robust policies for safeguarding critical business data and sensitive information, protecting confidential information and discouraging inappropriate behavior by employees. These policies include guidance for employees relating to storage, access and transportation of all data, inside and outside the office. Activities related to this function are:

- Establishment of security roles and responsibilities
- Establishment of employee Internet usage and acceptable use policies
- Establishment of a social media policy
- Identification of potential risks

Scams and Fraud Protection
DoIT both detects issues and activities related to scams and fraud, but also informs county employees proactively related to such scams and actions that can be taken to safeguard the county. Activities related to this function are:

- Employee awareness and training to recognize social engineering
- Active protection against virus and malware
- Implementation of a layered approach to guard against malicious software

Website Security
Working with the county’s website hosting vendor, DoIT secures the county Internet sites and associated transactions/interactions. Specific activities and areas of focus include the following:

- Appropriate administrative security management practices and controls
- Content publishing monitoring
- Access monitoring and blocking policies and procedures
- Coordinated website server maintenance and patching
Network Security
DoIT secures the county’s network consists with industry best practices by deploying the following tools, systems, and techniques:

- Cloud/hosted services/access security
- Internal network protection and monitoring
- Password and passphrase policies and enforcement
- Wireless network encryption
- Data encryption
- System patch maintenance
- Web browsing monitoring and administration
- VPN remote access security

Email Security
Email security is critical given the rise in sophistication of security attacks initiated through email, and its ubiquitous use by all technology users. DoIT employs the following techniques to secure the county’s email environment:

- Spam filtering
- Proactive employees training
- Email encryption tools
- Email retention policy
- Email usage policy

Facility Security
In compliance with certain policies and laws, IT security includes physical security of specific environments and facilities. DoIT works with the Facilities Management Department to enforce the following security practices:

- Company facilities security awareness
- Printed and sensitive materials security
- U.S. mail security
- Secure destruction of printed materials
- Data center locking and access management
- CJIS environment physical security

Employee Security
In addition to technology security, DoIT works with the Department of Human Resources to establish and enforce the following policies and practices:

- Employee background checks
- Vendor and third parties credentialing
- Employee access control administration
- New hire security training
Operations Security

Operations security (OPSEC) is the process of denying hackers access to any information about the capabilities or intentions of a business by identifying, controlling and protecting evidence of the planning and execution of activities that are essential to the success of operations. As an organization subject to public disclosure laws, DoIT must actively work with all departments and agencies to protect the dissemination of information that could jeopardize the county’s infrastructure or expose weaknesses. These activities include the following:

- Identification of critical information
- Threats, vulnerabilities, and risk analysis
- Secure user authentication

Business and Regulatory Data Security

Snohomish County is subject to laws and regulations common to governments related to health care, criminal justice, and other personal data security. DoIT’s cybersecurity program includes the safekeeping of all data following industry compliance policies associated with the applicable regulated data.

Mobile Device Security (FUTURE)

County employees increasingly leverage mobile devices to access county resources. While policy previously existed to restrict such activity, the county needs to adopt mobile devices to conduct business and perform services more effectively and efficient. DoIT’s cybersecurity program will be focusing on improving mobile device security in the future.

Incident Response and Reporting

In the event of a cybersecurity event/breach, DoIT is the lead organization responsible for assessing, reporting, and coordinating response. Depending on the incident, this activity would be performed in conjunction with agency directors, elected officials, and regional partners.
Appendix 7 – Strategic Technology Plan Enabling Code

The following is the Snohomish County Code that mandates and defines the Strategic Technology Plan, as adopted in October 2016, along with a brief explanation of how this plan fulfills this Code:

2.350.020 Definitions.

(20) "Strategic technology plan" means a plan adopted pursuant to SCC 2.350.065;

2.350.065 Strategic technology plan.

Beginning in 2017 and every three years thereafter, the director shall prepare and submit a strategic technology plan to the executive, which the executive shall submit to the council. The strategic technology plan will address the overall technology and information management strategy for the county covering a 36-month period and align such strategy to the business and service goals, strategies, objectives, and plans of the county and its departments. Prior to submitting the plan to the executive, the director shall submit the plan to the SAB for review. The plan must contain the following:

(a) a definition of strategic areas, explaining the current state of information technology at the County and the opportunities to be facilitated by the strategic technology plan;

(b) for each strategic area, a set of strategic objectives with descriptions and desired outcomes; and

(c) for each strategic objective, the intended approach to achieve the desired outcomes.

This plan fulfills SCC 2.350.065 as follows:

- This is the first Strategic Technology Plan, being produced in 2017.
- This plan addresses the overall countywide technology and information strategy for the 36-month period of 2017 to 2020.
- This plan specifically aligns strategic technology goals to the business and service goals and strategies of the county and to individual departments and agencies.
- This plan defines and explains strategic areas, identifies objectives and outcomes for each area, and includes an intended approach with key initiatives for each objective.
- This plan will be submitted to the Strategic Advisory Board (SAB) for review. After review, this plan will be officially submitted to the Executive and to the County Council.
Appendix 8 – Terms and Acronyms

BAC – Business Advisory Committee. A committee within the technology governance structure of Snohomish County, the BAC is comprised of business leaders from all departments and agencies. It meets monthly to evaluate, discuss, and endorse technology strategy and major programs, in alignment to the countywide strategies and goals of the government.

BI – Business Intelligence. BI is a set of techniques and tools for the acquisition and transformation of raw data into meaningful and useful information for business analysis purposes. Common functions of BI technologies are reporting, online analytical processing, data analytics, data mining, complex event processing, business performance management, predictive analytics, and prescriptive analytics.

BYOD – Bring Your Own Device. BYOD refers to the policy of permitting employees to bring personally owned devices (laptops, tablets, and smart phones) to their workplace, and to use those devices to access privileged company information and applications. BYOD is primarily driven by the perceived job satisfaction of employees who prefer to use tools they self-select instead of those prescribed by their employer, and thus is typically considered an employee morale and job satisfaction – not productivity – initiative.

Cayenta – Cayenta Financials. Cayenta is the business management software system used by Snohomish County as its core financial system. Snohomish County purchased Cayenta in 1993. Cayenta Canada Corporation was acquired by Harris Computer Systems in 2004, which itself is a previously-acquired subsidiary of Constellation Software Incorporated. Today, Cayenta is primarily promoted by Harris as a public utility billing system for small government jurisdictions.

CRM – Constituent (or Customer) Relationship Management. For governments, CRM is an approach to managing interaction with residents. The CRM approach organizes and analyzes data about resident’s history with a government to improve relationships with residents. One important aspect of the approach is the CRM systems that compile information from a range of different communication channels, including a government’s website, telephone, email, live chat, marketing materials, social media, and more.

DoIT – The Snohomish County Department of Information Technology. DoIT provides for the planning, management, control, security, operation and use of information services, backbone network, telecommunications, information processing, equipment, data, computer workstations, connected devices, purchased services, and proprietary software. The department provides administration and management of centralized support services for the county, and includes such procedures as will generally promote more efficient management and utilization of such services.

Dynamics 365 – A software package developed by Microsoft. Dynamics is a cloud-based application development platform that can be used to develop software that requires modular design built on highly relational data, such as a CRM application.

eCommerce – The trading or facilitation of trading in products or services using computer networks, such as the Internet. Electronic commerce draws on technologies such as mobile applications, electronic funds transfer, online transaction processing, electronic data interchange, and automated data collection systems. Modern eCommerce typically uses the World Wide Web for at least one part of the transaction lifecycle although it may also use other technologies such as e-mail.
eGovernment – The use of electronic communications methods, devices, and the Internet to provide public services to residents. The term most commonly refers to digital interactions between a resident and the government, facilitating involvement in government activities through multiple communication channels and technologies, delivering online government services, and enabling government efficiencies through business process re-engineering.

ERP – Enterprise Resource Planning. ERP is a category of business-management software – typically a suite of integrated applications – that an organization can use to collect, store, manage and interpret data from many business activities. ERP systems are most commonly associated with the business functions of finance, purchasing, payment processing, accounts receivable, budgeting, manufacturing, shipping, service delivery, inventory management, payroll, and human resource management.

IoT – Internet of Things. The inter-networking of physical devices, vehicles, buildings, and other items embedded with electronics, software, sensors, actuators, and network connectivity which enable these objects to collect and exchange data. Such data can then be leveraged to drive improvements to operations, service, safety, workflow, and other business and service centric capabilities.

Lean – A systematic method for the elimination of waste within a manufacturing system or business process. Lean also takes into account waste created through overburden and waste created through unevenness in workloads. Lean Government refers to the application of Lean principles and methods to both identify and then implement the most efficient, value-added way to provide government services. Government agencies have found that when Lean is implemented, they see an improved understanding of how their own processes work, that it facilitates the quick identification and implementation of improvements, and it builds a culture of continuous improvement.

MDM – Mobile Device Management. MDM is an industry term for the administration of mobile devices, such as smartphones, tablet computers, laptops and desktop computers. MDM is usually implemented with the use of a third party product that has management features for particular vendors of mobile devices.

Office 365 – The Microsoft brand name for a group of online services. Together, Office 365 provides productivity software and related services to subscribers. For business users, Office 365 provides e-mail, document storage, collaboration, communication, productivity tools, and social networking services through hosted versions of Exchange Server, Skype for Business, SharePoint, OneDrive, and Office Online, as well as access to the Microsoft Office software.

OneDrive – A Microsoft cloud-based file hosting service. OneDrive allows users to store and sync files and later access them from a web browser or mobile device. There are both commercial and personal versions of OneDrive. The personal version is generally free but with limited storage and functionality. The commercial version, known as OneDrive for Business, is part of the Office 365 suite, and includes administrative tools and controls to ensure security, file management, and archive capabilities. With OneDrive for Business, users can keep files private, or share files within their organization or with known contacts.

Power BI – A business intelligence and analytics service provided by Microsoft. It provides interactive visualizations with self-service business intelligence capabilities, where end users can create reports and dashboards by themselves, without having to depend on any information technology staff or database administrator.
POC – Project Oversight Committee. Part of the county’s technology governance, the POC provides oversight, reporting, and support for technology projects. The POC is chartered to ensure project success through status monitoring and proactive assistance when needed. In addition, the POC also defines criteria for recommending and prioritizing projects for investment.

SAB – Strategic Advisory Board. The highest level of technology governance in Snohomish County, the SAB is comprised of elected officials and external advisors. It meets twice per year to evaluate, discuss, and endorse technology strategy and major programs, in alignment to the countywide strategies and goals of the government.

STEP – Snohomish County’s Service, Technology, and Efficiency Program. This program, modeled on Lean principles, seeks to improve government services and operations, while instituting a culture of continuous improvement and efficiency.

SQL Server – A relational database management system developed by Microsoft. As a database server, it is a product with the primary function of storing and retrieving data as requested by other software applications – which may run either on the same computer or on another computer across a network (including the Internet). Generically, the term SQL refers to Structured Query Language, a programming language used to store, update, query, and delete data.