Department of Information Technology

Annual
Information Technology
Plan and Report

2019

Snohomish County
The annual report is an opportunity to reflect on progress against our goals. Being customer-centric is a fundamental priority for the Snohomish County Department of Information Technology (IT), and we strive to align all our services with this mindset. In a workplace highly dependent on digital solutions we take this commitment seriously.

Our core IT services help county employees and keep our IT assets safe and secure. Additional services related to document retention, storage and retrieval, and a professional-grade enterprise print and scanning center increase our ability to support staff and public alike. We manage the needs of a broad and diverse set of internal customers across every department, office, and entity in the county. Throughout this report, you will find insights into our IT footprint that touches every county employee and many residents daily. We also have a sizeable external-facing presence through our public website and social media. Over half a million users interact with county services monthly through these channels, accessing 89 different functions and finding information for their needs. Each visit leaves an impression and increases the ability of Snohomish County leaders and officials to tell stories of our community and hear directly from residents, providing an opportunity to strengthen trust in county government through quality services and transparency.

The impact of our IT investment goes well beyond county government. Our IT department’s strengths, in both technology and talent, enable us to be a service provider for more than thirty other agencies. From managed IT and co-location services to IT infrastructure for Law Enforcement and being an internet service provider, these cooperative services leverage and extend the value of public IT investments. Through our memberships in the King County Strategic Advisory Board and the Association of County and City Information Systems (ACCIS) in Washington, we are actively engaged in creating a stronger regional government IT community to benefit our residents.

In the last year, we delivered on many projects that had a direct business impact, such as:

- Providing face-to-face technical support through the IT Service Desk Walk-Up Window which allows county employees to interact more personally with the Service Desk team, ask questions, and develop working relationships.

- Modernizing our application portfolio and empowering our workforce to manage their work through access to their information securely from anywhere, using any device, anytime.

- Introducing new tools for civic engagement, including a system enabling residents to learn about their tax dollars distributions, and an online map to help people better understand and manage natural hazard risks.

Snohomish County IT believes technology can and should be used to simplify the lives of our employees and county residents. Our focus on building a customer-centric operating model where our services directly align to needs across all county departments will enable this. Technology can also increase operational efficiency through a strong alignment between IT and the county’s Service and Technology Excellence Program (STEP), allowing the county to provide better and more cost-effective services.

We take pride in serving our community, and we are grateful for the opportunity to make your lives more comfortable through our services.

Viggo Forde
Director
2019 Annual Information Technology Plan and Report

Introduction

Director’s Message

State of Information Technology

Current IT Environment
Strategic Plan Update
  Strategic Area: Portfolio Modernization
  Strategic Area: Workforce Empowerment
  Strategic Area: Civic Engagement
  Strategic Area: Service Maturity
Analysis of SWOC
  Analysis of Strengths
  Analysis of Weaknesses
  Analysis of Opportunities
  Analysis of Challenges

Status of IT Projects

Current Status of IT Projects

Five Year Financial Plan

Fund 505
Fund 315

Josh Whall  Sanjay Parikh  David Jones  Melodie McCann  Lisa Schultz  Matt Crisler
## Current IT Environment At A Glance

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Customer and Workstation Services:</strong></td>
<td>4,056 workstations, 4,547 mailboxes, 3,328 phone lines</td>
</tr>
<tr>
<td><strong>Geographical Information System:</strong></td>
<td>500+ data layers, 8+ terabytes of GIS data, 500+ gigabytes of aerial data</td>
</tr>
<tr>
<td><strong>Enterprise Application Services:</strong></td>
<td>Support, maintenance &amp; vendor management, Enhancements, upgrades &amp; patching of enterprise applications, Coordination, support, maintenance and planning</td>
</tr>
<tr>
<td><strong>Investment Alignment Services:</strong></td>
<td>102 IT managed projects, on average 26 departments, offices &amp; agencies supported, Strategy building, analysis &amp; business solutions</td>
</tr>
<tr>
<td><strong>Application Support Services:</strong></td>
<td>146 ‘line of business’ systems, Application administration &amp; support, Development, design &amp; planning</td>
</tr>
<tr>
<td><strong>Mandated Services:</strong></td>
<td>3,985,223 documents digitized, 75 contracts managed, 2,916 records retrieval requests</td>
</tr>
<tr>
<td><strong>Enterprise Technology:</strong></td>
<td>261 TB data, 79 networked facilities, agencies &amp; partners, 99.9% uptime service availability</td>
</tr>
</tbody>
</table>
Full lifecycle management of county workstations including deployment, support and a scheduled refresh program, providing standard tools that enable productivity, foster collaboration and provide a secure computing environment.

Maintenance, vendor management, upgrades, and coordination services that support County GIS professionals to deliver products such as maps, image/elevation analysis, and property/land use information.

Support, maintenance, vendor management, data analytics and business intelligence, enhancements, and upgrades for all enterprise-level applications, such as finance, payroll, taxation, web-based services.

Business analysis services and project management support to engage directly with customers to identify business needs and determine the enterprise solutions that will fulfill customer requirements.

Administration, support, maintenance, vendor management, data analytics, business intelligence and planned new development services for department specific applications.

Non-technical or administrative services essential to county departments and agencies, storage and management, print and copy services, IT procurement and contract management, and software license maintenance.

Enterprise technology infrastructure services to provision, maintain, secure and support a solid foundation for delivery of business systems and IT-enabled processes, with a focus on stability, performance, and cybersecurity.
Strategic Objectives

Strategic Area: Portfolio Modernization

To enable successful adoption of new business practices, operational changes, and customer service improvements, Snohomish County requires technology that is flexible and responsive, and supports modular changes to functionality. Our portfolio modernization strategy continues to focus on core systems that drive county revenue and finance while developing future software systems. This includes establishing a new capacity to support improvements emerging from the agencies (including STEP), and creating a governance structure to ensure successful results for IT investments.

Enterprise System Modernization

Modernize/replace the county's core enterprise systems, including revenue management, resource planning, and records management.

- Enterprise financial and payroll report migration from Actuate to Microsoft SQL Reporting Services (SRSS)
- Enterprise document/archives management
- Auditor records system replacement
- Election system upgrades
- Enterprise time keeping/payroll automation
- Public records portal

Platform Standardization

Implement common platforms, technologies and tools for the standardized development of tactical and modular business applications.

- SharePoint Online
- Microsoft Dynamics
- SQL Server Standardization and database migration

STEP Initiative Support

Perform tactical projects to achieve department/agency business goals related to operational efficiency and automation.

- Launch a Center of Excellence program for the IT department utilizing STEP and Continuous Improvement (CI) principles
- Multiple automation/efficiency initiatives proposed by departments and offices

Establishing flexible and sustainable modular approaches to managing system improvements now and into the future
Strategic Area: Workforce Empowerment

Emerging business models require enabling and empowering staff to work in multiple locations by providing flexible tools and collaboration workspaces accessible from anywhere, at any time. The workforce empowerment strategy will define and create the platforms, tools, and capabilities necessary to support a 21st-century labor force, while ensuring proper security and controls on hardware, software, and data.

Document and Data Collaboration

- Business intelligence and analytics development
- Office 365 records archiving
- Auditor records system replacement
- OneDrive for Business improvements
- SharePoint Online adoption

Flexible Device Definition and Enablement

- Mobile Device Management (MDM)
- Standard device adoption proposal
- Wireless capacity expansion

Mobile Security Management

- Enterprise identity management
- Enterprise data security
Strategic Area: Civic Engagement

An increasingly tech-savvy and connected public has created an evolving standard for how governments are expected to interact with residents. These emerging expectations from County residents are addressed with the Civic Engagement strategy of adopting new capabilities for communications, content management, and social engagement. Readily accessible online services also foster partnership and public trust, while also reducing operational costs.

Common Public Platforms
Developing the technological infrastructure to support and encourage community engagement, economic development, and public information access through self-serve tools and user-centered design.

- Public broadband initiatives
- Dynamics 365 CRM
- Public access to County legislative materials and processes
- Constituent Relationship Management (CRM)
- Enterprise public records portal

Content and Social Media Administration
Identifying and initiating an enterprise-level approach to ongoing engagement with County residents through online content and social media activity.

- Online Service integration
- Social Media maturity
- E-Commerce online services platforms standardization
- Website and internal tools modernization
- Web Services Team resources development

Mobile Applications
Identifying a set of services that can be delivered using mobile apps, and developing customer access apps using a standard toolset.

- For the Record (FTR) Audio File online hearing records access
- Pet Licensing mobile application

Bringing the “anywhere, anytime” empowerment strategy to community access to public services
Strategic Area: Service Maturity

An effective and efficient IT operation is fundamental to delivering value and enabling successful operations for all other government agencies and services. The IT service maturity strategy includes providing specific customer-centric services, developing a more comprehensive understanding of the county’s business application portfolio, defining methods for reporting service results, and aligning IT services to vendor relationships.

Service and Rate Model

Defining a new service and rate model through IT Governance, promoting transparent rates and service levels, and performance accountability.

- Sustainable service and rate model
- IT Service Desk maturity
- IT Service Level Agreements (SLA) formation and metric reporting

Vendor Management Maturity

Centralizing the administration of technology contracts to support efficient management, reduce redundancies, and coordinate vendor performance.

- Contract administration improvement
- Procurement processes refinements
- Vendor (SLA) evaluations

Technology Portfolio Maturity

Creating strategic roadmaps that ensure future alignment of systems, platforms, and technology to county operations, and drive future development.

- Disaster recovery strategy and architecture
- Application portfolio rationalization
- SQL platform modernization

IT Service Delivery

Putting service into action by delivering technology solutions into the hands of customers.

- Automated call services for internal and resident facing call centers
SWOC Analysis

Strengths: IT Infrastructure and Performance

Operational Reliability

This is an area of current strength that presents additional opportunities going forward. The operational capacities of IT have increased since 2017, and our uptime reliability now stands at 99.9%, exceeding the industry standard of 99.5%.

This operational reliability, along with a robust data center with large capacity volume, has allowed IT to provide services not only to internal clients, but also numerous external agencies and other municipalities throughout Snohomish County, empowering and supporting improved public services.

IT continues rolling out technology improvements to further enhance operational reliability and user experience. One such improvement is the finalization of device standards for technology replacement projects. By streamlining the Technology Replacement Program (TRP), these new standards now allow IT to upgrade more devices on an annual basis than ever before.

Multiple infrastructure changes to the OneDrive platform have further improved reliability and user functionality, as have the ongoing migration projects for PowerBI and OneDrive in process across the County. Enhanced spam and virus protection have increased information security.

Weaknesses: Workstations

Software Management Practices

Snohomish County has historically used a self-empowered purchasing model that enables individual departments to acquire IT solutions, especially software as a service (SaaS), outside the IT model. This has contributed to a non-standard IT environment that is neither fully understood nor comprehensively managed.

IT has continued the effort to identify and resolve the issue of unmanaged retail software applications installed on County workstations, with the goal of eliminating the gap between the catalog of software that is actively licensed, maintained and patched by IT staff, and unmanaged software. Approximately 3,000 such installations have been identified. IT is engaged in an ongoing effort to:

- Continue identifying and evaluating these applications and the needs behind them.
- Eliminate unused applications or replace them with managed alternative solutions.
- Simplify the range of options available for a particular business case.
- Reduce liabilities from security vulnerabilities and potentially illegal software.
- Enhance the speed of delivering solutions to clients.

The continued effort of retiring unmanaged software also leverages the department to look towards more innovative and modern software solutions that IT can help implement for its customers.
Opportunities: IT Workbench and STEP Initiatives

Customer-centered Project Management

One of the larger projects in the STEP initiative is to perform a major overhaul of our procurement process to make it more efficient. Identifying and implementing ways to streamline and strengthen procurement are ongoing.

The Workbench, developed in 2018, increases the transparency of IT as a solution provider by offering self-serve access to project status. Stakeholders and clients stay informed on project progress.

Currently there are 168 projects in progress listed in the Workbench:

- 115 active
- 22 completed
- 31 in queue

The visibility of the Workbench and STEP efforts help to inform clients and stakeholders as to how IT is utilizing project and staff resources at any given moment.

Challenges: Workforce Empowerment

Emerging Technology Adoption

In 2017 IT made a significant commitment to workforce empowerment by adopting the Microsoft Office 365 suite.

- Cloud Drive Mapper – provides employees with seamless and reliable file access
- Intune Management – manages County-owned mobile devices
- Team, Dynamics, and Delve – provides collaboration and information searching
- One Drive and SharePoint Online – provides access to files from anywhere
- Office portal – provides online access to tools

The adoption of these and other technologies has presented new challenges in identifying how the department can leverage them in the most advantageous manner. While each has provided positive advancements, the level of change involved and the interlocking nature of some of the changes has often revealed areas of needed improvement in how IT manages these changes internally and in terms of customer support. Implementation of these solutions has shown that the challenges with consuming new IT solutions are real and require a dedicated focus on change management practices to get the most out of these modern solutions.
Status of IT Projects

IDENTIFIED NON-ROUTINE PROJECTS

- Active: 115 (18%)
- Complete: 22 (13%)
- In Queue: 31 (18%)
- Cancelled: 1 (1%)

ACTIVE PROJECTS: HEALTH INDICATOR

- Green: 92
- Yellow: 15
- Red: 7
This data reflects the current status of all IT projects. The majority of projects are actively in process, with 80% of these projects fully within planned performance ranges. Only 6% of active projects are considered at risk, primarily due to funding issues or other constraints. The remainder have either been completed, or are scheduled to commence during the next 12-month period.
Fund 505 is the IT operating fund, budgeted one year at a time. Any revenue remaining in Fund 505 at the end of any year is rolled into Fund 315, where it must be appropriated before it can be expended.

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<tbody>
<tr>
<td>Intergovernmental Revenue</td>
<td>-</td>
<td>-</td>
<td>1,114,948</td>
<td>1,179,296</td>
<td>1,214,675</td>
<td>1,251,116</td>
<td>1,290,739</td>
<td>3.00%</td>
</tr>
<tr>
<td>Charges for Services</td>
<td>192,862</td>
<td>482,247</td>
<td>1,114,948</td>
<td>1,179,296</td>
<td>1,214,675</td>
<td>1,251,116</td>
<td>1,290,739</td>
<td>3.00%</td>
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<tr>
<td>Miscellaneous Revenues</td>
<td>723,361</td>
<td>697,349</td>
<td>707,339</td>
<td>721,486</td>
<td>735,915</td>
<td>750,634</td>
<td>765,464</td>
<td>2.00%</td>
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<tr>
<td>Interfund Rates</td>
<td>17,399,164</td>
<td>17,871,466</td>
<td>19,169,547</td>
<td>20,353,430</td>
<td>20,760,499</td>
<td>21,175,709</td>
<td>21,599,223</td>
<td>Above</td>
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<tr>
<td>Disposition of Assets</td>
<td>-</td>
<td>-</td>
<td>672,846</td>
<td>2,015,627</td>
<td>2,030,417</td>
<td>2,030,417</td>
<td>2,030,417</td>
<td>na</td>
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<tr>
<td>Transfers In</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>na</td>
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<tr>
<td>REVENUE TOTAL</td>
<td>18,315,387</td>
<td>19,051,062</td>
<td>20,988,486</td>
<td>22,219,864</td>
<td>22,675,711</td>
<td>23,141,018</td>
<td>23,615,985</td>
<td>na</td>
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<table>
<thead>
<tr>
<th>EXPENDITURES:</th>
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<tbody>
<tr>
<td>Salaries and Wages</td>
<td>6,859,579</td>
<td>7,065,362</td>
<td>7,786,720</td>
<td>8,042,470</td>
<td>8,243,532</td>
<td>8,449,620</td>
<td>8,660,861</td>
<td>2.50%</td>
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<tr>
<td>Personnel Benefits</td>
<td>2,678,615</td>
<td>3,051,269</td>
<td>3,338,310</td>
<td>3,376,089</td>
<td>3,587,770</td>
<td>3,612,723</td>
<td>4,051,781</td>
<td>6.27%</td>
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<tr>
<td>Supplies</td>
<td>629,497</td>
<td>791,862</td>
<td>1,045,546</td>
<td>1,087,457</td>
<td>1,109,542</td>
<td>1,131,733</td>
<td>1,131,733</td>
<td>2.00%</td>
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<tr>
<td>Other Services and Charges</td>
<td>4,181,396</td>
<td>4,938,197</td>
<td>5,757,962</td>
<td>5,527,148</td>
<td>5,637,691</td>
<td>5,750,445</td>
<td>5,885,454</td>
<td>2.00%</td>
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<tr>
<td>Technology Replacement Transfer</td>
<td>1,401,000</td>
<td>1,620,411</td>
<td>1,849,337</td>
<td>1,942,511</td>
<td>1,981,361</td>
<td>2,020,988</td>
<td>2,061,408</td>
<td>per Plan</td>
</tr>
<tr>
<td>Intergov Svc &amp; Other Interfund Pymts</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>n/a</td>
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<tr>
<td>Capital Outlays</td>
<td>42,190</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1.50%</td>
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<tr>
<td>Interfund Payments for Services</td>
<td>1,916,992</td>
<td>1,918,703</td>
<td>1,922,693</td>
<td>1,992,767</td>
<td>2,042,586</td>
<td>2,093,651</td>
<td>2,145,992</td>
<td>2.50%</td>
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<tr>
<td>EXPENDITURE TOTAL</td>
<td>17,867,079</td>
<td>19,458,264</td>
<td>21,730,468</td>
<td>21,947,442</td>
<td>22,580,726</td>
<td>23,236,969</td>
<td>23,917,228</td>
<td>n/a</td>
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<tr>
<td>Anticipated Under-Expenditure</td>
<td>-</td>
<td>397,623</td>
<td>400,099</td>
<td>411,967</td>
<td>424,320</td>
<td>437,116</td>
<td>437,116</td>
<td>2.00%</td>
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</table>

<table>
<thead>
<tr>
<th>FUND BALANCE:</th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Increase (Decrease) in Fund Balance</td>
<td>448,308</td>
<td>(407,203)</td>
<td>(344,359)</td>
<td>672,521</td>
<td>506,972</td>
<td>320,369</td>
<td>135,674</td>
<td>n/a</td>
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<tr>
<td>Information Services Fund Balance</td>
<td>2,403,600</td>
<td>1,956,398</td>
<td>1,852,038</td>
<td>2,324,559</td>
<td>2,831,531</td>
<td>3,159,900</td>
<td>3,296,774</td>
<td>n/a</td>
</tr>
<tr>
<td>Fund Balance as % of Revenue w/o Interfund Transfers</td>
<td>13.1%</td>
<td>10.5%</td>
<td>7.9%</td>
<td>10.5%</td>
<td>12.5%</td>
<td>13.7%</td>
<td>14.0%</td>
<td>n/a</td>
</tr>
</tbody>
</table>

**Assumed FTE Count**
- Viggo Forde: 86.0
- Alan Jones: 85.0
- Bao Dinh: 88.0
- Teri Lawrie: 88.0
- Jacob Rusher: 88.0
- Wes Sides: 88.0

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Growth % for DoIT Rates Only
- 5.35%
- 2.71%
- 7.26%
- 6.18%
- 2.00%
- 2.00%
- 2.00%
Fund 315 is a multi-year fund where money is appropriated for expenditures related to projects, Operation and Maintenance (O&M), and Technology Replacement Program (TRP). During the next five years, Fund 315 budgeting will focus on strategic improvements that ensure Snohomish County makes effective use of technology investments, aligning with the vision established by county leadership.

### 2019
- Replace 10% of endpoint closet network switches
- Replace 25% of users’ desktop computing devices
- Expand utilization of cloud storage
- Replace 20% of mobile computing devices
- Replace 20% of physical servers
- Replace 20% of closet UPS systems
- Procure flyover for GIS orthophotos
- Implement CRM
- High Line/EMSS and Time Reporting
- PRISM
- Replace Anthem
- Property Based Systems Project Fit Gap

### 2020
- Replace 10% of endpoint closet network switches
- Replace 25% of users’ desktop computing devices
- Replace 20% of mobile computing devices
- Replace 20% of physical servers
- Replace 20% of closet UPS systems
- Reserve $75k for GIS orthophotos

### 2021
- Replace 10% of endpoint closet network switches
- Replace 15% of users’ desktop computing devices
- Replace 20% of mobile computing devices
- Replace 20% of closet UPS systems
- Reserve $75k for GIS orthophotos
- Complete Property Based Systems Project

### 2022
- Replace 10% of endpoint closet network switches
- Replace 15% of users’ desktop computing devices
- Replace 20% of mobile computing devices
- Replace 20% of closet UPS systems
- Reserve $75k for GIS orthophotos

### 2023
- Replace 10% of endpoint closet network switches
- Replace 15% of users’ desktop computing devices
- Replace 20% of mobile computing devices
- Replace 20% of closet UPS systems
- Reserve $75k for GIS orthophotos