



County of Sonoma

# Information Systems Department

– Our Focus for FY 2019/20



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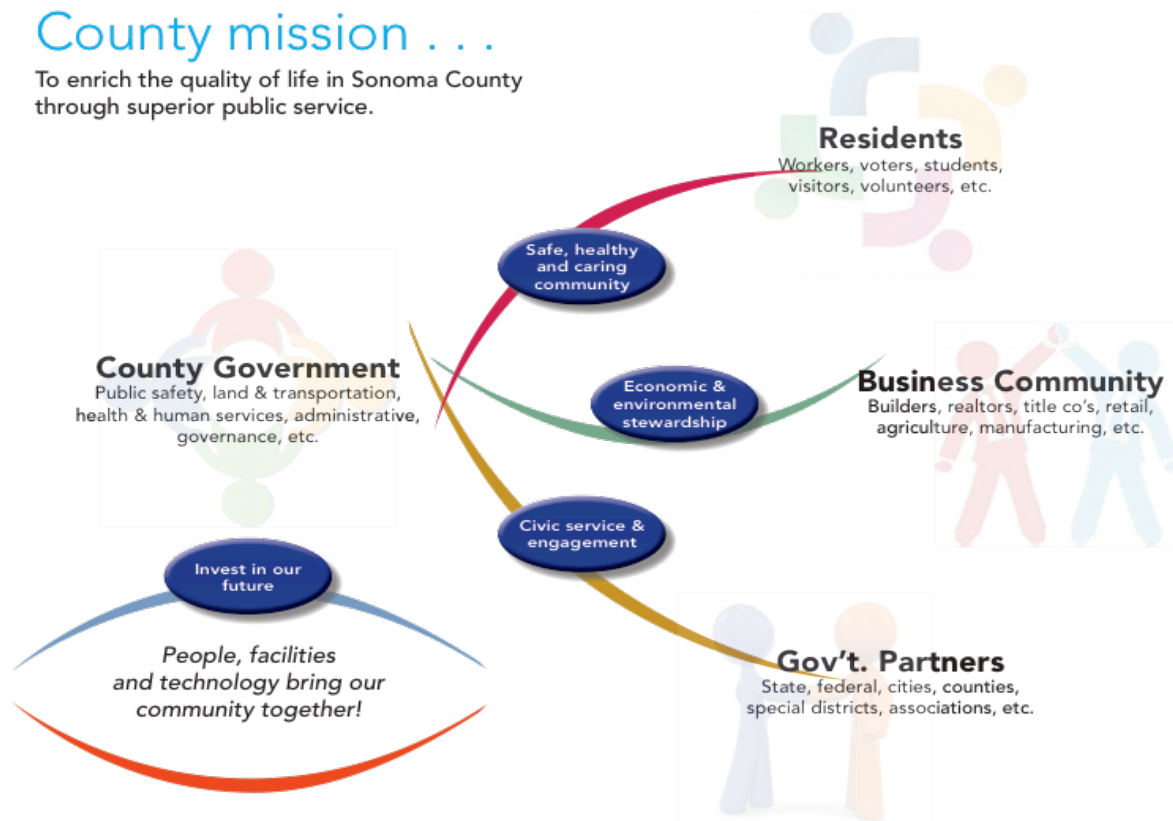
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## Information Technology Vision

***Our vision is to maximize public service and financial savings through the implementation of technology solutions that support and enhance current and future service delivery systems of Sonoma County.***

### County mission . . .

To enrich the quality of life in Sonoma County through superior public service.



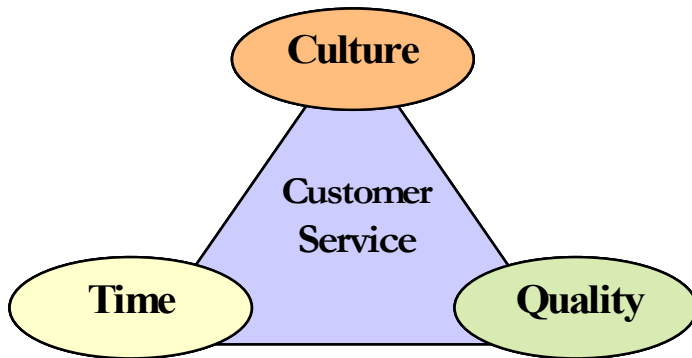
Superior public service involves and supports **residents**, **business communities**, and **government partners**. County enterprise technology effectively bridges public safety, health and human services, land management, transportation, parks, recreation and administrative programs with a consistent and sustainable technology foundation. County Strategic Goals define our focus and priorities which include:

- Safe, Healthy and Caring Community
- Economic & Environmental Stewardship
- Civic Service & Engagement, and
- Investing in our Future

Related technology projects and a service portfolio enables our best assets, our departments and employees, to work well together regardless of organizational or jurisdictional boundaries.

## Service Goals and Objectives

The vision and goals represents a culture of service that delivers quality products in a timely and effective manner. The Information Systems Department has established a set of operating objectives including:



**Customer Satisfaction and Level of Service** – constant improvement in practices used to provide and maintain cost effective, consistent and responsive technology tools and business services to fulfill all of the County Strategic Goals.

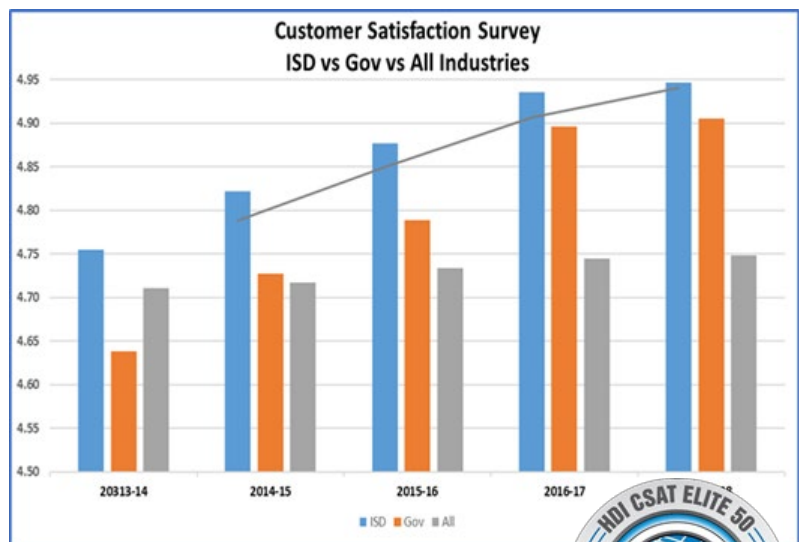
**Product and Service Value** – quality and effectiveness of support for individual employees, departments, and agencies in their delivery of efficient public services and products aligned to all of the County Strategic Goals.

**Clarity of Process and Managed Risks** – long term comprehensive planning tied to best practice standards and procedures, clear deliverables and equitable costing allows the department to develop and maintain credibility and trust of its county customers and fulfill its responsibilities under County rules and other applicable laws. In meeting these obligations we minimize risk, benefiting all of the County Strategic Goals.

## Measurement and Service Value

**Customer Satisfaction Surveys** are a primary measurement of our success in meeting service delivery objectives. Outside parties survey clients on requests and incident response tickets. The surveys measure courtesy, knowledge, timeliness, quality, and overall satisfaction on a scale of 1 – 5. Over 3,000 surveys have been responded to over the last 2 years. Ratings are compared to government peers and to all industries. For 3 years the Information Systems Department has exceeded both Government and all

industries in satisfaction levels. In 2018, the department was ranked 1<sup>st</sup> Place in the Help Desk Institute Elite 50 for outstanding performance when compared against other benchmark entities. This honor helps reinforce the value of measurement and importance of recognizing the hard work staff perform to



make sure clients are satisfied with services being provided... everyday! The Information Systems Department utilizes customer satisfaction feedback proactively to adjust training plans and to reassign staff from other areas to help insure client satisfaction remains a top focus and priority.

Innovation and sound business practices are critical to our success in demonstrating product and service value. Technology is constantly changing and emerging solutions can often be incorporated to provide improved delivery of public services. Sonoma County has been recognized as a leader in technology and innovation achieving top 5 rankings in the Digital Counties Survey since 2014 achieving 1<sup>st</sup> Place in 2016 and again in 2018. The survey collects information about our technology portfolio and about specific areas deemed important to the public. This is a national award conducted by the Center for Digital Government in partnership with the National Association of Counties (NACo) and provides a basis for both learning about technology trends and helps focus future efforts on the right things.

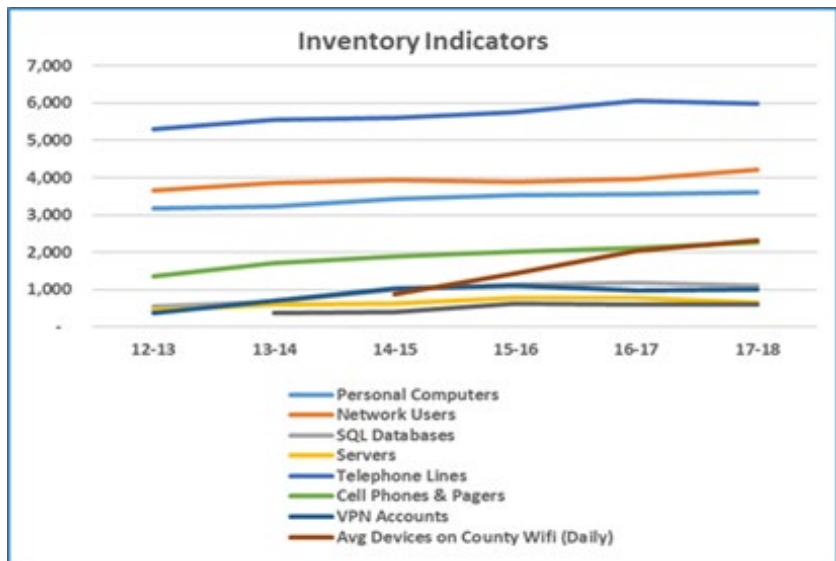


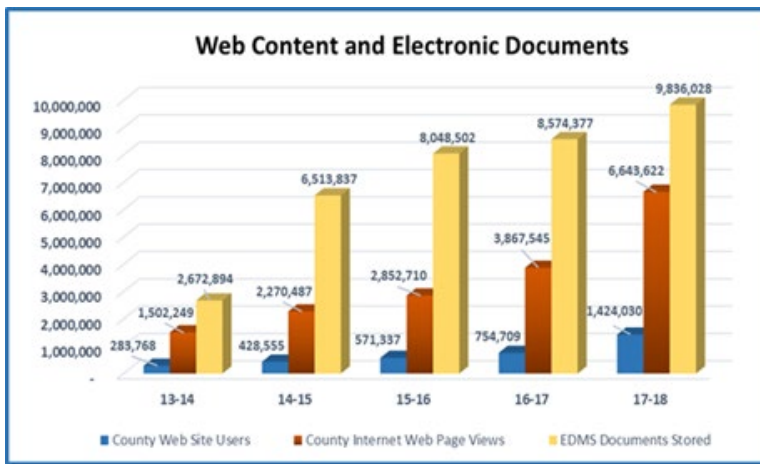
Equally important to maintaining a culture of customer satisfaction and innovation is managing and forecasting service demand for products and understanding expanding client expectations. Workload Indicators serve this purpose and help demonstrate how all primary IT functional areas deliver value and support change. Regular increases in user counts, devices supported, and related work activity with constantly changing technology demonstrates how our business partners view this resource as vital component of quality public service delivery. Summary information follows and additional detail is available in online ISD Performance Metrics and detailed Customer Satisfaction reports.

**Inventory Indicators** relate to the number of devices, users, volumes, and capacities that drive workload and resource consumption. In all IT categories we are seeing a significant growth in inventory indicators.

Mobility (Cell, Tablet, Phones, etc.) is a relatively new and rapidly expanding service category with impacts to online service expectations for both employees and the public.

Dramatic shifts are occurring as information is made available anytime-anywhere, from any device. This expands network (both wired and wireless) bandwidth needs across the enterprise and to Internet resources.



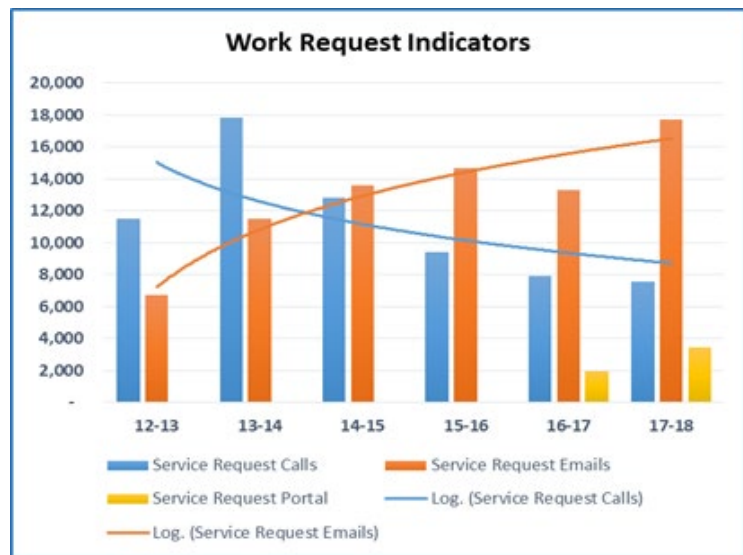


**Web Content and Electronic Documents** shape the basis for online services and open government. These technologies present internal efficiencies while improving access for residents and businesses throughout our communities. The County continually makes incremental progress in attracting new users to these resources and is working hard to expand availability of electronic documents and content for online use.

Measuring certain metrics help validate success. Internet users have nearly doubled over the past 3 years and the volume of web page views has followed similar trends. At the same time the County has worked to expand the number of documents stored in electronic form to reduce the need for paper based access and copies.

This shift to digital information is evident when compared to paper based activities in past years. Mail, courier services, print, and copy volumes have gradually declined as business processes and access methods transition to digital information and evolving communication tools. The department has used these measurements to recommend adjustments to service offerings and to help facilitate a more rapid transition to electronic service delivery. Internal business efficiencies coupled with environmental benefits (using less paper products and minimizing automobile trips) make this an imperative to support the County goals and protect our environment.

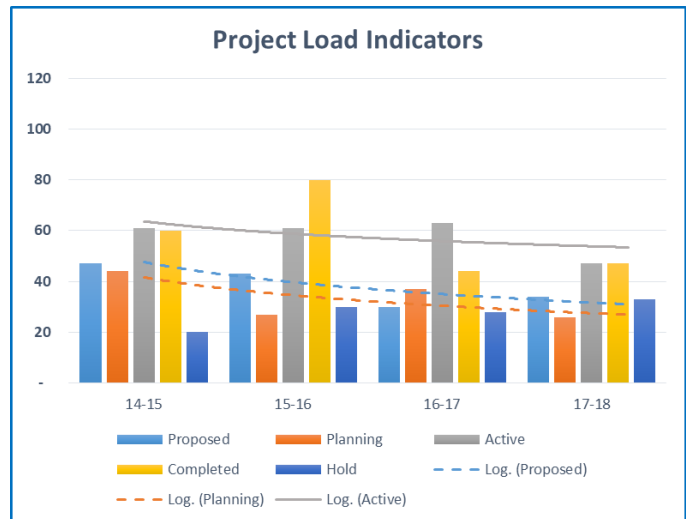
**Work Request Indicators** relate to the volume of requests for service (add, move, change, help, maintenance, incident, reports, etc.) Many of these are small or routine projects or account administrative activities with quick response expectations and consume 60 – 75% of our work team resources.



In 2013/14, all service desks were consolidated to improve single point service delivery and to facilitate convergence of voice and data environments.

The service desk processes approximately 28,000 requests each year. As an efficiency effort, the service desk began transition to electronic submittal via email and a self-service portal for routine administrative requests. This has shifted workloads and improved response for direct assistance or emergency needs.








**Project Load Indicators** relate to the volume of medium to large projects. Projects have a start and end date and typically cross all functional teams. Approximately 60% of the project inventory is related to enterprise technical infrastructure. While counts are significant, the size/scope of individual projects in each fiscal year can significantly impact completion counts as represented in the chart. Dedicating resource to large scale projects and impacts of emergency response and recovery efforts after the 2017 fires reduces backlogs of routine and mid-sized projects in planning and hold states as departments recognize County priorities versus department needs. Heading into 2019/20, we anticipate increase project demands as department move to completion rates for small and medium size projects as resources conclude work on the large scale projects.







## The Value of Information

Leveraging a strong technology foundation, the Information Systems Department is continuously shifting focus to better utilize and value information. By combining web, social media, geographical information, and electronic records a unique opportunity exists to better use local government information to improve awareness, enhance community engagement and demonstrate transparency in all we do.

### Popular Services - Find it Fast!

Board Meetings » 	SoCo Data » 	SoCo Alert » 	Pay it Online » 	SoCo Report It » 	Mobile Apps » 	Departments & Agencies » 
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<u>Resident Services</u> 	<u>Business Services</u> 	<u>Visitor Services</u> 	<u>Government Services</u> 
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**Innovation Services** works with Sonoma County leadership to stimulate an environment for systems innovation while developing business strategies that serve the growing technology needs of the County enterprise.

Working collaboratively with leadership from County departments and agencies in the selection, development, and implementation of new technologies, programs, and services that address business challenges and support their needs. Research and development efforts nurture new ideas from concept, through pilot, and into mainstream production. Additionally, this service is designed to lead technical teams on high profile projects requiring an agile approach to implementation. These projects lead to business process improvement through cross-departmental collaboration and data sharing, while enhancing the client experience.

A current notable project is Accessing Coordinated Care to Empower Self Sufficiency, ACCESS Sonoma County. Through closer coordination between the departments of Health Services, Human Services, Community Development Commission, Child Support Services and criminal justice departments' support is more effectively delivered to clients with complex needs improving their health, well-being and economic stability. Ultimately, the technology creates a scalable solution and blueprint for how county safety net departments can holistically manage care for citizen populations with complex needs.

Another innovative project currently being piloted at the county involves digital services with electronic forms and signatures. The digitized forms include internal documents such as Human Resources forms and reimbursement requests, as well as forms submitted by citizens to governmental agencies, with a goal of reducing costs and providing more efficient services. In conjunction with the electronic forms, the team enabled electronic signatures as a way to fully digitize these processes.

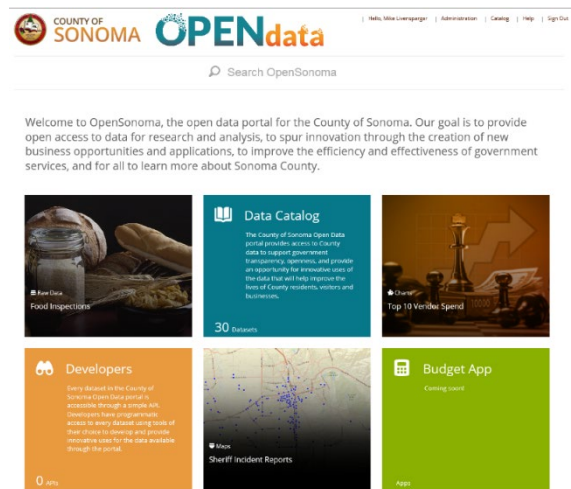
**Open Data and Online Services** are part of the Board's work priorities to expand Online Services supporting government openness, accessibility and transparency. Information Systems is working with departments to expand offerings and to enhance the value of information. A few examples of recent additions to online services includes: a new online reporting system, SoCo Report It, allows residents of the unincorporated County to report County maintenance and repair service requests; and SoCo Data provides a platform to share important local data with the community.



**SoCo Report It** provides people with the ability to submit and monitor the status of service requests for common maintenance and repair issues in the county service areas using both the Internet and smartphone applications. The app provides a convenient way to submit service requests, such as reporting a pothole or streetlight outage, and make it easy to attach a photo of the problem. Additionally, the app automatically records the location via the GPS location services on the smartphone. The submitter can track progress of the request from submission to resolution.



**SoCo Data** is accessible using a tool set that allows the public to view data directly in a web browser, download data into a spreadsheet or in other popular formats for more advanced analysis and visualization. County data and information is now available online to share and improve access to public information. Initial datasets include public safety incident reports, restaurant inspections, property information, and the County budget. The County is also collaborating with the City of Santa Rosa to allow the public to view data from multiple jurisdictions through the same tool.



## Project Portfolio

County Strategic Goals define our areas for making improvements and changes to county programs to enrich the quality of life in Sonoma County.

With this focus, the Information Systems Department manages a project portfolio that facilitates building and maintaining a strong technology infrastructure and business solutions that help deliver results.

At the end of FY 17/18 the project portfolio has the following counts:

<u>Project State</u>	<u>Count</u>	<u>State Description</u>
Active	47	Funded and moving forward - target dates established
Hold	33	Stopped pending customer or resource constraints
Planning	37	Project being estimated and planned for scheduling
Proposed	34	Requested work, pending funding and or prioritization

In the portfolio, there are several priority projects that represent core foundational elements for improving public service across all strategic goals and initiatives. These are significant as the size and complexity of the efforts often consume a large part of available technology and line of business staff resources. In many cases, these priorities have delayed being able to respond to other important work creating a significant back log that can be seen in the portfolio counts noted above.

## Strategic Technology Projects

Several priority initiatives will highlight ISD's work efforts through July 1<sup>st</sup>, 2020:

**Make our Information Technology (IT) more Resilient** by organizing program and mitigation project elements consistent with the Recovery and Resiliency Framework. Proposed solutions are under review. The Board has set aside \$1.7 million to support this critical project. The goal includes achieving greater resiliency in the highest priority areas by the end of FY19-20. Additional funding will need to be identified to complete the later phases. Additional information is available in the following Recovery Projects section.

**Integrated Justice System Stabilization and Modernization** project updates the County's centralized justice system to leverage current technologies that business partners rely upon to effectively serve the community. Nearly 2000 people utilize the system which contributes extensive efficiencies throughout the public safety and justice community. Expenses to support and sustain the modernization effort is estimated at \$1M annually to cover both expense items and revenue for required additional staffing for approximately 4-5 years. Measurement: Complete Phase I conversion to a supported database environment to be completed within 12-18 months following authorization.

- The update will proceed in three phases over a five year period to replace the underlying technology and significantly improve access, particularly for mobile devices and justice personnel in the field.
- Phase one planning and procurement is currently underway using available fund balance from the current year.
- In support of this effort ISD is retraining staff to transfer their knowledge and prepare for redesigning the system and filling vacancies with staff with experience with newer technology.

**Forms Digitization** - to further implement the County's Digital Government which provide cost efficiencies and improved service delivery. Electronic forms will expand use of online services easing access to government programs, services and information with citizens and provide efficiency in internal forms processing versus paper forms currently routed through the County of Sonoma offices and agencies. Information Systems Department (ISD) will continue to seek support and project funds to provide consultation, workflow mapping, form design, electronic signature integration, data collection, data structure for analysis, and integration with the County's existing trusted system, OnBase, and other enterprise systems.

**Document Remediation** - the Americans with Disabilities Act (ADA) and supporting regulations require all government entities that receive federal funding to provide equal access to services, electronic access to information is equally as important as physical access to individuals with disabilities. Based on the current volume of documents requiring remediation Information Systems will look for ways to improve our efforts and support departments in providing access to all

## IT Resiliency Projects:

See attachment that includes summary information on the Recovery and Resiliency Framework.

Information Systems is working to include incorporate IT Resiliency as a normal consideration for all projects, seeking to improve the ability for County operations to sustain operations during and after a disaster. Subject to Board approvals set aside funds for IT resiliency and related infrastructure funds and operating revenue will be leveraged to address gaps and mitigate risks. The following is a summary outline of anticipated activities in FY 19/20.

Spring/Summer 2019: Engage Disaster Recovery/Business Continuity Consultant to complete an assessment of County's information systems (staffing, procedures, software, hardware, network, servers, circuits, and locations) to identify the gaps in IT resiliency and corresponding recommendations to be completed within available resources.

- Reassign ISD resources to coordinate with Emergency Services and CAO Office to develop project deliverables and deadlines.
- Issue RFPs for disaster recovery/business continuity and to review alternatives for Cloud based personal productivity tools to replace on premise tools (Microsoft Office).
- Initiate network/infrastructure redesign to ensure cloud accessibility and readiness to transfer personal productivity workloads to Cloud vendors.

Summer/Fall 2019: Develop Business Continuity and Implementation Plan

- COOP Integration - Coordinate with departments on IT needs analysis for line of business applications.
- Identify and /or reaffirm proposed program elements, one-time costs, potential on-going, additional limited resources, capital projects.
- Gain Board concurrence, direction and approvals.

Winter/Spring 2020: Plan Execution

- Follow plan timetable.
- Finalize staffing and support organization plans.
- Proposal for any remaining items in the FY 2020-21 budget.

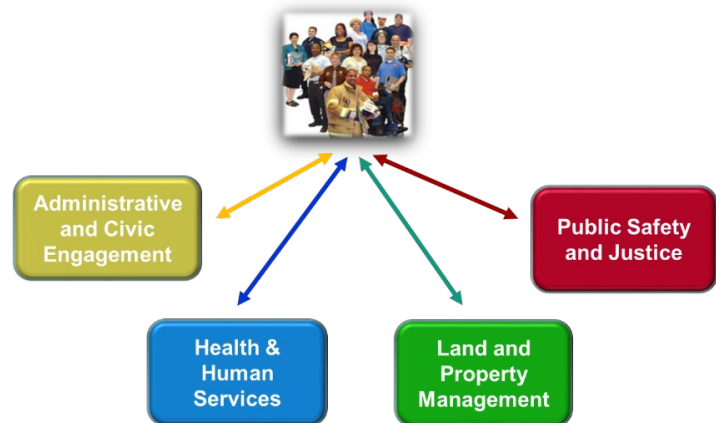
**Cyber Security** – update and enhance IT security programs, policies, and technical systems to protect systems and data. Evaluate virus and malware systems and enhance as appropriate to improve security posture.

## Routine and Mid-Sized Projects – 2019 / 2020

In addition to Strategic Projects, the portfolio contains over 130 routine and mid-sized projects. Each of the County Strategic Goals help guide our work planning and prioritization of effort. The Information Systems Department balances efforts on technology projects and related services in collaboration with departments. Each project is associated with a function of government with a primary role and responsibility to defined goals.

- Admin & Civic Engagement
- Health and Human Services
- Land & Property Management
- Public Safety and Justice

### Functions of Government



Technology infrastructure that supports all functions and goals relates to the **Investing in our Future** and is included in the Project Portfolio.

## Organizational Alignment

Given the project, support and maintenance workloads and the emerging demands for expanding services, the Information Systems Department is constantly adjusting the organization to best meet expectations and needs. Primary functions are aligned with technical architectures to provide focused knowledge in a manner that allows common services to be coordinated and consolidated in an efficient and effective way.

**Administration and Coordination** – a group that provides general administration, budget, accounting, fiscal analysis, contract, procurement, human resources, safety and facility support to all functional teams.

**Innovation Services** - works with Sonoma County leadership to stimulate an environment for systems innovation while developing business strategies that serve the growing technology needs of the County enterprise.

**Applications Programming** – the team that provides development, maintenance and support of business applications, data integration, and reporting solutions. The group supports make, build and buy decisions and associated implementation management services in coordination with department IT staff and vendors.

**Information Management** – has been re-aligned to revalue primary functional areas that define, process, manage, report, distribute, and archive both digital and traditional information. The following teams are involved in piloting organizational concepts.

**Web and Social Media** – providing content management systems and processes to facilitate the access to information through all on-line media avenues.

**Electronic Document Management** – supporting the capture, indexing, and storage of electronic documents and files of all types.

**Geographical Information** – coordinating the collection and digital association of geospatial attributes with other tabular data and developing visual maps tools for both internal and public access.

**Records and Reprographics** – supporting the collection, scanning, archival, and retention management for all records series and producing graphic designs and printed materials to support information sharing and communications.

**Technical Services** – develops, supports and maintains the technical infrastructure and standardized personal productivity tools for all County employees. The group has several specialized work teams including:

**Infrastructure Network and Communications** – develops, maintains and support countywide voice, video and data connectivity solutions for all departments. The group is consolidating environments into a single converged structure.

**Infrastructure Server, Storage and Database** – managing the data centers and all equipment and technical computing structures associated with technology solutions.

**Infrastructure / Cyber Security** – assuring safe and secure information technology and use. Includes compliance auditing, litigation support, and policy development.

**Infrastructure Application Hosting** – provides the hosting of departmental business applications and enterprise personal productivity and collaboration tools.

**Infrastructure Service Desk and Field Operations** – the single point of access to present and deliver services. The service desk manages all request, incident, and install requests for all technologies and oversees coordinating field staff for on-site needs.

## Staffing Trends and Organizational Objectives

Information Systems is constantly adjusting as the technology landscape and IT management environment evolves. Improving economic landscape and significant State re-alignment of programs has shifted additional responsibilities to local governments. This has increased county staffing by 11% over a five year period. Internal administrative services departments have increased staffing by approximately 4% during the same period.

At the same time, the County has made significant progress in replacing major technology infrastructure and IT support organizations (both central and departmental) are evolving to meet service level demands. Information Systems, the central IT organization represents approximately 65% of the total County information technology FTE's. During the last five years, Information Services has increased authorized staffing by 9%. A significant part of this increase was offset by cost reduction in vendor managed telecom services as voice and data network support was consolidated into a single internal unit. Staff was also added to meet support needs for the maintenance and operation of new systems.

Recruitment has been lagging needs as competition in demand for IT skills and experience has increased considerably in the bay area. Vacancy rates are around 10%, slightly higher than past years.

In 2019/20, primary organizational objectives are in place to address staffing and retention issues:

ISD has been working hard to incorporate practices that continually address depth of coverage, cross-training, and skill development. This is not just at the senior management level but across all functional teams. During the fiscal year, the department will be focused on several activities to enhance our ability to recruit and to improve existing employee's readiness for promotion or reassignment.

- Re-organize executive leadership roles to better balance operations and strategic initiatives and establish succession tracks.
- Support and utilize the new Learning Management System to help identify skill/knowledge gaps and to develop and manage training plans for all staff.
- Complete a Job Study to update job descriptions to accurately reflect current work, knowledge and skill requirements.
- Continue efforts to increase candidate pools by using internships, college outreach, and selective use of extra-help staff.

### ISD Recovery and Resiliency Framework Activities

The following is a summary of each primary activity on the Recovery and Resiliency Framework in

#### **CP 4.4.1 Identify primary County technology infrastructure, business systems, and critical facilities needed to support the essential services and critical business operations.**

Intends to address:

- Loss of network connectivity including internet
- Loss of core productivity applications including email, electronic documents, SharePoint
- Loss of enterprise and line of business applications and services due to a compromised ISD Data Center (would impact everything from 911 and Computer Aided Dispatch to Financial Systems and County Websites).

Planned efforts for next 18 months:

- Assess the completed Continuity of Operations Plan (CP 4.1.1) to determine IT Resiliency expectations for the various Business Applications in use throughout the County. Preparatory work has started.
- Prepare Initial Essential Systems report for review and concurrence by departments.
- Research and procure software tool to support 4.4.2 which will efficiently define complex technology dependencies for each of the Essential Systems.

#### **CP 4.4.2 Identify community infrastructure and utility services that are essential to the operation of the County technology infrastructure and systems.**

Intends to address:

- Loss of electrical power and internet carrier services to the ISD Data Center that would impact services.

Planned efforts for next 18 months:

- Primary utility and telecommunication services have been reviewed to determine potential risks.
- Development of priorities and work plans pending resources.

#### **CP 4.4.3 Assess risks and hazards that currently exist in the County technology infrastructure and community infrastructure and utilities.**

Intends to address:

- Critical Facility Redundant Internet Feeds and Pathways
- Critical Internal Facility Power Retrofit
- Critical Facility Power Retrofit (Transfer Switches)
- Critical Facility Redundant Grid-Power Feed to Campus/Data Center
- Hardening of Wireless Communications Infrastructure

Planned efforts for next 18 months:

- Prepare Business Impact Analysis (BIA) for County technology infrastructure and community infrastructure and utilities.
- Document and harden current infrastructure and utility disaster exposure through the Hazard Mitigation Grant Program as we implement modernization projects to address technology and community infrastructure and utilities.
- Notice of Intend has been approved for several projects. ISD will complete applications to help fund the activities.
  - Project Number: DR-4382-0258, Critical Facility Redundant Internet Feed
  - Project Number: DR-4382-0260, Critical Facility Power Retrofit
  - Project Number: DR-4382-0261, Critical Facility Power Retrofit
  - Project Number: DR-4382-0267, Critical Facility Redundant Power Feed
  - Project Number: DR-4382-0252, Hardening of Wireless Communications Infrastructure

**CP 4.4.4 Prioritize technology infrastructure modernization projects that directly relate to mitigating risks for points of failure that affect accessibility and scalability of critical business systems.**

Intends to address:

- Implement hazard mitigation projects and modernization plans that improve IT resiliency across critical business systems.

Planned efforts for next 18 months:

- Resilient Architecture: Virtualizing critical server, storage, and database structures to allow movement of service delivery between data centers and cloud providers. Implementation will allow the shifting of workloads (compute, storage, application hosting) to available resource based on disaster scenario. This will improve dramatically time-to-recover after data center failure.
- Network Connectivity: Revise network architecture to ensure access to Internet and to applications running offsite by adding circuits to ensure diverse paths and automated rerouting of traffic. Implementing this design would allow off-campus remote sites to continue to access Internet and cloud services even if the ISD Data Center and County campus were unusable. This is also a requirement to shift enterprise and line of business solutions to the cloud.
- Core Productivity Applications: Microsoft offers cloud hosting services for email and document storage known as Office 365. Using Office 365 would protect email and documents from local



disaster events affecting Sonoma County, since the data would be stored in secure facilities out-of-state.

- Enterprise and Line of Business Applications and Services: ISD stores backup copies of our data and systems outside Sonoma County using a physical data center and cloud services. Implementing improved availability and recovery solutions to run enterprise and essential line business applications at other physical sites or in the cloud will be proposed and prioritized over the period.

**CP 4.1.1 Establish priorities for essential services and critical business operations during and after a disaster or multi-hazard event (FES Lead).**

Planned efforts for next 18 months:

- Assist County Departments in coordination with the Emergency Management Department to develop IT component of Continuity of Operations Plan (COOP)
- Facilitate Business Impact Analysis (BIA) for customer applications and critical business processes
- Partner to identify and implement EOC operations solutions to replace and enhance functional capabilities of the command structure, e.g. logistics database, event log systems, staffing tools, GIS scenario templates, dash boards for situational awareness, etc.

In addition to activities in which ISD is the lead agency, we will continue to partner and support technology needs for Office of Recovery and Resiliency Framework activities related to modernizing systems for the EOC, public notification, the SafetyNet (ACCESS Sonoma County project), and support for activities defined under the Housing and Natural Resources areas as well.