



## **Master Class 4: Managing Program Evaluation and Using Data to Tell Your Story**

March 25<sup>th</sup>, 2025



## Today's Speakers



**Mary Pahissa Upchurch**

Executive Vice President  
Customer Success

Gray Decision Intelligence



**Jennifer Ziegler**

Vice President  
Customer Success and Compliance/HR

Gray Decision Intelligence



**Our first master class acknowledged the pessimistic prognostications about higher ed, outlined challenges and highlighted areas of opportunity.**

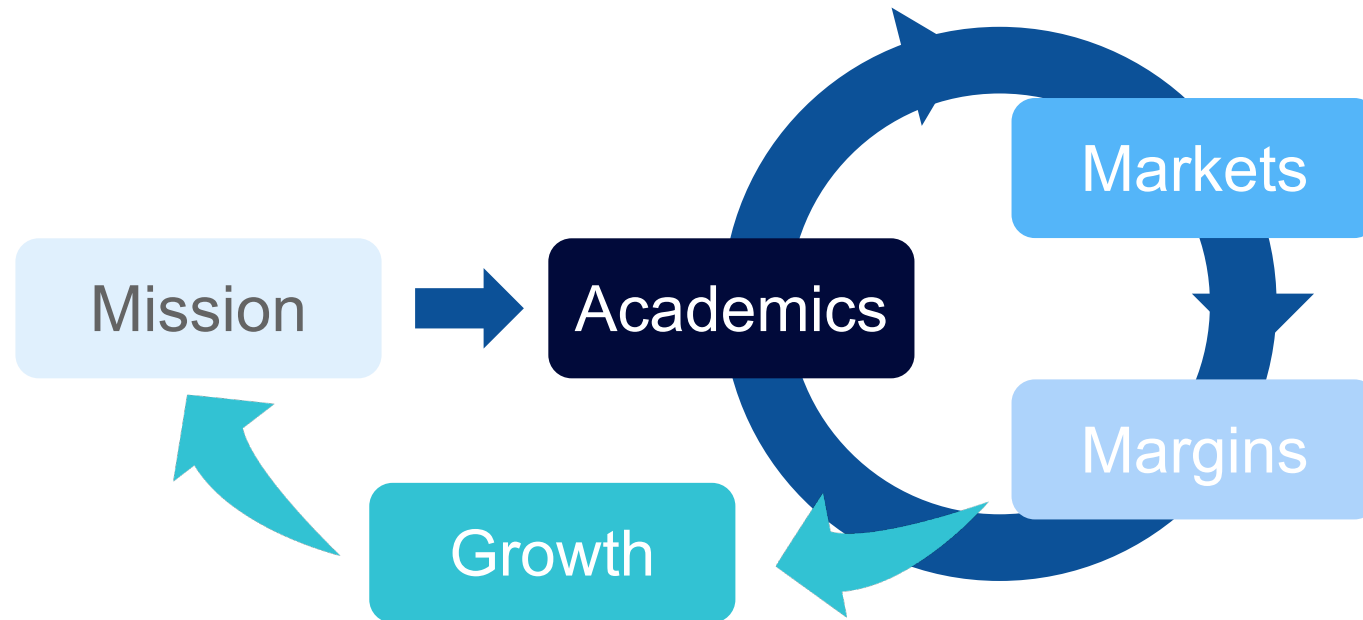




**In the second master class we presented about the importance of understanding program economics.**

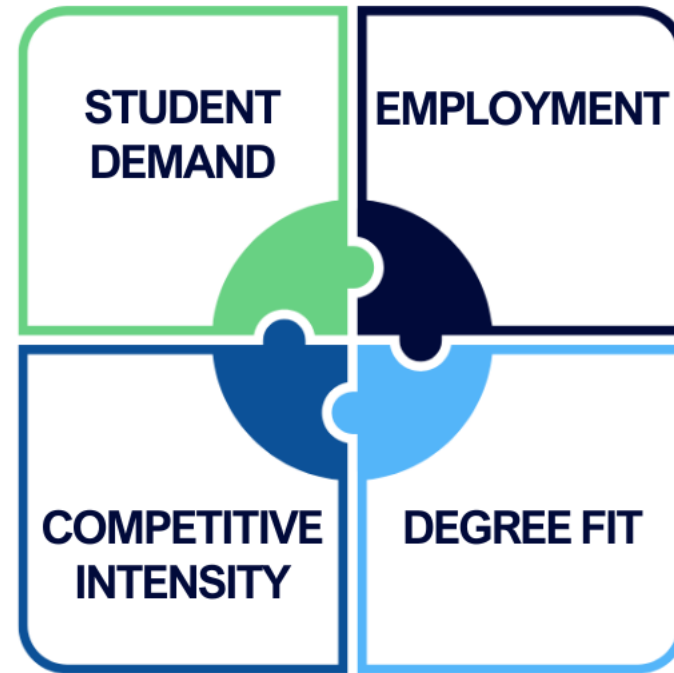
**High-margin programs produce more money than they cost.**

- Institutions use the funds to subsidize other mission-critical programs and activities.





In our third master class you learned the key metrics of market demand.



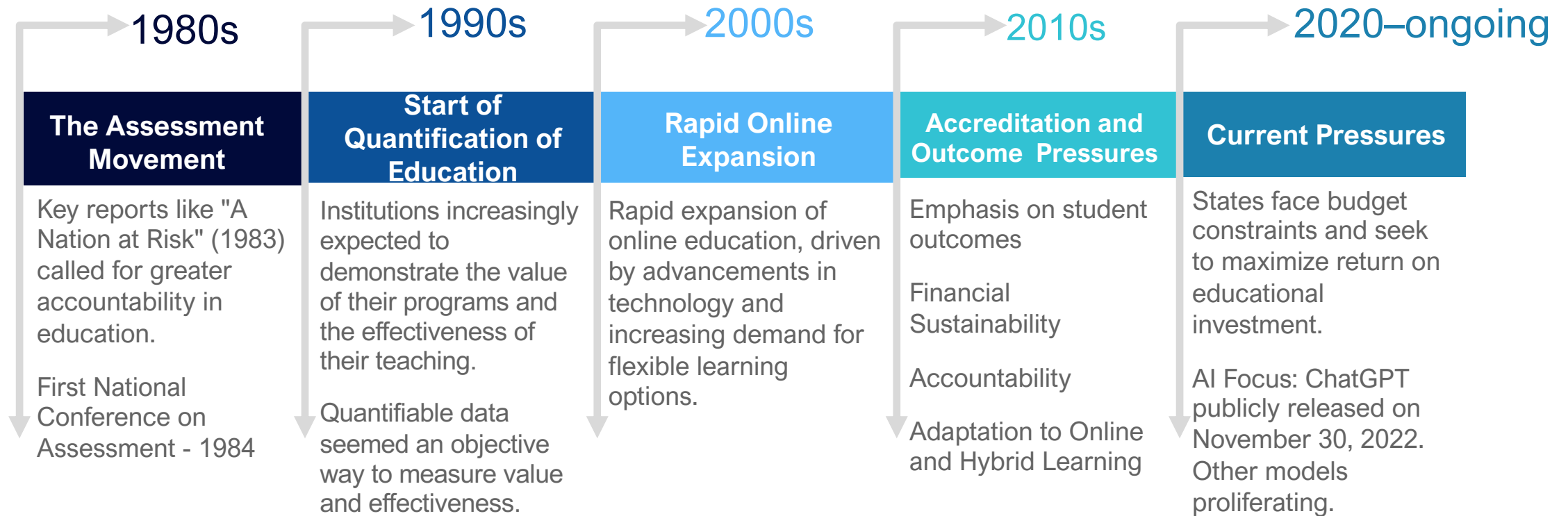


**Today's Master Class is about actively managing program portfolio evaluation using data and tools...**

...and addressing something increasingly important: using that data to help tell your story.



## Nothing stands still – including the delivery and consumption of education.



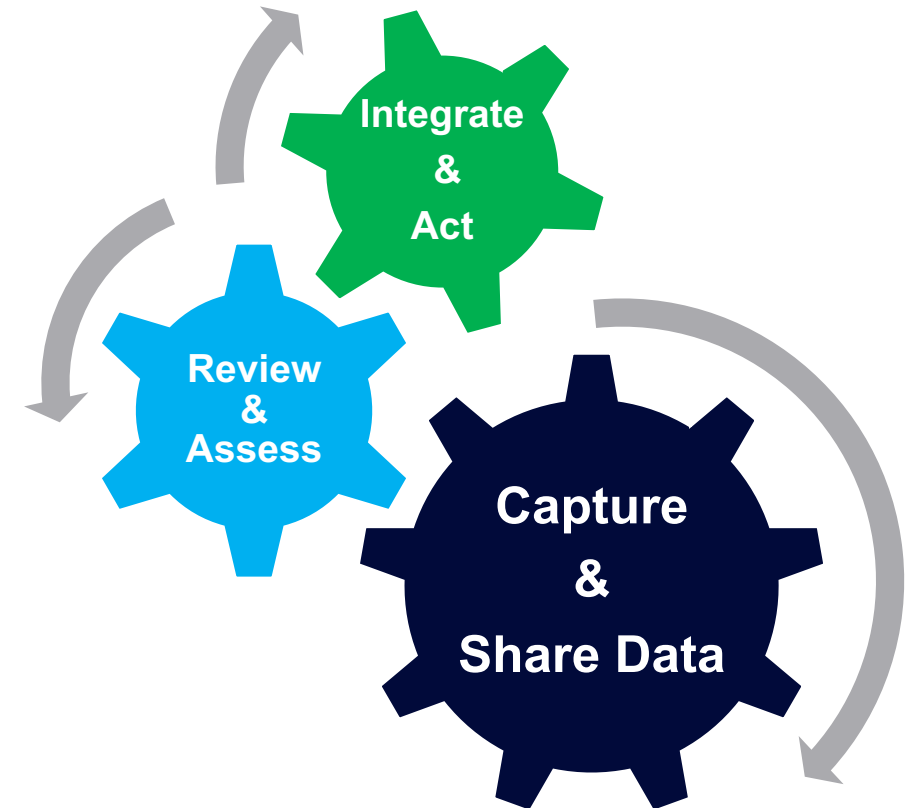
*How will higher education adapt?*



## Program portfolio management is an on-going process.

It provides a complete view of each program and the vitality of the program portfolio.

- **Capture and share program-related data** from key areas:
  - Academics
  - Administration
  - Operations
  - Market
- **Review and evaluate** the data on a regular basis
- **Integrate and act** to sustain a vibrant portfolio







## Program Assessment

vs.

## Program Management

### Focuses on teaching and learning

- Academic content
- Student learning outcomes
- Course and program objectives



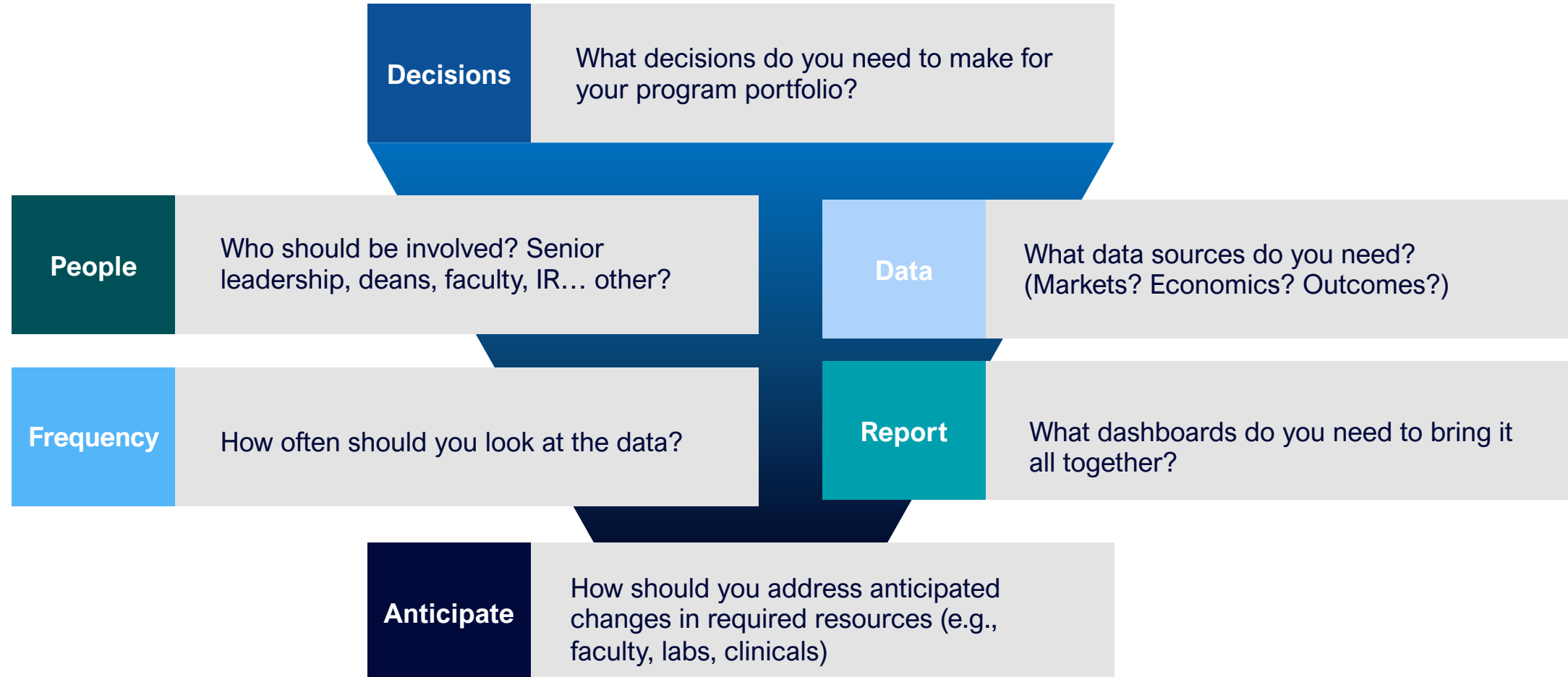
### Focuses on a sustainable program portfolio

- Aligning enrollment and resources
- Retention and completion
- Economic contribution to fund mission or growth
- Timely issue identification and resolution





## What is a program management process it made up of?





## What should it be? Informed, Frequent, Action-Oriented



### Quarterly or Semester

- Starts
- Retention
- Enrollment
- Course Completion
- Student Surveys



### Annual

- Student Outcomes
- Margins
- Student, Faculty, & Staff Ratios and Required FTEs



### Bi-Annual

- Curriculum
- Resources
- Efficiencies
- Longitudinal Outcomes

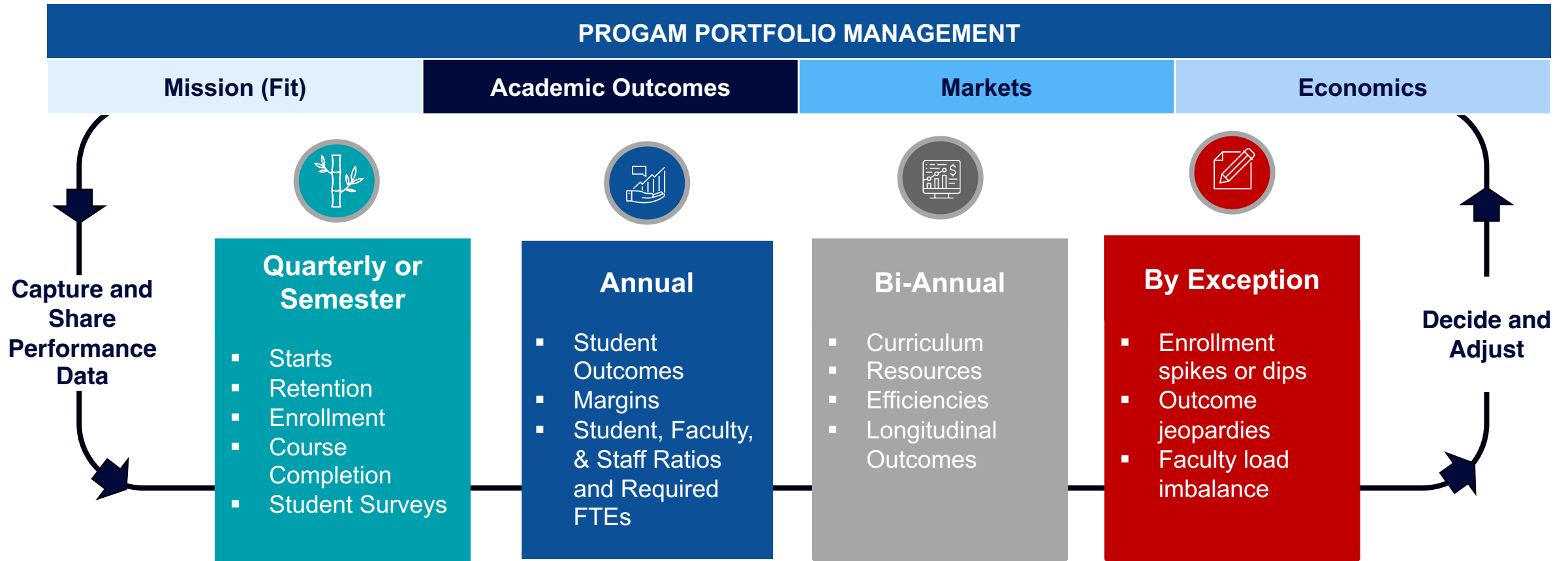


### By Exception

- Enrollment spikes or dips
- Outcome jeopardies
- Faculty load imbalance

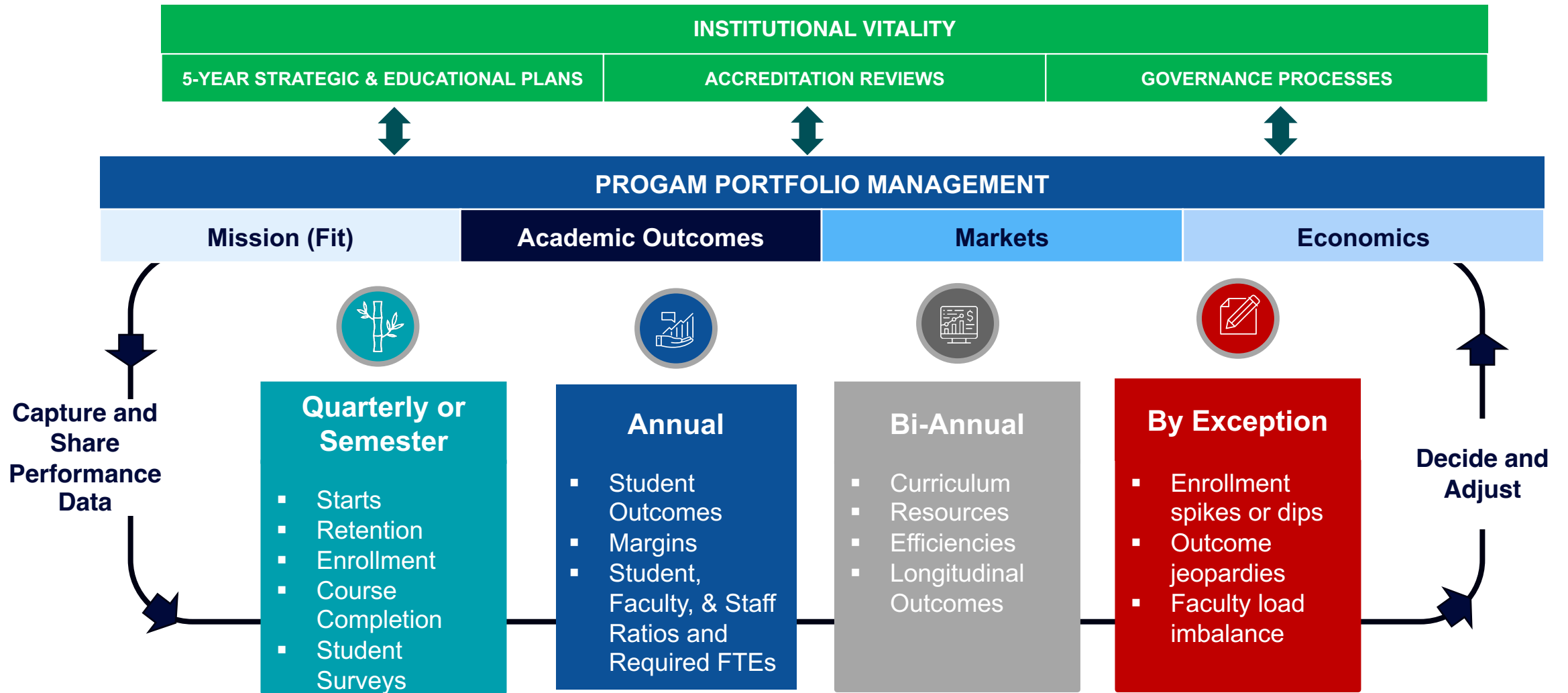


## Program Management: On-Going Process





## Program Management: On-Going Process





## Understanding what is important to a stakeholder to know, and identifying the relevant data-supported information to provide them is key.

What programs have high student demand? Are we positioned to meet these?

What does our state need to support its economic development?  
Are we doing that now? If not, what are we planning to do?  
Are we retaining talent?

What skills do employers want? Are we teaching them?

How are we preparing our graduates for future needs, with capabilities that transcend today's current jobs?

Are we effective? Before and after graduation? How are our graduates doing?

What is my market share?  
Where is my institution/program under pressure?

Which community do I wish to serve? Which am I serving? Is it making a difference?

Am I fiscally fit?  
Are we efficient?  
How do we know that?

**You need fast, informed, appropriate-level data to respond.**





**How can you organize so much critical information?**

**Make it accessible?**

**Keep it timely?**





**You may already have tools that can meet your current and expected needs.**



Framework



Data



Portfolio View





## Decide on and use a Framework for Analysis

**Consider all critical components, both internal and external.**

- Organize the data to establish a baseline for comparisons.
- Use quantitative data to inform and evaluate, and in combination with Academic and Operational knowledge to reach decisions.





## Focus on Engagement: Constituencies and Transparency

**Good program decisions take more than numbers... they take intellectual capital and teaming.**

- Academic and Administrative Leaders
  - Institutional Governance Representatives
  - Enrollment/Admissions
  - Finance
  - Marketing
  - Operations
  - Institutional Effectiveness
  - Student Services
  - Career Services
- ... and others with a stake and knowledge





## Employ a clear process for initial and ongoing management.

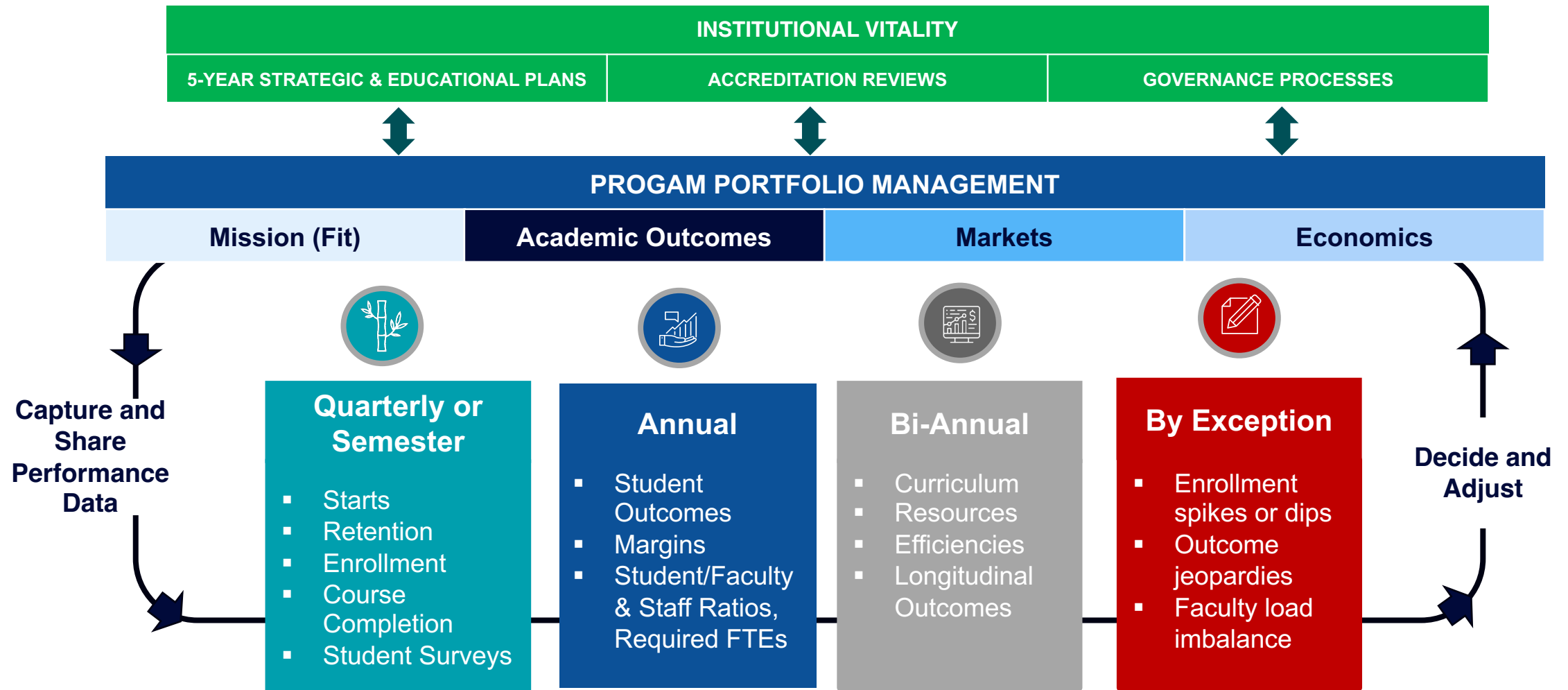
This is a well-tested and successful process for looking at a portfolio and deciding what programs to “Start, Stop, or Grow.”



- Uses facts and data effectively
  - Incorporates judgment of key stakeholders
  - Identifies the best new programs, not just “good enough” programs
- Earns the understanding and buy-in of key stakeholders
  - Positions the organization for next steps
    - Creates an action plan for growing, sustaining, fixing, or teaching out existing programs



Finally, do this not once, but continuously for stronger management and ability to anticipate institutional needs.





## Use all available tools to help you leverage your data.

Consider the data items that reflect areas of importance for your institution, program, and outcome.

Recognize what information is most important to the evaluation, and ensure it is being tracked.

Establish key reports that provide you with insights and results.

Leverage AI tools that ease the load of gathering, organizing, and summarizing data and can help you turn it into useful information.

And then engage in transparent and focused evaluation and decision-making.



# Example Data-Informed Workflow

▼

Review Enrollment Trends

\* denotes a required field.

Review Market Enrollment

Is market enrollment in the program trending up or down? ⓘ

▼

Market Enrollment - Please explain your rating. Is there a difference in award levels (if applicable)?

How does new enrollment compare to total enrollment for a given semester or year? Over time?

Is enrollment concentrated in geographies near us?

Institutional Enrollment

Is institutional enrollment in the program trending up or down? ⓘ

▼

Institutional Enrollment - Please explain your rating. Is there a difference in award levels (if applicable)?

How does this compare to market enrollment trends?

Implications and Actions

Is the market large enough to support our program?



Enrollment Dashboard



Academic Program Management Dashboard



Market Share



PES Markets Scorecard



## Once you have the data, use it.

Consider who is your stakeholder and what they need to know...that will drive the data to be used

Macro: Strategic and Comprehensive

Large Scale: Portfolio

Building Blocks: Programs

Keep Ahead of the Market

*What are we doing, and doing well?*

- Institutional outcomes: graduates, earnings, in-state graduate retention, workforce skills
- Portfolio vitality and sustainability: market attractiveness and relevance, demand interest, resource allocation
- Program excellence and demand: enrollment, persistence, and academic and employment outcomes
- Competitive position: new and emerging areas of study, employer needs, forward-looking skills and competencies



## What am I trying to communicate?

### If I am a Faculty Member...

- Program Interest
- Curriculum Quality
- Workforce Relevance
- Student Outcomes

## What data do I need?

### Information

- Student Demand Interest
- Curricular Trends
- Enrollment/Retention Current and Trends
- Employment Demand

## Where can I find it?

### Data Sources

- Google, IPEDS, Clearinghouse
- Disciplinary trends, Peer websites
- Institutional Research (IR), Labor market reports
- Student and alumni surveys
- PES Markets





CIP: 11.0701 Computer Science

Award Level: Bachelors

Market: Phoenix-Mesa-Scottsdale AZ

Total Score: 62

Percentile: 99

## Student Demand

Score: 28 Percentile: 99

Category	Pctl	Criterion	Value	Score
Size	98	Google Search Volume (12 Months)*	43,993	6
	100	International Page Views (12 Months)	41,674	NS
	99	New Student Enrollment Volume (12 Mo.)	984	6
	99	On-ground Completions by In-Market Institutions	886	4
	98	Online Completions by In-Market Students	70	4
Growth	99	Sum of On-ground and Online Completions	956	4
	94	Google Search YoY Change (Units)*	3,573	1
	0	New Student Enrollment Vol. YoY Change (Units)	-161	0
	100	Completion Volume YoY Change (Units)	144	2
	54	Google Search YoY Change (%)*	9%	0
	45	New Student Enrollment Vol. YoY Change (%)	-14%	0
	75	Completion Volume YoY Change (%)	18%	1

## Competitive Intensity

Score: 7 Percentile: 93

Category	Pctl	Criterion	Value	Score
Volume of In-Market Competition	1	Campuses with Graduates**	6	0
	2	Campuses with Grads YoY Change (Units)**	0	NS
	1	Institutions with Online In-Market Students**	11	0
In-Market Program Sizes	94	Average Program Completions	148	2
	92	Median Program Completions	116	2
	95	YoY Median Prog. Compl. Change (Units)	13	1
	71	YoY Median Prog. Compl. Change (%)	13%	0
In-Market Saturation	7	Google Search * Cost per Click**	\$30	0
	49	Google Competition Index**	0.11	2
National Online Competition	1	National Online Institutions (Units)**	154	NS
	76	Nat'l Online % of Institutions	13%	NS
	70	Nat'l Online % of Completions	9%	NS

## Employment

Score: 27 Percentile: 99

Category	Pctl	Criterion	Value	Score
Size: Entry Jobs	99	Job Postings Total (12 Months)	2,625	4
	99	BLS Current Employment	14,746	1
	99	BLS Annual Job Openings	1,327	1
Underemployed	100	Underemployed Percent of Graduates**	15%	4
Growth: Entry Jobs	7	BLS 1-Year Historical Growth	1.2%	0
	66	BLS 3-Year Historic Growth (CAGR)	4.7%	0
	99	BLS 10-Year Future Growth (CAGR)	1.8%	1
Saturation: Entry Jobs	56	Job Postings per Graduate	2.7	0
	56	BLS Job Openings per Graduate	1.4	0
Weighted-Avg BLS Wages	98	Entry 25th Percentile	\$74,857	8
	98	Post Entry Median	\$96,719	8
		Post Entry w/Associates Median	NA	NS
	98	Post Entry w/Bachelors Median	\$93,970	NS
	99	Post Entry w/Masters Median	\$115,012	NS
	98	Post Entry w/Doctoral Median	\$120,399	NS
National American Community Survey Bachelor's Degree Outcomes*	19	% with Any Graduate Degree*	23%	NS
	33	% with Masters*	21%	NS
	11	% with Doct/Prof Degree*	2%	NS
	14	% Unemp. (Age < 30)**	4%	NS
	98	% in Direct Prep Jobs*	61%	NS

\* - Google search do not filter by award level.  
 \*\* - Percentiles are displayed in reverse (100% minus the percentile).  
 NA - No data available/not currently tracked.  
 NS - Not Scored in Rubrics (values = 0).  
 PCTL - Percentile

## Degree Fit

Score: 0 Percentile: 50

Category	Pctl	Criterion	Value	Score
Cost Benchmarking	53	Average Cost per SCH Index**	0.91	NS
	27	Median Cost per SCH Index**	1.17	NS

## National Completions by Level

Score: 0

## National Workforce Ed. Attainment

Score: 0

Award Level	Completions (National)	Completions (Market)	Enrollment (Market)	BLS Educational Attainment
No College				6%
Some College				14%
Certificate	0%	0%	0%	
Associates	9%	8%	25%	9%
Bachelors	60%	49%	46%	46%
Postbaccalaureate Certificate	0%	0%	0%	
Masters	29%	42%	25%	22%
Post-masters Certificate	0%	0%	0%	
Doctoral	2%	1%	3%	3%

## CIP Description:

A program that focuses on computer theory, computing problems and solutions, and the design of computer systems and user interfaces from a scientific perspective. Includes instruction in the principles of computational science, computer development and programming, and applications to a variety of end-use situations.

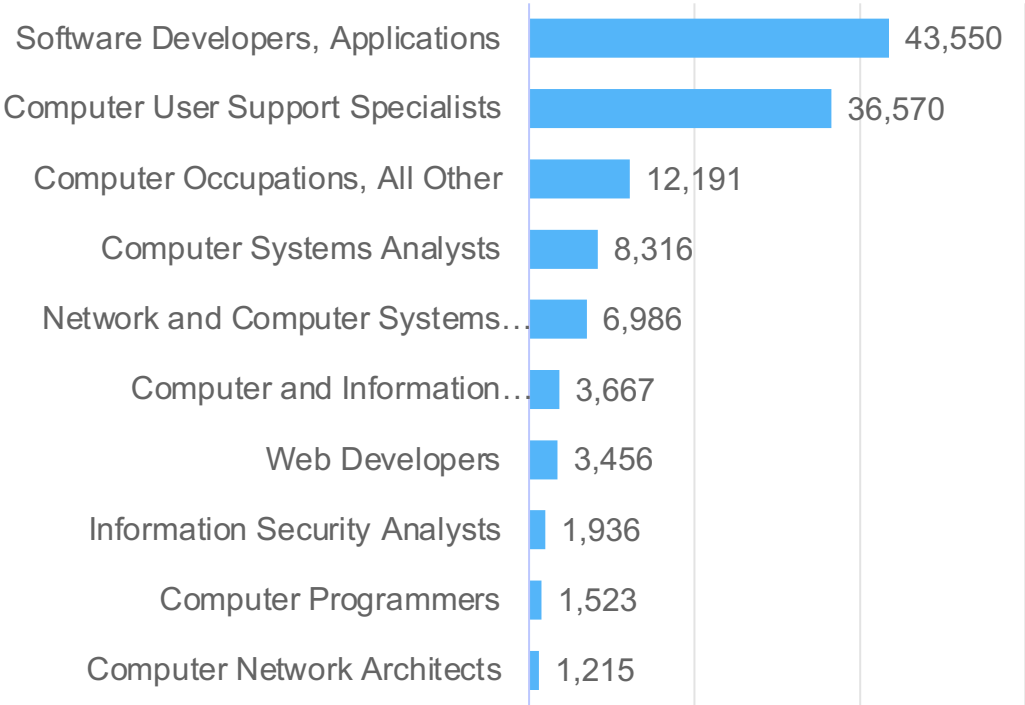
Total Percentile	0	20+	40+	70+	90+	95+	98+	100
Total Score	-19	-16	1	12	25	32	42	66





Illustrative

Highest Job Postings Volume  
Occupations for Computer Science  
February, 2025



Highest Skills Volume in Job Postings

Computer Science  
February 2025



Source: Gray DI Job Postings Insights Dashboard



## What am I trying to communicate?

### If I am a Dean, Chair, or Director...

- Program Demand
- Enrollment & Revenue
- Program Economics
- Margins
- Staffing & Efficiency
- Program Innovation

## What data do I need?

### Information

- Demand, Enrollment, Revenue, Retention, Graduation
- Faculty Workload, Student Ratios
- Program Margins, Curricular Efficiency
- Benchmarking, Review Process

## Where can I find it?

### Data Sources

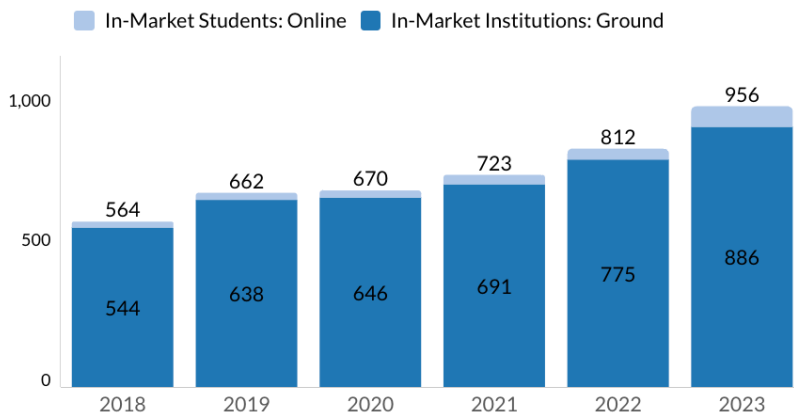
- IR, Finance
- HRIS
- SIS, HRIS, Finance
- Accreditors, Academic Affairs
- PES Markets and Economics



## In-Market Competition: Computer Science Bachelor's

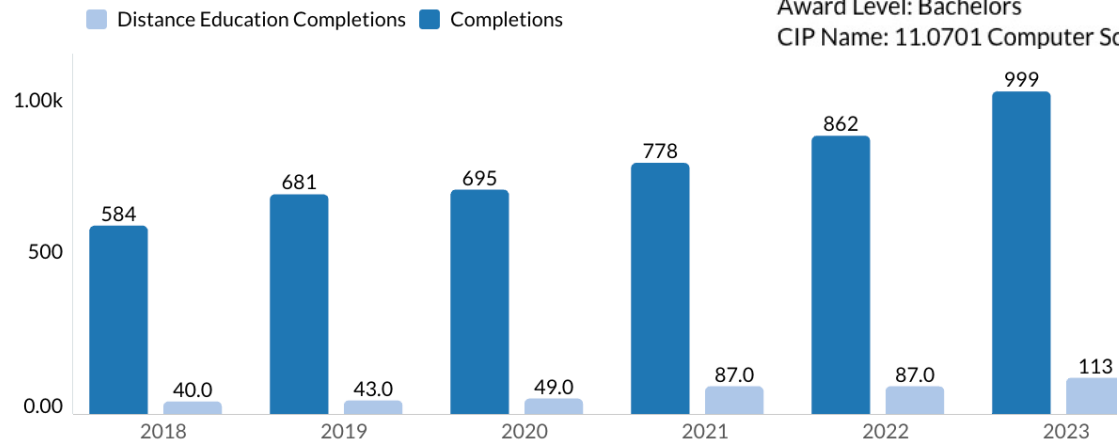
Total Completions by In-Market Students

Current Year and Previous Year



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Total Completions by In-Market Institutions



Current Selections:

Market: Phoenix-Mesa-Scottsdale AZ

Award Level: Bachelors

CIP Name: 11.0701 Computer Science

Instructions: Select At Least One Dimension And One Metric. Market Dimensions Is Shown If More Than 1 Market Selected.

Campus	Q	2023 On-Ground Completions	2023 Online Completions by In-Market Students	2023 Sum of On-Ground and Online Completions	1-year CAGR	5-year CAGR	IPEDS: UG Tuition & Fees in-state	IPEDS: UG Tuition & Fee out-of-state
Arizona State University Campus Immersion		347	0	347	17.4%	11.4%	\$12,051	\$32,193
Arizona State University-West		299	0	299	17.4%	11.4%	\$12,051	\$32,193
Arizona State University-Polytechnic		198	0	198	17.4%	11.4%	\$12,051	\$32,193
Grand Canyon University		33	2	35	-10.7%	20.1%	\$17,450	\$17,450
University of Arizona		0	21	21	-	-	\$13,626	\$41,095
Southern New Hampshire University		0	11	11	-	-	\$16,450	\$16,450
Western Governors University		0	10	10	-	-	\$8,300	\$8,300
DeVry University-Arizona		5	0	5	-50.0%	-30.1%	\$17,488	\$17,488



## Program Economics Scorecard, Computer Science, 2023-2024

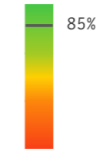


### Percentiles

Gross Revenue



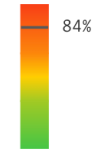
Net Revenue



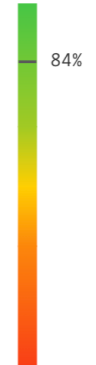
Discounts



Instruct. Cost

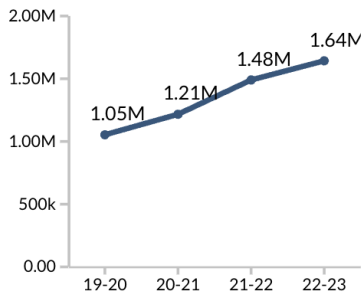


Contribution

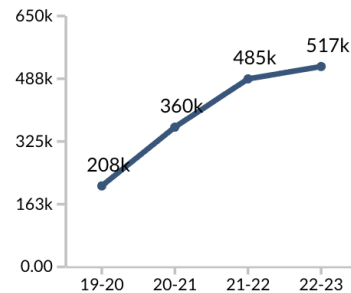


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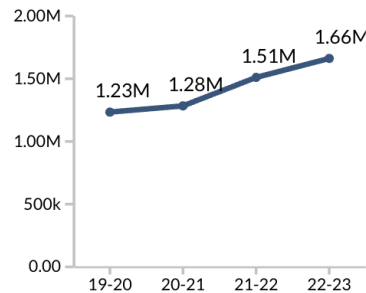
Gross Revenue  
(2023 vs 2022)



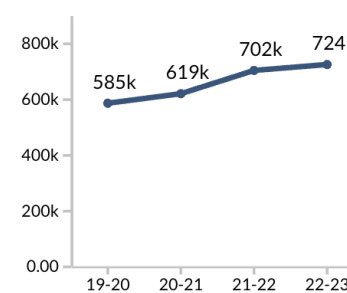
Discount  
(2023 vs 2022)



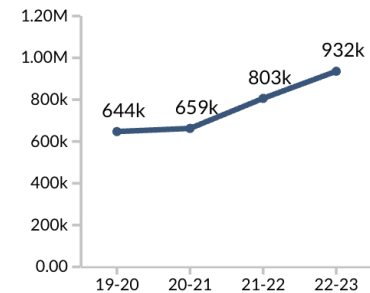
Net Revenue  
(2023 vs 2022)



Instructional Cost  
(2023 vs 2022)



Contribution  
(2023 vs 2022)





Computer Science (Bachelor's)

Change Program

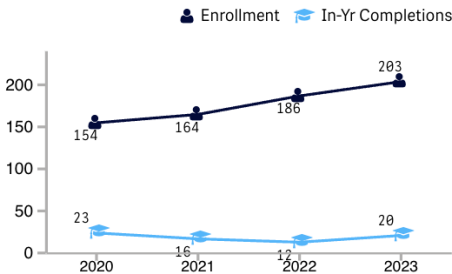
Program Review Status

Grow

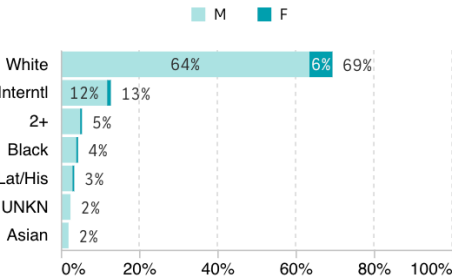
CIP Code: 11.0701 Computer Science

Review Year: 2025

Size



Demographics



Mission

Category	Program Fit
Mission	This program embodies the institution's commitment to academic excellence. It aligns closely with the institution's goals by providing a platform for intellectual growth, fostering innovation, and cultivating a community of lifelong learners.
Academic Focus	This program provides students with a comprehensive and well-rounded education across a diverse range of disciplines. It acts as a gateway for students to explore various fields of study, fostering critical thinking, communication skills, and interdisciplinary perspectives.
Students Served	The program serves a diverse range of students: traditional undergraduates, non-traditional adult learners, transfer, and international students. The program fulfills its mission of providing accessible, high-quality education to a diverse student body.
Community Impact	Through partnerships with local organizations, service-learning initiatives, and community outreach efforts, students and faculty collaborate with community members to address pressing challenges and make meaningful contributions.
Highlights	A notable highlight of the program is its emphasis on experiential learning opportunities. Through internships, research projects, practicums, and service-learning initiatives, students gain hands-on experience in their field of study.

Overview

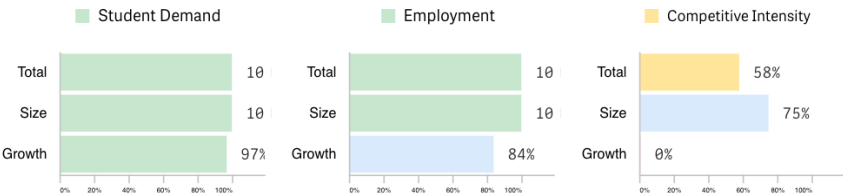
Markets

High Opportunity

Overall Percentile: 100%

Market: Contemporary U. Regional Market

Rubric: Bachelor's



Academics

Satisfactory

Academic Percentile: 89%

Category	Metric	20-21	21-22	22-23	YoY Change
Program Profile	# of Students	164	186	203	9% ↑
	# of SCH Taught	3,813	4,474	4,678	5% ↑
	FTE Students	127	149	156	5% ↑
	% SCH in Online Courses	11%	12%	17%	39% ↑
Student Progress	% SCH Taught by FT Faculty	100%	100%	100%	0% —
	Withdraw/D/F Rate	18%	15%	16%	1% ↑
	# Students Enrolled 2+ Terms	105	112	120	7% ↑
	# Students Return from Prior Yr	87	102	128	25% ↑
Outcomes	# of In-Year Completions	16	12	20	67% ↑
	Median Years to Complete	NA	NA	NA	NA
	Median Earnings 2-Yrs Post-Grad.	NA	NA	NA	NA

Gender: ☐ F ☐ M Pell Status: ☐ N ☐ Y IPEDS Race/Ethnicity: ☐ 2+ ☐ Asian ☐ Black ☐ Haw/Pac ☐ Interntl ☐ Lat/His ☐ Ntv.Am. ☐ UNKN ☐ White

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Margins

Below Average

Contribution SCH Pct: 47%







## What am I trying to communicate?

### If I am the Provost...

- Program Portfolio Strength
- Market Positioning
- Faculty Productivity
- Resource Allocation
- Program Economics
- Strategic Investment

## What data do I need?

### Information

- Demand & Completions
- Peer Benchmarking
- Teaching Utilization
- Cost per Student Credit Hour
- Margins
- Budget & Efficiency
- Environmental Scanning

## Where can I find it?

### Sources

- Enrollment Management, IR, SIS
- IPEDS, Accreditors
- HRIS, Workload Reports
- Skills data base, by program
- Finance
- Advancement, Regional Development
- PES Markets and Economics
- Alumni Data



## Program Portfolio Market View: Bachelor's Award Level

CIP

Award Level: Bachelors

Market: Phoenix-Mesa-Scottsdale AZ

Program Group

2 Digit



Percentiles by CIP



Scores by CIP



Scores Stacked Bar Chart

### Percentiles by CIP

(Double-click Field headers to change sorting.)

*Illustrative*

CIP Q	Total Percentile	Student Demand Percentile	Competitive Intensity Percentile	Employment Percentile
51.3801 Registered Nursing	100	100	93	100
52.0801 Finance, General	99	100	93	90
52.9999 Business and Management, Other	99	99	98	85
14.1901 Mechanical Engineering	99	99	94	99
11.0701 Computer Science	99	99	93	99
14.1001 Electrical/Electronics Engin'g	99	99	93	99
30.7101 Data Analytics and/or Data Science	99	99	93	99
11.1003 Cyber Security/ Info. Assurance	99	99	90	94
11.0103 Information Technology	99	99	61	99
52.0301 Accounting	99	99	50	99
45.0601 Economics (incl. Quant Econ and Econometrics)	99	98	99	90
11.9999 Computer/Info Sci and Svcs, Other	99	98	97	98
27.0101 Mathematics, General	99	97	99	91
04.0201 Architecture (incl. Building Tech)	99	97	99	90

Total Percentile	0	20+	40+	70+	90+	95+	98+	100
Total Score	-19	-16	1	12	25	32	42	66

Source: Gray DI PES Markets





## Program Economics Institutional View (Bachelor's)

Filters

Year

Semester

Academic Unit

Program Area

Program

Award Level

Secondary Program

Student Level

Modality

College

Department

Course Subject

Course Title

Course Level

Section Type

Location

Support

2024 Gross Revenue	2024 Discounts	2024 State Appropriation	2024 Net Revenue	2024 Instructional Cost	2024 Contribution
\$69,302,407 ▼ (2%) YoY	\$53,539,576 ▼ (1%) YoY	\$2,023,800 ▼ (6%) YoY	\$17,767,431 ▼ (6%) YoY	\$9,857,467 ▼ (6%) YoY	\$7,909,964 ▼ (7%) YoY

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Measure: 

Totals

Per SCH

View economics by: 

Program

Department

Course Subject

Course

State Funding: 

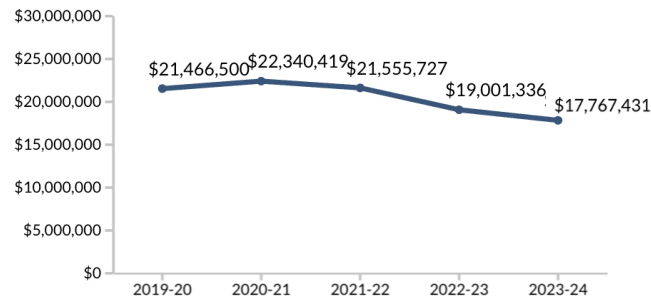
Yes

No

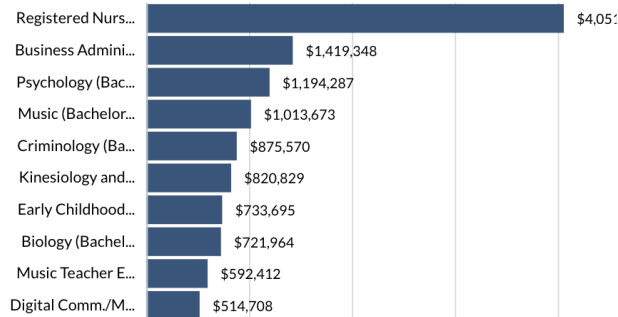
Units: 

\$

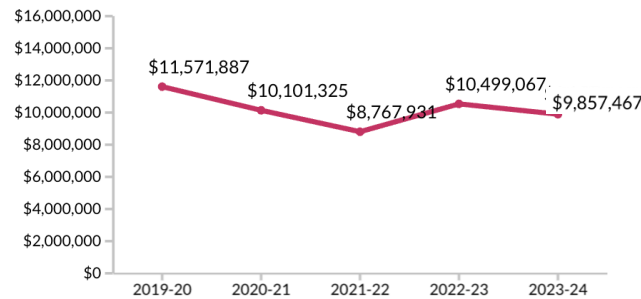
Net Revenue



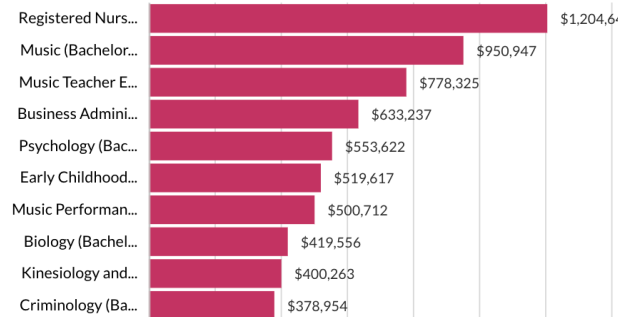
Net Revenue by Program



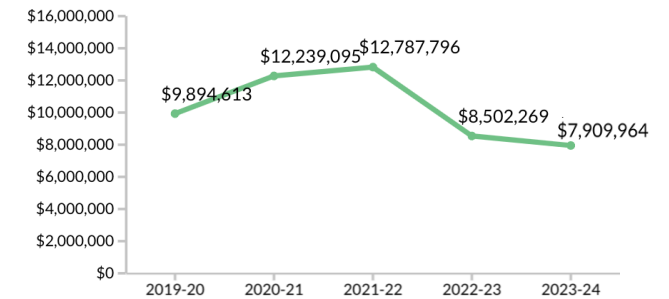
Instructional Cost



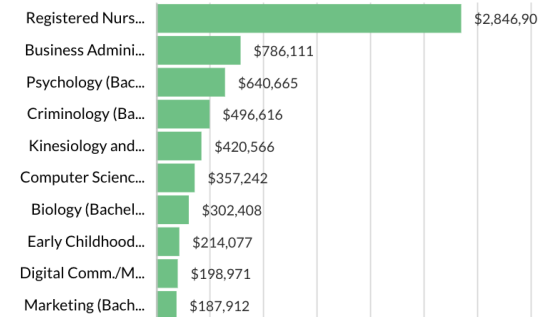
Instructional Cost by Program



Contribution



Contributions by Program





## Faculty Analysis: Department View (Bachelor's)

Filters

Year

Semester

Academic Unit

Program Area

Program

Award Level

Secondary Program

Student Level

Modality

College

Department

Course Subject

Course Title

Course Level

Section Type

Location

Support

*Illustrative*

Total Pay & Benefits

\$13.9M

Full-Time Instructional Cost

\$8.4M

Adjunct Instructional Cost

\$1.4M

Release Cost

\$764.0k

Unallocated Cost

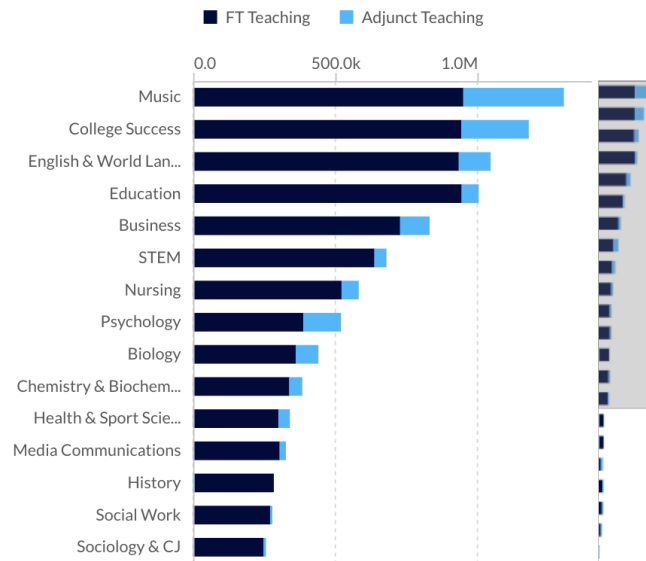
\$1.7M

Measure:

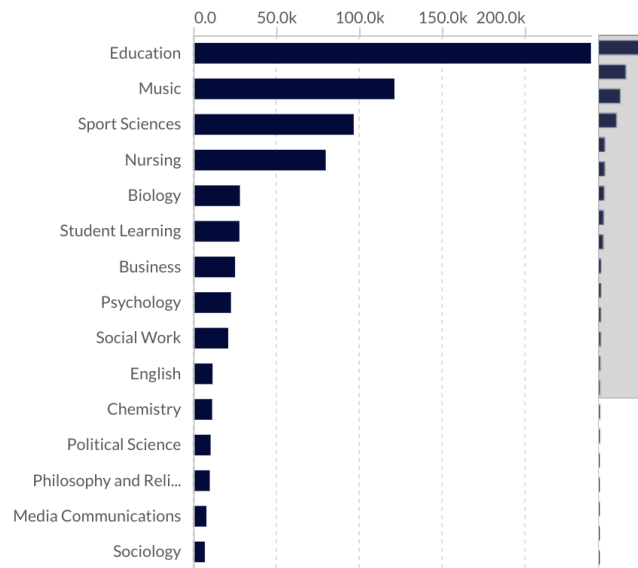
Totals

Percentage

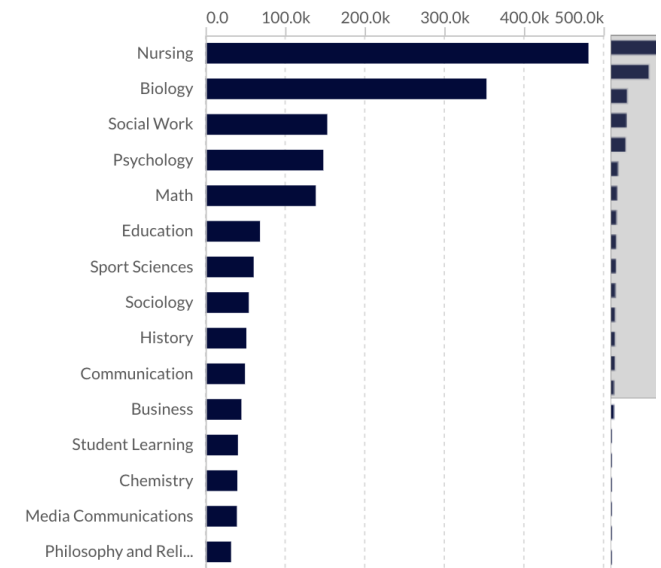
Instructional Cost By Course Department



Release Cost By Faculty Department



Unallocated Cost By Faculty Department





## Program Portfolio Contribution Position (Bachelor's)

Filters

Year

Semester

Academic Unit

Program Area

Program

Award Level

Secondary Program

Student Level

Modality

College

Department

Course Subject

Course Title

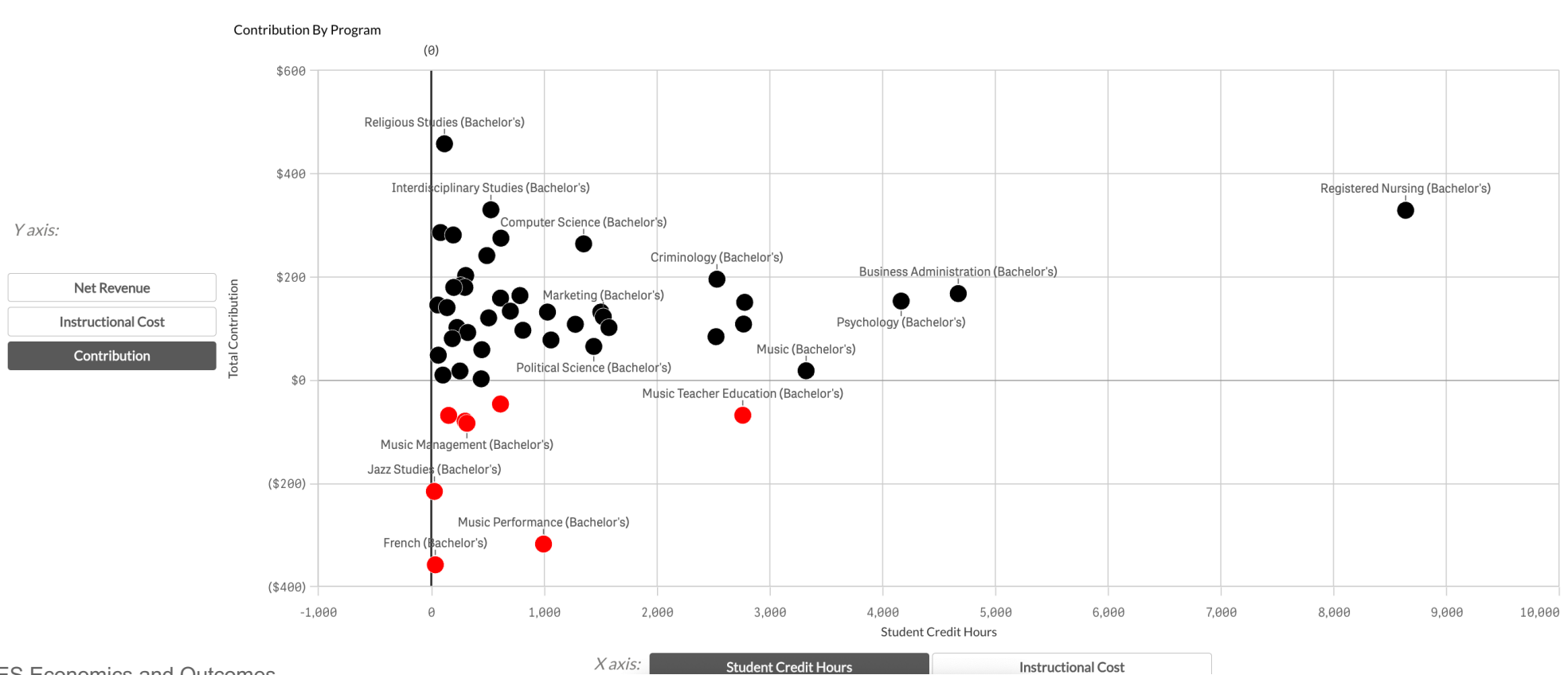
Course Level

Section Type

Location

Support

Measure: Totals Per SCH View economics by: Program Department Course Subject Course State Funding: Yes No Units: \$





## What am I trying to communicate?

### If I am the President...

- Institutional Health
- Graduate Preparation
- Workforce Alignment
- Community Impact

## What data do I need?

### Information

- Skills mapping to program
- Enrollment, Retention, Graduation Trends
- Program Portfolio map
- Financial Reporting
- Employment, Alumni Success
- Economic Impact, Success Stories

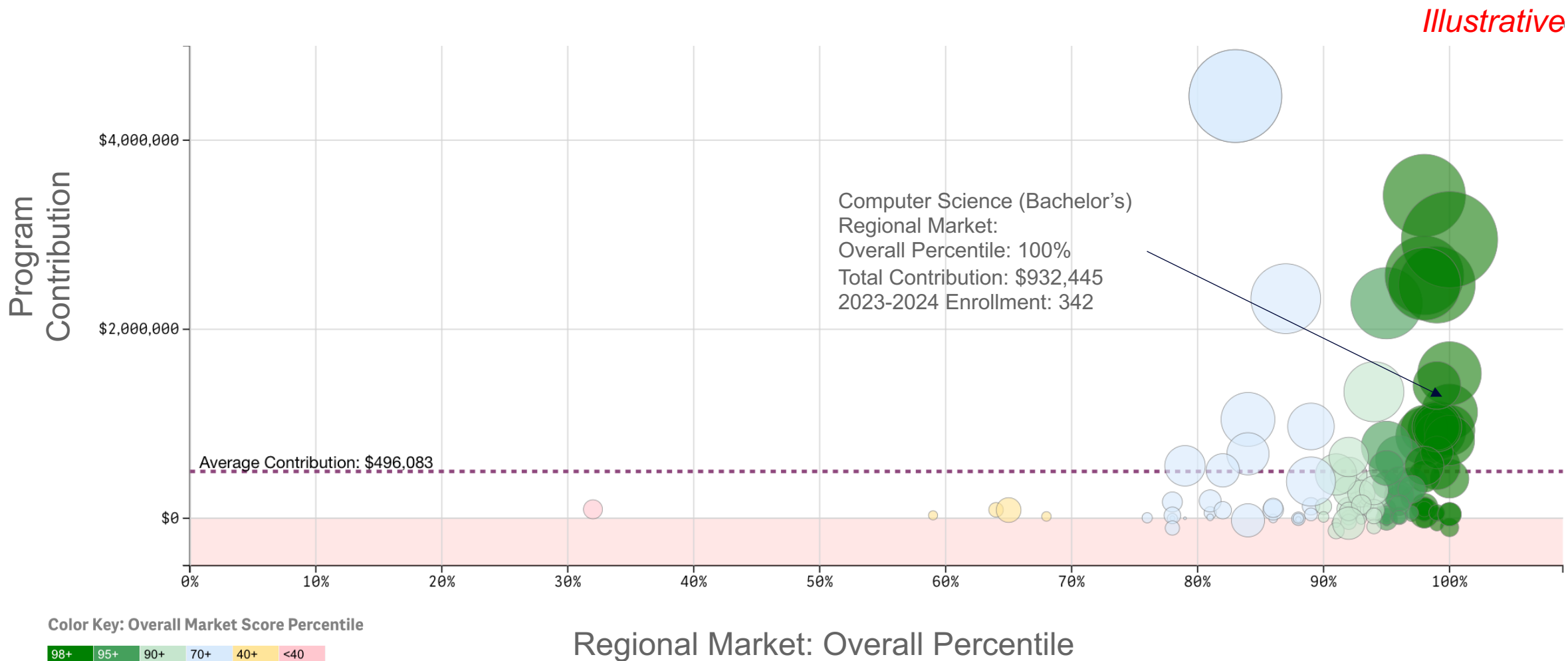
## Where can I find it?

### Source

- IR
- Forecasted employment needs and skills mapping
- Budget/Finance
- Development, Marketing
- Alumni database
- PES Markets and Economics



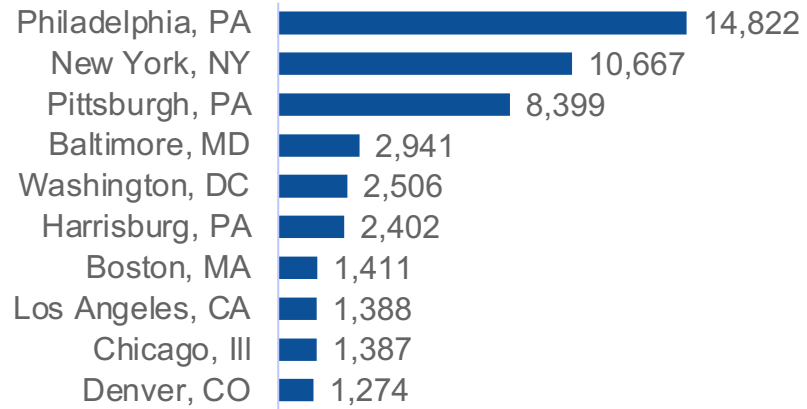
## Program Contribution by Market Position: Institution View



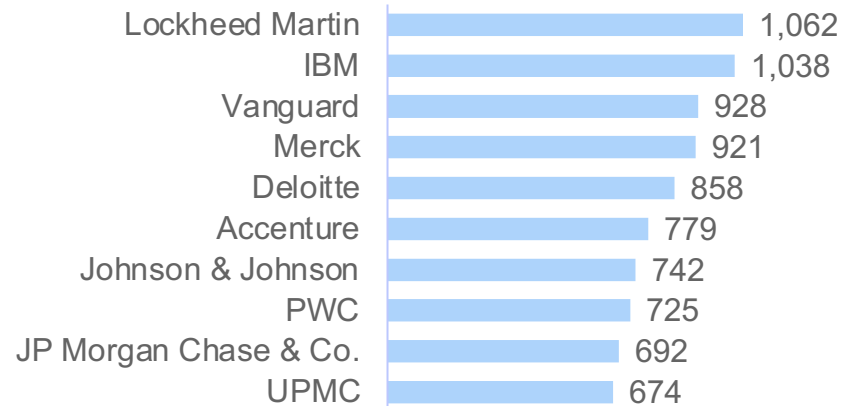


## Top 10 Cities, All Bachelor's Programs

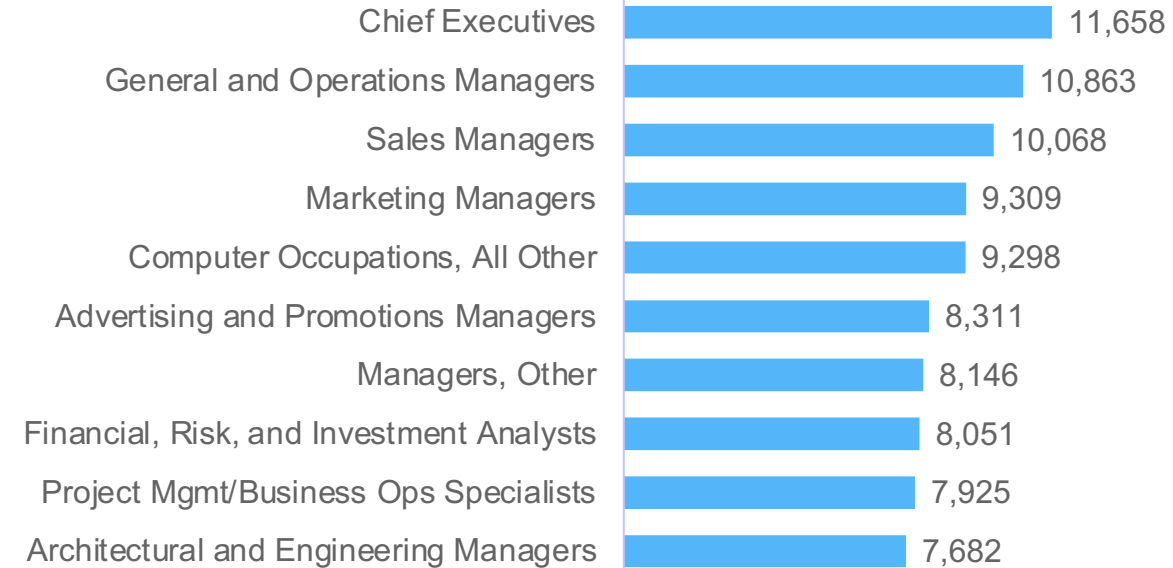
## Alumni Insights Report



## Top 10 Companies, All Bachelor's Programs



## Top 10 Entry-Level Jobs, Bachelor's Graduates First Four Years After Graduation

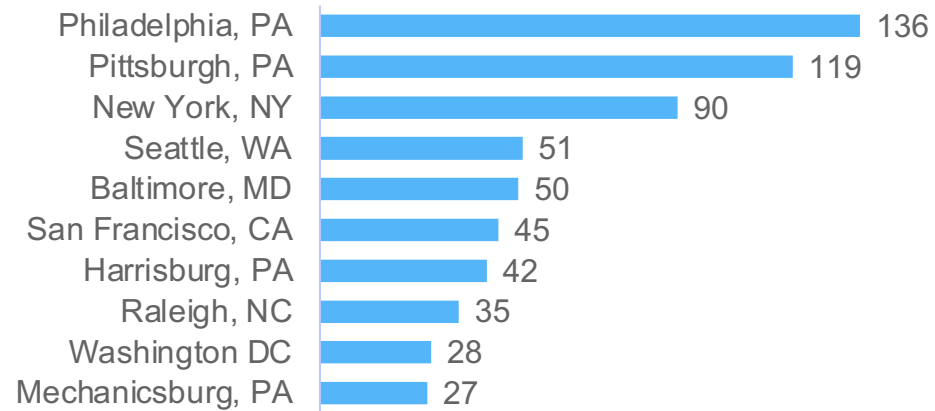


*Illustrative*

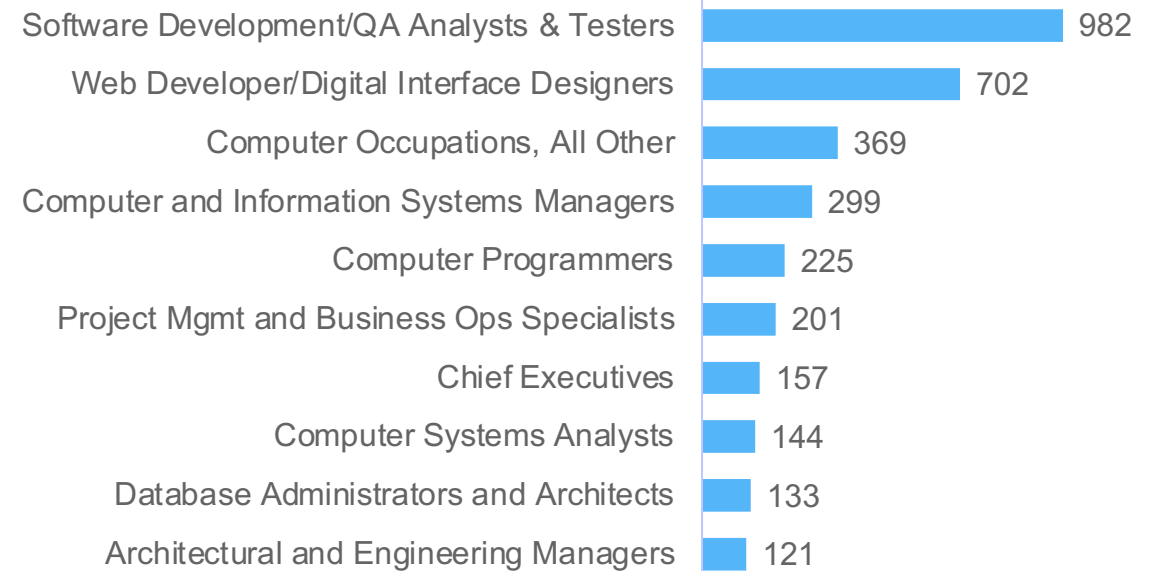


## Alumni Insights Report

### Top 10 Cities, Computer Science



### Top 10 Entry-Level Jobs, Computer Science First Four Years After Graduation



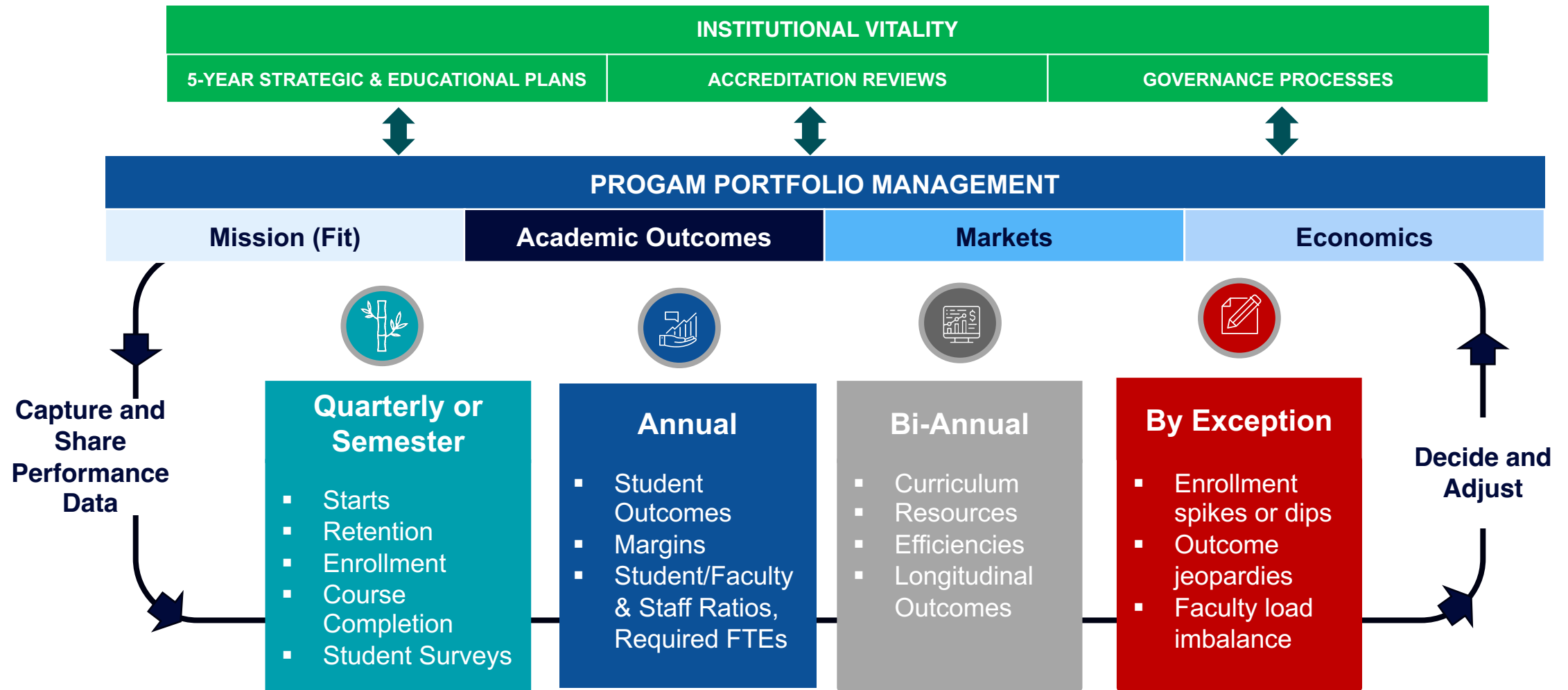
### Top 10 Companies



*Illustrative*



**Remember: A continuous, integrated data collection and portfolio management process supports effective evaluation and decision-making.**







**Take a moment to note ideas, applications, or other important learnings that you want to take note of from this discussion.**

**Possible areas for reflection:**

- Does your institution have a consistent program management process?
- Where is your institution strong in managing its portfolio?
- What supporting data or tools will help you with your ongoing evaluation and ability to explain key areas of performance?
- What tools would you like to add to better support your institution's work in this area?





GRAY DI™

PROPRIETARY

"The art of communication is the language of leadership." - James Humes







## Next up in our Master Class Series:

*All classes are from 2-3 PM ET.*

Date	Topic
Tues., March 4	Foundations of Academic Program Evaluation
Tues., March 11	Fiscal Fitness to Fund Growth
Tues., March 18	Market Demand: The Key to Program Growth and Relevance
Tues., March 25	Managing Program Evaluation and Using Data to Tell Your Story
Tues., April 1	Embracing Innovation: The Future of Program Evaluation

Register here:

<https://www.graydi.us/2025-master-class-series>

## Next Month: Butler University Case Study Webinar

*Thursday, April 17th, 2 PM ET*

### Using Data for Growth: Driving Innovation in Higher Education

How Butler University's Transformation Lab is Accelerating Change with Data-Informed Strategies

