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Finance and Administration Cabinet
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Matthew G. Bevin
Governor

Chuck Grindle
Chief Information Officer

Senator Stan Humphries
Representative John Blanton
Capital Planning Advisory Board

Dear Senator Humphries and Representative Blanton,

Am pleased to submit to the Capital Planning Advisory Board (CPAB) the results of our review of the information technology projects for the next biennium. The members of our staff and agency representatives performed the review. We focused specifically on information technology projects for the 2020-2022 biennium utilizing an automated prioritization methodology that promotes an objective view to determine those systems with the highest value and least potential risk to the Commonwealth. The result of this review is contained within three reports:

- Appendix A; 2020-2022 All Funds Capital Information Technology Projects with High Value Designation Noted
- Appendix B; 2020-2022 General Fund High Value Information Technology Projects
- Appendix C; 2020-2022 Chief Information Officer: Additional Priorities

Each capital project submission provides value and we feel the projects identified with the acronym of "HV" in the enclosed reports best support the strategic direction of the Commonwealth and provide the greatest returns on our investments.

Kentucky continues to make progress with our use of information technology and we look forward to working with this body so that, together, we can continue to move Kentucky forward.

Sincerely,

Charles E. Grindle, Ph.D.
Chief Information Officer

EXECUTIVE SUMMARY

Improving enterprise Information Technology (IT) throughout Kentucky state government has been a high priority for a number of years. Executive Order 2017-0889 and House Bill 244 established a new leadership structure and vision for IT within the Commonwealth. These changes enabled stronger alignment of IT solutions with strategic direction to strengthen the Commonwealth, while also establishing Kentucky as a prominent role model to other states.

To be successful, optimization of our infrastructure had to be our first stepping-stone to streamline the services we provide to our customers. Next, there was a dire need to structure IT projects in terms of wants, needs, and particularly, in the area funding/cost. The Commonwealth now has an Office of Project Management that assists agencies with their project planning, timeline, cost and reporting so the project stays healthy, in motion, and successful, which not only benefits the agencies, but also the citizens of Kentucky.

The review process for IT Capital Projects began with an assessment of criteria from previous biennia. Criteria reflective of the vision described above were defined and subsequently reviewed by the Technology Advisory Council (TAC). A Scoring Committee team was formed consisting of eight representatives from the Finance and Administration Cabinet, Cabinet for Health and Family Services, Justice and Public Safety Cabinet, Education and Workforce Development Cabinet, the Personnel Cabinet and the Office of the State Budget Director. In a deviation from prior years when weightings of the criteria were established by COT, the Scoring Committee completed a "pairwise ranking" of the criteria to weight the importance of each criteria in terms of their personal views. The results of that weighting exercise identified "Improved Quality of Life for Citizens" as the highest weighted of the "Business Value" criteria. Of the Risk Factor criteria, the committee chose to place emphasis on the "Sensitivity of Data."

LRC identified 22 Capital IT Project submissions for prioritization by COT. The requests for funding totaled approximately $189 million for the 2020-2022 biennium, which is nearly $200 million less than the previous biennium, although, the number of submissions were only 3 fewer this biennium. Only 5 projects had a cost estimate over $10 million dollars. The table below summarizes the funds requested by Cabinets of the Executive Branch.

Cabinet (# Projects)	General Funds	Restricted Funds	Federal Funds	Private Funds	Road Fund	Total Funds
CHFS (6)	$31,491,850	--	$44,299,850		--	$75,791,700
EEC (1)	$1,518,000	--	--		--	$1,518,000
EWDC (3)	$11,232,000	--	--		--	$11,232,000
FIN (3)	$13,590,000	$8,000,000	--	$ 1,000,000	--	$22,590,000
GG (4)	$3,000,000	$8,248,600	--		--	$11,248,600
JUS (1)	$52,450,000	--	--		--	$52,450,000
KYTC (2)	--	--	--		$7,000,000	$7,000,000
TAH (2)	$7,008,000	--	--		--	$7,008,000
Totals:	$120,289,850	$16,248,600	$44,299,850	$1,000,000	$7,000,000	$188,838,300

Agencies provided information to COT about their requests and presented their request to the Scoring Committee. The Scoring Committee evaluated each project and assigned a numeric score for each of the established criteria. The top eight projects requesting general funds earned a "High Value" ranking. From that selection, funding would primarily come from the General Fund totaling $93,961,850. Three of the eight projects would also receive financial support from Federal Funds in the amount of and additional $33,493,850 to supplement the general funds.

Based upon the recommendations of the Scoring Committee, the CIO has compiled three reports for the Capital Planning Advisory Board's (CPAB) to consider in its formulation of Kentucky's capital IT improvement plan. The first two reports are the direct result of COT's scoring and review process. The enclosed reports are as follows:

- Appendix A: 2020 – 2022 All Funds Capital Information Technology Projects with High Value Designations Noted
- Appendix B: 2020 – 2022 General Fund High Value Information Technology Projects
- Appendix C: 2020 – 2022 Chief Information Officer: Additional Priorities

Please note that Appendix C highlights projects that specifically enable the Commonwealth to achieve strategic agency goals, however, they are not requesting General Fund dollars to support those projects. All projects included in Appendix C will solely be funded from one of the following funding sources: Restricted Funds, Federal Funds, Road Fund or Other (Private Cash) funds. Therefore, those additional seven projects are recommended to be approved.

2020 – 2022 CAPITAL IMPROVEMENT PLANS

The Commonwealth Office of Technology's Overview / Assessment of
Information Technology Capital Items for the Capital Planning Advisory Board - May 2019

Biennially, the CPAB requests the CIO to communicate the capital IT needs of the Enterprise that are of high priority and seeking financial support from the General Fund (cash or bonds) and/or other funding sources. Therefore, per the CPAB's request and the CIO's obligation per 1 KAR 6:020, the CIO submits a report to the CPAB that outlines his skilled review, assessment, prioritization and enterprise ranking of IT projects for the Executive Branch agencies. Encompassing CPAB's request is the need to develop criteria that would assist in determining IT proposals that would be considered "high priority" due to the high value and low risk of the proposed project. CPAB also asked that the CIO recommend any other projects that may not have mathematically made the "high value" cut, but, in his opinion, would be very beneficial to Kentucky state government and to the citizens of the Commonwealth.

Therefore, within this report are three appendices: All Funds Capital Information Technology Projects with High Value Designations Notes, General Fund High Value Information Technology Projects and the CIO's Additional Priority Projects. These reports detail Cabinet/Agency projects, their budgets, and the funding source they would need to utilize during the execution and completion of the project.

2020 – 2022 Biennium Scoring Criteria:

BUSINESS VALUE	RISK FACTORS
- Business Case and Justification - External Requirements - 5 Year TCO Cost Savings - Strategic Alignment with Governor's Initiatives or CIO Strategic Plan - Service Improvement - Improved Quality of Life for Citizens	- Total Implementation Costs - Sensitivity of Data - Complexity of Solution - Implementation Plan - Availability of Skillsets

High Value Project Descriptions:

Project: ATSC 3.0 Conversion Phase 2, Education & Workforce Cabinet
Amount Budget: $1,000,000 (General)
Description: ATSC 3.0 Conversion Phase 1: As a part of the national Transmitter Repack, the Federal Communications Commission (FCC) mandated that all 16 of KET's stations move to new channels. As a result, by 2020, KET will have rebuilt its statewide transmission network at a cost of approximately $21 million reimbursed by the FCC. The 2018-2020 General Assembly appropriation of $2.1 million is enabling the completion of KET's microwave interconnect and the upgrade to ATSC 3.0 ready transmissions equipment. ATSC 3.0 Conversion Phase 2: To help ensure the safety of Kentuckians, KET's statewide transmission system must be equipped to provide geographically-targeted emergency alerts on its broadcast channels for weather and natural disasters. Emergency Alert System receivers and processors are needed for all 16 transmitters to provide critical localized weather alerts for the commonwealth to ensure the safety of the general public. KET is requesting $750,000 to provide regional and localized emergency warning and alerting information to the public.

Project: TWIST Modernization, Health & Family Services Cabinet
Project Budget: $19,787,700 (General & Federal)
Description: DCBS currently uses The Workers Information System (TWIST) in the operation of its adoption and foster care programs. Congress passed The Family First Prevention Services Act of 2018 (Family First) in February 2018, which takes effect in October 2019 and is leading to an overhaul of the state's child welfare system. This act requires each state to update its current information system to meet the criteria of a Comprehensive Child Welfare Information System (CCWIS). CCWIS replaces Statewide Automated Child Welfare Information System (SACWIS) as the standard for child welfare information systems. TWIST has properly followed SACWIS standards since inception and will transition to meet CCWIS compliance during this planning period. Federal requirements for a CCWIS system can be found within 45 CFR § 1355.52. Software development will be completed by the same team that developed and continues to oversee TWIST. Total costs for this project is estimated to be $19,787,700. However, half of this cost will be paid with federal grant awards through the following process. Expenditures will be accrued throughout each week and CHFS Division of General Accounting (DGA) will draw in federal dollars every Monday to pay for the federal share. At the end of each quarter, development costs will be reported on form CB-496. This quarterly submission to the Administration for Children & Families will be used to determine the next quarter's award as well as provide a reconciling award if additional funding is necessary.

Project: KASPER, Health & Family Services Cabinet
Project Budget: $2,000,000 (General & Federal)
Description: The Cabinet for Health and Family Services (CHFS) has a critical need to modernize the Kentucky All Schedule Prescription Electronic Reporting (KASPER) system. The Legacy application is over 12 years old and has had many features added to it over the years in haphazard manners. This has made the code difficult to support and be, in many areas, inefficient. Failure to replace this system may negatively affect the Cabinet's ability to provide state mandated services and enhancements in the future. This project will replace the old KASPER platform with a new modular structure that will make development, deployment and support much easier and will make potential future distribution much simpler. KASPER is a 12-year-old web application utilized by Schedule 2-5 drug Prescribers to determine if it is appropriate to prescribe scheduled drugs to a particular patient. Ongoing Commonwealth legislative changes and system enhancements require modern coding techniques be utilized. A modernized system will allow for greater ease of maintenance and will position the Commonwealth to implement efficiencies, reduce waste, and improve data accuracy in meeting Commonwealth legislative and reporting requirements. 90% of the funding for this project will be thru a federal agency.

Project: KASES III, Health & Family Services Cabinet
Project Budget: $33,000,000 (General & Federal)
Description: The Cabinet for Health and Family Services (CHFS) has a critical need to upgrade the Kentucky Child Support Enforcement System (KASES) through use of web technology. The Legacy application uses Cobol/Telon and IMS DB technology, which are obsolete, resulting in a critical shortage of available skilled resources and significant risk in providing on-going support of the system. Many of the current KASES mainframe developers are approaching or have surpassed eligibility for retirement. CHFS/DIS/CSE has incurred a substantial increase of shared mainframe operational expenses as other agencies, most notably the Department for Community Based Services (DCBS), migrated their systems from the mainframe to a web based system. As a result, CSE mainframe costs nearly doubled due to the reallocation of expenses to the remaining programs on the mainframe. Failure to replace this system will negatively affect the Cabinet's ability to provide state and federally mandated services in the future. This project will replatform the KASES legacy mainframe processing to a web platform, incorporate new technologies, and provide automated workflow and enforcement capabilities to Child Support Enforcement (CSE) users. KASES is a 28-year-old legacy mainframe application utilized by CSE and local contracting officials' staff in the administration of the child support program and in the enforcement of child support orders that is responsible for distribution of over $400 million annually in child support payments to custodial parents. Ongoing federal regulation changes continue to tax the current 28-year-old mainframe

system beyond its current capabilities. A modernized system will allow for greater ease of maintenance and will position the Commonwealth to implement efficiencies, reduce waste and fraud, and improve data accuracy in meeting federal administrative and reporting requirements.

Project: KSP Emergency Radio System Replacement, Justice & Public Safety Cabinet
Project Budget: $52,450,000 (General)
Description: Funding to replace existing statewide emergency radio communications network. This system provides day to day emergency radio communications between KSP dispatch and the Kentucky State Police, Commercial Vehicle Enforcement, KY Fish and Wildlife, Attorney General's Office, ABC and other state agencies. This project will have a life that extends over a 10 year master agreement. The cost will be divided over this 10 year period which will ensure maintenance contracts and service upgrades are completed throughout the payment period.

Project: Enterprise Content Management, Finance & Administration Cabinet
Project Budget: $13,590,000 (General)
Description: The Commonwealth Office of Technology is seeking approval to implement a true Enterprise Content Management (ECM) System to serve the needs of all Commonwealth agencies. A portion of the systems has been implemented utilizing "Transformation Funds" from the Managed Print Services Contract, however, the licensing is limited to the use cases of replacing legacy FileNet Document Management Systems for the Personnel Cabinet and Department of Revenue. Funding is being requested to purchase Enterprise Licensing of the Hyland OnBase solution, retain the current Specialized Services staff to lead the effort of implementing additional features and solutions. In addition, build an Enterprise Records Retention Platform to deliver the IT requirements for digital records retention that complies with KDLA's record retention schedule, implement true digital transformation of Personnel HR Records across the Commonwealth, have the ability to offer the solution to all Commonwealth agencies without having to continually return to the vendor to purchase additional licenses and features. Plan would also include a way to do away with storage and retrieval of paper documents across multiple agencies, develop and provide the data classification required to apply the correct privacy and security of stored documents, and provide a streamlined, efficient platform readily searchable and properly organized to respond to Open Records requests and legislative requests to agencies.

Project: Ky Heritage Council - Records Digitization, Tourism, Arts &Heritage Cabinet
Project Budget: $1,008,000 (General)
Description: Create and implement a comprehensive technology system which will serve as an interactive portal for agencies, municipalities, private consultants, and others who use historic preservation programs. This project will include (1) an assessment of digital assets and infrastructure, and projection of future needs; (2) upgrade the current Geographical Information System; (3) integrate and install new software, hardware and network systems; and (4) build the necessary maintenance support structure for on-going operations. In digitizing a wide variety of frequently used historic and pre-historic survey records, the Kentucky Heritage Council will become a more efficient, environmentally-friendly agency that can better accommodate its stakeholders.

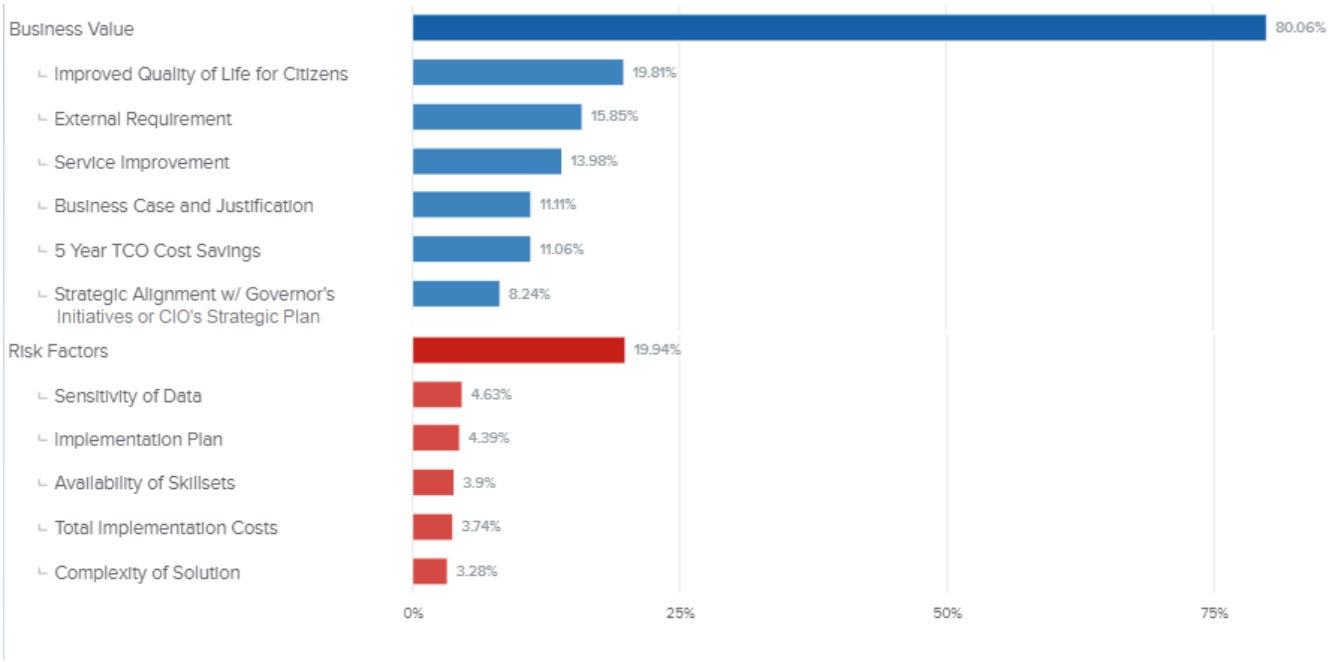
Project: Case Management System for Voc. Rehab, Education & Workforce Cabinet
Project Budget: $4,620,000 (General)
Description: The current system used by Vocational Rehabilitation for Case Management is 14 years old. It does not meet all business requirements currently and resides on outdated technology platforms.

Review Process

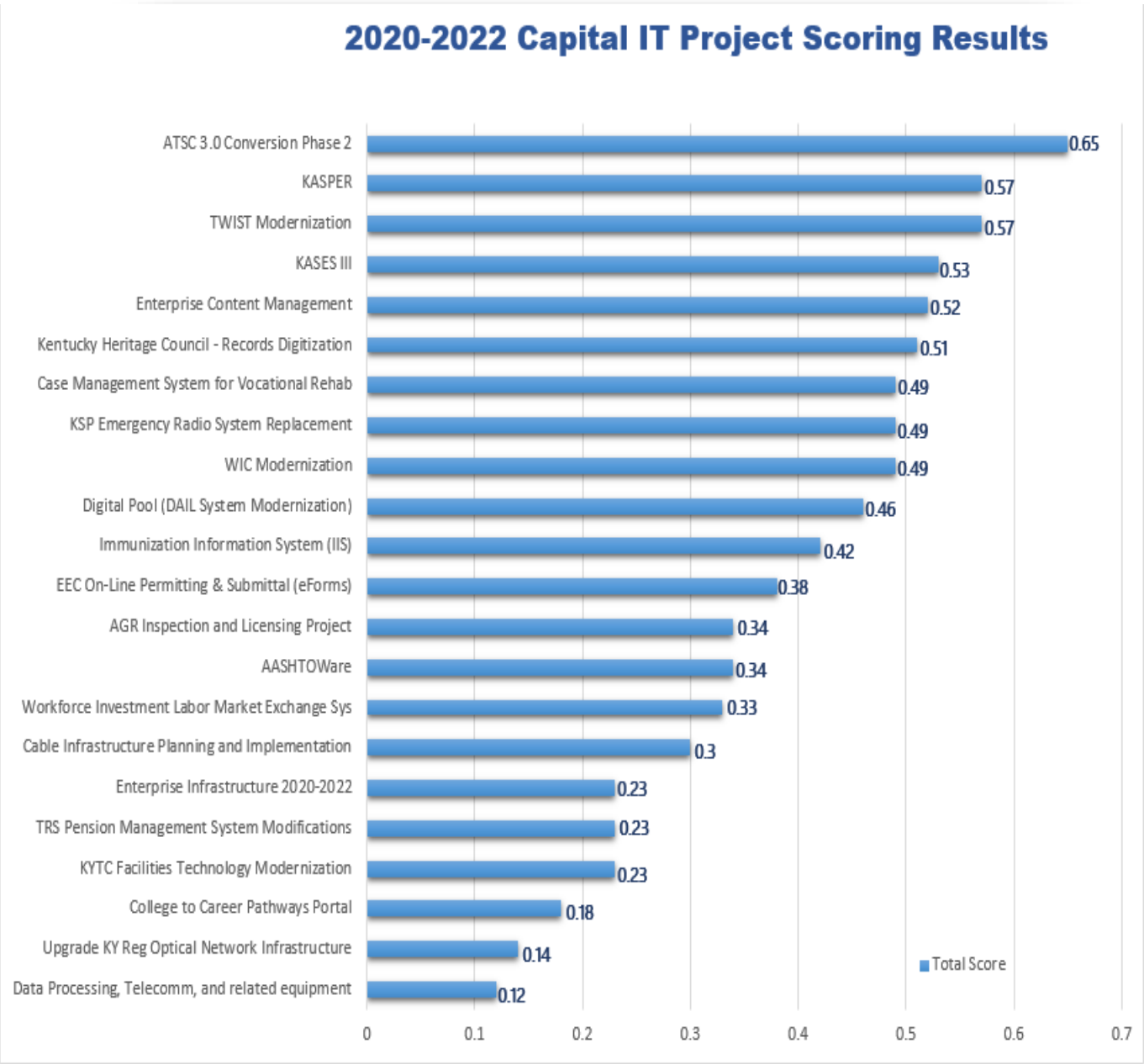
A Scoring Committee was selected in October of 2018. Each scorer was given a briefing of what the 2020 – 2022 Capital Planning Process entailed and their involvement. The committee was made up of representatives from the following Kentucky Offices/Cabinets:

- Office of the State Budget Director
- Health and Family Services
- Justice and Public Safety
- Education and Workforce Development
- Personnel Cabinet
- Commonwealth Office of Technology

In February of 2019, the Scoring Committee was called together to perform a pairwise ranking of the criteria to be performed in a new project portfolio prioritization application called Decision Lens. The graph below illustrates the weighting of each criteria resulting from the pairwise ranking exercise.



As identified in the Executive Summary of this report, 22 projects were submitted for consideration in this year's IT Capital Planning Process. In mid-May, the scorers trained on using Decision Lens for scoring. Scorers evaluated submissions and then participated in oral presentations, where agencies were given the opportunity to further explain specific details of their project plan and entertain any questions that surfaced from the Scoring Committee. The graph below illustrates the prioritization of projects. The scores reflect the net weighted results of the scoring process and are inclusive of both Business Value and Risk Factors.



The Scoring Committee reviewed the resulting prioritization of projects and confirmed consensus. The Scoring Committee also reviewed situations in which individual scores had significant variance across the committee and discussed the variance to ensure all Scoring Committee members 1) Shared a common understanding of the criteria and 2) Shared a common understanding of the project request.

Appendix A: All Funds Capital Information Technology Projects with High Value Designation Noted

2020-2022

Cabinet	Agency	Project	Fund Source	Total Project Budget	HV Designation
CHFS	DCBS	TWIST Modernization	GF, FF	$19,787,700	HV
CHFS	GAPS	KASPER	GF, FF	$2,000,000	HV
CHFS	GAPS	KASES III	GF, FF	$33,000,000	HV
CHFS	Dept for Public Health	WIC Modernization	FF	$10,756,000	
CHFS	GAPS	DAIL System Modernization	GF, FF	$1,008,000	
CHFS	Dept for Public Health	Immunization Information System	GF	$9,240,000	
EEC	Secretary's Office	EEC On-Line Permitting and Submittal (eForms)	GF	$1,518,000	
EWDC	Ky Education Television	ATSC 3.0 Conversion Phase 2: Public Safety Emergency Warning and Alerting	GF	$1,000,000	HV
EWDC	General Admin & Support	Case Management System for Office of Vocational Rehabilitation	GF	$4,620,000	HV
EWDC	General Admin & Support	Workforce Labor Market Exchange System	GF	$5,612,000	
FIN	Commonwealth Office of Technology	Enterprise Content Management	GF	$13,590,000	HV
FIN	Commonwealth Office of Technology	COT Enterprise Infrastructure	RES	$8,000,000	
FIN	Ky Lottery Corporation	Data Processing, Telecom and Related Equipment	PRIV	$1,000,000	
GG	Dept of Agriculture	AGR Inspection and Licensing Project	RES	$3,248,600	
GG	Ky Teacher's Retirement	KTRS Pension Management System Modifications	RES	$5,000,000	
GG	Council on Postsecondary Education	College to Career Pathways Portal	GF	$2,000,000	
GG	Council on Postsecondary Education	Upgrade KY Reg Optical Network Infrastructure	GF	$1,000,000	
JUS	Ky State Police	KSP Emergency Radio System Replacement	GF	$52,450,000	HV
KYTC	Secretary's Office	AASHTOWare Upgrades and Solicitations	ROAD	$5,000,000	
KYTC	Dept of Highways	KYTC Facilities Technology Modernization	ROAD	$2,000,000	
TAH	Ky Heritage Council	Kentucky Heritage Council Digitization Project	GF	$1,008,000	HV
TAH	Dept of Parks	KY State Parks Infrastructure Improvement	GF	$6,000,000	
			Total =	**$ 188,838,300**	

Appendix B: General Fund High Value Information Technology Projects

2020-2022					
Cabinet	**Agency**	**Project**	**Fund Source**	**Total Project Budget**	**HV Designation**
EWDC	Ky Education Television (KET)	ATSC 3.0 Conversion Phase 2: Public Safety Emergency Warning and Alerting	GF	$1,000,000	HV
CHFS	Dept of Community Based Services	TWIST Modernization	GF, FF	$19,787,700	HV
CHFS	GAPS	KASPER	GF, FF	$2,000,000	HV
CHFS	GAPS	KASES III	GF, FF	$33,000,000	HV
JUS	Ky State Police	KSP Emergency Radio System Replacement	GF	$52,450,000	HV
FIN	Commonwealth Office of Technology	Enterprise Content Management	GF	$13,590,000	HV
TAH	Kentucky Heritage Council	Kentucky Heritage Council Digitization Project	GF	$1,008,000	HV
EWDC	General Admin & Support	Case Management System for Office of Vocational Rehabilitation	GF	$4,620,000	HV
			Total =	**$127,455,700**	

Appendix C: Chief Information Officer: Additional Priorities

2020-2022					
Cabinet	**Agency**	**Project**	**Fund Source**	**Total Project Budget**	**Add'l Priority Designation**
CHFS	Dept for Public Health	WIC Modernization	FF	$10,756,000	Add'l Priority
GG	Dept of Agriculture	AGR Inspection and Licensing Project	RES	$3,248,600	Add'l Priority
KYTC	Secretary's Office	AASHTOWare Upgrades and Solicitations	ROAD	$5,000,000	Add'l Priority
FIN	Commonwealth Office of Technology	COT Enterprise Infrastructure	RES	$8,000,000	Add'l Priority
KYTC	Dept of Highways	KYTC Facilities Technology Modernization	ROAD	$2,000,000	Add'l Priority
GG	Ky Teacher's Retirement	KTRS Pension Management System Modifications	RES	$5,000,000	Add'l Priority
FIN	Ky Lottery Corporation	Data Processing, Telecom and Related Equipment	PRIV	$1,000,000	Add'l Priority
			Total =	**$ 35,004,600**	