STRATEGIC INFORMATION TECHNOLOGY PLAN 2020 – 2023

2022 Update

April 2022

King County

I.   Contents

II.   King County Code

2A.380.200 **Technology business plan - strategic information technology plan.**

Beginning in 2019 and every fourth year thereafter, the Chief Information Officer (CIO) shall prepare a strategic information technology plan for council adoption by motion. The Strategic Information Technology Plan (SITP) and the motion for the plan's adoption require transmission to the council by December 31 of the year it is prepared, with annual updates provided by April 30 starting in year two of the four-year plan. The plan should include, for the subsequent four calendar years:

1. A vision statement for the coordination of technology management and investment across the county;
2. A description of the current environment, strengths, weaknesses, opportunities, and challenges for individual planning issue areas;
3. A list of recommended objectives, with description;
4. The approach to achieve the desired outcomes for each strategic objective;
5. The accomplishments towards meeting objectives from previous approved strategic plans, for unmet objectives and a discussion of the obstacles towards meeting those objectives;
6. Appendices supporting the recommended objectives; and
7. Appendix defining appropriate strategic performance metric(s) for each recommended objective in the plan. (Ord. 18802 § 1, 2018: Ord. 18432 § 8, 2016).

III.   Executive Summary

This report highlights the progress King County has made in 2021 on the King County Strategic Information Technology Plan (SITP) 2020 – 2023 goals and objectives.

The major 2020-23 Strategic Information Technology Plan objectives are:
- **Connected Communities** – Community members connect with their government and conduct their business from where they are either in person or online.
- **Connected Data** – Community members trust that the data the County has in custody provides secure, timely, convenient, and accurate access to the County's services and information.
- **Connected Government** – Community members have a quick and transparent access to services regardless of which local or state government provides the service or information.

<u>Summary</u>

In 2021, King County completed eight **Connected Communities** projects; another 25 funded technology projects are currently in progress, totaling $220 million in investments. Achievements outlined in this report include:
- Increased Metro reduced fare annual pass revenue by over 2000 percent in 2021 compared to 2020 revenues by enabling online enrollment
- Over 4,000 customers per year no longer need to travel downtown for protection orders now available online

- More than 40,000 households, predominantly from underserved communities, enrolled in subsidized monthly internet program

In 2021, King County completed 22 **"Connected Data"** projects; another 33 funded technology projects are currently in progress, totaling $137 million in investments. Key findings include:

- Over 275,000 large digital evidence files now available quickly and securely from within case management systems
- Client Outcome Reporting Engine (CORE) providing DCHS with real-time data dashboards on over 100 providers. This covers all levy and departmental programs allowing analysis on success factors as well as equity
- As part of a new Jail Management System, dashboards monitor COVID cases, vaccination status, and the ability to quickly adjust bed assignments to help prevent the spread of the virus through the jails
- Metro's transit data hub (TBIRD) supports a data-driven culture resulting in multiple, on-going improvement automations eliminating tasks that previously took 675 hours of staff time to perform every year
- New digital HR systems enabled over 75,000 HR transactions to happen faster and more securely. They also collected over 14,300 digital vaccination compliance forms supporting compliance requirements and rapid access to status to enable continued service delivery during the pandemic
- Established Enterprise Information Security policy framework and have created and activated 13 policies and 4 standards to date with more to come in 2022 resulting in more secure and consistent new project implementations

In 2021, King County completed seven **"Connected Government"** projects; another 17 funded technology projects are currently in progress, totaling $292 million in investments. Some examples include:
- Remote Jury selection/attendance and witness testimony for 120 Superior Court jury trials – more than any county in the nation
- Rapidly implemented remote collaboration tools for employees enabling 75,000 meetings, 350,000 phone calls, and 3 million chat messages per month
- Deployed virtual work environments enabling scientists and engineers interacting with high volumes of data to work remotely by increasing remote processing speeds by over 50 percent
- Enabled remote HR management of hybrid/remote workforce by expanded digital HR capabilities to include over 31,824 training courses, over 3,991 digital on-boardings of new staff, and employee performance evaluation creation and delivery
- Fully tested, piloted, and rolling out new PSERN (Puget Sound Emergency Radio Network) that will result in increased coverage, enhanced capabilities, and improved reliability when fully rolled out in 2023
- Increased on-line supplier registration and efficiency with new procurement solution
- Reduced average booking fee for employee travel from $35 down to $5 and reduced processing time from 45 days down to 5 with new digital employee travel system

- Improved security, protection, and disaster recovery of payroll systems by modernizing to the cloud

In 2021, King County delivered several technology solutions that supported critical **COVID-response** needs. These projects were rapidly implemented to aid crisis response teams and economic recovery efforts in the region. Key findings include:

- More than 105,000 vaccinations were administered at King County Public Health sites in 2021 relying on new, multi-lingual, appointment verification and scheduling systems
- Nearly 50,000 households were able to register for rental assistance that paid out $169 million to 15,000 qualified households using new, automated application and disbursement tracking systems

What's Next?

Just as in 2020 and 2021, significant project progress is expected over the remaining two years of this strategic IT plan that will deliver results. These results are anticipated to continue to increase the digital capabilities available to communities.

Increased emphasis and progress related to digital equity is also expected, as inequities have become more obvious and pronounced during the COVID-19 pandemic. Due to these unfortunate impacts, increased awareness, and the desire to fund and deliver solutions is also expected.

IV.   Background

DEPARTMENT OVERVIEW

King County's Department of Information Technology (KCIT) provides the information technology infrastructure and support for King County government services and employees. Its work supports King County's residents and communities.

The department is directed by King County's Chief Information Officer (CIO). The CIO provides vision and coordination of technology management and investments across the County. The department is comprised of the CIO Office, the Emergency Radio Systems Division, the Enterprise Business Services Division and the Infrastructure and Operations Division (King County Code 2A.380.010).

Image 1 below displays how Information Technology is an integral and critical partner in delivering King County services, by providing a foundation for those services.

Among the services provided by KCIT directly to communities are:
- GIS Center
- I-Net
- Cable Communications
- Enhanced-911 Program (E-911). The Enhanced 9-1-1 (E-911) Program administers the emergency 911 telephone system in King County.

In addition, two KCIT-led initiatives impact residents countywide:

- Digital Equity. Access to information and technology is a fundamental social justice goal. KCIT conducted the 2020 Broadband Access Study , which informs the work to increase access to and usage of the internet for all communities in King County. Actions to be taken have not yet been finalized. Such actions may include initiatives like subsidized internet access programs, increased public wi-fi locations, targeted broadband build-out, and public/private partnerships.
- Puget Sound Emergency Radio Network (PSERN). PSERN is a voter-approved emergency public safety radio system that will be used for dispatching and communications between fire, law enforcement, and other first responders when it replaces the aging King County Emergency Communications System (KCERCS) in 2022.
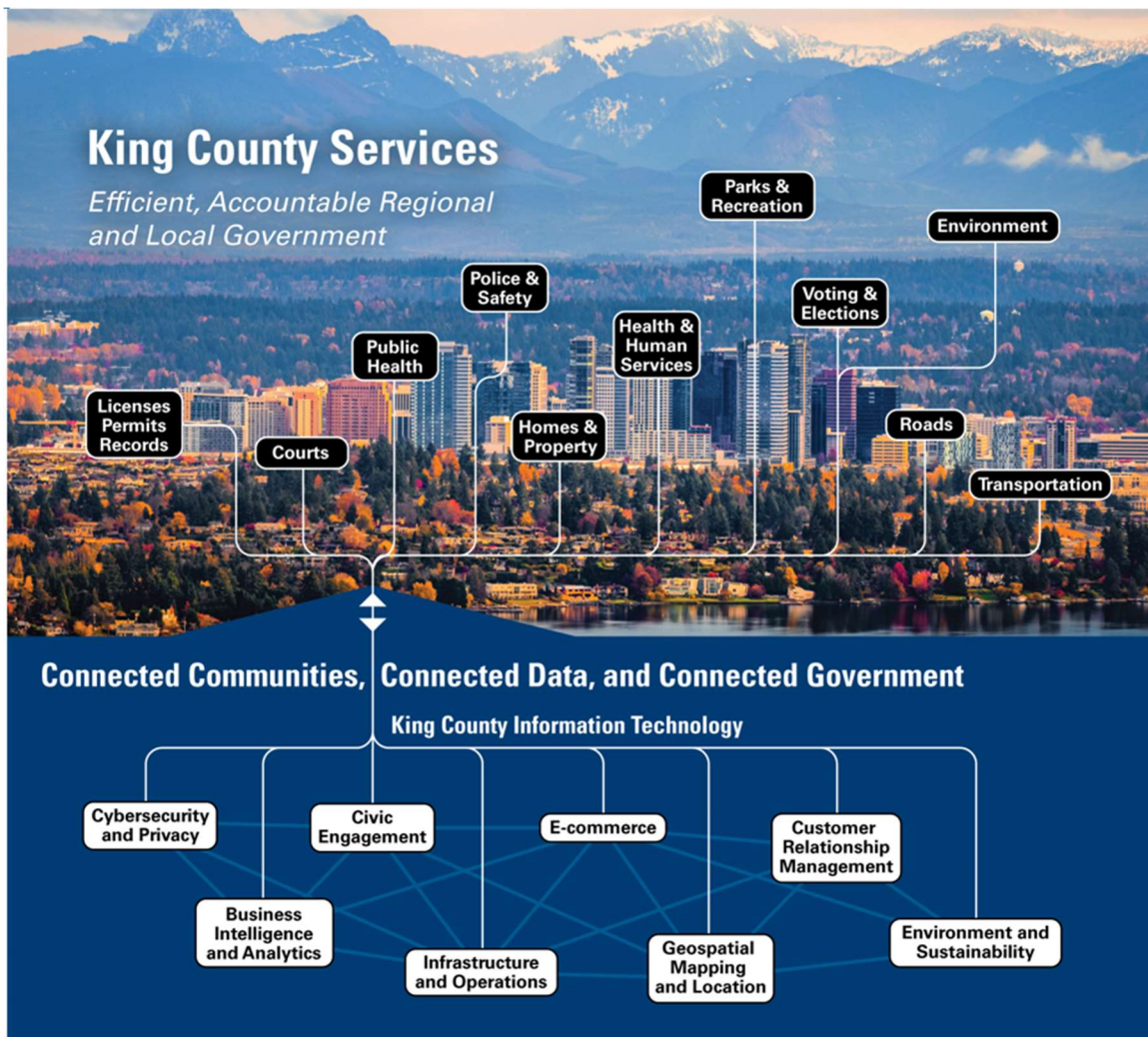
Image 1 – King County services are supported and enabled by Information Technology

KEY CONTEXT

King County Technology is guided by input and advice from *Technology Governance,* ensures King County's business needs are supported through collaboration with leadership and external partners who provide input and guidance on strategy and investments. In 2001, King County enacted Ordinance 14155 which established the County's technology oversight structure. The Strategic Advisory Council, Business Management Council, Technology Management Board, and Project Review Board advise the CIO on establishing countywide IT policies and provide central oversight for technology investments.

There are three key elements to the context of this annual update:

1. Input from Technology Governance that informs the Strategic Information Technology Plan (SITP) and its annual updates, as Image 2 shows.
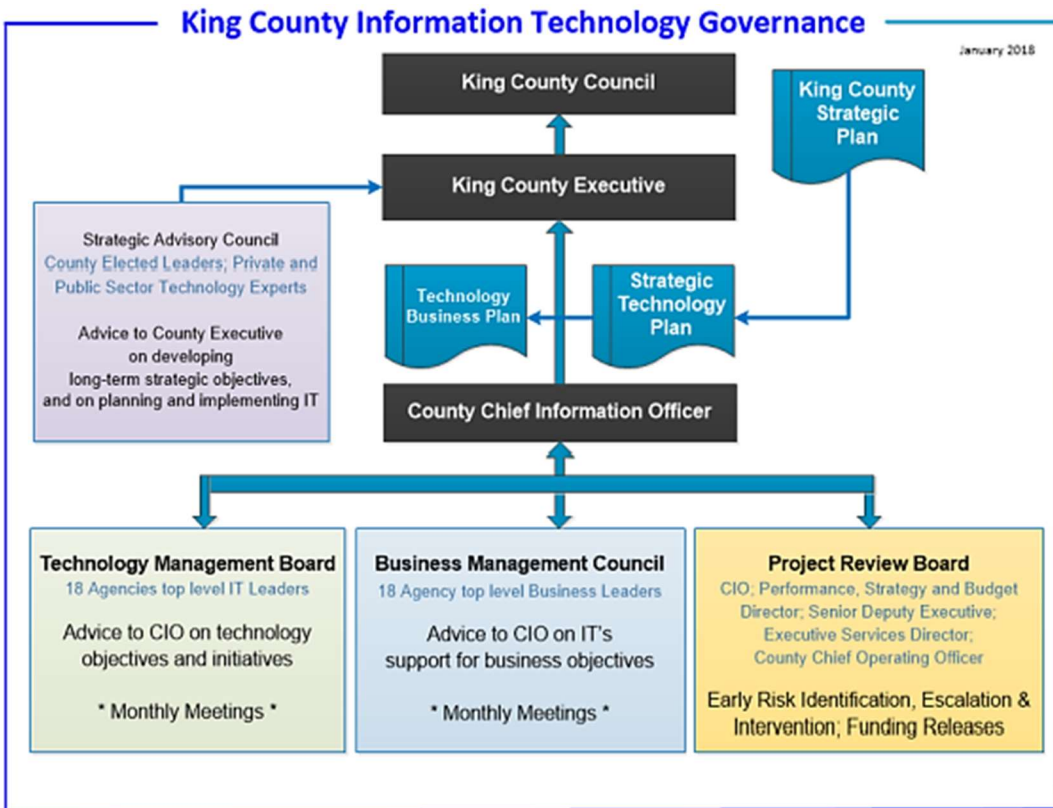
Image 2 – Strategic Technology Plan Context

2. Ongoing modernization efforts to modernize King County technology applications and infrastructure. These modernization efforts include:

    •   Migration from local computing to centralized computing in a modern data center; and more recently, into cloud computing for the majority of King County's systems.
    •   Minimizing custom in-house or vendor developed applications specifically for King County and movement towards vendor provided solutions readily available on the market, then configuring for the County's needs, with little or no customizations. These solutions are often hosted by vendors in the cloud.
    •   Reshaping IT organization from individual department support to centralized support. This has been accomplished by expanding the skills and training of staff.
    •   Improving the County's fiberoptic and wi-fi networks to increase accessibility, reliability, and stability – regardless of where employees and residents are located.
    •   Standardizing desktop tools that enable remote service support.

3. In 2021, the County continued to respond to the pandemic challenges, and quickly pivot to address emerging business needs. Technology was essential in this response. Re-prioritization of existing efforts and new demands resulted in number of new projects that needed to be delivered very promptly to communities and employees. This report includes examples of such projects.

REPORT METHODOLOGY

This update to the 2020 Strategic Information Technology Plan (STIP) was developed by KCIT based on guidance, input, and contributions from the County's Technology Governance comprised of business and technology leaders and public and private sector business partners. The membership is available at the links below.

- Strategic Advisory Council Members
- Business Technology Management Members
- Technology Management Board Members
- Project Review Board Members

Feedback was gathered and synthesized into themes which informed updates outlined in this report. In addition, the data is being used to inform planning and development of the department's 2023-2024 budget request.

V.   Report Requirements

King County Code (KCC) *2A.380.200.B Technology Business Plan - Strategic Information Technology Plan (SITP)* describes the purpose and content of the SITP. This document provides updates on actions that furthered the objectives of the STIP in 2021.

This report follows the structure of the KCC requirements for the STIP. Requirements 3-5 are jointly addressed in subsection 3 due to their interconnectedness.

> **1. A vision statement for the coordination of technology management and investment across the county**

No update or change to the vision statement occurred in 2021. The vision identified in King County's Strategic Information Technology Plan 2020-2023 remains in place:

"A connected King County where everyone thrives and reaches their unique potential and engages in their communities."

> **2. A description of the current environment strengths, weaknesses, opportunities, and challenges for individual planning issue areas**

The strengths, weaknesses, opportunities, and challenges from the original Plan 2020--23 have been updated to reflect the impacts of the global pandemic and related social distancing. These updates are

marked as "NEW" below *(Image 3)*. Changes include:

- Strength – Ability to quickly pivot to changing priorities
- Weakness – Increased and more evident digital inequity and related impacts on under and unserved communities
- Opportunity – Increased trust in IT as valued partner
- Challenges – Transition to remote/hybrid work and remote service delivery to communities

THRUST

S   STRENGTHS

LEADING EDGE

- Consistently high ranking in digital achievement
- Strong partnerships with local, Industry leading technology partners
- 2016 – 2019 strategic focus on infrastructure enabling future focus
- Funding successes for enterprise efforts

NEW: CHANGE READY

- *Ability to quickly pivot to changing priorities*

W   WEAKNESSES

CHANGE AVERSE/SLOW

- High technical debt contained in legacy application portfolios
- Multi-leader government designed for checks and balances not speed
- Cultural aversion to risk and consequently change – engrained through existing business processes

NEW: DIGITAL INEQUITY

- *Increased and more evident impacts on under and unserved communities*

O   OPPORTUNITIES

INNOVATION

- Success with Innovation Pilots
- Partners expecting innovation leadership from IT that spans technology to include business change
- Heavy training and growth emphasis for IT staff on agile processes, tools, and future technologies
- Increased digital channels and capabilities rapidly evolving and affordably available

NEW: PANDEMIC DISRUPTION

- *Increased trust in IT as valued partner*

C   CHALLENGES

STATUS QUO

- High percentage of IT cost tied up in labor making investments less frequent
- Internal as opposed to external/customer focus; limited or siloed connections with communities and citizens
- IT often viewed as support organization rather than an enabler
- Continued investment required for cybersecurity and privacy

NEW: PANDEMIC DISRUPTION

- *Transition to remote and hybrid work*
- *Remote service delivery to communities*

Image 3 – SWOC Table (New Features)

3. **A list of recommended objectives, with descriptions**

4. **The approach to achieve the desired outcomes for each strategic objective**

5. **The accomplishments towards meeting objectives from previous approved strategic plans, when objectives have not been met and a discussion of the obstacles towards meeting those objectives**

The objectives identified in the SITP remain the same. They are summarized, along with their approach, below:

OBJECTIVE	DESCRIPTION AND APPROACH
1 – Connected Communities	Provide "omni-channel" service delivery and access to County information anywhere: phone, live chat, video calls, text messaging, social media, mobile app, online chatbots, or web.
2 – Connected Data	Use the vast amount of information that the County possesses, coupled with partner data, to assist the County to deliver better outcomes and information to the community. This includes development and utilization of well-defined cybersecurity, privacy, and risk management that permit organizations and individuals to have confidence that the County is a good steward of their data.
3 – Connected Government	Create a no wrong door digital marketplace for government services, including supporting transactions between departments and across government entities so that an individual can find the service or information that one is seeking. Employees use the marketplace to inform their work, develop automated workflows, assist customers, and derive insights from data and reporting to drive successful outcomes by using the data.

ACCOMPLISHMENTS

King County was recognized as the #1 digital county government by the National Association of Counties in its 2021 Digital Survey awards. This honor demonstrates King County's leadership in providing digital services that consistently rank among the very best year after year. King County invests in technology where it matters – in ways that drive real change for communities and employees.

King County measures three key performance indicators (KPIs) that demonstrate overall progress toward the strategic objectives stated in the SITP:

1. **Project Closure Rates.** In 2021, King County delivered more technology, faster. A record-breaking 37 technology projects were completed last year; the median duration for completing these projects was just 1.36 years – 1.5 years faster than the 17 completed projects completed in 2018 *(Image 4)*.
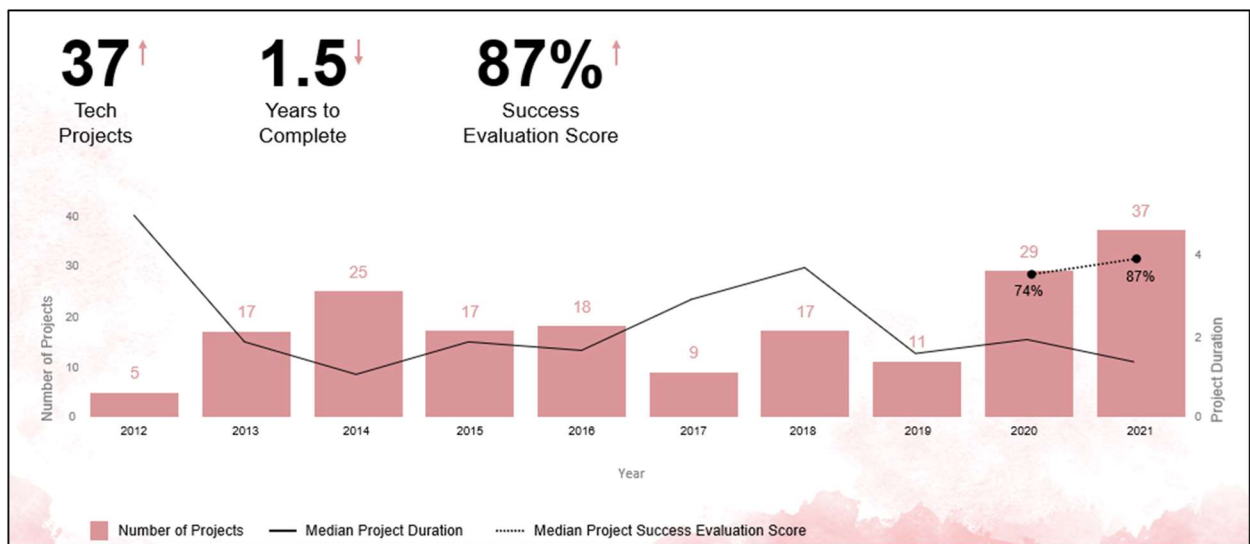
Image 4 – Number of Closed Projects By Year Graph

2. **Project Benefits.** Each of the 37 projects closed in 2021 aligned with a Strategic Technology Objective and Benefit Achievement, as described in King County Code 2.16.025 *(Image 5)*. Benefit Achievement categories include:

   - *Benefits Category #1:* External service benefits are focused on improving the quality or quantity of services provided to the public. This category is intended for projects that directly benefit the public. This includes improved quality of service, such as faster response times and better access to services for the public. In 2021, six projects were completed that achieved these benefits.

   - *Benefits Category #2:* Internal service benefits are focused on improving internal operations, including the quality or quantity of internal services. In 2021, 16 projects were completed that achieved these benefits.

- *Benefits Category #3:* Benefits of maintaining service at current levels are achieved by projects by either replacing or upgrading older technology, reducing the risk of system failures, or providing regulatory compliance. In 2021, 15 projects were completed that achieved these benefits.

- *Benefits Category #4:* Reduced cost or cost avoidance to produce services. In 2021, no projects were completed that achieved these benefits; the category was not included in the chart below.

3. **Project Success Scores.** The median project success scores increased to 87 percent in 2021, from 74
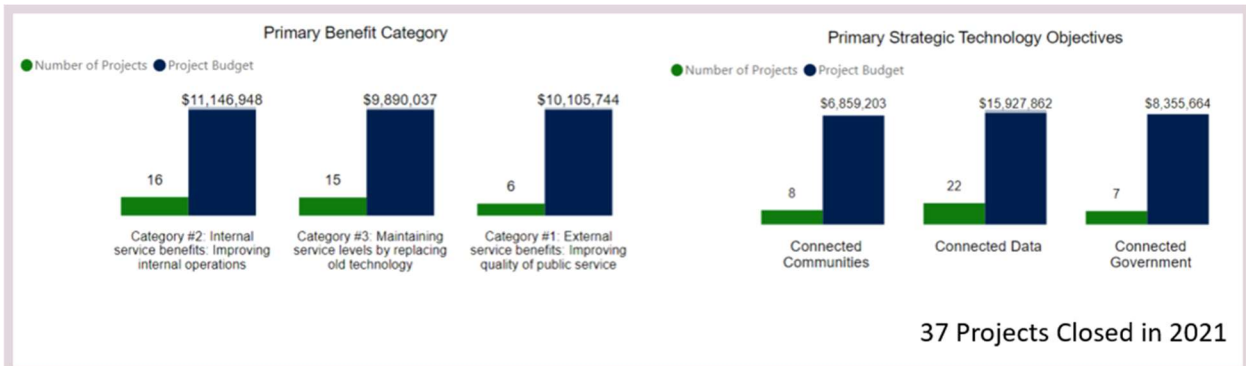

Image 5 – Graph of Closed Projects by Primary Benefit and Strategic Technology Objectives (2021)

percent in 2020. These advances were largely due to the County's advances in business and technology partnerships; project management and delivery practices; change management; and Project Review Board oversight.

In 2020, King County implemented an IT investment management tool to assess how successful IT investment are at completion. One of the assessment components of the success is provided by the sponsoring agency that assesses the business values of the delivered solution, as shown in Image 6. The second component includes an assessment of the project management practices, and the third how well the project followed Project Review Board oversight requirements.

Project Value (33% of Total) -- to be completed by the business sponsor/stakeholder [evaluator name] - maximum 4 point per criterion.			
Delivered Solution (Product)	Agency's satisfaction with the new solution and its impact on the business service(s) and/or operations. Suggested objective criteria: does the solution deliver what was set forth in the BAP. Additional criteria may be chosen by the sponsor/stakeholder and list the criteria in the comments.	0 points if	Very Dissatisfied
		1 points if	Dissatisfied
		2 points if	Neither satisfied nor dissatisfied
		3 points if	Satisfied
		4 points if	Very Satisfied
Process Value	Agency's overall experience with the process encountered to deliver the solution, including: working with KCIT (delivered and planned as agreed, facilitation of problem solving), own agency resources (right and sufficient staff at the right time), management of vendor resources and deliverables, external partners, change management of deployment	0 points if	Very Dissatisfied
		1 points if	Dissatisfied
		2 points if	Neither satisfied nor dissatisfied
		3 points if	Satisfied
		4 points if	Very Satisfied

Image 6 – Methodology for Completed Project Value Assessment by Sponsoring Agency

Success evaluations are now required for all technology projects using capital funds and/or costing more than $250,000. Evaluations are completed by both business and technology stakeholders. Projects falling below a 75 percent success threshold must conduct a post-closure review for lessons learned to improve project delivery. The data in these success evaluations is useful for evaluating future investments and assessing how King County is maturing project delivery practices over time.

success evaluations for completed projects are listed in the tables below, grouped by King County's technology objectives as stated in the SITP.

Objective 1 - Connected Communities

In 2021, King County completed eight Connected Communities projects. Success evaluations and examples of accomplishments associated with objective 1 - Connected Communities are highlighted below (Image 7).

Project Agency, Name & Number	Overall Success Evaluation	Score: Project Value	Score: Project Management	Score: PRB Compliance
DNRP-Parks and Recreation - Parks Facility Scheduling and AR System - 1137163	78%	63	100	72
DNRP-WLRD-Local Hazardous Waste - DNRP - LHWMP Website Upgrade - 1136426	63%	63	83	44
DPH - MEO Case Mgmt System Upgrade - 1132329	61%	38	83	61
KCM - HASTUS Planning Module (NetPlan) - 1124415	69%	50	92	67
KCM - Online Reduced Fare - 1134101	88%	88	100	78
KCM - Rider Information Systems - TABS Replacement - 1028651	94%	100	100	83

Image 7 – Success Scores of "Connected Communities" projects completed in 2020-2021 over $250,000 or using capital funds

A. Digital Protection Order Office

PROBLEM	Individuals seeking protection orders had to seek them in person. Social distancing required by COVID-19 impacted accessibility of this service.
SOLUTION	A Digital Protection Order Office was launched for those seeking protection orders, enabling them to submit required paperwork online for same-day service. A virtual office lets customers talk face-to-face with a staff member in Zoom breakout rooms. LiveChat assistance helps customers complete the required forms and submit forms electronically to the judicial officers.
IMPACT	The Digital Protection Order Office serves 4,000 customers per year who now no longer need to come into the office to get help.

B. King County Metro – Online Reduced Fare

PROBLEM	Transit customers had to demonstrate eligibility in person at the downtown Seattle King Street Center for Metro's low-income ORCA LIFT card or a regional reduced fare permit. This was a barrier for accessing the benefit.
SOLUTION	Creation of an accessible web-based application available in English or Spanish that allows customers to enroll and prove their eligibility online. Now customers can choose the type of pass/permit needed (low-income, youth, senior, or disabled), enter their personal information, and upload their documentation and photo online. The application is HIPAA-compliant, protecting customers' sensitive personal data.
IMPACT	Reduced fare programs have seen a significant increase – more than 2000% compared to 2020.[1]

C. Digital Equity Through Affordable Internet

PROBLEM	Not everyone who lives in King County has access to, or the ability to pay for, broadband internet. The pandemic forced many King County residents to use technology to access services or engage in critical activities such as work, school, telemedicine, ordering essential supplies, and accessing government services and information.
SOLUTION	To help underserved communities better afford internet services, KCIT engaged in extensive outreach efforts in 2021 promoting the federal Emergency Broadband Benefit (EBB) that provided up to $50 a month for qualified households. This temporary COVID-relief measure was converted into the long-term Affordable Connectivity Program (ACP) with $14 billion in funding[2]. KCIT will continue promoting enrollment in 2022.
IMPACT	Although this work is still underway, the project has already had a significant impact. From March 2021 through February 2022, more than 40,000 King County households successfully enrolled in EBB; enrollment data shows households receiving assistance are predominately from underserved communities in King County *(Image 8)*.[3]

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[1] Metro Transit Joint Board Program Management Report, 3rd Quarter 2021 (p. 18)
[2] Affordable Connectivity Program website: https://www.fcc.gov/acp
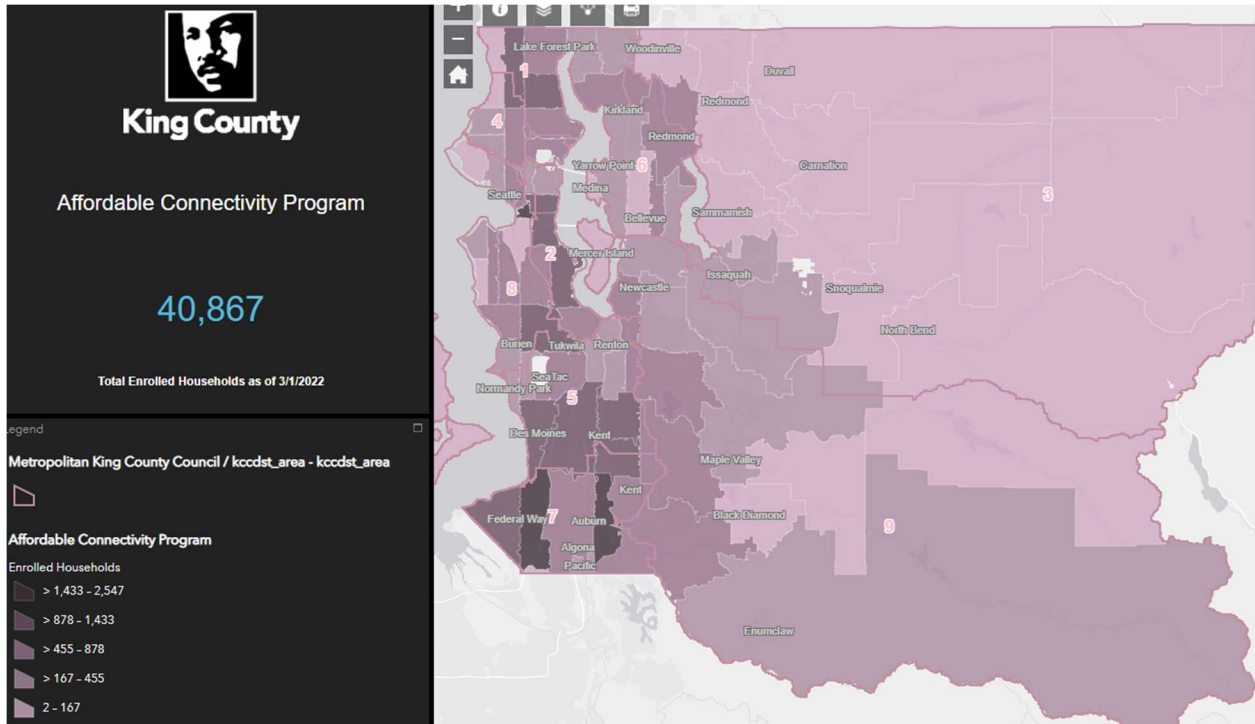[3] Enrollment in the federal Emergency Broadband Benefit, as of Dec. 30, 2021

Image 8 – King County Affordable Connectivity Program Map

Objective 2 - Connected Data

In 2021, King County completed 22 Connected Data projects; another 33 funded technology projects are currently in progress, totaling $137 million in investments. Success evaluations for Connected Data projects averaged 76.3 percent in 2021 *(Image 9)*. Examples of accomplishments associated with Objective 2 - Connected Data are highlighted below.

Project Agency, Name & Number	Overall Success Evaluation	Score: Project Value	Score: Project Management	Score: PRB Compliance
DCHS - Client Outcome Reporting Engine (CORE) - 1134636	57%	50	67	56
DCHS - DCHS/PH Data Integration - 1129638	73%	75	83	61
DES - DES FUEL MANAGEMENT SYSTEM UPGRADE - 1138773	63%	63	67	61
DHR - DHR ENTERPRISE HR e-RECORDS - 1137306	87%	100	100	61
DNRP - DNRP - SWM Billing System Replacement - 1129702	47%	75	33	33
DNRP-WLRD-Stormwater Services - DNRP - Cityworks AMS for WLRD Stormwater Services - 1131430	74%	50	100	72
DNRP-WTD - DNRP Drawing Management System (DMS) - 1130937	71%	75	83	56
DNRP-WTD-Finance & Administration - DNRP - WTD Capacity Charge Escrow Customer Add Automation - 1123391	70%	50	100	61
DPH - DPH JHS Med Packaging Replacement - 1138797	79%	88	100	50
KCIT - Adobe AEM-DAM Platform (Adobe Experience Manager-Digital Asset Management) - 1045856	39%	63	0	56
KCIT - AvePoint O365 Governance Tool Deployment - 1135636	87%	100	83	78
KCIT - E911 Call Reporting Upgrade - 1133687	63%	63	83	44
KCIT - KCIT Enh Wireless Phase II - Downtown Seattle Facilities - 1140826	81%	100	100	44
KCIT - KCIT Enhanced Wireless - Public Health - 1140831	94%	100	100	83
KCIT - KCIT Enhanced Wireless RCECC - 1140829	92%	88	100	89
KCIT - KCIT Jail Fac Enh Wireless - 1134905	62%	75	50	61
KCIT - KCIT Public Records Enterprise (GovQA) - 1137412	73%	75	83	61
KCM - Capital Management and Reporting System . - 1028812	88%	88	100	78
KCM - Comfort Station Management System - 1134110	93%	100	100	78
KCM - FARE ENFORCEMENT ENHANCEMENTS - 1134106	91%	100	100	72
KCM - Safety and Security Systems - 1129800	91%	100	83	89
KCM - Transit Data Infrastructure Replacement - 1112007	92%	97	100	78
KCM - VMS and On-Board Camera Management System - 1129798	91%	100	100	72
KCSO - IRIS/TESS Replacement Project - 1111808	83%	88	100	61
KCSO - KCRA AFIS Replacement - 1133726	66%	75	67	56

Image 9 – Success Scores of "Connected Data" projects completed in 2020-2021 over $250,000 or using capital funds

A. Client Outcome Reporting Engine (CORE)

PROBLEM	Stakeholders have requested real-time data dashboards and on-demand reporting to visualize the impacts of funded programs.
SOLUTION	[CORE](#) is a first-of-its-kind system that compares contractual performance to DCHS program goals for services delivered to individual clients, and the clients' outcomes. Data collected across DCHS' three major levy programs (Best Start for Kids; Veterans, Seniors & Human Services Levy; and Mental Illness and Drug Dependency) is combined with data from the Developmental Disabilities and Early Childhood Support Division. This system provides access to real-time dashboards *(Image 10)*, ready-made reports, and a querying tool to facilitate data-informed decision making.
IMPACT	Over 100 provider organizations submit quarterly information through a secure online platform that automatically validates their data; this streamlined submission tool improves accuracy, standardizes data into usable formats, and saves time. CORE enables required reporting by deduplicating clients across DCHS' local fund sources. DCHS can now identify unique clients to understand how funding and providers work together to generate positive holistic client outcomes. With these new analytics comes opportunities to explore trends in equity, differential impact, and service access, thus advancing the County's ESJ goals.

Image 10 – CORE dashboard

B. Community Health Data Integration

PROBLEM	Data sets siloed between departments don't provide complete picture of residents' needs, often leaving out high risk people such as those living homeless.
SOLUTION	The integrated Data Hub provides multiple data sets in real time from Department of Community and Human Services (DCHS), Public Health – Seattle & King County (PHSK), and Department of Adult & Juvenile Detention (DAJD).[4] This enables analysts to better evaluate population health, program effectiveness, and costs.
IMPACT	A recent DCHS analysis[5] using this cross-system data hub estimates that 40,800 people were homeless at some point in 2020 in King County, compared to just 11,700 people identified in the last federally required point-in-time count in January 2020.[6] The system's ability to identify high-risk groups will eventually support required state-managed care and behavioral health organization (MCO-BHO) coordination, federally-required performance improvement goals, and planned MCO-Jail Health collaborations.

C. HR e-Records

PROBLEM	Remote workers needed a system to access paper-based personnel files while ensuring employees' personal data remains protected and secure.
SOLUTION	Department of Human Resources' (DHR) new eRecords system enables departments to create electronic personnel files and convert historical paper-based files that are available anywhere, any time to authorized employees. Electronic files are integrated with existing applications (NeoGov, PeopleSoft and Electronic Records Management) by connected workflows so that data is shared between systems. Features such as metadata, templates, workflows, records management, security, and SQL reference tables create efficiencies by eliminating time and effort required to re-enter tasks that were previously required in an email/paper-based workflow.
IMPACT	According to DHR, so far nearly 400,000 historical personnel records have been digitized, and more than 10,000 new records were created in the new HR eRecords platform in 2021. More than 75,000 annual HR transactions that previously happened on paper or via email now happen in the system, making data simpler to track and more secure. For example, 14,300 new digital COVID vaccine compliance forms were submitted in fall 2021, allowing HR managers to track employees' vaccination status in real time and respond quickly to inquiries around this high-interest topic, without manually compiling data in spreadsheets.

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[4] Microsoft Customer Story- King County uses Azure to help secure resident health data—and make lives better
[5] DCHS Data Insights Series: Integrating Data to Better Measure Homelessness (Dec. 16, 2021)
[6] 40,000+ People Experiencing Homelessness in King County (kcrha.org)

D. Digital Evidence

PROBLEM	Previously, no central storage of digital evidence existed. Agencies spent a significant amount of time downloading and re-uploading large evidence files into case management systems. Moving digital evidence from one agency to another required considerable time and effort. For example, when Metro bus video was requested by law enforcement, a detective physically drove to Metro to pick it up to maintain chain of custody.
SOLUTION	King County's new Evidence.com system helps manage digital evidence shared by the King County Sheriff's Office, King County Prosecutor, Seattle Police, Seattle City Attorney, and other cities' police and prosecutors. King County Public Defense, Metro, Facilities, Jail, and Inquest are also exploring opportunities to utilize this regional asset.
IMPACT	This system has delivered several benefits resulting from these agencies storing, sharing, and using digital evidence connected in one convenient system. • **Reduced storage cost** - shared evidence stored in the Evidence.com system costs 60-90 percent less than storage costs by an individual agency. • **Improved searchability** - agencies like the Sheriff's Office, which uploaded 275,000 digital evidence files in the first eight months, know exactly where their evidence is and can search for it in seconds. • **No re-work** – Agencies spend less time per case organizing it and linking the evidence to their case management system for easy access. • **Secure and instant transfer of information** - Digital evidence can be transferred electronically and securely in minutes without detective time and cost.

E. Metro Comfort Station Management System

PROBLEM	Scheduled breaks at comfort stations are required for transit operators; however, not all comfort stations are available 24-hours a day. Metro staff manually identified comfort station locations and scheduled breaks for bus operators. Lack of automation made identifying gaps in comfort station availability difficult and time consuming.
SOLUTION	This project provided modern, sustainable tools to support more effective planning, scheduling, and management of restroom facilities for operators (comfort stations) along Metro Transit routes. Upgrades to the existing HASTUS scheduling system now provides integrated tools for Transit staff to effectively plan and schedule restroom breaks. The upgraded HASTUS system allows tracking of comfort station locations and operating hours with compliance reports to monitor and assess performance over time.
IMPACT	The department's goal is to have ninety percent of the scheduled trips followed by a scheduled layover include restroom access; Metro now has a better system to help achieve and maintain Transit operator restroom policy compliance.

The following examples are for projects that are still **in progress** but are already significantly furthering King County's technology objective of Connected Data:

F. Jail Management System (JMS)

|	
PROBLEM	Previously, all adult jail operations were dependent on outdated, DOS-based user screens in a 40-year-old legacy system; PDF printed reports; and physical ledger logbooks *(Image 11)*. This resulted in operational reports generated each morning between 1:00 - 3:00 AM with a halt of jail operations as reports were generated.
SOLUTION	In August 2021, the department of Adult and Juvenile Detention (DAJD) launched the Jail Management System (JMS) – one of the first systems in the nation to combine records for juvenile, adult, and community corrections organizations within King County. When fully developed in mid-2022, the system will feature a Data Hub accessible to law, safety, and justice partners. The Hub will eliminate emailed reports and provide a single source of truth for key information.
IMPACT	JMS provides real-time reports and logbooks – with no downtime *(Image 12)*. JMS improved DAJD's ability to ensure the care and safety of staff and persons in custody. For example: dashboards monitoring COVID cases, vaccination status, and the ability to quickly adjust bed assignments let DAJD respond quickly to accommodate changing health conditions and prevent the spread of the virus through the jails.
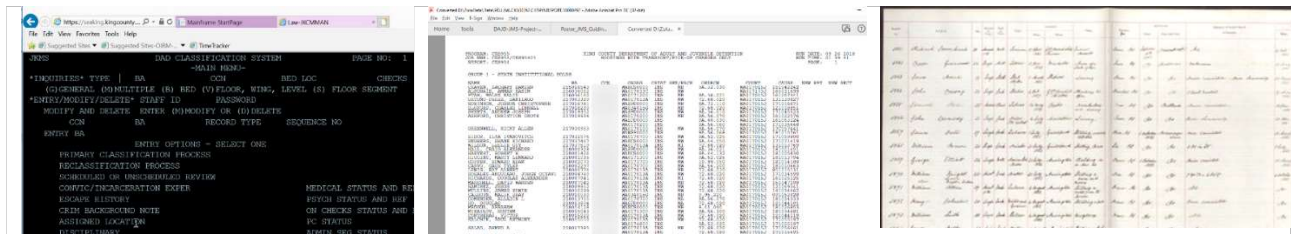
Image 11 - DOS-based user screens in DAJD's 40-year-old legacy system, PDF printed reports, and handwritten ledger logbooks
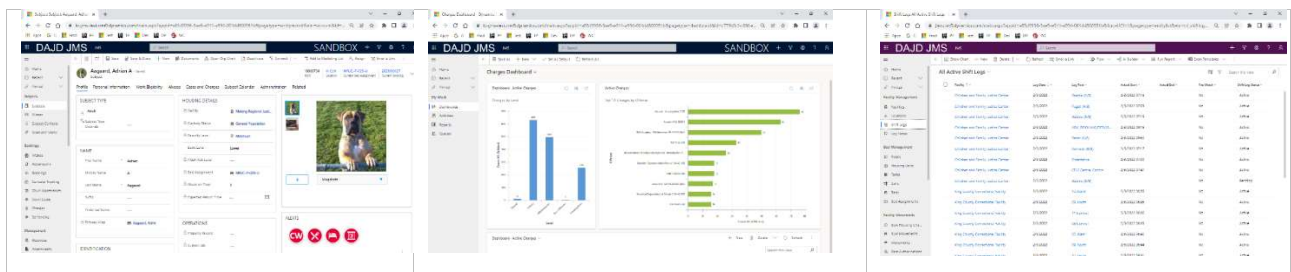

Image 12 - New JMS system dashboard, reporting, and electronic logbooks

G. Transit Business Intelligence Resource Data (TBIRD)

PROBLEM	Several unstable, onerous legacy systems were time consuming to maintain; siloed data sets required manual collation and comparisons, preventing real-time metrics.
SOLUTION	TBIRD is a data warehouse built using cloud products while integrating 13 data sources within Metro. In addition to the raw data, the warehouse offers self-service access to over 70 data products developed to achieve direct business goals, introduce more automation to users, and share data with local regional partners. The core purpose of TBIRD is tracking performance metrics related to the transit service network, including on-time performance, ridership, fare collection, asset costs, incidents, accidents, and other historical performance data.
IMPACT	New automations have resulted in significant staff time savings - approximately 675 hours per year. TBIRD dashboards on Metro's employee intranet gives staff the latest data, and highlights development efforts for the future *(Image 13)*. This project enables business analytics, business intelligence, and is helping Metro grow a data-driven culture.

Image 13 – sample TBIRD dashboard

H. Enterprise Information Security Policy Framework

PROBLEM	Ever increasing security threats as well as security audits have identified a need for a more formalized policy framework applied consistently across IT systems.
SOLUTION	Established an Enterprise Information Security policy framework based on industry best practices and have created and activated 13 policies and 4 standards to date with more to come in 2022.
IMPACT	All new systems or changes to existing systems are reviewed for policy and standards compliance resulting in systems that more securely safeguarding sensitive data and operations.

Objective 3 - Connected Government

In 2021, King County completed seven Connected Government projects; another 17 funded technology projects are currently in progress, totaling $292 million in investments.
Success Evaluations for Connected Government projects averaged 83.5 percent in 2021 *(Image 14)*. Examples of accomplishments associated with Objective 3 – Connected Government are highlighted below.

Project Agency, Name & Number	Overall Success Evaluation	Score: Project Value	Score: Project Management	Score: PRB Compliance
DES-Facilities Management - DES FMD CUBE RESERVE TECH - 1141199	85%	88	83	83
DES-Records & Licensing Services - KC Records Management System Upgrade - 1129348	91%	100	100	72
KCIT - EDMS Migration to Azure Govt. Cloud - 1139921	90%	75	100	94
KCM - ELECTRONIC SIGN IN FOR OPERATORS - 1134108	81%	75	100	67
KCM - HR DOC MGMT SYS REPL - 1134103	88%	88	100	78
KCM - Regional Fare Coordination Enhancements - 1028726	89%	100	100	67
KCSC - KCSC COURTROOM RECORDING RPLC - 1134042	74%	88	100	33
PAO - PAO Data Modernization - 1133959	70%	38	100	72

Image 14 – Success Scores of "Connected Government" projects completed in 2020-2021 over $250,000 or using capital funds

A. Courtroom Recording Replacement

PROBLEM	Due to the pandemic, King County Superior Court (KCSC) was faced with the challenge of holding court and adhering to social distancing measures.
SOLUTION	This project launched in 2020. Throughout 2021 cameras were installed in 47 courtrooms. With Zoom attendance enabled, standard court practices were modified to allow remote jury selection[7], and juries and witnesses can attend remotely for civil trials. Attorneys can plug in laptops to display evidence or other information in the courtroom and virtually. Second cameras are currently being installed in each courtroom to give online attendees a view of the counselors' desks in addition to the judges' benches.
IMPACT	In 2021, KCSC held more than 600 trials, including 120 jury trials, allowing jury selection and certain witness testimony to occur remotely.[8] King County Superior Court reports that it held more juried trials in the last six months of 2021 than in all of 2019,

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[7] King County Superior Court website: Remote Participation – Video Voir Dire
[8] Seattle Times (July 11, 2021): King County's courts are 'barely keeping up' with a massive backlog of cases due to the COVID-19 pandemic

and more than any other county in the nation in 2021.[9] This technology enabled King County Superior Court to avoid additional delays to court calendars caused by lack of jury availability while providing a COVID safe environment through remote attendance.

[9] State court closures in response to the coronavirus (COVID-19) pandemic between March and November, 2020 - Ballotpedia

Expanded NeoGov HR Platform

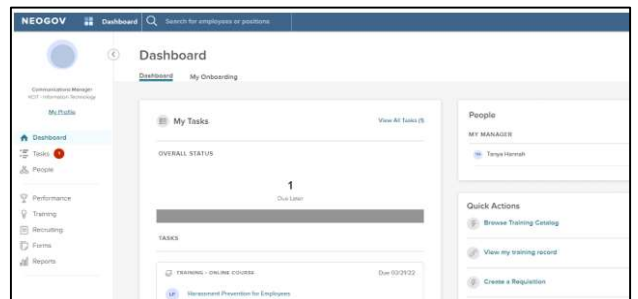|	
PROBLEM	Previously, King County had no standardized learning and development platform, and enterprise-level data did not exist. Numerous side systems, disconnected data bases and other tools led to inconsistent tracking, contributing to inequitable employee growth and development experiences.
SOLUTION	This project delivered a streamlined, mobile-accessible learning, and development platform by leveraging the existing NeoGov Human Resources system. NeoGov can now manage digital employee performance evaluations, moving away from the old paper evaluation forms. This solution is being piloted by the Department of Human Resources (DHR) and KCIT.
IMPACT	The expanded NeoGov platform allowed DHR to fully digitize the new employee orientation process with a personalized onboarding portal for each new employee; over 3,991 digital onboardings have occurred since launching in 2021 *(Image 15)*. Additionally, King County employees have completed more than 31,824 online training courses in the new NeoGov LEARN platform *(Image 16)*. This enterprise-wide eLearning platform allows DHR to provide an equitable training experience for every King County employee. Modern HR tracking and reporting tools have added efficiency and clarity as King County moves from a paper-based legacy into this new era of digital workspaces. NeoGov now has a fully integrated digital Learning platform that supports employee growth and career development goals through individualized learning plans and pathways.
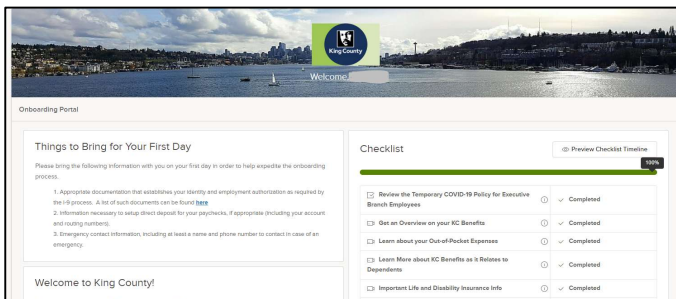
Image 15 - NeoGov New Employee Onboarding Portal

Image 16 - NeoGov LEARN Dashboard

B. High-Volume Data Solutions for Remote Workers

PROBLEM	Processing large volumes of data (such as GIS, modeling, or autoCad) remotely has always been a challenge. The demand for large data processing via Virtual Private Network (VPN) has increased substantially due to remote work during the pandemic. Based on the County's developing post-pandemic Future of Work planning, it is expected that many high-compute roles will stay remote. The County needed a solution to accommodate those hybrid and remote workers with high-data processing needs.
SOLUTION	KCIT created virtual work environments known as virtual machines (VM) utilizing graphics enhanced processors to allow employees to log in to these virtual environments to perform work that requires additional processing speed. This solution reduced data processing time for remote employees who process large volumes of data on a daily basis.
IMPACT	Testing has shown processing speed improved by more than 50% compared to previous practices, which could take between 2-8 hours depending on the job. This improvement dramatically increases employee productivity for high-volume data scientists and engineers working from home.

C. Electronic Sign in for Transit Operators – (Project #1134108)

PROBLEM	A settlement with the U.S. Department of Labor concerning pay practices required King County to record start and stop times for Metro Transit operators, and document overtime.
SOLUTION	Implementation of a badge reader-based sign-in/sign-out process to record start and stop times and document overtime for Metro Transit coach, rail, and streetcar operators. The project included provisioning of necessary hardware, software, network infrastructure, and integration to log actual start and end times for operators, using card reader technology and existing King County ID cards. The software also allows/requires entry of reason codes for additional work beyond scheduled hours.
IMPACT	This system interfaces directly with King County payroll systems, helping Metro Transit Division (MTD) address any concerns with pay practices.

E. Migrating from Skype to Teams

PROBLEM	Replacing King County's Skype communication system was already planned for in 2020 when the pandemic created an immediate need to move to a more stable, robust platform to support telework requirements.
SOLUTION	Nearly all 14,000 King County employee Skype accounts were migrated to Microsoft Teams in 2021. In 2022, the project will migrate the remaining Common Area and Stand-Alone Phones to Teams before fully decommissioning Skype.
IMPACT	Microsoft Teams is a more stable platform, providing enhanced remote collaboration and a high-quality remote experience. Per month, King County employees use Teams to conduct an average 75,000 meetings, 350,000 phone calls and 3 million individual chat messages.

Several additional projects are still in progress but are already significantly furthering King County's technology objective of Connected Government:

F. Integrated Managed Care

PROBLEM	Each year, DCHS contracts with local nonprofit organizations for over one billion dollars in services. The goal of this project is to replace a 25 year-old legacy system that hundreds of behavioral health services staff used for client tracking and billing. Thousands of King County residents depend on the continuity of services that are supported by this new system.
SOLUTION	Work began in 2021 to replace the aging, custom-built Integrated Managed Care platform with a next-generation COTS (commercial off the shelf) platform to enhance scalability, supportability, and regulatory compliance capabilities. This project is expected to conclude in early 2023.
IMPACT	This project has already transformed how DCHS receives and manages data from providers. The new system allows DCHS to track and process services, billing, eligibility, and other pertinent health information, ensuring clients are well served by contracted managed care organizations (MCOs) and behavioral health providers.

G. PeopleSoft Migration to Cloud Infrastructure

PROBLEM	King County's PeopleSoft system was hosted on aging King County-owned servers. To maintain service levels for this critical system, the infrastructure hosting the system needed to be replaced. Failure to do so would risk King County's ability to meet payroll, state retirement, employee benefits, and federal tax obligations.
SOLUTION	The PeopleSoft system was moved from onsite servers into the Oracle Cloud Infrastructure (OCI) in November 2021. Work will continue through early 2022 to fully implement this solution.
IMPACT	This new cloud-based platform provides several benefits such as improved security to better protect employees' sensitive personal information, as well as disaster recovery backups to ensure King County can continue paying employees in the event of a disaster. PeopleSoft is now accessible from mobile devices – making it more convenient for employees no matter where they work in King County.

H. Puget Sound Emergency Radio Network (PSERN)

PROBLEM	The Puget Sound Emergency Radio Network (PSERN) is a voter-approved effort to upgrade and expand the current King County Emergency Radio Communications System (KCERCS). The current system is nearing the end of its useful life.
SOLUTION	In 2021, the PSERN Project[10] made significant progress toward replacing the current system, its supporting infrastructure, adding new 911 dispatch consoles, and distributing 17,000 end-user radios (including 6,000 radios installed in vehicles). PSERN will shift users from analog technology to IP based digital technology and will transform emergency communications for the next 20+ years by allowing for regular upgrades and updates that will prevent the infrastructure from ever becoming obsolete.
IMPACT	Radio sites grew from 26 to 61 sites, increasing emergency radio coverage from 94.1% to over 99.3% of King County. Areas that were previously "deserts" with no available emergency radio networks will now be covered, offering residents better protection with connected fire, police, and ambulance communication infrastructure. New abilities such as encrypted radio traffic, over-the-air programming, and GPS will also be available. This dynamic system will allow two-way communication for police and firefighters not just within one city, but throughout the entire region. PSERN is scheduled for completion in 2023.

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[10] https://psern.org/

I. Procurement Modernization – eProcurement and Concur Travel & Expense Handling

PROBLEM	Suppliers registering in the County's online vendor registration platform experienced a high error rate that prevented many from receiving King County's solicitation notices. Online bidding was not available; bids were submitted on reams of printed paper that required staff to manually enter data. This technology was labor-intensive, time-consuming, and resulted in significant delays especially for solicitations with several hundred bidders. In addition, there was no electronic system for booking employee travel and expense reimbursement; PDF forms were processed manually through email, resulting in frequent errors and long delays that left employees bearing the brunt of out-of-pocket expenses.
SOLUTION	This project expanded King County's existing Oracle platform to create a convenient online supplier registration and e-bidding platform.[11] The project also implemented Concur Travel and Expense[12], letting King County employees book travel and submit expenses online. This new technology makes it easier for employees to book travel and file expense reports when returning home, without the need to use paper documentation. Approvers/reviewers are flagged if receipts don't match with what was entered on the expense report, eliminating duplication submissions of the same receipts for reimbursement.
IMPACT	The new Oracle eProcurement solution has increased the number of suppliers who've successfully registered to bid on King County solicitations and includes an electronic bidding platform that dramatically improved efficiency and reduced the time/cost for businesses bidding on King County contracts. When travel fully resumes, Concur Travel and Expense will result in significant cost savings for King County; the average booking fee through the previously contracted travel agency was $35 per trip. Booking through Concur is just $5. Additionally, employee reimbursements are now processed in roughly 5 days, compared to 30-45 days before implementing Concur.

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[11] New online Supplier Registration website: Register as a Supplier - King County
[12] SAP Concur Home (concursolutions.com)

Technology Supporting COVID Response Efforts

In 2021, King County delivered technology solutions that supported critical COVID-response needs. These projects were rapidly implemented to aid crisis response teams and economic recovery efforts in the region. Below are examples of how technology supported King County's COVID response efforts:

A. COVID Rapid Response: PPE Distribution and Public Data Dashboards

|	
PROBLEM	King County was one of the first areas affected by COVID-19. No systems or technology were dedicated to support the information needs of a global pandemic at the local level.
SOLUTION	King County leveraged technology to quickly respond to the pandemic. For example, many facilities needed Personal Protective Equipment (PPE) to protect their staff and clients. Limited PPE could not meet demand. Using open-source software, King County created a platform for public health epidemiologists to prioritize and distribute PPE based on a flow chart. King County also created dashboards with a daily outbreak summary that looked at cases, test, deaths, and hospitalizations *(Image 17)*. These charts break down COVID cases based on various demographics, including geography, race, and ethnicity.[13]
IMPACT	This kind of real-time, publicly accessible data help County leadership more easily visualize where pandemic response was working or could use improvement.[14]
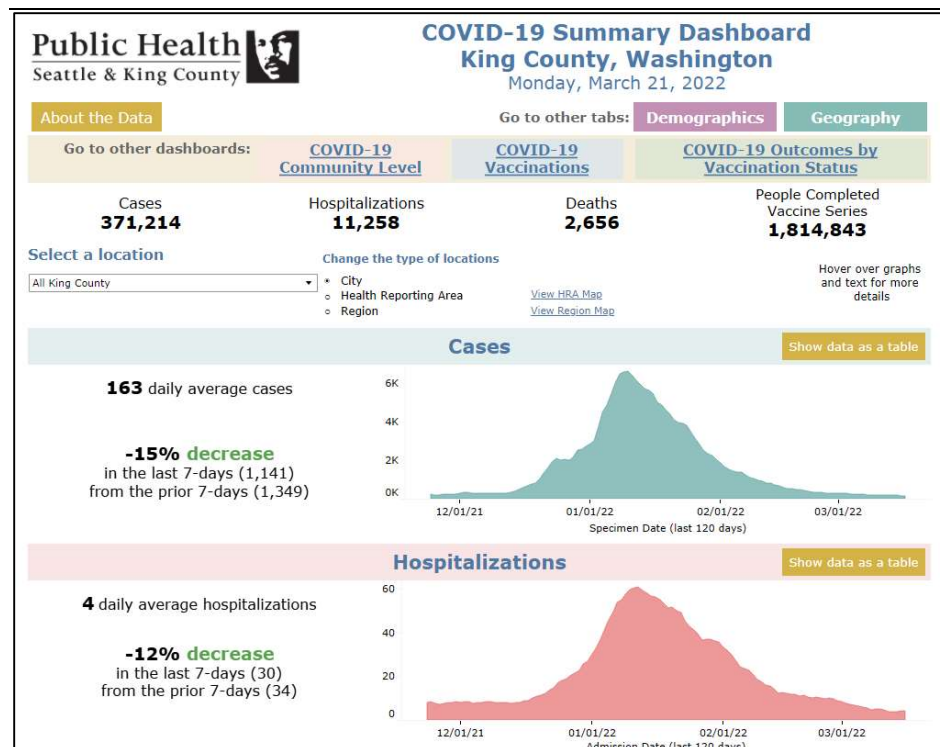
Image 17 - Online daily summary of COVID cases

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[13] [LINK]
[14] [LINK]

B. Eviction Prevention and Rental Assistance Program

|	
PROBLEM	In response to financial hardships due to the COVID pandemic, Dept. of Community and Human Services (DCHS) distributed funds to help King County households avoid eviction. The first Eviction Prevention and Rental Assistance Program (EPRAP) distributed $37.6 million to about 9,000 households in 2020, but getting this money out the door was an extremely time and labor-intensive manual process that required in-person verification of eligibility, physical signatures, and used Excel spreadsheets for tracking renter and landlord applications.
	In 2021, DCHS was tasked with distributing an additional $300 million, a nine-fold increase. KCIT worked with DCHS to develop a new data system that automated applications and fund disbursements to help DCHS reasonably accomplish this large-scale task with their existing staff.
SOLUTION	KCIT worked with DCHS to develop a new online application that determines tenant/landlord eligibility and provides convenient electronic signature options, as well as electronic payment options.
IMPACT	By the end of 2021, nearly 50,000 households registered for rental assistance (double the previous number) and King County paid out $181 million to 16,000 qualified households by the end of the year. Funds can now be electronically dispersed, resulting in more efficient, faster delivery. Additionally, the new system feeds public facing dashboards that allow King County to measure in real-time critical demographic data, ensuring equity and transparency *(Image 18).*[15]
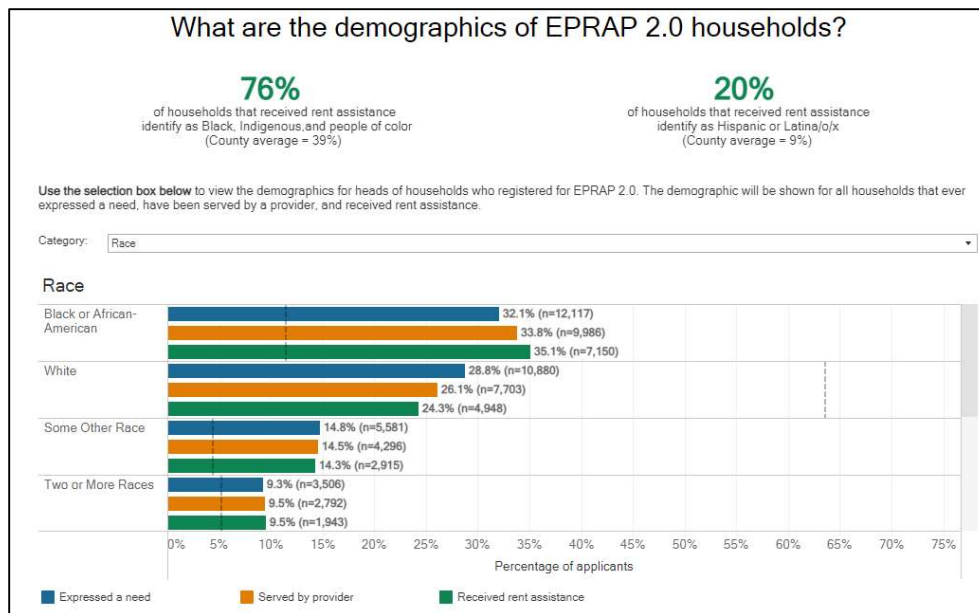
Image 18 - EPRAP data dashboard showing distribution of funds by race

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[15] [LINK]

C. Mass Vaccine Management

PROBLEM	IT systems were urgently needed to schedule appointments for eligible residents, meet vaccination reporting requirements, and manage vaccine supplies at high-volume COVID vaccination sites.
SOLUTION	Several interconnected mass vaccine management (MVM) systems we put in place to support King County's COVID vaccination sites. Additional MVM enhancements improved workflow, language accessibility, reporting, and eligibility-based scheduling tools to meet updated CDC guidance for pediatric vaccines and boosters.
IMPACT	MVM is now available in English, Spanish, Somali, and Vietnamese. Residents may go online or call the Public Information Call Center to schedule vaccine appointments, then receive text and e-mail reminders in their preferred language. A "Line Recall" app manages crowds at busy vaccination sites, allowing people with scheduled appointments and unscheduled walk-ins to wait in their cars at a safe distance and out of the weather. MVM directly interfaces with the Washington State Immunization Information System (WAIIS) for accurate and timely reporting of doses administered, as required by the state. Staff can see a resident's WAIIS information during their immunization visit to better support workflow and safety. More than 105,000 vaccinations were administered King County Public Health sites in 2021 *(Image 19)*.

Parent Site	Total	Dose				Appt. Same Day	County		Age								
		#1	#2	#3	Booster		King	Other	< 12	12 - 17	18 - 29	30 - 39	40 - 49	50 - 64	65 - 74	75 - 84	85+
Auburn Outlet Mall COVID-19 Vaccination Clinic	68154	34383	19788	421	13562	24224	64063	4091	3631	5515	13604	14807	12853	14539	2240	764	201
Downtown Public Health Center COVID-19 Vaccine Clinic	2828	1154	729	4	941	1918	2741	87	0	15	575	677	497	725	234	80	25
Eastgate Public Health Center COVID-19 Vaccine Clinic	9600	2975	2241	13	4371	3657	9452	148	1325	645	1630	1726	1571	1720	634	262	87
Kent PHC In Home Vaccination Team	728	104	110	19	495	439	724	4	0	10	50	61	68	169	146	125	99
Kent Public Health Center COVID-19 Vaccine Clinic	8860	1899	1810	23	5128	3018	8736	124	1022	467	1297	1622	1362	1929	745	333	83
Kent ShoWare COVID-19 Vaccination Clinic	12780	2975	9805	0	0	3896	11781	999	10	3154	3038	2435	1910	1808	303	83	39
PH Mobile Vx Team 1	585	332	253	0	0	552	585	0	0	35	63	126	129	194	30	6	2
PH Mobile Vx Team 2	277	160	106	0	11	271	277	0	0	0	50	35	35	59	46	30	22
PH Mobile Vx Team 3	1233	593	208	23	409	1107	1233	0	6	1	188	233	256	414	113	21	1
PH Mobile Vx Team 4	340	30	8	0	302	250	340	0	0	0	29	51	63	139	53	4	1
Public Health at Navos COVID-19 Vaccine Clinic	62	28	34	0	0	19	62	0	0	0	14	22	14	7	3	1	1
Total	105447	44633	35092	503	25219	39351	99994	5453	5994	9842	20538	21795	18758	21703	4547	1709	561

Image 19 - Vaccines administered by King County Public Health in 2021, by location

VI.   What's Ahead in 2022

The County's North Star is "Making King County a place where all people can thrive." Despite all the progress and prosperity, some communities are being left behind in a widening digital equity divide. It is imperative that King County engage and connect in unique and diverse ways that meet the needs of its communities. Although the pandemic and new future of work shifted and accelerated many business priorities, King County's technology recommendations are more relevant now than ever:

- Increase the channels available for constituent interactions, including request and receive services in native languages for government services and information

- Safeguard data entrusted to the County by community members, manage risk and compliance per regulatory frameworks, and ensure modern approaches to cybersecurity

- Use data to ensure services and information are timely, relevant, and delivered where the needs are greatest

- Modernize technology risk management, including scenario and threat planning, strategic responses for the operational and financial management of risks, and ethical considerations to emerging technologies

- Support County transparency efforts through performance metrics, dashboards, and open data

As of Q1 2022, there are 75 technology projects currently **in progress** totaling $649 million in investments *(Images 20 -21)*. Current forecasts are for an additional 35 projects to close between now and the end of 2022.
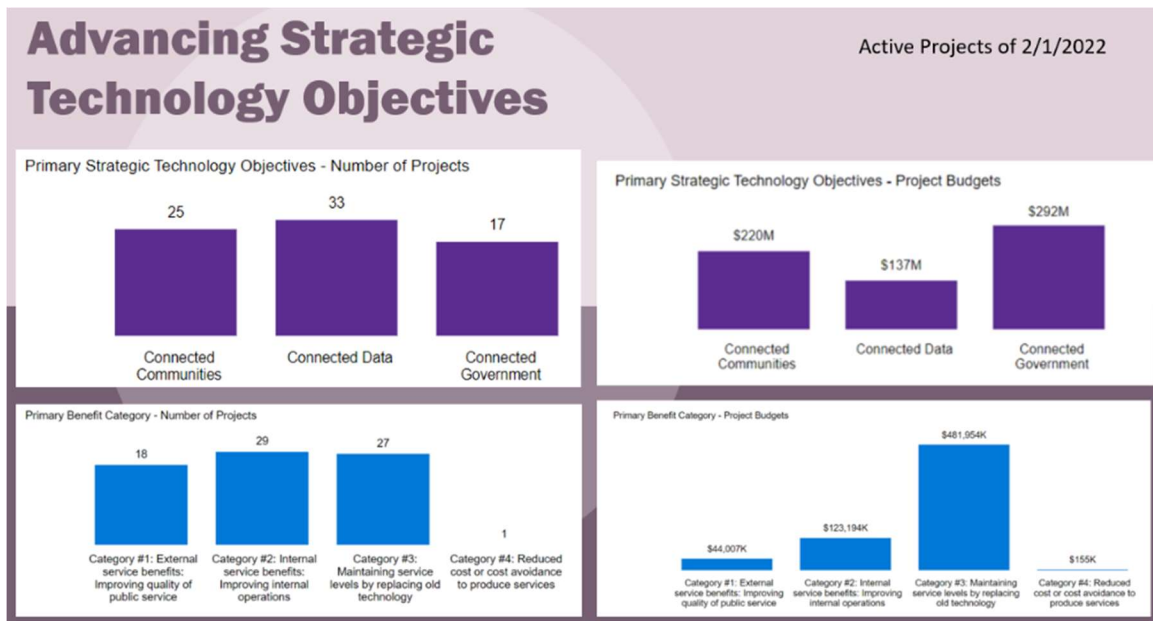

Image 20 – Graph of Active Projects by Primary Strategic Technology Objective, Benefit Category and Project Budget

Project Agency, Name & Number	Planned Project End Date ▲	Project Budget
DCHS - DCHS Case Management Info System (CMIS) - 1134637	March 25, 2022	$1,625,000
DAJD - Distributed Antenna Network (DAN) Phase III - 1129762	March 31, 2022	$1,862,566
DAJD - Jail Management System - 1129763	March 31, 2022	$22,713,753
DJA - DJA Systems Replacement Project - 1123900	March 31, 2022	$8,425,827
KCIT - KCIT IAM Multifactor Authentication -	March 31, 2022	$863,066
KCIT - KCSO Enterprise Data Hub - 1124717	March 31, 2022	$539,889
KCM - VM Dispatch Modernization - 1137066	March 31, 2022	$360,592
KCSO - Body and Vehicle Camera Trial Project - 1137980	April 6, 2022	$150,000
KCIT - KCIT Mobile Device Management -	April 8, 2022	$110,000
DPH - JHS Electronic Medication Administration Record - 1116742	April 15, 2022	$897,761
DES-Business Resource Center - DES - Peoplesoft Infrastructure Replacement - 1139605	April 29, 2022	$1,444,397
KCIT - KCIT VM High Compute Solutions Project - 1141616	April 29, 2022	$1,201,750
KCM - Customer Information Systems - 1111785	April 29, 2022	$4,662,619
KCIT - KC Intranet - 1142621	May 16, 2022	$873,750
DES-Records & Licensing Services - DES-RALS: For-Hire License System - 1129863	May 31, 2022	$166,501
DNRP-WLRD-River and Floodplain Management - DNRP WLRD Agiloft Implementation - 1044281	May 31, 2022	$141,065
KCIT - Information Technology Financial Management Application - 1141930	May 31, 2022	$1,424,349
KCIT - CJ Digital Evidence Sharing - 1137305	June 30, 2022	$572,000
KCIT - Microsoft Skype to Teams Migration - 1139665	June 30, 2022	$6,261,987
KCM - Real-Time Improvements Project - 1124413	July 7, 2022	$2,219,832
KCSC - KCSC JURY MGMT SYS REPLACEMENT - 1134041	July 29, 2022	$462,000
DAJD - DAJD JHS CFJC EPIC EHR - 1137304	September 28, 2022	$852,573
KCIT - KCIT Eastrail Fiber Development - 1139245	October 31, 2022	$13,507,544
KCM - TDC Service Mgmt Modernization - 1139391	November 23, 2022	$3,354,501
DES-FBOD - DES FBOD Treasury Scanner - 1139616	November 30, 2022	$1,115,000
DLS - CWP OBSOLETE IT SYS RPLMNT - 1134094	December 9, 2022	$900,000
DLS - RSD Maintenance Mgmt System Replacement - 1139749	December 16, 2022	$1,000,000
KCM - Transit Business Intelligence Resource Data (TBIRD) - 1129801	December 20, 2022	$5,873,032
KCIT - KCIT MassVac Sched & Tracking - 1141183	December 21, 2022	$4,233,270
DOA - Property Tax Accounting System (PTAS) - 1123944	December 30, 2022	$53,196,456
KCDC - District Court Unified Case Management System - 1124157	December 30, 2022	$13,828,142
KCIT - E911 Map Modernization - 1133686	December 30, 2022	$4,213,750
KCSO - KCSO Comprehensive Project Plan and Funding Request for BWC/ICV - 1039392	December 30, 2022	$184,388
KCM - TDC Cap Drawing Mgmt - 1139368	December 31, 2022	$1,850,400
KCM - Transit Signal Priority System Replacement (TSP) - 1124427	December 31, 2022	$5,329,305

Image 21 –Active Projects and planned budgets

VII.   Appendices

Appendices supporting the recommended objectives; and defining appropriate strategic performance metric or metrics for each recommended objective in the plan. (Ord. 18802 § 1, 2018: Ord. 18432 § 8, 2016).

Appendix A: Project Benefit Achievement Plan (BAP) Results

King County Code 2.16.025 requires the development and transmittal of a report on the benefits achieved from technology projects to occur every other year. The report covering 2019 - 2020 showed in total, the BAP (Benefit Achievement Plan) report included 104 BAPs, of which:

- 59 are for projects that have an active status
- 26 are for completed projects with final BAPs
- 12 are for new projects approved in the 2019-2020 biennial budget
- 4 are for projects that are on hold

Breakdown of BAPs by Type

BAP Type	Count	% of Total
Completed Projects - Final BAPs	26	25%
Completed Projects – Updated BAPs	7	7%
Underway Projects	59	57%
New Projects Approved in the 2019-2020 Biennial Budget	12	12%
TOTAL	**104**	**100%**

BAPs by Department by Project Status

Department	Completed Projects		Underway & New Projects	Total Count
	Final BAPs	Will Report Again		
King County Metro (KCM)	4	2	23	**29**
Information Technology	6	0	14	**20**
Executive Services	4	3	7	**14**
Natural Resources & Parks	3	2	6	**11**
Other Departments	9	0	21	**30**
TOTAL	**26**	**7**	**71**	**104**

Out of 33 closed projects, 26 are final while seven need more time to realize and measure benefits. In total, the BAP (Benefit Achievement Plan) report will include 26 BAPs, of which:

- 15 projects have met or exceeded the target benefits
- 6 projects partially met the benefits
- 1 project was completed and did not meet target benefits:
    - KCIT Cybersecurity Enhancement

- 4 projects did not meet the target benefits and were either cancelled, or re-scoped and initiated into a new project:
    - DNRP Parks Facilities Scheduling System Replacement
    - KCIT Project Royale
    - KCM Video Management System (VMS) and On-Board Camera Management System
    - King County Superior Court (KCSC) Family Treatment Court

Project Distribution by Primary Benefit Category 2015-2020 is shown on Image 22.
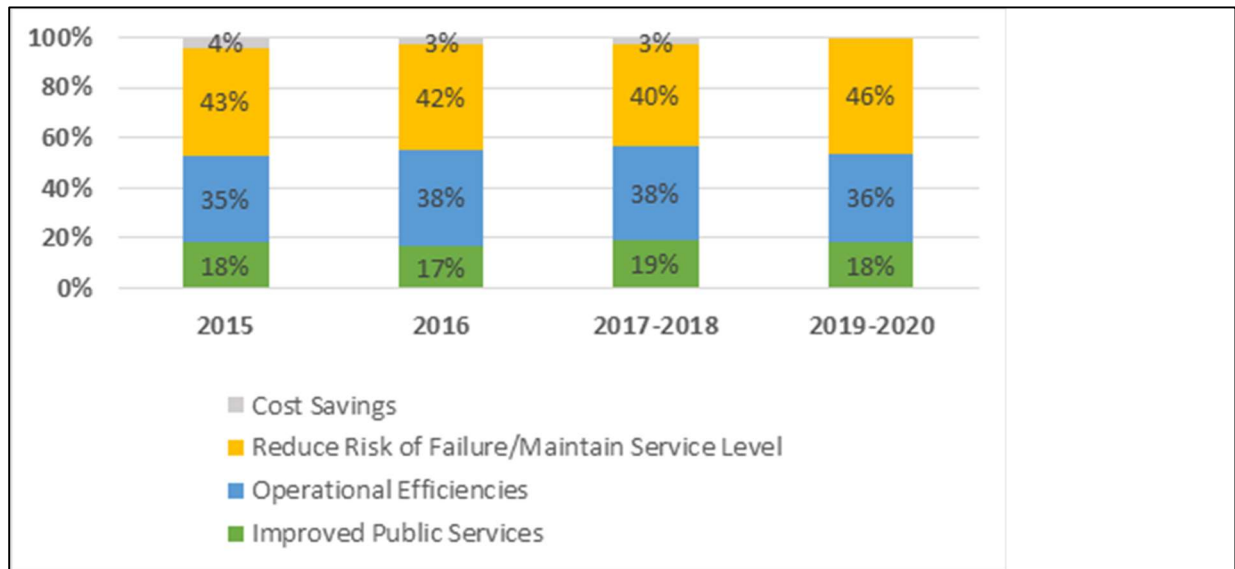

Image 22 – Project Distribution by Primary Benefit Category 2015-2020

Further information on each project and their reported benefit plans and results can be seen in the IT Benefits Report for Year Ending 2019 – 2020 created by the Office of Performance, Strategy, and Budget and transmitted to Council in April 2021.

Because of significant prior investments, the County has shown resiliency over the last year in weathering the pandemic and lessening its impact on operations,

Appendix B: Project Budgets / Expenditures

Project Agency, Name & Number	Project Close Date	Project Budget	Total Expenditures
DCHS - CORE Data Hub Integration - 1128305	December 31, 2021	$167,561	$48,470
DES - DES FUEL MANAGEMENT SYSTEM UPGRADE - 1138773	December 31, 2021	$737,274	$731,402
KCIT - Adobe AEM-DAM Platform (Adobe Experience Manager-Digital Asset Management) - 1045856	December 31, 2021	$262,294	$258,561
KCIT - AvePoint O365 Governance Tool Deployment - 1135636	December 30, 2021	$411,449	$281,371
KCIT - SharePoint 2010 Workflow Retirement -	December 30, 2021	$170,350	$120,664
DNRP - DNRP SWD - Maximo Implementation - 1126970	December 17, 2021	$299,170	$190,532
KCIT - Enterprise Data Catalog - 1142016	November 22, 2021	$660,000	$529,611
KCIT - KCIT Enhanced Wireless - Public Health - 1140831	November 19, 2021	$489,530	$433,379
DES-Facilities Management - DES FMD CUBE RESERVE TECH - 1141199	November 17, 2021	$498,264	$547,964
DPH - TB Tracker - 1124717	November 16, 2021	$240,000	$282,004
KCIT - I-Net Equipment Replacement (not under PRB oversight) - 1129570	October 19, 2021	$691,456	$630,000
DLS - DLS Roads - Roadworks (Cityworks) Upgrade - 1134974	October 15, 2021	$132,151	$51,262
KCIT - Tableau Enterprise Service - 1139965	September 30, 2021	$951,025	$773,430
DPH - DPH JHS Med Packaging Replacement - 1138797	September 20, 2021	$976,600	$607,946
KCM - HASTUS Planning Module (NetPlan) - 1124415	August 31, 2021	$1,245,079	$1,154,684
KCM - Online Reduced Fare - 1134101	August 31, 2021	$870,838	$626,094
KCM - Comfort Station Management System - 1134110	August 26, 2021	$861,220	$799,576
KCM - Rider Information Systems - TABS Replacement - 1028651	August 26, 2021	$1,426,261	$1,325,935
KCM - HR DOC MGMT SYS REPL - 1134103	July 31, 2021	$249,621	$145,392
KCSO - Fire Investigation Replacement Project - 1039391	July 30, 2021	$152,030	$142,896
KCSO - KCRA AFIS Replacement - 1133726	July 29, 2021	$2,072,000	$1,870,336
DNRP - DNRP - Architect and Implement option to improve ability to process large data - 1135702	July 16, 2021	$190,000	
DNRP-Parks and Recreation - Parks Facility Scheduling and AR System - 1137163	May 6, 2021	$496,000	$223,263
DCHS - DCHS/PH Data Integration - 1129638	April 30, 2021	$3,164,760	$3,164,646
DES-Office of Emergency Management - OEM AV Phase 3 - 1139910	April 30, 2021	$120,000	$116,533
DHR - DHR ENTERPRISE HR e-RECORDS - 1137306	April 13, 2021	$572,911	$202,131
KCM - ELECTRONIC SIGN IN FOR OPERATORS - 1134108	March 31, 2021	$755,433	$604,538
KCM - Regional Fare Coordination Enhancements - 1028726	March 31, 2021	$4,701,560	$4,401,768
KCM - Safety and Security Systems - 1129800	March 31, 2021	$2,114,368	$1,596,043
PAO - PAO Data Modernization - 1133959	March 31, 2021	$918,780	$908,518
KCIT - KCIT Enhanced Wireless RCECC - 1140829	March 26, 2021	$161,000	$152,023
DPH - DCHS-PH Data Integration: Phase 3 - ID Linkage - 1033699	March 19, 2021	$160,000	$110,040
KCIT - EDMS Migration to Azure Govt. Cloud - 1139921	March 12, 2021	$540,550	$302,934
DPH - eCBD/CAD Modernization/Interface at Valley Communications - 1113977	March 1, 2021	$250,000	$158,657
DHR - DHR NEOGOV Expansion - 1139753	February 1, 2021	$229,649	
DNRP-Parks and Recreation - Parks Asset Mgmt System (Lucity) - not under PRB oversight - 1124055	January 29, 2021	$1,703,545	$967,071
DES-Office of Emergency Management - OEM EOC A/V System Replacement – COVID - 1138869	January 2, 2021	$1,500,000	$1,294,399

Image 23 – Table; Projects closed in 2021, with estimated project budget compared to total actual expenditures.

The following list of projects were reported in the 2020 Update to the Strategic Information Technology Plan 2020-2023. For the most part, projects are included as they were in that report, with some updates if new information has become available since then.

- **Technology Recycling** was recognized in King County with a 2020 EPEAT Purchaser Award for excellence in the sustainable procurement of IT products in two separate categories: imaging equipment (copiers), and computers and displays. Sustainable purchasing decisions benefit people and the planet while realizing cost savings and environmental benefits.

- **Senior Tax Exemption** lets eligible homeowners easily apply for property tax breaks online.

- **Medical Examiner's Office** Case Management is providing automated workflows, electronic board status and mobile capabilities for employees while performing state-mandated services related to all deaths reported with King County and the greater Seattle area.

- **Law Enforcement Assisted Diversion (LEAD)** is a collaborative community safety effort that offers law enforcement an alternative to booking people into jail for criminal activity that stems from unmet behavioral health needs or poverty. The app allows for monitoring, tracking, and reporting needed to manage caseloads.

- **Integrated Data Analytics** on aggregate and client-level data from multiple providers informs community health decision makers.

- **Court Appointments Text Messages Reminders** helps people keep track of court dates.

- **Hazardous Waste Service** is now on multiple channels: in-person, phone, kiosks, email, online chat, co-browsing, messaging, social media and the Hazardous Waste Service website.

- **Noxious Weeds Mobile App** enables the public to identify and locate dangerous plants by geotagging location to photographs, and message us 24/7. The Noxious Weeds mobile app received several national tech innovation awards.

- **Roadworks Storm Drains Inspection** is now automated by mobile data collection to better manage over 20,000 drains within 1,500 miles of unincorporated county roads.

- **Wastewater Treatment** Facilities use electronic tablets for inspection. Abnormalities are automatically flagged for detecting issues and impending equipment failure.

- **Telematics** captures and integrates mileage and bus diagnostics to better manage fleet and improve transportation. The MortalCoil provides vehicle part survival estimates based on telematics; these estimates are improving buy versus build decisions

- **Drawing Management Control System** addresses the need to organize, maintain, access, and archive electronic record drawings and interface with CAD systems to update critical schematics and provide remote wireless access while employees are out in the field more efficiently.

- **KCWebOne Intranet** supports employee communications and engagement for employees with or without county email addresses.

- **Broadband Technology Access Study** assesses both the availability and affordability of internet connectivity for underserved and unserved communities. [The study is presented online in an interactive map](#).