Dear Colleagues,

The June 15 and 16 meeting of the Kentucky Community and Technical College System (KCTCS) Board of Regents (BOR) was eventful on many levels. Among many positive actions, the Regents voted to approve the Huron Project's twelve priorities that the President's Leadership Team (PLT) and the BOR identified at their joint meeting on June 5 and 6. The twelve priorities are attached to this communication and were part of the Board materials for the June 15 and 16 meeting. The Project now moves into its second phase, "Roadmapping."

Roadmapping is the path outlined to achieve each priority. Although that is a simple way of stating it, the roadmapping process is more complicated than setting a linear process and following it. Instead roadmapping will involve mapping the path, the resources necessary to travel the path, the speed it takes to follow the path, the intersection of various priority paths, and the metrics used to measure the success that KCTCS makes as we travel the paths.

All of this is a way to say that the work has just begun. Traveling in Kentucky has its joys – the scenery and the people – but major roads have taken decades to build and decades more to maintain. This is my way of cautioning us not to lose patience or sight of the destination as we build the roads and set out on them.

This Project began with a commitment to transparency, and the Board and Administration is committed to open communication about the findings and the opportunities. The Huron Resource Optimization Study can be found in the System President's Office SharePoint site located in the folder "Final Report & Board Motion". Also note, this does not include the data or data analysis for the Human Resources Analysis or the Compensation and Equity Study. These are separate parts of the Project and have different timelines. The opportunities for those parts of the Project will not be finalized until August and September, respectively.

One more word of caution, cost savings and returns on investments are not necessarily focused on people or their jobs. Some items on the roadmaps relate to the effectiveness of our processes and the best use of our resources, from our buildings to our community partnerships with local businesses to our dedicated employees. The bottom-line is that these priorities and their roadmaps are essential to navigating our ever-changing educational and workforce landscape, and ensuring we meet our mission and live our values.

Sincerely,

Pamela M. Duncan

Pamela M. Duncan
General Counsel
Kentucky Community and Technical College System

Kentucky Community and Technical College System
300 North Main Street • Versailles, KY 40383
P: (606) 256-3100
kctcs.edu

KENTUCKY COMMUNITY & TECHNICAL COLLEGE SYSTEM

KCTCS Resource and Program Optimization

Space Utilization Assessment, Academic Programming Optimization, Financial & Organizational Assessment

KCTCS leadership engaged Huron Consulting Group to perform an assessment of the system's physical resources, programs, and administrative support structures to identify opportunities to improve business operations, cross-campus collaboration, and overall efficiency in alignment with the system's strategic plan.

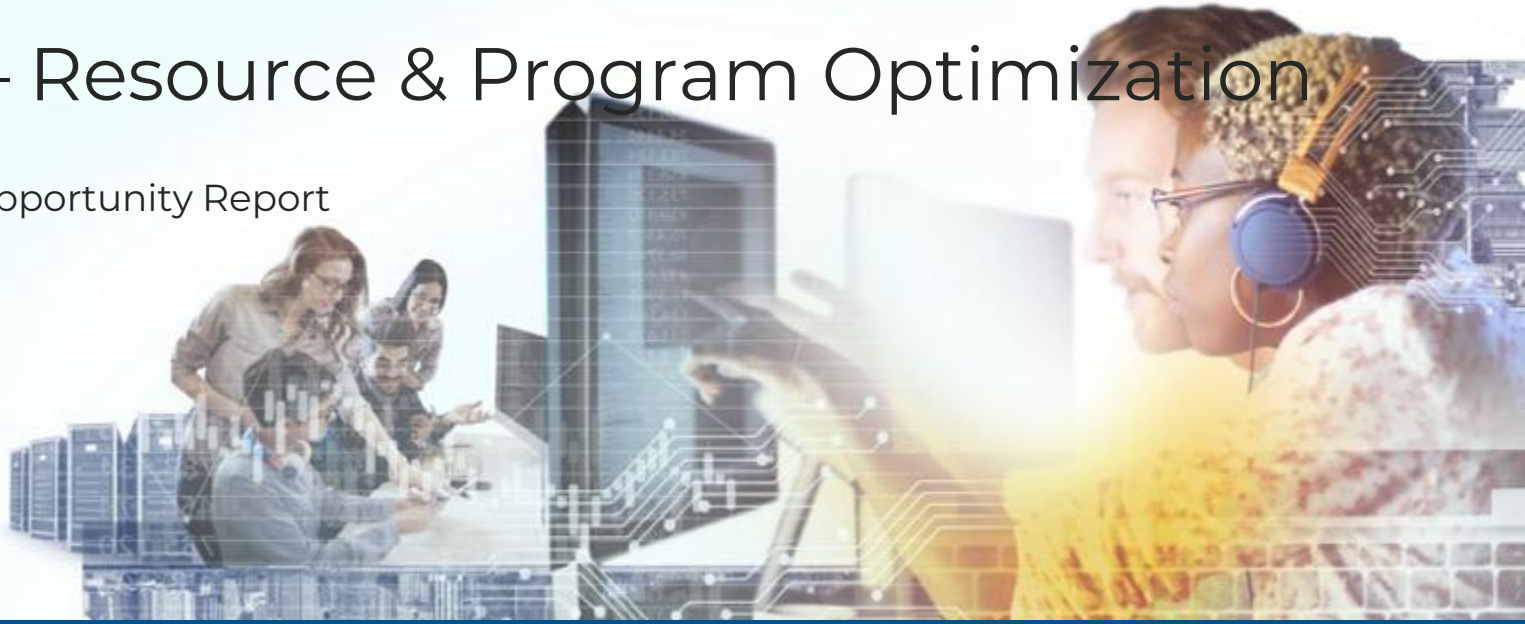
The list below outlines the opportunities the Board of Regents is voting on to determine what moves forward in the next calendar year. The President's Leadership Team was engaged in discussion in advance of the vote. The Compensation & Equity Study opportunities will be delivered and prioritized Fall 2023.

#	Opportunity	Description
Space Utilization Assessment Workstream		
1	Capital Construction Process	Potentially opt out of state-managed capital construction project process and invest in resources in-house (as noted in KRS 164A.580). A shift in-house can result in an accelerated and nimble capital project process as it limits competition with state agencies and allows for KCTCS to make decisions based on its goals and needs.
2	External Lease Agreements	Reevaluate leased space from external partners and consider leveraging any existing, underutilized internal space instead.
3	Sub-Standard Space Management	Identify buildings that stand to gain the most in redevelopment and potentially establish P3 (public-private-partnership) agreements.
Academic Programming Optimization		
4	Faculty Credit Hour Production	Develop KCTCS-wide expectations for faculty position responsibilities to ensure transparency and consistency. Identify nuances to consider (e.g., technical and transfer program differences).
5	Program Offerings and Enrollment	Review current academic offerings to determine where to invest in, refine, or sunset. A review of current academic offerings will take into consideration several components, including but not limited to cost of education, mission alignment, and job opportunities for students.

#	Opportunity	Description
6	Program Inventory Management	Refine the program creation and suspension processes to ensure comprehensive understanding of the processes as well as alignment amongst academic offerings and organization-wide and market trends.
7	Section Enrollments	Review – and potentially consolidate or close – low-enrolled sections to maximize and redeploy faculty effort towards other initiatives.
Financial & Organizational Assessment		
8	Spans and Layers	Reallocate managerial capacity at the System Office and the 16 colleges to expand a supervisor's management experience and capabilities, allow for greater focus on strategic decisions, and limit duplication of effort.
9	Strategic Sourcing	Increase centrally guided procurement activities, including leveraging buying power by aggregating volume, consolidating vendors, monitoring P-card usage, and increasing establishment and utilization of contracts.
10	Administrative Effort Assessment	Review administrative effort managed at the System Office and the 16 colleges to determine how to best provide administrative services to employees, students, and the broader community as well as the optimal split of responsibilities between the colleges and System Office.
Additional Considerations		
11	Data Strategy	Increase the cleanliness, consistency, and utilization of data cross the colleges and System Office. Managing data that is central to the organization's strategic planning will allow for greater proactive, flexible, and data-driven decision-making practices.
12	Project Management Office	Establish a Project Management Office (PMO) to oversee the design and implementation of organization-wide initiatives. The PMO will hold projects accountable to outputs, coordinate communication and technology enablement, and escalate risks to leadership.

KCTCS – Resource & Program Optimization

Optimization Opportunity Report



Agenda

1. Executive Summary
2. Opportunities Overview
3. Space Utilization Assessment
4. Academic Programming Optimization
5. Financial & Org. Assessment
6. Strategic Considerations
7. Next Steps

1

Executive Summary

Project Overview

KCTCS leadership engaged Huron Consulting Group to assess physical resources, academic programs, and administrative support structures to identify opportunities for enhancement.

Key Activities:

KCTCS leadership engaged Huron to **assess the current state operations organization-wide**, with a focus on identifying opportunities for resource and program optimization.

Huron **engaged with over 2,300 members of the KCTCS organization** by conducting **interviews with 70+** System Office and college employees, hosting **21 focus groups** with 250+ participants, and facilitating **17 townhalls** with ~2,000 attendees to **ensure broad information gathering was achieved.**

Huron **gathered and analyzed institutional data**, ultimately receiving and cataloging 100+ unique sets of data. In addition, Huron collected **market and peer data** to gain insight on additional opportunities.

Outcomes:

The Resource and Program Optimization Assessment resulted in a menu of **47 academic, space, and financial and organizational opportunities** for KCTCS to consider, prioritize, and pursue. **Compensation and Equity will be covered in a future report**.

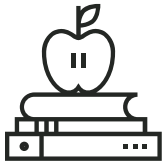
Huron's analysis helped quantify the opportunities, **totaling $18.9M – $43.1M in total financial opportunity** that includes a mix of revenue generation and cost savings opportunities as well as additional strategic considerations.

History of KCTCS

KCTCS serves a critical role in the Kentucky educational system and economy and “aims to be the nation’s premier community and technical college system”.

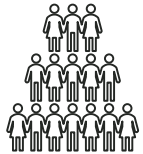
1998

KCTCS was created in **1998 with the Postsecondary Education Improvement Act**. KCTCS became the state’s ninth public institution by merging the **14 community colleges of the University of Kentucky and the 15 technical institutes** in the Kentucky Workforce Development cabinet.



600+ Offerings

KCTCS serves as Kentucky's primary source for: **College and Workforce Readiness, Transfer Education, and Workforce Education**. KCTCS has **over 600 academic and technical offerings** that aim to **improve the quality of life and employability of Kentuckians**.



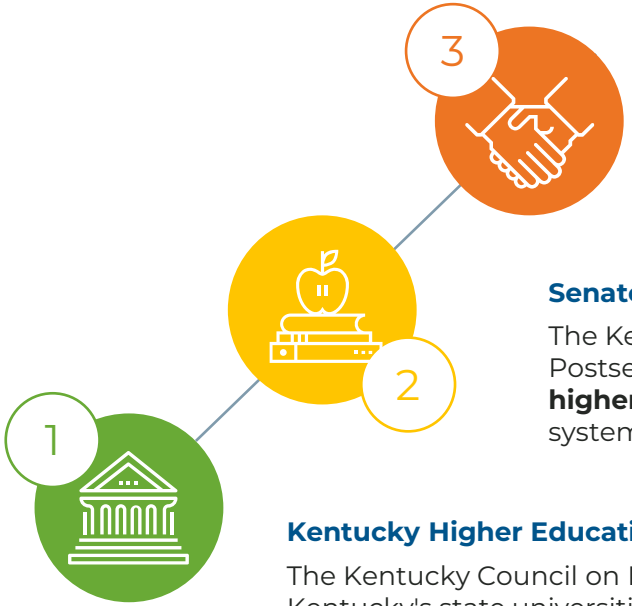
1M Kentuckians

Over the last 20 years, **KCTCS has served 1 million Kentuckians**. Today, the System has **16 different colleges and 70 different campus locations** and is the largest provider of postsecondary education in Kentucky, **serving 94,272 students in 2021-2022**.

Source: KCTCS Institution Website; Our History; Strategic Plan; KCTCS Factbook

KCTCS Current Landscape

In 2023, several external factors influence the operations and priorities of KCTCS.



Additional Economic Factors and External Partners

Economic factors may alter the priorities and potential of future changes to the KCTCS system. For example, **new national investment in electronic vehicles opened a partnership** between Elizabethtown and Ford Motors. Additional economic influences or external partners may shape the future of KCTCS.

Senate Joint Resolution 98

The Kentucky Senate Education Committee has directed the Council for Postsecondary Education **to study the need for changes in the state's higher education system**, including a potential overhaul to the KCTCS system that would split off technical and transfer programs.

Kentucky Higher Education Governance

The Kentucky Council on Postsecondary Education (CPE) oversees Kentucky's state universities and KCTCS. CPE **controls elements like performance-based funding, approval of new academic programs, and tuition moderation**.

Impact and Strengths

Since starting 20 years ago, KCTCS has become a national leader for community colleges. When considering the future of the system, KCTCS can lean on existing strengths.

KCTCS is **8th in the nation** in credentials awarded by public, two-year colleges and **2nd** based on state population.

Since 1999, KCTCS enrollment has **increased 111%**, and since starting, the number of credentials awarded has **increased nearly 300%**.

More than **three million participants** have received KCTCS workforce training through the Workforce Solutions division.

KCTCS has the **lowest tuition** of any higher education institution in Kentucky. Students pay **less than half of** what they'd pay at four-year partners.

Only **18% of KCTCS students** take out student loans. Those who do, borrow less than **$5,000**.

KCTCS has a tremendous positive impact on communities across Kentucky. In order to continue serving and strengthening this impact, KCTCS recognizes a need for greater efficiencies.

Source: KCTCS Institution Website; KCTCS 2020 System Profile

Project Objectives

KCTCS engaged Huron to identify opportunities to better and more efficiently serve the community. To meet this goal, Huron focused on the following objectives and impacts.

Objectives

	Resource utilization that promotes optimization and long-term sustainable growth
	Efficiencies that lead to improvement of services for students
	Operational alignment that supports the strategic plan
	Organizational model that supports student development and employee advancement

Impacts

Huron identified **efficiencies to support and align** with KCTCS's **strategic mission**, and that can impact operations, finances, and more. These include:

- Financial Opportunity
- Perceived Service Impact
- Productivity Impact
- Risk Mitigation, including:
  - Legal Compliance
  - Reaction by Internal Stakeholders
  - Public Relations
  - Impact to Academic Reputation
- Anticipated Recognition of Benefits
- Cultural Impact

Project Timeline

The Resource and Program Optimization engagement is in the opportunity prioritization phase.

Month	December	January	February	March	April	May	June	July	August	September
Space Utilization Assessment										
Academic Programming Optimization										
Financial and Organizational Assessment										
Compensation and Equity Study										
Design and Implementation								→	→	→

KCTCS will need to engage in design and implementation activities, such as engaging leadership in active sponsorship and designing a future state, upon completion of Huron's assessment.

Project Approach - Workstreams

This engagement addresses space utilization, academic programming, financial spend and organizational structure, and compensation. This report outlines opportunities for the first three workstreams.

Space Utilization Assessment	Academic Programming Optimization	Financial and Organizational Assessment	Compensation and Equity Study
• Performed a comprehensive **utilization study** • Performed a **benchmarking** and **best-practice** analysis • Identified **opportunities**	• Conducted a targeted **academic cost management** analysis • Created **cost-to-educate** model • Conducted study of current **market position** • Identified **opportunities**	• Conducted stakeholder **interviews** • Mapped KCTCS's **org. structure and staffing** • Analyzed core **financial data** • Identified **opportunities**	• Understand the **current state** • Use **quantitative and qualitative data** to evaluate opportunities • Develop / update **job profiles** and **pay range structure** • **Communicate** and implement changes

KCTCS Engagement

Throughout the 20-week assessment, Huron collaborated with various employees across KCTCS to gather organization-specific context and opportunities.

Executive Sponsors	Developed over 15 status reports in addition to 10 check-ins
Advisory Committee	Hosted 7 Advisory Committee meetings
Workstream Leads	Hosted 40+ check-ins with the project's 25 workstream leads
Town Halls	Hosted 17 System Office and college town halls with ~2,000 attendees
Focus Groups	Hosted 20+ virtual focus groups with Peer Teams with 250+ staff, faculty, and students
Interviews	Hosted 40+ interviews with System Office and college leadership
Emails	Received 90+ emails from employees across KCTCS
Data Collection	Received and catalogued 100+ unique data sets

Opportunity Process

Following opportunity identification, Huron and KCTCS play distinct roles.

Huron Steps ---------- **KCTCS Steps**

Assessment

Huron collected **quantitative and qualitative** data and engaged with **KCTCS** to identify strengths and areas of opportunity.

Identification

KCTCS and Huron will review all optimization opportunities. Opportunities are focused **organization-level**.

Prioritization

KCTCS will rank **7-10 opportunities** for further discussion. Huron will develop **implementation roadmaps**.

Design

KCTCS will design the future state of the prioritized opportunities.

Implementation

KCTCS will execute the future state design and engage in continuous **change management**.

Key Questions

In today's conversation, Huron will provide a high-level overview of the identified opportunities.

Objectives:

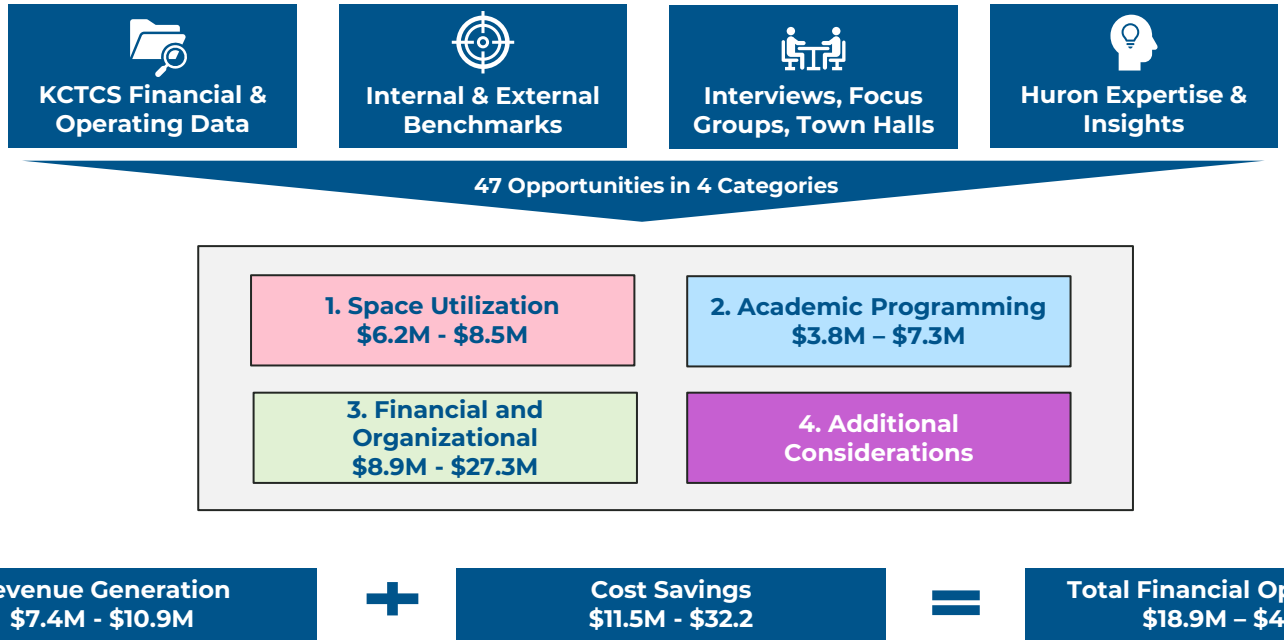
- Reflect on the organization's core values and ensure the identified direction is in alignment with those principles
- Discuss opportunities based on service impact, estimated financial impact, and additional factors surfaced through discussion
- Review the entire menu of opportunities

Questions to Consider:

- What impact would these opportunities have to KCTCS's operations?
- Does the financial impact outweigh the necessary investment of organization and college capacity and resources?
- Who would be affected by these changes?
- Do the opportunities align with long-term priorities?
- What are the change management considerations of which leadership should be aware?

Financial Opportunity Overview

Huron leveraged stakeholder interviews, institutional data, benchmarking, and industry expertise to identify the current set of opportunities.



Deprioritized Opportunities

In preparing opportunities, a variety of opportunities were examined but not pursued either because KCTCS already demonstrated strength in the areas, or a lack of data was available.

Function	Opportunity	Notes
Space Utilization	Academic Course Utilization During Peak Hours	Colleges currently hold most courses during peak hours, in response to student demand. Feedback suggests this is already an area of strength.
Space Utilization	Course Attendance and Capacity	Lack of consistent data exists for room capacity. KCTCS will need to update building / room data to reflect the true occupancy available for such space.
Academic Programming	Dual Credit Offerings	KCTCS is the number one provider of dual credit in Kentucky with 25,000+ students. Opportunity exist to invest additional resources.
Academic Programming	Faculty Tenure and Overload	Lack of consistent data exists around tenure decision and overload tracking policies and practices.
Academic Programming	Academic Programming Services	Feedback suggested colleges have a strong relationship with the System Office and feel supported in academic processes (e.g., curriculum review).
Financial and Organizational	Information Technology Helpdesks	KCTCS currently manages a college-shared service for tech helpdesks led by Bluegrass. Feedback suggested this is already an area of strength.
Financial and Organizational	Legal Services	The System Office provides legal services. Feedback suggested this is already an area of strength.
Financial and Organizational	Grants and Contracts	The System Office provides grants and contracts management services. Feedback suggested this is already an area of strength.

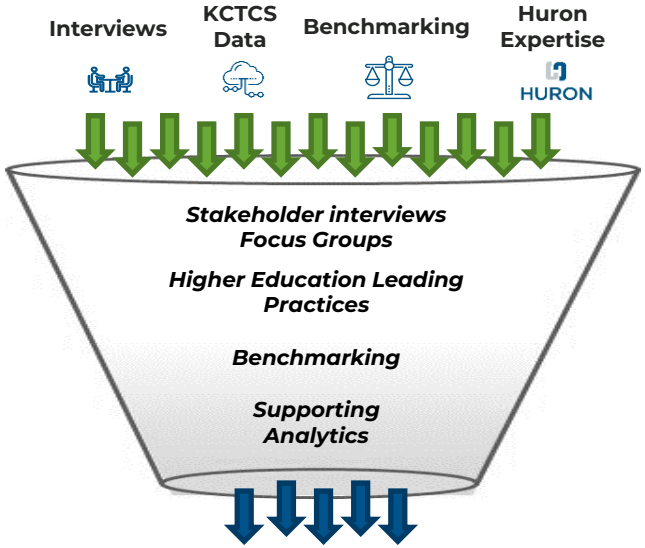
2

Opportunities Overview

Opportunity Identification

Huron leveraged a variety of resources to identify a robust list of opportunities that are most promising for KCTCS.

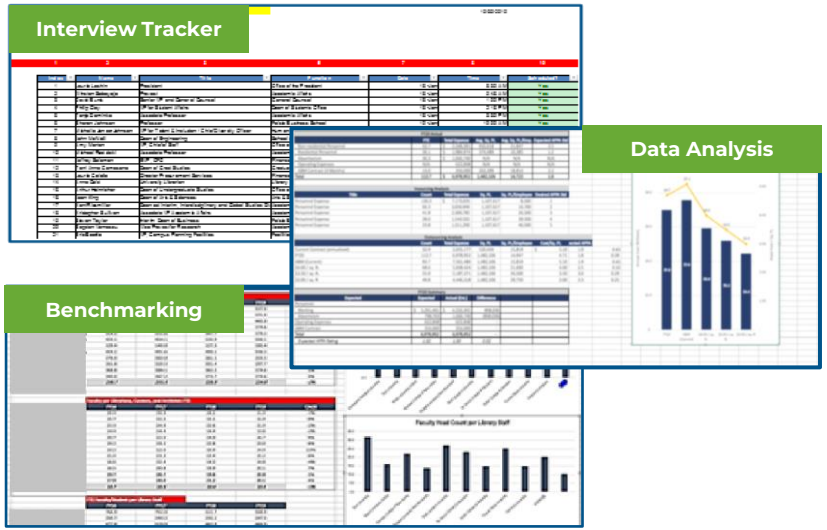
Project Inputs & Results



List of Opportunities

(Opportunities can include course utilization, instructional capacity, process clarification, transactional support teams, space scheduling / reporting capabilities, etc.)

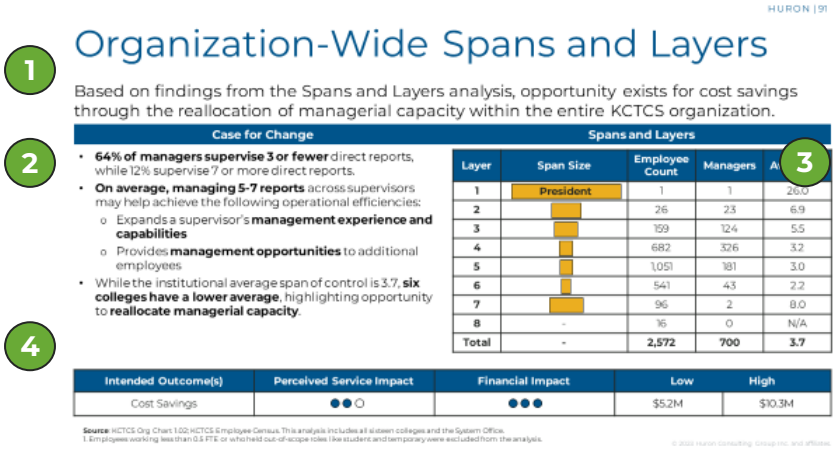
Project Resources & Tools



Case for Change

In today's conversation, Huron will review all opportunities for improvement. The following provides an example of what each opportunity slide will entail.

1. Title and overview of potential opportunity, including hypothesis tested.
2. Case for change describing potential opportunities derived from interviews and data analysis.
3. Quantitative analysis (e.g., internal or external benchmarking) supporting potential opportunities.
4. Measure of perceived service impact, financial impact, and range of potential revenue growth or cost savings.



HURON | 91

Organization-Wide Spans and Layers

1

Based on findings from the Spans and Layers analysis, opportunity exists for cost savings through the reallocation of managerial capacity within the entire KCTCS organization.

2

Case for Change

- **64% of managers supervise 3 or fewer** direct reports, while 12% supervise 7 or more direct reports.
- **On average, managing 5-7 reports** across supervisors may help achieve the following operational efficiencies:
  - Expands a supervisor's **management experience and capabilities**
  - Provides **management opportunities** to additional employees
- While the institutional average span of control is 3.7, **six colleges have a lower average**, highlighting opportunity to **reallocate managerial capacity**.

Spans and Layers

3

Layer	Span Size	Employee Count	Managers	A…
1	President	1	1	26.0
2		26	23	6.9
3		159	124	5.5
4		682	326	3.2
5		1,051	181	3.0
6		541	43	2.2
7		96	2	8.0
8		16	0	N/A
Total	-	2,572	700	3.7

4

Intended Outcome(s)	Perceived Service Impact	Financial Impact	Low	High
Cost Savings	●●○	●●●	$5.2M	$10.3M

Source: KCTCS Org Chart 1.02; KCTCS Employee Census. This analysis includes all sixteen colleges and the System Office.
1. Employees working less than 0.5 FTE or who held out-of-scope roles like student and temporary were excluded from the analysis.

Criteria	Level of Magnitude		
	●○○	●●○	●●●
Perceived Service Impact (If applicable)	Less perceived service impact due to minimal cultural and productivity impact.	Medium perceived service impact due to moderate cultural and productivity impact.	High perceived service impact due to high cultural and productivity impact.
Financial Impact (If applicable)	Potential savings / additional revenue of less than $1M.	Potential savings / additional revenue of between $1M - $10M.	Potential savings / additional revenue of greater than $10M.

All Opportunities: Overview

Space Utilization	Academic Programming	Financial and Organizational	Additional Considerations
Master Plan Expectations	Cost to Educate	Spans and Layers	System Accreditation
Office Use Practices	Market Positioning	Supervisory Titles w/o Direct Reports	Data Strategy
Community Engagement with Space	Program Offerings and Enrollment	Vacancy Assessment	Project Management Office
Academic Space Scheduling Process	Program Sharing	Consolidation of Admin Support	
Space Request Process	Program Inventory Management	System Office Staffing	
Capital Construction Process	Technical and Transfer Programs	System Office Leadership Structure	
Space Governance Structure	Tuition Differential / Course Charges	Service Delivery Considerations	
Space Prioritization & Decision-Making	Faculty Credit Hour Production	Realign Transactional Support Staff	
Data Management	Section Enrollments	Outsource Functions or Activities	
Space Scheduling Systems	Dual Credit	SLAs and Recharge Simplification	
Space Data Requirements & Reporting	Transfer Pathways	Budget Reserves	
Multipurpose Spaces	Online Courses	Performance-Based Funding	
Community Event Reservations	Out-of-State Enrollment	Strategic Sourcing	
External Lease Agreements	Baccalaureate Degree Offerings	Library Subscriptions	
Sub-Standard Space Assessment		Motor Pool Spend	

Opportunity is highlighted in green if there is a financial impact.

Total Financial Opportunity: $18.9M – $43.1M

Opportunity Prioritization Matrix

Revenue Generation **Cost Savings**

Revenue Generating and Cost Saving Opportunities		
Less Service Impact, Higher Potential Savings / Revenue	Medium Service Impact, Higher Potential Savings / Revenue	More Service Impact, Higher Potential Savings / Revenue
	Spans and Layers	**System Office Staffing**
	External Lease Agreements **Section Enrollments** **Strategic Sourcing**	**Sub-Standard Space Agreement** **Tuition Differential / Course Charges** **Consolidation of Admin Support**
Online Courses **Out of State Enrollment** **Library Subscriptions**		**Community Event Reservations**
Less Service Impact, Lower Potential Savings / Revenue	Medium Service Impact, Lower Potential Savings / Revenue	More Service Impact, Lower Potential Savings / Revenue

Financial Impact (High-End of Range)

Perceived Service Impact

Space Utilization Assessment

		Opportunity	Service Impact	Financial*	Financial Impact		Type
Space Utilization Assessment	1	Master Plan Expectations	●●○	N/A	N/A	N/A	Strategic
	2	Office Use Practices	●○○	N/A	N/A	N/A	Strategic
	3	Community Engagement with Space	●●○	N/A	N/A	N/A	Strategic
	4	Academic Space Scheduling Process	●●○	N/A	N/A	N/A	Strategic
	5	Space Request Process	●○○	N/A	N/A	N/A	Strategic
	6	Capital Construction Process	●●●	N/A	N/A	N/A	Strategic
	7	Space Governance Structure	●○○	N/A	N/A	N/A	Strategic
	8	Space Prioritization & Decision-Making	●○○	N/A	N/A	N/A	Strategic
	9	Data Management	●●○	N/A	N/A	N/A	Strategic
	10	Space Scheduling Systems	●●●	N/A	N/A	N/A	Strategic
	11	Space Data Requirements & Reporting	●●○	N/A	N/A	N/A	Strategic
	12	Multipurpose Spaces	●●●	N/A	N/A	N/A	Strategic
	13	Community Event Reservations	●●●	●○○	$39K	$112K	Revenue Generation
	14	External Lease Agreements	●●○	●●○	$1.7M	$3.0M	Cost Savings
	15	Sub-Standard Space Assessment	●●●	●●○	$4.5M	$5.4M	Revenue Generation
				Space Utilization Total Range	**$6.2M**	**$8.5M**	

●○○ **Low Service Impact / Financial Impact**

●●○ **Medium Service Impact / Financial Impact**

●●● **High Service Impact / Financial Impact**

*Not all opportunities may have a financial impact associated with them due to having a more qualitative focus.

Academic Programming Optimization

		Opportunity	Service Impact	Financial*	Financial Impact		Type
Academic Programming Optimization	1	Cost to Educate	●●●	N/A	N/A	N/A	Strategic
	2	Market Positioning	●●●	N/A	N/A	N/A	Strategic
	3	Program Offerings and Enrollment	●●●	N/A	N/A	N/A	Strategic
	4	Program Sharing	●●○	N/A	N/A	N/A	Strategic
	5	Program Inventory Management	●●○	N/A	N/A	N/A	Strategic
	6	Technical and Transfer Programs	●○○	N/A	N/A	N/A	Strategic
	7	Tuition Differential / Course Charges	●●●	●●○	$2.8M	$4.7M	Revenue Generation
	8	Faculty Credit Hour Production	●●○	N/A	N/A	N/A	Strategic
	9	Section Enrollments	●●○	●●○	$917K	$1.8M	Cost Savings
	10	Dual Credit	●●○	N/A	N/A	N/A	Strategic
	11	Transfer Pathways	●●○	N/A	N/A	N/A	Strategic
	12	Online Courses	●○○	●○○	$0	$588K	Revenue Generation
	13	Out-of-State Enrollment	●○○	●○○	$63K	$88K	Revenue Generation
	14	Baccalaureate Degree Offerings	●●●	N/A	N/A	N/A	Strategic
				Academic Programming Total Range	$3.8M	$7.2M	

●○○ **Low Service Impact / Financial Impact**

●●○ **Medium Service Impact / Financial Impact**

●●● **High Service Impact / Financial Impact**

*Not all opportunities may have a financial impact associated with them due to having a more qualitative focus.

Financial and Organizational Assessment

		Opportunity	Service Impact	Financial*	Financial Impact		Type
Financial and Organizational Assessment	1	Spans and Layers	●●○	●●●	$5.2M	$10.3M	Cost Savings
	2	Supervisory Titles w/o Direct Reports	●○○	N/A	N/A	N/A	Strategic
	3	Vacancy Assessment	●○○	N/A	N/A	N/A	Strategic
	4	Consolidation of Admin Support	●●●	●●○	$854K	$3.4M	Cost Savings
	5	System Office Staffing	●●●	●●●	$1.6M	$10.9M	Cost Savings
	6	System Office Leadership Structure	●●○	N/A	N/A	N/A	Strategic
	7	Service Delivery Considerations	●●○	N/A	N/A	N/A	Strategic
	8	Realign Transactional Support Staff	●●○	N/A	N/A	N/A	Strategic
	9	Outsource Functions or Activities	●●○	N/A	N/A	N/A	Strategic
	10	SLAs and Recharge Simplification	●○○	N/A	N/A	N/A	Strategic
	11	Budget Reserves	●○○	N/A	N/A	N/A	Strategic
	12	Performance-Based Funding	●○○	N/A	N/A	N/A	Strategic
	13	Strategic Sourcing	●●○	●●○	$1.1M	$2.3M	Cost Savings
	14	Library Subscriptions	●○○	●○○	$98K	$367K	Cost Savings
	15	Motor Pool Spend	●○○	N/A	N/A	N/A	Strategic
				Financial and Organizational Total Range	**$8.9M**	**$27.3M**	

●○○ **Low Service Impact / Financial Impact**

●●○ **Medium Service Impact / Financial Impact**

●●● **High Service Impact / Financial Impact**

*Not all opportunities may have a financial impact associated with them due to having a more qualitative focus.

Additional Considerations Menu

Below is a list of all additional opportunities identified by Huron.

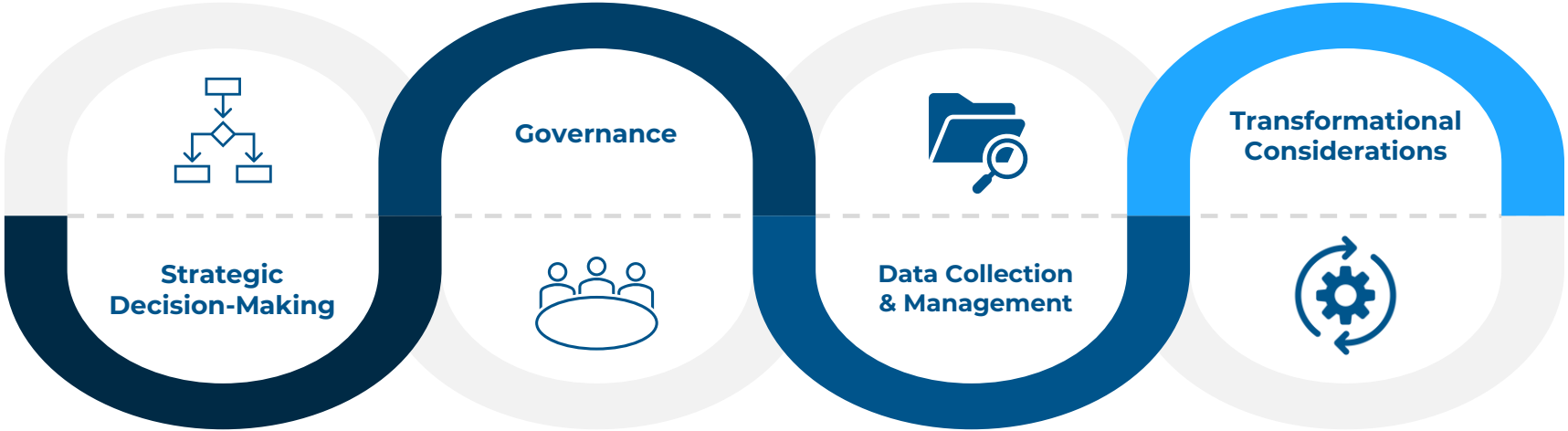
Additional Considerations	Impact
System Accreditation	By standardizing and consolidating efforts within the accreditation process, organizations can optimize staff capacity and minimize potential risks.
Data Strategy	Implementing data-driven decision-making practices across an organization can boost team performance, facilitate strategic planning, and uncover new efficiency opportunities.
Project Management Office	Establishing a Project Management Office (PMO) can increase the success rate of organization-wide initiatives and support the return on investment for professional services engagements.

3

Space Utilization Assessment

Space Utilization Opportunity Overview

In order to optimize space on its campuses, KCTCS needs to establish a governance structure, policies & processes and a standardized set of expectations for data collection.



What types of decisions need to be made? What are the guiding principles?

Who is responsible for making decisions? How are strategic decisions made? What policies guide that decision making?

What data is needed for decision making? How is it collected & managed. What tools are needed to make this possible?

How can KCTCS leverage its space assets to meet its strategic goals?

Master Plan Expectations

Master plans are intended to guide priorities and decision-making. Opportunity exists to design and communicate clear, formalized expectations and accountability for these plans.

Case for Change

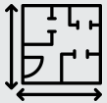
- Currently, **no consistent structure exists** for what to include in a college's master plan and **coordinated review processes are limited** to monitor performance towards space goals.
- **~60% of colleges** have not updated their master plans **within the last five years,** with one of the **oldest plans being 13 years old**.
- Developing **formalized expectations** for master plan **creation and review** may help achieve the following:
  - **Holds colleges accountable** for their proposed campus development needs and space priorities.
  - Promotes **ongoing dialogue around space needs** between the colleges and System Office.
  - **Reduces administrative effort** during the **capital planning process** when master plans are updated and revisited regularly.

Master Plan Best Practices

Timeline & Review
Reviewing master plans every two years and updating them every five years can make sure college space goals are aligned with current needs

Goals & Objectives
Including goals and objectives in a master plan can ensure priorities are well-documented and provide guidance in the planning process

Building Utilization[1] & Scheduling Needs
Illustrating building utilization data can highlight opportunities to improve space use over time, especially when there are shifts in academic or market demand



Building Conditions & Inventory
Understanding space availability and the condition of physical resources is a critical component to aligning space with campus and community needs

Campus-Level Plans & Resources
Including campus-level plans rather than just college-level space priorities, can ensure local nuances are accounted for during the capital planning process

Source: KCTCS College-Level Master Plans; KCTCS Interviews and Focus Groups
1. Any building utilization analysis is dependent on complete and updated data.

Office Use Practices

Opportunities exist to evaluate remote work policies, practices, and data collection to ensure office space is used efficiently and reflects the needs of KCTCS.

Case for Change

- About **13% of space** across KCTCS is dedicated to **offices**, which is **below the industry standard of 20 – 30%**[1].
- Opportunity exists for KCTCS to **further manage office space effectively, avoid additional costs**, and **collect more data** (e.g., office occupancy details).
- Some peer institutions **set criteria** to decide who is **eligible for a dedicated office** and who may benefit from **working in shared or hotel spaces**.
- Over **50% of institutions** who are redesigning offices are **incorporating shared hoteling** and some have yielded significant space savings, with as much as a **10% reduction in overall GSF**[2].
- If each college reduces office space use to **11% (KCTCS median)** by using shared space options, **68K GSF would be available**.
- This additional space could then be **rented out externally** or **used internally** in place of any space KCTCS currently leases from outside organizations.

Potential Remote Work Considerations

Multiple Offices
Faculty will be assigned **one primary office space** only; **additional spaces** will be **shared** or **hoteling** space

Shared Office Space
Positions like part-time faculty, temporary faculty, etc. **will be assigned to a shared or hoteling space**

Private Office Eligibility & Requests
Eligibility **based on position**, such as academic and administrative **leadership**, or those who **meet face-to-face** with students or **handle private / sensitive matters**

Total Current Office GSF	Median % Total Office GSF	Total Future Office GSF
984K	11%	916K

Source: KCTCS Interviews and Focus Groups; KCTCS Administrative Policies; KCTCS Master Building List; KCTCS Master Space Inventory; Huron Institutional Benchmarking
1. 13% of office space use is based on square footage for all 16 colleges and the System Office; HDR: What the Future of Higher Education Means for Office Space
2. EAB: Adapting University Office Space to Support Flexible Work Arrangements; EAB: 3 Opportunities to Reduce Private Office Space on Campus

Community Engagement with Space

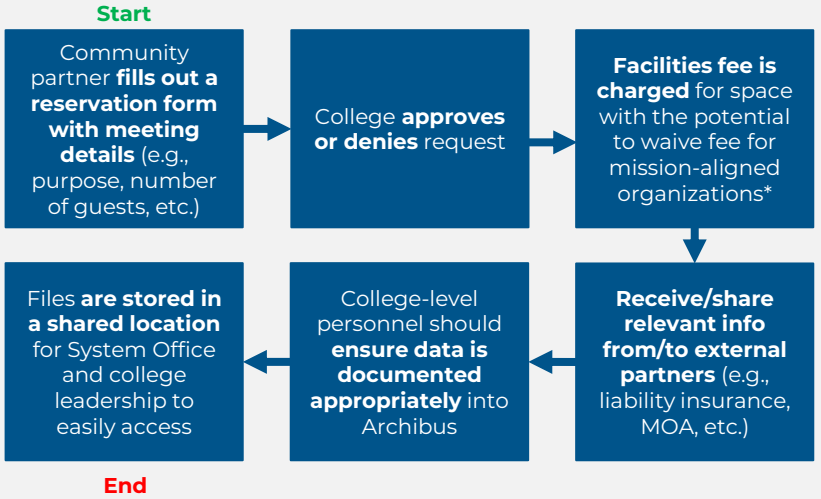
Community partners across the state leverage KCTCS space, but the process can be burdensome, which highlights an opportunity to simplify and standardize these procedures.

Case for Change

- Colleges often allow **community members** to use campus space for events and programs, but **partnerships and requests are not consistent or well-documented**.
- Currently, the process for community partners to reserve space **requires multiple steps and forms**, which can be cumbersome for both parties to manage.
- **Documenting community space use consistently and properly** may help achieve the following efficiencies:
  - **Inform future space decisions** around utilization and resource availability.
  - **Communicate community impact** to college and System Office leadership.
  - **Store information in a central location** for easy access and reference for employees.
- Other opportunities exist to **reevaluate the fee structure and waiver process** associated with renting out KCTCS space to **ensure optimal revenue generation**[1].

Illustrative Potential Space Request Process

If a community partner wishes to use KCTCS space, they could go through the following request process…



** College should keep track of how many organizations have its fee waived. They could consider setting a threshold for the amount or number of partners this is applicable to.*

Source: KCTCS Interviews and Focus Groups

1. See *Community Event Reservations* opportunity for more details.

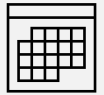
Academic Space Scheduling Process

Opportunity exists to develop a consistent approach to academic space scheduling at KCTCS, both in how the courses are scheduled and who manages the scheduling.

Case for Change

- **Academic space scheduling practices vary by college**. For example, colleges may do some of the following:
  - **First-come, first-served**
  - Priority **by function or course type** (e.g., a specific lab)
  - Cluster **by building** (e.g., courses in same building)
  - Designated **by department or term**
- Many colleges **rely on manual processes, such as excel spreadsheets or emails**, to schedule academic spaces on campus before uploading data into PeopleSoft.
- Some colleges have **each department coordinator** manage their own academic scheduling while other colleges **rely on one individual**.
- Developing a **consistent approach to scheduling** and in a **centralized location** can ensure information is **accurately recorded** and done in an **efficient manner**.

Future Academic Scheduling Considerations



Methodology
Each college could use a **like-term approach**[1] to set their academic schedules which can **improve efficiency** by rolling over previous schedules and allowing for minor adjustments.

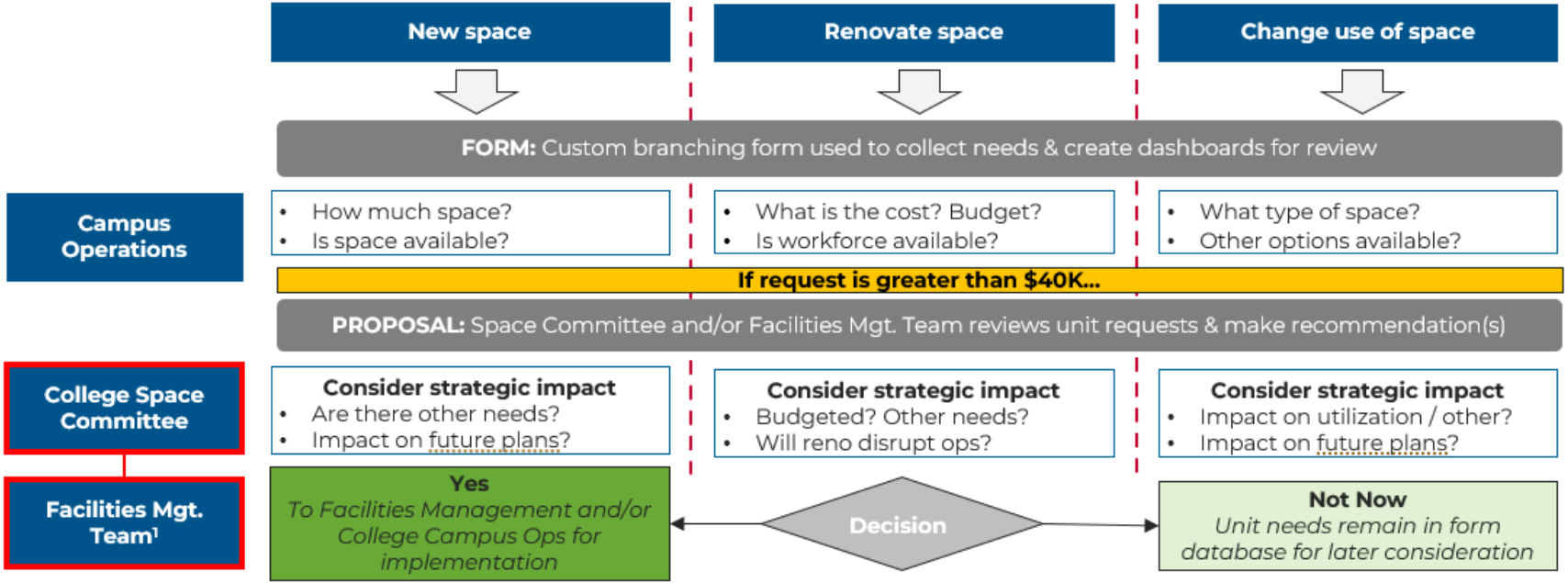
Roles & Responsibilities
Each college could have **individuals with similar responsibilities** (e.g., dept. coordinators) be responsible for **managing the academic schedule**.

Data Management
Each college could maintain their academic schedules in a **standardized format or tool**, provided by the System Office, to ensure **consistency across colleges**.

Source: KCTCS Interviews and Focus Groups
1. Like-term approach: Using a previous academic term schedule to serve as a baseline for scheduling in future terms. For example, using the previous fall schedule to inform scheduling for the following fall term.

Space Request Process

Currently, KCTCS sources space needs informally and relies on Facilities Management to understand impacts of space allocation decisions. Below is an outline of a modified process.



Source: KCTCS Interviews and Focus Groups; Huron Institutional Benchmarking
1. Decision could get escalated to System President and President's Cabinet.

Capital Construction Process

Currently, KCTCS's capital project process is managed by the state, which reduces the organization's ability to prioritize projects and lengthens the overall project timeline.

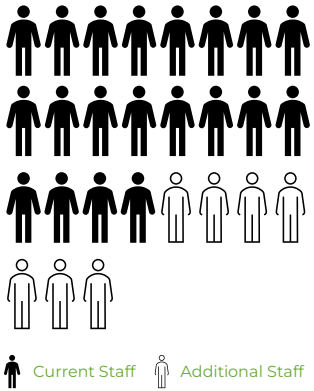
Case for Change

- Unlike most higher education institutions in Kentucky, KCTCS **processes capital construction projects** through the state's **Division of Engineering and Contract Administration (DECA)**.
- According to KRS 164A.580 provision[1], **KCTCS can "opt-out"** and manage their own capital construction instead of **competing with other state agencies** and organizations for **staff** and **resources**.
- Past **KCTCS leadership** and **college Business Officers** have expressed interest in **opting out of the DECA** system.
- **Proper documentation, procedures,** and **staffing** are needed to accomplish this.
- However, once completed, KCTCS will benefit from an **accelerated capital project process** that provides them the ability to **make decisions** based on **the goals and needs of the organization**.
- This shift can be a **sequenced process**, so KCTCS has enough time to **adjust to this change appropriately**.

Capital Construction Process Staff Requirements

Facilities Support Services

- Currently, there are **20 staff** members on the System Office's **Facilities Support Services** team.
- In order to move the capital construction projects process to KCTCS oversight, **7 additional staff members must be added** to this group. Positions may include:
  - Contracting Officer
  - Contracting Specialist
  - Procurement Payables
  - Real Property Specialist
  - Project Manager
- This shift will require investment in time, effort, and financial resources from KCTCS.



Source: KCTCS Interviews and Focus Groups; KCTCS General Conditions for Construction Contract; KCTCS Facilities Support Services Organizational Chart
1. KRS 164A.580 Management of Capital Construction Projects Provision

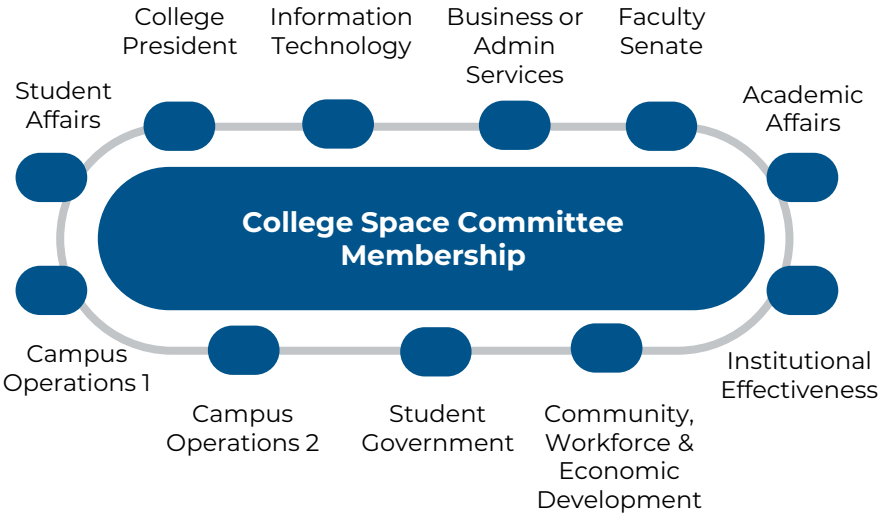
Space Governance Overview

Space is a critical and finite resource owned by the institution. Therefore, it is important for KCTCS to enhance their governance structures and practices to make strategic decisions.

Case for Change

- The goal of a strong governance model is that each decision **builds institutional knowledge** and **trust of the decision-making bodies** such that recommendations from the Committee are actionable with **less need for review over time**.
- Decisions made about space could occur **with individuals from the following groups:**
  - System President & President's Cabinet
  - System Office Facilities Management Team
  - College Space Committee
- The proposed governance structure can apply to **multiple space optimization decisions**, such as:
  - What **space needs are prioritized**
  - Additional **space or equipment requests**
  - How to **address impacts of external factors**, such as changes in local economic workforce or effects of a natural disasters

Illustrative Space Committee Leadership[1]



1. Based on function, but titles may vary by college.

Space Governance Model

Huron's research into other higher education institutions has uncovered six common elements of governance that could be incorporated into KCTCS's space governance model.

MEETING FREQUENCY

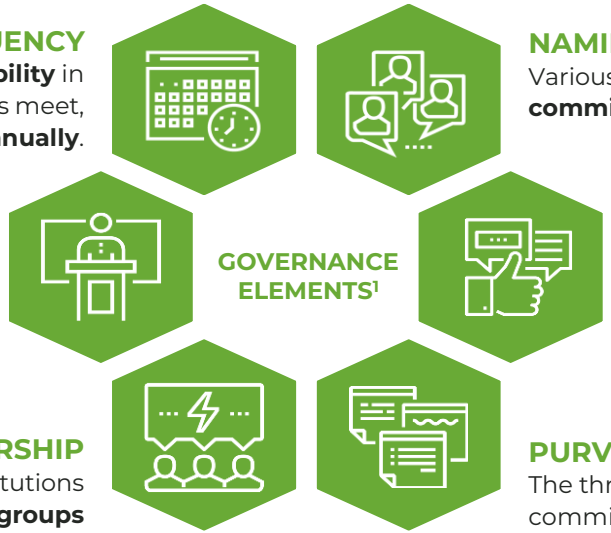
There is **considerable variability** in how frequently committees meet, ranging from **monthly** to **annually**.

COMMITTEE LEADERSHIP

Space committee chairs at other institutions are either **vice president- or director-level** and are leaders in the **academic affairs, administration, financial,** or **institutional planning** departments.

COMMITTEE MEMBERSHIP

Consensus among higher education institutions indicates at least **six different functional groups** represented in space committees. The space committee's scope determines the seniority of members on committees.



NAMING CONVENTION

Various committees' names convey the **committee's scope and function**.

AUTHORITY

Authority over space at peer institutions resides with the **College President**, who in turn **delegates responsibility** to others at the institution. At KCTCS, this responsibility may be **shared with the System President.**

PURVIEW AND CHARGE

The three main components of a space committee's charge are 1) to **make recommendations** on space use, 2) to **conduct analysis** of space utilization, and 3) to **develop procedures** to promote space governance.

Source: Huron Institutional Benchmarking
1. Additional Industry Guiding Principles can be found in the appendix.

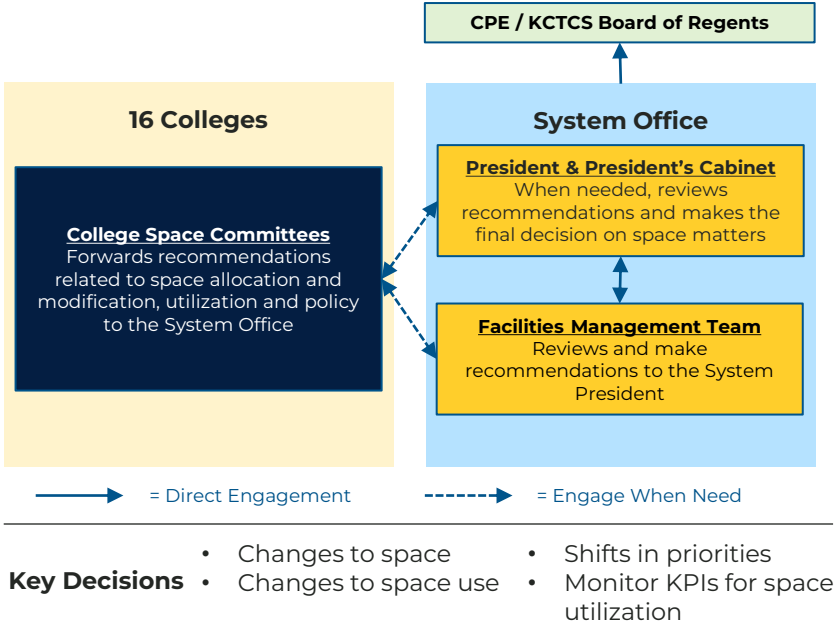
Space Prioritization & Decision-Making

Given the unique needs of each college, space priorities should be managed at the local level, but opportunity exists to create a stronger governance structure across KCTCS.

Case for Change

- The System Office should continue to work closely with colleges to **identify** and **discuss local space needs**, but **formalizing the governance structures** and **decision-making process** may help achieve the following:
  - Promotes **regular communication** and **transparent decision-making** through regular meetings and consistent policies and procedures.
  - **Allocates space strategically** with input from all affected stakeholders to **optimize its use** and **advance the priorities** of the organization.
  - **Encourages proactive thinking** when it comes to **future space requirements** and planning for those needs accordingly.
- Documentation of **who** makes certain decisions and **when** those decisions take place can assure that there is **proper sequencing** and **individuals involved** in the process.

Decision-Making Process



Source: KCTCS Interviews and Focus Groups

Data Management (1/2)

Although space data is centralized, inconsistencies in data collection and management create challenges for KCTCS to effectively use current data to make informed decisions.

Case for Change

- Colleges are responsible for maintaining their room inventory and communicating updates to the System Office, but there is **limited accountability to ensure accurate data documentation**.
- **Inconsistencies exist** on **how often** data is updated, **how space is classified**, and **what is included**.
- **Examples of data inconsistencies include:**
  - **Room code / room type classifications** (e.g., one college may view a space as a classroom while another views it as a lab)
  - **CAD drawings availability** (i.e., some colleges do not have updated CAD drawings)
  - **Individual office use alignment** (i.e., some colleges document who sits in each office and some do not)
  - **Room capacity accuracy** (e.g., some rooms hold courses with enrollment of 20+ but show capacity of 1)
  - **Space square footage accuracy**

Source: KCTCS Interviews and Focus Groups

Data Management Best Practices

Data Completeness

Additional data focused on space type, use, and cost, such as office occupancy by person or classroom types (e.g., active learning vs. fixed) can enhance decision-making

System of Record

A formal system of record for space / occupancy data needs to be established to ensure consistent reporting, but requires coordination of central standards and local knowledge

Data Collection Processes

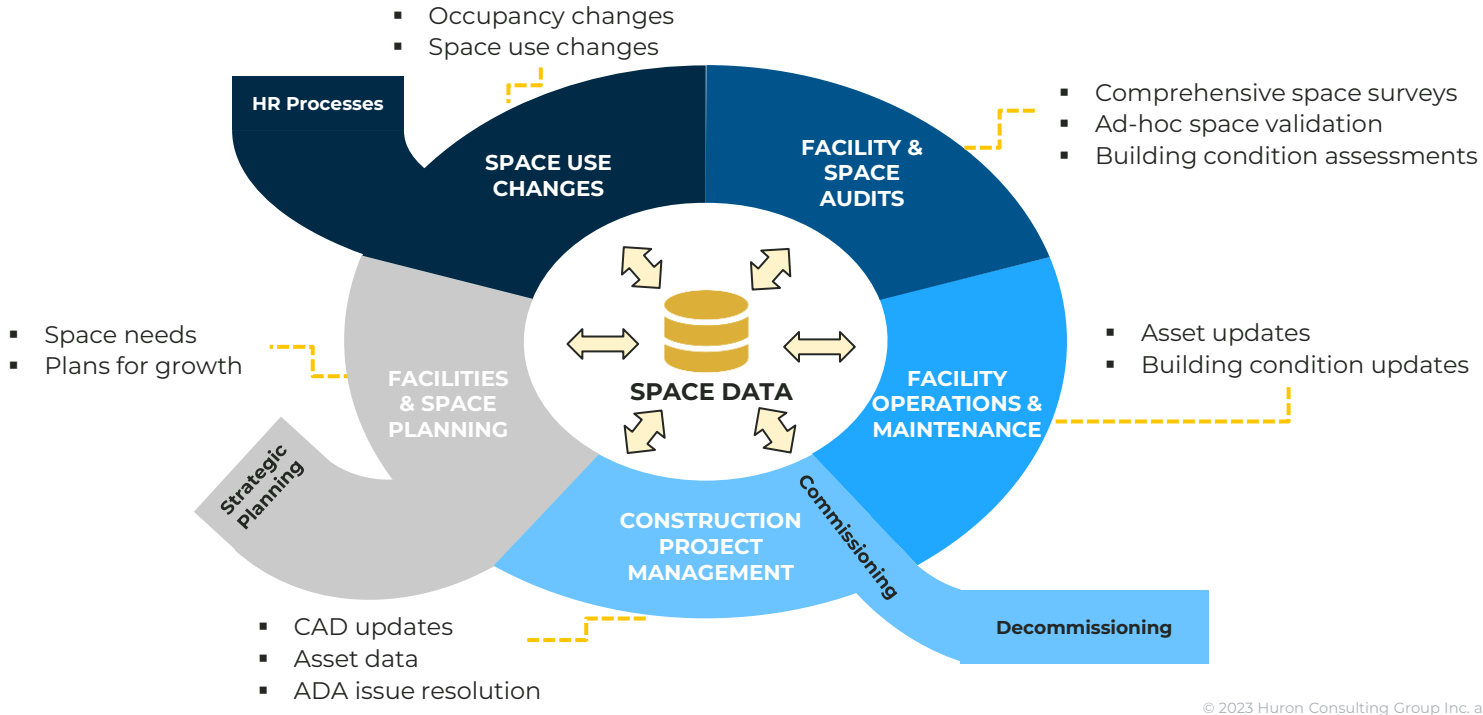
More regular processes for data collection and verification must be established to ensure a level of data completeness and accuracy to support proper utilization and stewardship

Reporting Capabilities

Reporting tools and resources around space utilization (e.g., classroom, event, office, etc.) can provide helpful context on current space efforts and enhance future best practices

Data Management (2/2)

The lifecycle of facilities and space management has natural intersection points with data intake and reporting that can help reduce administrative burden and improve collaboration.



Space Scheduling Systems

Based on conversations, informal systems and the current functionality of Archibus are not meeting KCTCS's needs, which highlights opportunity for other tools or added capabilities.

Case for Change

- **Since 2018**, KCTCS has **struggled to find a software** that aligns with its data collection and reporting needs.
- The presence of multiple or informal scheduling processes for space **exacerbates challenges to accurately reflect utilization and duplicates administrative effort**, especially for academic space.
- If KCTCS wishes to continue its Archibus contract, it should **leverage added capabilities** or establish other **consistent and efficient methods** to address scheduling needs (e.g., new process or new system).
- **Current Archibus functionality is limited**, for example:
  - Training exists but is **insufficient** for college needs.
  - **PeopleSoft communication is "one-way"** (i.e., PeopleSoft feeds into Archibus, but not vice versa).
  - Data and reporting exists around when rooms are **used** but is not as accessible for when they are **not in use**, and **it does not provide resources for optimization**.

Desired Scheduling Functionality & Employee Impact

List of Needed Functionality[1]

- Flexible schedule changes and customized reporting
- Ability to schedule multiple meetings for one event
- User-friendly calendar (semester grid) view
- Centralized academic scheduling and room optimization
- More software licenses
- Scheduling shared office / hoteling space

Current Employee Impact

Total Archibus Scheduling Cost	$219K
Total Scheduling Admin Effort[2]	$54K
Current Total Cost	273K
Potential Reallocated Effort	**27K**

Using Archibus' full capabilities can **limit the number of shadow systems** and **reduce duplicative admin effort**. This can then be **reallocated** to other types of administrative activities.

Source: KCTCS Interviews and Focus Groups; KCTCS Salary Schedule; KCTCS Org Chart; KCTCS Employee Census; KCTCS Archibus Contract; Archibus Solutions
1. This is not an exhaustive list of desired scheduling software capabilities.
2. Multiply average annual admin salary ($34K) by 10% (assumes an admin staff spends 5% of their time on general scheduling and an additional 5% using the shadow system). Then multiply this product by 16 to account for all KCTCS colleges.

Space Data Requirements & Reporting

The Council for Postsecondary Education (CPE) provides guidance on what data should be collected and managed, but limited requirements exist for reporting and peer comparison.

Case for Change

- Currently, KCTCS collects data that **supports compliance with government reporting requirements**.
- However, additional space data could be collected and reported to **encourage strategic decision-making** and **answer key questions** around space utilization.
- Some other state higher education governing bodies have **space usage efficiency reports** to provide institutions with tools for **benchmarking against peers** and **managing annual trends**.
- Although CPE is unlikely to provide a similar resource at this time, **KCTCS could independently create their own space usage efficiency calculation tool** to compare internal college space utilization, especially for classrooms and lab spaces.

Illustrative Space Usage Efficiency Calculation

College A Classroom Utilization Report

# of Classes	# of Meetings / Week	Min. / Class	Total Min. / Week	# of Classrooms
100	3	50	15,000	7
# of classes in classrooms	**# of Classes in Non-Classrooms**	**Total Min. in Classrooms**	**Total Min. in on-Classrooms**	**Average % of Seats Filled**
90	10	13,500	1,500	70%

Illustrative

Use the data above to calculate a score for the following categories[1]:

Demand + **Utilization Rate** + **Percent Fill** = **Total Score**

KCTCS can create a **scoring methodology** to understand if a college is following the **standard set space efficiencies**. This provides colleges with a resource to **compare their space usage** with other colleges and **understand areas for optimization**.

Source: KCTCS Interviews and Focus Groups; Huron Institutional Benchmarking
1. KCTCS may decide which categories to include, how to calculate variables, and the efficiency threshold.

Space Utilization at KCTCS: Observations

Space is a costly resource that must be utilized effectively and in response to an evolving landscape. Opportunity exists for KCTCS to further evaluate its current space environment.

Observations & Considerations

Since AY2017-2018, colleges have seen a **decline in overall enrollment (-13.5%)**, with growth in **online** and **hybrid course delivery methods (40.5%)**.

In that same timeframe, overall **space use has also declined (-17.1%)**, but some colleges have **reduced space use at a slower rate** than enrollment and remote learning trends.

Maintaining excess or unnecessary space can be costly, and each college's **maintenance** and **utility costs vary** with some spending well above the average cost per square foot, which is **$1.23 and $1.67, respectively**.

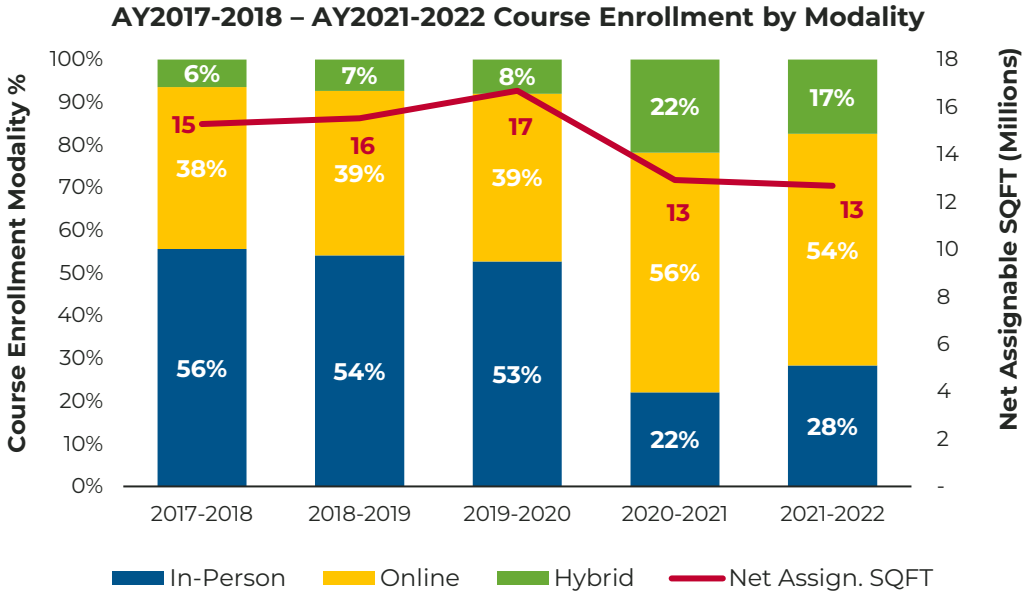
The **-17.1% decline in space use** means about **2.6M SQFT of academic space was not utilized**. This equals approximately **$7.8M in maintenance and utilities costs**[1].

KCTCS will need to conduct further analysis to **determine the appropriate options to pursue** for **optimal space use** (e.g., consolidation, closure, etc.,) some of which are highlighted on following slides[2].

Source: KCTCS Meeting Patterns; KCTCS Course Offerings; KCTCS Master Space Inventory; KCTCS Maintenance Data; KCTCS Utilities Data; KCTCS Deferred Maintenance Pool
1. Total maintenance and utilities costs may include duplicate spaces and cost savings is dependent on the location and type of systems / equipment. Individual building evaluation would be needed.
2. Additional considerations and spectrum of strategic alliances can be found in the Appendix.

Space Utilization at KCTCS: Modality (1/2)

Based on industry trends and KCTCS data, strategic opportunities exist around modality and space utilization, such as reallocation of space and course delivery methods.



Source: KCTCS Meeting Patterns; Course Offerings; Inside Higher Ed, *Online Leaders: Fully In-person Students Will Be Outliers*, 2022
1. Chronicle of Higher Education, *What Happened After the Great Online Pivot of 2020*, 2023.
2. See following slides for more details of potential opportunities.

Observations & Considerations

- Online and hybrid learning courses rose nationwide to **45.6% in 2020** and **dropped to 30.4% in 2021**[1].
- Although many institutions are **moving back to in-person operations**, experts indicate it likely will **not go back to pre-pandemic levels**[1].
- Due to the pandemic and shifts to online learning, **KCTCS saw a 22.5% decline in their overall space use** across all 16 colleges **from AY2019-2020 to AY2020-2021,** and that percentage has continued to decline.
- **Evaluating space use** to align with recent trends could result in opportunities to[2]:
  - **Review** programs that offer multiple modality options
  - **Close or lease** underutilized buildings
  - **Consolidate** campuses or colleges
  - **Repurpose space** for other offerings

Space Utilization at KCTCS: Modality (2/2)

The underlying detail for each college's course modality make-up and corresponding academic square footage is listed below.

Unit	2017 – 2018				2021 – 2022			
	% In-Person	% Online	% Hybrid	NASF (M)[1]	% In-Person	% Online	% Hybrid	NASF (M)
Ashland	62%	35%	3%	1.28	33%	47%	20%	1.33
Big Sandy	48%	47%	5%	0.01	26%	68%	6%	0.01
Bluegrass	59%	34%	7%	2.51	8%	60%	32%	1.36
Elizabethtown	56%	36%	9%	1.78	33%	55%	12%	1.25
Gateway	57%	29%	13%	0.94	27%	49%	24%	0.82
Hazard	40%	55%	5%	0.74	35%	64%	1%	0.65
Henderson	57%	38%	4%	0.10	53%	47%	0%	0.08
Hopkinsville	55%	42%	3%	0.14	30%	56%	14%	0.13
Jefferson	64%	29%	7%	2.11	24%	47%	30%	1.73
Madisonville	50%	43%	7%	0.11	35%	56%	9%	0.17
Maysville	46%	44%	10%	0.69	2%	58%	40%	0.95
Owensboro	67%	28%	5%	0.93	36%	40%	23%	1.16
Somerset	39%	54%	7%	1.74	39%	55%	7%	1.46
Southcentral KY	63%	29%	9%	1.03	39%	50%	12%	0.76
Southeast KY	62%	37%	1%	0.25	42%	55%	3%	0.16
West KY	61%	36%	2%	0.90	53%	45%	2%	0.66
Total / Average	**56%**	**38%**	**6%**	**15.28**	**28%**	**54%**	**17%**	**12.67**

Source: KCTCS Meeting Patterns; Course Offerings
1. Net Assignable SQFT is in millions. This is only for spaces used for academic courses.

Space Utilization at KCTCS: Academic

While there may be opportunity to increase course offerings at certain times, KCTCS could also consider other options to utilize space, which are outlined in the following slides.

KCTCS AY2021-2022 Total Section Counts[1]

	Time	M	T	W	R	F	SA/SU
Peak Hours[2]	8:00 AM - 9:30 AM	2090	2005	2162	1918	1005	133
	9:30 AM - 11:00 AM	980	1008	1058	972	362	1
	11:00 AM - 12:30 PM	839	887	892	818	308	4
	12:30 PM - 2:00 PM	880	878	936	792	253	3
Non-Peak Hours	2:00 PM - 3:30 PM	381	377	389	367	99	4
	3:30 PM - 5:00 PM	256	296	253	267	88	1
	5:00 PM - 6:30 PM	405	487	377	408	40	1
	6:30 PM - 8:00 PM	92	87	87	72	11	0
	8:00 PM - 9:30 PM	16	13	16	9	3	0
	TOTAL	**6,465**	**6,579**	**6,714**	**6,163**	**2,622**	**342**

KCTCS AY2021-2022 Normalized Course Hours[3]

Time of Day	# of Course Hours	% of Course Hours
7am - 9am	29,191	38%
9am - 11am	15,744	21%
11am - 1pm	9,442	12%
1pm - 3pm	5,929	8%
3pm - 5pm	4,470	6%
5pm+	5,739	8%
N/A	5,378	7%
Total	**75,893**	**100%**

Source: KCTCS Meeting Patterns; Course Offerings
1. Excludes all online courses and any courses with no listed days/times or listed as ASC are not in the table but are included in the total counts (ASC in SA/SU).
2. Peak hours are defined by KCTCS as 9am – 2pm.
3. Shows normalized utilization of academic space to account for frequency of meetings and duration of course (e.g., if a course meets MWF (3 times) for 1 hour each day, it will get a value of 3).

Observations & Considerations

- KCTCS scheduled **relatively few (11%)** classes after **3:30 PM**.
- **About 10% of classes** were scheduled for Fri, Sat, and Sun.
- Even after accounting for duration and frequency, **79% of courses in AY2021-2022 were held before 3pm**.
- Interviewees noted that **many courses are scheduled during the day** to respond to student demand.
- Additional opportunity exists to **use academic space in other ways**, such as hosting additional programs and events or **renting out that space to external parties**.

Space Utilization at KCTCS: College Level

Based on enrollment and space metrics, Huron determined how individual colleges were performing as it relates to space use and modality trends, as indicated in the table below.

AY2017-2018 through AY2021-2022 College-Level Space Metrics Summary[1]

Unit	Gross SQFT	FY22 SQFT per Employee	FY22 SQFT per Student[2]	% of classes in non-peak hours	Growth / Decline			FY22 $ per SQFT	
					Enrollment	Remote[3]	Space Use	Maintenance	Utilities
Ashland	454,938	2,861	396	26%	-7%	65%	2%	$1.93	$2.05
Big Sandy	493,805	2,297	3	23%	-39%	-14%	-30%	$0.84	$1.57
Bluegrass	871,203	1,919	103	23%	-4%	114%	-46%	$1.20	$1.66
Elizabethtown	498,363	1,962	166	15%	-17%	26%	-30%	$1.07	$1.59
Gateway	348,168	1,439	149	23%	-3%	66%	-13%	$0.87	$1.82
Hazard	533,270	2,527	160	15%	-15%	-8%	-12%	$1.20	$2.39
Henderson	209,276	2,754	42	23%	-21%	-13%	-24%	$1.93	$1.33
Hopkinsville	302,638	1,857	47	15%	-26%	14%	-9%	$1.89	$1.18
Jefferson	1,093,295	2,519	107	24%	-11%	89%	-18%	$1.47	$1.34
Madisonville	518,779	2,931	35	11%	-3%	28%	63%	$1.11	$1.51
Maysville	396,551	2,044	219	21%	-18%	48%	38%	$0.91	$1.23
Owensboro	427,875	2,206	205	28%	4%	101%	25%	$1.49	$1.80
Somerset	707,278	2,044	221	20%	-18%	-17%	-16%	$0.76	$1.50
Southcentral KY	446,283	1,814	126	23%	-1%	64%	-27%	$0.79	$1.81
Southeast KY	586,194	2,902	45	23%	-22%	20%	-36%	$1.12	$1.86
West KY	674,496	2,764	104	25%	-29%	-14%	-27%	$0.59	$2.04
System Office	119,456	519	N/A	N/A	N/A	N/A	N/A	$1.66	$1.73
Total / Average	**8,681,868**	**2,148**	**134**	**21%**	**-13%**	**40%**	**-17%**	**$1.23**	**$1.67**

Source: KCTCS Meeting Patterns; KCTCS Course Offerings; KCTCS Master Space Inventory; KCTCS Maintenance Data; KCTCS Utilities Data; KCTCS Deferred Maintenance Pool
1. Metrics highlighted in red fall within the lowest 25th percentile within that category compared to one another.
2. SQFT per student is calculated using the net assignable SQFT based on rooms associated with academic courses. It does not use the unit's total SQFT as the basis.
3 Remote growth/decline refers to the change in online and hybrid course enrollment within a five academic year timeframe.

Multipurpose Spaces

The COVID-19 pandemic produced the need for flexible learning, which continues to permeate higher education campuses and highlights the need for multifunction spaces.

Case for Change

- Individuals across KCTCS noted that some spaces are **only intended for a single purpose**, such as for lectures and labs; however, there is a growing need to **have multipurpose space to increase optimization**.
- According to APPA[1] and other higher education experts, many colleges and universities are focusing on **increasing flexible classroom configurations** so that classrooms can **operate as both lecture halls and lab spaces**.
- Opportunities exist for KCTCS **to reevaluate academic space use** to serve multiple purposes[2], such as:
  - **Adding moveable furniture** instead of fixed seating
  - **Equipping labs** with **dual-purpose or portable** equipment and technology, especially for hybrid courses
  - **Designating fixed swing spaces** on campus (e.g., spaces for short-term needs)

Considerations for Multipurpose Space

External Partnerships
Partnerships between **private, public, and community members** are increasing throughout higher education, which highlights the need for **flexible, adaptable spaces**.

Shifting Program Needs
Programs and economic needs are **continuously evolving** so having **academic spaces that can respond to those needs** can be critical.

Scheduling Management
Scheduling shared multipurpose spaces can become **more complex** when it relates to data management because there are **more occupants to consider when tracking usage**.

Source: The Chronicle of Higher Education: The Overbuilt Campus
1. APPA Space Planning and Administration.
2. Any of these adjustments will require an investment in time, effort, and financial resources from KCTCS.

Community Event Reservations

As colleges evaluate existing space use, opportunity exists for KCTCS to increase revenue by thinking strategically about community event reservations and contracts.

Case for Change

- Across KCTCS, **academic space is underutilized during evening hours** compared to peak times, which lends opportunity to **rent out spaces to community partners**.
- Colleges **waive fees and/or provide discounts to mission-aligned organizations**, with some daily rates[1] being nearly **60% lower** than other organization types.
- If KCTCS were to **decrease discounts to 20%** or **remove all discounts and waivers**, the organization could **generate between $39K and $112K** through additional revenues.
- Other considerations around **community members using KCTCS space** include:
  - **Increasing the number of events** hosted.
  - Establishing **public-private-partnerships (P3) agreements** for long-term leases or space use.

Illustrative College Event Reservation Impact

Scenario[2]: A college hosts 50 events evenly split between classrooms and conferences and 20% are hosted by mission-aligned orgs, which receive a discount / fee waiver. Otherwise, fixed fee is $100 per event.

Rate Type*	Current (50% off + waiver)	Future (20% off + waiver)	Future (None)
Classroom	$3,375	$3,600	$3,750
Conference	$9,000	$9,600	$10,000
Fixed Fee**	$4,000	$4,000	$5,000
Total	**$16,375**	**$17,200**	**$18,750**
% Change	**0%**	**5%**	**15%**

* For Profit: Conference room rate per day = $400 and classroom rate per day = $150
** Fixed fee can include administration, security, custodial support, IT, etc.

Intended Outcome(s)	Perceived Service Impact	Financial Impact	Low	High
Revenue Generation	●●●	●○○	$39K	$112K

Source: KCTCS College Facility Rental Agreements; KCTCS College Facility Rental Revenues; FY22 General Ledger; Huron Institutional Benchmarking
1. Rates vary by room type (e.g., conference centers, classrooms, etc.).
2. Uses Bluegrass, Gateway, and Hopkinsville event reservation data as a proxy for scenario planning.

External Lease Agreements

KCTCS leases space from external partners, but the organization may be able to reevaluate and shift space use by leveraging existing, underutilized internal resources.

Case for Change

- Currently, KCTCS **leases approximately 448K SQFT**[1] of space from external partners, which equals **around $3.1M of leasing costs**.
- There may be opportunity for KCTCS to evaluate its **current lease agreements** to **reduce costs** and **utilize existing space**. A few considerations include:
  - Leases with an **annual rent of $0 – $1** and leases for **high-demand programs,** such as nursing or CDL can be maintained within KCTCS' space portfolio.
  - Leases for **office and/or classroom space**, should be reviewed to understand if **similar space already exists at KCTCS** and can be utilized.

KCTCS Lease Summary

Room Type[2]	Annual Rental	SQFT Leased
Program-Specific	$92,160	9,200
Storage	$20,917	2,130
Office	$1,735,955	180,295
Classroom	$1,089,810	240,422
Parking / Lot	$187,950	-
Other	$ 3	16,000
Total	**$3,126,795**	**448,047**

If KCTCS shifts **all external <u>office</u> space use internally**, they could **save $1.7M** by leveraging physical resources that may become available from other opportunities.

Additionally, if they shift **all external space use internally** (except program-specific spaces), they could **save up to $3.0M.**

Intended Outcome(s)	Perceived Service Impact	Financial Impact	Low	High
Cost Savings	●●○	●●○	$1.7M	$3.0M

Source: KCTCS Interviews and Focus Groups, KCTCS FY22 – FY23 Budget Book
1. Parking lots square footage was not provided; therefore, is excluded in total SQFT.
2. Program-Specific includes CDL lots, nursing labs, pastures, shops, and stalls/paddock; Other includes hangar space and land.

Sub-Standard Space Assessment

Sub-standard buildings[1] create immediate expenses through high operating costs. Leveraging P3 agreements can reduce costs and increase potential new revenue streams.

Case for Change

- Institutions are facing **declining need for on-site operations** and **increasing deferred maintenance** (DM).
  - Additionally, buildings and spaces exist at KCTCS that are being **underutilized during non-peak hours**.
  - KCTCS could consider **leasing out space to external partners** to make **optimal use of their resources** and **cover** maintenance and operations **costs**.
- One approach is to do a **sub-standard space assessment** which identifies a **subset of buildings** that stand to gain the most in redevelopment and proposes **P3 (public-private-partnership) agreements as a solution**.
- P3 agreements[2] **help offset risk, promote innovative design**, and allow the institution to focus on **mission-critical activities**..

Identifying P3 Building Candidates[3]

College	Total Bldg. Value	Total DM Need	NAV
Ashland	$175,223,833	$55,455,000	68%
Big Sandy	$151,663,035	$26,274,000	83%
Bluegrass	$212,515,366	$24,520,000	88%
Elizabethtown	$151,273,419	$61,565,000	59%
Gateway	$111,720,383	$12,225,000	89%
Hazard	151,925,970	22,100,000	85%
Henderson	68,115,822	6,075,000	91%
Hopkinsville	78,730,603	28,000,000	64%
Jefferson	318,236,142	128,750,000	60%
Madisonville	164,835,368	7,250,000	96%
Maysville	118,337,056	24,100,000	80%
Owensboro	132,686,241	22,500,000	83%
Somerset	186,689,578	52,550,000	72%
Southcentral KY	128,721,764	18,290,000	86%
Southeast KY	125,379,888	34,795,000	72%
West KY	204,346,692	11,900,000	94%

Sub-standard buildings can be identified using building value, deferred maintenance (DM) need, and net asset value (NAV). A substandard building is one with low NAV and high DM need.

Intended Outcome(s)	Perceived Service Impact	Financial Impact	Low	High
Revenue Generation	●●●	●●○	$4.5M	$5.4M

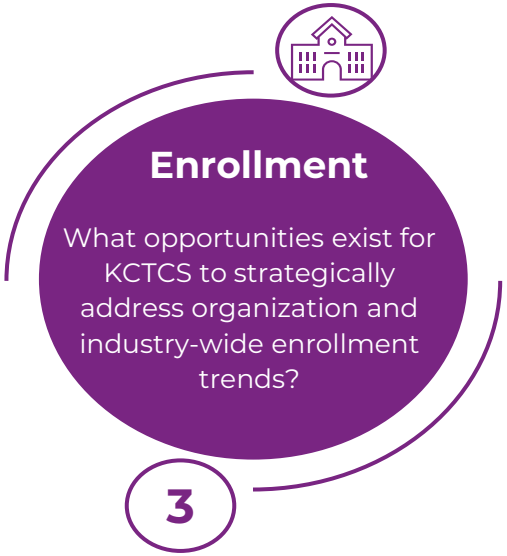
Source: KCTCS Master Building List, KCTCS Master Space Inventory, KCTCS FY22 – FY28 Deferred Maintenance List, Huron Institutional Benchmarking
1. Sub-standard buildings are any structures that do not meet the standards, specifications, or needs established by the institution.
2. KCTCS could also consider other partnerships, including ones with organizations in the non-profit sector.
3. Additional data would be required to understand which distinct buildings are considered sub-standard (e.g., deferred maintenance by building)

4

Academic
Programming
Optimization

Academic Opportunity Overview

When reviewing academic opportunities, KCTCS should consider program, course, and enrollment data trends, policies, and practices.



The next few slides will outline KCTCS-specific opportunities related to program offerings, policies and practices, and enrollment.

Academic Taxonomy and Resources

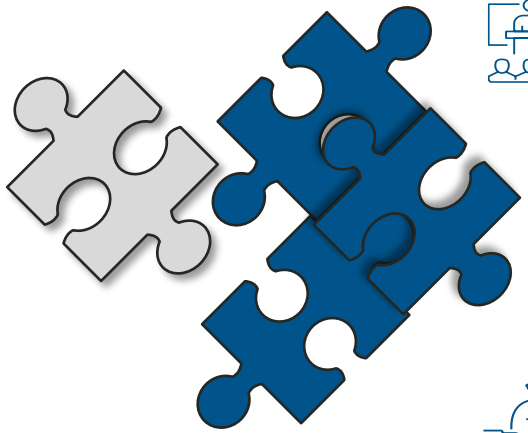
Generally, higher education has diluted the linkage between academic taxonomy and resource allocation decisions, resulting in a lack of integrated information.

Academic Taxonomy (Program Areas)

Faculty, in collaboration with academic leadership, generally have the responsibility and authority to make decisions involving program areas

Overhead Costs

Academic administrative support is typically the purview of academic leaders and includes direct and indirect support of instruction and service



Coursework

Course offerings are normally under the purview of a program coordinator who, in collaboration with academic leadership, balances instructor availability, student need, and other factors

Compensation

Academic Officers, Business Officers, and Presidents, through their budget authority, are typically responsible for compensation. This is especially true when considering the allocation of faculty lines and faculty mix

The connection between the academic taxonomy and resource allocation is critical, as decisions at the program area level impact coursework, compensation, & mission alignment.

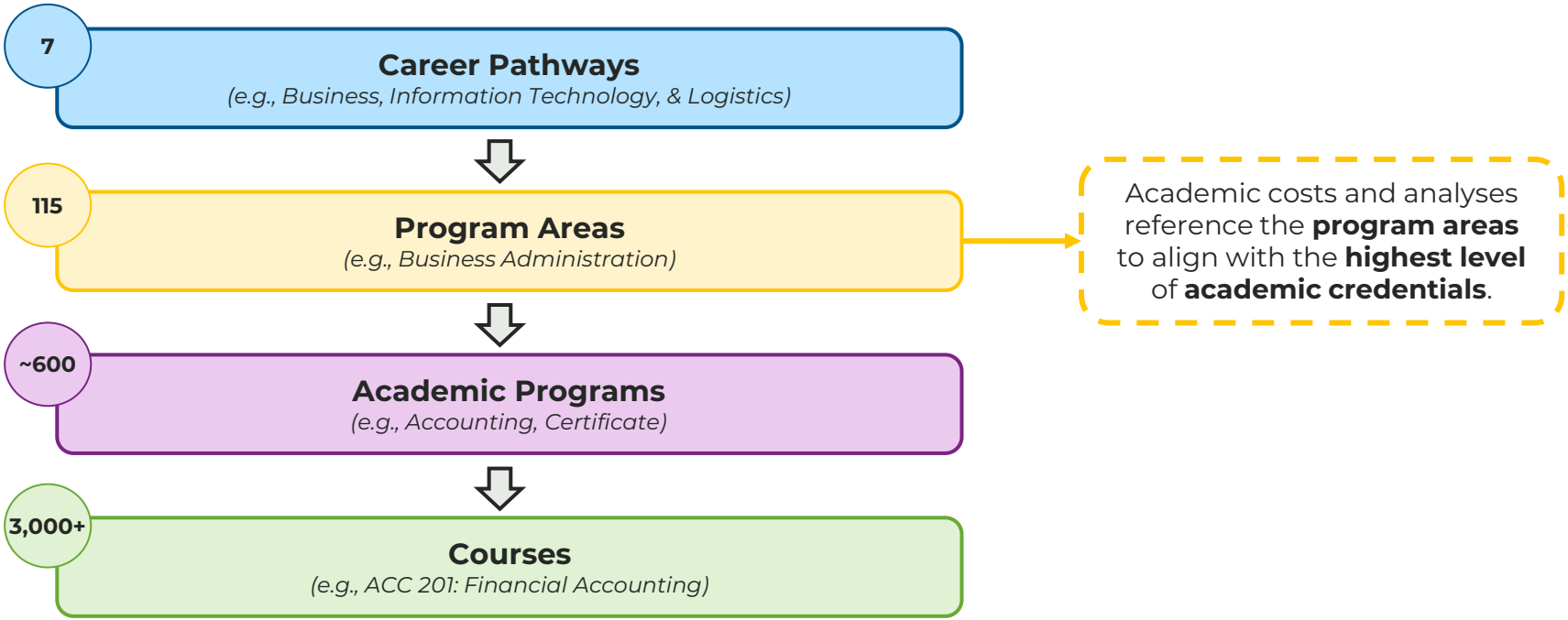
Academic Programming Optimization

Analyzing the cost to educate calls for a holistic approach and a mutual understanding of key components that impact expenses associated with the academic taxonomy.

Tasks	Component	Objectives
Establish Academic Taxonomy	 **Academic Taxonomy**	I. Confirm understanding of the academic structure II. Map program areas to the taxonomy
Measure Credit Hour Production	 **Coursework**	I. Calculate credit hours produced by college II. Evaluate credit hour growth trends across colleges and program areas
Define Instructional Load	 **Faculty Effort**	I. Establish college level understanding of faculty effort
Map Direct Cost of Instruction	 **Compensation**	I. Confirm methodology for distributing salary across teaching & advising, internal and external service, professional development, and educational leadership
Allocate Overhead Costs	 **Overhead Costs**	I. Confirm understanding and application of expense classifications with colleges II. Determine metrics for allocating expenses

Academic Taxonomy

KCTCS categorizes academic offerings in four main classifications to create organization-wide standardization while maintaining college-level individualization.



Source: KCTCS Academic Plan Inventory Highest Level Credential

Credit Hour Production

Over the last 5 years, KCTCS has seen a decrease in its production of credit hours, with a compound annual growth rate (CAGR) of -4.3% organization-wide.

Credit hour trends[2] are amplified by organization-wide and college-specific shifts across program areas.

- Since AY2017-2018, **Mining Technology** (-59.8%), **Global Studies** (-43.6%), and **Women's and Gender Studies** (-39.2%) have seen the largest decline in credit hour production across all 16 colleges.
- Over the past five years, **Certified Medical Technician** (70.2%), **Truck Driver Training** (42.2%), and **Apprenticeship Studies** (34.1%) have seen the largest amount of growth across the organization.

Credit Hour Production (CHP)[1] by College			
College	**AY2017–2018**	**AY2021–2022**	**5-yr CAGR**
Ashland	53,497	46,116	-3.6%
Big Sandy	68,757	45,408	-9.9%
Bluegrass	181,708	172,185	-1.3%
Elizabethtown	101,421	87,354	-3.7%
Gateway	69,292	66,186	-1.1%
Hazard	51,992	44,015	-4.1%
Henderson	26,326	18,711	-8.2%
Hopkinsville	44,569	32,880	-7.3%
Jefferson	185,289	150,548	-5.1%
Madisonville	46,311	44,959	-0.7%
Maysville	61,867	47,729	-6.3%
Owensboro	63,315	63,186	-0.1%
Somerset	104,707	80,522	-6.4%
Southcentral Kentucky	73,100	68,780	-1.5%
Southeast Kentucky	54,838	38,576	-8.4%
West Kentucky	94,954	69,559	-7.5%
Total CHP	**1,281,944**	**1,076,712**	**-4.3%**

Source: Cost to Educate Model; KCTCS Academic Course Offerings
1. Excludes non-enrollment sections, dual credit, non-KCTCS paid instructors, discussions, and independent study courses
2. Highlights greatest change in CHP for program areas offered starting in AY2017-2018 through AY2021-2022.

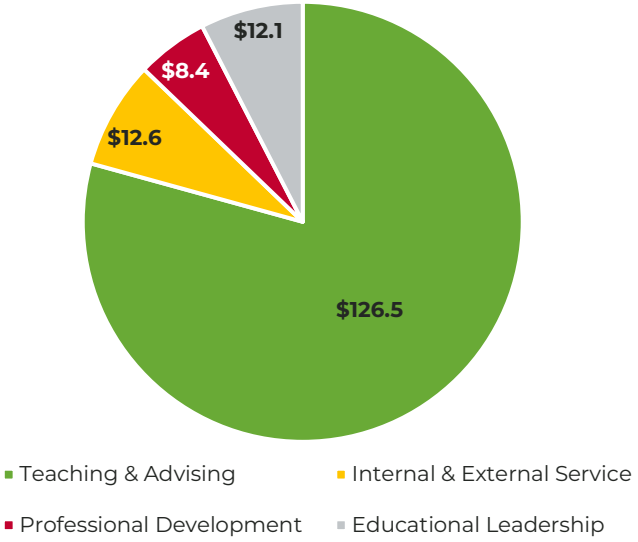
Faculty Effort and Compensation

The table below represents the breakdown of faculty effort by faculty type.

Faculty Type[1]	Teaching & Advising*	Internal & External Service	Professional Development	Educational Leadership
Lecturer	100%	0%	0%	0%
Instructor	90%	5%	5%	0%
Assistant Professor	85%	5%	5%	5%
Associate Professor	80%	10%	5%	5%
Professor	75%	10%	5%	10%

**Examples for teaching & advising include curriculum design and development, instruction, learning assessment, and academic advising.*

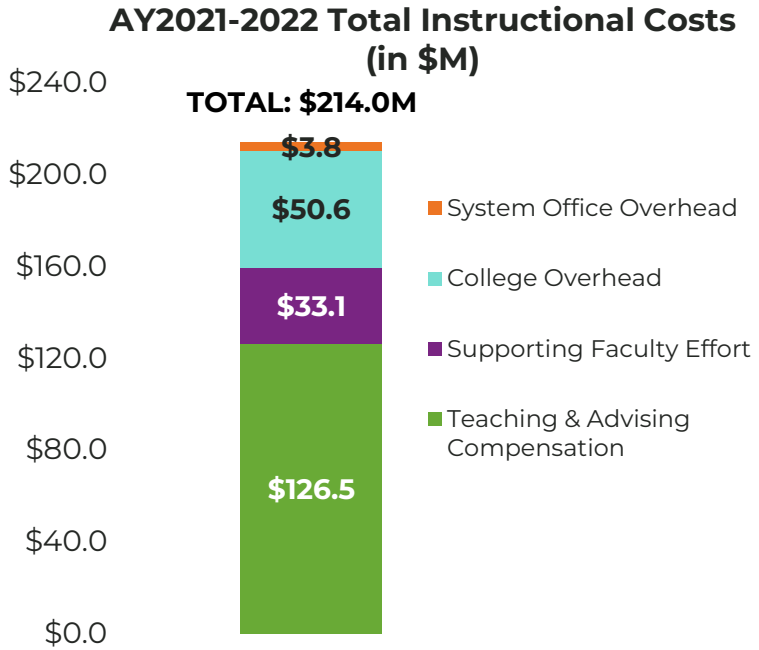
AY2021-2022 Total Compensation[2] (in $M)



Source: Cost to Educate Model; 2022 Employee Census; AY2021-2022 Academic Course Offerings; Instructor Titles and Pay Rates; Position Funding
1. Each college provided feedback for target faculty effort in each of the four categories. Each college has the autonomy to set allocation of effort based on faculty type and institutional need; the table highlights a general representation of faculty effort across the colleges. 324 staff members taught a course in AY2021-2022 and their effort was allocated using the same categories plus an additional "non-academic duties" category to account for responsibilities outside of academic-related activities.
2. Faculty compensation includes base salary + fringe.

Instructional Cost Components

The cost to educate model quantifies various instructional cost components for each college and program area, including direct costs (compensation) and indirect costs (overhead).



System Office Overhead[1]

Operating expenses charged to a system business unit (e.g., System Office) and assigned proportionally by CHP

College Overhead[1]

Operating expenses directly charged to a college (less instructor comp) and assigned proportionally by CHP

Supporting Faculty Effort

Additional faculty efforts (e.g., internal & external service, professional development, and educational leadership) - assumptions outlined on slide 55

Teaching & Advising Compensation

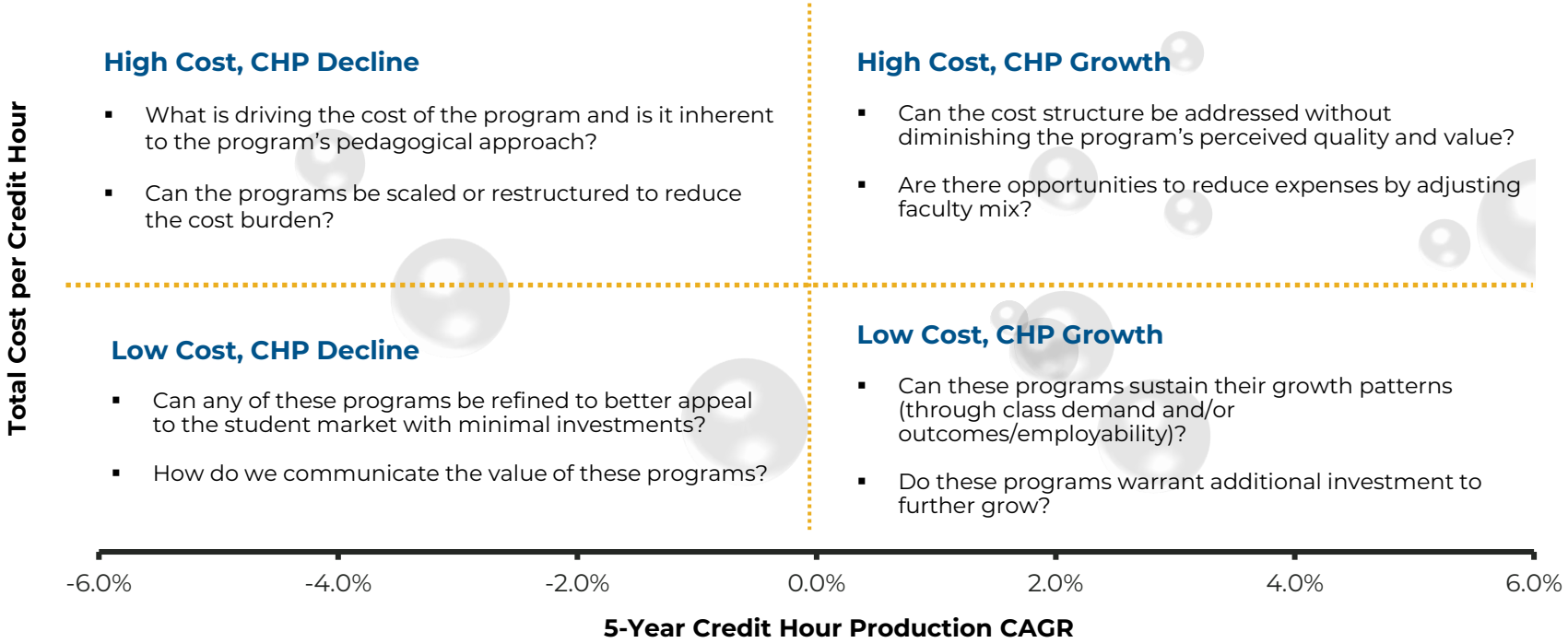
The total teaching & advising portion of instructor compensation based on the assumptions outlined on slide 55

Source: Cost to Educate Model; FY21 Trial Balance

1. Operating expenses are tied to the business unit rather than the program area. For that reason, overhead costs are equally distributed across all program areas by credit hour regardless of program type (i.e., technical vs. transfer).

Cost-to-Educate Model

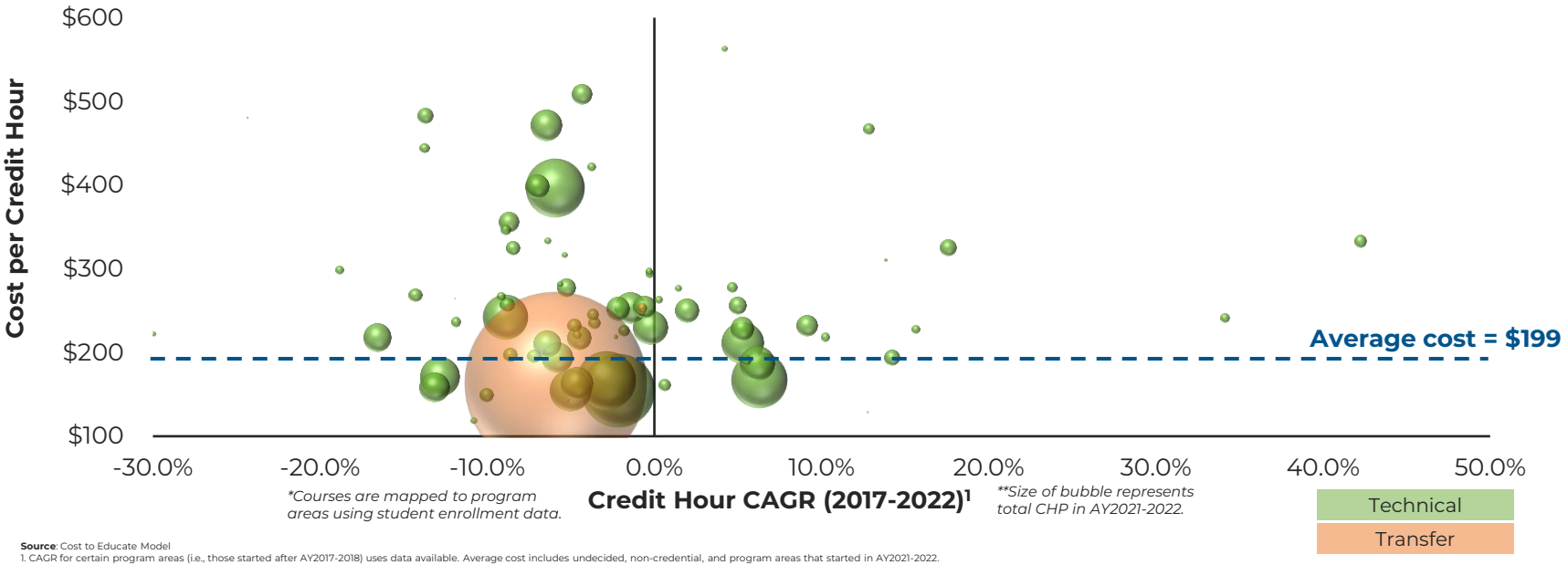
The cost-to-educate model quantifies components of instructional cost for each program area across the colleges, including direct costs and indirect costs.



KCTCS Credit Hour Summary

The following view of program areas compares enrollment trends and the cost per credit hour, which displays that the majority of programs are high cost and declining in CHP.

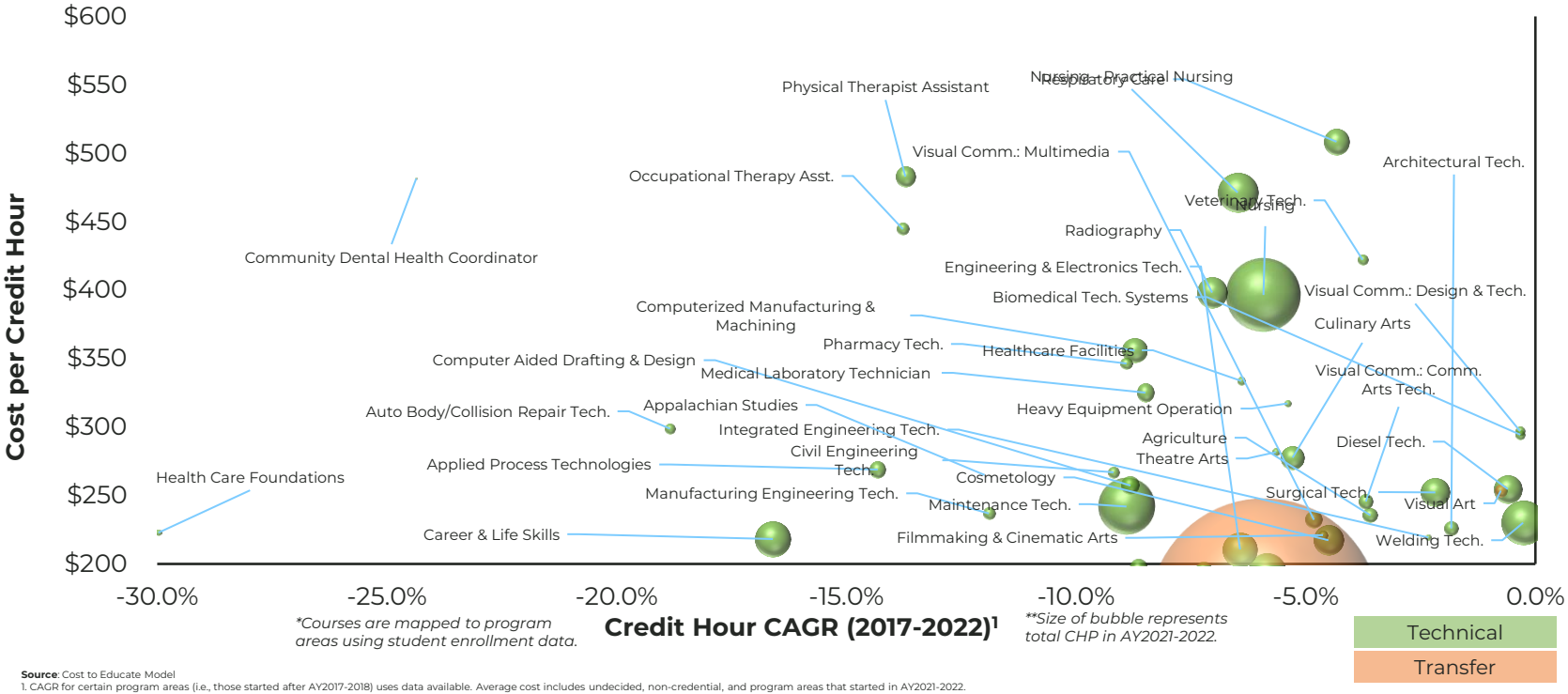
Credit Hour Volume, Growth, and Cost by Program Area
(AY2017-2018 – AY2021-2022)



Source: Cost to Educate Model
1. CAGR for certain program areas (i.e., those started after AY2017-2018) uses data available. Average cost includes undecided, non-credential, and program areas that started in AY2021-2022.
Non-Credential and Undecided programs not included in graph. Program areas started in AY2021-2022 and those that were not offered in AY2021-2022 not included in graph. Program Areas not shown on graph listed in appendix. Complete list of program areas and their credit hour production and cost trends included in appendix.

KCTCS: High Cost, Low CHP

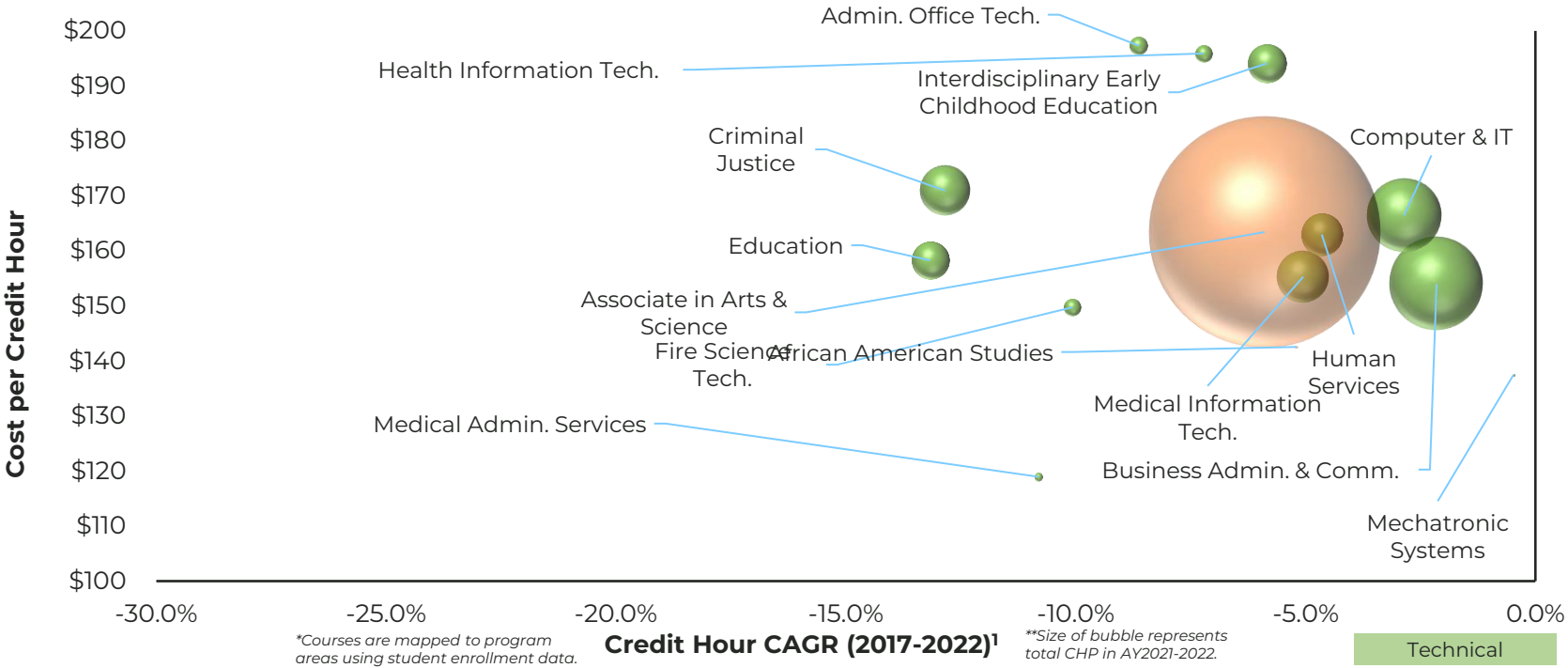
Credit Hour Volume, Growth, and Cost by Program Area
(AY2017-2018 – AY2021-2022)



Source: Cost to Educate Model
1. CAGR for certain program areas (i.e., those started after AY2017-2018) uses data available. Average cost includes undecided, non-credential, and program areas that started in AY2021-2022.
Non-Credential and Undecided programs not included in graph. Program areas started in AY2021-2022 and those that were not offered in AY2021-2022 not included in graph. Program Areas not shown on graph listed in appendix. Complete list of program areas and their credit hour production and cost trends included in appendix.

KCTCS: Low Cost, Low CHP

Credit Hour Volume, Growth, and Cost by Program Area
(AY2017-2018 – AY2021-2022)



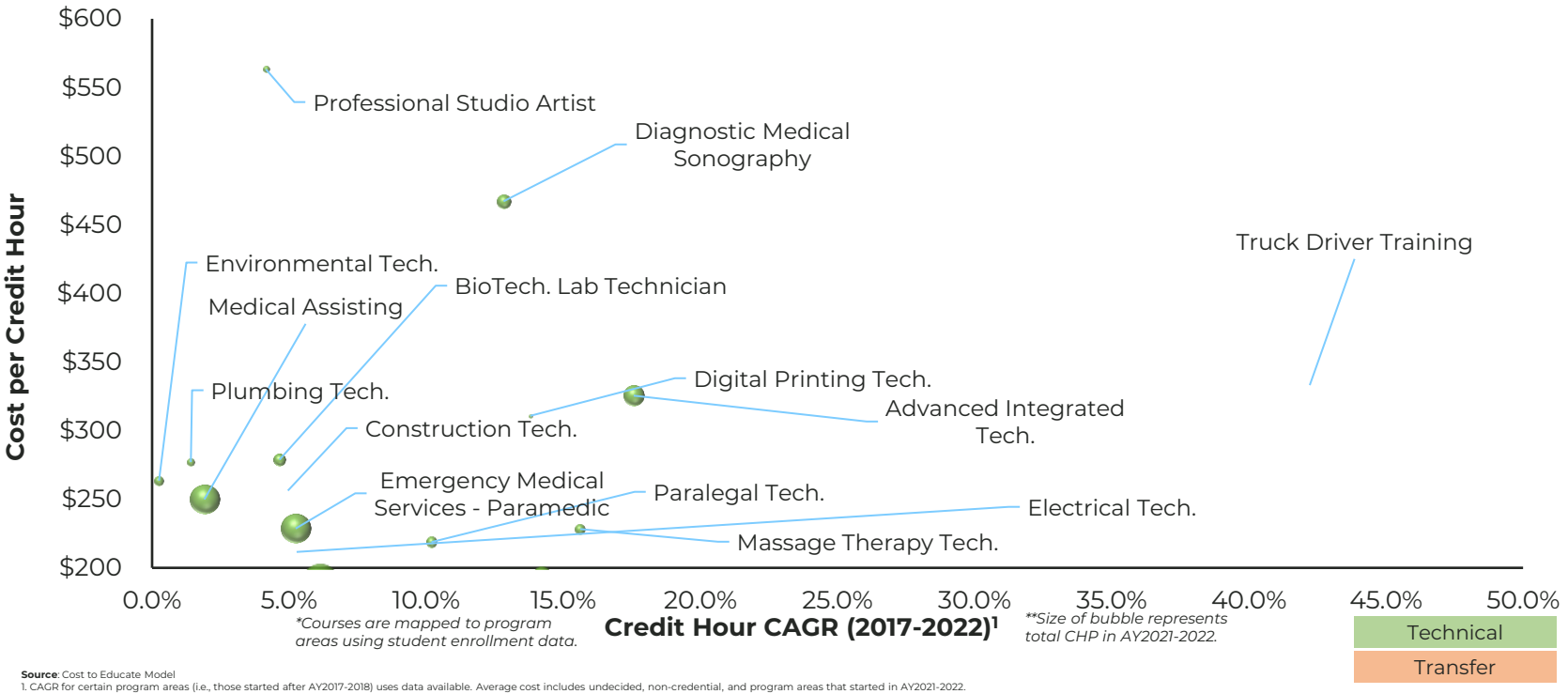
**Courses are mapped to program areas using student enrollment data.*

***Size of bubble represents total CHP in AY2021-2022.*

Source: Cost to Educate Model
1. CAGR for certain program areas (i.e., those started after AY2017-2018) uses data available. Average cost includes undecided, non-credential, and program areas that started in AY2021-2022.
Non-Credential and Undecided programs not included in graph. Program areas started in AY2021-2022 and those that were not offered in AY2021-2022 not included in graph. Program Areas not shown on graph listed in appendix. Complete list of program areas and their credit hour production and cost trends included in appendix.

KCTCS: High Cost, High CHP

Credit Hour Volume, Growth, and Cost by Program Area
(AY2017-2018 – AY2021-2022)



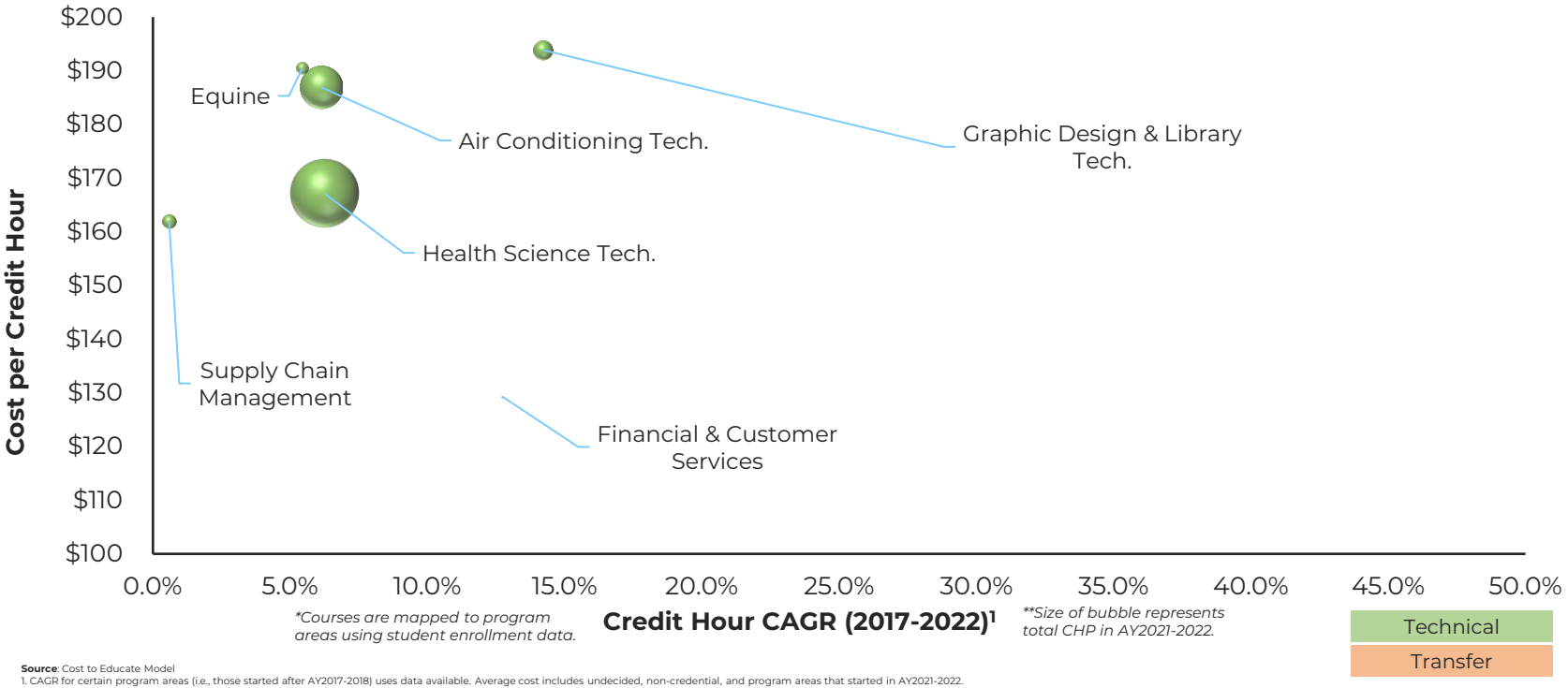
**Courses are mapped to program areas using student enrollment data.*

***Size of bubble represents total CHP in AY2021-2022.*

Source: Cost to Educate Model
1. CAGR for certain program areas (i.e., those started after AY2017-2018) uses data available. Average cost includes undecided, non-credential, and program areas that started in AY2021-2022.
Non-Credential and Undecided programs not included in graph. Program areas started in AY2021-2022 and those that were not offered in AY2021-2022 not included in graph. Program Areas not shown on graph listed in appendix. Complete list of program areas and their credit hour production and cost trends included in appendix.

KCTCS: Low Cost, High CHP

Credit Hour Volume, Growth, and Cost by Program Area
(AY2017-2018 – AY2021-2022)



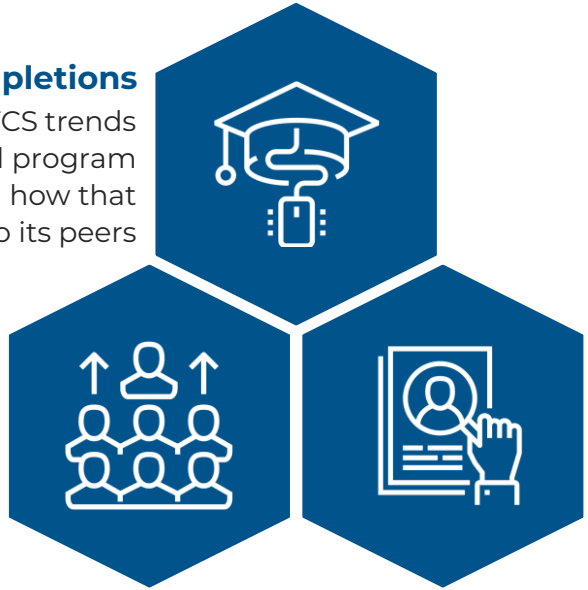
Source: Cost to Educate Model
1. CAGR for certain program areas (i.e., those started after AY2017-2018) uses data available. Average cost includes undecided, non-credential, and program areas that started in AY2021-2022.
Non-Credential and Undecided programs not included in graph. Program areas started in AY2021-2022 and those that were not offered in AY2021-2022 not included in graph. Program Areas not shown on graph listed in appendix. Complete list of program areas and their credit hour production and cost trends included in appendix.

Market Positioning Overview

Program growth, program market share, and growth in corresponding jobs should be considered in conjunction with cost in strategic academic decision making.

Program Completions
Identify KCTCS trends around program completions and how that compares to its peers

Competitive Landscape
Compare KCTCS program offerings to peer offerings to identify opportunities for differentiation and innovation



Labor Market Data
Compare trends in program completions to identify alignment and gaps with the job market

Market Positioning Takeaways

Looking across program and job growth within Kentucky displays key considerations for KCTCS in academic offerings and market alignment.

Steady Completions

Completions across KCTCS have remained relatively **steady**, with 23% of program areas seeing a decline over the past 5 years.

- **Transportation** and **engineering**-related program areas saw the greatest **positive change** in completions.
- **Health** and **agriculture**-related program areas have remained relatively **consistent** in completions.

Strong Labor Market

Job data across Kentucky suggests a **strong labor market**, with relatively few program areas seeing a decrease in jobs.

- **Health-related** program areas display the largest job **growth**.
- **Engineering-related** jobs remain relatively **steady**.
- **Agriculture-related** program areas depict the most consistent **decline** in job growth.

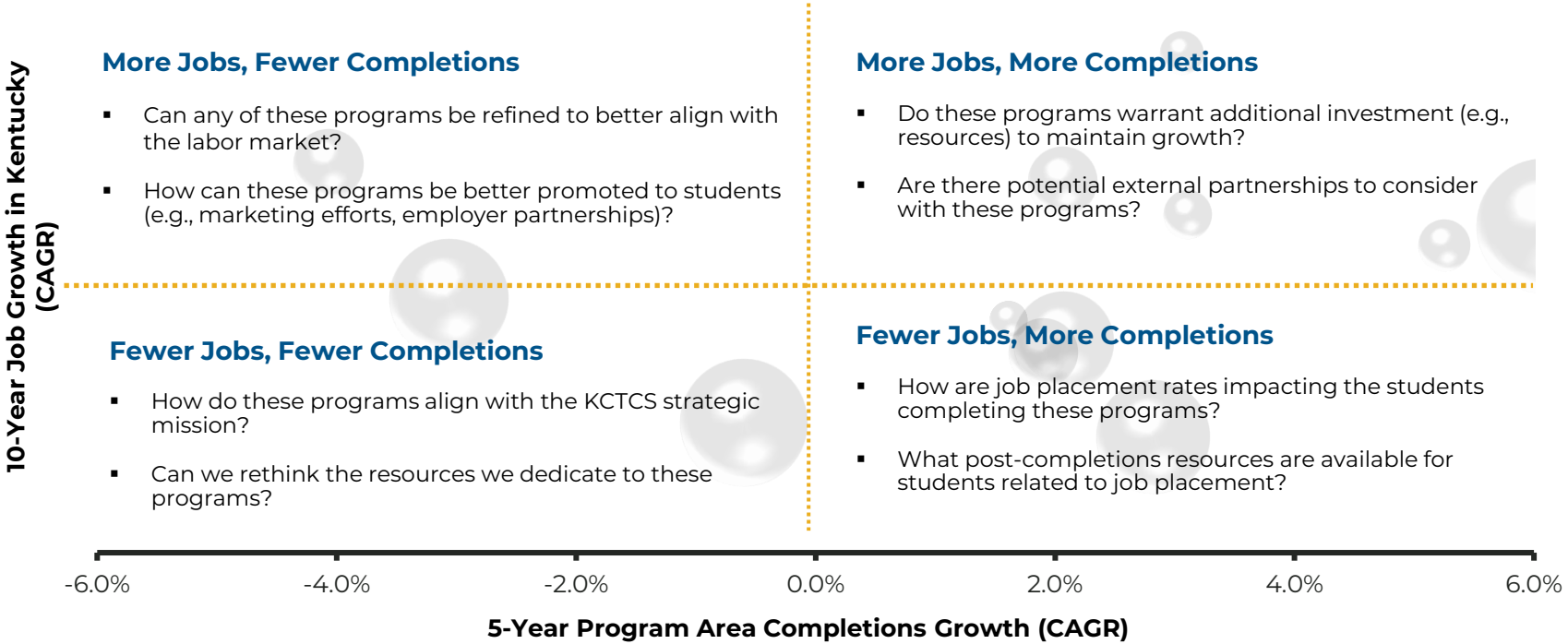
Varying Market Alignment

Market trends **do not always align** with KCTCS's areas of growth and decline across program areas.

- **Medical Information Technology** and **Culinary Arts** saw large **declines in completions** but are projected to see a large **increase in jobs**.
- **Equine** and **Civil Engineering Technology** saw **growth in completions** but are projected to see a **decline in job growth**.

Market Positioning Matrix

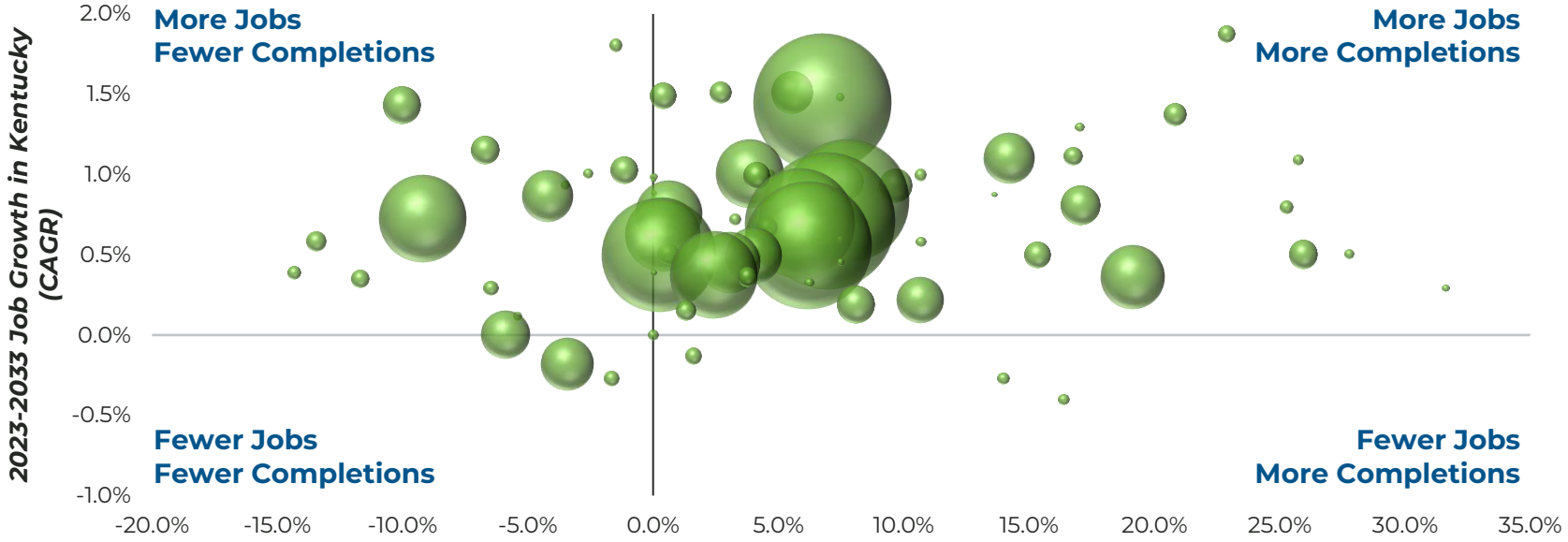
The market positioning matrix looks across completions and jobs trends to provide insight into alignment between the labor market and program offerings.



Market Position: Program Area Matrix

The matrix below organizes KCTCS according to a 5-year CAGR in program completions and corresponding future-looking jobs in Kentucky between 2023-2033 for technical programs.

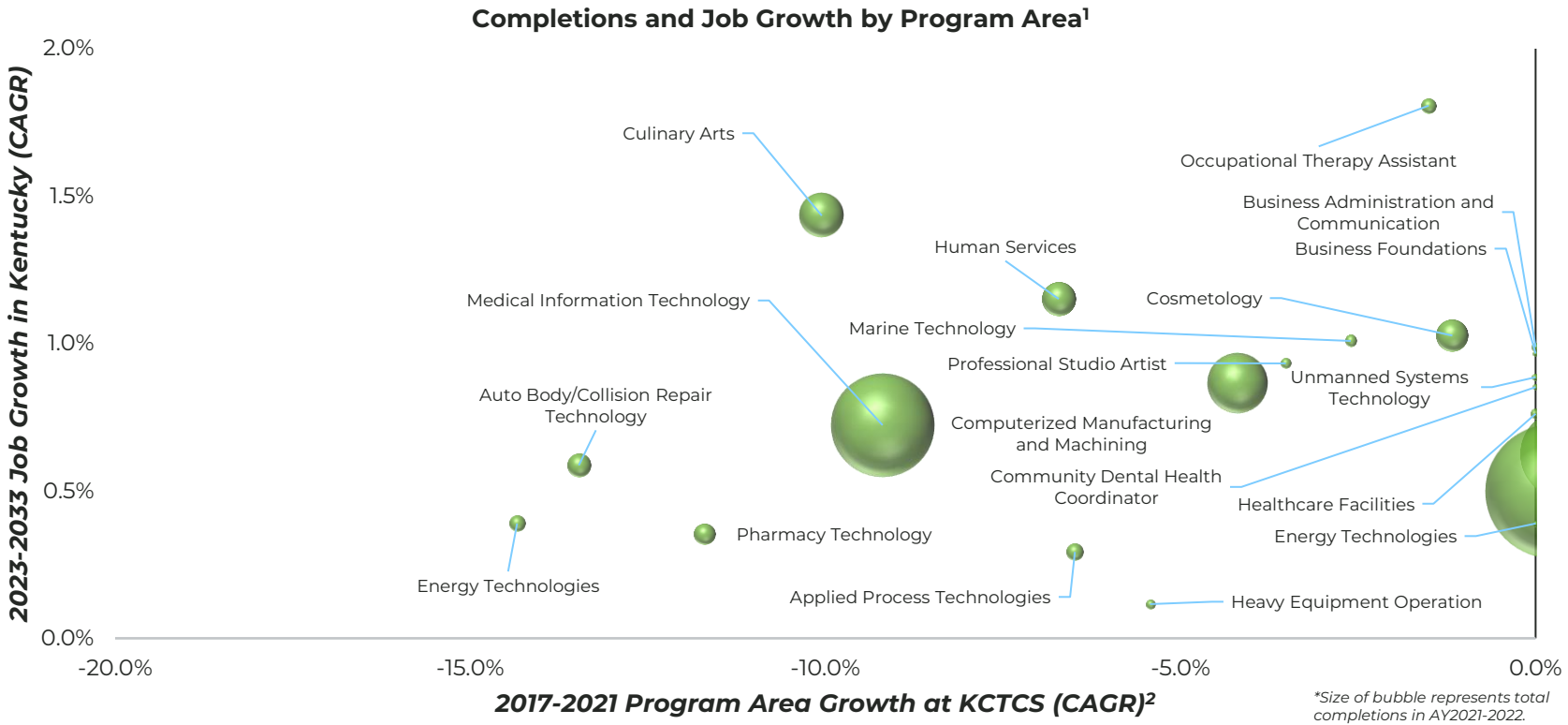
Completions and Job Growth by Program Area[1]



*Size of bubble represents total completions in AY2021-2022.

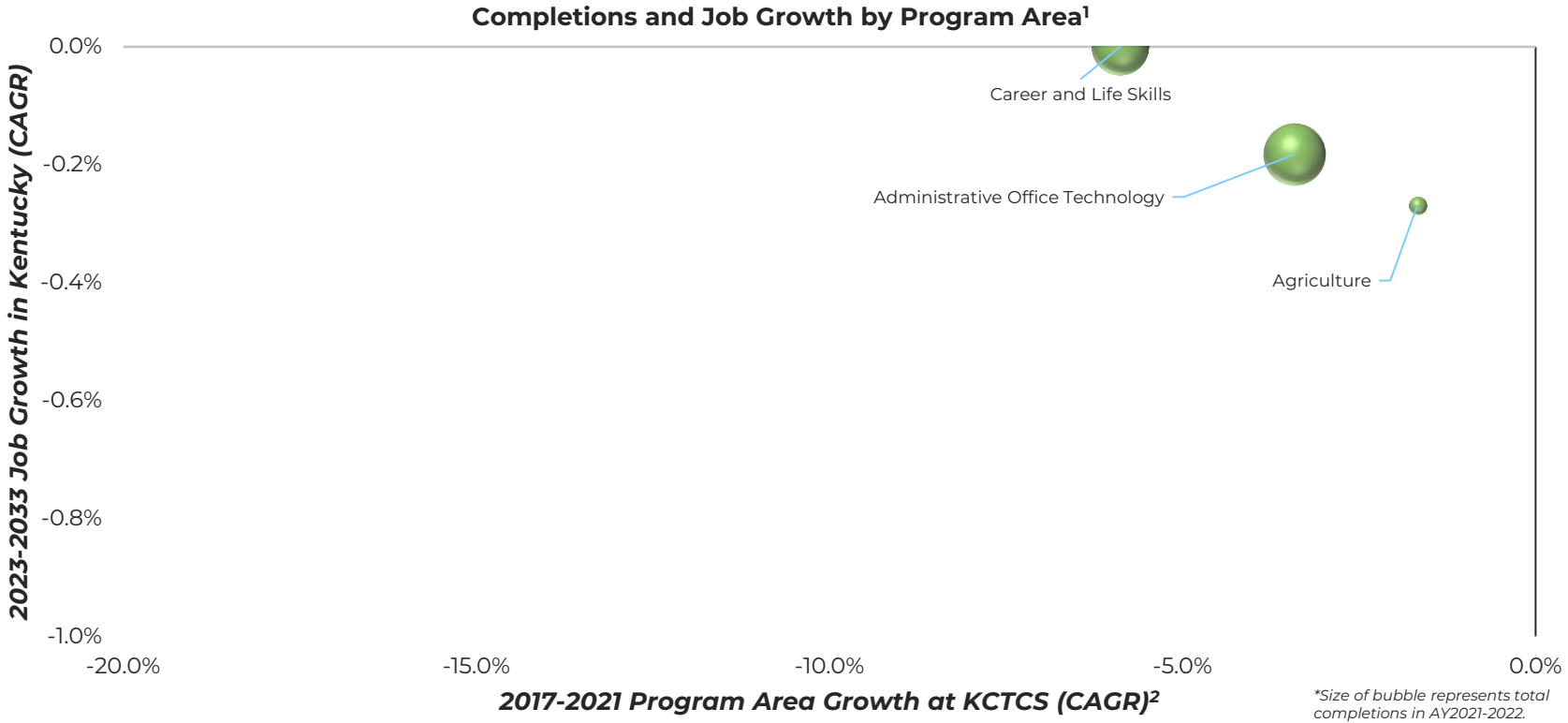
Source: Lightcast
1. Only includes technical programs due to labor market relevancy. Size of bubble represents total completions in 2021. Job market data does not take into account expected wages for applicable jobs.
2. Program areas not included that started after 2017 or were not offered in 2021. Programs areas not shown in graph due to axis dimensions listed in appendix. Program areas listed more than once have multiple CIP codes. Additional details in Market Positioning model.

More Jobs, Fewer Completions



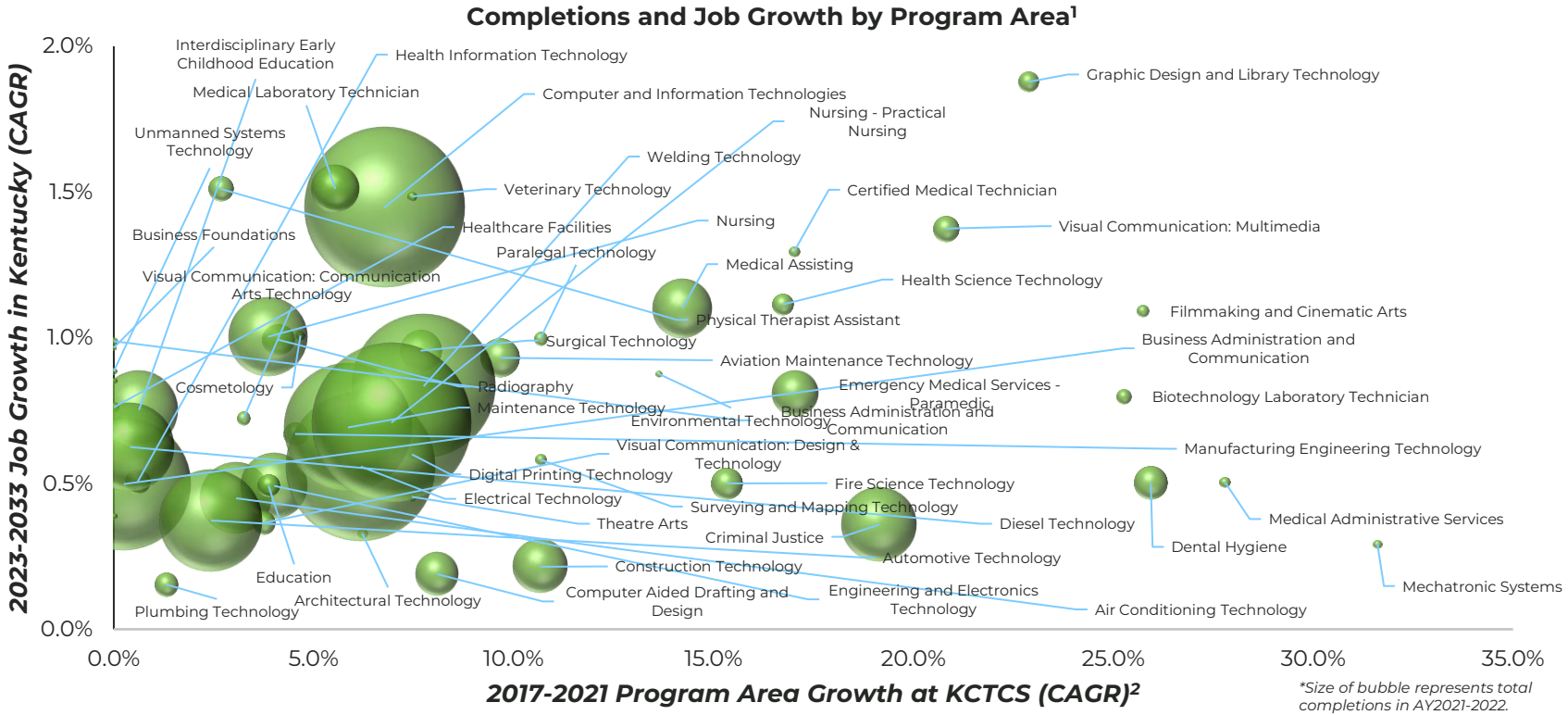
Source: Lightcast
1. Only includes technical programs due to labor market relevancy. Size of bubble represents total completions in 2021. Job market data does not take into account expected wages for applicable jobs.
2. Program areas not included that started after 2017 or were not offered in 2021. Programs areas not shown in graph due to axis dimensions listed in appendix. Program areas listed more than once have multiple CIP codes. Additional details in Market Positioning model.

Fewer Jobs, Fewer Completions



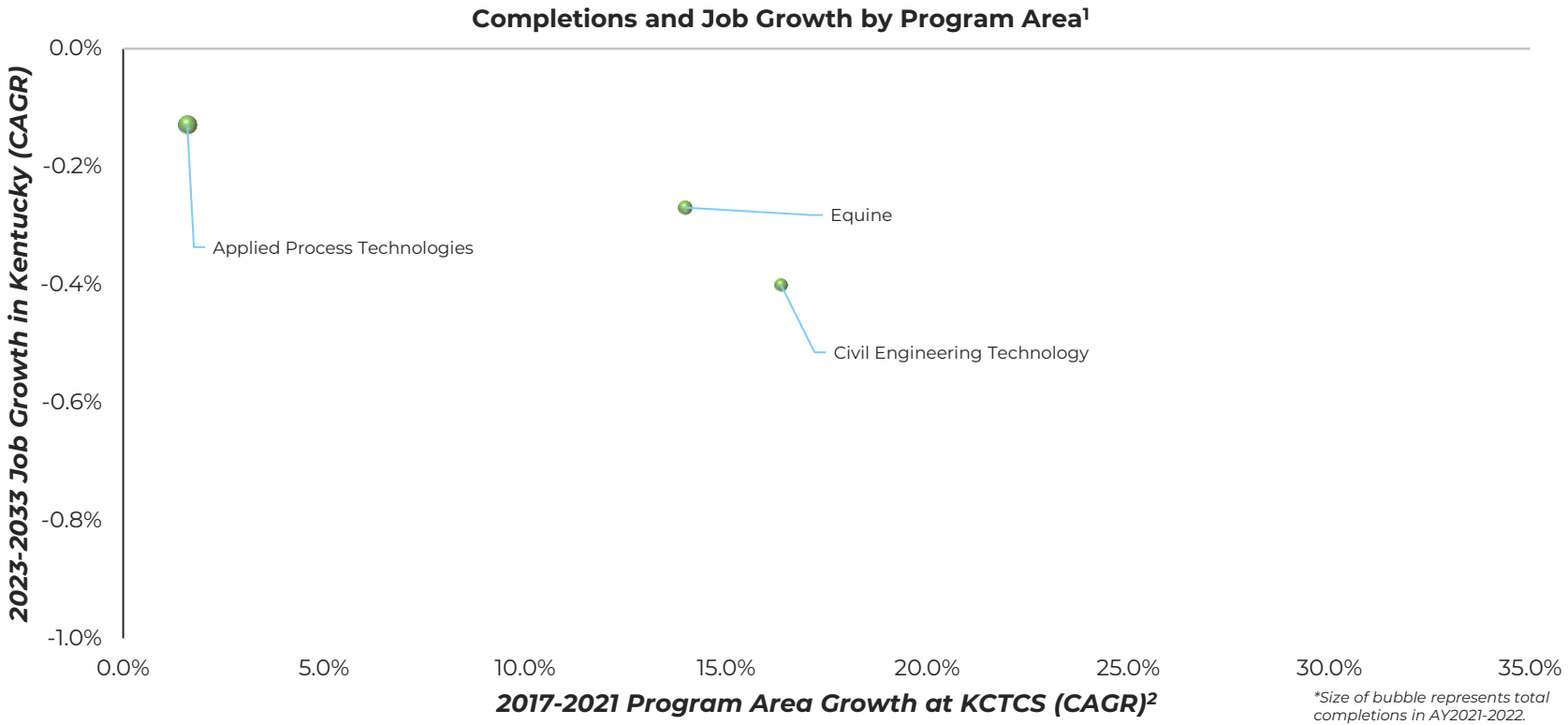
Source: Lightcast
1. Only includes technical programs due to labor market relevancy. Size of bubble represents total completions in 2021. Job market data does not take into account expected wages for applicable jobs.
2. Program areas not included that started after 2017 or were not offered in 2021. Programs areas not shown in graph due to axis dimensions listed in appendix. Program areas listed more than once have multiple CIP codes. Additional details in Market Positioning model.

More Jobs, More Completions



Source: Lightcast
1. Only includes technical programs due to labor market relevancy. Size of bubble represents total completions in 2021. Job market data does not take into account expected wages for applicable jobs.
2. Program areas not included that started after 2017 or were not offered in 2021. Programs areas not shown in graph due to axis dimensions listed in appendix. Program areas listed more than once have multiple CIP codes. Additional details in Market Positioning model.

Fewer Jobs, More Completions



Source: Lightcast
1. Only includes technical programs due to labor market relevancy. Size of bubble represents total completions in 2021. Job market data does not take into account expected wages for applicable jobs.
2. Program areas not included that started after 2017 or were not offered in 2021. Programs areas not shown in graph due to axis dimensions listed in appendix. Program areas listed more than once have multiple CIP codes. Additional details in Market Positioning model.

Data Informed Opportunities

Huron compiled academic data and identified trends in order to provide leadership with the necessary information to have informed, strategic conversations.

Huron Steps

Gather feedback from KCTCS faculty and staff related to academic offerings, decisions, and processes.

Compile KCTCS historical, current, and forward-looking academic and market data.

Identify trends across academic offerings, industry, and market (e.g., academic costs).

Translating to Action

KCTCS Steps

Provide insight and additional context not easily identified in the data.

Utilize trends to strategically think through KCTCS academic landscape (e.g., grow, sustain, fix, sunset programs).

Manage data to make informed decisions and connect academic taxonomy, resource allocation, and market alignment.

The next few slides highlight potential opportunities based on insights and trends identified both in the data and in employee conversations.

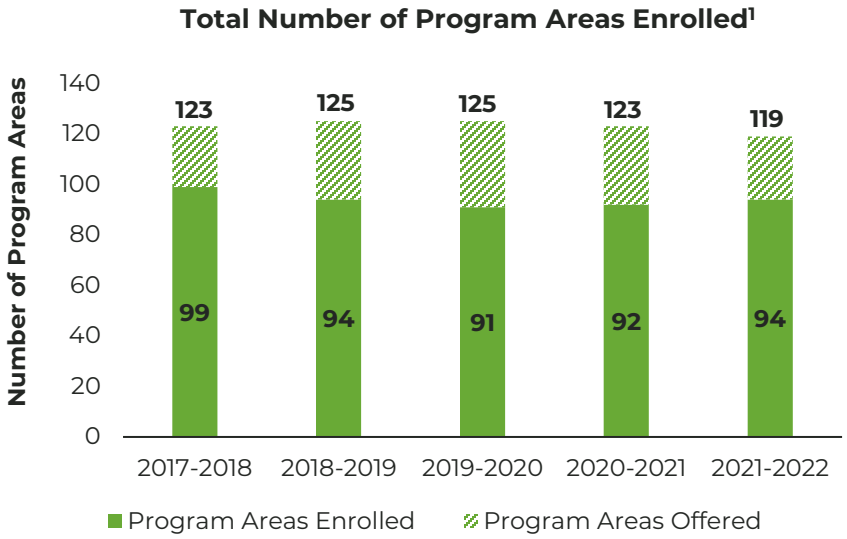
Program Offerings and Enrollment

In AY2021-2022, 21% (25 program areas) across KCTCS had no students enrolled, pointing to an opportunity to review current offerings.

Case for Change

- In AY2021-2022, KCTCS had **students enrolled in 94 of 119 offered programs areas**, which points to the **large number of under-utilized program offerings**.
- KCTCS employees noted that the process of suspending programs differs at the **local versus organization-wide level**. College-level program suspension decisions are made **locally**. Thus, programs are not able to be suspended across the entire organization until it is suspended at the **last college that offers it**.
- This process leads to a **lengthy program suspension process**, which results in an **abundance of offerings** despite program enrollment trends.
- The number of offerings and program enrollment trends point to an opportunity for KCTCS to **review current offerings** as well as **refine current program-related processes** (e.g., program suspension).

Program Area Enrollment Trends



Source: Student Enrollment Data
1. Total Number of Program Areas takes the distinct count of programs areas that students enrolled in across the 16 colleges

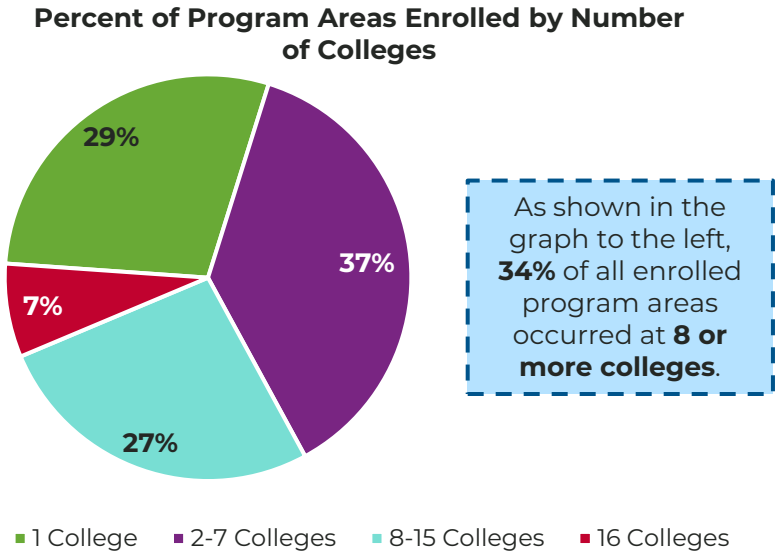
Program Sharing

With the abundance of programs offered across the organization, KCTCS has an opportunity to increase program sharing across the colleges.

Case for Change

- In AY2021-2022, **34%** of enrolled program areas had enrollment at **8 or more colleges**.
- This demonstrates that students across the colleges are enrolling in **similar program areas** (i.e., consistent **in-demand offerings**).
- KCTCS employees noted that colleges engage in **program sharing** often as a result of conversations across cross-college academic leadership.
- Employees noted that select shared programs engage in resource sharing, such as the **use of one college** as the **satellite campus** for certain courses.
- Increasing program sharing across the organization will allow the colleges to increase **resource sharing**, which will improve **resource efficiency**, **reduce academic costs**, and withhold **in-demand programmatic offerings**.

Program Area Enrollment Consistencies



As shown in the graph to the left, **34%** of all enrolled program areas occurred at **8 or more colleges**.

Source: Student Enrollment Data

Program Inventory Management (1/2)

Employees across KCTCS noted the complexity in the processes related to creating and suspending programs, pointing to the need for refined processes.

Observations & Considerations

The processes for **creating** and **sunsetting** a program at KCTCS vary in terms of **decision-making authority** and **process duration**.

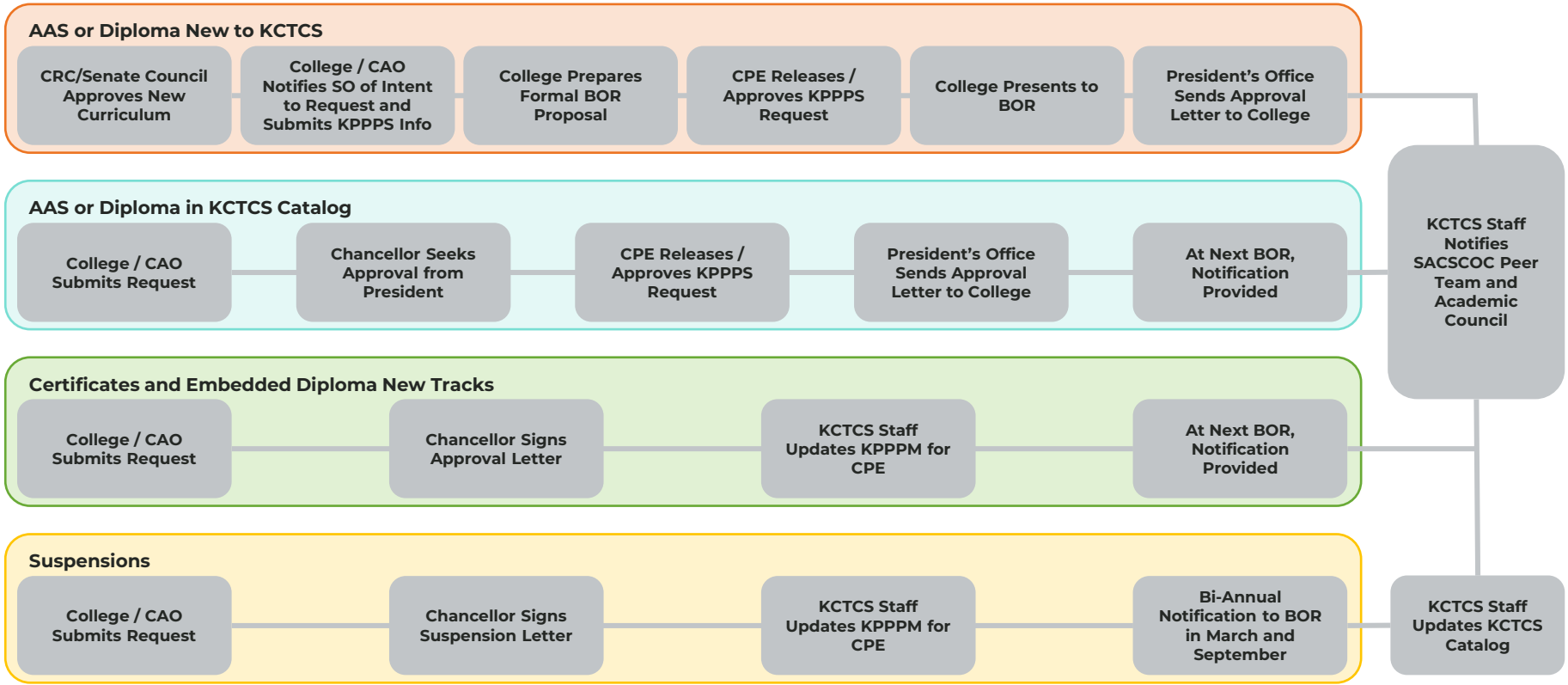
In creating a degree, the decision makers are the **college**, **System President**, **CPE**, and the **Board of Regents**. On the other hand, colleges **make program suspension decisions locally** and report to the Board; organization-wide program suspension can occur after the **last college** that offers the program suspends it.

KCTCS created an **expedited process** for the addition of programs that already exist across the organization, which employees noted has helped simplify the process.

KCTCS has an opportunity to **refine** the current program creation and suspension processes to ensure **comprehensive understanding** of the processes as well as **alignment** amongst **academic offerings** and **organization-wide and market trends** (i.e., enrollment).

Source: KCTCS Workstream Leads

Program Inventory Management (2/2)



Source: KCTCS Workstream Leads

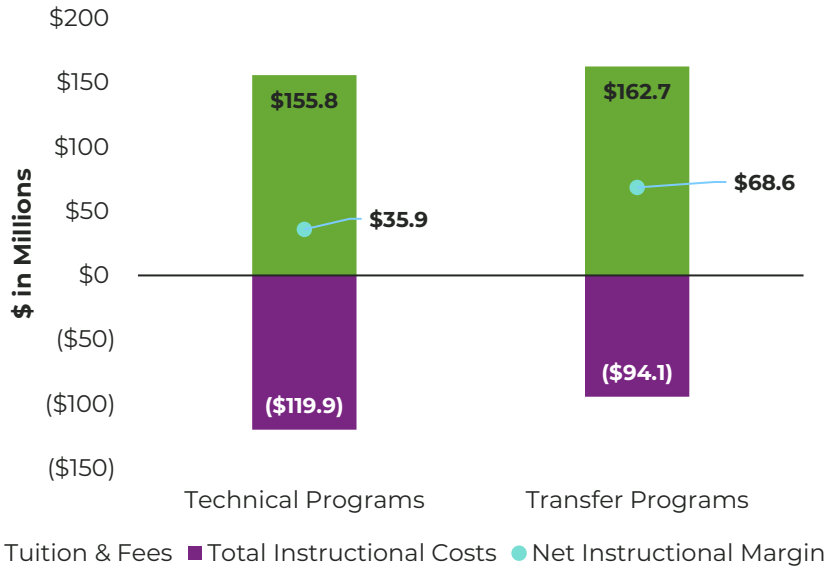
Technical and Transfer Programs

In AY2021-2022, technical programs across KCTCS generated less revenue and were more expensive than transfer programs, pointing to the need for both programmatic offerings.

Case for Change

- Individuals across KCTCS noted that technical programs often require more **advanced resources**, such as special equipment and highly trained faculty members, which drives up the **academic costs** for these programs.
- Transfer programs typically involve more general education courses, making them **less expensive** than technical programs.
- In AY2021-2022, transfer programs made over **50% of total revenue** and **cost a total of 20% less** than technical programs. Further, transfer programs net instructional margin was **2x** that of technical programs.
- While technical programs yielded a positive net instructional margin in AY2021-2022, the total margin would be **66% less**[2] ($68.6M) without the offering of transfer programs.
- Offering transfer programs ensures **financial stability** across KCTCS and helps provide the necessary **resources** and **investment** for technical programs.

AY2021-2022 Net Instructional Margin by Program Type[1]



Source: Cost to Educate Model; Financial Aid Data

1. Margin analysis only takes credit-seeking courses and program areas into account. Non-credit or dual enrollment courses not included. Operating expenses are tied to the business unit rather than the program area. For that reason, overhead costs are equally distributed across all program areas by credit hour regardless of program type (i.e., technical vs. transfer).
2. Sunsetting or shifting programs will not realize immediate monetary impacts. Additional analysis is required to determine financial impact.

Tuition Differential / Course Charges

Although most technical programs are costly for colleges, KCTCS does not differentiate tuition based on program type, highlighting an opportunity to generate additional revenue.

Case for Change

- KCTCS individuals noted that **technical programs yield higher costs** than transfer programs. While select programs have additional course fees (e.g., nursing), not all courses **utilize course fees** and base **tuition is the same**.
- In AY2022-2023, in-state tuition is **$182 per credit hour (CH)**, and **average cost per CH** for technical programs is **$266**, which is **27% more** than transfer programs ($210).
- **Peer institutions utilize course fees**, which can provide **financial security** during **enrollment declines**.
- If KCTCS were to increase **technical course charges** and **technical program tuition**[1] **by 3-5%**, the organization could **generate** additional revenues.
- This may **require stages of review and discussion**, and KCTCS may consider **piloting with high-cost programs.**

AY2021-2022 Highest & Lowest Cost Technical Programs

Program Name	CHP[2]	Total Cost	Avg. Cost per CH
Helicopter Flight Training	75	$161,941	$2,159
Geospatial Tech.	6	$6,695	$1,116
Orthotics & Pros. Tech.	70	$55,208	$789
Unmanned Systems Tech.	159	$112,898	$710
Fixed Wing Flight Training	301	$192,951	$642
Mechatronic Systems	31	$4,262	$138
Financial & Customer Services	21	$2,715	$129
Medical Admin. Services	479	$56,717	$119
Business Foundations	44	$4,905	$112
Horticulture	12	$1,305	$109

☐ Most Expensive Technical Programs ☐ Least Expensive Technical Programs

Some technical programs are more costly than others, which points to the need for **differentiated tuition.**

Intended Outcome(s)	Perceived Service Impact	Financial Impact	Low	High
Revenue Generation	●●●	●●○	$2.8M	$4.7M

Source: KCTCS Interviews and Focus Groups; KCTCS Tuition Rates; Cost to Educate Model; https://kctcs.edu/affording-college/tuition-costs/tuition-charges.aspx
1. Additional tuition revenue estimate utilizes in-state tuition rate. 3-5% increase is based on peer institution program-specific tuition or fees, which were 5% higher than general in-state tuition.
2. CHP = Credit Hours Produced.

Faculty Credit Hour Production (1/2)

Across the 16 colleges, credit hour production varies by faculty type, pointing to the disparity in job duties and an opportunity for standardized position responsibilities.

Observations & Considerations

The **number of credit hours** produced by each faculty type **differs by college** often due to **varying faculty mix** and the **autonomy** that colleges have in creating **faculty effort expectations**.

Individual credit hour production also **varies within colleges**, with faculty members producing a **range of credit hours**[1] despite falling under the same faculty type.

Individuals across KCTCS pointed to the **disparity across similar jobs** and the **frustration** this causes due to **lack of appropriate compensation** and **inability to provide standard training and resources**.

An opportunity exists to further standardize faculty **position responsibility expectations** to create increased **cross-college collaboration**, decreased **job ambiguity**, and boosted **employee morale**.

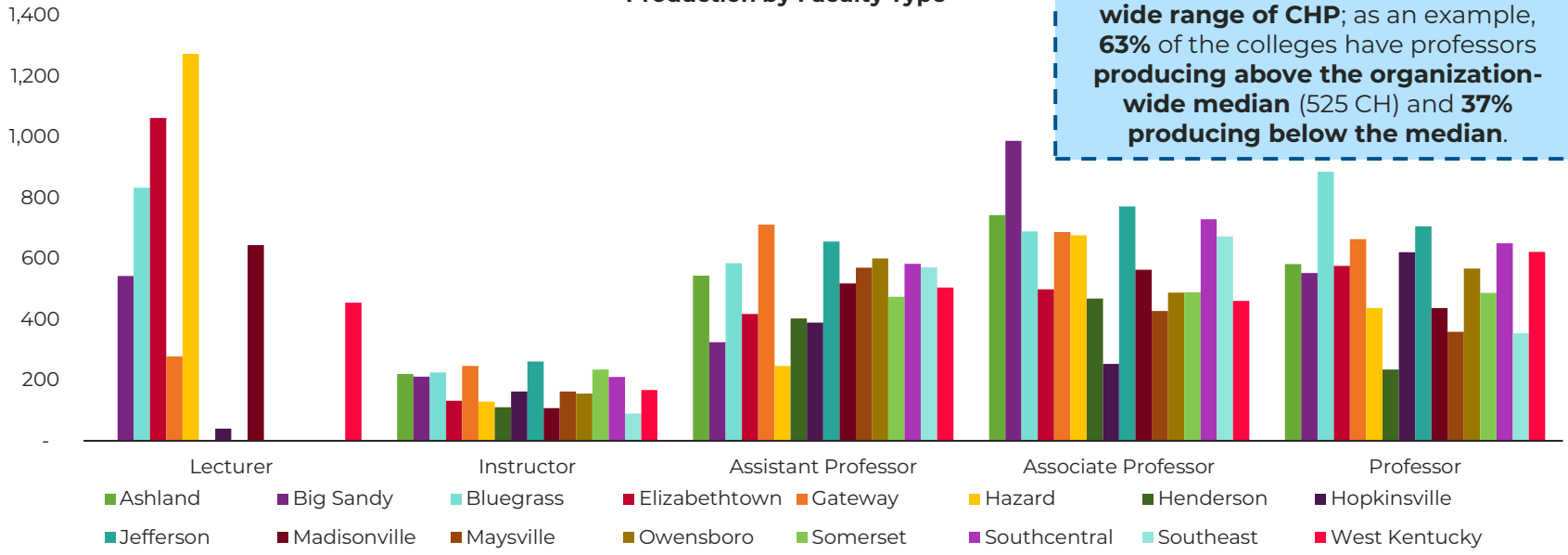
The following slide highlights the inconsistency in credit hours produced by faculty type across the organization.

Source: Cost to Educate Model; KCTCS Interviews and Focus Groups
1. Additional details related to intra-college variance in the appendix.

Faculty Credit Hour Production (2/2)

Comparing median credit hour production (CHP) by faculty type across the colleges further depicts the discrepancies that exist with faculty position responsibilities.

Median Credit Hour Production by Faculty Type[1]



Looking across this graph displays **the wide range of CHP**; as an example, **63%** of the colleges have professors **producing above the organization-wide median** (525 CH) and **37% producing below the median**.

Source: Cost to Educate Model
1. Faculty includes any individual teaching a course in AY2021-2022 (i.e., adjuncts and full-time faculty).

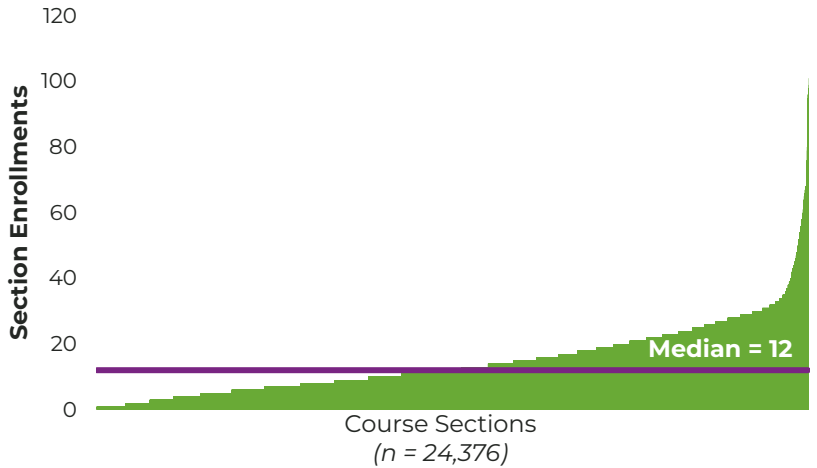
Section Enrollments

Further examining sections that fall below the organizational median enrollment of 12 presents an opportunity for increased efficiencies and reduced costs.

Case for Change

- In AY2021-2022, a total of **24,376 sections**[2] were taught across KCTCS. About **47%** (11,424) had **less than the median (12) enrollment** and **15%** (3,529) had **fewer than 5 students**.
- Smaller sections are important in that they **accommodate student needs** by providing more one on one support and may be necessary due to **pedagogy**.
- Huron notes that due to how KCTCS tracks **overload courses**, it is also possible that the **number of below median sections is inflated**.
- Reducing 5-10% of offerings with fewer than 5 students[3] will result in **cost savings of $917K - $1.8M** in instructor compensation and will further **consolidate redundancies**, **maximize faculty effort**, and **redeploy savings towards strategic activities**.

Course Enrollment[1] by Section



Intended Outcome(s)	Perceived Service Impact	Financial Impact	Low	High
Cost Savings	●●○	●●○	$917K	$1.8M

Source: Cost to Educate Model
1. Course Enrollment is total student headcount in AY2021-2022.
2. Sections include lectures, labs, practicums, clinicals and co-ops. Dual credit and non-credit sections are excluded.
3. Huron recognizes that CPE defines low-enrollment as sections with 10 students. 5 student threshold was used to account for data error and avoid over inflation of savings.

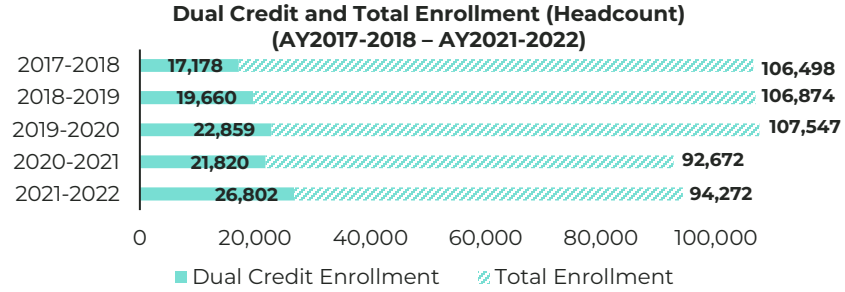
Dual Credit

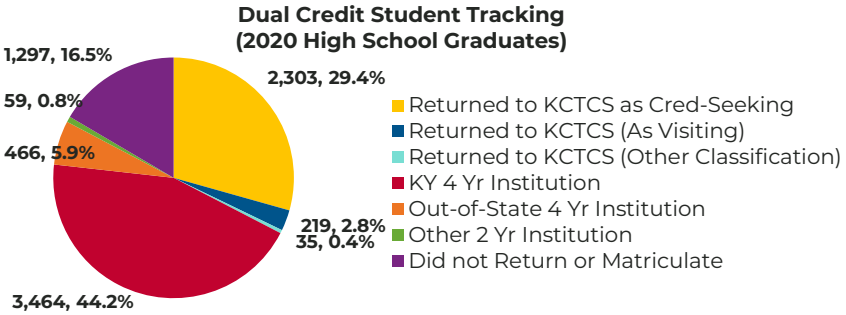
Even with overall declining enrollment, KCTCS dual credit enrollment has increased, pointing to an opportunity to enhance resources and increase KCTCS return rates.

Case for Change

- Over the past five years, dual credit enrollment has increased by 56% and in AY2021-2022, **dual credit students made up around 1/3 of the student body**.
- Kentucky high school students who **enroll in dual credit at KCTCS** are **more likely to enroll at KCTCS** than those who do not enroll in dual credit at KCTCS. However, **more** dual credit students enroll in a **4-year institution than KCTCS**[1].
- Today, dual credit students **pay 50% less in tuition**[2] than a traditional in-state student. Colleges have to **waive the other 50%**, which creates barriers in increasing resources.
- Opportunities exist for KCTCS to reevaluate both the internal and external dual credit structure, such as:
  - Internal: **Invest money into more resources** (e.g., advising and technology) to increase student engagement and KCTCS return rates.
  - External: Collaborate with CPE and the Kentucky Department of Education on **leveraging dual credit more intentionally** across the school districts.

KCTCS Dual Credit Trends





Source: KCTCS Interviews and Focus Groups; KCTCS Tuition Rates; KCTCS Course Offerings; KCTCS Enrollment Data; KCTCS ORPA Dashboard
1. CPE, the Kentucky Center for Statistics, and KCTCS performed a study to assess the success of dual credit students. This bullet point summarizes some of their findings.
2. Dual credit tuition is set by legislation.

Transfer Pathways

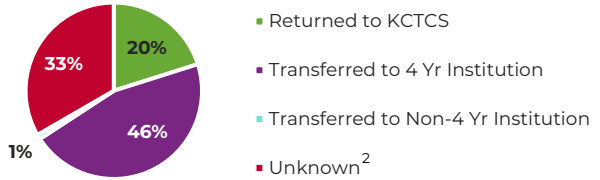
The number of students who choose not to transfer and declining transfer enrollment at 4-year institutions, points to an opportunity to strengthen transfer pathways across KCTCS.

Case for Change

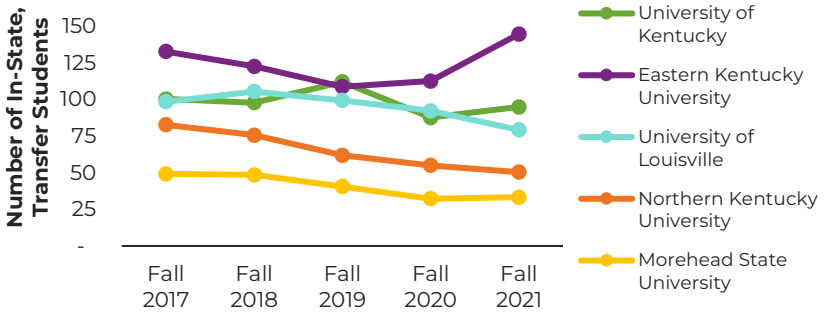
- KCTCS has established **250+ transfer pathways**[1], with **~28,400 students**[2] enrolled in transfer programs.
- In recent years, **47% of students**[2] that completed a transfer program **transferred to another institution**.
- Looking across KCTCS's established public partners, general trends have shown a **decline in the number of in-state, transfer students enrolled**.
- KCTCS employees noted that transfer programs are a large portion of the **organization-wide mission** but not enough resources (e.g., advisors) nor investment dedicated to transfer students exists.
- KCTCS has an opportunity to **strengthen transfer pathways** through:
  - Improved **data management** (e.g., student tracking)
  - Increased **internal engagement** (e.g., transfer center, advising)
  - Increased **external engagement** (e.g., partner institutions)

Transfer Student Completion and Enrollment Trends

Transfer Program Student Outcomes AY2015-2016 – AY2019-2020



In-State, Transfer Enrollment Trends



Source: IPEDS; KCTCS Transfer Programs; KCTCS Academic Leadership

1. This number accounts for established pathways with Kentucky postsecondary schools. More pathways with non-Kentucky partners and online partners exist but are not tracked.
2. Student count from student enrollment data file and may be inflated due to the way students are tracked. Transfer programs include AA/AS, Women's Studies, Appalachian Studies, African American Studies, Visual Art.
3. Unknown refers to students that did not transfer nor return to KCTCS.

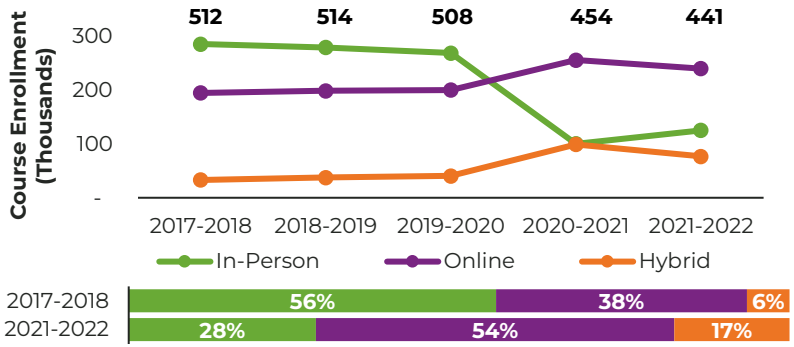
Online Courses

With the shifts to online and hybrid learning in recent years, opportunity exists for KCTCS to increase their online presence and equip instructors with additional teaching resources.

Case for Change

- Since 2020, **course modality has shifted** across higher education from primarily in-person to a combination of **online and hybrid learning approaches**.
- If KCTCS were to **increase online course enrollment by 0-.05%**[1], while maintaining their in-person and hybrid course enrollment, the organization could **generate up to $588K** through additional tuition revenues.
- In addition to **increasing online course enrollment** or **number of online course sections**, KCTCS should ensure faculty and instructors have the **training and resources** to navigate the evolving environment. This may include:
  - Additional **annual** online instructor **training programs** (e.g., technology, pedagogy, etc.)
  - **Centralized** tools, documents, and best practices

AY2017-2018 – AY2021-2022 Course Enrollment Trends



Since AY2017-2018, KCTCS **online and hybrid course enrollment increased 23% and 132%**, respectively, while in-person enrollment fell by -56%, mostly driven by COVID-19.

Intended Outcome(s)	Perceived Service Impact	Financial Impact	Low	High
Revenue Generation	●○○	●●○	$0	$588K

Source: KCTCS Meeting Patterns Data; KCTCS AY2017-2018 – AY2021-2022 Enrollment Data; KCTCS AY2017-2018 – AY2021-2022 Course Offerings Data; KCTCS Tuition Rates
1. Additional online tuition revenue is calculated using AY2022-2023 tuition rate for online courses, which is $182 per credit hour, and the average credit hours taken by a student in AY2021-2022, which is 2.7 credit hours. The 0-05% range was to account for any current students that may move between modalities as opposed to net new student enrollment in online and hybrid courses.

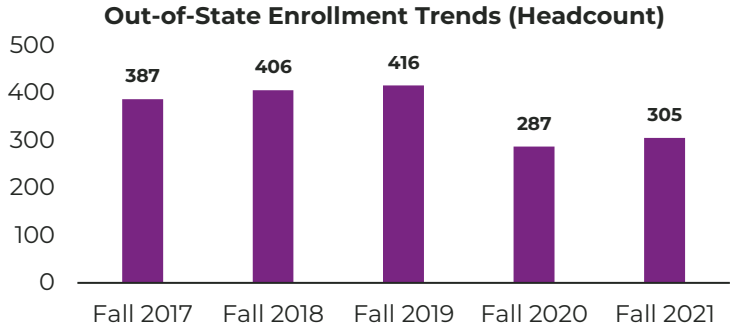
Out-of-State Enrollment

Due to declining enrollment across KCTCS, the organization should consider recruiting differing student populations, such as non-Kentucky residents.

Case for Change

- In recent years, community college enrollment has declined; since fall 2017, KCTCS has declined by **-2.5%**.
- Historically, Kentucky **in-state students have made up 99%** of total fall enrollment.
- At KCTCS, **four separate rates for out-of-state tuition** exist, with Kentucky contiguous counties, online students, and select states with reciprocity agreements receiving discounted tuition rates.
- KCTCS has the opportunity to **further invest in out-of-state enrollment strategies**, such as **increased/targeted marketing around the existing reciprocity rates.**
- Increasing out-of-state enrollment by 25-35%[1] could generate **$63 - $88K** in **additional revenue[2]**.

KCTCS Total and Out-of-State Student Enrollment[3]



KCTCS has had low out of state enrollment, averaging **0.5% of total fall enrollment** over the past five years. This is comparable to peers, who range between 0.3% and 0.7%.

Intended Outcome(s)	Perceived Service Impact	Financial Impact	Low	High
Revenue Generation	●○○	●○○	$63K	$88K

Source: IPEDS; https://www.insidehighered.com/news/two-year-enrollment-trends
1. Percent increase based off increasing to average out-of-state enrollment in the pre-pandemic years which is 403 students.
2. Revenue is calculated using the average of AY2022-2023 out-of-state tuition rates ($341/CH), and the average credit hours taken (2.7 CH). Revenue is further reduced by 10% to account for marketing expenses (spending ~$100 in marketing expenses per additional student).
3. Out of state students includes any student who resides in a state outside of the institution.

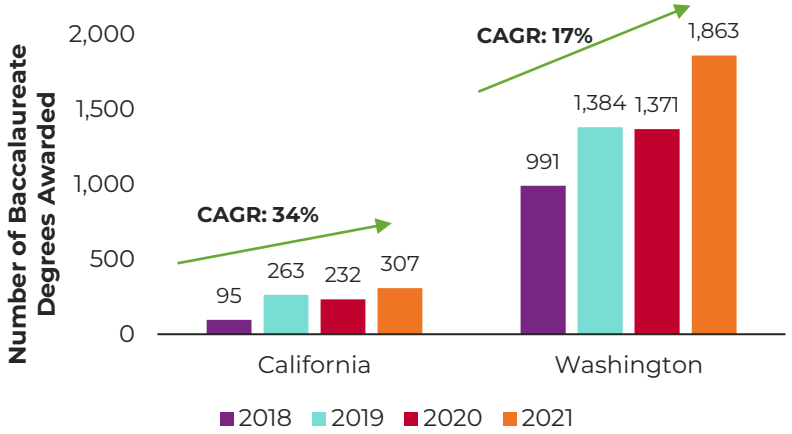
Baccalaureate Degree Offerings

Community colleges across the US have begun to offer baccalaureate degrees to increase accessibility and expand opportunities for students entering the workforce.

Case for Change

- Individuals across KCTCS have voiced interest in offering baccalaureate programs to meet both **internal (i.e., students) and external (i.e., workforce) demand**.
- Across the country, 23 states and 121 community colleges now offer baccalaureate degrees to increase **financial accessibility**, **expand post-grad opportunities**, meet **workforce demand**, and **maintain transfer students**.
- While offering baccalaureate degrees could lead to **additional revenue** through **increased enrollment**, KCTCS must consider the following external factors to ensure programmatic offerings are **equitable**, **non-duplicative**, and **policy-abiding**:
  - **Regional need** (i.e., local access to baccalaureate degrees)
  - Kentucky **higher education landscape** (i.e., neighboring 4-yr institutions' offerings)
  - Kentucky **legislative landscape** (e.g., education-specific bills)

Baccalaureate Degrees Awarded by Community Colleges[1]



Trends across peer states indicate **growing student demand for baccalaureate degrees** at community colleges.

Source: IPEDS; California Community College System; New Bachelor's Degrees Offered at Community Colleges; CCBD Programs by State
1. California and Washington displayed because they had corresponding baccalaureate degree data for community colleges in IPEDS.

5

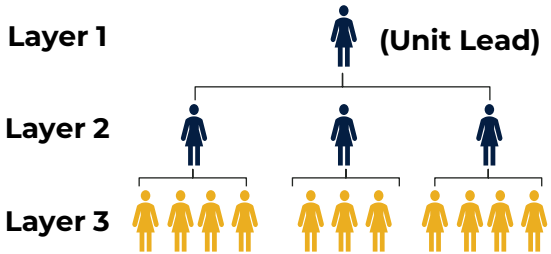
Financial and Organizational Assessment

Spans & Layers: Methodology (1/2)

Spans and Layers is a tool allowing Huron to analyze overhead structure by assessing the width and depth of an organization.

Spans (width):
Average number of direct reports per manager

Illustrative Example

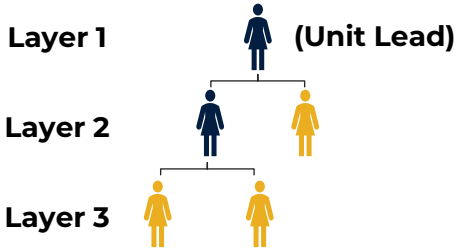


$$\frac{(4 + 11.\ \text{employees})}{4\ \text{managers}} = 3.8\ \text{average span of control (overall)}$$

Layers	3
Avg. Span	3.8 Direct Reports / Manager

Layers (depth):
Number of levels from front-line employees and lead

Illustrative Example



$$\frac{(2 + 3)\ \text{employees}}{2\ \text{managers}} = 2.5\ \text{average span of control (overall)}$$

Layers	3
Avg. Span	2.5 Direct Reports / Manager

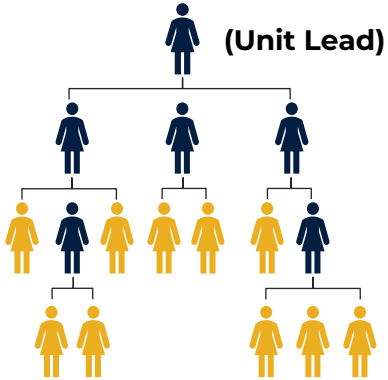
= Managers

= Direct Reports (Individual Contributors)

Spans & Layers: Methodology (2/2)

Spans and Layers is a tool allowing Huron to analyze overhead structure by assessing the width and depth of an organization.

Spans & Layers:
Average span of control for supervisors at each layer of the organization

Layer	Example	# of Supervisors	# of Employees	Avg. Span of Control
Layer 1		1	1	3 Employees (Layer 2) / 1 Manager (Layer 1. = **3.0 DR / Manager**
Layer 2		3	3	7 Employees (Layer 3) / 3 Manager (Layer 2) = **2.3 DR / Manager**
Layer 3		2	7	5 Employees (Layer 4) / 2 Manager (Layer 2) = **2.5 DR / Manager**
Layer 4		0	5	**N/A (no supervisors)**

For each layer *n*... $\frac{\text{\# employees in layer } n+1}{\text{\# managers in layer } n}$ **= average span of control in layer *n***

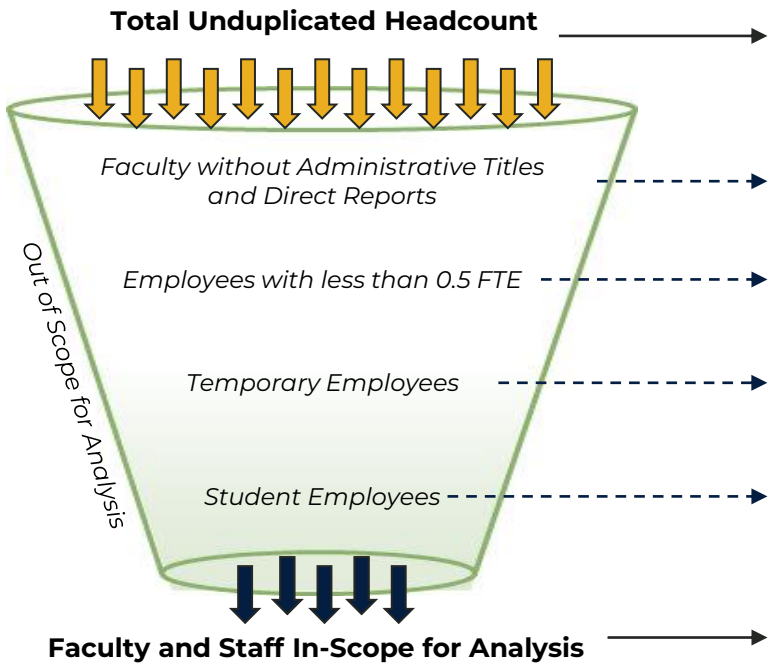
= Managers = Direct Reports (Individual Contributors)

Spans & Layers: Span of Control Variation

Although there is no “right size” that fits all organizations, too few or too many spans or layers may impact organizational and operational effectiveness.

Spans and Layers: In-Scope Population

For the most accurate results, the employee census is refined to include in-scope employees.



Total Employees (Vacancies not included)	4,818
Faculty without Administrative Titles or In-Scope Direct Reports	**(1,402)**
Employees with less than 0.5 FTE	**(413)**
Temporary Employees	**(397)**
Student Employees	**(34)**
"In Scope" Employees	**2,572**

Source: KCTCS Org Chart 1.02; KCTCS Employee Census. This analysis includes all sixteen colleges and the System Office.
1. Employees without Nov. 2022 census information were also excluded from the analysis – this impacted 56 employees.

Spans and Layers Cost Savings

Estimates of cost savings associated with the analysis are predicated on restructuring that reallocates supervisory responsibility, therefore increasing the average span of control.

	Before				After					
	Avg. Span	# Mgrs	% 3 or Fewer	Layers	Avg. Span	% Reduction in Managers	# Mgrs	% 3 or Fewer	Layers	Savings[1]
College #1	3.5	218	60%	9	4.3	20%	178	47%	7	$2.3 - $2.8M
College #2	3.8	436	61%	7	4.6	20%	350	49%	7	$2.8 - $3.7M
College #3	4.1	450	58%	9	4.6	12%	398	49%	8	$2.5 - $3.5M
College #4	3.7	449	58%	9	4.6	20%	362	48%	8	$0.5 - $2.1M
College #5	3.8	362	58%	7	4.2	16%	304	50%	7	$2.2 - $3.0M
KCTCS	**3.7**	**700**	**64%**	**8**	**4.1 – 4.6**	10% – 20%	**560 – 630**	TBD	6 – 7	**$5.2 – $10.3M**

To realize savings through span of control, Huron recommends that KCTCS take a strategic and collaborative approach by engaging employees and considering implementation challenges.

Source: KCTCS Org Chart 1.02; KCTCS Employee Census. This analysis includes all sixteen colleges and the System Office.
1. Calculated by taking the avg. supervisor salary of $73,666 and multiplying by reduction in managers.

Organization-Wide Spans and Layers

Based on findings from the Spans and Layers analysis, opportunity exists for cost savings through the reallocation of managerial capacity within the entire KCTCS organization.

Case for Change

- **64% of managers supervise 3 or fewer** direct reports, while 12% supervise 7 or more direct reports.
- **On average, managing 5-7 reports** across supervisors may help achieve the following operational efficiencies:
  - Expands a supervisor's **management experience and capabilities**
  - Provides **management opportunities** to additional employees
- While the institutional average span of control is 3.7, **six colleges have a lower average**, highlighting opportunity to **reallocate managerial capacity**.

Spans and Layers

Layer	Span Size	Employee Count	Managers	Avg. Span
1	President	1	1	26.0
2		26	23	6.9
3		159	124	5.5
4		682	326	3.2
5		1,051	181	3.0
6		541	43	2.2
7		96	2	8.0
8	-	16	0	N/A
Total	**-**	**2,572**	**700**	**3.7**

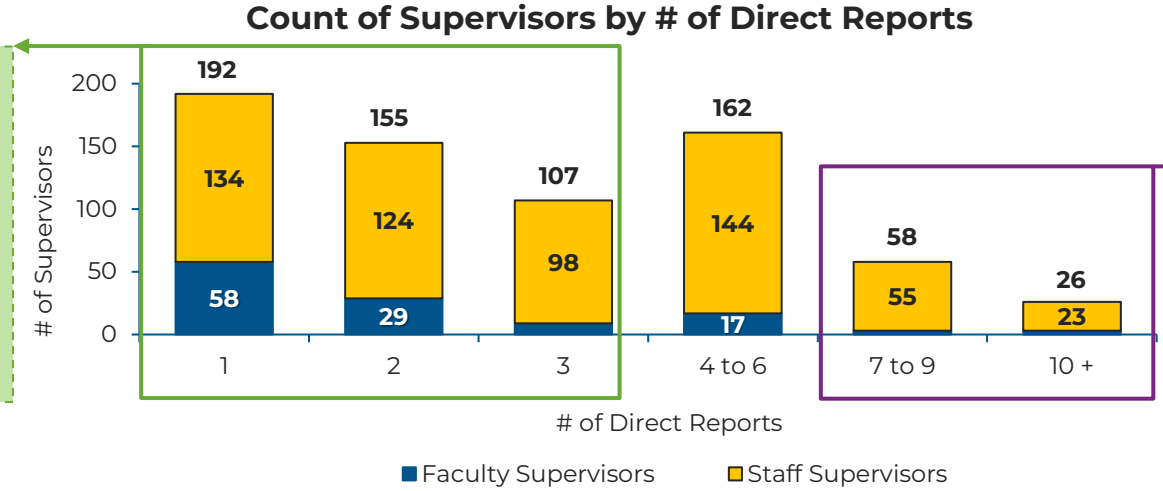
Intended Outcome(s)	Perceived Service Impact	Financial Impact	Low	High
Cost Savings	●●○	●●●	$5.2M	$10.3M

Source: KCTCS Org Chart 1.02; KCTCS Employee Census. This analysis includes all sixteen colleges and the System Office.
1. Employees working less than 0.5 FTE or who held out-of-scope roles like student and temporary were excluded from the analysis.

Count of Supervisors by Direct Reports

The majority of supervisors across the organization manage three or fewer individuals, indicating an opportunity to address and reallocate managerial capacity.

64% of supervisors have three or fewer direct reports, highlighting potential areas of **micromanagement** and limited **trickle-down communications**.



12% of supervisors have 7 or more direct reports, highlighting a potential for high managerial burden.

A high count at either end of the supervisory spectrum may indicate an opportunity for greater efficiency through the reallocation of time and resources.

Supervisory Title without Direct Reports

Supervisory titles across KCTCS reflect disparate levels of managerial responsibilities, presenting opportunities for savings by rationalizing titles and reducing salary premium.

Case for Change

- **197 employees** have supervisory titles[1] without in-scope[2] reports, totaling **$10.9M** in total salaries.
- Supervisory titles without direct reports **may be necessary** as employees oversee strategic partnerships, students, or other areas not included in the analysis.
- **479 employees** have supervisory titles and have in-scope reports, totaling **$36.8M in total salaries**. On average, supervisors with direct reports **earn $21,396** more than those without reports.
- Individuals across the organization noted **lower compensation than market rates**; the organization may have addressed the need for increased compensation through title changes.
- Relying on title changes for increased compensation will be addressed in the **compensation, classification, and equity project**.

Supervisory Titles without Direct Reports

Business Unit	Count
Ashland	3
Big Sandy	12
Bluegrass	30
Elizabethtown	12
Gateway	11
Hazard	9
Henderson	6
Hopkinsville	2
Jefferson	16
Madisonville	7
Maysville	9
Owensboro	5
Somerset	18
Southcentral KY	6
Southeast KY	9
System Office	38
West KY	4
Total	**197**

Source: KCTCS Salary Schedule; KCTCS Org Chart; KCTCS Employee Census
1. Supervisory titles are those that include any of the following: Dean, Supervisor, President, Manager, Director, Lead, Chair.
2 Student, temporary, and vacant positions were excluded from the analysis. The 197 supervisory titles without direct reports may be supervising these positions.

Vacancy Assessment

Opportunity exists for a more consistent process for evaluating vacancies, as KCTCS has 2,115 current vacancies within the organization.

Case for Change

- KCTCS organization-wide currently has **2,115 vacant positions**[1] (both budgeted and not budgeted), 112 of which have never been occupied. **27% of the vacant positions have "last occupied" dates prior to 2020**, which means that these previously occupied positions have been unfilled for over 2 years.
- **Jefferson and Bluegrass** account for almost a third (31%) of all vacant positions.
- KCTCS colleges and the System Office currently **review and manage vacancies differently** which makes determining financial impact challenging.
- Opportunity exists to **review vacant roles and assess closing low-priority positions**. In addition, colleges and the System Office should **consider establishing a standard process for assessing vacant positions**, including **connecting vacancies with their budget allocation**.

Count of Vacancies Last Occupied

Years	Vacancies Count	% of Total
Never Occupied	112	5%
Prior to 2013	16	1%
2013	1	0%
2014	2	0%
2015	8	0%
2016	109	5%
2017	76	4%
2018	171	8%
2019	199	9%
2020	293	14%
2021	374	18%
2022	648	31%
2023	106	5%
Total	**2,115**	**100%**

Source: KCTCS Vacant Positions Report
1. This includes active and inactive positions.

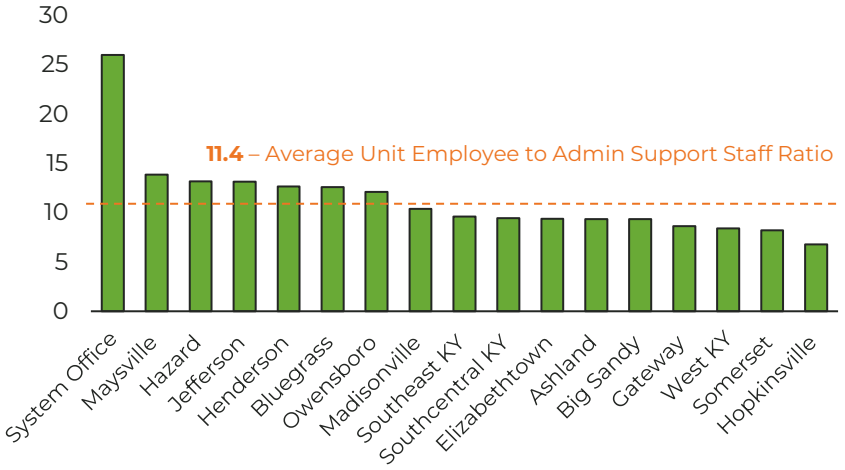
Consolidation of Administrative Support

KCTCS organization-wide spends $13.2M on admin support[1]; opportunity exists to share resources to consolidate work, reduce duplicate effort, and achieve capacity gains.

Case for Change

- The KCTCS organization manages **386 administrative support** employees, which amounts to **$13.2M in total salaries** with an **average salary of $34,188**.
- Administrative support staff are **the largest family of staff employees**, and **the second most expensive** family. Student Affairs was the most expensive at $17.7M.
- **Sharing resources across units** for those with similar work functions could consolidate work, thus allowing for **greater standardization** and clarity of effort, **limited duplication**, and **cost savings**.
- If KCTCS were to increase its admin support ratios to **10:1 or 15:1**[2], the organization could **save between $854K and $3.4M** through the sharing of resources.

Unit Employees to Administrative Support Staff Ratio



Intended Outcome(s)	Perceived Service Impact	Financial Impact	Low	High
Cost Savings	●●●	●●○	$854K	$3.4M

Source: KCTCS Salary Schedule; KCTCS Org Chart; KCTCS Employee Census
1. Administrative Support Staff were determined by utilizing KCTCS-provided job families.
2. 10:1 and 15:1 ratios were determined based on best practices from previous engagements..

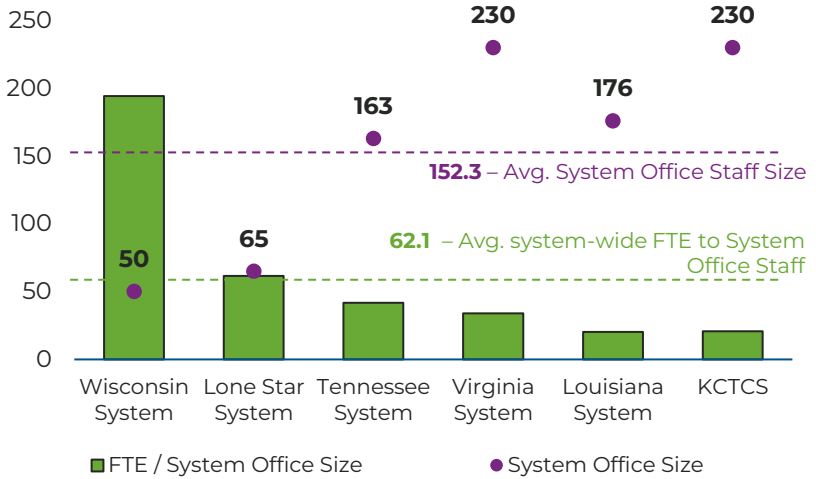
Staffing Comparison with Peers

Based on comparisons of KCTCS organization staffing to peer systems[1], opportunity exists to redistribute System Office staffing to be more in line with peer-set norms.

Case for Change

- KCTCS had 4,750 employees in FY2022, making it the **fifth largest organization in terms of staffing within the ten-system peer set**.
- Regarding **total student enrollment**, KCTCS was the **third smallest organization** within the ten-system peer set.
- The **KCTCS System Office was tied for the largest** of the peer set with **230 employees**. **Technology Solutions and Fiscal/Business Affairs** job families accounted for over a third of all System Office positions (**35%, 80 total**).
- Opportunity exists to **redistribute support from the System Office** amongst the KCTCS colleges that may need more assistance and have KCTCS System Office staffing **be more aligned to peer sizes**.

System Office Sizes and Ratios of FTE to System Office Size



Intended Outcome(s)	Perceived Service Impact	Financial Impact	Low	High
Cost Savings	●●●	●●●	$1.6M	$10.9M

Source: Available Information on Institution Websites and Directories; IPEDS Historical Data; KCTCS Org. Chart
1. System Office employee data could not be found for these peer systems: Dallas College, Ivy Tech, North Carolina, and West Virginia. Low impact is a 10% reduction in total sum of System Office salaries. High financial impact is the difference between sum of salaries versus if the System Office had an FTE/system staff ratio of 62.1.

Administrative Responsibilities

The System Office and 16 colleges collaborate to "enhance the quality of life and economic vitality of the Commonwealth"[1] by dividing roles and responsibilities.

System Office 	**Assists with...**  Financial Aid; Student Services; Tech Solutions; Workforce Dev.; Marketing & Recruitment; Website Dev.	"Our role at the System Office is to **develop relationships** with the sixteen colleges, **become well versed on their workings and needs** and **help them create excellent experiences** for our students."
16 Colleges 	**Responsible for...**  Academics & Student Services; Budgeting & Finances; Human Resources & Operations; Enrollment, Marketing & Fundraising; IT & Data Management	"Our mission is to improve the **quality of life and employability of the citizens** of the Commonwealth by serving as the primary provider of: **College and Workforce Readiness, Transfer Education, and Workforce Education and Training**"

Is this the optimal split of responsibilities between the System Office and colleges? What administrative functions could be more shared or independent for maximum effectiveness?

Source: KCTCS System Office, KCTCS Mission
1. KCTCS Mission Statement.
*Slide is not intended to be an exhaustive list of all responsibilities of the System Office and colleges but highlight a few key administrative functions.

Leadership Structure

The System Office President currently oversees 26 direct reports. Comparing the reporting structure with peers may highlight areas to realign and restructure.

System (# of Colleges)	Title of System Lead	Title of College Lead	# of DR	College Leaders[1]	Academic & Student	Finance & Ops.	External	Legal	IT	Other
KCTCS (16)	**President**	**President**	26	16	1	4	2	1	1	1
Dallas College (7)	Chancellor	President	12	7	2	2	1	0	0	0
Ivy Tech (19)	President	Chancellor	25	19	1	2	1	0	1	1
Lone Star (7)	Chancellor	President	20	8	4	5	1	1	0	1
North Carolina System (58)	President	President	8	0	1	2	3	1	1	0
Virginia System (23)	Chancellor	President	29	23	1	3	0	1	0	1
Tennessee College System (37)	Chancellor	President	47	37	2	3	1	1	0	3
West Virginia College System (9)	Chancellor	President	16	0	4	6	1	1	0	4
Median	**-**	**-**	**22.5**	**12.0**	**1.5**	**3.0**	**1.0**	**1.0**	**0.0**	**1.0**

Key: = Above Peer Median; = Meets Peer Median; = Below Peer Median

Source: Institution Websites - Louisiana and Wisconsin were excluded because of lack of an available organizational chart or clear directories on their websites.
1. WV and NC Presidents report to institution boards. "Academic & Student" includes Academic Affairs, Student Success roles. "External": Workforce Development, Government Relations, PR roles. "Finance and Ops": Business, CFO, Facilities, HR, Audit, Assistant roles. "Other": Communications, Board Liaison, Advancement roles.

System Office Structure Opportunities

KCTCS may consider altering the System Office leadership structure to improve operations.

Clarify Leadership Titles

KCTCS could alter titles of the current System Office President, Chancellor, and College Presidents. Majority of peers **(4/7)** use **Chancellor** for the **system-level lead**, and **Provost or Vice President of Academic** as their lead of academics. This could rectify having a "President" at the System Office and college level.

Realign Administrative Reports

Peers have different reporting lines for System Office administrative functions. Most peers **(5/7)** have **HR leadership report to the administrative lead**. Majority of peers **(4/7)** also have **IT fall under the administrative lead**.

Realign Communications Reports

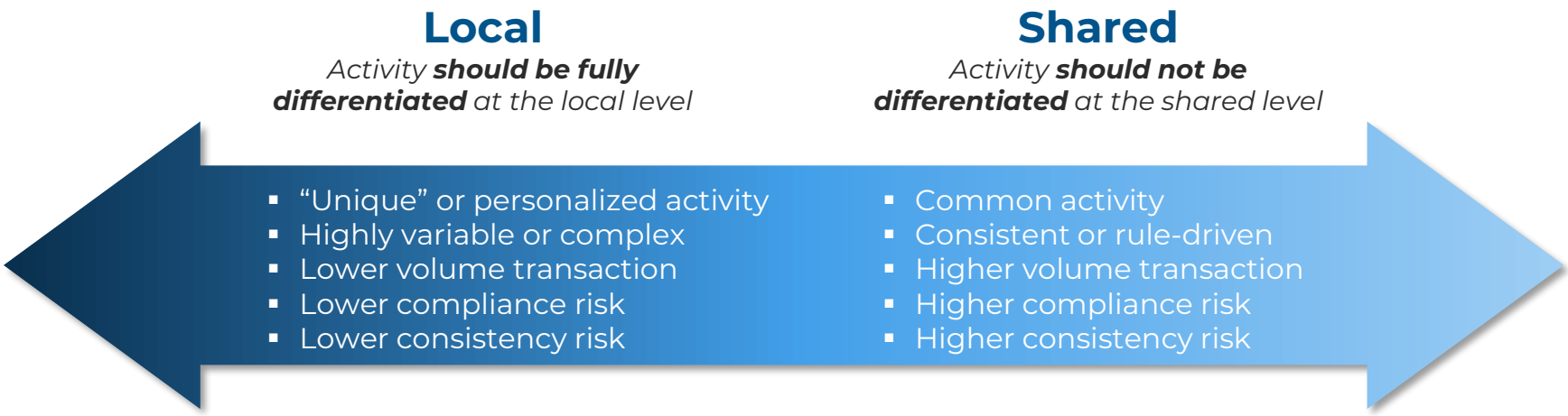
Peers have different reporting lines for System Office communications roles. Majority of peers **(4/7)** have **communications roles under the Chief Operating Officer, marketing lead,** or outside the president's direct reports.

Elevate Student Services Role

Most peers **(4/7)** have a **distinct Vice President of Student Services role** reporting to the System Office lead. KCTCS could **consider elevating a Student Services lead to the System Office President's reports** to give this area increased attention.

Service Delivery Explained

Organizations can manage its service delivery in various forms; refining the structure presents an opportunity for maximum effectiveness.



Service Delivery Outcomes

Refining service delivery enables organizations to achieve their goals with more cost-effective, expert-driven, tactical processes.

SERVICE DELIVERY

COST SAVINGS

- Economies of scale
- Efficiencies from standardization
- Ability to leverage technology investment

SERVICE

- Shift support to *experts*
- Consistent accountability standards
- Reduce back log and redundancy from small units

TALENT & CULTURE

- Consolidated training base
- Defined career pathways
- Ability to launch an organization-wide talent management strategy

STRATEGY

- Platform for shifting from transactional to decision support
- Improved use of data
- Reinvestment in mission-critical activities

Service Delivery Opportunity Areas

KCTCS manages service delivery at varying levels. Finding additional opportunities within the following areas can result in performance gains.

Opportunity		Description	Current State Examples
	**System Office Shared Service**	Managing a process or function at the system level, where multiple colleges (or all sixteen) would meet a need through the System Office. This can include transactional activities as well as strategic initiatives.	• Payroll • Legal Services • Recruitment Services • Technology Solutions
	**College Shared Service**	Sharing a process or function between multiple colleges (or all sixteen).	• Program Sharing • Tech Helpdesk
	**Local Service**	Managing a process or function at a local college level, while still utilizing the System Office for guidance.	• Hiring and Onboarding • Budgeting • Student Services
	**Outsourcing**	Contracting with a third party to manage the process or function.	• College Bookstores and Cafes • Blackboard Helpdesk

Realign Transactional Support Staff

KCTCS can more effectively gain “economies of scale” by shifting to a shared services model for certain back-office support functions or activities.

Case for Change

- Certain transactional functions/activities at KCTCS follow **a cycle for the same process** (e.g., monthly). These types of processes should be prioritized for shared services delivery.
- Functional support varies across colleges. This can lead to **key employees entering transactions** rather than focusing on strategic activities.
- KCTCS could further leverage “economies of scale” by shifting to a shared service model for specific activities. This would **provide backup support and reduce enterprise risk**, as well as **gain capacities**.
- Additionally, this gives individuals the **opportunity to specialize and gain expertise**. This **improves turnaround time**, **reduces errors**, and provides **growth opportunities.**
- The System Office currently offers shared services related to activities within procurement, human resources, technology, recruitment, and more - **an opportunity exists to extend current shared services by piloting additional transactional activities at the shared-college or shared-system level.**

Common Implementation Areas

Function	Activity Examples
Procurement	Accounts payable Travel & Expense administration
Accounting	Annual and monthly reports & reconciliations
Finance and Budget	Collect, enter, reconcile receipts of funds
Human Resources	New Hire processing and onboarding Personnel transactions

Outsource Functions or Activities

KCTCS can more effectively manage certain administrative functions by outsourcing some activities, especially functions that are difficult to hire for and complex activities.

Case for Change

- Outside KCTCS, colleges and systems have **outsourced entire functions or activities** within their operations to a third party. This is common in areas where knowledge is specialized and hard to find or retain specialists.
- Organization-wide, KCTCS currently outsources their **student helpdesk** with Blackboard and their **college bookstores** with Barnes and Noble.
- A few benefits of outsourcing include:
  - **Reducing complexity** of operations
  - **Easing burdens** of other areas (e.g., hiring, payroll)
  - Makes **expert service available** regardless of location
- A few challenges of shifting to outsourcing include:
  - **Losing control** of day-to-day decision making
  - Impacting **company culture**
- The costs associated with outsourcing activities vary on **size, scope, and complexity**. In general, savings are realized through **gained capacity** due to less management and administration.

Common Outsourcing Activities

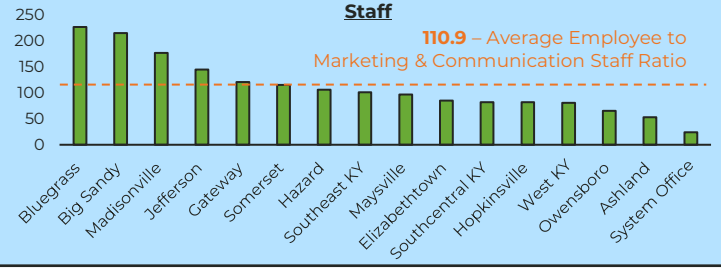
Function	Activity Examples
Accounts Payable	Invoice processing & data entry
Human Resources	Absence management (FMLA, disability leaves); background checks; benefits
Information Technology	Cloud data center infrastructure
Procurement	Strategic sourcing & category management
Student Services	Tele-health (mental health counseling)

Marketing and Branding

Current State

- **47 MarComm roles** systemwide
- MarComm roles have an **average salary of $56,421**
- Combined worth of **$2.6M in salary**
- KCTCS System Office **employs 25% of all MarComm roles** with **12 roles**

Unit Employees per Marketing and Communications Staff



Opportunity: *Marketing and Branding*

Colleges desire branding that **captures their unique identity and offerings**. In FY2022, the colleges spent $2.9M on advertising and marketing, while the System Office spent $887K. The System Office **can continue providing consistent templates and graphics to the colleges** while **allowing the colleges to have ownership over their individual messaging**. An impact of this change could include improved communication from colleges to prospective students and the local community.

Considerations for Design and Implementation

- What factors should be considered to decide whether messaging should be KCTCS-branded or college-branded?
- What data should be examined to direct marketing spend?
- What resources or staffing would the colleges need to take ownership of their brand?
- What local strengths should each college highlight?

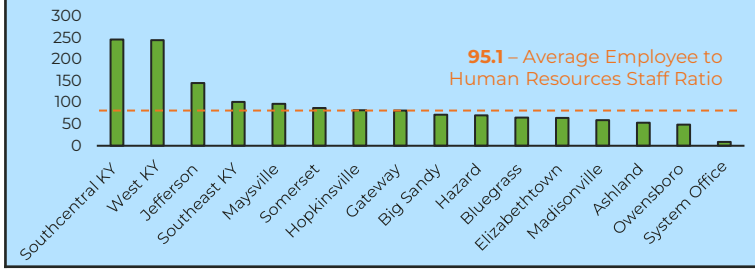
Source: KCTCS Salary Schedule, KCTCS Org Chart, KCTCS Employee Census, KCTCS Family Classification.
*Roles determined by utilizing KCTCS-provided job family for Public Affairs/Marketing. Spend determined by sum of annual salaries. Huron recognizes that there may be staff doing MarComm work not included. Costs are sum of FY22 General Ledger descriptions of "Advertising: Internet, Print, Radio, TV" and "Promotional Items".

Training and Development

Current State

- **77 HR roles** systemwide
- HR roles have an **average salary of $56,789**
- Combined worth of **$4.3M in salary**
- KCTCS System Office **employs 42% of all HR roles** with **32 roles**

Unit Employees per Human Resources Staff



Opportunity: *Training & Development*

The System Office can design and offer additional consistent **training for organization-wide tools** (e.g., Archibus) as well as programs – such as Online Learning Teaching Support – to meet specific employee needs. Additionally, **increased coordination and tracking of ongoing college-level training** could broaden reach and limit duplication. Training can continue at the **local level for detailed and nuanced** college-specific skills.

Considerations for Design and Implementation

- What current systemwide trainings can serve as leading examples?
- What college-level professional development programs can be expanded?
- What coordination exists currently? What gaps exist?
- What trainings are too nuanced to be led at a system level?

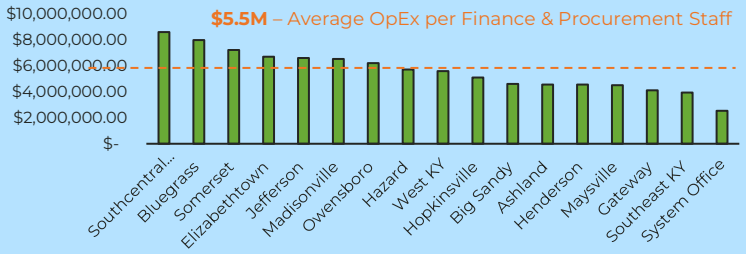
Source: KCTCS Salary Schedule, KCTCS Org Chart, KCTCS Employee Census, KCTCS Family Classification.
*Roles determined by utilizing KCTCS-provided job family for HR roles. Spend determined by sum of annual salaries. Huron recognizes that there may be staff doing HR work that are not included in this family. Training includes "Employee Education Program Exp", "Group EmpEducation/Training", and "Training Services".

Procurement Center of Excellence

Current State

- **172 finance and procurement roles** systemwide
- Finance and procurement roles have an **average salary of $57,986**
- Combined worth of **$9.9M in salary**
- KCTCS System Office **employs 21% of all finance and procurement roles** with **36 roles**

FY23 Operating Expense per Finance & Procurement Staff



Opportunity: *Procurement Center of Excellence*

The System Office can enhance its strategic sourcing and procurement practices by **establishing a center of expertise**. This model would be **responsible for managing transactional work as well as maintaining a repository of current vendors**. Employees noted that **high quantity of college-level tech-related expenses** suggest the need for increased systemwide strategic sourcing. However, **exceptions** may exist for individual colleges needing to make purchases that address their specific needs.

Considerations for Design and Implementation

- How can current procurement practices be expanded?
- What gaps exist in current procurement policies?
- What purchases could be bundled for greater cost savings?
- What purchases should be handled strictly by the colleges?

Source: KCTCS Salary Schedule, KCTCS Org Chart, KCTCS Employee Census, KCTCS Family Classification.
*Roles were determined by utilizing KCTCS-provided job family for Fiscal/Business roles. Spend determined by sum of annual salaries, no benefits included.
Huron recognizes that there may be staff doing finance work that are not included in this family.

Key Organizational Considerations

Along with structural changes across the organization, KCTCS should examine the following considerations for a more efficient workforce.

Consideration		Description
	**Clarify Roles and Responsibilities**	Ensuring there are clear and appropriate responsibilities for staff throughout a unit.
	**Redesign Processes**	Evaluating whether process outcomes can be achieved through more automated means or with different staffing.
	**Reallocate Effort**	Increasing or decreasing staff support for a given process and deciding where resources are needed elsewhere.
	**Enhance Training and Professional Development**	Providing opportunities for professional growth throughout the organization to ensure continuous improvement for employees.

Service Level Agreements

College employees voiced confusion about what the Systemwide Services budget and recharges are funding. Opportunity exists for clarification with Service Level Agreements.

Case for Change

- While the System Office reviews charges yearly with the Presidential Leadership Team, college employees continue to **express a desire to define and understand** System Office services.
- In the FY2022 budget, **Systemwide Services were $29.6M**[1]. College employees noted limited insight into what services the Systemwide Service budget and additional recharges fund.
- The System Office can design **Service Level Agreements**[2] with the colleges to increase **transparency and collaboration**. The purpose of SLAs are to:
  - Establish the **terms and conditions** under which the System Office will provide these services
  - Set forth the **responsibilities** of the colleges and System Office
  - Ensure that **expectations are aligned**
  - Provide a foundation to **improve communication, transparency, and service quality**

Key Considerations for Service Level Agreements

Service Expectations: What is entailed in the agreement?

Service Providers: Which teams at the System Office will be responsible for providing the services?

Standard Services: What services are included within the terms of the service-level agreement?

Premium Services: What services are not included within the terms of the service-level agreement, but are available to colleges via a separate contract?

Pricing: What are the pricing structures of both standard and premium services?

Important Contacts: Who should colleges contact with questions or concerns regarding service delivery?

Additional Factors: What other components of service delivery should be included in this agreement?

Source: System Contracts and Support Services FY22 Overview w end dates
1. This is a specific line item in the "System Contracts and Support Services FY22" document sent from the System Office to the colleges.
2. The KCTCS System Office does have service level agreements with vendors but does have anything similar outlining the relationship between the System Office and colleges.

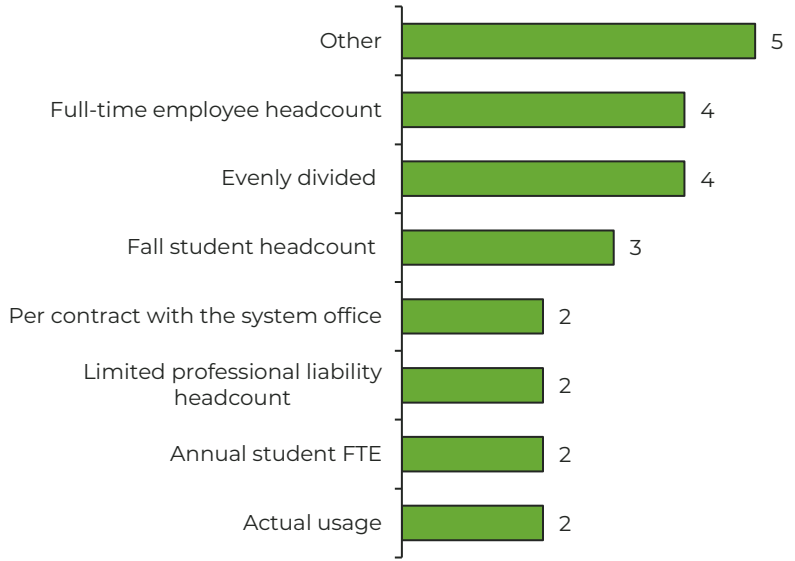
Recharge Simplification

In addition to developing Service Level Agreements to clarify the purpose and allocation of recharges, the System Office could consider consolidating the number of metrics used.

Case for Change

- KCTCS currently has **24 recharges, totaling $9.3M.**
  - 19 of these charges **apply to all colleges (totaling $7.6M)**, 3 charges apply to specific colleges, and 2 charges apply by usage
  - **$5.2M** of the $7.6M all-college charges are for **Blackboard Student Services, Enrollment, and Maintenance**
- The System Office uses **12 different metrics in charge allocation in FY2023.**
- While the System Office presents recharges to the President's Leadership Team each year for review, college employees **noted lack of transparency** and **limited understanding around the allocation methods** used for recharges.
- Opportunity **exists to reduce the number of metrics used and identify additional methods to communicate recharges** in order to **create a more seamless and easier-to-understand** recharge process.

Count of Recharges by Allocation Metric



Source: KCTCS FY23 MASTER List of Recharges
1. "Other" refers to the following metrics: $500,000 per year from 2014-2033, full-time employee headcount AND full-time student headcount (combined total), Number of landline phones, Online SCH, and Annual unduplicated headcount.

Budget Reserves

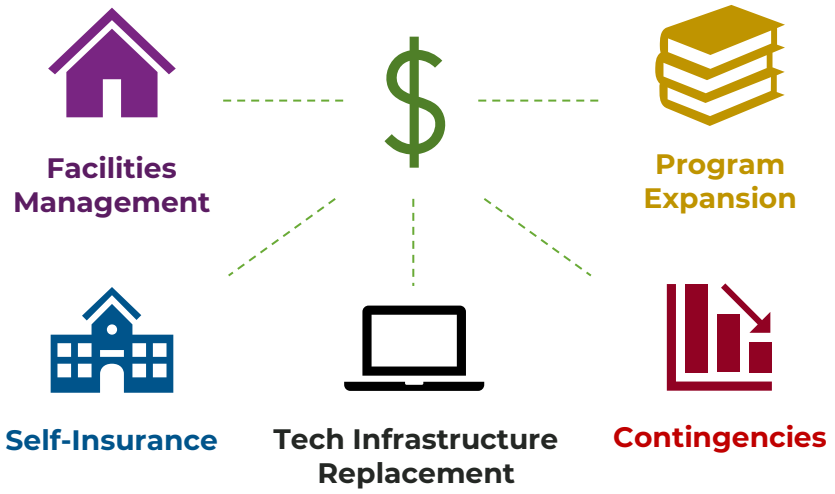
KCTCS currently has a recommended range of 3-5% for budget reserves. Opportunity exists to increase the reserve range and continue aligning with industry best practices.

Case for Change

- For FY2023, the reserve is **$13.9M**, **3.6%** of total unrestricted operating expenses and tuition revenue (**$385.3M**).
- Industry observations around budget reserves include:
  - The National Association of College and University Business Officers (NACUBO) **recommends a minimum of 30 days of expenses for a short-term measure and 90 days for an intermediate-term measure.**
  - The California Community College System Office recommends **at least 5 percent** of annual unrestricted expenditures. However, **some colleges reserve up to 17%, or 2 months of annual operating expenditures**.
  - **Policies should clearly outline what responsibilities** the **System, colleges, and the state** have in responding to local uncertainties and challenges[2].
- Opportunity exists to **expand the use** of budget reserves and **extend the recommended budget reserve range beyond 3-5% to align with industry recommendations on reserve utilization and long-term reserves.**

Key Areas for Budget Reserves

National Association of Colleges and University Business Officers suggests having reserves for:



Source: National Association of Colleges and University Business Officers; An Analysis of University Reserves ; Essentials of College Budgeting
1. KCTCS has not had to ever use the budget reserves. However, in the event of an emergency, there should be clear next steps set on utilizing the reserves.

Performance-Based Funding

The Council on Postsecondary Education (CPE) currently sets the performance-based funding metrics, but opportunities exist for KCTCS to advocate for additional changes.

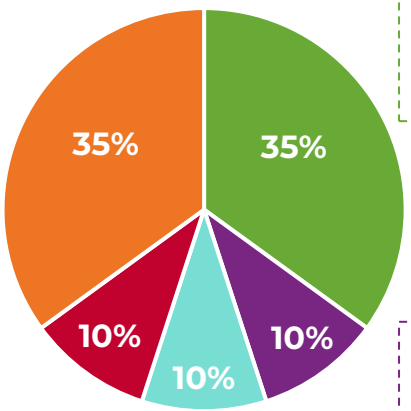
Case for Change

- In FY2022, KCTCS received **22.1% of the state postsecondary education performance fund** ($21.5M of $97.3M).
- Performance-based funding is currently determined by the **metrics to the right** and an **equity adjustment**, which is meant to offer more support to underfunded colleges.
- College employees feel the current process **favors colleges with higher enrollment and creates a feeling of competition between the colleges**[1].
- The **CPE is currently evaluating requested changes** from KCTCS such as incorporating the Community Needs Index.
- Opportunity exists to advocate **for all KCTCS colleges to receive performance-based funding** with **unique weights determined by the college presidents**[2].
- KCTCS could also **advocate for a higher percentage of the state postsecondary education performance fund** that is more representative of their student enrollment (37% of enrollment in public institutions in FY2023).

Current Kentucky Performance-Based Funding Weights

35% Student Success
Based on degrees and credentials awarded, degrees per 100 full time enrollments, STEM+H degrees earned by minority and low-income students, student progression.

35% Course Completion
Based on share of total student credit hours earned.



10% Maintenance and Operations
Based on share of square footage dedicated to student learning.

10% Academic Support
Based on share of sector total full-time enrollment.

10% Institutional Support
Based on share of sector total instruction and student services spending.

Source: KCTCS 2022-2023 Performance Funding Model; Kentucky Council on Postsecondary Education, Kentucky General Assembly
1. 4 colleges did not receive performance-based funding in FY23: Big Sandy, Hazard, Henderson, and Southeast KY.
2. The Tennessee Higher Education Commission has "mission weights" in their performance funding which are constructed by the leadership of each institution.

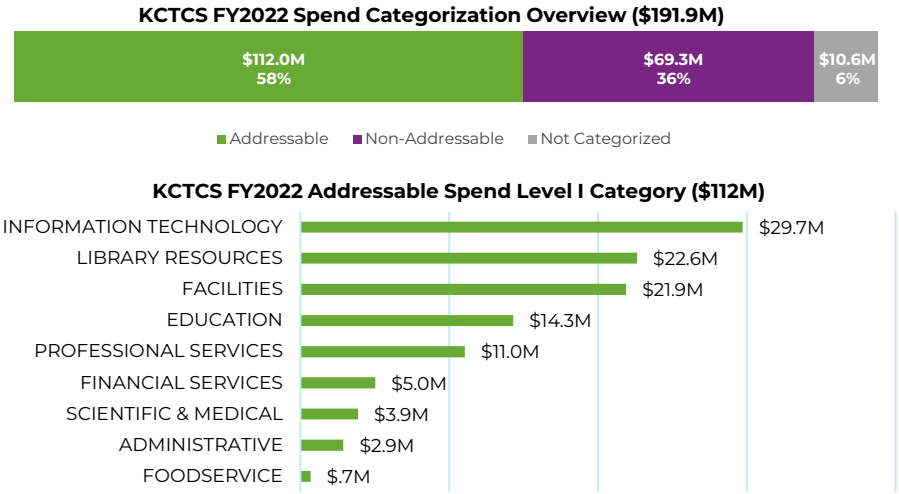
Strategic Sourcing

Preliminary categorization for FY2021-FY2023 spend indicates savings opportunities for spend management and vendor consolidation through centrally-guided sourcing initiatives.

Case for Change

- Initial analysis indicates KCTCS had an **estimated $192M in FY2022 vendor spend**, about **$112M of which can potentially be addressed by strategic sourcing** activities. Addressable vendor spend can be influenced by sourcing efforts. Non-addressable includes not-for-profits, dues, etc.
- **~6% of FY2022 addressable spend was through PCard** with Amazon, Cinti Bell, and AT&T, as the top suppliers.
- An estimated **$1.1M-$2.3M in cost savings** opportunities can be achieved through sourcing activities including:
  - Leveraging **buying power** by aggregating volume
  - **Monitoring P-card** usage
  - Increased **establishment and utilization of contracts**; Over 70% of contracts have a 2022-2023 renewal date in need of review

Spend Categories



Intended Outcome(s)	Perceived Service Impact	Financial Impact	Low	High
Cost Savings	●●○	●●○	$1.1M	$2.3M

Source: FY21-23 Pcard Merchant Spend; "All Spend Except Travel"; Raw Data_2.03 K_REVIEW_CONTRACTS_2028972467

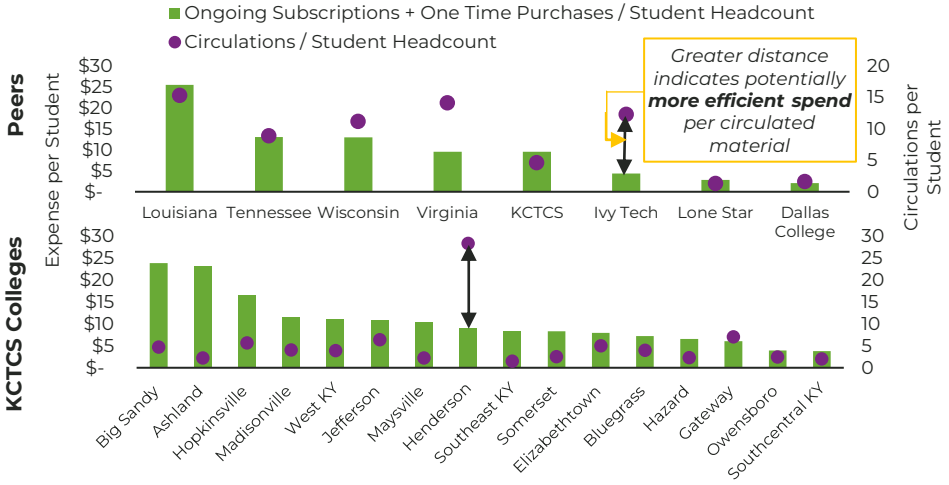
Library Subscriptions

In FY2021, KCTCS systemwide spent $734.4K on ongoing subscriptions; opportunity exists to share resources across colleges to yield cost savings.

Case for Change

- Systemwide, **KCTCS spent $7.76 per student** on subscription expenses. The system **peer set median was $6.72 per student** for ongoing subscription expenses.
- A **variability of spend** exists across the KCTCS colleges.
- COVID-19 may have impacted spend in FY2021 by increasing the need for more online resources.
- Employees noted that the colleges manage their licenses for electronic databases separately, which causes **disparities in staff and student accessibility** of data.
- The System Office could coordinate **sharing databases and serials/journals across colleges**, expanding access.
- KCTCS could **increase accessibility of data** and **save between $98K and $367K** by sharing access to databases across the system and reducing ongoing subscriptions.

FY21 Material Expense and Circulations per Student



Intended Outcome(s)	Perceived Service Impact	Financial Impact	Low	High
Cost Savings	●○○	●○○	$98K	$367K

Source: IPEDS Historical Data,; West Virginia excluded for lack of library IPEDs data. North Carolina excluded for inconsistent IPEDS library data.
*Low financial impact determined by if KCTCS met peer median of $6.72 per student for ongoing subscription expenses. High impact determined by reducing current subscription spend per student in half. Material spend includes one-time purchases of books , serial, backfiles and other materials.

Motor Pool Spend

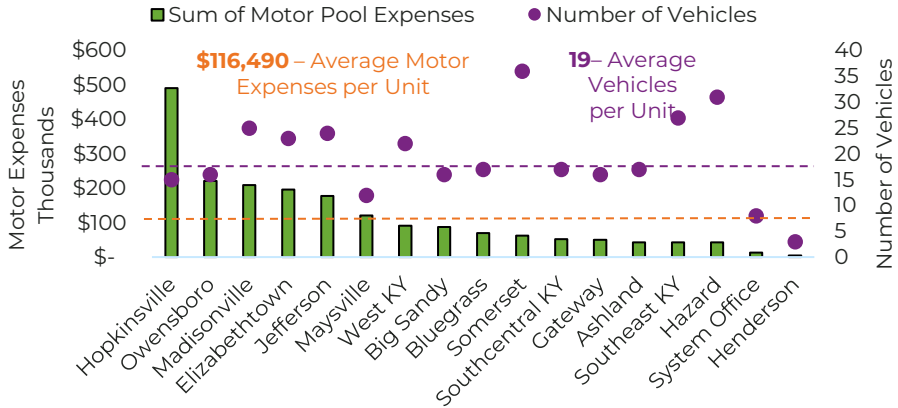
Across the colleges and System Office, KCTCS has 325 vehicles; additional data collection may confirm opportunities to reduce fleet size, consolidate manufacturers, or outsource.

Case for Change

- **KCTCS spent $1.9M on motor-related expenses in FY2022,** which was comprised of four categories: **Vehicles:** $1.0M; **Motor Fuels:** $416.8K; **Service & Maintenance:** $321.9K; **Rental/Lease – Vehicles**: $156.9K.
- The total motor fleet includes **325 vehicles** representing **17 different manufacturers**. 70 of these are semi-trucks.
- **66% (216) of KCTCS vehicles are more than 10 years old**, with 115 vehicles between 10-15 years old, and 101 vehicles older than 15.
- Currently, each college tracks motor pool locally. Opportunity exists to **track consistent motor pool information on a recurring basis in order to determine where potential efficiencies exist.**
- Additional **data collection on vehicle utilization and purpose** may validate that opportunities exist to reduce expenditures by **decreasing fleet size, focusing purchasing with specific manufacturers, and outsourcing motor pool operations**.

Manufacturers and Motor Information by College

Top 5 Manufacturers Represented					
Make	**# of Vehicles**	**% of Fleet**	**Avg. Miles**	**Avg. Age**	**Avg. Miles/ Year**
Ford	85	26%	80,234	13.8	5,540
Chevrolet	63	19%	94,442	16.2	7,314
Dodge	46	14%	132,257	16.1	8,942
Toyota	42	13%	93,366	8.4	9,014
International	33	10%	458,325	14.9	10,885



Source: KCTCS FY22 General Ledger, Fleet Analysis Combined 2023 Summary
1. Motor-related materials include all above categories.. System Office expenses included System Office, VP Tech Solutions, VP Admin Services, Institutional Advancement, Chancellor, President, VP General Counsel, VP Student Services, and Virtual Learning. Fire Commission was excluded.

6

Additional Considerations

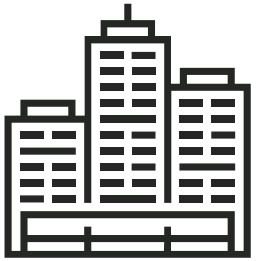
Current State of Accreditation

The 16 colleges currently achieve accreditation through college-level efforts and collaboration with the System Office.

SACSCOC
SOUTHERN ASSOCIATION OF COLLEGES AND SCHOOLS
COMMISSION ON COLLEGES

Each of the colleges within KCTCS is **individually accredited** by the **Southern Association of Colleges and Schools Commission on Colleges** (SACSCOC) to award associate's degrees.

Each of **the 16 colleges** is responsible for ultimately working with SACSCOC to achieve accreditation. Colleges must collect and organize their **financial and workforce data**. Each college has **its own timeline for the accreditation process and has Institutional Effectiveness staff** that work with SACSCOC.



The **System Office** supports each college with its accreditation process **by providing enrollment and student achievement data.** The System Office has an **Executive Director of Institutional Effectiveness, Research, and Accreditation** who **helps collect data and coordinate across the colleges** by organizing the SACSCOC peer team.

Source: KCTCS Accreditation; Southern Association of Colleges and Schools Commission on Colleges.

Peer Systems Accreditation Methods

Six peers pursue college accreditation (similar to KCTCS), while three peers have system-wide accreditation. Each accreditation method has distinct effects on the organization.

Peer System	College / Campus Accreditation	Org-wide Accreditation
KCTCS	✓	
Dallas College		✓
Ivy Tech Community College of Indiana		✓
Lone Star College System		✓
Louisiana System	✓	
North Carolina System	✓	
Virginia Community College System	✓	
The College System of Tennessee	✓	
West Virginia System	✓	
Wisconsin Technical College System	✓	

Considerations

- How will a potential change in accreditation impact the **autonomy and flexibility** of each college?
- How will a potential change in accreditation change the **accountability and risk mitigation?**
- How much **effort (and associated costs)** will be saved if streamlining the accreditation process?
- How will the **leadership structure** need to change?
- How will the **Board governance** need to change (Board of Regents and Board of Directors)?

Data Strategy

Based on interviews with employees and leadership, an opportunity exists for KCTCS to increase the cleanliness and utilization of data across the 16 colleges and System Office.

KCTCS Organization Current State

0	1	2	3	4	5
Nonexistent	**Ad Hoc**	**Fragmented**	**Standardized**	**Managed**	**Optimized**
No recognition of data or issues • No system • Not sure what data means • Not sure how to use it	**Low agility and governance** • System in place • Not sure what data means • Not sure how to use it	**Inconsistent, descriptive data** • System in place • Basic data analysis and usage	**Consistent, diagnostic data** • System in place • Data analysis & use standards • Efficiency in analysis	**Predictive, automated data** • Automated system in place • Data analysis and use encouraged by leadership	**Proactive, Flexible, Agile** • Automated system in place • Data analysis and use central to business strategy

Foundational to becoming a transformative and effective organization is addressing data quality so that information is trusted and leveraged across the organization.

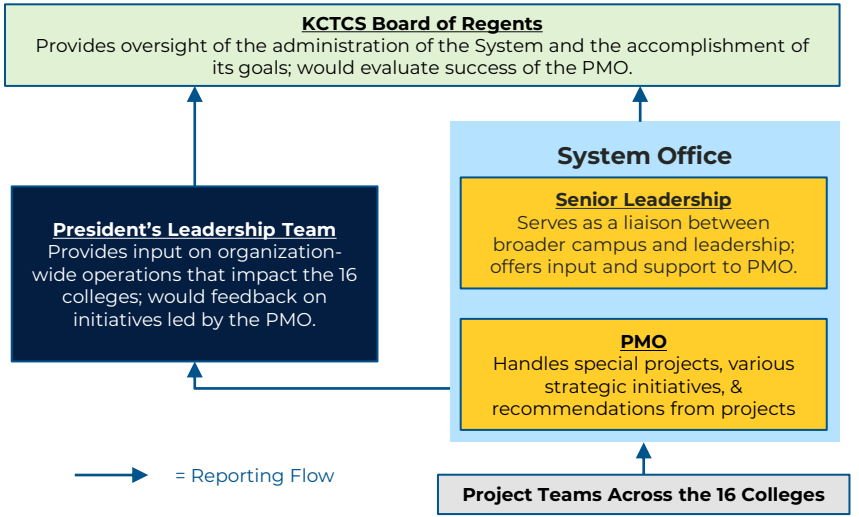
Project Management Office (PMO)

KCTCS may launch major change-management initiatives as a result of this assessment. A Project Management Office (PMO) may help expedite these organization-wide projects.

Case for Change

- Multiple individuals highlighted **organization-wide projects that did not meet expectations with adoption and execution**, such as new technology platforms with inadequate training.
- In FY2022, KCTCS organization-wide spent over **$4.6M** on consulting services[1]. A PMO can **oversee recommendation implementation and increase the return on investment from consulting projects**, including the additional organization-wide initiatives that may result from this optimization assessment.
- The purpose of a PMO is to **hold individual projects accountable to outputs**, coordinate **communication and technology enablement** across the institution, and **identify risks or decisions early** to leadership.
- A PMO can **streamline coordination efforts, reduce project duplication, promote consistent change-management methodology,** and **provide general strategic oversight** of organization-wide goals at KCTCS.

PMO Illustrative Structure



Key PMO Deliverables:

- Status Reports
- Major Initiative Tracker
- Risk Tracker
- Program Impact Catalog

Source: KCTCS FY22 General Ledger
1. "Consulting Services" are a KCTCS included description within the general ledger.

7

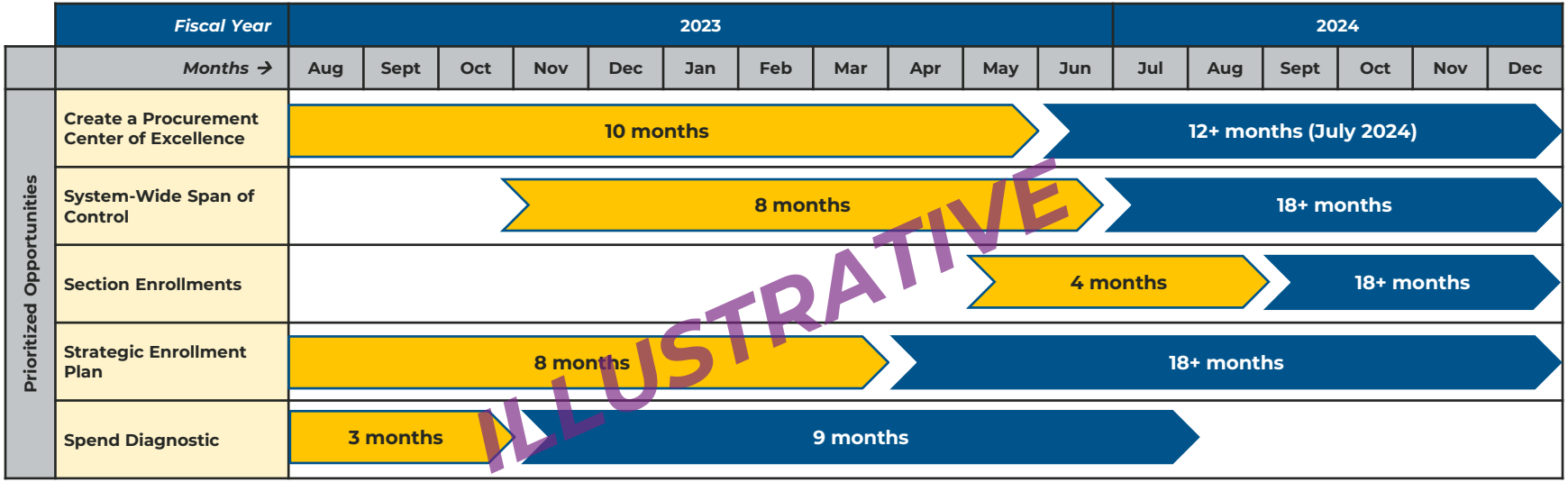
Next Steps

Optimization Sequencing

Completed | To be Completed | KCTCS

Implementation Planning: Overview

Once KCTCS leadership reviews and prioritizes opportunities to move forward with, Huron will develop high-level implementation roadmaps for the organization to consider.



Assessment / Design | Implementation

Implementation Planning: Details

Once KCTCS leadership reviews and prioritizes opportunities to move forward with, Huron will develop high-level implementation roadmaps for the organization to consider.

Engagement Tasks / Month # →	1	2	3	4	5	6	7	8
Priority Area Identification								
Conduct Analysis of the Past 5-10 years of Enrollment Data								
Surface Priority Areas for Future Enrollment and Retention								
Engage Employees to Finalize Priority Areas of Strategic Enrollment Plan								
Priority Area Action Plans								
Develop Action Plans for Each Specific Priority Area								
Develop Governance Structure to Support Each Priority Area								

Financial Benefits Realization

In addition to implementation roadmaps, Huron will calculate the forecasted financial benefit realization for all prioritized opportunities.

Opportunities	Financial Benefits			Realization Forecast				
	Low	Mid	High	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Create a Procurement Center of Excellence	$9.8M	$14.2M	$18.6M	$3.7M	$6.5M	$9.7M	$11.2M	$14.2M
Organization-Wide Span of Control	$2.1M	$3.2M	$4.2M	-	$0.8M	$1.6M	$2.4M	$3.2M
Section Enrollments	$2.1M	$2.6M	$3.2M	-	$0.7M	$1.3M	$2.0M	$2.6M
Strategic Enrollment Plan	$0.4M	$0.8M	$1.1M	-	$0.4M	$0.6M	$0.8M	$0.8M
Spend Diagnostic	$0.7M	$1.1M	$1.5M	$0.2M	$0.5M	$0.7M	$0.9M	$1.1M
Total Financial Impact:	**$15.1M**	**$21.9M**	**$28.6M**	**$3.9M**	**$8.9M**	**$13.9M**	**$17.3M**	**$21.9M**

Design and Implementation

Once KCTCS leadership determines what opportunities to prioritize, the organization will need to engage in further discussions and analysis before design and implementation.

Finalize Next Steps

Determine what opportunities will move forward most Immediately and which are long-term goals.

Refine Project Governance Structure

Clarify the project governance structure to be involved in design and implementation – roles and responsibilities, dependencies, etc.

Engage in Change Management

Provide updates to the community, engage leadership in active sponsorship, identify change leaders across the organization.

A.1

Appendix:
Project Overview

Strategic Alignment

This assessment and optimization effort should closely align with KCTCS's three primary goals that support the mission of the organization, as listed below.

Increase Organizational Success

Continuing to **evaluate and invest in the human, physical, and operational infrastructure** of KCTCS will promote long-term sustainability and support the efficient utilization of resources.

Increase Employment Success

Expanding workforce training and strengthening community partnerships can **align talent and academic program offerings with workforce needs** and further contribute to Kentucky's growing economic environment.

Increase Learner Success

Assessing academic program positioning and leveraging resources effectively can help meet the needs of Kentucky's learners and provide them with the tools and pathways for long-term success.

1. KCTCS Strategic Plan

KCTCS Organizational Strengths

Huron met with individuals across a variety of academic and administrative units at KCTCS, which led to the identification of observed strengths.

Curriculum Diversification

KCTCS colleges feel empowered to offer curriculum that matches the needs of the community they serve.

Commitment to Community

Individuals demonstrated a commitment to their community through partnerships and access to space.

Students First

Individuals have KCTCS's students and local community in mind while making decisions and are focused on ensuring their well-being.

Value Proposition

KCTCS employees recognize the value of the colleges and stress the importance of representing that value more clearly to the community.

Employee Collaboration

Individuals expressed a strong commitment to each other through formal and informal outlets, such as peer teams and mentorship programs.

Interview Themes: Systemwide Effort

Employees stressed the importance of individual college identity, the services they provide to their communities, as well as the services provided by the System.

Systemwide Initiatives

While colleges **appreciate the services provided** by the System Office, individuals stated that their value and engagement is **not clearly reflected in systemwide initiatives** and communications.

"The System Office tends to push initiatives on the colleges that already occur at a local level"

College Individuality

Individuals noted the **unique nature and populations served** of each college. At times, colleges are unclear on how to **balance branding** as individual entities while still emphasizing the tenets of the KCTCS system.

"Each of the colleges serve a unique population and community"

Trickle-down Communications

A perception exists across the colleges that the System Office could provide **additional insight and transparency** into its decisions. Individuals noted that the trickle-down communications does not always trickle down appropriately.

"While the System Office is responsive, they could be a bit more transparent"

Interview Themes: Employee Morale

Individuals noted experiencing high turnover rates and lower compensation, which yield to limited capacity and resource availability.

Compensation

Individuals feel underpaid and underappreciated. In some units, leadership feels compensation is **hurting their ability to attract and retain talent.** Colleges noted feeling of disparity among salaries as well.

"We have trouble filling positions because of low compensation"

Resource Availability

Individuals noted high levels of turnover, leading to resource constraints. Individuals also frequently noted their units **feel understaffed**.

"We have difficulty hiring and retaining in highly technical faculty positions"

Succession Planning

Individuals noted a **need for succession planning** to ensure knowledge is transferred to other individuals. KCTCS has employees that have been working within the system for majority of their careers, further exacerbating the **loss of knowledge** when these individuals leave.

"If I were to leave tomorrow, there is a whole lot of knowledge that is going to leave with me"

Interview Themes: Roles & Responsibilities

Individuals expressed a need for clarity around roles, responsibilities, and handoffs.

Manual Processes

Individuals voiced frustration around the **paper-based and archaic nature** of existing processes. Examples include processes around hiring and procurement.

"In the hope of being efficient, we have become inefficient"

Roles & Responsibilities

Due to resource constraints, some individuals are **working outside of their scoped responsibilities** and are not compensated additionally.

"We have individuals wearing multiple hats and managing 'other duties as assigned'"

Administrative Effort

Although the system manages the sharing of resources, **duplication of administrative effort** exists between colleges and the System Office. Individuals noted opportunities to leverage college resources more.

"The System Office could leverage this peer team more"

Training and Professional Development

Individuals noted a **lack of training** existing in certain units, leading to a lack of clarity around policies, processes, and procedures.

"We do not always have the right resources when it comes to training"

A.2

Appendix:
Space Utilization
Assessment

Selected Industry Guiding Principles

Huron's research into peer and best practice institutions helped to define guiding principles that could serve as a framework to support current and future governance of space.

OWNERSHIP

Space is **owned by the institution**. The **institution assigns** and repurposes space to colleges, departments, and divisions for use based on need.

ASSET

Space is a **finite resource**, and proper management of space is critical to **advancing the mission** of the institution.

CONTIGUITY

The institution exercises care to allocate spaces to departments that are **adjacent** to one another.

EQUITY

A **uniform**, **equitable**, **transparent**, and effective governance of space promotes the efficient use of space.

ADAPTABLE

Space is **not assigned permanently** to allow for adaptable and optimal deployment of space.

ALIGNMENT

Space-related decisions shall be made in alignment with the **institution's Strategic Plan**, **set priorities**, and **available resources**.

SUSTAINABILITY

Space usage and assignments shall promote **fiscal responsibility** and **institutional sustainability**.

FUNCTIONALITY

Space needs will be evaluated using **quantitative and functional considerations**.

Spectrum of Strategic Alliances

Strategic alliances consist of a wide spectrum of scenarios, including those shown below.

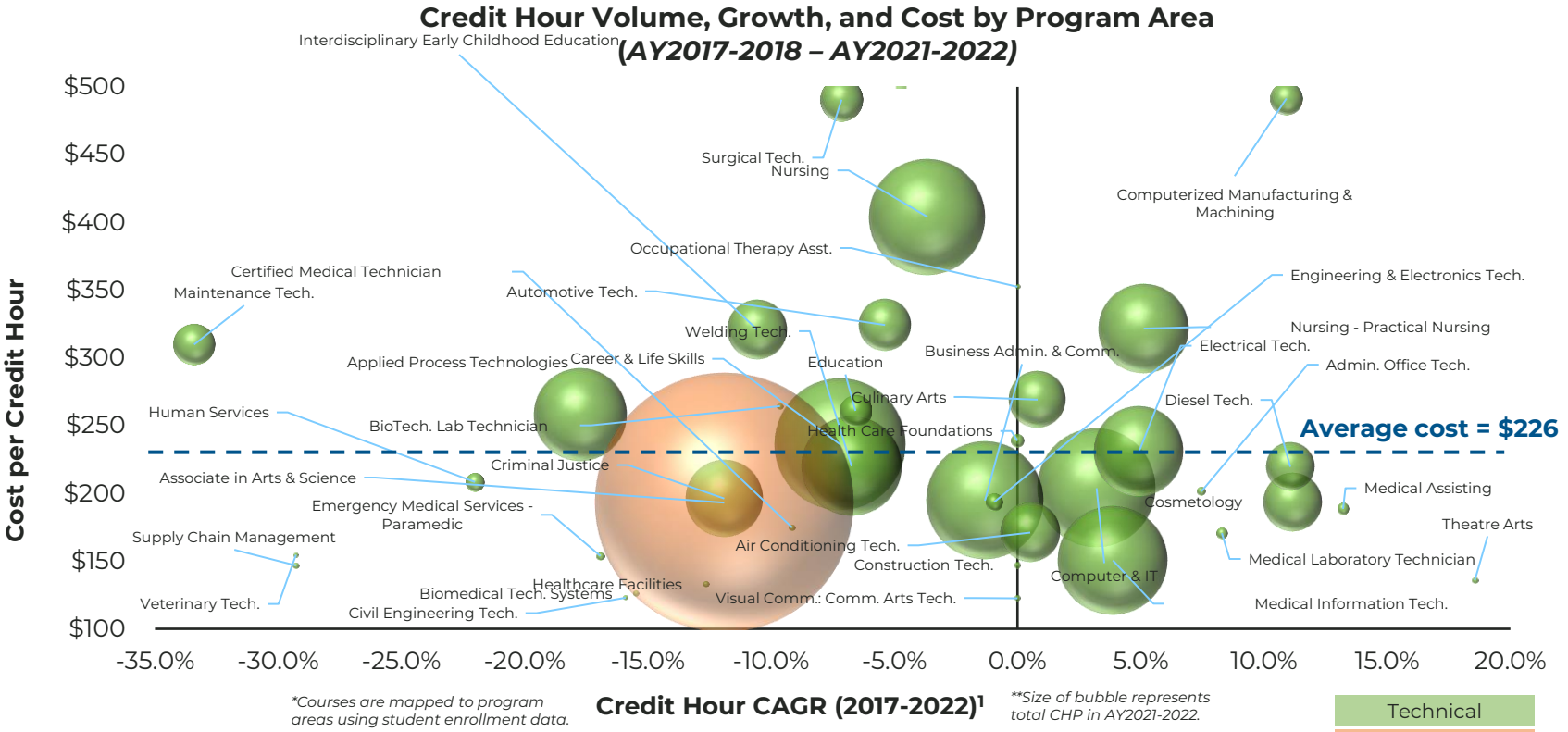
						
Third-Party Academic Services	**P3 Public-Private Partnerships**	**Shared or Managed Services**	**Joint Ventures**	**Multi-Institution**	**Public Univ. System Consolidations**	**Complete Merger or Acquisition**
Online program management (OPM) organizations like **2U, Bisk Education, Academic Partnerships, and Pearson Learning** **Purdue** established Kaplan as a third-party OPM for online program services*	**Univ. Health Services Inc. and George Washington Univ.** formed a public-private partnership to establish two new hospitals with **Howard Univ.** The **Univ. of Iowa, Syracuse Univ., and Georgetown Univ.** monetized utilities to focus on mission and create resources for strategic investments	Claremont Colleges (formerly **Claremont University Consortium**) includes Pomona, Harvey Mudd, Scripps, and 4 others that shares central services **Ripon College and Marian Univ.** announced plans to explore the potential benefits of establishing a partnership for admin, academic, and co-curricular activities	**Seton Hall and Hackensack Meridian Health** formed a joint venture to establish a new medical school **Goodwin Univ., Sacred Heart, and Paier College of Art** announced plans to acquire Bridgeport and create a "University Park"*	**TCS Education System** has created a nonprofit system of colleges including The Chicago School of Professional Psychology and Saybrook University **Otterbein Univ. and Antioch Univ.** plan to form a national system	**Univ. of Wisconsin System** merged its 13 two-year campuses with seven of its four-year colleges* The **Univ. of Texas System** shuttered two of its univ. (UT Pan American & UT Brownsville) and established the consolidated UT Rio Grande Valley* **Penn. State System of Higher Education** announced the integration of three pairs of univ.	**Univ. of Arizona** acquired **Ashford**, with for-profit Zovio contracted to operate as OPM* **Univ. of Tennessee System** acquired **Martin Methodist College*** **Bloomfield College and Montclair State Univ.** announced a merger[1] **Delaware State** acquired **Wesley College**

1. Illustrative example included Huron engagement(s) with one or more institutions involved in the alliance or partnership assessment and/or transaction.

A.3

Appendix:
Academic
Programming
Optimization

Ashland Credit Hour Summary

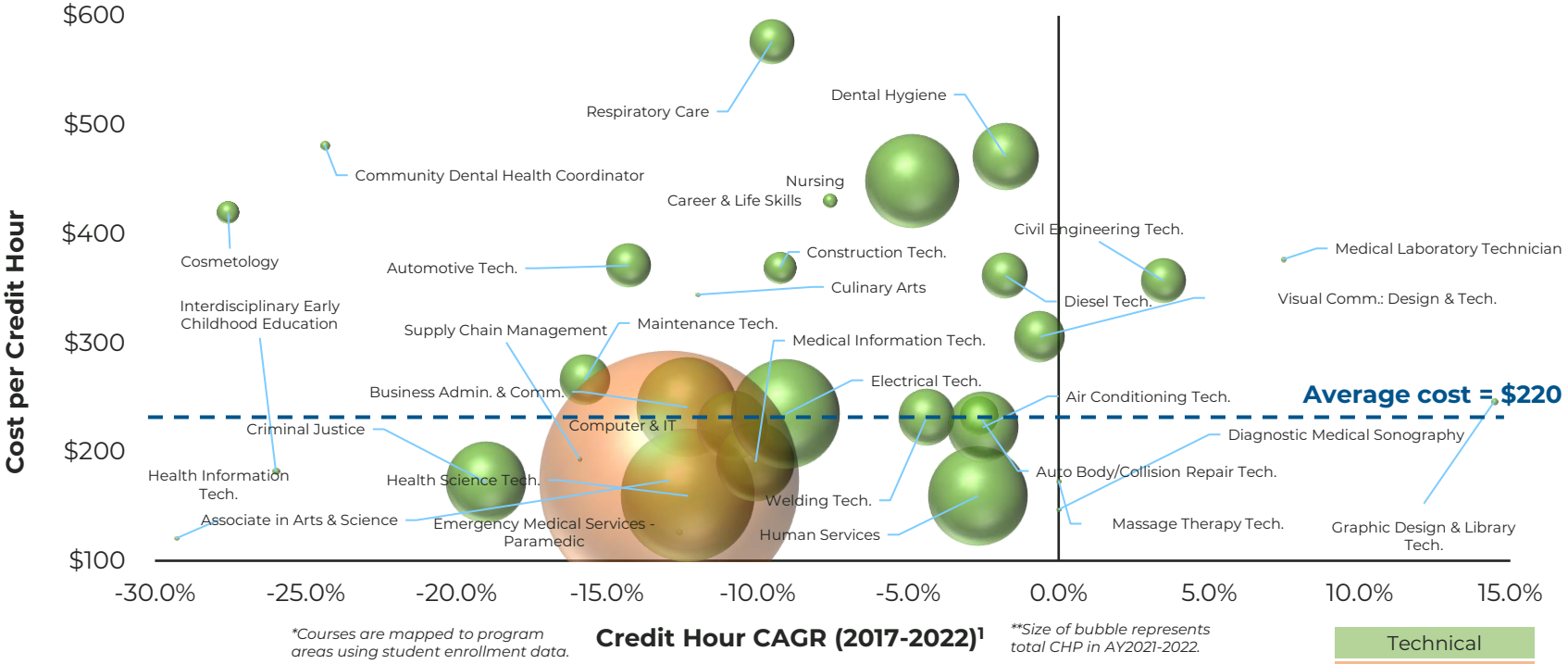


Source: Cost to Educate Model

1. CAGR for certain program areas (i.e., those started after AY2017-2018) uses data available. Average cost includes undecided, non-credential, and program areas that started in AY2021-2022. Non-Credential and Undecided programs not included in graph. Program areas started in AY2021-2022 and those that were not offered in AY2021-2022 not included in graph. Program Areas not shown on graph listed in appendix. Complete list of program areas and their credit hour production and cost trends included in appendix.

Big Sandy Credit Hour Summary

Credit Hour Volume, Growth, and Cost by Program Area
(AY2017-2018 – AY2021-2022)

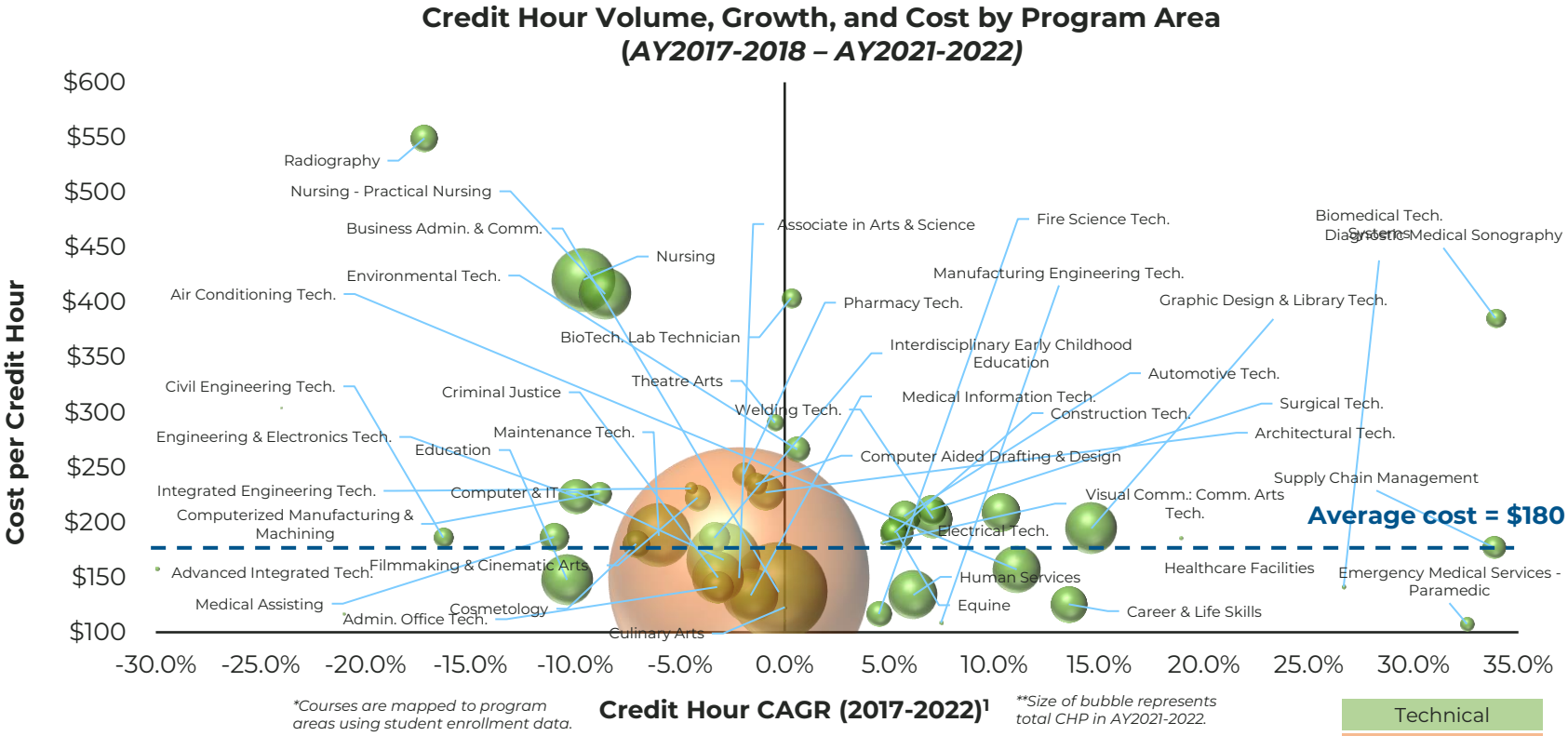


**Courses are mapped to program areas using student enrollment data.*

***Size of bubble represents total CHP in AY2021-2022.*

Source: Cost to Educate Model
1. CAGR for certain program areas (i.e., those started after AY2017-2018) uses data available. Average cost includes undecided, non-credential, and program areas that started in AY2021-2022.
Non-Credential and Undecided programs not included in graph. Program areas started in AY2021-2022 and those that were not offered in AY2021-2022 not included in graph. Program Areas not shown on graph listed in appendix. Complete list of program areas and their credit hour production and cost trends included in appendix.

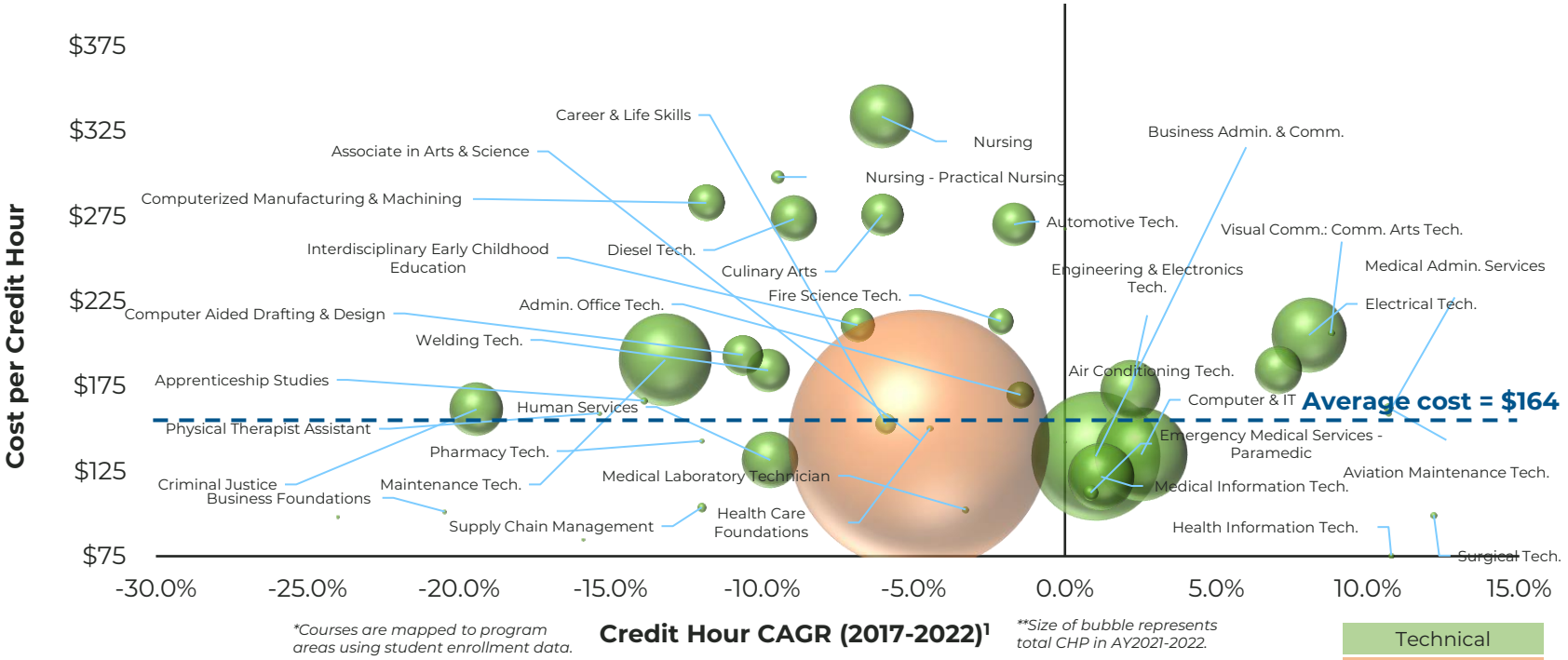
Bluegrass Credit Hour Summary



Source: Cost to Educate Model
1. CAGR for certain program areas (i.e., those started after AY2017-2018) uses data available. Average cost includes undecided, non-credential, and program areas that started in AY2021-2022.
Non-Credential and Undecided programs not included in graph. Program areas started in AY2021-2022 and those that were not offered in AY2021-2022 not included in graph. Program Areas not shown on graph listed in appendix. Complete list of program areas and their credit hour production and cost trends included in appendix.

Elizabethtown Credit Hour Summary

Credit Hour Volume, Growth, and Cost by Program Area
(AY2017-2018 – AY2021-2022)



**Courses are mapped to program areas using student enrollment data.*

***Size of bubble represents total CHP in AY2021-2022.*

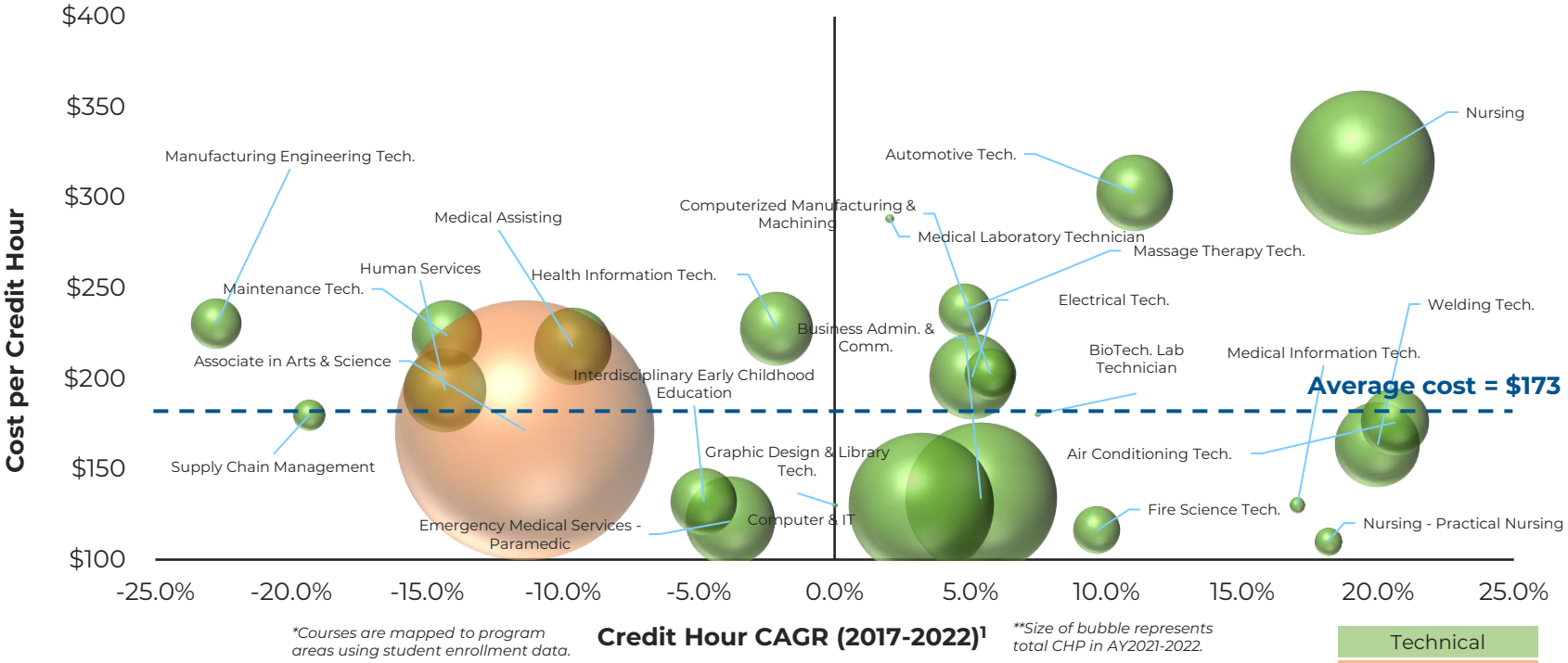
Technical

Transfer

Source: Cost to Educate Model
1. CAGR for certain program areas (i.e., those started after AY2017-2018) uses data available. Average cost includes undecided, non-credential, and program areas that started in AY2021-2022.
Non-Credential and Undecided programs not included in graph. Program areas started in AY2021-2022 and those that were not offered in AY2021-2022 not included in graph. Program Areas not shown on graph listed in appendix. Complete list of program areas and their credit hour production and cost trends included in appendix.

Gateway Credit Hour Summary

Credit Hour Volume, Growth, and Cost by Program Area
(AY2017-2018 – AY2021-2022)

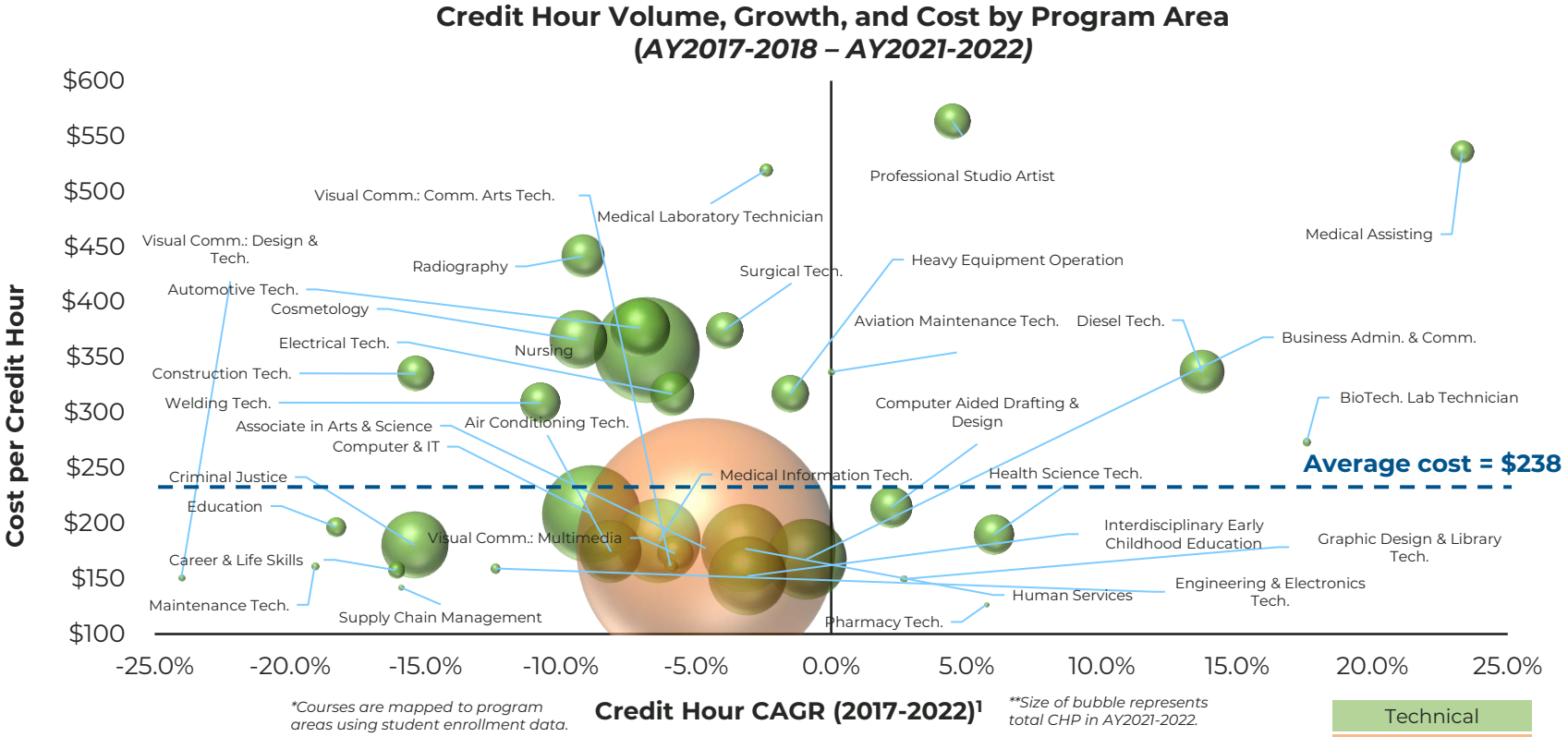


**Courses are mapped to program areas using student enrollment data.*

***Size of bubble represents total CHP in AY2021-2022.*

Source: Cost to Educate Model
1. CAGR for certain program areas (i.e., those started after AY2017-2018) uses data available. Average cost includes undecided, non-credential, and program areas that started in AY2021-2022.
Non-Credential and Undecided programs not included in graph. Program areas started in AY2021-2022 and those that were not offered in AY2021-2022 not included in graph. Program Areas not shown on graph listed in appendix. Complete list of program areas and their credit hour production and cost trends included in appendix.

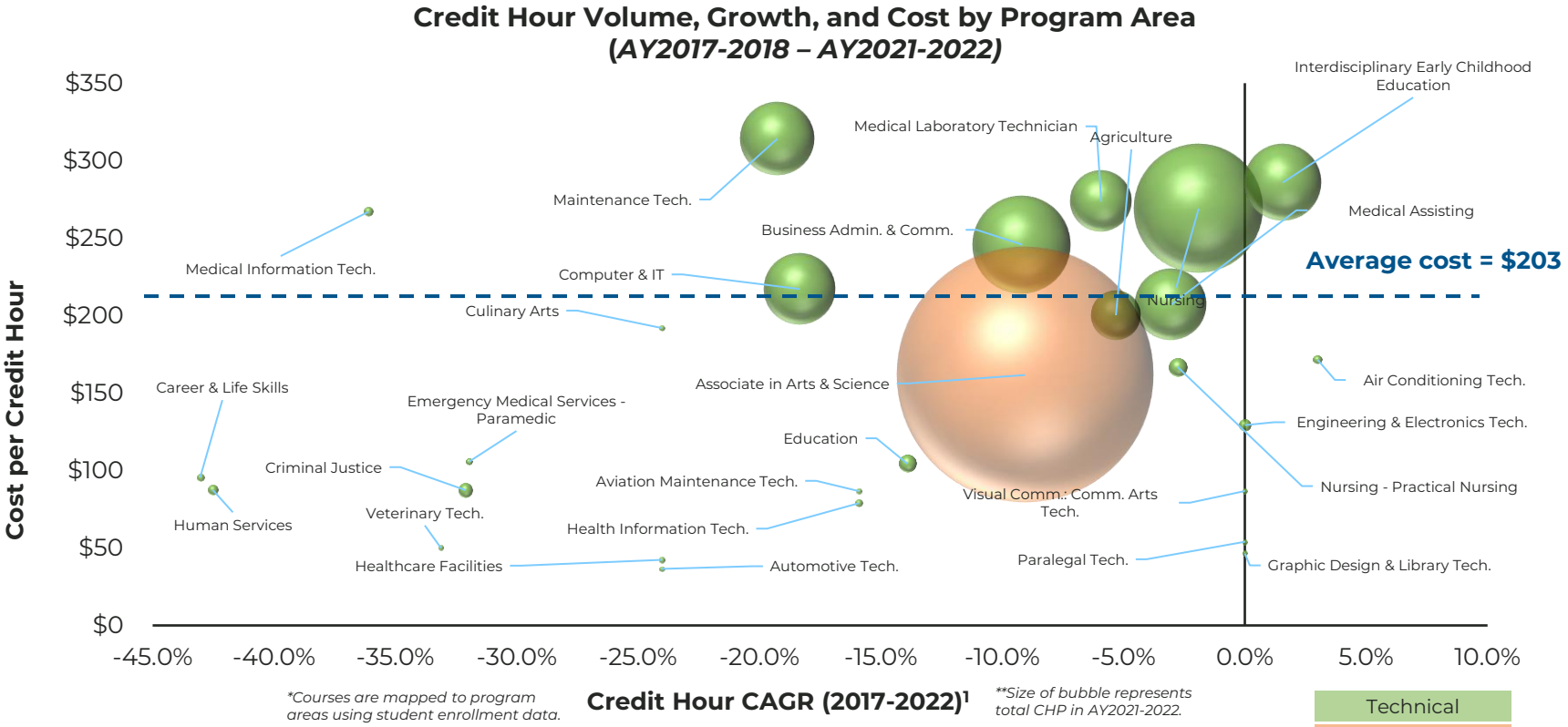
Hazard Credit Hour Summary



Source: Cost to Educate Model

1. CAGR for certain program areas (i.e., those started after AY2017-2018) uses data available. Average cost includes undecided, non-credential, and program areas that started in AY2021-2022. Non-Credential and Undecided programs not included in graph. Program areas started in AY2021-2022 and those that were not offered in AY2021-2022 not included in graph. Program Areas not shown on graph listed in appendix. Complete list of program areas and their credit hour production and cost trends included in appendix.

Henderson Credit Hour Summary



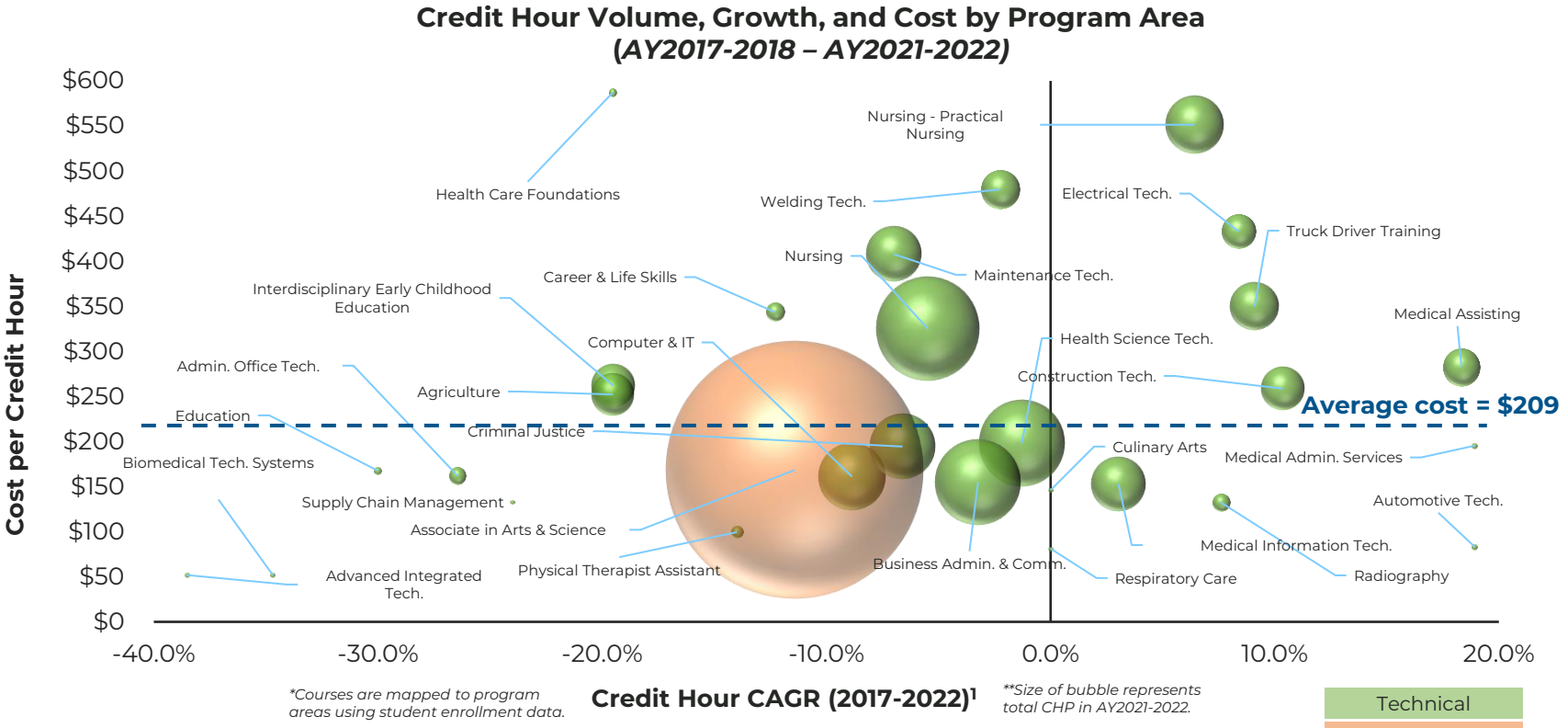
*Courses are mapped to program areas using student enrollment data.

**Size of bubble represents total CHP in AY2021-2022.

Source: Cost to Educate Model

1. CAGR for certain program areas (i.e., those started after AY2017-2018) uses data available. Average cost includes undecided, non-credential, and program areas that started in AY2021-2022. Non-Credential and Undecided programs not included in graph. Program areas started in AY2021-2022 and those that were not offered in AY2021-2022 not included in graph. Program Areas not shown on graph listed in appendix. Complete list of program areas and their credit hour production and cost trends included in appendix.

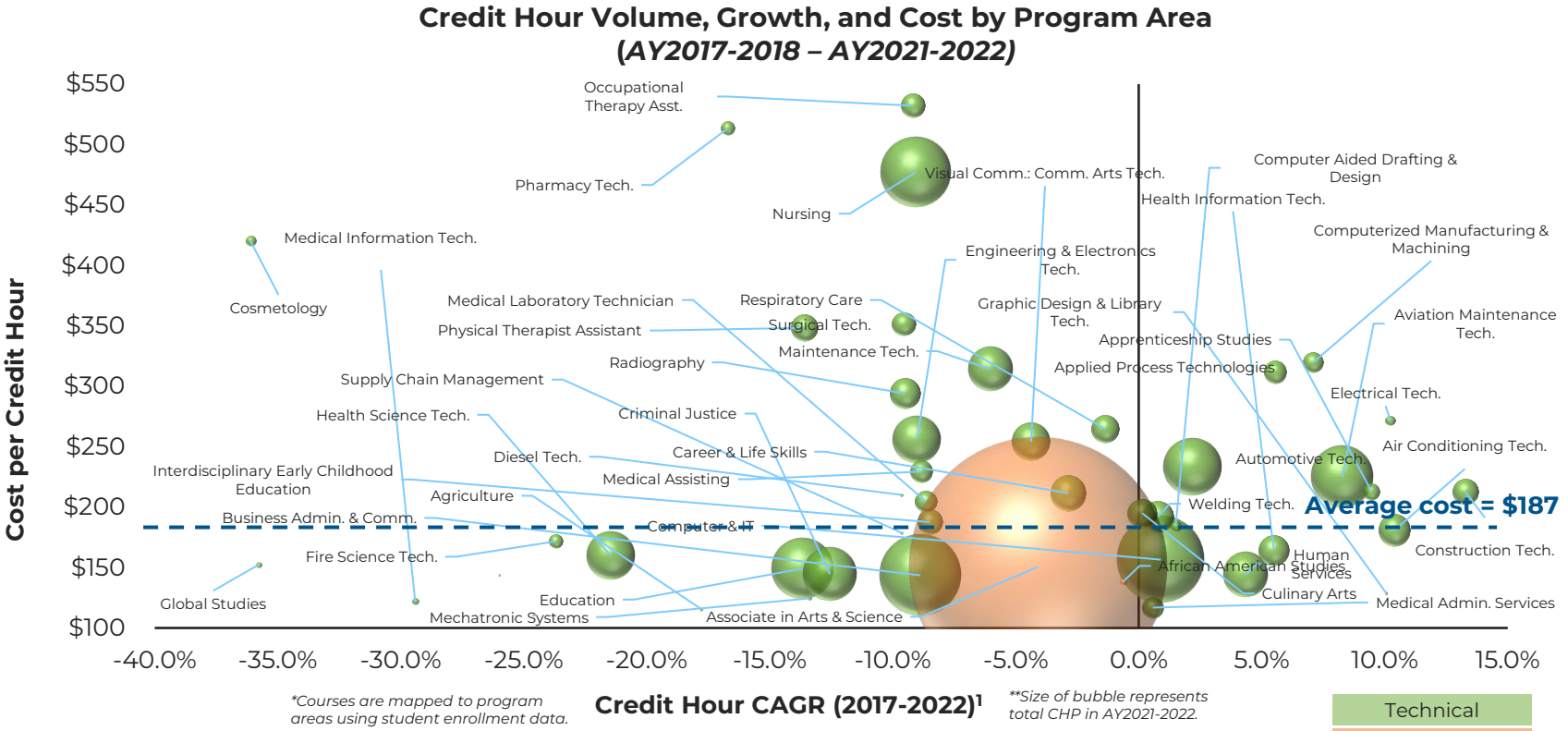
Hopkinsville Credit Hour Summary



Source: Cost to Educate Model

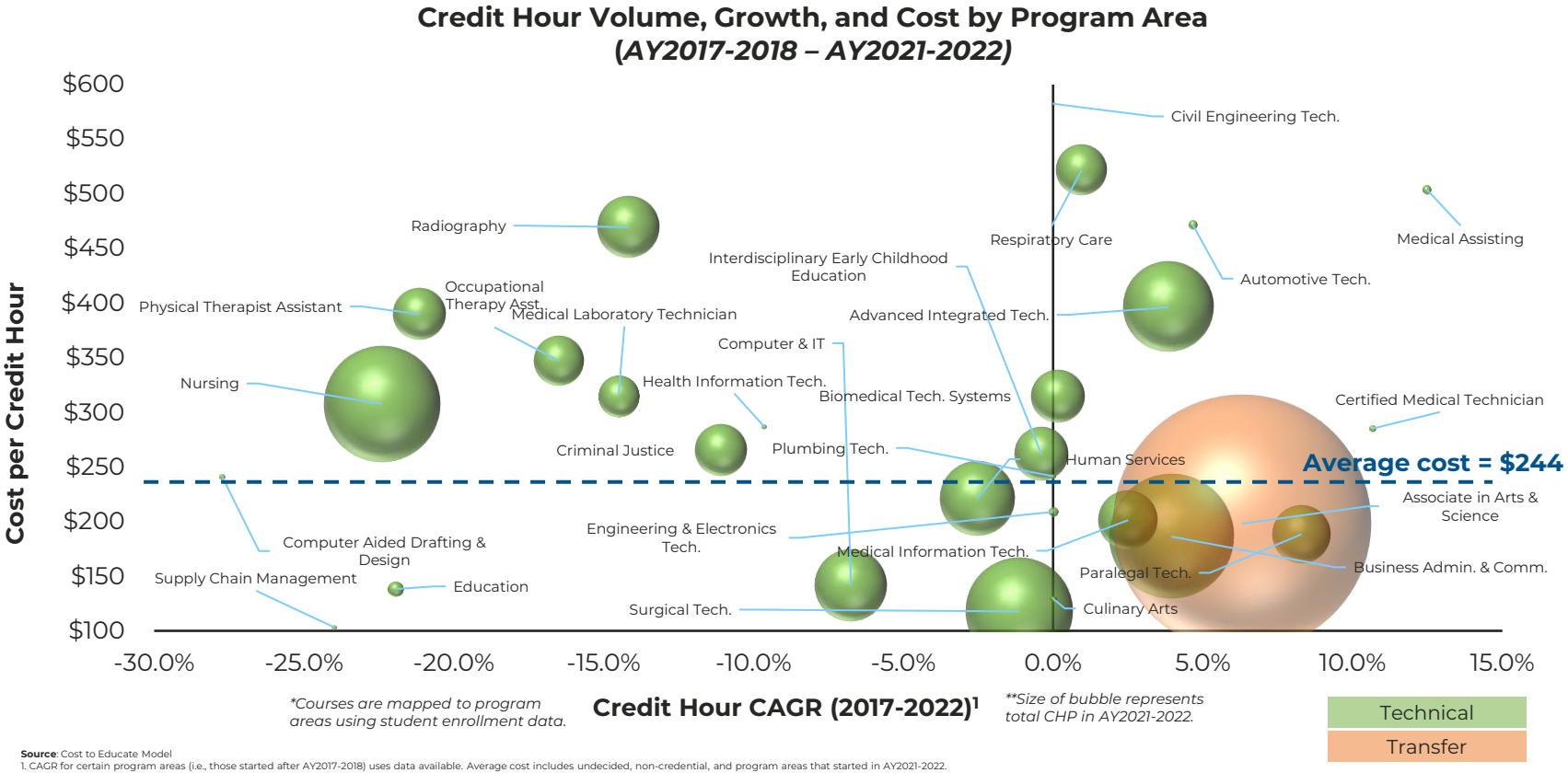
1. CAGR for certain program areas (i.e., those started after AY2017-2018) uses data available. Average cost includes undecided, non-credential, and program areas that started in AY2021-2022. Non-Credential and Undecided programs not included in graph. Program areas started in AY2021-2022 and those that were not offered in AY2021-2022 not included in graph. Program Areas not shown on graph listed in appendix. Complete list of program areas and their credit hour production and cost trends included in appendix.
2. Average cost of cost per credit hour across all program areas is $223.

Jefferson Credit Hour Summary



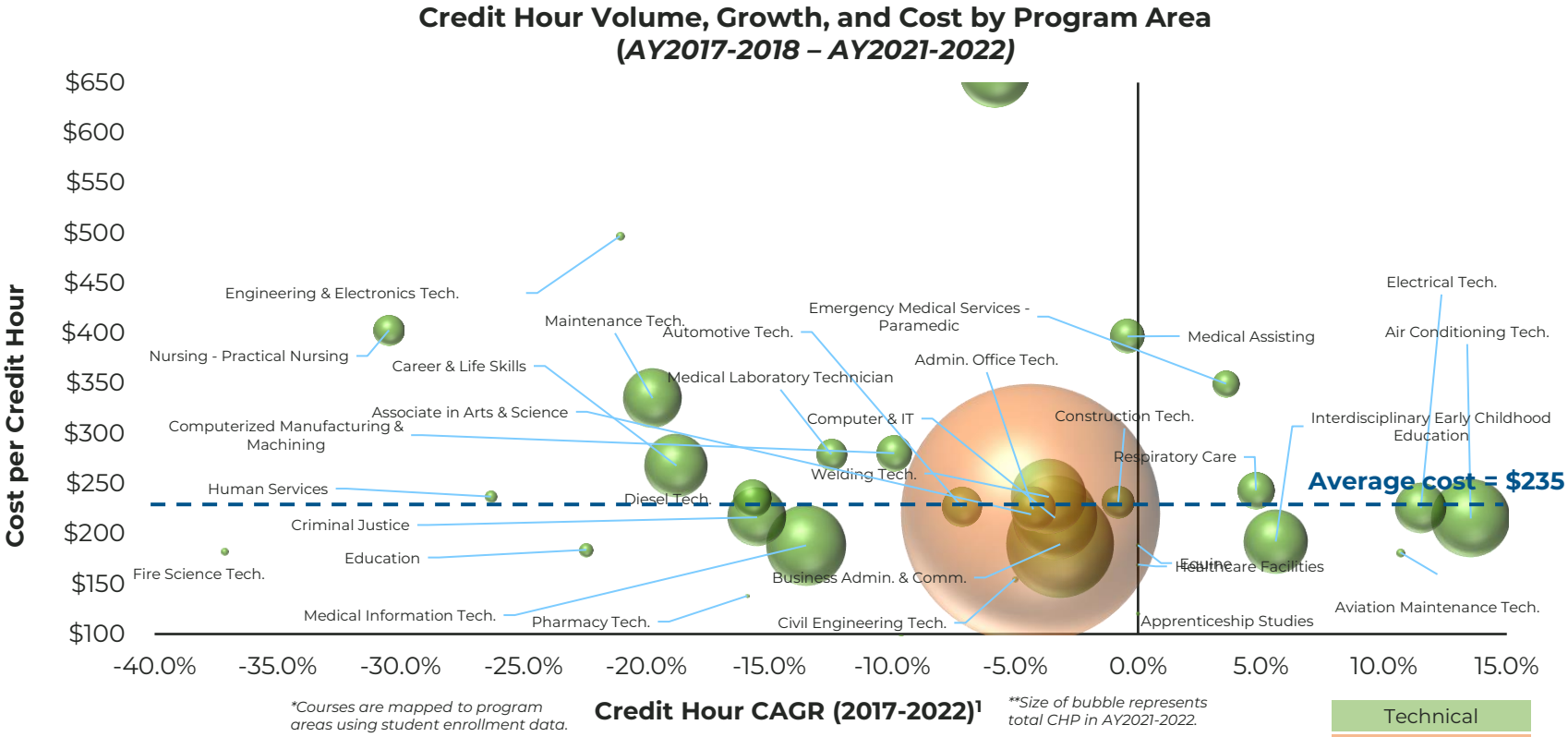
Source: Cost to Educate Model
1. CAGR for certain program areas (i.e., those started after AY2017-2018) uses data available. Average cost includes undecided, non-credential, and program areas that started in AY2021-2022.
Non-Credential and Undecided programs not included in graph. Program areas started in AY2021-2022 and those that were not offered in AY2021-2022 not included in graph. Program Areas not shown on graph listed in appendix. Complete list of program areas and their credit hour production and cost trends included in appendix.

Madisonville Credit Hour Summary



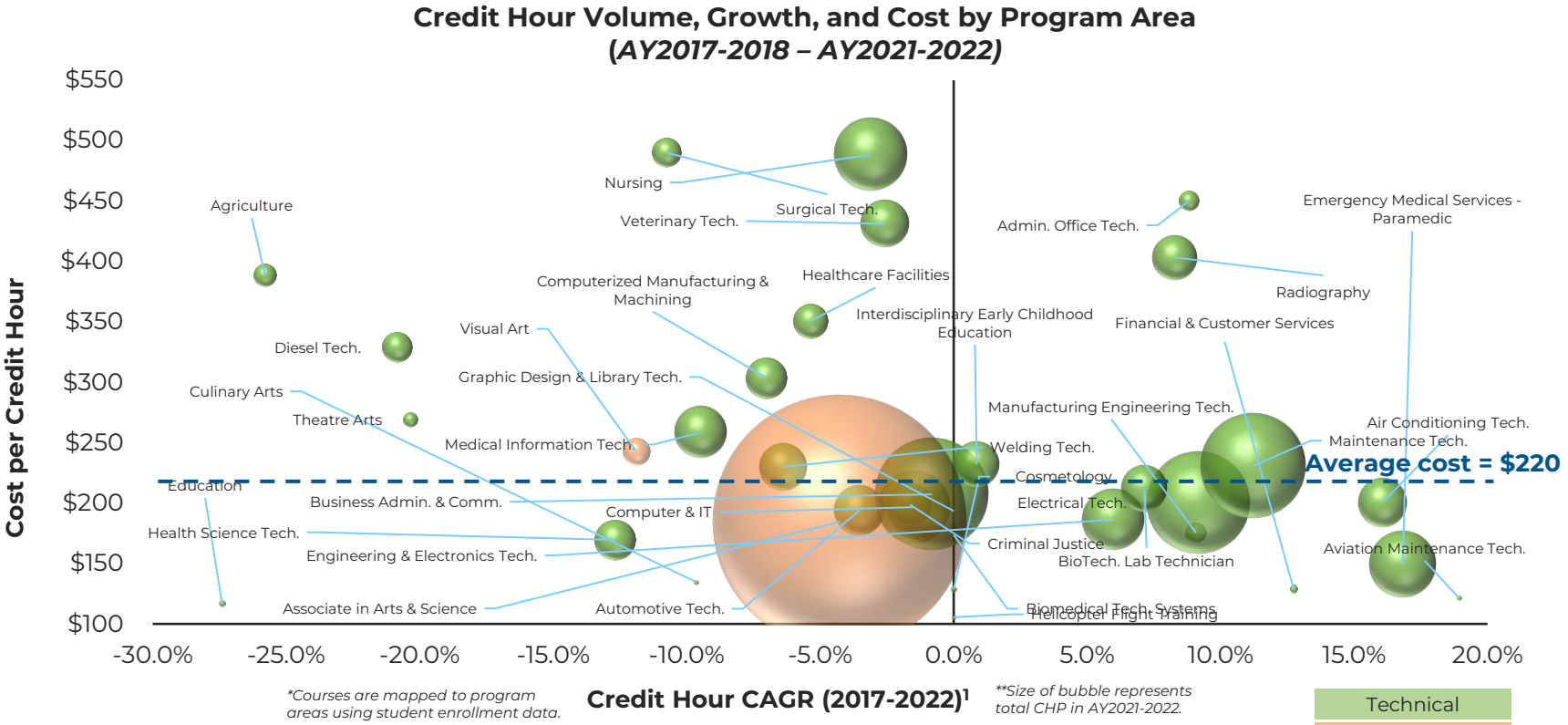
Source: Cost to Educate Model
1. CAGR for certain program areas (i.e., those started after AY2017-2018) uses data available. Average cost includes undecided, non-credential, and program areas that started in AY2021-2022.
Non-Credential and Undecided programs not included in graph. Program areas started in AY2021-2022 and those that were not offered in AY2021-2022 not included in graph. Program Areas not shown on graph listed in appendix. Complete list of program areas and their credit hour production and cost trends included in appendix.

Maysville Credit Hour Summary



Source: Cost to Educate Model
1. CAGR for certain program areas (i.e., those started after AY2017-2018) uses data available. Average cost includes undecided, non-credential, and program areas that started in AY2021-2022.
Non-Credential and Undecided programs not included in graph. Program areas started in AY2021-2022 and those that were not offered in AY2021-2022 not included in graph. Program Areas not shown on graph listed in appendix. Complete list of program areas and their credit hour production and cost trends included in appendix.

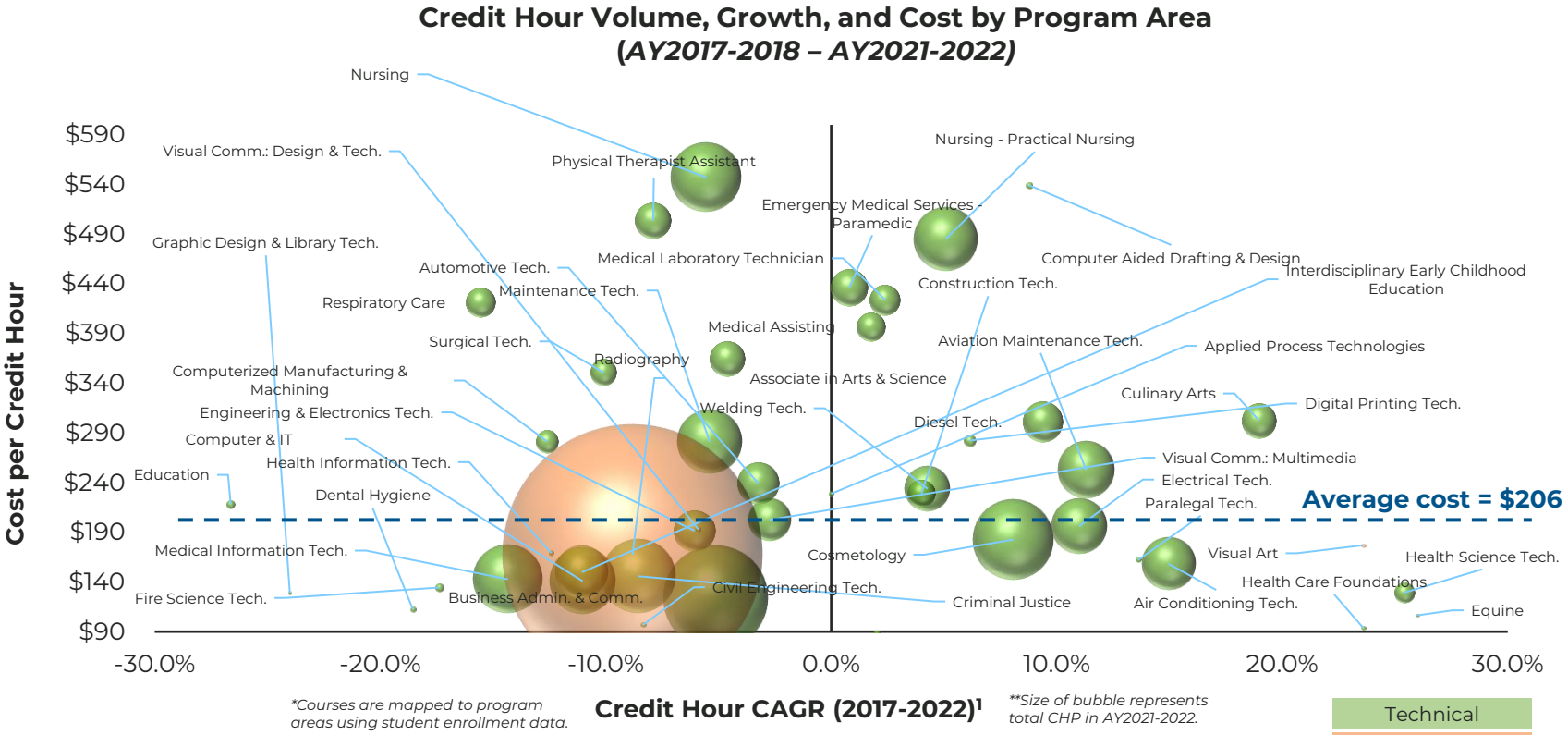
Owensboro Credit Hour Summary



Source: Cost to Educate Model

1. CAGR for certain program areas (i.e., those started after AY2017-2018) uses data available. Average cost includes undecided, non-credential, and program areas that started in AY2021-2022. Non-Credential and Undecided programs not included in graph. Program areas started in AY2021-2022 and those that were not offered in AY2021-2022 not included in graph. Program Areas not shown on graph listed in appendix. Complete list of program areas and their credit hour production and cost trends included in appendix.

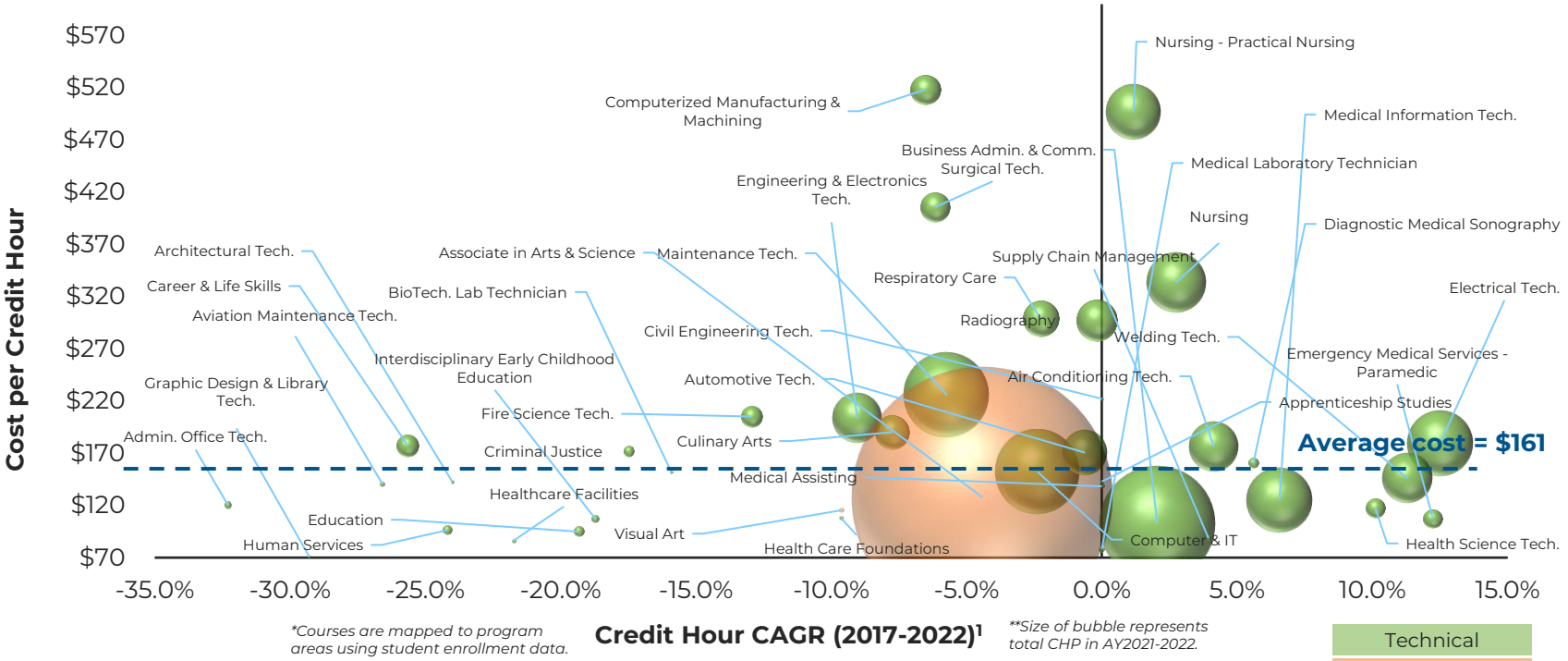
Somerset Credit Hour Summary



Source: Cost to Educate Model
1. CAGR for certain program areas (i.e., those started after AY2017-2018) uses data available. Average cost includes undecided, non-credential, and program areas that started in AY2021-2022.
Non-Credential and Undecided programs not included in graph. Program areas started in AY2021-2022 and those that were not offered in AY2021-2022 not included in graph. Program Areas not shown on graph listed in appendix. Complete list of program areas and their credit hour production and cost trends included in appendix.

Southcentral KY Credit Hour Summary

Credit Hour Volume, Growth, and Cost by Program Area
(AY2017-2018 – AY2021-2022)



**Courses are mapped to program areas using student enrollment data.*

***Size of bubble represents total CHP in AY2021-2022.*

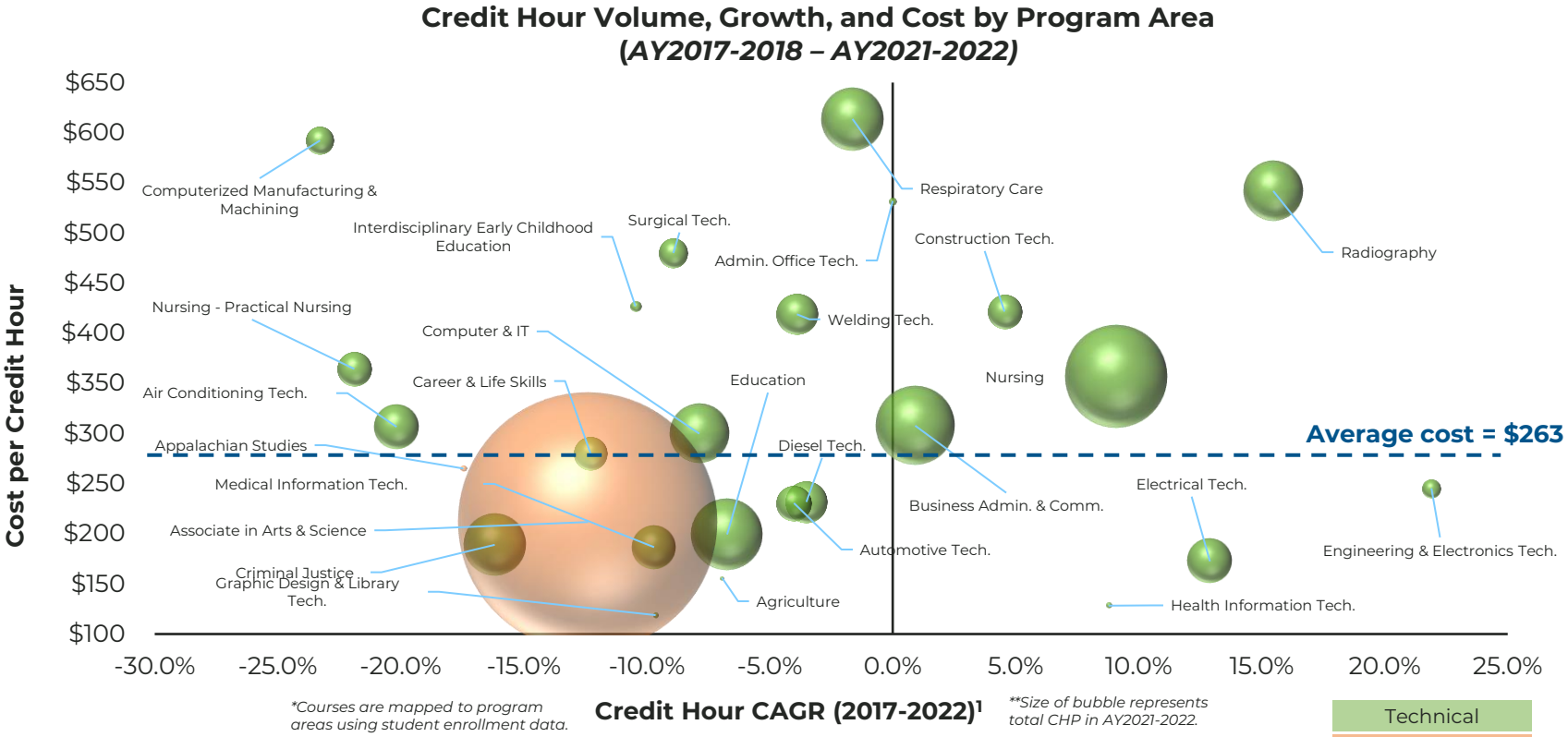
Technical

Transfer

Source: Cost to Educate Model

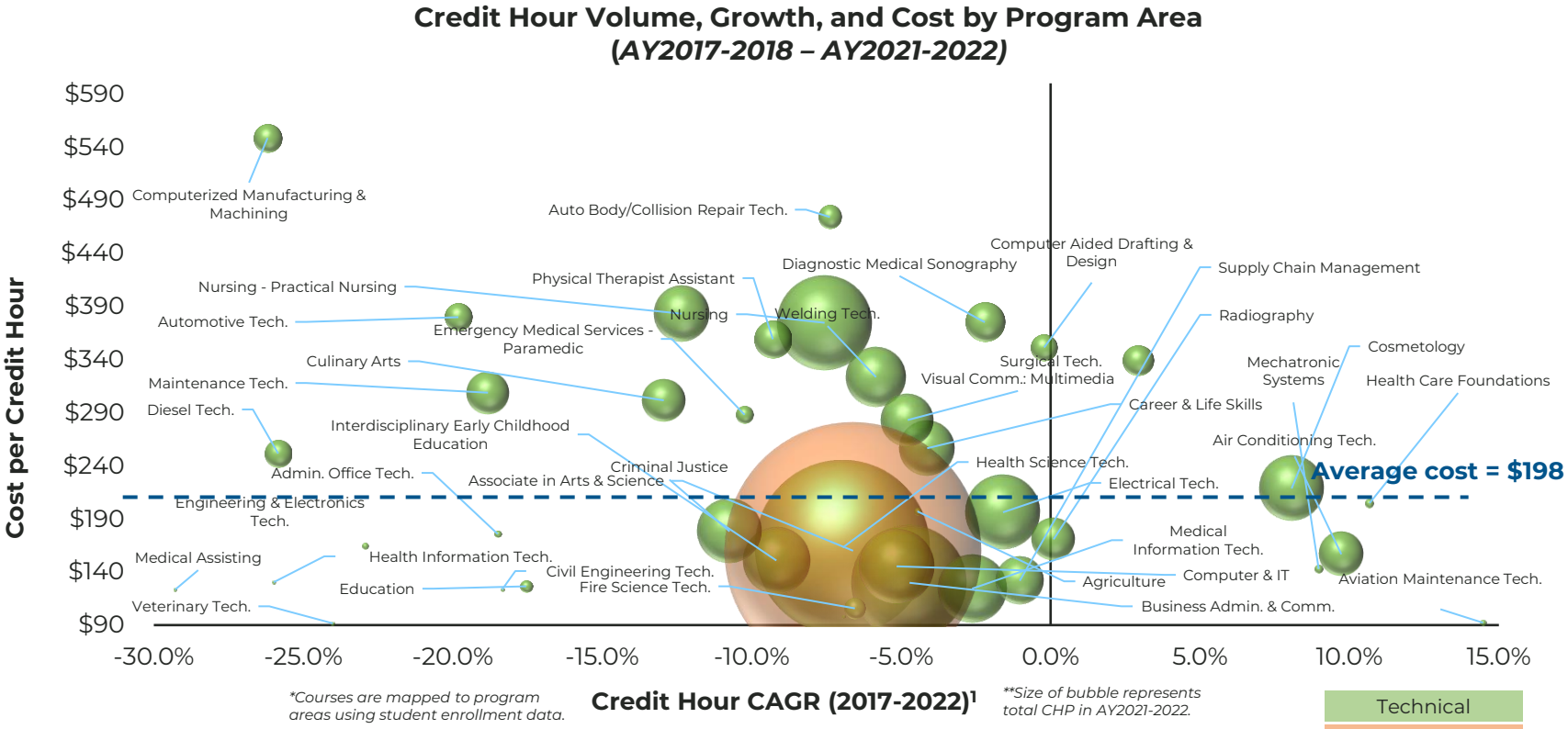
1. CAGR for certain program areas (i.e., those started after AY2017-2018) uses data available. Average cost includes undecided, non-credential, and program areas that started in AY2021-2022. Non-Credential and Undecided programs not included in graph. Program areas started in AY2021-2022 and those that were not offered in AY2021-2022 not included in graph. Program Areas not shown on graph listed in appendix. Complete list of program areas and their credit hour production and cost trends included in appendix.

Southeast KY Credit Hour Summary



Source: Cost to Educate Model
1. CAGR for certain program areas (i.e., those started after AY2017-2018) uses data available. Average cost includes undecided, non-credential, and program areas that started in AY2021-2022.
Non-Credential and Undecided programs not included in graph. Program areas started in AY2021-2022 and those that were not offered in AY2021-2022 not included in graph. Program Areas not shown on graph listed in appendix. Complete list of program areas and their credit hour production and cost trends included in appendix.

West KY Credit Hour Summary



Source: Cost to Educate Model
1. CAGR for certain program areas (i.e., those started after AY2017-2018) uses data available. Average cost includes undecided, non-credential, and program areas that started in AY2021-2022.
Non-Credential and Undecided programs not included in graph. Program areas started in AY2021-2022 and those that were not offered in AY2021-2022 not included in graph. Program Areas not shown on graph listed in appendix. Complete list of program areas and their credit hour production and cost trends included in appendix.

KCTCS Additional Programs (1/15)

The table below lists program areas not shown in the credit hour summary bubble charts for KCTCS and each college.

College	Program Area	AY2021-2022 Average Cost per CH	CHP CAGR
Ashland	Environmental Technology	$95	-16%
Ashland	Agriculture	$127	26%
Ashland	Fire Science Technology	$127	-44%
Ashland	Manufacturing Engineering Technology	$139	-38%
Ashland	Digital Printing Technology	$572	54%
Ashland	Health Science Technology	$176	110%
Ashland	Aviation Maintenance Technology	$206	73%
Ashland	Health Information Technology	$219	39%
Ashland	Truck Driver Training	$272	91%
Ashland	Advanced Integrated Technology	$611	-59%
Ashland	Respiratory Care	$803	18%
Big Sandy	Architectural Technology	$84	-4%
Big Sandy	Medical Assisting	$85	0%

KCTCS Additional Programs (2/15)

College	Program Area	AY2021-2022 Average Cost per CH	CHP CAGR
Big Sandy	Manufacturing Engineering Technology	$114	32%
Big Sandy	Surgical Technology	$119	41%
Big Sandy	Nursing - Practical Nursing	$122	-51%
Big Sandy	Undecided	$143	-49%
Big Sandy	Education	$156	122%
Big Sandy	Computer Aided Drafting and Design	$208	-36%
Big Sandy	Engineering and Electronics Technology	$208	-34%
Big Sandy	Visual Communication: Multimedia	$228	39%
Big Sandy	Visual Communication: Communication Arts Tech.	$297	46%
Big Sandy	Truck Driver Training	$477	82%
Big Sandy	Computerized Manufacturing and Machining	$842	147%
Big Sandy	Administrative Office Technology	$870	-6%
Big Sandy	Aviation Maintenance Technology	$1,038	-12%
Bluegrass	Plumbing Technology	$55	-24%
Bluegrass	Aviation Maintenance Technology	$91	19%

KCTCS Additional Programs (3/15)

College	Program Area	AY2021-2022 Average Cost per CH	CHP CAGR
Bluegrass	Agriculture	$95	14%
Bluegrass	Applied Process Technologies	$98	-23%
Bluegrass	Health Information Technology	$131	-64%
Bluegrass	Diesel Technology	$160	154%
Bluegrass	Health Science Technology	$164	107%
Bluegrass	Visual Art	$169	73%
Bluegrass	Undecided	$200	-55%
Bluegrass	Apprenticeship Studies	$393	258%
Bluegrass	Dental Hygiene	$738	-9%
Bluegrass	Respiratory Care	$931	-9%
Elizabethtown	Truck Driver Training	$42	66%
Elizabethtown	Graphic Design and Library Technology	$42	-11%
Elizabethtown	Architectural Technology	$42	-24%
Elizabethtown	Medical Assisting	$68	-1%
Elizabethtown	Environmental Technology	$86	32%

KCTCS Additional Programs (4/15)

College	Program Area	AY2021-2022 Average Cost per CH	CHP CAGR
Elizabethtown	Biotechnology Laboratory Technician	$89	32%
Elizabethtown	Veterinary Technology	$88	97%
Elizabethtown	Integrated Engineering Technology	$95	127%
Elizabethtown	Healthcare Facilities	$99	211%
Elizabethtown	Visual Art	$116	26%
Elizabethtown	Manufacturing Engineering Technology	$121	-45%
Elizabethtown	Applied Process Technologies	$129	19%
Elizabethtown	Health Science Technology	$140	50%
Elizabethtown	Education	$153	-51%
Elizabethtown	Construction Technology	$156	-35%
Elizabethtown	Undecided	$169	-31%
Elizabethtown	Agriculture	$202	32%
Elizabethtown	Plumbing Technology	$333	-42%
Elizabethtown	Radiography	$423	-17%
Elizabethtown	Diagnostic Medical Sonography	$428	10%

KCTCS Additional Programs (5/15)

College	Program Area	AY2021-2022 Average Cost per CH	CHP CAGR
Elizabethtown	Respiratory Care	$699	-3%
Gateway	Medical Administrative Services	$58	7%
Gateway	Respiratory Care	$74	-21%
Gateway	Engineering and Electronics Technology	$86	-23%
Gateway	Business Foundations	$90	-37%
Gateway	Applied Process Technologies	$95	-16%
Gateway	Computer Aided Drafting and Design	$97	-40%
Gateway	Career and Life Skills	$116	-70%
Gateway	Undecided	$118	-33%
Gateway	Health Science Technology	$145	236%
Gateway	Diesel Technology	$149	48%
Gateway	Truck Driver Training	$157	220%
Gateway	Plumbing Technology	$174	52%
Gateway	Education	$178	-50%
Gateway	Energy Technologies	$211	153%

KCTCS Additional Programs (6/15)

College	Program Area	AY2021-2022 Average Cost per CH	CHP CAGR
Gateway	Apprenticeship Studies	$233	55%
Gateway	Criminal Justice	$234	-36%
Gateway	Paralegal Technology	$424	151%
Hazard	Medical Administrative Services	$87	-35%
Hazard	Culinary Arts	$103	73%
Hazard	Emergency Medical Services - Paramedic	$107	-41%
Hazard	Fire Science Technology	$110	-26%
Hazard	Respiratory Care	$113	-45%
Hazard	Biomedical Technology Systems	$149	44%
Hazard	Health Information Technology	$151	-69%
Hazard	Undecided	$163	-33%
Hazard	Applied Process Technologies	$173	-28%
Hazard	Civil Engineering Technology	$176	-31%
Hazard	Advanced Integrated Technology	$221	101%
Hazard	Manufacturing Engineering Technology	$283	131%

KCTCS Additional Programs (7/15)

College	Program Area	AY2021-2022 Average Cost per CH	CHP CAGR
Hazard	Unmanned Systems Technology	$603	90%
Hazard	Nursing - Practical Nursing	$895	5%
Hazard	Truck Driver Training	$816	14%
Hazard	Diagnostic Medical Sonography	$831	-2%
Hazard	Physical Therapist Assistant	$866	-14%
Hazard	Auto Body/Collision Repair Technology	$886	-63%
Henderson	Biomedical Technology Systems	$124	73%
Henderson	Electrical Technology	$166	26%
Henderson	Health Science Technology	$194	109%
Henderson	Surgical Technology	$542	6%
Henderson	Welding Technology	$654	15%
Hopkinsville	Applied Process Technologies	$52	-45%
Hopkinsville	Aviation Maintenance Technology	$120	-50%
Hopkinsville	Fire Science Technology	$127	28%
Hopkinsville	Visual Communication: Multimedia	$135	41%

KCTCS Additional Programs (8/15)

College	Program Area	AY2021-2022 Average Cost per CH	CHP CAGR
Hopkinsville	Surgical Technology	$150	75%
Hopkinsville	Human Services	$155	-50%
Hopkinsville	Engineering and Electronics Technology	$186	-44%
Hopkinsville	Computer Aided Drafting and Design	$192	-52%
Hopkinsville	Undecided	$199	-46%
Hopkinsville	Massage Therapy Technology	$202	38%
Hopkinsville	Medical Laboratory Technician	$223	-49%
Hopkinsville	Emergency Medical Services - Paramedic	$382	89%
Hopkinsville	Diesel Technology	$427	79%
Hopkinsville	Computerized Manufacturing and Machining	$750	-32%
Jefferson	Paralegal Technology	$78	-26%
Jefferson	Veterinary Technology	$96	-33%
Jefferson	Advanced Integrated Technology	$102	175%
Jefferson	Visual Communication: Design & Technology	$107	25%
Jefferson	Health Care Foundations	$164	-43%

KCTCS Additional Programs (9/15)

College	Program Area	AY2021-2022 Average Cost per CH	CHP CAGR
Jefferson	Visual Art	$162	44%
Jefferson	Plumbing Technology	$190	24%
Jefferson	Emergency Medical Services - Paramedic	$239	22%
Jefferson	Administrative Office Technology	$500	-49%
Jefferson	Women's and Gender Studies	$774	-39%
Jefferson	Nursing - Practical Nursing	$782	-17%
Jefferson	Unmanned Systems Technology	$2,367	58%
KCTCS	Horticulture	$109	-31%
KCTCS	Global Studies	$153	-44%
KCTCS	Undecided	$185	-38%
KCTCS	Energy Technologies	$211	154%
KCTCS	Mining Technology	$339	-60%
KCTCS	Marine Technology	$454	-33%
KCTCS	Dental Hygiene	$629	-10%
KCTCS	Fixed Wing Flight Training	$642	4193%

KCTCS Additional Programs (10/15)

College	Program Area	AY2021-2022 Average Cost per CH	CHP CAGR
KCTCS	Unmanned Systems Technology	$710	107%
KCTCS	Women's and Gender Studies	$774	-39%
KCTCS	Helicopter Flight Training	$2,159	188%
Madisonville	Graphic Design and Library Technology	$88	7%
Madisonville	Visual Art	$91	-9%
Madisonville	Applied Process Technologies	$114	-43%
Madisonville	Career and Life Skills	$145	-47%
Madisonville	Maintenance Technology	$192	45%
Madisonville	Welding Technology	$209	50%
Madisonville	Aviation Maintenance Technology	$223	33%
Madisonville	Electrical Technology	$223	126%
Madisonville	Agriculture	$228	142%
Madisonville	Health Science Technology	$225	64%
Madisonville	Air Conditioning Technology	$269	65%
Madisonville	Mining Technology	$339	-59%

KCTCS Additional Programs (11/15)

College	Program Area	AY2021-2022 Average Cost per CH	CHP CAGR
Madisonville	Truck Driver Training	$430	263%
Madisonville	Computerized Manufacturing and Machining	$595	122%
Madisonville	Fixed Wing Flight Training	$817	5213%
Madisonville	Nursing - Practical Nursing	$754	-21%
Madisonville	Emergency Medical Services - Paramedic	$880	-25%
Madisonville	Helicopter Flight Training	$2,466	174%
Maysville	Health Information Technology	$92	0%
Maysville	Supply Chain Management	$95	-10%
Maysville	Graphic Design and Library Technology	$97	0%
Maysville	Manufacturing Engineering Technology	$179	44%
Maysville	Health Science Technology	$191	34%
Maysville	Computer Aided Drafting and Design	$196	19%
Maysville	Undecided	$332	-46%
Maysville	Applied Process Technologies	$459	51%
Maysville	Certified Medical Technician	$556	50%

KCTCS Additional Programs (12/15)

College	Program Area	AY2021-2022 Average Cost per CH	CHP CAGR
Maysville	Culinary Arts	$727	-24%
Maysville	Physical Therapist Assistant	$833	70%
Maysville	Dental Hygiene	$4,029	-46%
Owensboro	Physical Therapist Assistant	$97	-44%
Owensboro	Fixed Wing Flight Training	$110	800%
Owensboro	Human Services	$145	-51%
Owensboro	Fire Science Technology	$241	-37%
Owensboro	Career and Life Skills	$191	-44%
Owensboro	Construction Technology	$193	186%
Owensboro	Health Care Foundations	$210	-35%
Owensboro	Medical Laboratory Technician	$235	120%
Owensboro	Nursing - Practical Nursing	$257	65%
Owensboro	Medical Assisting	$316	55%
Owensboro	Pharmacy Technology	$752	0%
Owensboro	Supply Chain Management	$2,426	26%

KCTCS Additional Programs (13/15)

College	Program Area	AY2021-2022 Average Cost per CH	CHP CAGR
Somerset	Administrative Office Technology	$62	-43%
Somerset	Theatre Arts	$63	0%
Somerset	Supply Chain Management	$73	0%
Somerset	Visual Communication: Communication Arts Tech.	$86	2%
Somerset	Human Services	$94	-34%
Somerset	Career and Life Skills	$209	-34%
Somerset	Truck Driver Training	$377	80%
Somerset	Pharmacy Technology	$668	-19%
Southcentral KY	Veterinary Technology	$57	-34%
Southcentral KY	Dental Hygiene	$77	39%
Southcentral KY	Health Information Technology	$101	47%
Southcentral KY	Computer Aided Drafting and Design	$95	67%
Southcentral KY	Visual Communication: Communication Arts Tech.	$107	32%
Southcentral KY	Diesel Technology	$113	33%
Southcentral KY	Visual Communication: Multimedia	$120	41%

KCTCS Additional Programs (14/15)

College	Program Area	AY2021-2022 Average Cost per CH	CHP CAGR
Southcentral KY	Manufacturing Engineering Technology	$185	-42%
Southcentral KY	Medical Administrative Services	$150	-60%
Southcentral KY	Auto Body/Collision Repair Technology	$253	32%
Southeast KY	Business Foundations	$125	-41%
Southeast KY	Health Care Foundations	$179	-42%
Southeast KY	Medical Laboratory Technician	$188	-53%
Southeast KY	Emergency Medical Services - Paramedic	$190	45%
Southeast KY	Fire Science Technology	$207	-31%
Southeast KY	Undecided	$220	-50%
Southeast KY	Medical Assisting	$224	31%
Southeast KY	Human Services	$245	71%
Southeast KY	Health Science Technology	$259	29%
Southeast KY	Manufacturing Engineering Technology	$364	-77%
Southeast KY	Supply Chain Management	$398	32%
Southeast KY	Physical Therapist Assistant	$783	-23%

KCTCS Additional Programs (15/15)

College	Program Area	AY2021-2022 Average Cost per CH	CHP CAGR
Southeast KY	Maintenance Technology	$987	-29%
Southeast KY	Plumbing Technology	$3,095	0%
West KY	Human Services	$78	-23%
West KY	Truck Driver Training	$83	-16%
West KY	Advanced Integrated Technology	$83	-28%
West KY	Visual Communication: Communication Arts Tech.	$184	32%
West KY	Apprenticeship Studies	$195	170%
West KY	Visual Communication: Design & Technology	$237	59%
West KY	Graphic Design and Library Technology	$270	147%
West KY	Pharmacy Technology	$275	26%
West KY	Construction Technology	$342	71%
West KY	Marine Technology	$463	-32%
West KY	Medical Laboratory Technician	$865	-11%
West KY	Dental Hygiene	$975	-18%

KCTCS Credit Hour Summary (1/5)

Technical
Transfer

Program Area	AY2021-2022 CHP	AY2021-2022 Average Cost per CH	CHP CAGR
Administrative Office Technology	2,416	$198	-8.6%
Advanced Integrated Manufacturing	0	$0	N/A
Advanced Integrated Technology	3,289	$322	17.6%
African American Studies	42	$107	-5.2%
Agriculture	1,676	$237	-3.6%
Air Conditioning Technology	14,919	$187	6.1%
Appalachian Studies	9	$265	-12.0%
Applied Process Technologies	2,068	$273	-14.3%
Apprenticeship Studies	955	$247	34.1%
Architectural Technology	1,485	$226	-1.8%
Associate in Arts and Science	424,143	$164	-5.9%
Auto Body/Collision Repair Technology	826	$300	-18.8%
Automotive Technology	12,160	$254	-1.5%
Aviation Maintenance Technology	5,707	$232	9.1%
Biomedical Technology Systems	677	$296	-0.3%
Biotechnology Laboratory Technician	1,205	$277	4.6%
Broadband Technology	0	$0	N/A
Business Administration and Communication	69,048	$154	-2.2%
Business Foundations	44	$111	-38.7%
Career and Life Skills	9,728	$218	-16.6%
Certified Medical Technician	52	$240	70.2%
Civil Engineering Technology	906	$267	-9.2%
Community Dental Health Coordinator	18	$481	-24.4%
Community Health Worker	0	$0	N/A
Computer Aided Drafting and Design	2,427	$256	-8.8%

Source: Cost to Educate Model; *Program Areas use data available to calculate the CAGR; **Program Areas started in AY2021-2022; N/A CAGR for Program Areas not offered in AY2021-2022 or started in AY2021-2022

KCTCS Credit Hour Summary (2/5)

Technical
Transfer

Program Area	AY2021-2022 CHP	AY2021-2022 Average Cost per CH	CHP CAGR
Computer and Information Technologies	43,646	$167	-2.9%
Computer Engineering Technology**	400	$159	N/A
Computerized Manufacturing and Machining	4,770	$359	-8.7%
Construction Technology	3,845	$256	5.0%
Cosmetology	7,064	$218	-4.5%
Criminal Justice	19,565	$171	-12.8%
Culinary Arts	4,322	$278	-5.3%
Cybersecurity**	252	$277	N/A
Dental Hygiene	2,078	$629	-10.2%
Diagnostic Medical Sonography	1,486	$437	12.8%
Diesel Technology	6,065	$254	-0.6%
Digital Game and Simulation Design	0	$0	N/A
Digital Printing Technology*	84	$256	13.8%
Education	11,044	$159	-13.2%
Electrical Technology	21,826	$159	5.3%
Emergency Medical Services - Paramedic	6,891	$238	5.2%
Energy Management	0	$0	N/A
Energy Technologies*	414	$211	154.3%
Engineering and Electronics Technology	9,213	$210	-6.4%
Environmental Technology	698	$265	0.3%
Equine	1,235	$190	5.4%
Exercise Science	0	$0	N/A
Fermentation Science**	122	$275	N/A
Filmmaking and Cinematic Arts	758	$222	-4.6%
Financial and Customer Services	21	$129	12.7%

Source: Cost to Educate Model; *Program Areas use data available to calculate the CAGR; **Program Areas started in AY2021-2022; N/A CAGR for Program Areas not offered in AY2021-2022 or started in AY2021-2022

KCTCS Credit Hour Summary (3/5)

Technical
Transfer

Program Area	AY2021-2022 CHP	AY2021-2022 Average Cost per CH	CHP CAGR
Fire Science Technology	2,215	$146	-10.1%
Fixed Wing Flight Training*	301	$642	4192.9%
Geospatial Technology**	6	$1,116	N/A
Global Studies	24	$155	-43.6%
Graphic Design and Library Technology	3,073	$194	14.2%
Health Care Foundations	198	$222	-30.0%
Health Information Technology	2,140	$196	-7.2%
Health Science Technology	39,485	$168	6.3%
Healthcare Facilities	439	$334	-6.4%
Heavy Equipment Operation	316	$317	-5.4%
Helicopter Flight Training*	75	$2,159	188.5%
Historic Preservation Technology	0	$0	N/A
Homeland Security/Emergency Management	0	$0	N/A
Horticulture	12	$109	-31.0%
Human Services	13,485	$163	-4.7%
Humanities	0	$0	N/A
Insurance Risk Management	0	$0	N/A
Integrated Engineering Technology	182	$221	-2.3%
Interdisciplinary Early Childhood Education	11,889	$186	-5.8%
Invasive Cardiology	0	$0	N/A
Maintenance Technology	25,405	$241	-8.9%
Manufacturing Engineering Technology	1,079	$237	-11.9%
Marine Technology	120	$454	-32.9%
Masonry	0	$0	N/A
Massage Therapy Technology*	799	$229	15.6%

Source: Cost to Educate Model; *Program Areas use data available to calculate the CAGR; **Program Areas started in AY2021-2022; N/A CAGR for Program Areas not offered in AY2021-2022 or started in AY2021-2022

KCTCS Credit Hour Summary (4/5)

Technical
Transfer

Program Area	AY2021-2022 CHP	AY2021-2022 Average Cost per CH	CHP CAGR
Mechatronic Systems	31	$137	-0.5%
Medical Administrative Services	479	$118	-10.8%
Medical Assisting	7,020	$252	1.9%
Medical Information Technology	21,521	$155	-5.1%
Medical Laboratory Technician	2,485	$324	-8.5%
Mining Technology	19	$339	-59.8%
Non-Credential	135,545	$179	1.5%
Nursing	43,513	$355	-5.9%
Nursing - Practical Nursing	12,538	$440	-6.5%
Nursing (ADN)	0	$0	N/A
Occupational Therapy Assistant	1,110	$414	-13.8%
Orthotics and Prosthetics Technology**	70	$789	N/A
Paralegal Technology	861	$219	10.2%
Pharmacy Technology	1,117	$348	-8.9%
Physical Therapist Assistant	3,022	$486	-13.7%
Plumbing Technology	456	$280	1.4%
Professional Craft: Pottery	0	$0	N/A
Professional Studio Artist	286	$563	4.2%
Project Lead the Way	0	$0	N/A
Radiography	7,137	$398	-7.0%
Real Estate	0	$0	N/A
Respiratory Care	5,160	$508	-4.3%
Security Management	0	$0	N/A
Supply Chain Management	1,697	$162	0.6%
Surgical Technology	6,462	$251	-2.2%

Source: Cost to Educate Model; *Program Areas use data available to calculate the CAGR; **Program Areas started in AY2021-2022; N/A CAGR for Program Areas not offered in AY2021-2022 or started in AY2021-2022

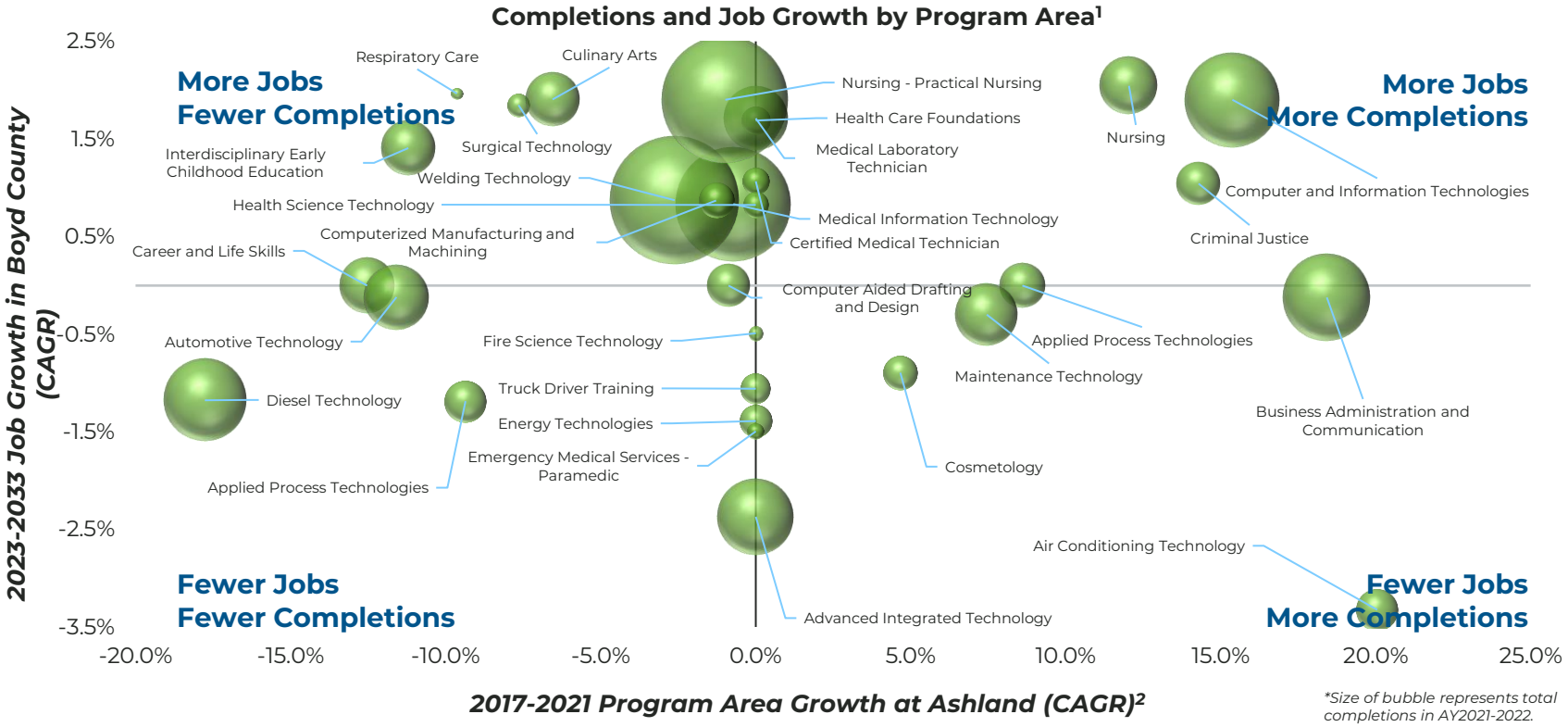
KCTCS Credit Hour Summary (5/5)

Technical
Transfer

Program Area	AY2021-2022 CHP	AY2021-2022 Average Cost per CH	CHP CAGR
Surveying and Mapping Technology	0	$0	N/A
Theatre Arts	393	$282	-5.7%
Truck Driver Training	1,890	$333	42.2%
Undecided	1,489	$184	-38.1%
Unmanned Systems Technology*	159	$710	106.7%
Veterinary Technology	793	$419	-3.8%
Visual Art	1,159	$254	-0.8%
Visual Communication - Printing	0	$0	N/A
Visual Communication - Visual Arts	0	$0	N/A
Visual Communication: Communication Arts Technology	1,654	$245	-3.7%
Visual Communication: Design & Technology	595	$295	-0.3%
Visual Communication: Multimedia	2,207	$233	-4.8%
Welding Technology	14,935	$230	-0.3%
Women's and Gender Studies	3	$774	-39.2%
Workplace Safety Specialist	0	$0	N/A

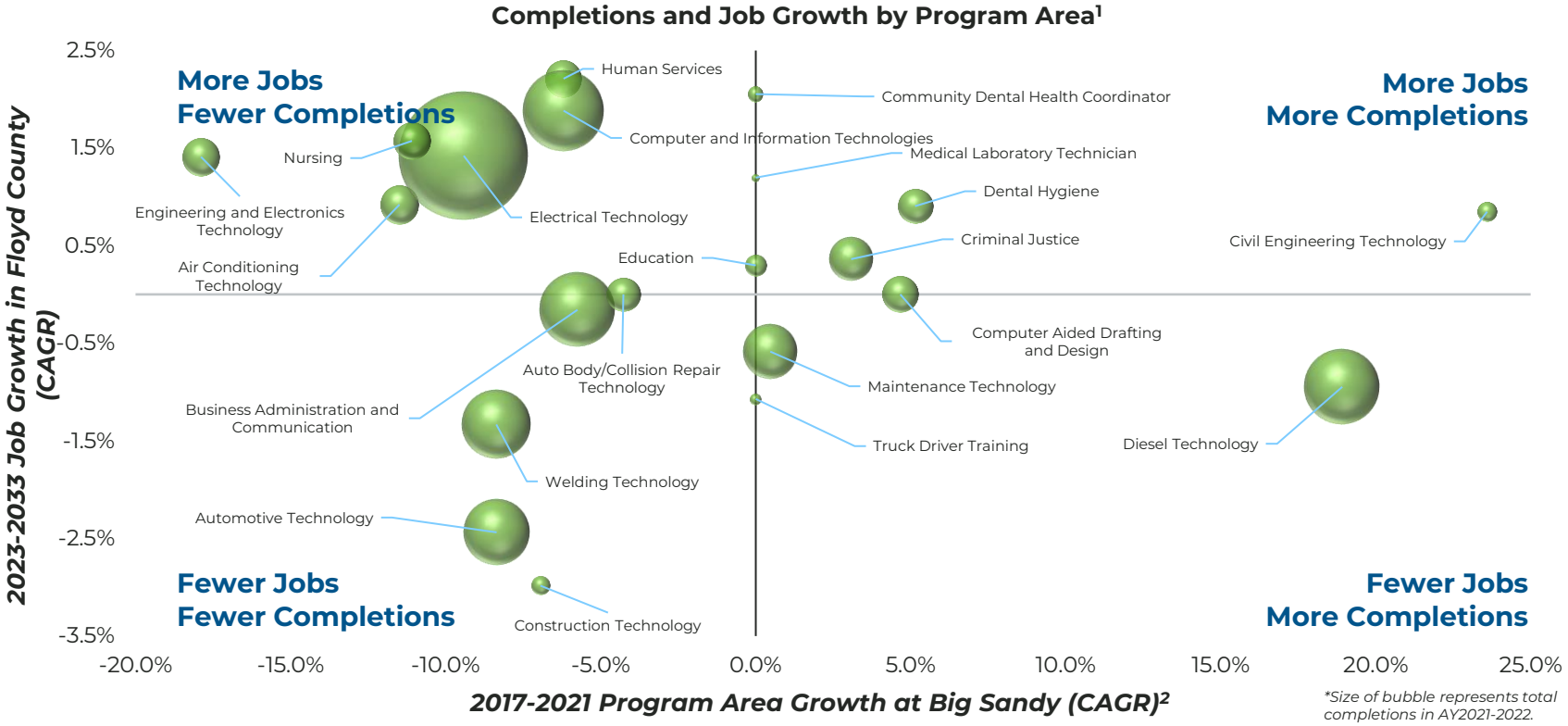
Source: Cost to Educate Model; *Program Areas use data available to calculate the CAGR; **Program Areas started in AY2021-2022; N/A CAGR for Program Areas not offered in AY2021-2022 or started in AY2021-2022

Ashland: Program Area Matrix



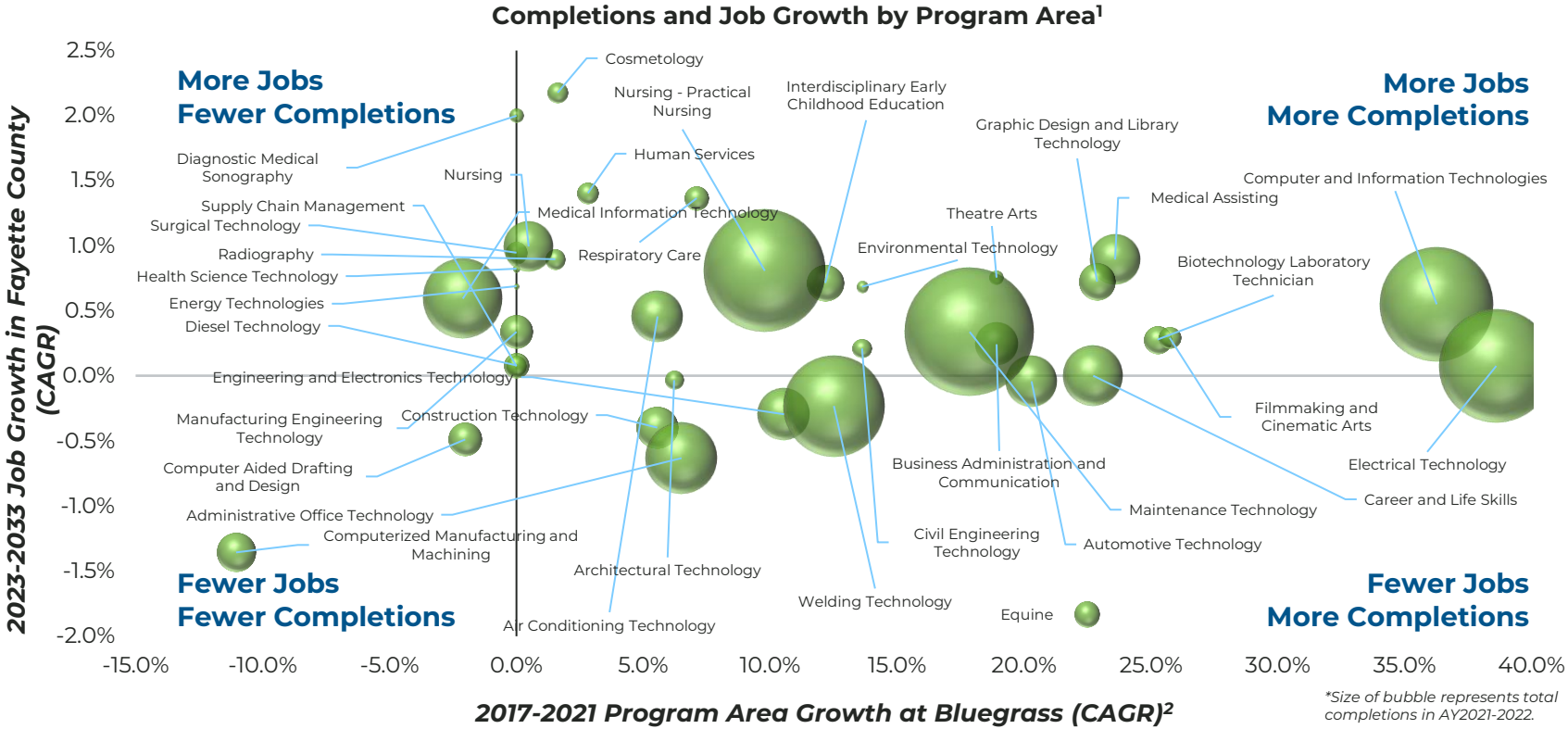
Source: Lightcast
1. Only includes technical programs due to labor market relevancy. Size of bubble represents total completions in 2021. Job market data does not take into account expected wages for applicable jobs.
2. Program areas not included that started after 2017 or were not offered in 2021. Programs areas not shown in graph due to axis dimensions listed in appendix. Program areas listed more than once have multiple CIP codes. Additional details in Market Positioning model.

Big Sandy: Program Area Matrix



Source: Lightcast
1. Only includes technical programs due to labor market relevancy. Size of bubble represents total completions in 2021. Job market data does not take into account expected wages for applicable jobs.
2. Program areas not included that started after 2017 or were not offered in 2021. Programs areas not shown in graph due to axis dimensions listed in appendix. Program areas listed more than once have multiple CIP codes. Additional details in Market Positioning model.

Bluegrass: Program Area Matrix



*Size of bubble represents total completions in AY2021-2022.

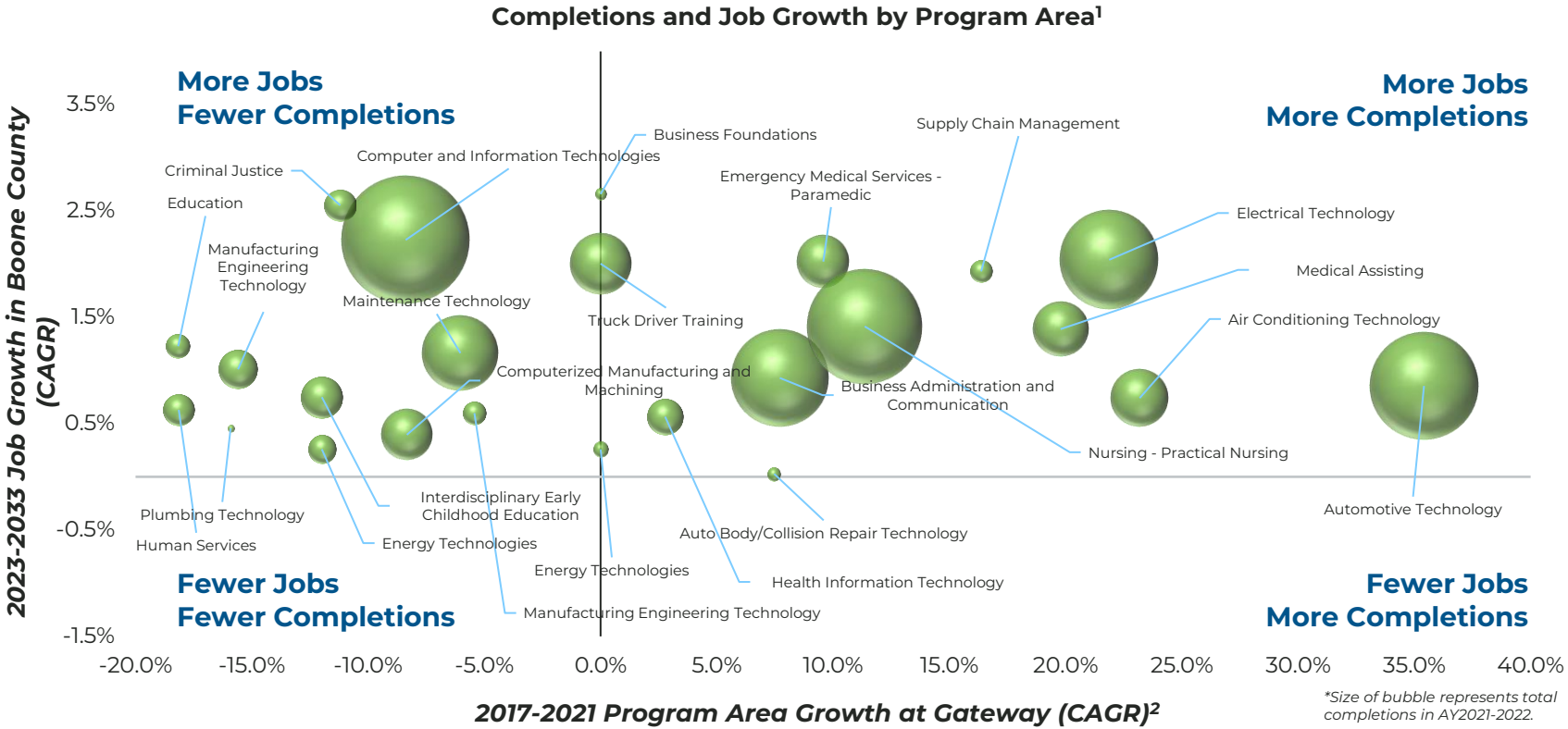
Source: Lightcast
1. Only includes technical programs due to labor market relevancy. Size of bubble represents total completions in 2021. Job market data does not take into account expected wages for applicable jobs.
2. Program areas not included that started after 2017 or were not offered in 2021. Programs areas not shown in graph due to axis dimensions listed in appendix. Program areas listed more than once have multiple CIP codes. Additional details in Market Positioning model.

Elizabethtown: Program Area Matrix

*Size of bubble represents total completions in AY2021-2022.

Source: Lightcast
1. Only includes technical programs due to labor market relevancy. Size of bubble represents total completions in 2021. Job market data does not take into account expected wages for applicable jobs.
2. Program areas not included that started after 2017 or were not offered in 2021. Programs areas not shown in graph due to axis dimensions listed in appendix. Program areas listed more than once have multiple CIP codes. Additional details in Market Positioning model.

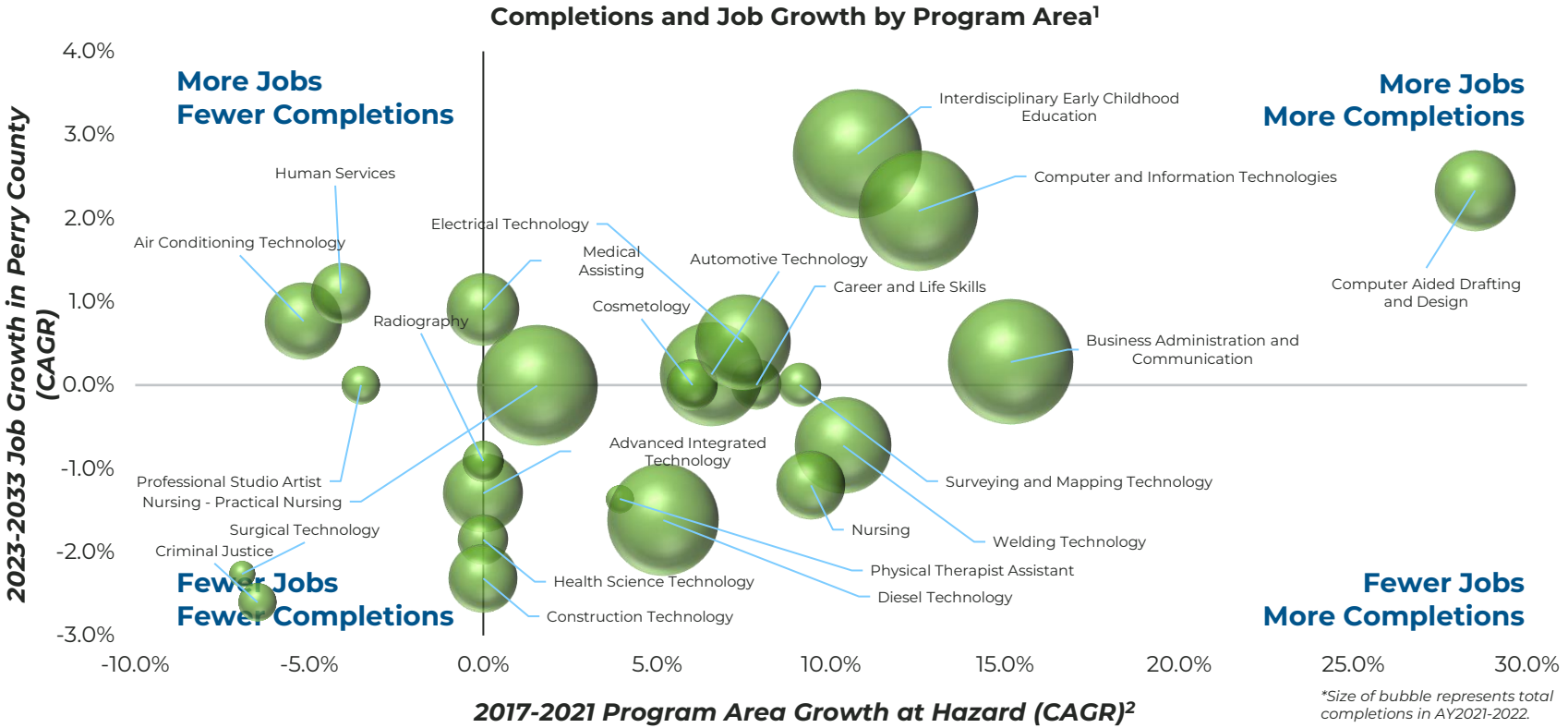
Gateway: Program Area Matrix



*Size of bubble represents total completions in AY2021-2022.

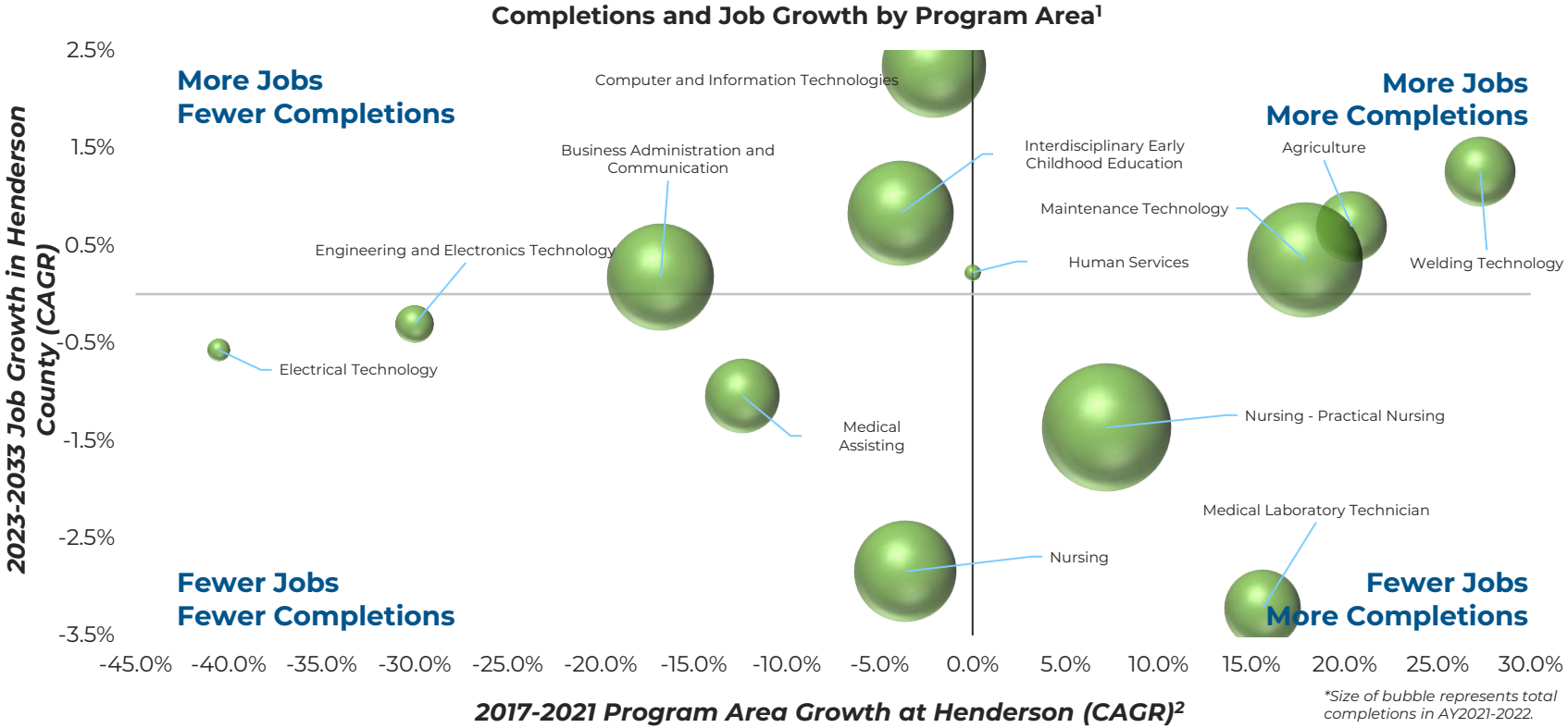
Source: Lightcast
1. Only includes technical programs due to labor market relevancy. Size of bubble represents total completions in 2021. Job market data does not take into account expected wages for applicable jobs.
2. Program areas not included that started after 2017 or were not offered in 2021. Programs areas not shown in graph due to axis dimensions listed in appendix. Program areas listed more than once have multiple CIP codes. Additional details in Market Positioning model.

Hazard: Program Area Matrix



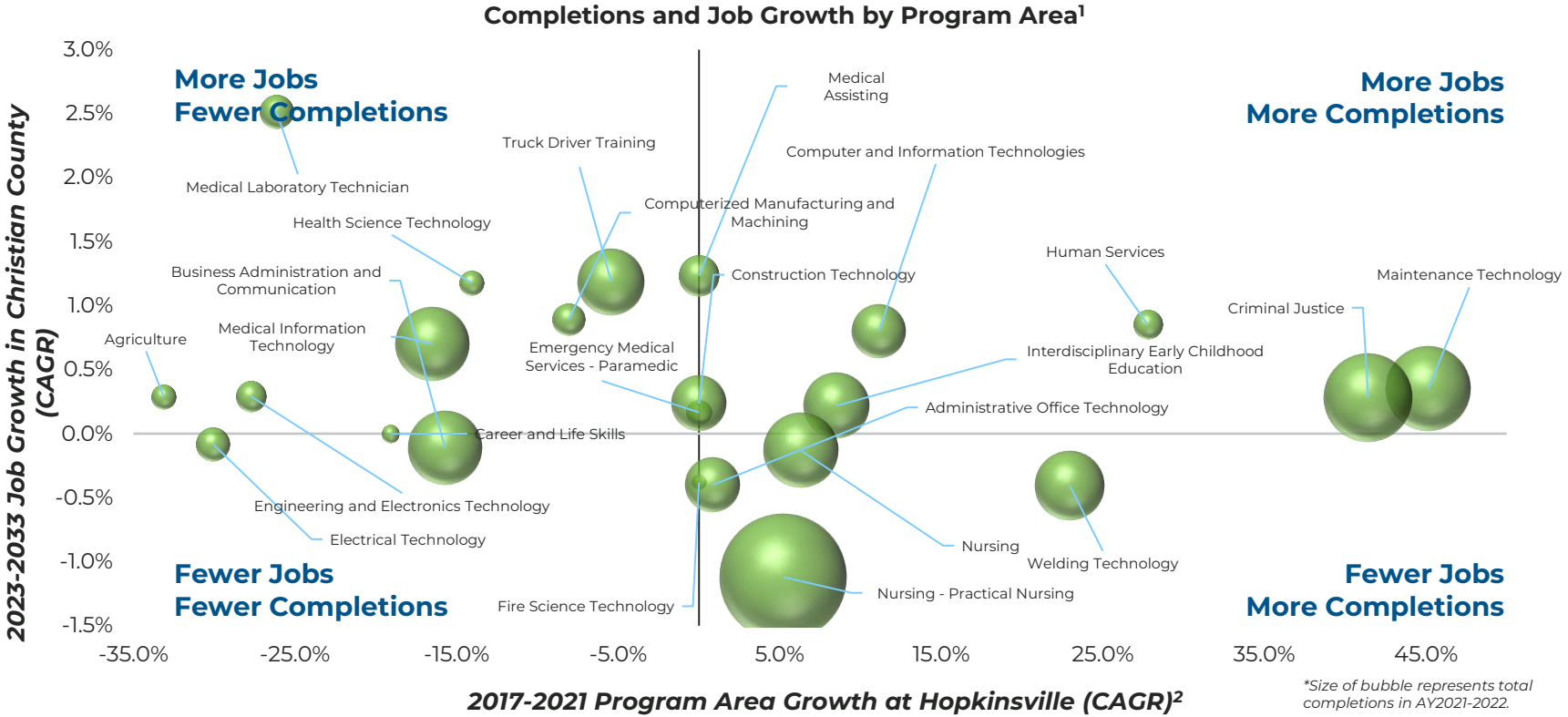
Source: Lightcast
1. Only includes technical programs due to labor market relevancy. Size of bubble represents total completions in 2021. Job market data does not take into account expected wages for applicable jobs.
2. Program areas not included that started after 2017 or were not offered in 2021. Programs areas not shown in graph due to axis dimensions listed in appendix. Program areas listed more than once have multiple CIP codes. Additional details in Market Positioning model.

Henderson: Program Area Matrix



Source: Lightcast
1. Only includes technical programs due to labor market relevancy. Size of bubble represents total completions in 2021. Job market data does not take into account expected wages for applicable jobs.
2. Program areas not included that started after 2017 or were not offered in 2021. Programs areas not shown in graph due to axis dimensions listed in appendix. Program areas listed more than once have multiple CIP codes. Additional details in Market Positioning model.

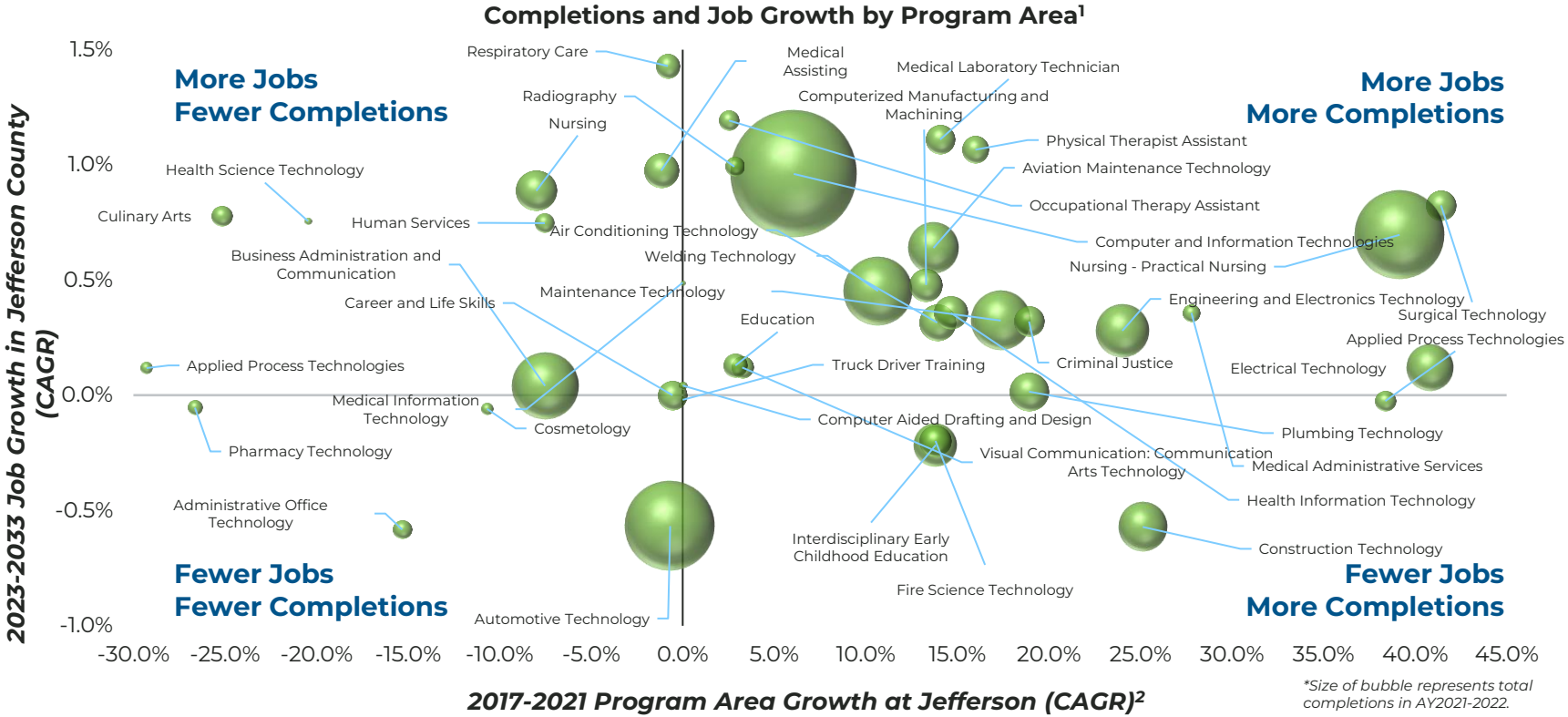
Hopkinsville: Program Area Matrix



*Size of bubble represents total completions in AY2021-2022.

Source: Lightcast
1. Only includes technical programs due to labor market relevancy. Size of bubble represents total completions in 2021. Job market data does not take into account expected wages for applicable jobs.
2. Program areas not included that started after 2017 or were not offered in 2021. Programs areas not shown in graph due to axis dimensions listed in appendix. Program areas listed more than once have multiple CIP codes. Additional details in Market Positioning model.

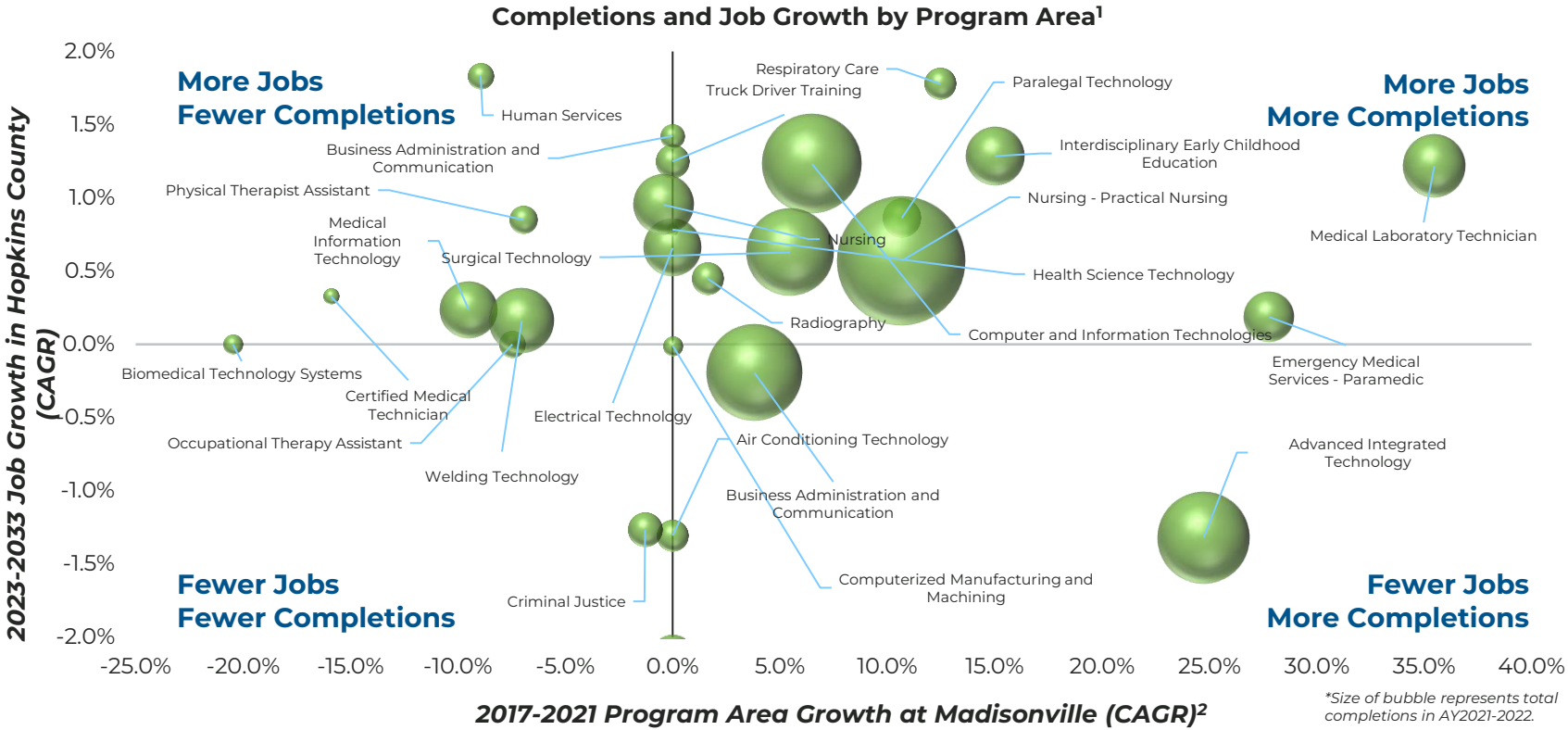
Jefferson: Program Area Matrix



*Size of bubble represents total completions in AY2021-2022.

Source: Lightcast
1. Only includes technical programs due to labor market relevancy. Size of bubble represents total completions in 2021. Job market data does not take into account expected wages for applicable jobs.
2. Program areas not included that started after 2017 or were not offered in 2021. Programs areas not shown in graph due to axis dimensions listed in appendix. Program areas listed more than once have multiple CIP codes. Additional details in Market Positioning model.

Madisonville: Program Area Matrix



*Size of bubble represents total completions in AY2021-2022.

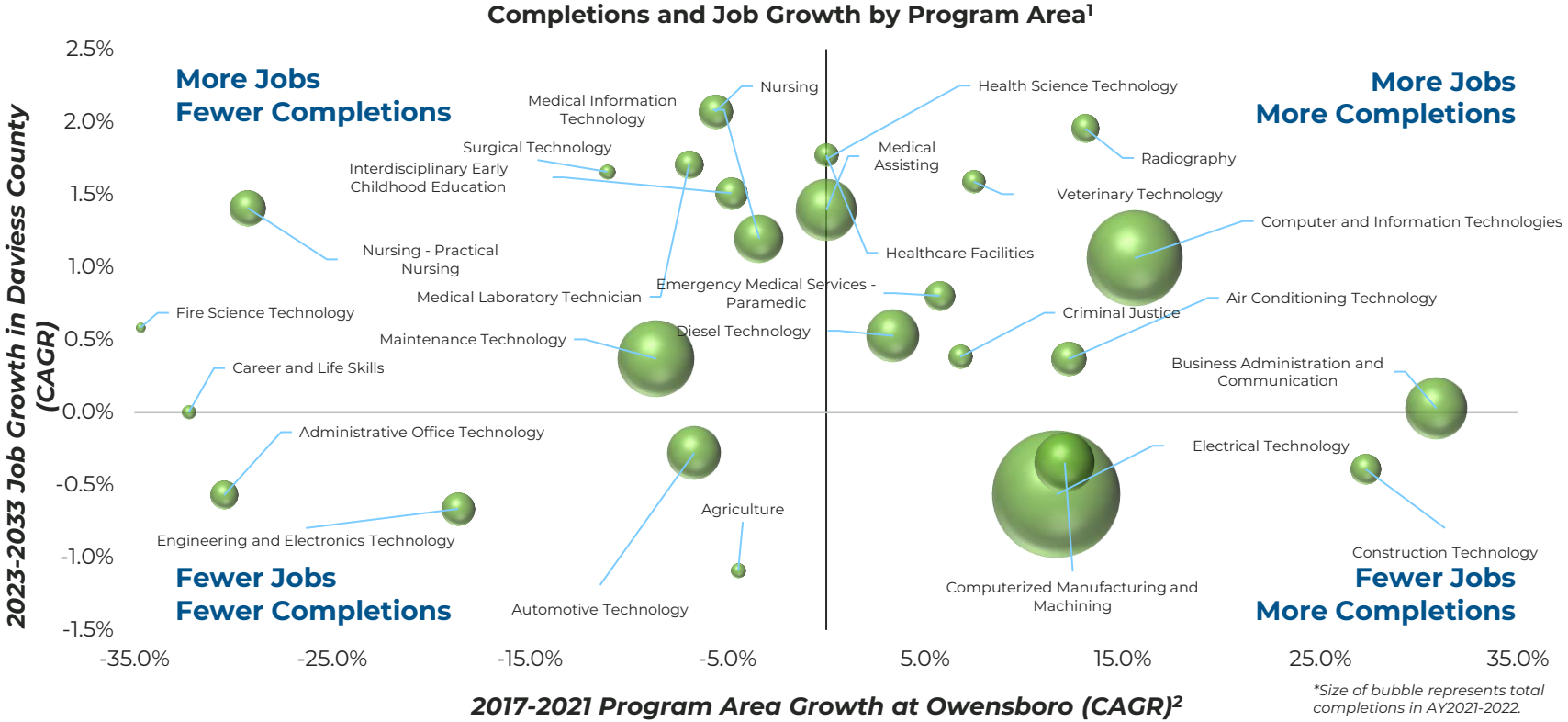
Source: Lightcast
1. Only includes technical programs due to labor market relevancy. Size of bubble represents total completions in 2021. Job market data does not take into account expected wages for applicable jobs.
2. Program areas not included that started after 2017 or were not offered in 2021. Programs areas not shown in graph due to axis dimensions listed in appendix. Program areas listed more than once have multiple CIP codes. Additional details in Market Positioning model.

Maysville: Program Area Matrix

*Size of bubble represents total completions in AY2021-2022.

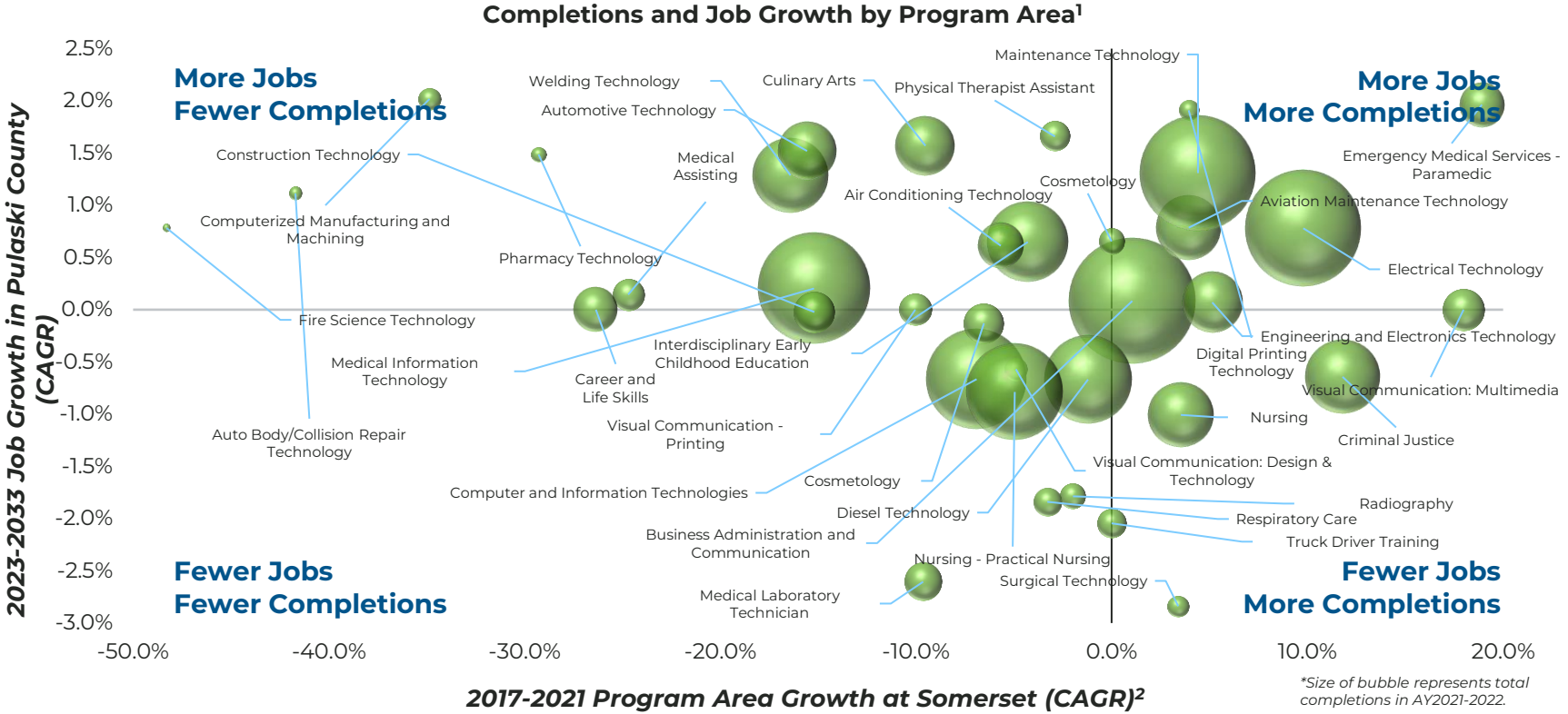
Source: Lightcast
1. Only includes technical programs due to labor market relevancy. Size of bubble represents total completions in 2021. Job market data does not take into account expected wages for applicable jobs.
2. Program areas not included that started after 2017 or were not offered in 2021. Programs areas not shown in graph due to axis dimensions listed in appendix. Program areas listed more than once have multiple CIP codes. Additional details in Market Positioning model.

Owensboro: Program Area Matrix



Source: Lightcast
1. Only includes technical programs due to labor market relevancy. Size of bubble represents total completions in 2021. Job market data does not take into account expected wages for applicable jobs.
2. Program areas not included that started after 2017 or were not offered in 2021. Programs areas not shown in graph due to axis dimensions listed in appendix. Program areas listed more than once have multiple CIP codes. Additional details in Market Positioning model.

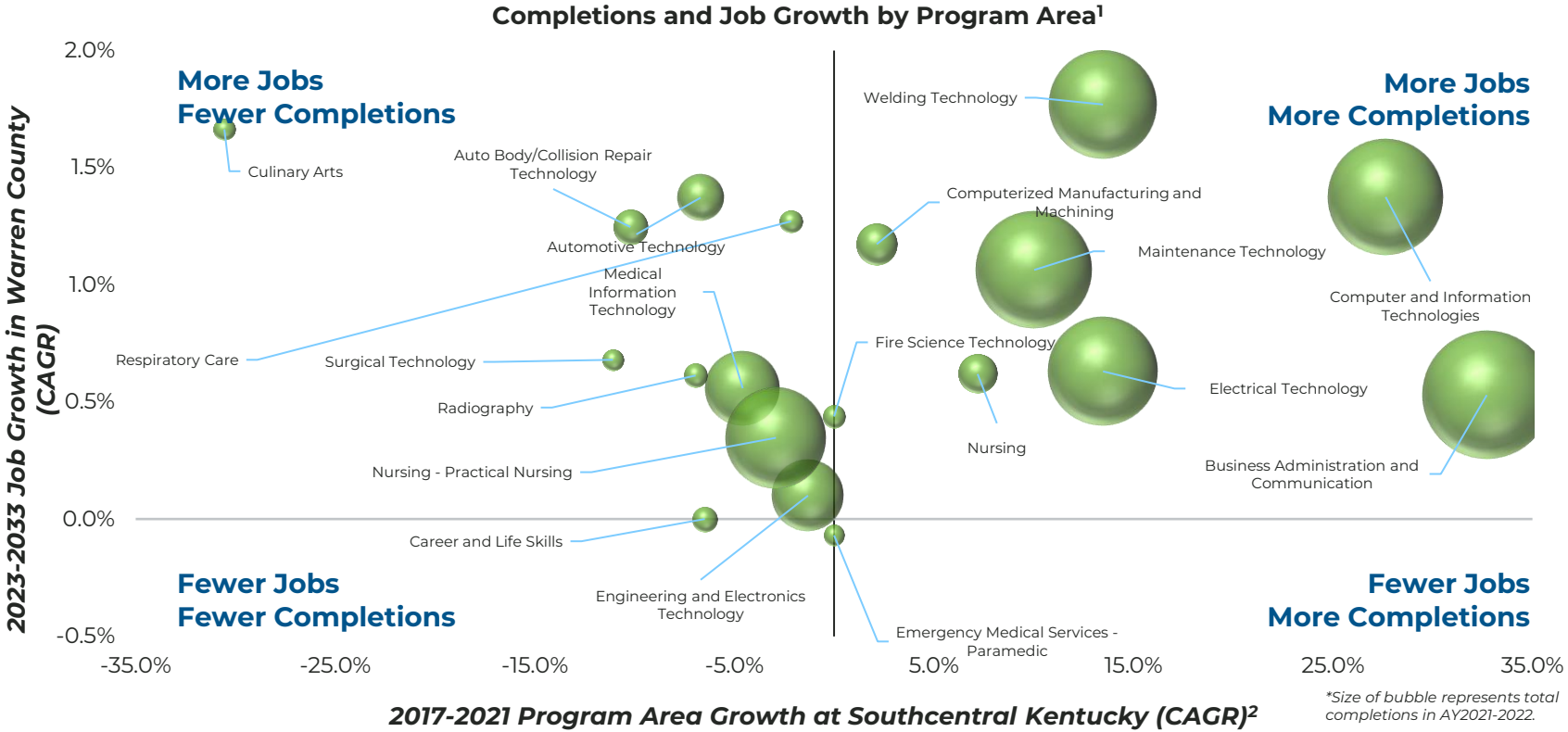
Somerset: Program Area Matrix



*Size of bubble represents total completions in AY2021-2022.

Source: Lightcast
1. Only includes technical programs due to labor market relevancy. Size of bubble represents total completions in 2021. Job market data does not take into account expected wages for applicable jobs.
2. Program areas not included that started after 2017 or were not offered in 2021. Programs areas not shown in graph due to axis dimensions listed in appendix. Program areas listed more than once have multiple CIP codes. Additional details in Market Positioning model.

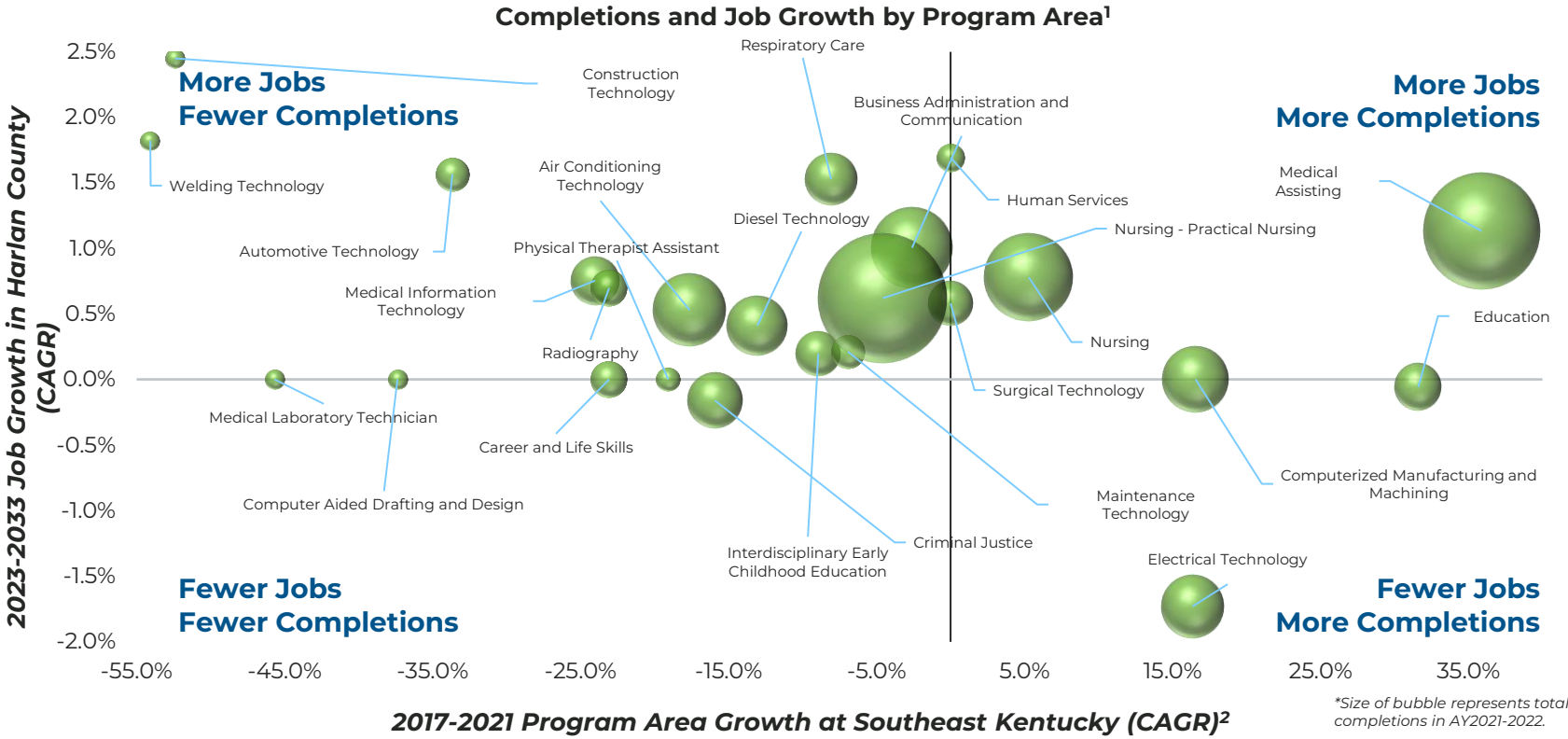
Southcentral KY: Program Area Matrix



*Size of bubble represents total completions in AY2021-2022.

Source: Lightcast
1. Only includes technical programs due to labor market relevancy. Size of bubble represents total completions in 2021. Job market data does not take into account expected wages for applicable jobs.
2. Program areas not included that started after 2017 or were not offered in 2021. Programs areas not shown in graph due to axis dimensions listed in appendix. Program areas listed more than once have multiple CIP codes. Additional details in Market Positioning model.

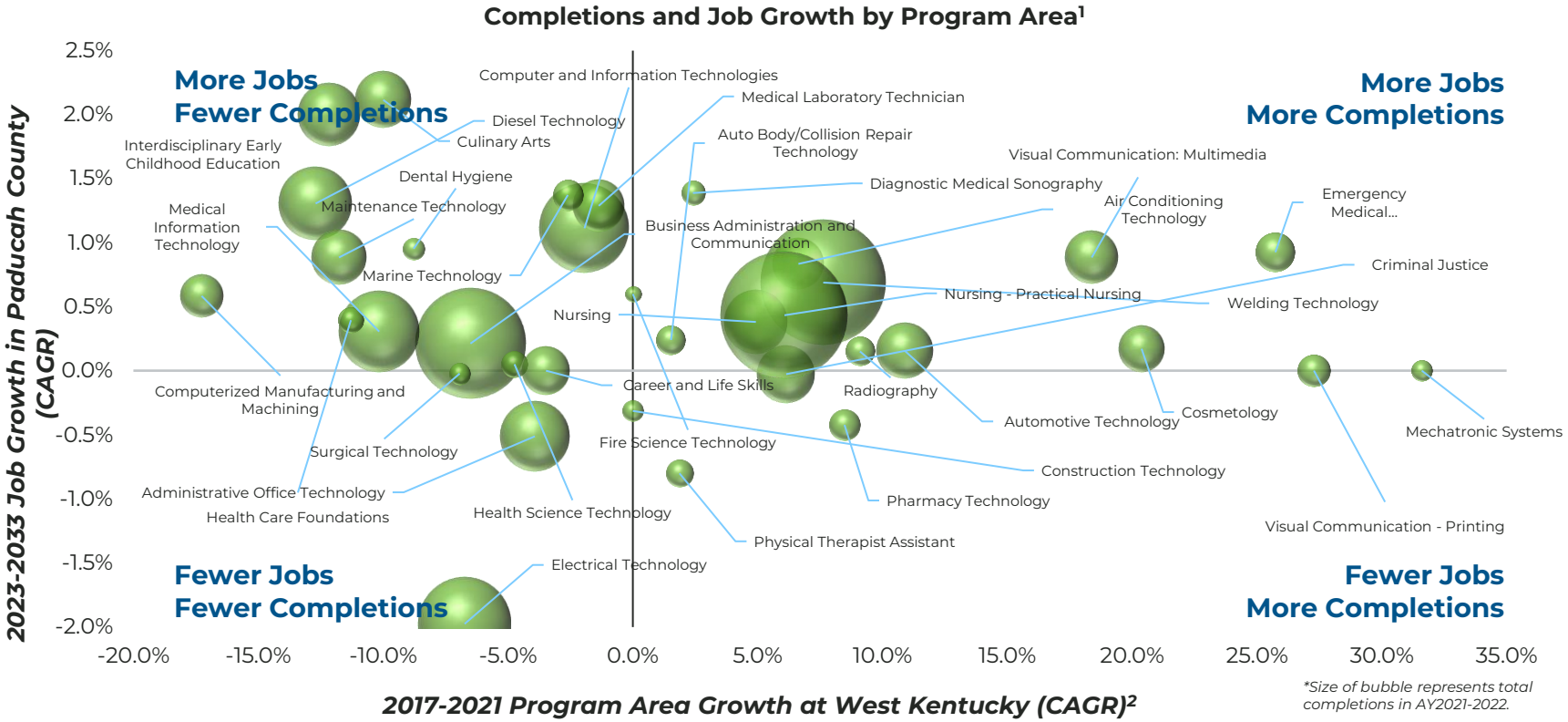
Southeast KY: Program Area Matrix



*Size of bubble represents total completions in AY2021-2022.

Source: Lightcast
1. Only includes technical programs due to labor market relevancy. Size of bubble represents total completions in 2021. Job market data does not take into account expected wages for applicable jobs.
2. Program areas not included that started after 2017 or were not offered in 2021. Programs areas not shown in graph due to axis dimensions listed in appendix. Program areas listed more than once have multiple CIP codes. Additional details in Market Positioning model.

West KY: Program Area Matrix



*Size of bubble represents total completions in AY2021-2022.

Source: Lightcast
1. Only includes technical programs due to labor market relevancy. Size of bubble represents total completions in 2021. Job market data does not take into account expected wages for applicable jobs.
2. Program areas not included that started after 2017 or were not offered in 2021. Programs areas not shown in graph due to axis dimensions listed in appendix. Program areas listed more than once have multiple CIP codes. Additional details in Market Positioning model.

Matrix: Additional Program Areas (1/3)

The table below lists program areas not shown in the program area matrices for KCTCS and each college.

College	Program Area	Program Area Growth	Job Growth
Ashland	Electrical Technology	-25.3%	-1.5%
Big Sandy	Career and Life Skills	-30.7%	0.0%
Big Sandy	Medical Information Technology	-21.9%	1.5%
Big Sandy	Respiratory Care	9.8%	5.3%
Big Sandy	Nursing - Practical Nursing	42.7%	0.7%
Big Sandy	Administrative Office Technology	64.1%	0.1%
Bluegrass	Fire Science Technology	44.8%	0.3%
Bluegrass	Education	49.5%	0.7%
Bluegrass	Emergency Medical Services - Paramedic	56.5%	0.6%
Bluegrass	Dental Hygiene	57.7%	0.9%
Bluegrass	Criminal Justice	66.8%	0.5%
Bluegrass	Pharmacy Technology	76.3%	0.2%
Gateway	Career and Life Skills	-40.3%	0.0%

Matrix: Additional Program Areas (2/3)

College	Program Area	Program Area Growth	Job Growth
Gateway	Fire Science Technology	47.6%	1.1%
Gateway	Welding Technology	53.9%	0.2%
Gateway	Nursing	66.5%	1.8%
Gateway	Diesel Technology	67.2%	1.1%
Hazard	Diagnostic Medical Sonography	-43.8%	0.0%
Hazard	Emergency Medical Services - Paramedic	-37.4%	1.0%
Hazard	Auto Body/Collision Repair Technology	-37.0%	0.0%
Hazard	Medical Information Technology	-29.3%	0.3%
Hazard	Heavy Equipment Operation	7.5%	-12.1%
Hazard	Visual Communication: Multimedia	86.1%	0.0%
Hazard	Truck Driver Training	116.6%	-1.4%
Jefferson	Emergency Medical Services - Paramedic	70.4%	-0.3%
Jefferson	Health Care Foundations	167.2%	0.6%
KCTCS	Manufacturing Engineering Technology	-45.2%	0.5%
KCTCS	Biomedical Technology Systems	-20.5%	1.3%

Matrix: Additional Program Areas (3/3)

College	Program Area	Program Area Growth	Job Growth
KCTCS	Diagnostic Medical Sonography	-20.1%	2.1%
KCTCS	Visual Communication - Printing	2.0%	-2.6%
KCTCS	Health Care Foundations	36.8%	0.5%
KCTCS	Truck Driver Training	43.5%	0.7%
KCTCS	Advanced Integrated Technology	44.4%	0.8%
KCTCS	Supply Chain Management	50.0%	0.9%
Maysville	Construction Technology	51.3%	3.2%
Owensboro	Welding Technology	72.2%	0.4%
Southcentral	Air Conditioning Technology	63.9%	0.6%
Southeast	Computer and Information Technologies	-6.4%	7.8%
West KY	Visual Communication: Design & Technology	-15.9%	-4.1%
West KY	Supply Chain Management	51.7%	1.6%
West KY	Computer Aided Drafting and Design	83.5%	0.9%

Market Position: Completions

The table below highlights the change in completions across KCTCS and peers. Comparing completions by program area displays the disparity across peers in programmatic offerings.

Change in Program Area Completions (2017-2021)[1]	KCTCS	Ivy Tech CCS	Dallas College	Lone Star CS	Louisiana CTCS	North Carolina CCS	Tennessee CCS	Virginia CCS	West Virginia CTCS
Nursing - Practical Nursing	876	303	6	(33)	(372)	69	0	(62)	31
Computer and Information Technologies	869	61	0	191	(19)	1	(189)	17	0
Welding Technology	780	257	65	153	(1,244)	750	25	(68)	(17)
Electrical Technology	689	358	50	0	104	166	27	39	0
Maintenance Technology	486	173	0	0	(3)	0	(20)	0	0
Criminal Justice	410	0	0	0	0	(1)	0	(64)	0
Associate in Arts and Science	212	45	0	957	(19)	2,340	(34)	121	(296)
Administrative Office Technology	(81)	99	11	0	0	(14)	0	0	(8)
Computerized Manufacturing and Machining	(96)	85	0	0	0	(473)	4	0	(1)
Manufacturing Engineering Technology	(121)	(19)	0	0	0	(47)	57	2	0
Career and Life Skills	(127)	0	0	0	0	4	(208)	0	(7)
Culinary Arts	(144)	0	(82)	0	(184)	(140)	3	0	(2)
Medical Information Technology	(714)	0	10	(6)	0	0	0	0	0

- All peers have completions in **Welding Technology** pointing to its position in a competitive market. **KCTCS** saw the highest amount of growth (7.8%) in completions.
- **Medical Information Technology** saw the highest amount of decline (-9.2%) across KCTCS and had little to no completions across peers, pointing to low student demand.

Source: Lightcast data.
1. Program area completions tied by 6-digit CIP code; Complete list of program areas and completions on slides 195-203.

Market Position: Jobs

The table below highlights the change in jobs by program area. Comparing trends across both the local and national landscape provides a more holistic market perspective.

Change in Jobs by Program Area (2017-2021)[1]	Kentucky	United States
Business Administration and Communication	14,168	1,006,161
Manufacturing Engineering Technology	13,358	815,761
Medical Information Technology	5,932	73,401
Interdisciplinary Early Childhood Education	1,632	(114,620)
Computer and Information Technologies	941	411,458
Manufacturing Engineering Technology	468	10,705
Welding Technology	13	22,695
Electrical Technology	(727)	(49,244)
Culinary Arts	(826)	17,857
Maintenance Technology	(1,154)	101,429
Criminal Justice	(2,197)	(83,185)
Nursing - Practical Nursing	(7,455)	(405,230)
Administrative Office Technology	(16,351)	(861,508)

- Despite experiencing negative growth across the US, Kentucky jobs within **Interdisciplinary Early Childhood Education** have increased (+1,632) over the last 5 years, pointing to **regional labor demand**.
- Jobs in **Culinary Arts** and **Maintenance Technology** have experienced negative growth within Kentucky, depicting **waning regional demand** but **increased national demand**.
- **Business Administration and Communication** and **Administrative Office Technology** have experienced the highest growth and decline across both the regional and national landscape, demonstrating a **consistent general trend in labor demand**.

Source: Lightcast data.
1. Change in jobs by program area uses 6-digit CIP code tied to SOC code. Program areas selected based on greatest change in completions from previous page along with 2 additional program areas based on greatest change in jobs (Business Admin and Comm. and Interdisciplinary Early Childhood Education); complete list of program areas and jobs on slides 204-211.

Market Position: Completions (1/9)

Change in Program Area Completions (2017-2021)[1]	KCTCS	Ivy Tech CCS	Dallas College	Lone Star CS	Louisiana CTCS	North Carolina CCS	Tennessee CCS	Virginia CCS	West Virginia CTCS
Nursing - Practical Nursing	876	303	6	(33)	(372)	69	0	(62)	31
Computer and Information Technologies	869	61	0	191	(19)	1	(189)	17	0
Welding Technology	780	257	65	153	(1,244)	750	25	(68)	(17)
Electrical Technology	689	358	50	0	104	166	27	39	0
maintenance Technology	486	173	0	0	(3)	0	(20)	0	0
Criminal Justice	410	0	0	0	0	(1)	0	(64)	0
Advanced Integrated Technology	221	0	0	0	(7)	(127)	0	0	1
Associate in Arts and Science	212	45	0	957	(19)	2,340	(34)	121	(296)
Medical Assisting	212	(41)	9	21	20	51	49	(9)	(66)
Truck Driver Training	188	0	0	0	0	(182)	0	0	0
Construction Technology	142	95	0	0	(111)	(47)	0	0	0
Emergency Medical Services - Paramedic	142	37	79	(97)	(64)	70	(29)	(68)	(28)
Automotive Technology	140	(11)	258	74	(133)	299	(10)	(123)	1
Nursing	127	143	(66)	129	157	754	10	69	63
Dental Hygiene	97	6	19	0	0	(58)	15	(8)	2

Source: Lightcast data.
1. Program area completions tied by 6-digit CIP code.

Market Position: Completions (2/9)

Change in Program Area Completions (2017-2021)[1]	KCTCS	Ivy Tech CCS	Dallas College	Lone Star CS	Louisiana CTCS	North Carolina CCS	Tennessee CCS	Virginia CCS	West Virginia CTCS
Engineering and Electronics Technology	93	83	0	0	0	(28)	0	0	(6)
Air Conditioning Technology	84	5	126	42	(241)	127	0	(41)	(3)
Computer Aided Drafting and Design	73	(30)	94	0	(182)	0	(15)	0	0
Aviation Maintenance Technology	66	0	0	0	(28)	0	0	0	0
Medical Laboratory Technician	65	(3)	(3)	0	(5)	11	44	(42)	1
Supply Chain Management	65	113	22	57	41	43	20	0	0
Surgical Technology	64	(6)	(2)	6	(9)	6	47	(5)	11
Fire Science Technology	60	42	0	(6)	1	0	25	(19)	0
Health Care Foundations	55	1,558	10	0	(366)	63	0	0	(27)
Visual Communication: Multimedia	52	0	45	0	(4)	27	(3)	0	4
Massage Therapy Technology	40	(26)	0	(4)	(2)	(29)	(1)	(24)	20
Graphic Design and Library Technology	32	128	46	0	(1)	0	(24)	(32)	2
Health Science Technology	30	0	0	0	0	0	(309)	0	38
Project Lead the Way	30	0	0	0	0	0	(309)	0	38
Business Administration and Communication	26	1,608	931	315	(55)	1,505	214	46	(16)

Source: Lightcast data.
1. Program area completions tied by 6-digit CIP code.

Market Position: Completions (3/9)

Change in Program Area Completions (2017-2021)[1]	KCTCS	Ivy Tech CCS	Dallas College	Lone Star CS	Louisiana CTCS	North Carolina CCS	Tennessee CCS	Virginia CCS	West Virginia CTCS
Interdisciplinary Early Childhood Education	22	0	20	0	(19)	0	0	154	(4)
Radiography	21	12	54	(6)	2	58	0	19	14
Biotechnology Laboratory Technician	19	0	0	7	0	(6)	0	(15)	0
Apprenticeship Studies	19	136	0	0	0	0	(33)	0	0
Diesel Technology	18	15	12	13	(23)	(10)	0	(32)	(7)
Manufacturing Engineering Technology	13	102	0	0	51	6	(6)	77	5
Filmmaking and Cinematic Arts	12	0	0	0	(16)	20	(9)	0	0
Healthcare Facilities	12	0	0	0	(63)	129	0	0	0
Equine	11	0	0	0	0	11	0	0	0
Visual Communication: Design & Technology	10	0	55	0	9	(44)	(27)	0	2
Education	10	214	0	0	0	8	0	10	(23)
Civil Engineering Technology	10	0	0	0	(5)	14	5	2	(3)
Medical Administrative Services	10	(4)	8	0	89	0	14	0	22
Physical Therapist Assistant	9	(10)	0	6	4	44	(21)	12	(28)
Business Administration and Communication	9	0	0	0	0	0	0	0	0

Source: Lightcast data.
1. Program area completions tied by 6-digit CIP code.

Market Position: Completions (4/9)

Change in Program Area Completions (2017-2021)[1]	KCTCS	Ivy Tech CCS	Dallas College	Lone Star CS	Louisiana CTCS	North Carolina CCS	Tennessee CCS	Virginia CCS	West Virginia CTCS
Paralegal Technology	8	17	(5)	41	19	106	1	34	(34)
Certified Medical Technician	7	1,033	0	0	0	0	0	0	(34)
Surveying and Mapping Technology	6	0	0	13	0	(9)	0	0	(2)
Mechatronic Systems	6	0	0	0	0	12	115	0	10
Unmanned Systems Technology	6	19	0	0	0	27	0	0	0
Energy Technologies	5	18	0	0	0	49	0	0	14
Plumbing Technology	4	0	0	0	(26)	(59)	0	0	0
Community Dental Health Coordinator	4	0	0	0	0	0	0	0	0
Applied Process Technologies	3	(1)	0	71	7	(1)	(1)	0	(7)
Visual Communication - Printing	3	0	0	0	0	(4)	0	12	0
Visual Communication: Comm. Arts Tech.	3	0	0	0	0	(10)	0	0	0
Architectural Technology	3	13	13	0	0	0	6	8	0
Veterinary Technology	3	0	152	14	(17)	2	(2)	26	7
Business Foundations	3	0	222	(133)	263	0	(172)	0	28
Respiratory Care	2	16	3	3	6	(4)	(3)	(62)	6

Source: Lightcast data.
1. Program area completions tied by 6-digit CIP code.

Market Position: Completions (5/9)

Change in Program Area Completions (2017-2021)[1]	KCTCS	Ivy Tech CCS	Dallas College	Lone Star CS	Louisiana CTCS	North Carolina CCS	Tennessee CCS	Virginia CCS	West Virginia CTCS
Health Information Technology	2	11	7	(1)	2	(18)	(27)	(53)	(4)
Cosmetology	2	0	0	0	0	90	0	0	5
Digital Printing Technology	2	0	0	0	0	0	0	0	4
Theatre Arts	2	0	0	0	0	13	0	0	0
Environmental Technology	2	2	0	0	0	1	0	0	2
Women's and Gender Studies	1	0	0	0	0	0	0	0	0
Appalachian Studies	0	0	0	0	0	0	0	0	0
Advanced Integrated Manufacturing	0	18	0	0	(28)	0	0	0	(20)
African American Studies	0	0	0	0	0	0	0	0	0
Broadband Technology	0	0	0	0	0	0	0	0	0
Community Health Worker	0	0	0	0	0	0	0	0	5
Computer and Information Technologies	0	0	170	0	(10)	0	0	0	0
Computer Engineering Technology	0	0	0	(2)	0	(2)	(16)	0	0
Cybersecurity	0	0	0	0	0	0	0	0	0
Digital Game and Simulation Design	0	6	0	0	0	0	0	0	0

Source: Lightcast data.
1. Program area completions tied by 6-digit CIP code.

Market Position: Completions (6/9)

Change in Program Area Completions (2017-2021)[1]	KCTCS	Ivy Tech CCS	Dallas College	Lone Star CS	Louisiana CTCS	North Carolina CCS	Tennessee CCS	Virginia CCS	West Virginia CTCS
Energy Management	0	0	0	0	0	0	0	0	0
Fermentation Science	0	0	0	0	0	0	0	0	0
Financial and Customer Services	0	0	15	0	9	(38)	(1)	0	1
Fixed Wing Flight Training	0	3	0	1	0	16	0	0	0
Healthcare Facilities	0	0	0	0	0	0	0	9	0
Helicopter Flight Training	0	0	0	0	0	0	0	0	0
Historic Preservation Technology	0	0	0	0	0	0	0	0	0
Horticulture	0	3	0	0	(19)	(79)	(1)	5	0
Insurance Risk Management	0	8	0	0	0	0	0	0	0
Invasive Cardiology	0	0	0	0	0	0	0	0	0
Non-Credential	0	0	0	0	0	0	0	0	0
Nursing (ADN)	0	0	0	0	0	0	0	0	0
Orthotics and Prosthetics Technology	0	0	0	0	0	0	0	0	0
Professional Craft: Pottery	0	0	0	0	0	0	0	0	0
Project Lead the Way	0	0	0	0	0	0	0	0	0

Source: Lightcast data.
1. Program area completions tied by 6-digit CIP code.

Market Position: Completions (7/9)

Change in Program Area Completions (2017-2021)[1]	KCTCS	Ivy Tech CCS	Dallas College	Lone Star CS	Louisiana CTCS	North Carolina CCS	Tennessee CCS	Virginia CCS	West Virginia CTCS
Security Management	0	0	0	0	0	0	0	0	0
Undecided	0	0	0	0	0	0	0	0	0
Veterinary Technology	0	0	0	0	0	0	0	0	0
Visual Communication - Visual Arts	0	0	0	0	0	0	0	0	0
Visual Art	(1)	(4)	0	0	0	0	0	0	(1)
Geospatial Technology	(1)	0	4	29	0	(9)	(1)	0	0
Global Studies	(1)	0	0	0	0	0	0	0	0
Humanities	(1)	0	0	0	0	0	29	0	0
Occupational Therapy Assistant	(2)	0	9	7	3	33	29	48	0
Marine Technology	(2)	0	0	0	11	0	0	0	0
Professional Studio Artist	(2)	0	0	0	0	(5)	0	0	0
Homeland Security/Emergency Mgmt.	(2)	(23)	0	0	0	8	(1)	0	34
Agriculture	(3)	0	0	0	0	0	0	0	0
Heavy Equipment Operation	(3)	47	0	0	(55)	23	0	0	0
Apprenticeship Studies	(4)	(3)	0	0	28	0	(7)	0	0

Source: Lightcast data.
1. Program area completions tied by 6-digit CIP code.

Market Position: Completions (8/9)

Change in Program Area Completions (2017-2021)[1]	KCTCS	Ivy Tech CCS	Dallas College	Lone Star CS	Louisiana CTCS	North Carolina CCS	Tennessee CCS	Virginia CCS	West Virginia CTCS
Workplace Safety Specialist	(4)	0	0	0	0	0	5	0	0
Real Estate	(5)	0	72	0	1	0	0	1	0
Engineering and Electronics Technology	(6)	4	0	0	0	0	1	0	0
Cosmetology	(7)	0	0	46	2	(56)	0	0	(1)
Biomedical Technology Systems	(9)	0	0	0	(9)	(10)	0	0	(7)
Masonry	(9)	58	0	0	(28)	(83)	0	0	0
Integrated Engineering Technology	(10)	0	0	0	0	0	0	0	0
Applied Process Technologies	(12)	0	0	0	0	3	0	0	0
Exercise Science	(14)	0	0	0	0	(25)	3	(142)	0
Radiography	(24)	0	0	(4)	(4)	(11)	(14)	0	(20)
Diagnostic Medical Sonography	(29)	9	(1)	(3)	(1)	15	10	(16)	2
Human Services	(29)	0	40	0	0	0	0	0	(2)
Energy Technologies	(30)	(79)	0	0	0	7	(6)	0	(2)
Pharmacy Technology	(40)	(22)	0	37	(5)	(29)	(10)	0	2
Human Services	(50)	0	0	0	0	0	0	0	10

Source: Lightcast data.
1. Program area completions tied by 6-digit CIP code.

Market Position: Completions (9/9)

Change in Program Area Completions (2017-2021)[1]	KCTCS	Ivy Tech CCS	Dallas College	Lone Star CS	Louisiana CTCS	North Carolina CCS	Tennessee CCS	Virginia CCS	West Virginia CTCS
Auto Body/Collision Repair Technology	(58)	13	126	0	(79)	43	(2)	6	0
Mining Technology	(58)	0	0	0	0	0	0	1	0
Administrative Office Technology	(81)	99	11	0	0	(14)	0	0	(8)
Computerized Manufacturing and Machining	(96)	85	0	0	0	(473)	4	0	(1)
Manufacturing Engineering Technology	(121)	(19)	0	0	0	(47)	57	2	0
Career and Life Skills	(127)	0	0	0	0	4	(208)	0	(7)
Culinary Arts	(144)	0	(82)	0	(184)	(140)	3	0	(2)
Medical Information Technology	(714)	0	10	(6)	0	0	0	0	0

Source: Lightcast data.
1. Program area completions tied by 6-digit CIP code.

Market Position: Jobs (1/8)

Change in Jobs by Program Area (2017-2021)[1]	Kentucky	United States
Business Administration and Communication	14,168	1,006,161
Manufacturing Engineering Technology	13,358	815,761
Medical Assisting	8,599	173,516
Medical Information Technology	5,932	73,401
Certified Medical Technician	3,564	80,901
Advanced Integrated Technology	3,156	39,293
Truck Driver Training	3,149	162,876
Business Foundations	2,347	455,711
Interdisciplinary Early Childhood Education	1,632	(114,620)
Air Conditioning Technology	1,364	58,879
Heavy Equipment Operation	1,296	28,901
Advanced Integrated Manufacturing	1,180	(16,571)
Auto Body/Collision Repair Technology	1,026	1,232
Human Services	964	26,782
Computer and Information Technologies	941	411,458

Source: Lightcast data.
1. Change in jobs by program area uses 6-digit CIP code tied to SOC code.

Market Position: Jobs (2/8)

Change in Jobs by Program Area (2017-2021)[1]	Kentucky	United States
Fermentation Science	940	(12,085)
Veterinary Technology	871	16,390
Supply Chain Management	836	56,846
Surgical Technology	672	2,627
Engineering and Electronics Technology	659	4,175
Physical Therapist Assistant	555	3,924
Cosmetology	538	6,350
Manufacturing Engineering Technology	468	10,705
Pharmacy Technology	419	25,015
Energy Management	361	19,059
Biomedical Technology Systems	352	11,257
Health Information Technology	337	(10,190)
Medical Administrative Services	337	(10,190)
Exercise Science	332	(53,240)
Fire Science Technology	329	17,432

Source: Lightcast data.
1. Change in jobs by program area uses 6-digit CIP code tied to SOC code.

Market Position: Jobs (3/8)

Change in Jobs by Program Area (2017-2021)[1]	Kentucky	United States
Unmanned Systems Technology	289	(361)
Helicopter Flight Training	286	6,520
Civil Engineering Technology	276	(6,990)
Mechatronic Systems	245	(11,247)
Applied Process Technologies	245	(11,247)
Digital Printing Technology	238	(2,136)
Workplace Safety Specialist	238	(2,136)
Homeland Security/Emergency Management	237	3,718
Security Management	229	84,878
Health Science Technology	221	15,434
Cybersecurity	181	58,659
Biotechnology Laboratory Technician	178	1,528
Aviation Maintenance Technology	171	(7,305)
Diagnostic Medical Sonography	164	10,193
Respiratory Care	163	5,436

Source: Lightcast data.
1. Change in jobs by program area uses 6-digit CIP code tied to SOC code.

Market Position: Jobs (4/8)

Change in Jobs by Program Area (2017-2021)[1]	Kentucky	United States
Orthotics and Prosthetics Technology	162	1,958
Agriculture	138	18,264
Equine	138	18,264
Business Administration and Communication	130	10,469
Healthcare Facilities	128	17,436
Graphic Design and Library Technology	116	280,866
Project Lead the Way	107	(25,848)
Insurance Risk Management	97	21,305
Visual Communication - Printing	96	(4,968)
Geospatial Technology	86	(5,066)
Medical Laboratory Technician	84	11,222
Integrated Engineering Technology	84	2,678
Theatre Arts	77	(5,367)
Historic Preservation Technology	64	3,491
Environmental Technology	53	1,979

Source: Lightcast data.
1. Change in jobs by program area uses 6-digit CIP code tied to SOC code.

Market Position: Jobs (5/8)

Change in Jobs by Program Area (2017-2021)[1]	Kentucky	United States
Occupational Therapy Assistant	45	298
Visual Communication: Design & Technology	43	(21,745)
Digital Game and Simulation Design	31	(75,679)
Welding Technology	13	22,695
Visual Communication - Visual Arts	5	(289)
Apprenticeship Studies	0	0
Global Studies	0	0
Career and Life Skills	0	0
Apprenticeship Studies	0	0
Visual Communication: Communication Arts Tech.	(12)	(103)
Radiography	(28)	15,528
Community Health Worker	(32)	17,721
Computer and Information Technologies	(37)	3,506
Computer Engineering Technology	(37)	3,506
Architectural Technology	(62)	5,369

Source: Lightcast data.
1. Change in jobs by program area uses 6-digit CIP code tied to SOC code.

Market Position: Jobs (6/8)

Change in Jobs by Program Area (2017-2021)[1]	Kentucky	United States
Professional Craft: Pottery	(68)	(682)
Humanities	(85)	(5,401)
Automotive Technology	(88)	(6,909)
Filmmaking and Cinematic Arts	(92)	(103)
Professional Studio Artist	(98)	(36,711)
Surveying and Mapping Technology	(102)	4,166
Computer Aided Drafting and Design	(114)	(5,032)
Energy Technologies	(137)	31,865
Masonry	(177)	(7,086)
Massage Therapy Technology	(191)	(21,384)
Visual Communication: Multimedia	(231)	(22,595)
Diesel Technology	(240)	1,347
Applied Process Technologies	(251)	(4,401)
Broadband Technology	(295)	(74,029)
Cosmetology	(323)	(50,421)

Source: Lightcast data.
1. Change in jobs by program area uses 6-digit CIP code tied to SOC code.

Market Position: Jobs (7/8)

Change in Jobs by Program Area (2017-2021)[1]	Kentucky	United States
Invasive Cardiology	(370)	259
Real Estate	(389)	32,722
Engineering and Electronics Technology	(392)	17,216
Marine Technology	(489)	35,530
Fixed Wing Flight Training	(511)	(1,069)
Horticulture	(564)	(33,177)
Emergency Medical Services - Paramedic	(634)	(168)
Electrical Technology	(727)	(49,244)
Culinary Arts	(826)	17,857
Dental Hygiene	(862)	12,699
Computerized Manufacturing and Machining	(960)	(38,293)
Construction Technology	(1,083)	80,208
Paralegal Technology	(1,150)	173,088
Maintenance Technology	(1,154)	101,429
Nursing (ADN)	(1,371)	123,806

Source: Lightcast data.
1. Change in jobs by program area uses 6-digit CIP code tied to SOC code.

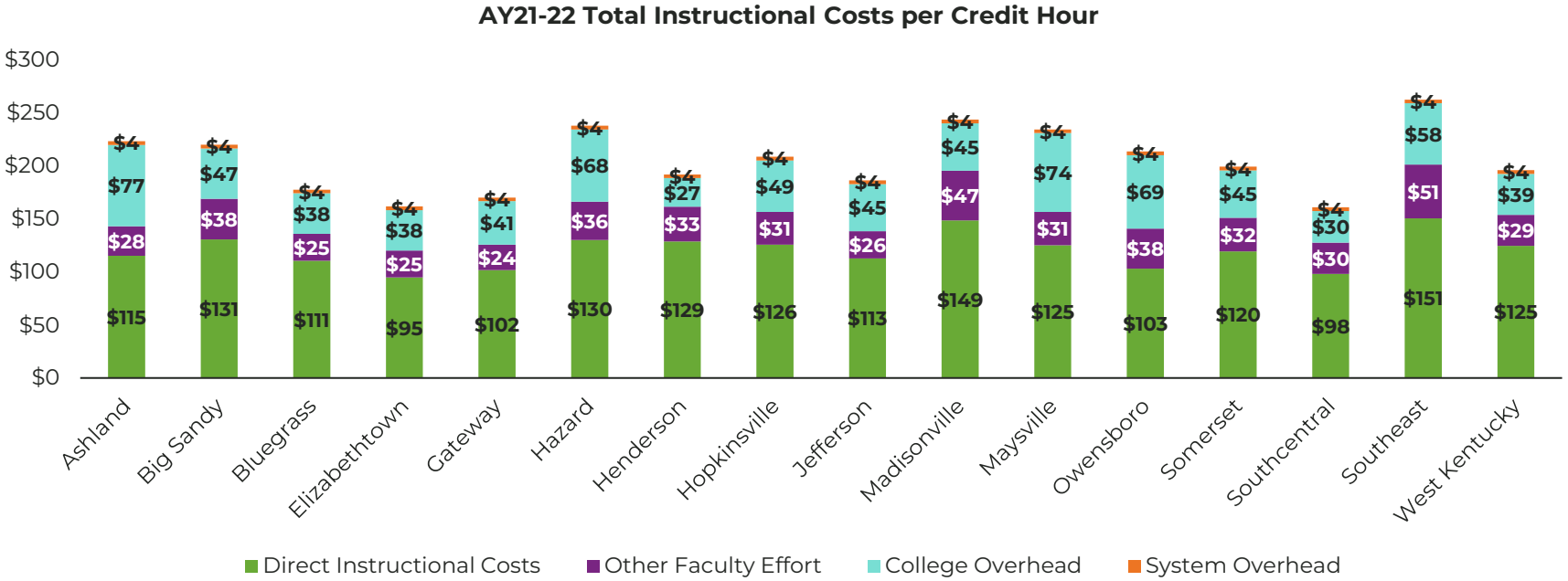
Market Position: Jobs (8/8)

Change in Jobs by Program Area (2017-2021)[1]	Kentucky	United States
Health Care Foundations	(1,594)	(139,585)
Plumbing Technology	(1,670)	(10,960)
Education	(1,805)	(87,332)
Mining Technology	(2,129)	126,980
Financial and Customer Services	(2,175)	(121,864)
Criminal Justice	(2,197)	(83,185)
Nursing	(4,113)	371,417
Nursing - Practical Nursing	(7,455)	(405,230)
Administrative Office Technology	(16,351)	(861,508)

Source: Lightcast data.
1. Change in jobs by program area uses 6-digit CIP code tied to SOC code.

Instructional Cost Components

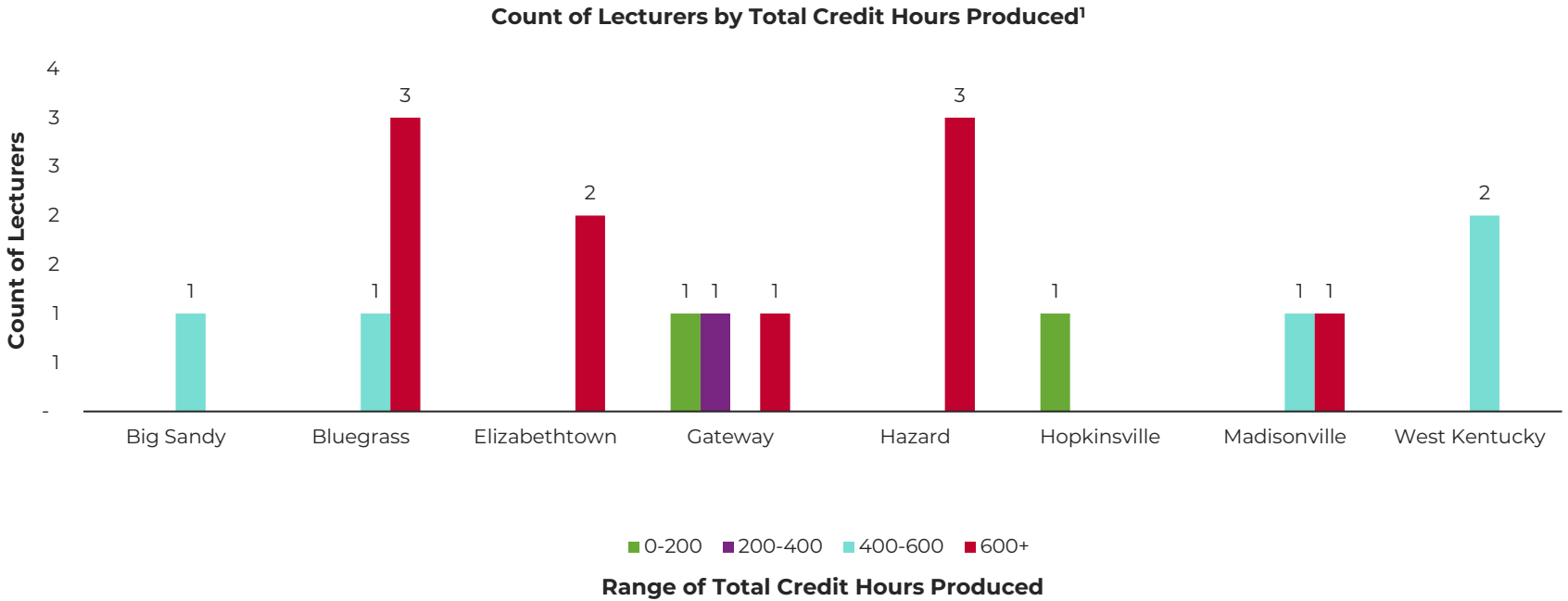
Huron isolated each cost component so that expenses can be allocated at the level in which the expenditure occurred (e.g., college).



Source: Cost to Educate Model,;FY21 Trial Balance

Faculty Type CHP: Lecturers

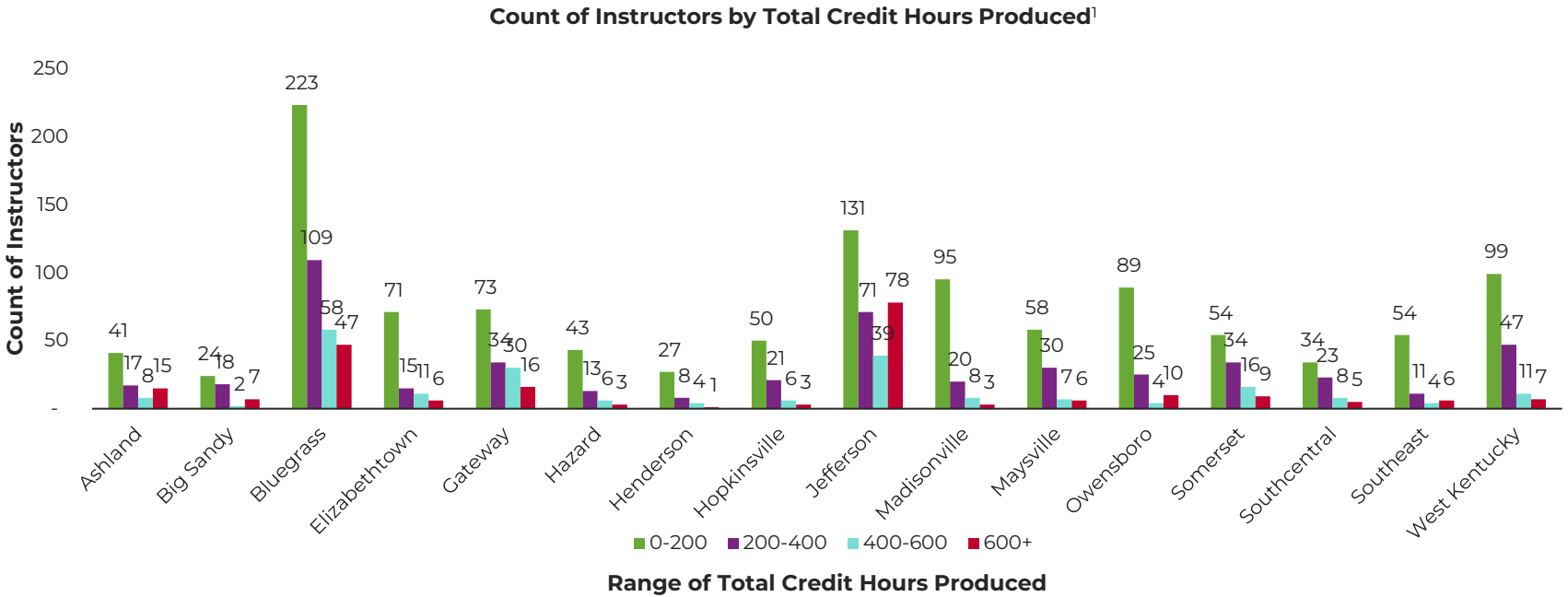
Within the colleges, the total credit hours produced not only varies across faculty type but within faculty type as well.



Source: Cost to Educate Model
1. Faculty includes any individual teaching a course in AY2021-2022 (i.e., adjuncts and full-time faculty). Colleges with no lecturers teaching a course excluded.

Faculty Type CHP: Instructors

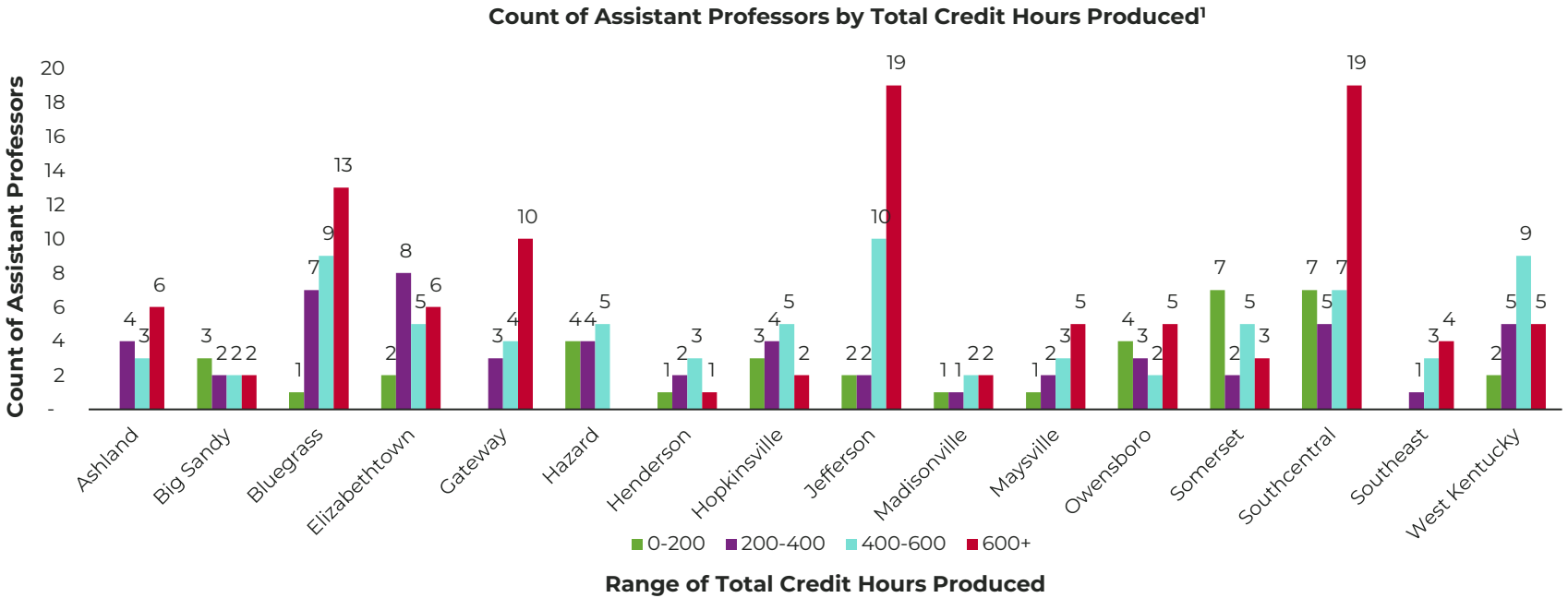
Within the colleges, the total credit hours produced not only varies across faculty type but within faculty type as well.



Source: Cost to Educate Model
1. Faculty includes any individual teaching a course in AY2021-2022 (i.e., adjuncts and full-time faculty).

Faculty Type CHP: Assistant Professors

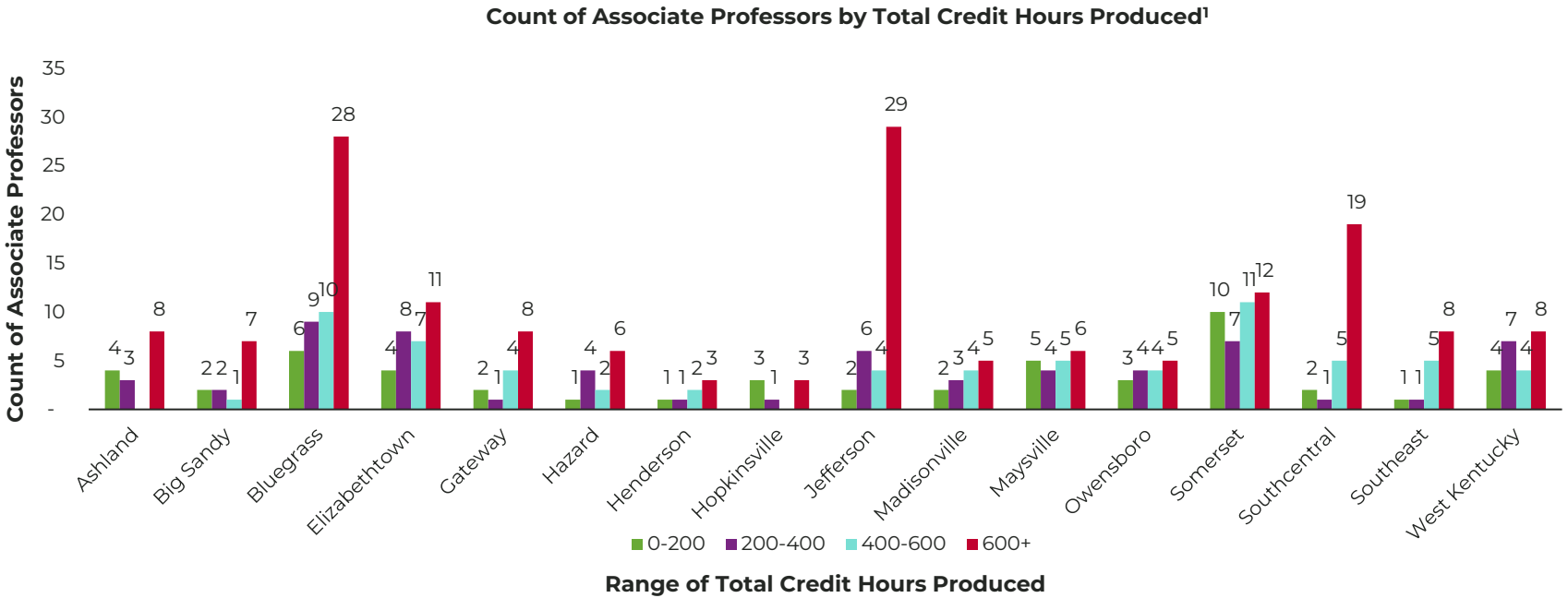
Within the colleges, the total credit hours produced not only varies across faculty type but within faculty type as well.



Source: Cost to Educate Model
1. Faculty includes any individual teaching a course in AY2021-2022 (i.e., adjuncts and full-time faculty).

Faculty Type CHP: Associate Professors

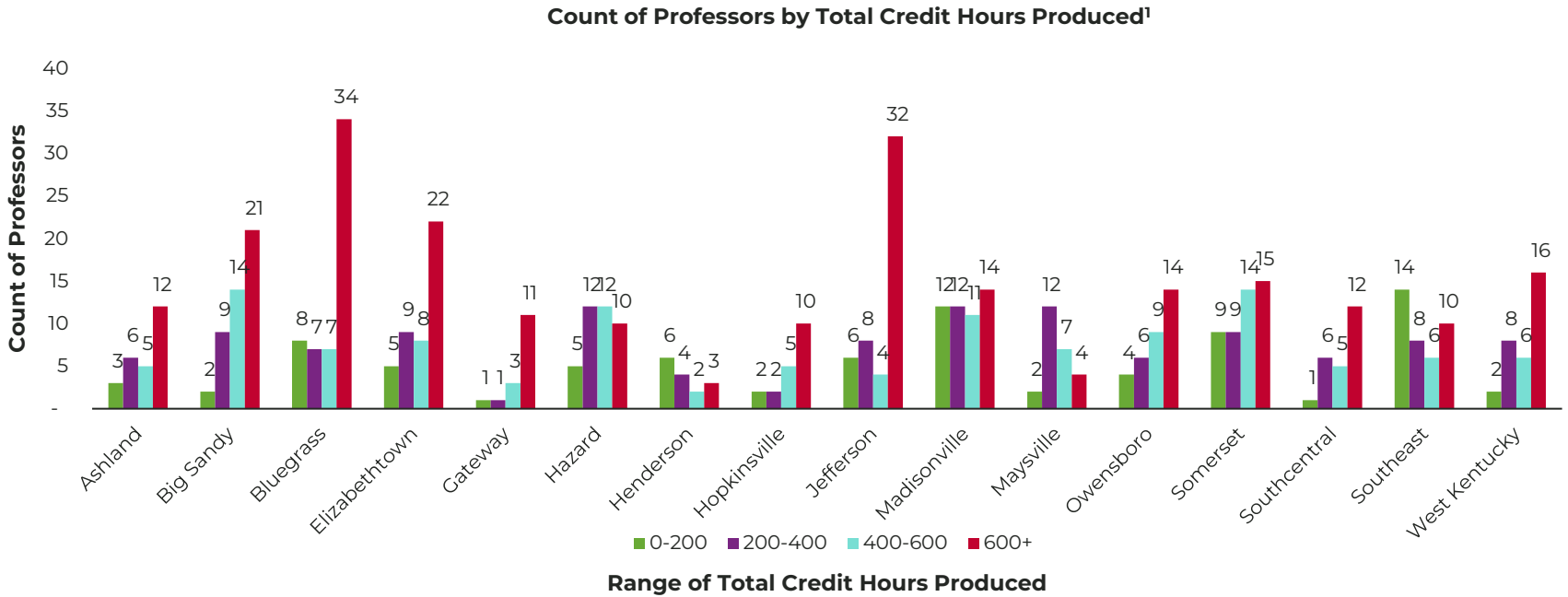
Within the colleges, the total credit hours produced not only varies across faculty type but within faculty type as well.



Source: Cost to Educate Model
1. Faculty includes any individual teaching a course in AY2021-2022 (i.e., adjuncts and full-time faculty).

Faculty Type CHP: Professors

Within the colleges, the total credit hours produced not only varies across faculty type but within faculty type as well.



Source: Cost to Educate Model
1. Faculty includes any individual teaching a course in AY2021-2022 (i.e., adjuncts and full-time faculty).

A.4

Appendix:
Financial and
Organizational
Assessment

KCTCS Internal Benchmarking

As part of the opportunity identification process, Huron conducted internal benchmarking across the colleges.

#	College	2022 Employee Count[1]	21-22 Enrollment	FY23 OpEx	Total Enrollment / Total Employees	Total OpEx / Total Employees
1	KCTCS System Office	230	-	$91M	-	-
2	Ashland CTC	159	3,357	$31M	21.1	$200,976
3	Big Sandy CTC	215	2,803	$41M	13.0	$192,972
4	Bluegrass CTC	454	13,265	$96M	29.2	$211,087
5	Elizabethtown CTC	254	7,535	$67M	29.7	$263,837
6	Gateway CTC	242	5,489	$37M	22.7	$153,283
7	Hazard CTC	211	4,096	$46M	19.4	$216,455
8	Henderson CC	76	1,814	$14M	23.9	$179,850
9	Hopkinsville CC	163	2,742	$31M	16.8	$187,777

Source: KCTCS Employee Census; KCTCS Factbook; Budget Book.
1. Temporary, Vacant, and Student roles were excluded from the employee count.

KCTCS Internal Benchmarking

As part of the opportunity identification process, Huron conducted internal benchmarking across the colleges.

#	College	2022 Employee Count[1]	21-22 Enrollment	FY23 OpEx	Total Enrollment / Total Employees	Total OpEx / Total Employees
10	Jefferson CTC	434	16,104	$93M	37.1	$213,371
11	Madisonville CTC	177	5,027	$39M	28.4	$221,286
12	Maysville CTC	194	4,317	$41M	22.3	$209,638
13	Owensboro CTC	194	5,667	$37M	29.2	$192,487
14	Somerset CTC	346	6,604	$65M	19.1	$187,645
15	Southcentral Kentucky CTC	246	5,992	$52M	24.4	$210,230
16	Southeast Kentucky CTC	202	3,550	$35M	17.6	$175,493
17	West Kentucky CTC	244	6,310	$50M	25.9	$206,135

Source: KCTCS Employee Census; KCTCS Factbook; Budget Book.
1. Temporary, Vacant, and Student roles were excluded from the employee count..

KCTCS Peer Benchmarking

As part of the opportunity identification process, Huron conducted peer benchmarking to compare organizational finances, structures, and services.

#	Peer Institution	# of Colleges	FTE Headcount (2021-2022)[1]	Student Headcount (2020-2021)	Operating Expenses (FY21)
1	Kentucky Community and Technical College System	16	4,750	92,993	$549M
2	Dallas College	7[2]	3,693	110,694	$433M
3	Ivy Tech Community College of Indiana	19[3]	4,277	159,624	$602M
4	Lone Star College System	7	4,004	107,768	$498M
5	Louisiana Community and Technical College System	12	3,556	73,995	$523M
6	North Carolina Community College System	58	22,674	291,661	$2.5B
7	Virginia Community College System	23	7,831	211,963	$1.2B
8	West Virginia Community College System	9	1,382	20,167	$157M
9	Wisconsin Technical College System	16	9,710	143,308	$1.1B
10	The College System of Tennessee	37	6,789	123,781	$2.7B

Source: Institution Budgets Reports; IPEDS Historical Data.
1. FTE Headcount includes staff and faculty.
2. Number of campuses.
3. Ivy Tech manages 19 full-service campuses and 24 satellite locations.

KCTCS Motor Fleet

Unit	Number of Vehicles	Vehicle Average Age	Acquisition Age Average	Average Years in Service	Avg. Miles Per Year
Ashland	17	12.9	1.6	11.3	6,976
Big Sandy	16	12.6	1.1	11.6	5,827
Bluegrass	17	11.5	0.9	10.8	4,595
Elizabethtown	23	12.3	2.0	10.3	8,102
Gateway	16	14.1	4.8	9.6	8,071
Hazard	31	18.3	3.3	15.4	No Data
Henderson	3	12.3	0.0	12.7	7,972
Hopkinsville	15	11.9	2.8	9.2	18,485
Jefferson	24	11.8	3.6	8.3	4,780
Madisonville	25	12.0	2.5	9.7	5,217
Maysville	12	10.4	2.5	8.0	5,482
Owensboro	16	13.3	1.8	11.8	8,546
Somerset	36	14.6	1.3	13.6	7,920
Southcentral KY	17	10.2	3.0	7.5	No Data
Southeast KY	27	16.7	2.6	14.2	8,137
West KY	22	12.5	2.1	10.5	7,939
System Office	8	6.9	0.0	7.0	9,019
KCTCS	**325**	**13.3**	**2.3**	**11.1**	**7,716**

Source: Fleet Analysis Combined 2023 Summary

KCTCS Motor Fleet

Manufacturer	Count	Average of Age	% of Fleet
Ford	85	13.8	26%
Chevrolet	63	16.2	19%
Dodge	46	16.1	14%
Toyota	42	8.4	13%
International	33	14.9	10%
Freightliner	18	10.1	6%
Kenworth	8	11.3	2%
Hyosung	6	7.5	2%
Peterbilt	6	6.3	2%
Volvo	6	11.3	2%
Mack	5	11.0	2%
Chrysler	2	1.0	1%
Altec	1	11.0	0%
Mercedes	1	4.0	0%
Spartan	1	33.0	0%
StarTrans	1	0.0	0%
Thomas Bus	1	3.0	0%

Source: Fleet Analysis Combined 2023 Summary