



Five-Year Information Technology Plan

Introduction

The proposed five-year Information Technology (IT) Plan for Fiscal Years 2020-21 through 2024-25 is the County's compilation of significant IT projects. The projects include both those requesting General Funds from Data Systems Development Projects, Budget Control 038, as well as those proposing funding from non-General Fund sources. This document is updated annually to reflect the changing needs and fiscal outlook of the County.

Departments were requested to identify planned IT projects costing more than \$150,000 over the five-year financial planning period. Identification of projects in the IT Plan allows each request to be reviewed and five-year funding requirements to be assessed. IT projects exceeding \$1,000,000 in a single year and requiring General Funds will continue to be reported in the Strategic Priority section of the SFP.

The IT Plan serves as an assessment tool to assist in the evaluation of funding commitments, as well as potential project overlap. Moreover, the plan provides a roadmap for future IT projects while maintaining long-term financial stability. The assessment is an ongoing process influenced by many changing factors such as service needs, available resources, Board priorities, legal mandates, age and condition of existing IT infrastructure, and considerations for changes in technology and IT data security.

The IT plan is not a budget document, but rather a planning tool to be used in conjunction with the budget development process for FY 2020-21 through FY 2024-25. The reported IT projects (and those subsequently identified) will be evaluated for funding during the FY 2020-21 annual budget development process. Project needs and related costs will be reviewed again during the next SFP cycle which will begin in August 2020.

IT projects will be reviewed by the Information Technology Investment Review Committee (IT IRC) in preparation of the following year's budget requests. Departments will continue to submit detailed IT project requests on an annual basis in order to secure approval and appropriations as part of the budget development process.



General Fund

As of September 30, 2019, appropriations in Data Systems Development Projects, Budget Control 038, total \$7.6 million for FY 2019-20 IT projects. Of this total, \$4.0 million comes from NCC and \$3.6 million stems from transfers in for multi-year project re-budgets. The FY 2019-20 First Quarter Budget Report will add another \$3.4 million in appropriations for a grand total of \$11.3 million for FY 2019-20 projects. The total five-year net project costs for IT projects summarized in this SFP are \$8.8 million, excluding General Fund Strategic Priorities requested by OCIT Countywide Services and Departments.

INFORMATION TECHNOLOGY (IT) PROJECT PROPOSAL SUMMARY

C/N IT Project Title	5-Year Cost Funded by Dept	5-Year NCC Request	ANNUAL NCC REQUEST (COST LESS REVENUES OR OTHER SOURCES)				
			FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Program I - Public Protection							
<u>026 - District Attorney</u>							
N Electronic Discovery System	0	1,100,000	300,000	200,000	200,000	200,000	200,000
N Cloud Migration	0	3,340,000	550,000	600,000	660,000	730,000	800,000
<u>058 - Public Defender</u>							
PD & DA Courtroom	715,991	0	135,400	139,192	143,089	147,096	151,214
Program I Subtotal	715,991	4,440,000	985,400	939,192	1,003,089	1,077,096	1,151,214
Program IV - General Government Services							
<u>054 - Human Resource Services</u>							
N Cornerstone OnDemand (Eureka) - Engage Module	470,000	0	0	0	0	0	0
Program IV Subtotal	470,000	0	0	0	0	0	0
Program V - Capital Improvements							
<u>038 - Data Systems Development Projects</u>							
N County SD-WAN Core	180,000	671,000	671,000	0	0	0	0
N Network Test Lab	200,000	375,000	375,000	0	0	0	0
N Application Security Tool	240,000	600,000	600,000	0	0	0	0
N Automated Patching Tool	180,000	450,000	450,000	0	0	0	0
N Identity & Badge Data	0	150,000	150,000	0	0	0	0
N Identity Management	0	250,000	250,000	0	0	0	0
N AI - Network Traffic Analysis	190,000	475,000	475,000	0	0	0	0
N Network Segmentation and Network Access Control	0	375,000	375,000	0	0	0	0
N Self-Service Password Reset using MIM	0	200,000	200,000	0	0	0	0
N Cloud Security Controls	100,000	250,000	250,000	0	0	0	0
N E-Discovery Tool	80,000	200,000	200,000	0	0	0	0
N Computerized Maintenance Management System (CMMS)	0	396,683	396,683	0	0	0	0
Program V Subtotal	1,170,000	4,392,683	4,392,683	0	0	0	0
Total NCC Request	0	8,832,683	5,378,083	939,192	1,003,089	1,077,096	1,151,214

Legend: C = Continuing IT Project, N = New IT Project

Program: **Public Protection**
 Budget Control: **026 - District Attorney**

Fund: **100**

IT Project Description:		Unit Number: 026IZ01			PB Req: 5285
Electronic Discovery System					
Sources and Uses	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Expense:	300,000	200,000	200,000	200,000	200,000
NCC:	300,000	200,000	200,000	200,000	200,000
Funding Source:	State	Federal	General Fund	Other	Total
	0%	0%	100%	0%	100%
Proposal:					
The District Attorney (DA) proposes replacing the current manual discovery process with an automated solution. An electronic discovery system would allow the DA attorneys to share discoverable items in an efficient and timely manner with appropriate parties. In addition, an automated process may reduce the need for physical storage space.					

Program: **Public Protection**
 Budget Control: **026 - District Attorney**

Fund: **100**

IT Project Description:		Unit Number: 026IZ02			PB Req: 5287
Cloud Migration					
Sources and Uses	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Expense:	550,000	600,000	660,000	730,000	800,000
NCC:	550,000	600,000	660,000	730,000	800,000
Funding Source:	State	Federal	General Fund	Other	Total
	0%	0%	100%	0%	100%
Proposal:					
The District Attorney (DA) proposes migration to a hybrid on-premise and cloud-based infrastructure solution to provide business continuity and disaster recovery so that the core functionality of the DA's Office remains available at all times. Cloud migration would provide high availability, redundancy, and disaster recovery. A new cloud-based infrastructure solution could improve overall effectiveness in criminal investigations and filing of in-custody and out-of-custody complaints.					

Total Budget Control: 026 - District Attorney					
Sources and Uses	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24
Total Expense:	850,000	800,000	860,000	930,000	1,000,000
NCC*:	850,000	800,000	860,000	930,000	1,000,000

*Note: Balance is funded by Net County Cost (NCC) or Fund Balance

Program: **Public Protection**
 Budget Control: **058 - Public Defender**

Fund: **100**

IT Project Description:		Multiple			
		Unit Number: Units			PB Req: 6000
Public Defender & District Attorney Courtroom Modernization					
Sources and Uses	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Expense:	135,400	139,192	143,089	147,096	151,214
NCC:	135,400	139,192	143,089	147,096	151,214
Funding Source:	State	Federal	General Fund	Other	Total
	0%	0%	100%	0%	100%

Proposal:

Public Defender (PD) and District Attorney (DA), are Law and Justice Agencies (L&JAs) continuing the process of upgrading wireless network access in each of the courtrooms. The request for this project is a joint submission of both departments with PD taking the lead and DA concurring. As part of this upgrade, L&JA's are increasing the bandwidth on the core network to handle the additional capacity. The L&JA's are using more mobile device technology, including tablets and cell phones, which relies heavily on wireless networks. Also the new CAT6 network cables at the counsel tables in the arraignment courtrooms will provide faster speeds and increased reliability. It would also provide the ability to have VoIP phones at each of the counsel tables. The first phase of the project includes installing new wireless equipment in each of the courtrooms and pulling new CAT6a network cables to the counsel tables inside of the arraignment courtrooms. The second phase of the project will include adding additional Wireless Access Points inside each courtroom. Other agencies that may benefit indirectly from this project could include the Courts, Sheriff, Social Services Agency, and County Counsel, among others.

Total Budget Control: 058 - Public Defender					
Sources and Uses	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24
Total Expense:	135,400	139,192	143,089	147,096	151,214
NCC*:	135,400	139,192	143,089	147,096	151,214

*Note: Balance is funded by Net County Cost (NCC) or Fund Balance

Program: **General Government Services**
 Budget Control: **054 - Human Resource Services**

Fund: **100**

IT Project Description:		Unit Number: 054IZ01			PB Req: 6110
Cornerstone OnDemand (Eureka) - Engage Module					
Sources and Uses	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Expense:	110,000	90,000	90,000	90,000	90,000
Revenue:	110,000	90,000	90,000	90,000	90,000
NCC:	0	0	0	0	0
Funding Source:	State	Federal	General Fund	Other	Total
	0%	0%	0%	100%	100%
Proposal:					
<p>Human Resources proposes contracting for a third module to the Eureka learning and development resource to measure employee engagement and satisfaction throughout the County. The data provided by this module would enhance data-driven, human capital decisions and could support talent retention and employee performance. Additionally, data provided by the "Engage" module could serve as a critical measure for Recruitment Services to understand the fit and success of new hires. Subsequently, the data may be used to guide decisions related to recruitment and hiring processes. The module could provide access to research-based engagement tools to measure employee engagement, satisfaction, and commitment, which are all key drivers of retention and performance. Additionally, Engage would provide the County with the ability to implement and administer a new hire survey as part of a new onboarding process</p>					

Total Budget Control: 054 - Human Resource Services					
Sources and Uses	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24
Total Expense:	110,000	90,000	90,000	90,000	90,000
Total Funding:	110,000	90,000	90,000	90,000	90,000
NCC*:	0	0	0	0	0

*Note: Balance is funded by Net County Cost (NCC) or Fund Balance

Program: **Capital Improvements**
 Budget Control: **038 - Data Systems Development Projects**

Fund: 100

IT Project Description:		Unit Number: 038IZ01			PB Req: 5550
County SD-WAN Core Implementation					
Sources and Uses	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Expense:	671,000	45,000	45,000	45,000	45,000
Revenue:	0	45,000	45,000	45,000	45,000
NCC:	671,000	0	0	0	0
Funding Source:	State	Federal	General Fund	Other	Total
	0%	0%	100%	%	100%
Proposal:					
<p>This project, requested by OC Information Technology (OCIT), proposes building a new County Wide Area Network (WAN) core with new Software Defined (SD)-WAN technology to prepare for the annual scheduled County network devices refresh. The majority of Data Systems sites are Class 3 sites with a single circuit. When a circuit is down, work may slow down or come to a stop until the circuit issue is resolved. With the local Internet services provisioned at remote sites, OCIT can allow some trusted Internet traffic like Office 365 to go through local Internet links which may reduce the need to upgrade Internet Link links at OC Data Center and the County Administration South Building. The project could be completed in FY 2020-21 should funding be available. The implementation cost of \$671,000 would be requested from NCC in FY 2020-21 and OCIT Countywide Services, Fund 289, would charge \$45,000 annual ongoing costs to users beginning in FY 2021-22.</p>					

Program: **Capital Improvements**
 Budget Control: **038 - Data Systems Development Projects**

Fund: 100

IT Project Description:		Unit Number: 038IZ02			PB Req: 5554
Network Test Lab Environment					
Sources and Uses	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Expense:	375,000	50,000	50,000	50,000	50,000
Revenue:	0	50,000	50,000	50,000	50,000
NCC:	375,000	0	0	0	0
Funding Source:	State	Federal	General Fund	Other	Total
	0%	0%	100%	0%	100%
Proposal:					
<p>A lab environment is requested by OCIT for testing configurations, patches and upgrades before applying to the production environment. This may assist with keeping network devices updated with current software and patches, improve network reliability, and reduce outages. OCIT would build a network lab with the same model and type of routers, switches and firewalls currently implemented on the County network. Because the patches, upgrades and solutions would be suitably tested before deployment, OCIT may be able to provide even more reliable services to County departments. The project could be completed in FY 2020-21 if funding were available. The implementation cost of \$375,000 would be requested from NCC in FY 2020-21 and OCIT Countywide Services, Fund 289, would charge \$50,000 annual ongoing costs to users beginning in FY 2021-22.</p>					

Program: **Capital Improvements**
 Budget Control: **038 - Data Systems Development Projects**

Fund: **100**

IT Project Description:		Unit Number: 038IZ03			PB Req: 5558
Application Security Tool					
Sources and Uses	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Expense:	600,000	0	0	120,000	120,000
Revenue:	0	0	0	120,000	120,000
NCC:	600,000	0	0	0	0
Funding Source:	State	Federal	General Fund	Other	Total
	0%	0%	100%	0%	100%
Proposal:					
<p>The County website, OCGov.com is a business application used by external entities and the public for various reasons. OCIT requests a proposed application security tool to increase protection against web application exploitation by scanning the code and addressing possible vulnerabilities. OCIT proposes to implement a tool and provide a mechanism to identify potential flaws in the County's applications code design. The project could be completed in FY 2022-23 if funding were available. Implementation cost of \$600,000 would be requested from NCC in FY 2020-21 and OCIT, Fund 289, would charge \$120,000 annual ongoing costs to users beginning in FY 2023-24.</p>					

Program: **Capital Improvements**
 Budget Control: **038 - Data Systems Development Projects**

Fund: **100**

IT Project Description:		Unit Number: 038IZ04			PB Req: 5561
Automated Patching Tool					
Sources and Uses	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Expense:	450,000	0	0	90,000	90,000
Revenue:	0	0	0	90,000	90,000
NCC:	450,000	0	0	0	0
Funding Source:	State	Federal	General Fund	Other	Total
	0%	0%	100%	0%	100%
Proposal:					
<p>Vulnerability management is a process requiring ongoing remediation of identified risks. OCIT requests a project to compare commercially available automated patching solutions and implement the most suitable tool based on a set of criteria for identifying vulnerability management and patching. The project could be completed in FY 2022-23 if funding were available. Implementation cost of \$450,000 would be requested from NCC in FY 2020-21 and OCIT, Fund 289, would charge \$90,000 ongoing annual costs to users beginning in FY 2023-24.</p>					

Program: **Capital Improvements**
 Budget Control: **038 - Data Systems Development Projects**

Fund: **100**

IT Project Description:		Unit Number: 038IZ05			PB Req: 5581
Identity & Badge Data Integration					
Sources and Uses	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Expense:	150,000	0	0	0	0
NCC:	150,000	0	0	0	0
Funding Source:	State	Federal	General Fund	Other	Total
	0%	0%	100%	0%	100%
Proposal:					
<p>OCIT requests a proposal to Implement an Identity and Badge Data Integration project that would improve the flow between digital identities and the badge access system, enhance security and increase efficiencies while providing physical access to County facilities. The project would provide data integration between digital identity management and physical access management. The project could be completed in FY 2020-21 if funding were available. Implementation cost of \$150,000 would be requested from NCC in FY 2020-21.</p>					

Program: **Capital Improvements**
 Budget Control: **038 - Data Systems Development Projects**

Fund: **100**

IT Project Description:		Unit Number: 038IZ06			PB Req: 5583
Identity Management Workflows					
Sources and Uses	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Expense:	250,000	0	0	0	0
NCC:	250,000	0	0	0	0
Funding Source:	State	Federal	General Fund	Other	Total
	0%	0%	100%	0%	100%
Proposal:					
<p>The County's Identity Management solution, implemented in FY 2019-20, for identity governance and administration (IGA) automates basic user-provisioning and de-provisioning. OCIT requests a project for an Identity Management solution that could provide workflows and self-service features for employees and managers necessary for efficient and accurate employee onboarding, offboarding, and maintenance of personnel changes affecting digital identities. This project would review and analyze the current Human Resource Services (HRS) processes for managing HR action requests related to personnel changes and integrate the changes with user-provisioning or de-provisioning actions. The project would also enhance the workflow for management of contingent worker data. In addition, the project would include self-service features allowing authorized users to update personnel information such as preferred name, working title and work location. The project could be completed in FY 2020-21 if funding were available. Implementation cost of \$250,000 would be requested from NCC in FY 2020-21.</p>					

Program: **Capital Improvements**
 Budget Control: **038 - Data Systems Development Projects**

Fund: **100**

IT Project Description:		Unit Number: 038IZ07			PB Req: 5586
Artificial Intelligence (AI) - Network Traffic Analysis					
Sources and Uses	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Expense:	475,000	0	0	95,000	95,000
Revenue:	0	0	0	95,000	95,000
NCC:	475,000	0	0	0	0
Funding Source:	State	Federal	General Fund	Other	Total
	0%	0%	100%	0%	100%
Proposal:					
A proposed Artificial Intelligence (AI) Network Traffic Analysis project, requested by OCIT, would allow protection of the County network by utilizing the latest available technology. The project could be completed in FY 2022-23 if funding were available. Implementation cost of \$475,000 would be requested from NCC in FY 2020-21 and OCIT, Fund 289, would charge \$95,000 annual ongoing costs to users beginning in FY 2023-24.					

Program: **Capital Improvements**
 Budget Control: **038 - Data Systems Development Projects**

Fund: **100**

IT Project Description:		Unit Number: 038IZ08			PB Req: 5591
Network Segmentation and Network Access Control					
Sources and Uses	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Expense:	375,000	0	0	0	0
NCC:	375,000	0	0	0	0
Funding Source:	State	Federal	General Fund	Other	Total
	0%	0%	100%	0%	100%
Proposal:					
OCIT requests a proposed Network Segmentation and Network Access Control project that would safeguard access to the County network and prevent data exfiltration and unintended data loss. The project would establish network segmentation to prevent unauthorized users from accessing the network and enhance the ability to contain malware. The project could be completed in FY 2020-21 if funding were available. Implementation cost of \$375,000 would be requested from NCC in FY 2020-21.					

Program: **Capital Improvements** Fund: **100**
 Budget Control: **038 - Data Systems Development Projects**

IT Project Description:		Unit Number: 038IZ09			PB Req: 5593
Self-Service Password Reset (SSPR) Using Microsoft Identity Manager (MIM)					
Sources and Uses	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Expense:	200,000	0	0	0	0
NCC:	200,000	0	0	0	0
Funding Source:	State	Federal	General Fund	Other	Total
	0%	0%	100%	0%	100%

Proposal:
 The Self-Service Password Reset (SSPR) project, requested by OCIT, would enable an on-demand self-service model for Active Directory (AD) password resets. Users would be able to reset the password that enables access to the County network, email, Office 365 (including Skype for Business, OneDrive for Business, and Teams), OC Expediter, or any other system integrated with the current Single Sign-On (SSO) solution. This project would minimize the need for IT Service Desk support and provide the ability to reset passwords at any time. The OCIT solution would utilize Azure Self-Service Password Reset (SSPR) with password write-back and Microsoft Identity Manager (MIM). The project could be completed in FY 2020-21 if funding were available. Implementation cost of \$200,000 would be requested from NCC in FY 2020-21.

Program: **Capital Improvements** Fund: **100**
 Budget Control: **038 - Data Systems Development Projects**

IT Project Description:		Unit Number: 038IZ10			PB Req: 5595
Cloud Security Controls					
Sources and Uses	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Expense:	250,000	0	0	50,000	50,000
Revenue:	0	0	0	50,000	50,000
NCC:	250,000	0	0	0	0
Funding Source:	State	Federal	General Fund	Other	Total
	0%	0%	100%	0%	100%

Proposal:
 The proposed Cloud Security Controls project, requested by OCIT, would provide necessary measures to protect County applications and data stored in the cloud environment. OCIT's solution would implement effective authentication and authorization processes to safeguard the applications and data. The project could be completed in FY 2022-23 if funding were available. Implementation cost of \$250,000 would be requested from NCC in FY 2020-21 and OCIT, Fund 289, would charge \$50,000 annual ongoing costs to users beginning in FY 2023-24.

Program: **Capital Improvements** Fund: **100**
 Budget Control: **038 - Data Systems Development Projects**

IT Project Description:		Unit Number: 038IZ11			PB Req: 5596
E-Discovery Tool					
Sources and Uses	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Expense:	200,000	0	0	40,000	40,000
Revenue:	0	0	0	40,000	40,000
NCC:	200,000	0	0	0	0
Funding Source:	State	Federal	General Fund	Other	Total
	0%	0%	100%	0%	100%
Proposal:					
County departments, including Human Resource Services and County Counsel, have expressed a need for electronic discovery (e-discovery) information. OCIT's proposed solution would be designed to enhance the accuracy of searches of electronically stored information. The project could be completed in FY 2022-23 if funding were available. Implementation cost of \$200,000 would be requested from NCC in FY 2020-21 and OCIT, Fund 289, would charge \$40,000 annual ongoing costs to users beginning in FY 2023-24.					

Program: **Capital Improvements** Fund: **100**
 Budget Control: **038 - Data Systems Development Projects**

IT Project Description:		Unit Number: 038IH08			PB Req: 6187
Computerized Maintenance Management System (CMMS)					
Sources and Uses	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Expense:	396,683	0	0	0	0
NCC:	396,683	0	0	0	0
Funding Source:	State	Federal	General Fund	Other	Total
	0%	0%	100%	0%	0%
Proposal:					
Funding for the Computerized Maintenance Management System (CMMS) project began in FY 2017-18 and this request from OCIT is for the third and final year of system development and implementation. The requested funding for this project will complete the CMMS, an asset management strategy. This enterprise business solution provides building managers, customer tenants, finance departments and all stakeholders with transparency and controls. This system will provide data analytics capability for further analysis and business insight to support decision-making processes. The plan is for project completion in FY 2020-21, with funding of \$396,683 requested from NCC.					

Total Budget Control: 038 - Data Systems Development Projects					
Sources and Uses	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24
Total Expense:	4,392,683	0	0	0	0
NCC*:	4,392,683	0	0	0	0

*Note: Balance is funded by Net County Cost (NCC) or Fund Balance