

## **Council on Postsecondary Education Information Technology Capital Project Review**

### **Purpose**

To define and apply an objective, disciplined, and justifiable methodology for reviewing and determining the value of information technology capital projects from the public postsecondary institutions.

### **Scope**

Information technology projects that the public postsecondary institutions included for the 2022-24 biennium.

### **Approach**

1. Institutions will submit Capital IT Projects within the CPAB system.
2. The Review Team comprised of CPE Staff and outside representatives will evaluate and score capital projects for 2022-24.
3. Any questions for the institutions will be funneled through Doyle Friskney.
4. Team members can score criteria with any whole number between the set values of 0 to 5 if they feel the project information justifies the score.
5. Review Team members will consolidate scores and rank projects based upon scoring against Business Value and Risk Factor criteria.

### **Criteria**

Each proposed information technology capital project will be evaluated against two sets of criteria: Business Value and Risk Factors. Project ranking will be assessed against each component on a scale of 0 to 5, with each assigned ranking being explicitly defined. An objective score will be derived based upon an evaluation of the project as submitted to the Capital Planning Advisory Board.

### **Business Value**

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#### **Business Case**

Has a business case been prepared and submitted to include such items as Business Need/Benefits, High-level Requirements and/or Features, Expected Risks, Critical Success Factors, Assumptions, Return on Investment (quantitative or qualitative), and Mean Time to Pay Back? Does the business case show a large and rapid justification for the investment?

#### **Efficiency**

Does the project outline demonstrable and quantifiable savings, revenue generation, or cost avoidance? Does the project provide additional transparency or accountability? Are efficiency gains SMART (Specific, Measurable, Achievable, Realistic and Relevant, Time-limited)?

**Executive Sponsorship**

How important is the technology project considered among the institution's capital project priorities?

**Service Improvement**

Does the proposed project automate existing processes, or are processes being redefined prior to automation? Does the proposed project provide new online services to citizens or business? Does the proposed project support or directly enable the success of other project(s) either within the agency or across agencies?

**Improved Quality of Life for Citizens**

Will the project directly affect an improved quality of life for a majority of Kentucky citizens through improved public health, education, safety, infrastructure, environmental issues, economic development, or similar enterprise initiatives?

**Risk Factors**

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**Total Cost of Ownership**

What is the TCO of the project (includes hardware, software, state staffing, vendors/contractors, support and maintenance for the life of the initiative, etc)?

**Data Classification**

Will the system contain personally identifiable data? If so, how will this information be safeguarded within the system to deter identity theft?

**Solution Definition**

What is the anticipated level of effort to customize, develop, invent, or create the proposed solution?

**Implementation Timeline**

How quickly will the project be implemented, and how quickly will the Commonwealth see a Return on Investment? Will the implementation be all at once ('big bang') or will the functionality be implemented in multiple, smaller phases or deliverables?

**Level of Complexity**

What is the level of effort and technical complexity required to make the project successful? Is the expertise to implement fully in-house or will contract staff be needed for some period of time? Are there skill sets currently available in-house to be used to manage the Vendor(s) that provide the solution? Has the Agency undergone a major system implementation in the last five (5) years? What business process re-engineering and change management efforts will be implemented as part of the project?

## CPE IT Project Review Criteria - July 2021

Adapted from COT's capital project review process

<b>Business Value</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>5</b>
<b>Business Case &amp; Justification</b>	None Provided	Minimal information or justification	Some detail provided but not clear/logical	Detailed, complete explanations with TCO, RIO, etc.
<b>Efficiency - Cost Savings or Avoidance and/or Additional Revenue or Accountability</b>	None Identified	Negligible or minimal opportunity	Significant opportunity expected; not quantified	Quantified, significant opportunity
<b>Executive Sponsorship</b>	Bottom 10% organization priority	Lower 50% priority	Upper 50% priority	Top 10% organization priority
<b>Service Improvement</b>	Update to existing system with no business process re-engineering analysis	Update to existing system through some business process re-engineering analysis	Replace existing system through business process re-engineering analysis	Automate existing manual processes including BPR analysis and/or offer new online service/s for citizens
<b>Improved Quality of Life for Kentuckians</b>	Does not relate	Indirectly supports	Directly affects a small percentage of Kentuckians	Directly affects a large percentage of Kentuckians
<b>Risk Factors</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>5</b>
<b>Change in Total Cost of Ownership</b>	\$200 million or more	\$100 to \$150 million	\$25 to \$50 million	Less than \$15 million
<b>System will contain "sensitive" data (KITS 4080, FIPS 200, etc.)</b>	No determination of data content	No explanation of how sensitive data will be safeguarded	Partial explanation of how sensitive data will be safeguarded	Detailed explanation of how sensitive data will be safeguarded or no sensitive data
<b>Solution Definition</b>	Solution must be developed from scratch or customized > 50%	Solution must be customized 25-50%	Solution is readily available with minor customization expected (<10%)	Solution is "OTS" or "Cloud" to be configured, not customized.
<b>Implementation Timeline</b>	Phases > 2 years or "Big Bang"	Phases between 1 and 2 years	Phases between 6 months & 1 year	Phases less than 6 months
<b>Complexity</b>	Extremely Difficult	Difficult	High	Medium to Low

High Value Projects: Score of 4 or greater in both Business Value and Risk Factor.

The Capital Planning Advisory Board asked the Council on Postsecondary Education (CPE) to evaluate information technology (IT) projects submitted by the institutions as part of the 2022-28 six-year capital planning process. CPE's evaluation committee, consisting of the City of Lexington's Chief Information Officer, CPE's Senior Fellow for Technology and Innovation, a public university faculty member, and CEO & Chairman of a local technology company met on July 13, 2021 and evaluated all 36 IT projects submitted by the institutions using criteria like those used by COT to assess both business value and risk for IT projects submitted by state agencies. CPE continued using this approach, which has been used for the past several biennia.

The committee discussed the importance of funding technology infrastructure to ensure the safety and security of Kentucky's postsecondary academic and financial records and to maintain network services and computing hardware to support instruction, research, public service, and institutional operations. The committee noted that the COVID-19 pandemic underscored the importance of technology infrastructure, which allowed institutions to pivot quickly to provide online and hybrid instruction, keeping students on track and keeping institutions open. To some extent, the pandemic pointed out holes in the infrastructure that developed due to lack of sufficient investment in recent years.

The committee recommends the following:

1. That CPE consider including a request for state General Funds for 2022-24, similar to the request made in 2016-18, for a pool of funding for information technology projects. The committee recommends a funding allocation that provides a base amount to each institution with any remaining funds distributed using a rational method and that includes appropriations for CPE's two proposed IT projects.
2. That any new facilities study include an assessment of the postsecondary system's and each institution's IT infrastructure to inform the allocation of state funds for such projects.
3. That campuses place a higher priority on projects related to cyber-security, healthcare technology, and infrastructure. Below is a list of university and KCTCS projects which were considered the highest value and lowest risk by the evaluators:
  - Eastern Kentucky University – Campus Data Network Pool
  - KCTCS – Information Tech Infrastructure Upgrade
  - Kentucky State University – Expand Campus Communications Infrastructure
  - Kentucky State University – Upgrade Information Technology Infrastructure
  - Kentucky State University – Replace Enterprise Resource Planning System
  - Morehead State University – Enhance Network/Infrastructure Resources – Add'l
  - Morehead State University – Upgrade Instructional PCs/LANS/Peripherals
  - Murray State University – Replace Campus Communications Infrastructure (fiber)
  - Northern Kentucky University – Scientific/Technology Equipment Pool
  - University of Kentucky – Improve Enterprise Networking 1
  - University of Kentucky – Improve Enterprise Networking 2
  - University of Kentucky – Lease/Purchase Campus Call Center System
  - University of Kentucky – Lease/Purchase Campus IT Systems
  - University of Kentucky – Lease/Purchase High Performance Computer
  - University of Kentucky – Lease/Purchase Network Security

- University of Kentucky – Lease/Purchase Voice Infrastructure
- University of Kentucky – Repair/Replace Campus Infrastructure
- University of Louisville – Purchase Computer Processing System and Storage
- University of Louisville – Computing for Research Infrastructure
- University of Louisville – Purchase Contact Management System
- University of Louisville – Purchase Fiber Infrastructure
- University of Louisville – Purchase Identity Management
- University of Louisville – Purchase Networking System
- Western Kentucky University – Upgrade IT Infrastructure

In addition, four of the five UK Healthcare system projects were considered to be high value. The magnitude of the project “Replace UKHC IT Systems 1” at \$320,000,000 made it a “high risk” project.

All of the projects submitted were deemed to be reasonable and necessary, with most projects focusing on upgrades to academic and administrative computing systems, infrastructure, classroom equipment, and campus networks. The group noted that the evaluation of projects is more difficult when pools of funding for a broad category of need are requested by the institutions. Attached is a listing of all projects reviewed by the committee.

State-of-the-art network infrastructure and cyber security are necessary to support the instruction, public service, and research missions of our postsecondary institutions and to ensure the safety of academic and administrative records. It is important that institutions take advantage of the increased bandwidth provided by KentuckyWired.

Please see the following pages for a list of projects evaluated. Note that evaluators did not score CPE’s two capital projects.

Evaluators:

Randall Stevens	Local Entrepreneur, Founder & Chairman of Avail & ArchVision
Cody Bumgardner, PhD	Faculty member, University of Kentucky, College of Medicine
Aldona Valicenti	CIO, Lexington Fayette Urban County Government
Doyle Friskney	Senior Fellow, Council on Postsecondary Education

2022-24 Information Technology Capital Projects Projects  
Submitted by Public Postsecondary Institutions  
2022-2028 Capital Plans

	High Value Designation	Funding Identified by Institutions		
		General Fund	Restricted Funds	Total
<b>Eastern Kentucky University</b>				
Academic Computing Pool		-	8,000,000	8,000,000
Administrative Computing Pool		-	6,500,000	6,500,000
Campus Data Network Pool	Yes	-	13,000,000	13,000,000
<b>EKU Subtotal</b>		-	<b>27,500,000</b>	<b>27,500,000</b>
<b>KCTCS</b>				
KCTCS Information Tech Infrastructure Upgrade	Yes	9,500,000	-	9,500,000
<b>KCTCS Subtotal</b>		<b>9,500,000</b>	-	<b>9,500,000</b>
<b>Kentucky State University</b>				
Expand Campus Communications Infrastructure	Yes	2,407,000	-	2,407,000
Upgrade Information Tech Infrastructure 2018	Yes	12,263,000	-	12,263,000
Replace Enterprise Resource Planning System	Yes	5,000,000	-	5,000,000
<b>KSU Subtotal</b>		<b>19,670,000</b>	-	<b>19,670,000</b>
<b>Morehead State University</b>				
Enhance Network/Infrastructure Resources - Add'l	Yes	3,000,000	-	3,000,000
Upgrade Instruct. PCs/LANS/Peripherals	Yes	2,088,000	-	2,088,000
Enhance Library Automation Resources		1,608,000	-	1,608,000
<b>MoSU Subtotal</b>		<b>6,696,000</b>	-	<b>6,696,000</b>
<b>Murray State University</b>				
Replace Campus Comm Infrastructure (Fiber Ring)	Yes	4,640,000	-	4,640,000
<b>MuSU Subtotal</b>		<b>4,640,000</b>	-	<b>4,640,000</b>
<b>Northern Kentucky University</b>				
Scientific/Technology Equipment Pool	Yes	5,000,000	-	5,000,000
Upgrade Admin/IT Infrastructure Pool		15,950,000	6,000,000	21,950,000
<b>NKU Subtotal</b>		<b>20,950,000</b>	<b>6,000,000</b>	<b>26,950,000</b>
<b>University of Kentucky</b>				
Acquire Information Technology Systems		-	2,000,000	2,000,000
Improve Enterprise Networking 1	Yes	-	5,000,000	5,000,000
Improve Enterprise Networking 2	Yes	-	5,000,000	5,000,000
Lease/Purchase Campus Call-Center System	Yes	-	5,000,000	5,000,000
Lease/Purchase Campus IT Systems	Yes	-	10,000,000	10,000,000
Lease/Purchase High Performance Computer	Yes	-	7,000,000	7,000,000
Lease/Purchase Network Security	Yes	-	5,000,000	5,000,000
Lease/Purchase Voice Infrastructure	Yes	-	3,000,000	3,000,000
Repair/Replace Campus Infrastructure	Yes	-	4,000,000	4,000,000
<b>UK Subtotal</b>		-	<b>46,000,000</b>	<b>46,000,000</b>

		Funding Identified by Institutions		
	High Value Designation	General Fund	Restricted Funds	Total
University of Louisville				
Purchase - Computer Processing System & Storage	Yes	-	3,500,000	3,500,000
Purchase - Computing for Research Infrastructure	Yes	-	7,000,000	7,000,000
Purchase - Content Management System	Yes	-	4,000,000	4,000,000
Purchase - Fiber Infrastructure	Yes	-	3,500,000	3,500,000
Purchase - Identity Management	Yes	-	2,000,000	2,000,000
Purchase - Networking System	Yes	-	8,000,000	8,000,000
<b>UofL Subtotal</b>		-	<b>28,000,000</b>	<b>28,000,000</b>
Western Kentucky University				
Upgrade IT Infrastructure	Yes	6,000,000	-	6,000,000
<b>WKU Subtotal</b>		<b>6,000,000</b>	-	<b>6,000,000</b>
-				
<b>Campus Subtotal</b>		<b>\$ 67,456,000</b>	<b>\$ 107,500,000</b>	<b>\$ 174,956,000</b>
<b>High Value Campus Projects Subtotal</b>	<b>24</b>	<b>49,898,000</b>	<b>85,000,000</b>	<b>134,898,000</b>
UK HealthCare				
Acquire Data Center Hardware	Yes		15,000,000	15,000,000
Acquire Telemedicine/Virtual ICU	Yes		10,000,000	10,000,000
Acquire/Upgrade IT System - UKHC	Yes		10,000,000	10,000,000
Implement Patient Communication System - UKHC	Yes		10,000,000	10,000,000
Replace UKHC IT Systems 1			320,000,000	320,000,000
<b>UK HealthCare Subtotal</b>		-	<b>365,000,000</b>	<b>365,000,000</b>
Council on Postsecondary Education				
Student Portal (College to Career Pathways)	NA	2,000,000	-	2,000,000
Upgrade KY Regional Optical Network	NA	1,000,000	-	1,000,000
<b>CPE Total</b>		<b>3,000,000</b>	-	<b>3,000,000</b>