



Program Economics and Outcomes

Gray DI Master Class Series

March 24, 2026



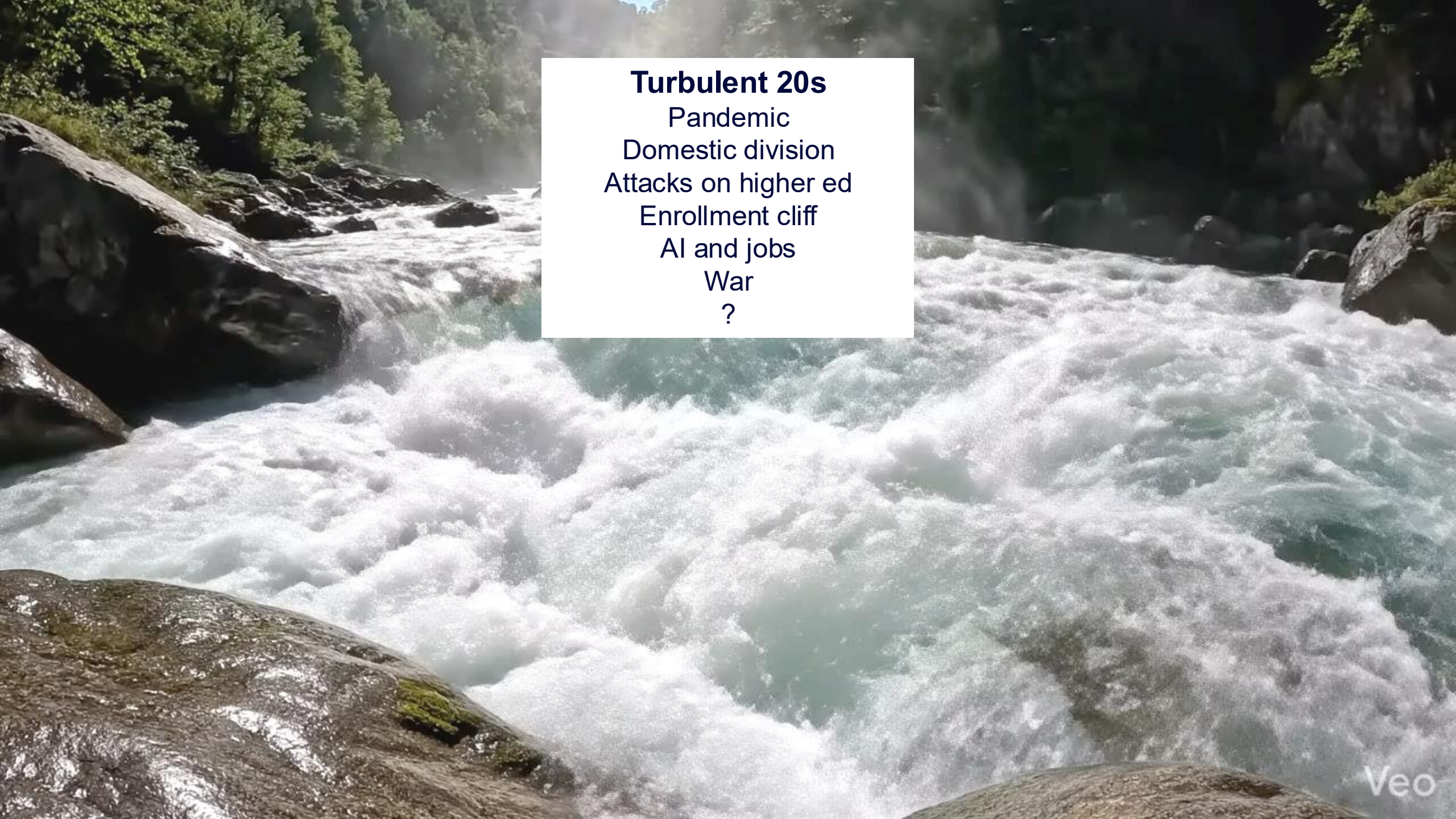


Today's Speaker



Elizabeth Higgins

Vice President,
Decision Intelligence
Analysts and
Product



Turbulent 20s

Pandemic

Domestic division

Attacks on higher ed

Enrollment cliff

AI and jobs

War

?



More Tools to Thrive in Turbulence

In the last session, we explored how market data enables higher education to navigate the “rapids”.

In this session, we will:

- Move inside the four walls.
- Examine a foundational element to financial stability: program economics.
- Learn efficiency strategies.





Agenda

Let's Not

- Methods
- Benchmarks
- Natural

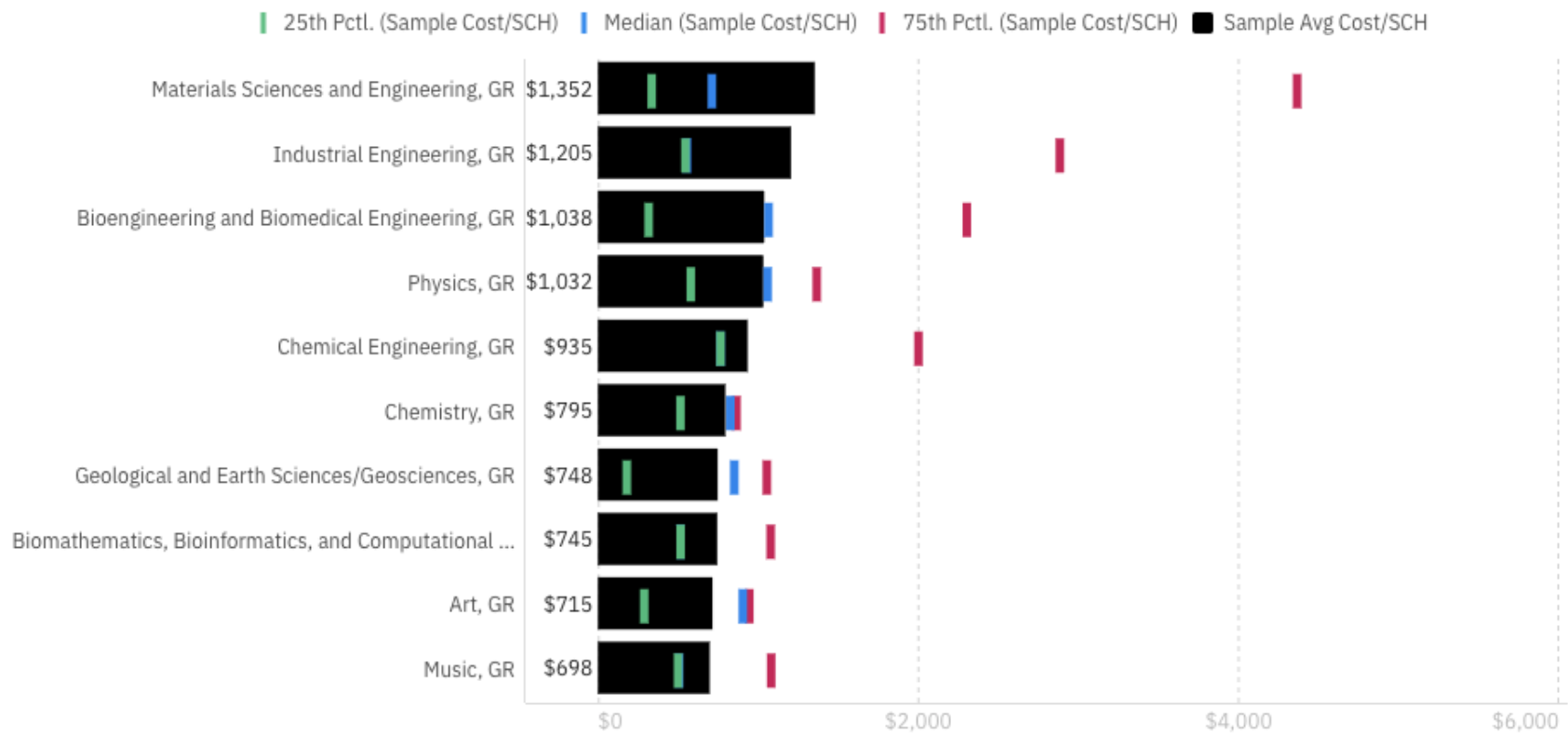
Efficiency





Graduate materials sciences and engineering is the most expensive subject.

Gray DI Benchmark Sample Cost per Student Credit Hour Course Subject and Level





Margins are only one component of a complete Program Evaluation System.





Poll 1

Does your institution calculate program economics, or the cost of instruction?

- A. Yes, and we have institutional buy-in and access to the data.
- B. Yes, but only select individuals have access to the data.
- C. This is a work-in-progress.
- D. No, we don't have a program economics model.



Why are margins important?

Cross-subsidies fund what markets won't: *investing in your mission.*

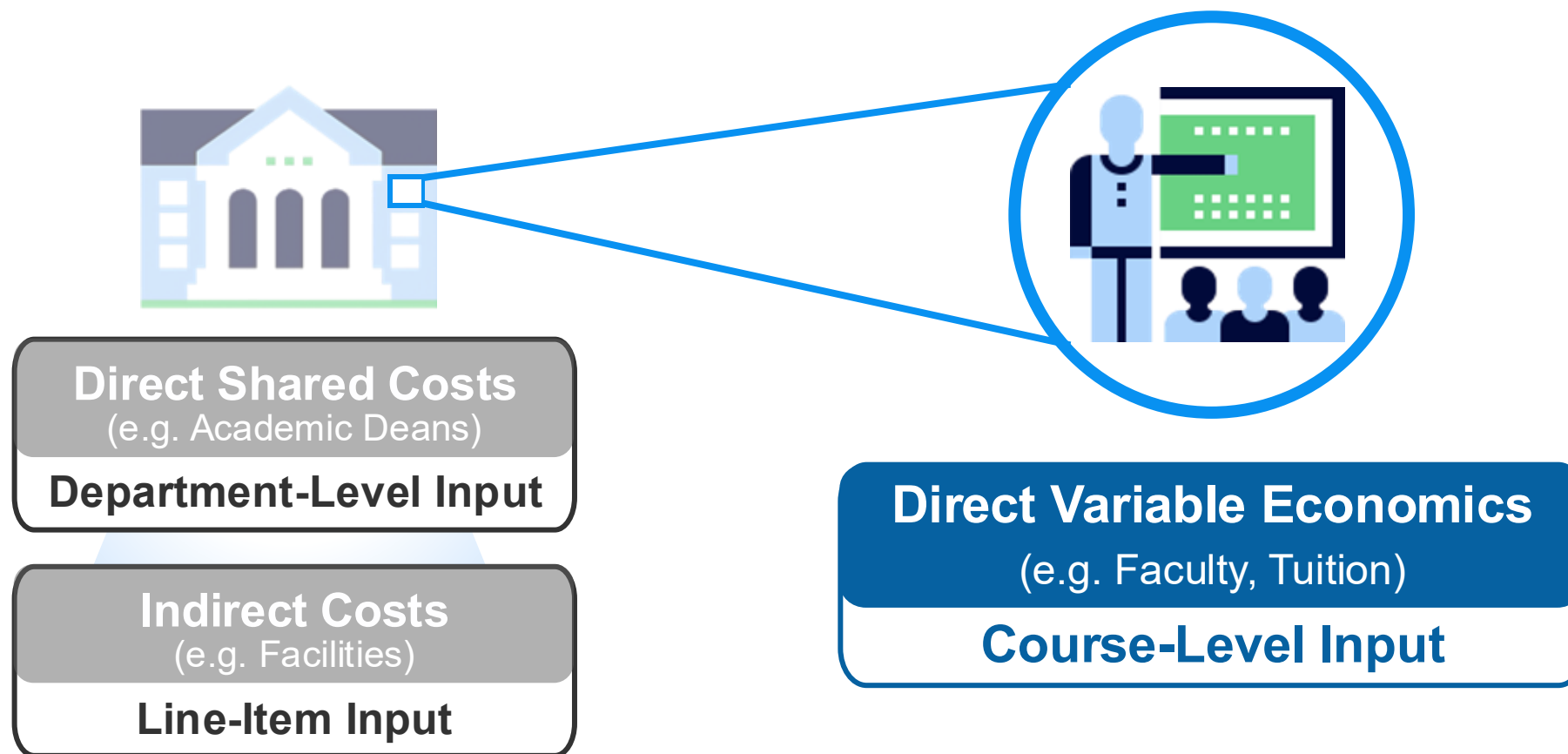
- Institutions use the funds to subsidize mission-critical programs and activities.





Program Economics Methodology

Gray DI calculates revenue, cost, and margin for teaching; we usually exclude overhead.

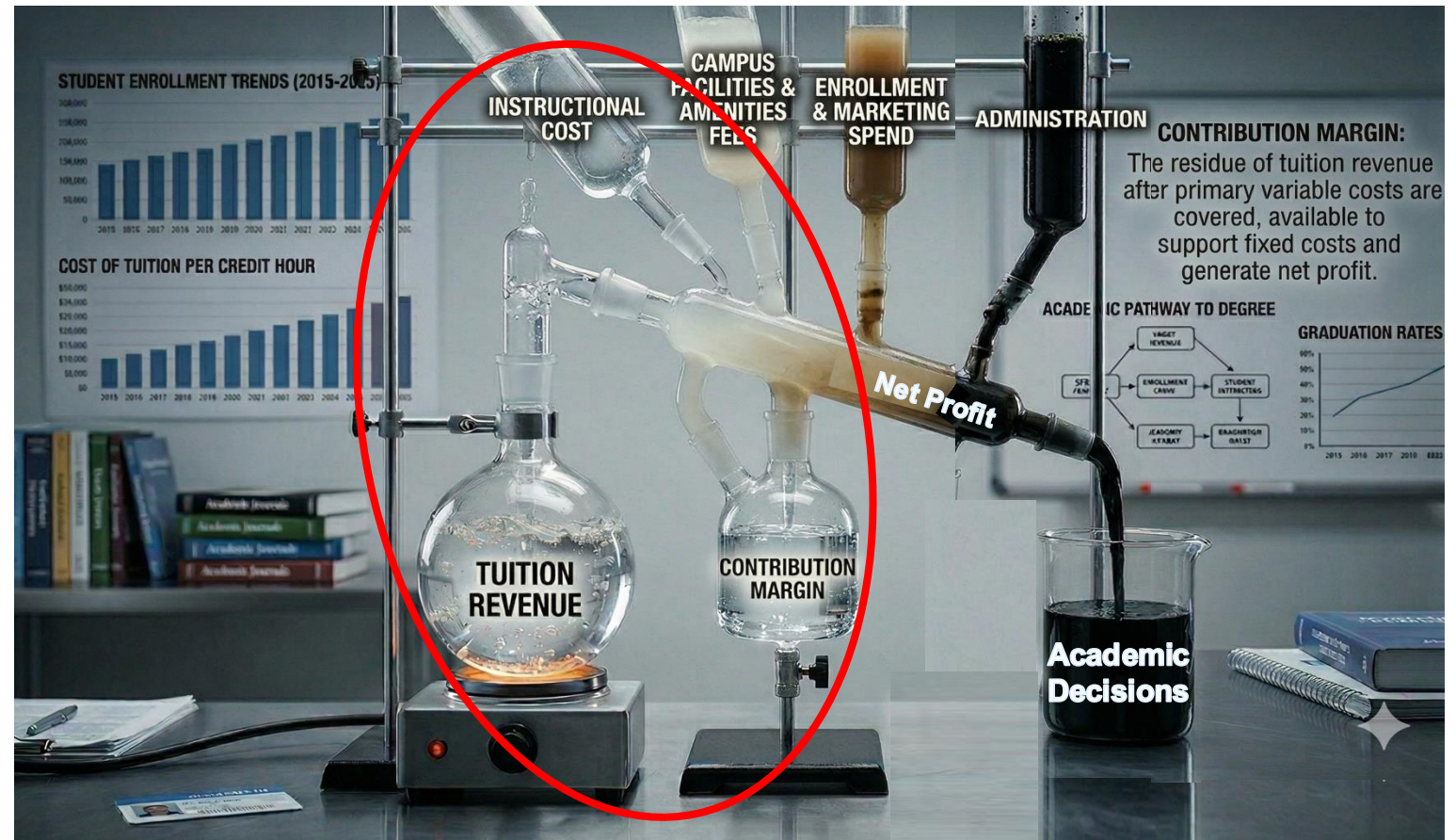




Why focus on direct variable economics?

Inform course and program decisions with the clearest data available.

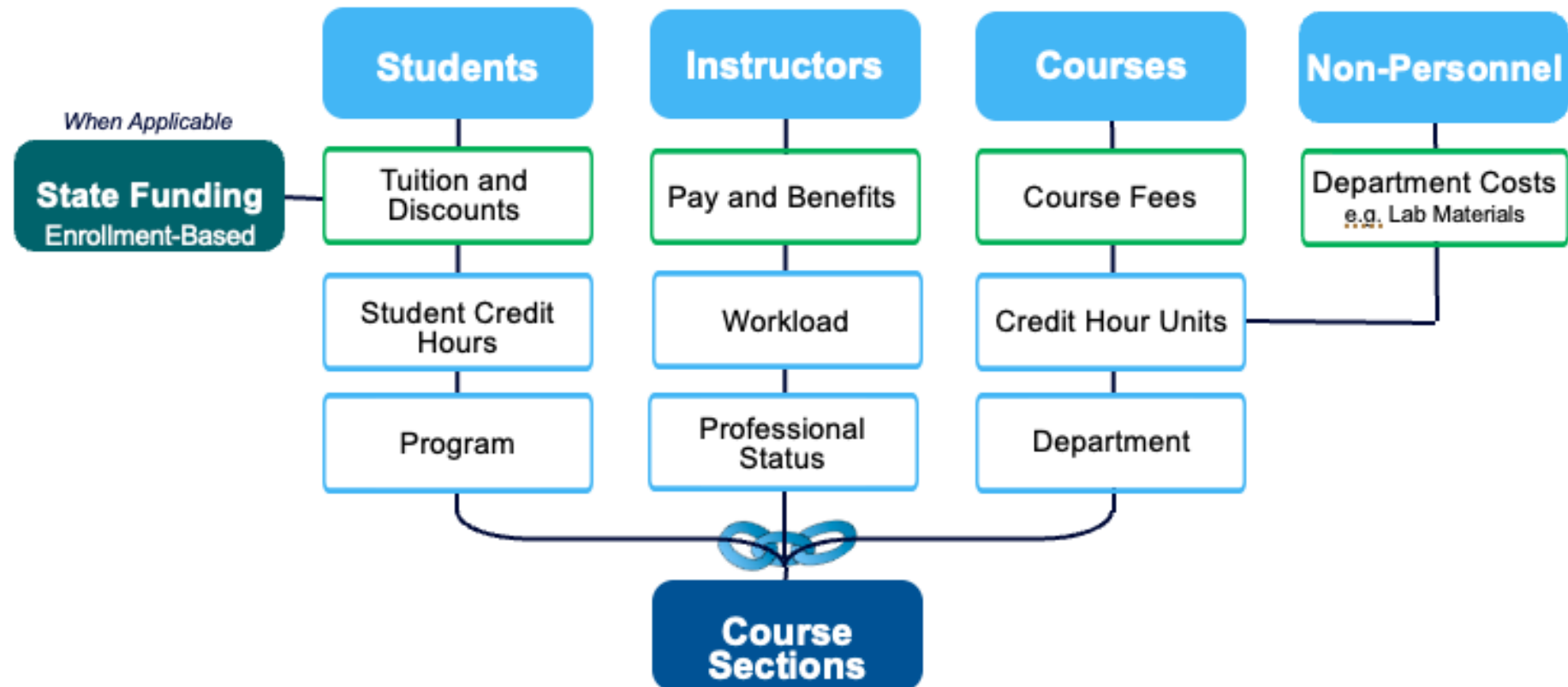
- Cutting a program that is contribution positive but does not cover allocated overhead costs will financially hurt the institution.





Data Gathering

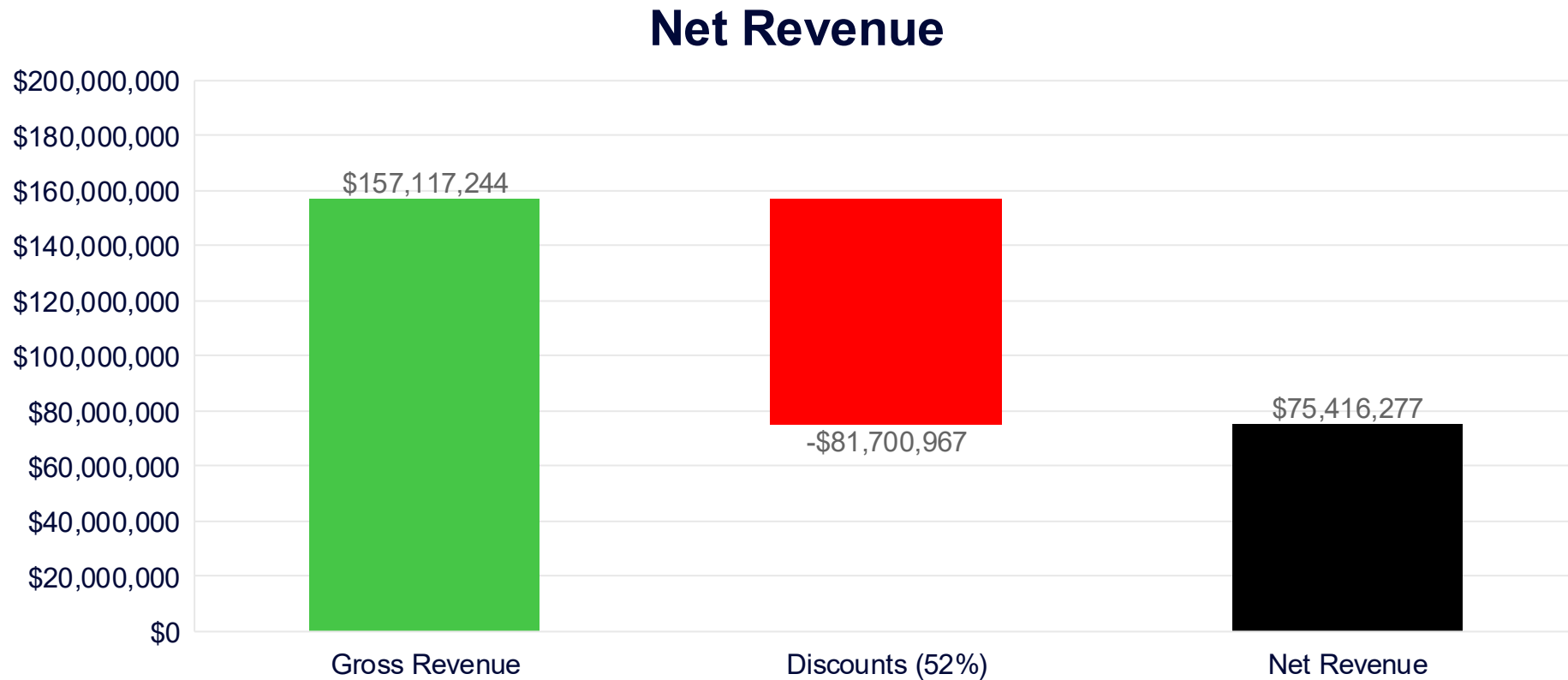
The data model is centered on course sections, students enrolled, and instructors teaching.





Composition of Net Revenue

Net revenue is the sum of tuition and fees charged less institutional discounts.

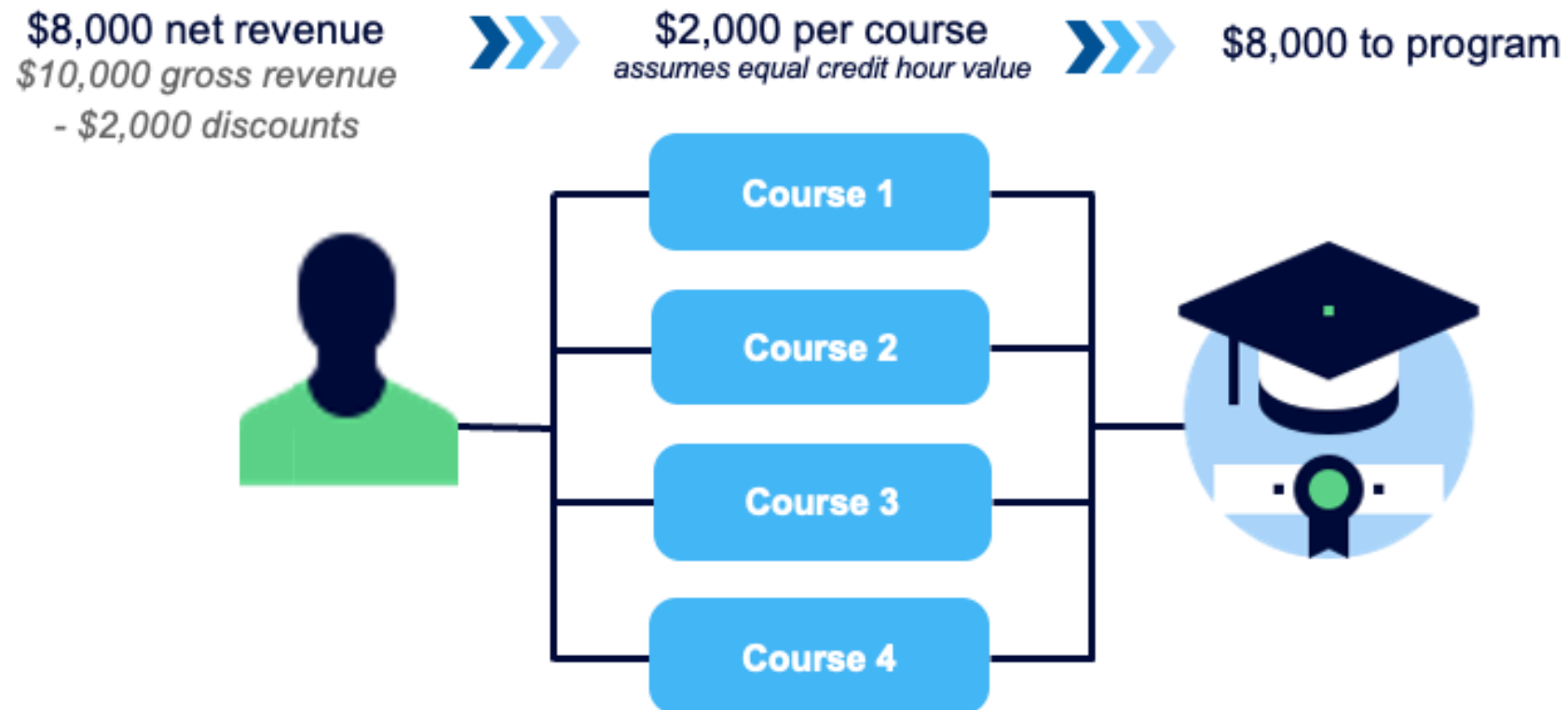


Illustrative



Net Revenue Methodology

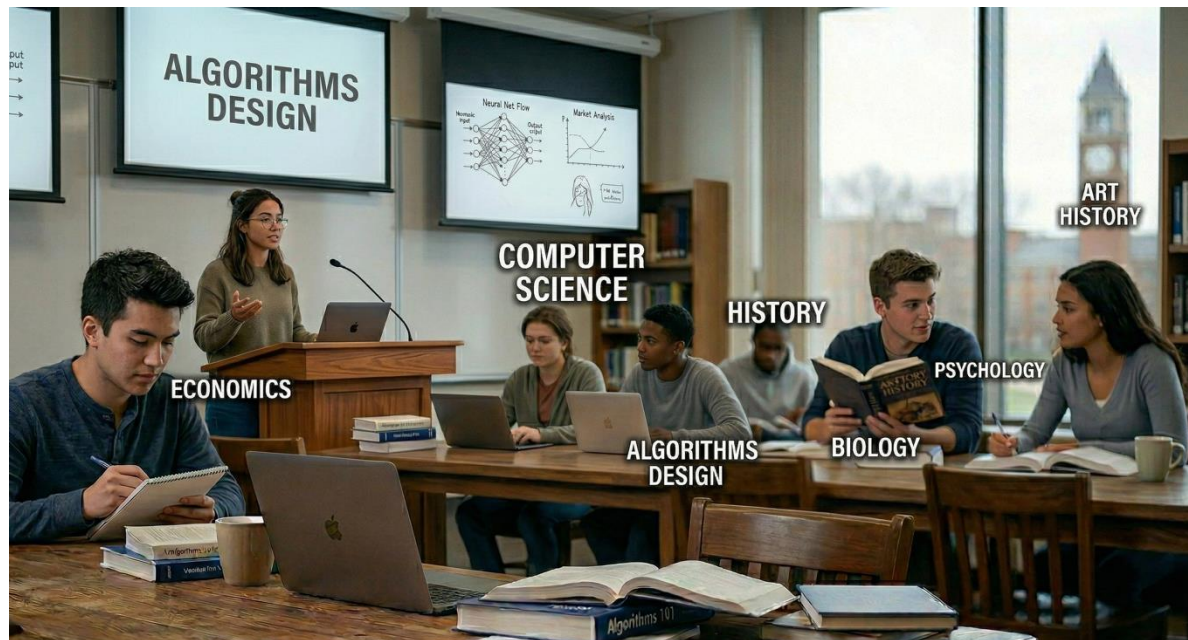
Revenue and discounts follow students into courses and flow to their declared major or program.



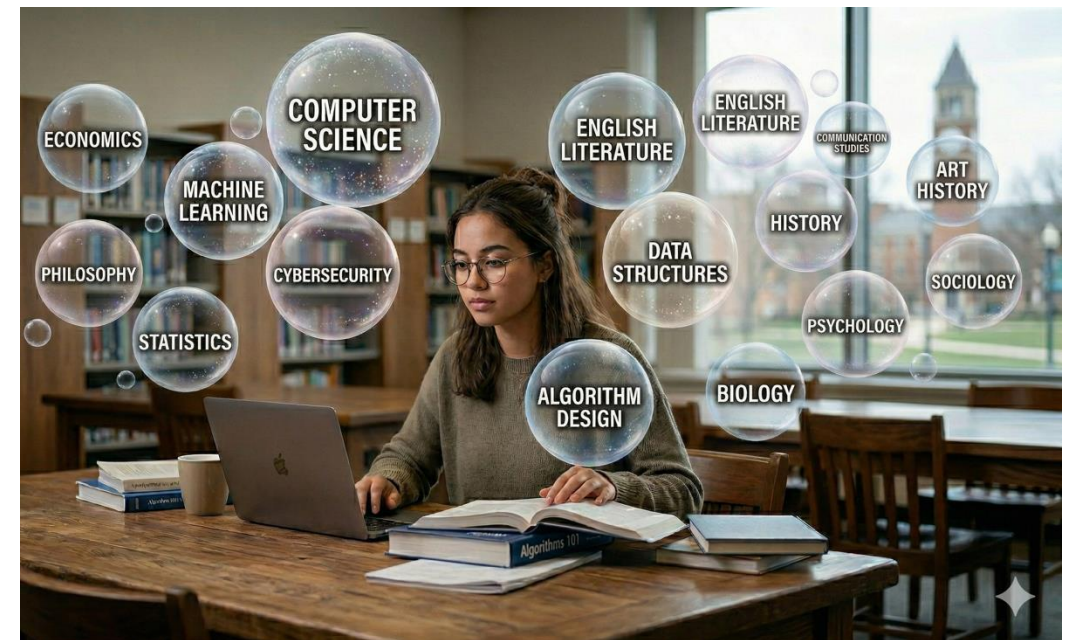
Courses vs. Programs

Both perspectives are important in understanding your institution's economics.

Courses



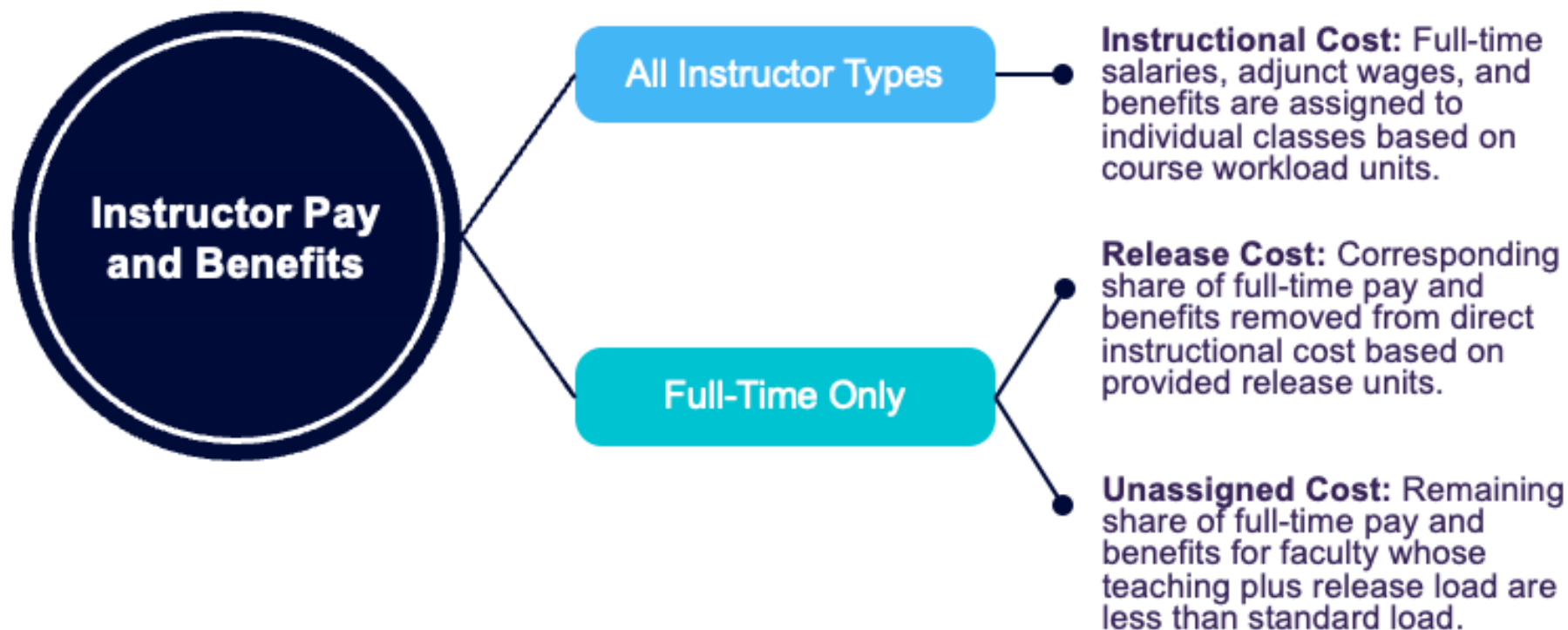
Programs





Instructor Cost Methodology

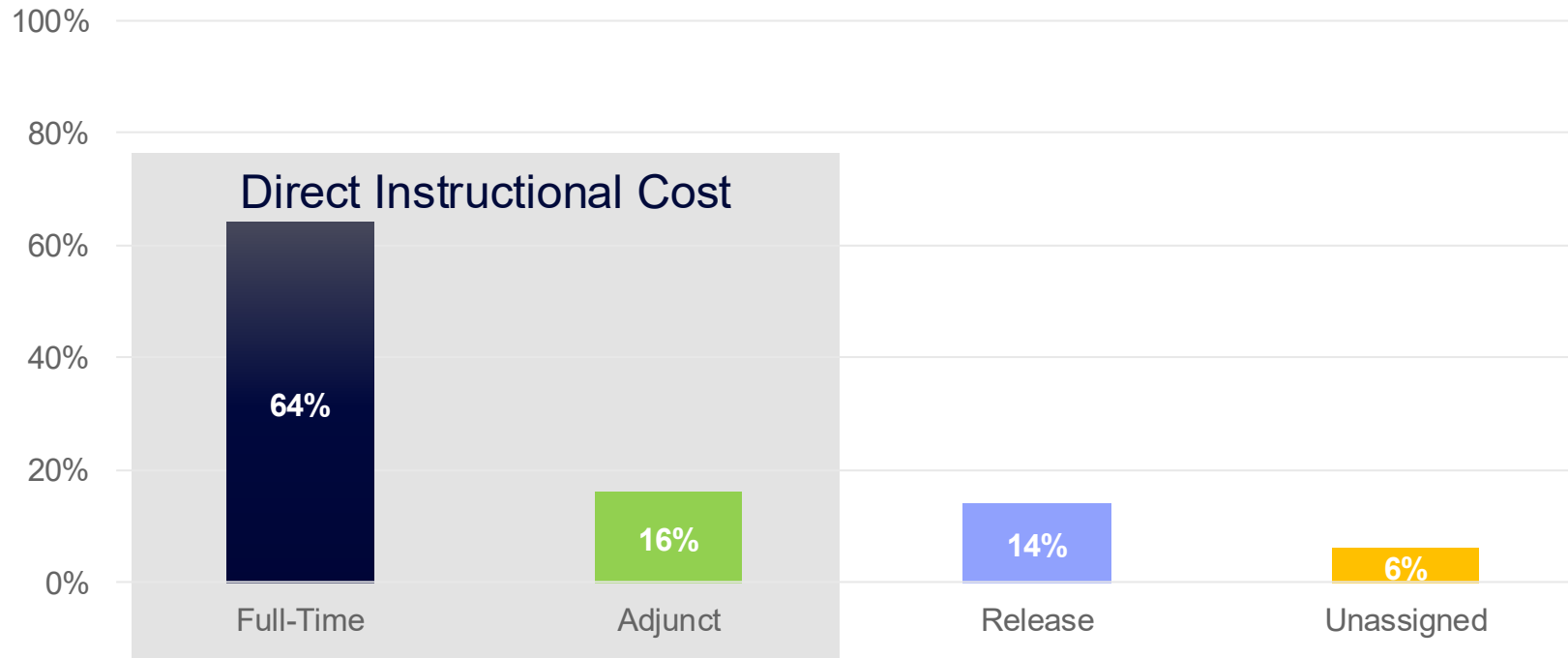
Instructor pay and benefits are assigned to their courses based on workload units.





Using workload expectations to calculate instructional cost also quantifies the amount invested outside the classroom – and excess capacity.

Share of Instructional Pay and Benefits By Type of Cost





Instructional Cost per Section

In addition to a share of instructor pay and benefits, the cost of a section also includes departmental non-personnel costs assigned to sections based on credit hour units.

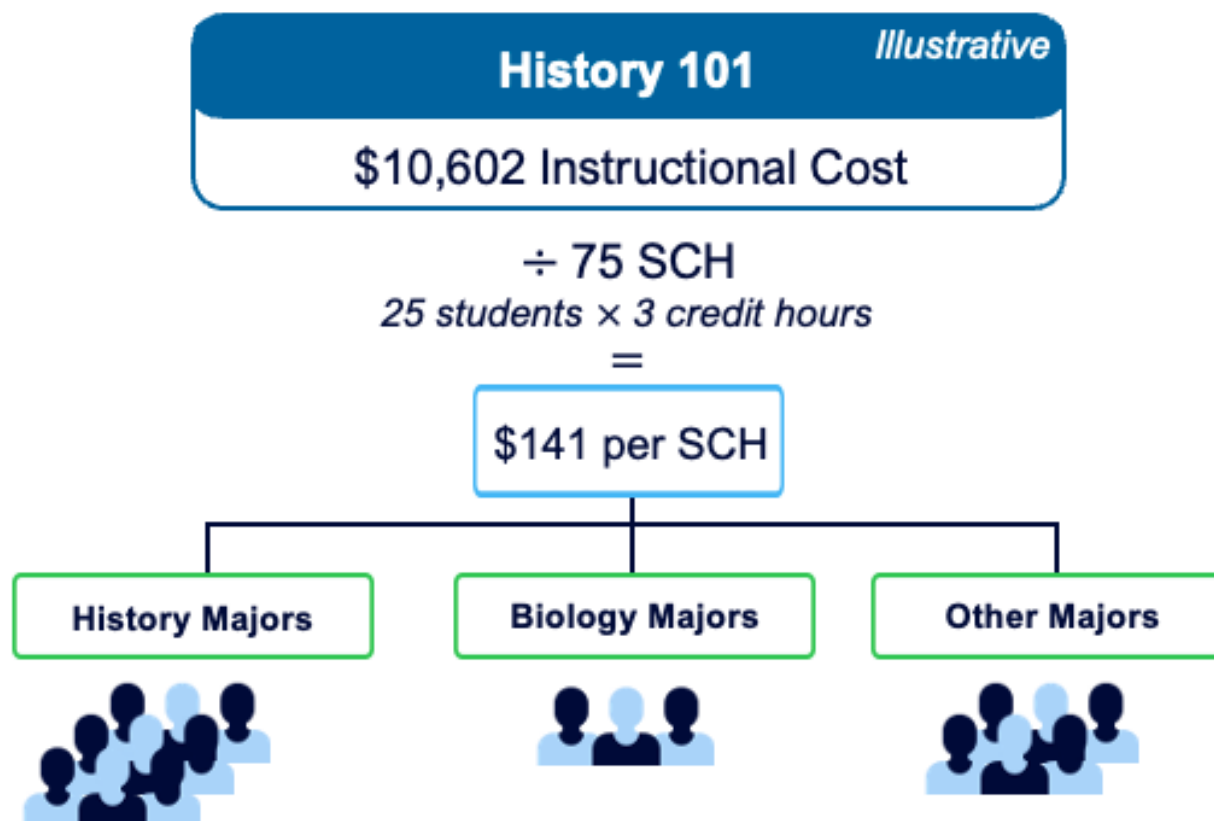
Instructional Cost per Section
Illustrative





Allocating Cost to Students

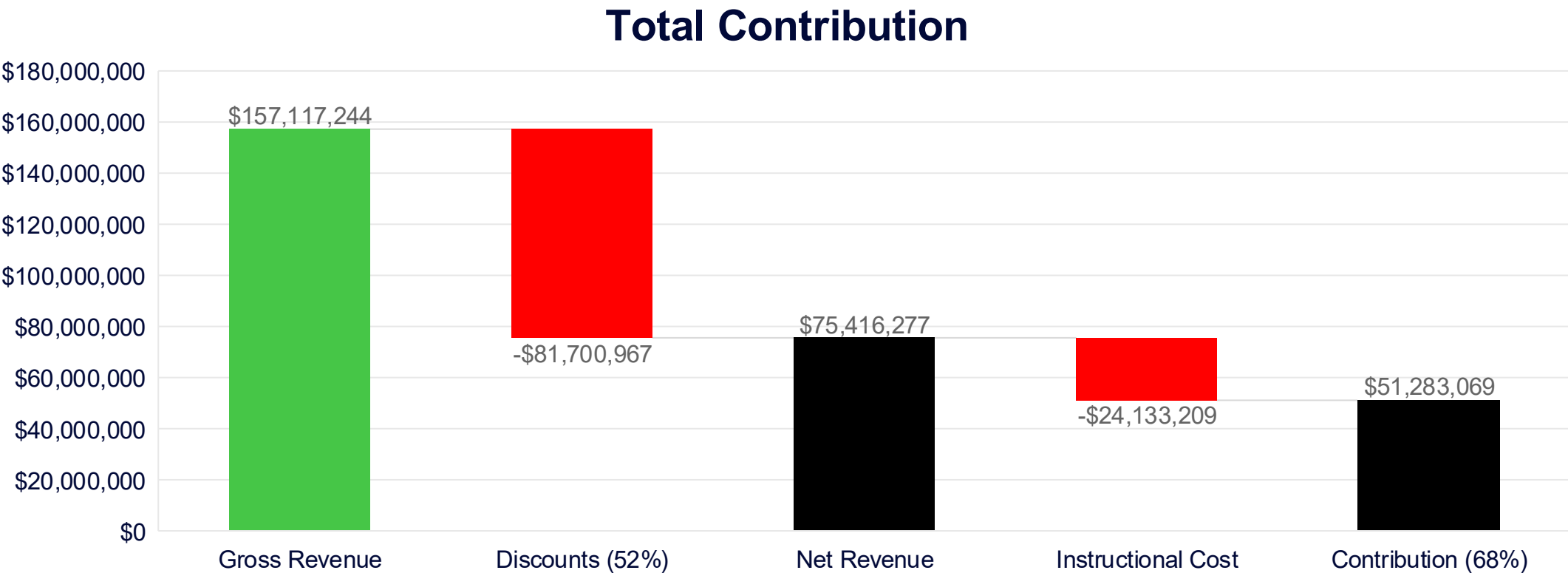
The “fair share” of each section’s cost is allocated to all students in the class by student credit hour.





Contribution Margin

Net revenue less direct instructional cost equals contribution margin.



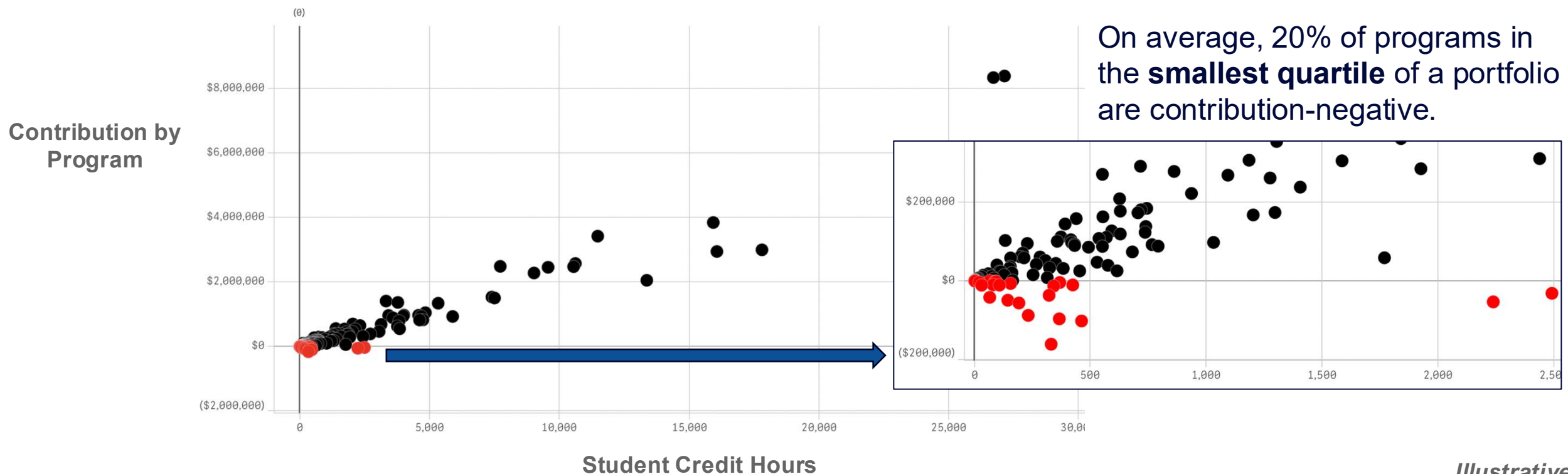
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Why bother?

Programs of all shapes and sizes can be contribution positive.

Program Contribution by Student Credit Hour





Co



Percentiles

Gross Revenue



Net Revenue



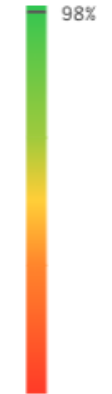
Discounts



Instruct. Cost



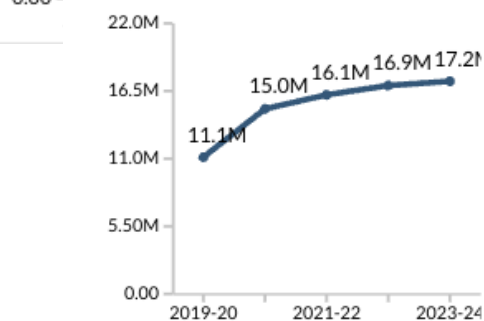
Contribution



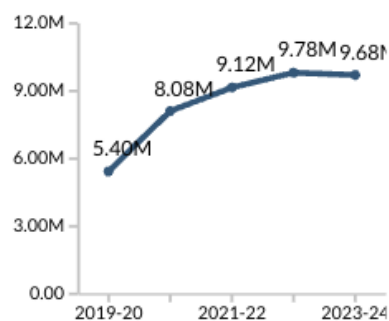
with:

4.21M

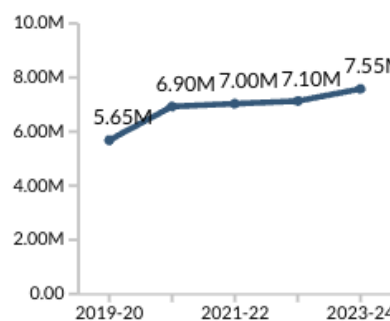
Gross Revenue
(2024 vs 2023)



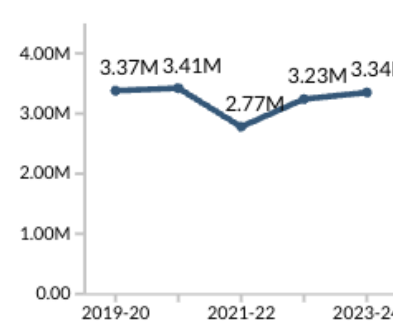
Discount
(2024 vs 2023)



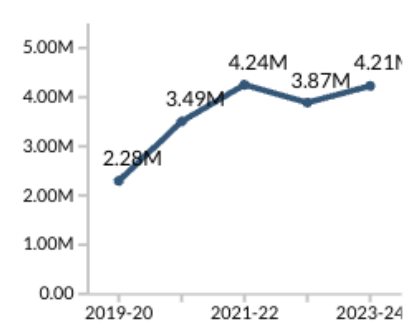
Net Revenue
(2024 vs 2023)



Instructional Cost
(2024 vs 2023)



Contribution
(2024 vs 2023)



2023-24

Illustrative

Agenda

Let's Navigate: Program Economics

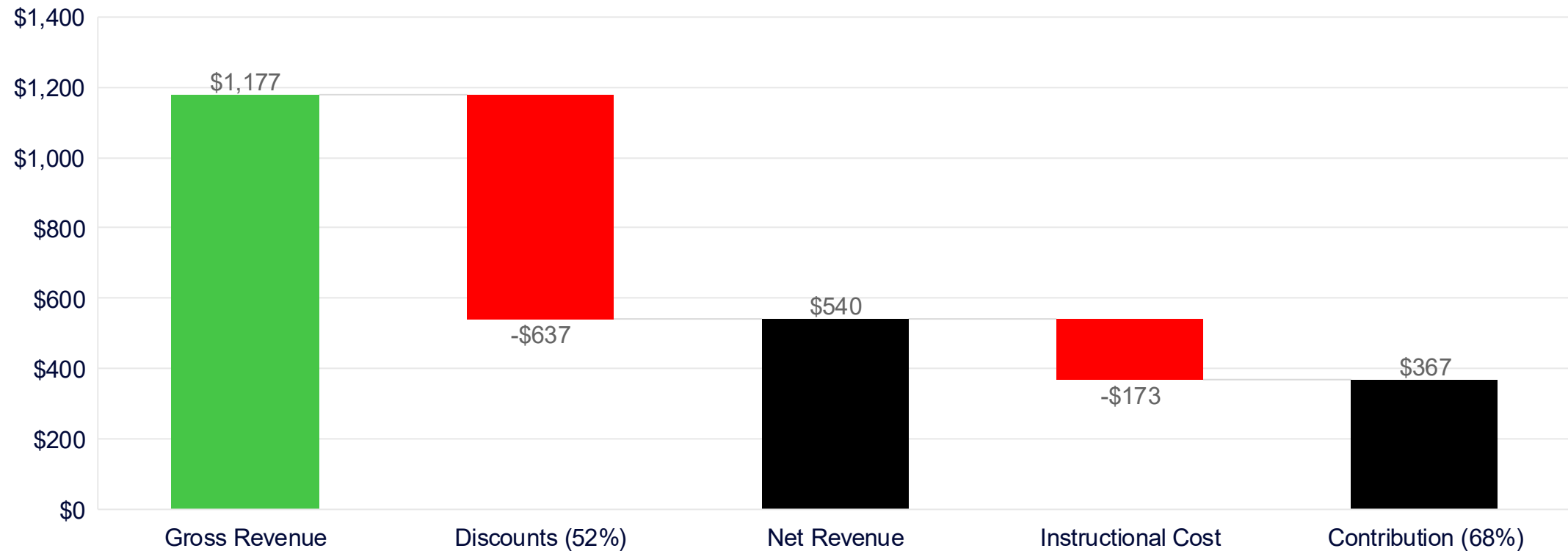
- Methodology
- Benchmarking
- Natural-Language Querying

Efficiency Strategies



Economics at the per-SCH level enables benchmark comparisons across big and small courses, programs, departments, and institutions.

Economics per Student Credit Hour (SCH)

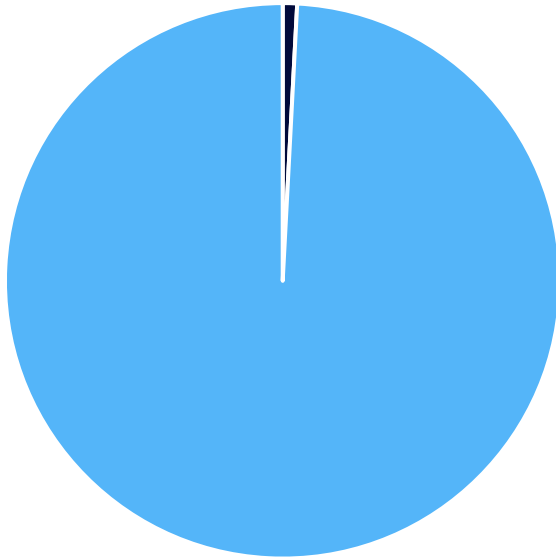


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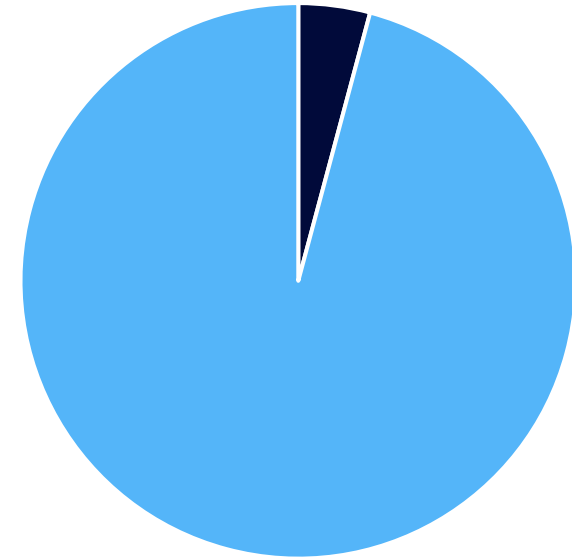
Unit-level comparisons allow for an “apples-to-apples” measure of efficiency.

1/120 of a Bachelor's Degree



**1 Credit
Hour
Unit**

1/24 of an Instructor Workload





The Essential Metric: Cost per SCH

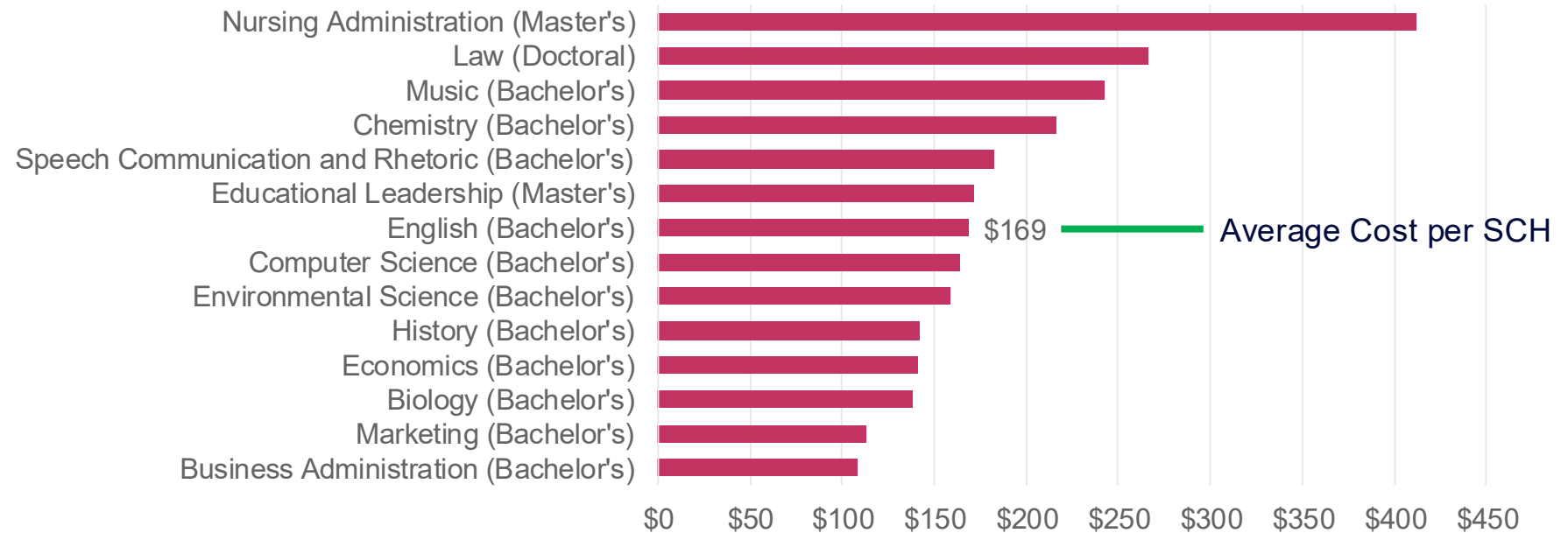
Use your institution's average cost per SCH to understand how it varies by program, level, and subject and where actions may be needed.

Instructional Cost per SCH by Program

Instructional Cost

\$169

per Student Credit Hour



Illustrative



Course Level Trends

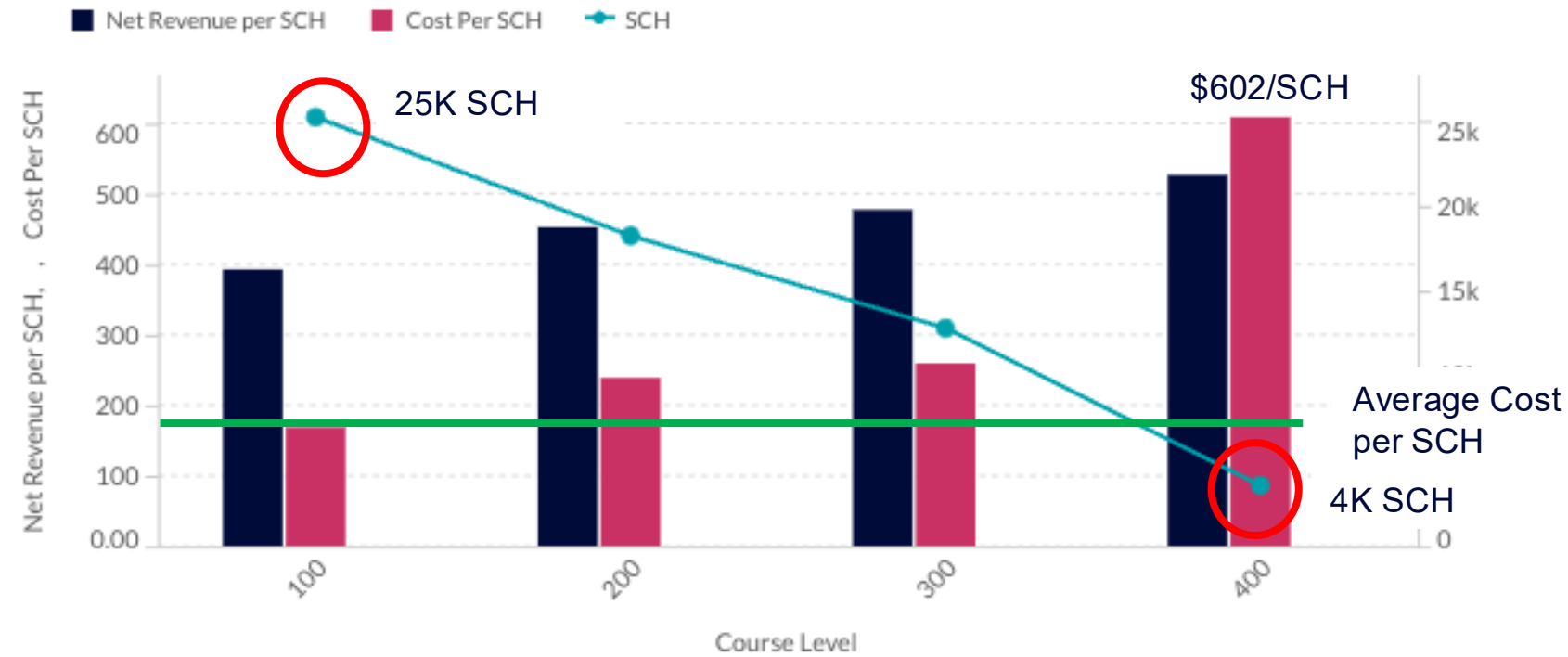
Decreased credit hour production due to student retention issues compounded with experienced faculty instruction can drive up cost per SCH in higher-level courses.

Instructional Cost

\$169

per Student Credit Hour

Net Revenue and Cost per SCH By Course Level





Content Area Trends

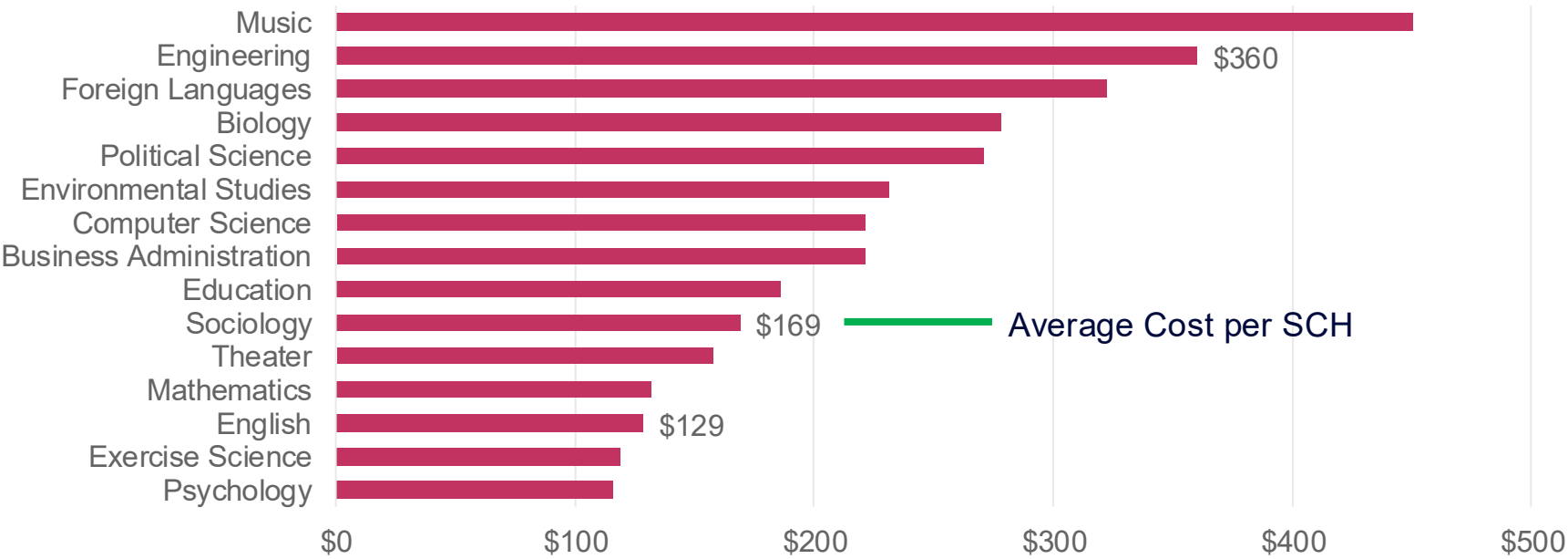
English and Engineering are different – content areas have their own economic profiles.

Instructional Cost per SCH by Subject

Instructional Cost

\$169

per Student Credit Hour



Illustrative



Cost weighing you down?

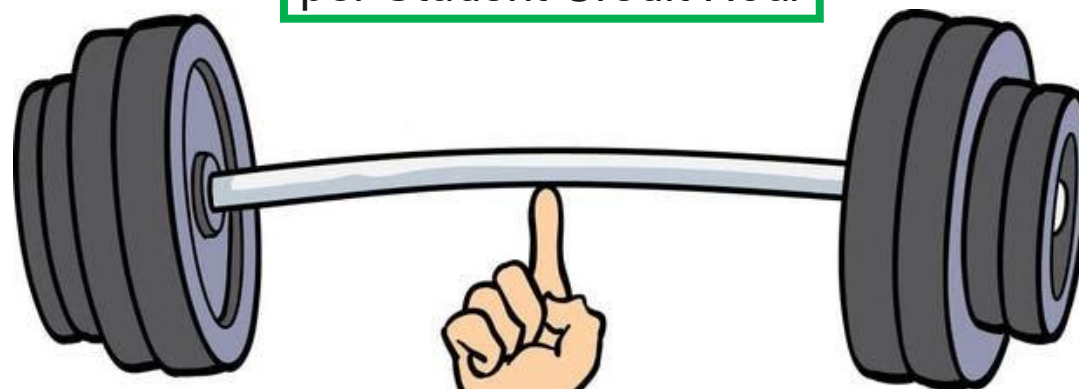




External benchmarks help keep your performance in perspective.



Instructional Cost
\$169
per Student Credit Hour



Benchmark Cost*
\$185
per Student Credit Hour

*Average Cost per SCH



Quantifying the difference in actuals vs. benchmark costs highlights where improvements will have the largest impact on cost.

Avg. Cost/SCH, Client

\$230

Avg. Cost/SCH, Sample

\$192

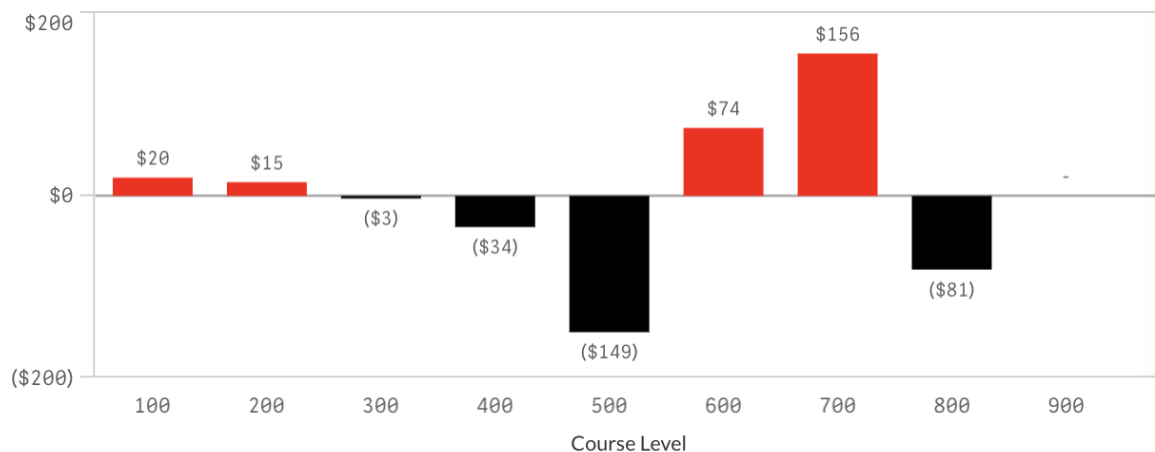
Percent Difference

20%

Total Cost Difference

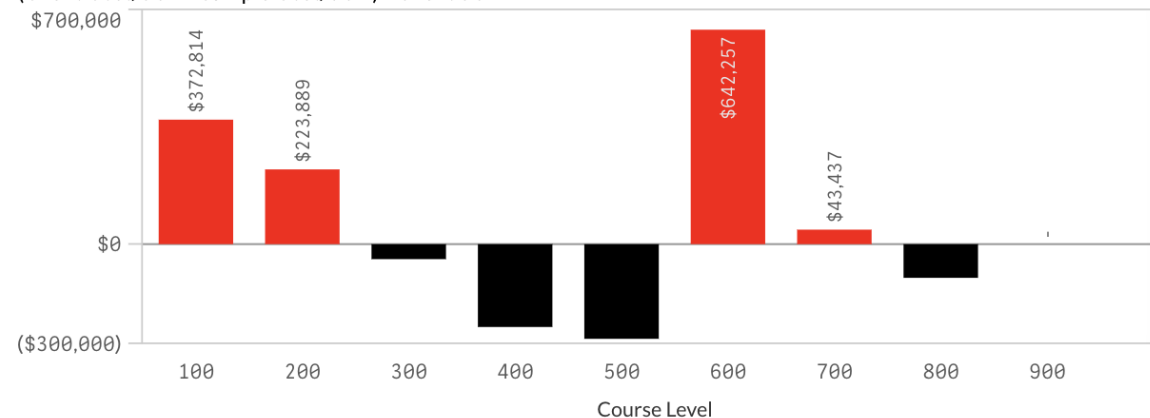
1.34M

Difference In Average Cost/SCH, Client Vs. Sample



Total Cost Impact, Client Vs. Sample

(Client Cost/SCH - Sample Cost/SCH) * Client SCH

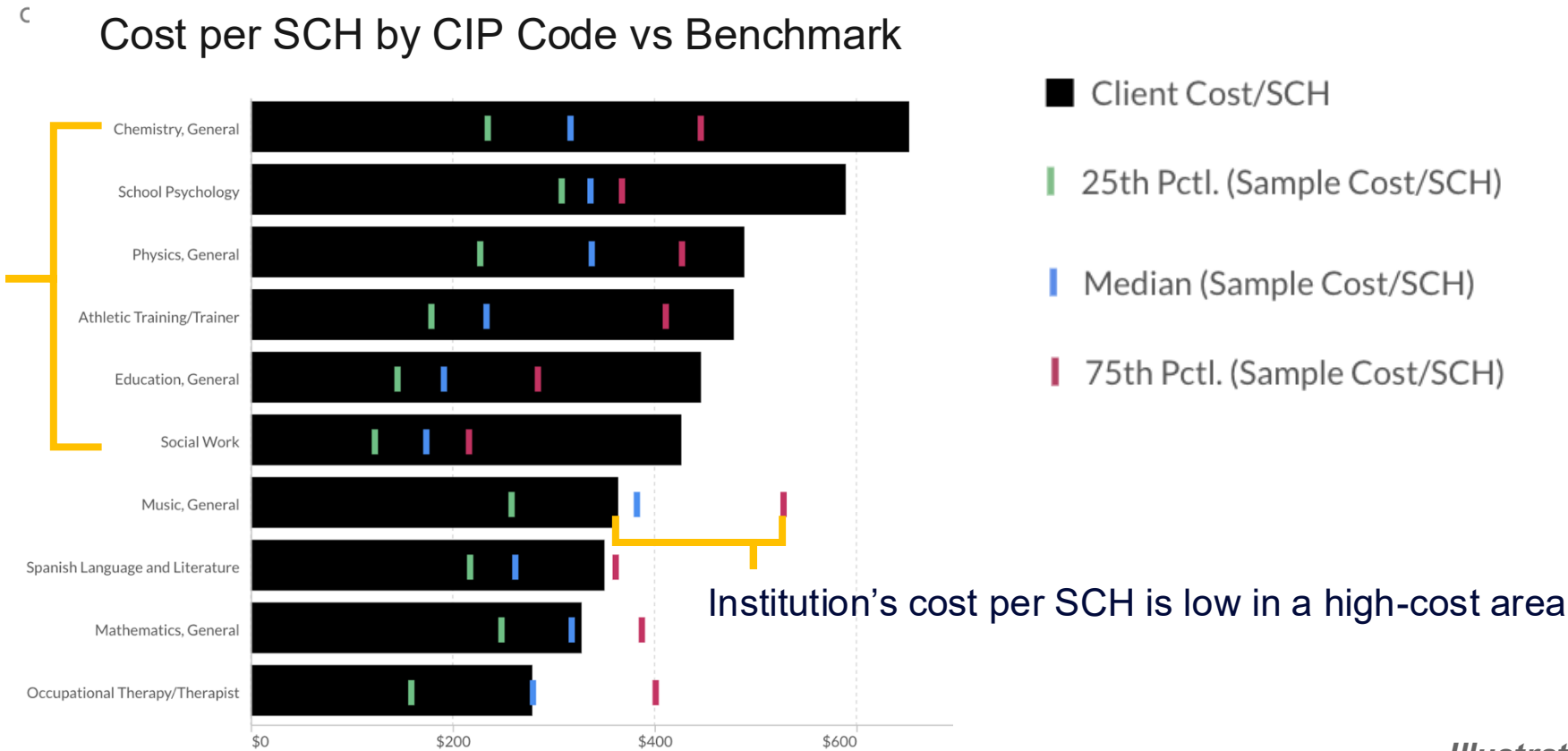


Illustrative



Ranking your programs by cost per SCH against the benchmark can identify both areas of opportunity and noteworthy efficiencies.

Institution's top 5 highest-cost per SCH programs all exceed the benchmark 75th percentile



Illustrative



Details down to the course subject and level help you pinpoint actions to take.

Course Subject	Q	Cost/SCH Client	Median Cost/SCH Sample	Percent Dif. from Sample Median	Dif. in Cost if Client Same as Sample Cost/SCH	FT % of Total Cost Client	FT % of Total Cost Sample	Avg. Students Client	Avg. Students Sample	Avg. SCH Client	Avg. SCH Sample	Count of Courses in Sample
Business Admin/Mgmt		\$214	\$170	26%	-222,144	88%	82%	26	52	88	152	2,539
Religious Studies		\$443	\$199	122%	-\$164,650	91%	84%	6	38	13	115	1,036
Theatre Arts		\$461	\$326	41%	-\$53,453	88%	78%	16	17	40	48	887
Social Sciences		\$159	\$199	-20%	\$44,254	72%	80%	72	39	277	127	25
Chemistry		\$304	\$360	-16%	\$78,613	82%	82%	28	43	58	119	1,317
English Language and Literature		\$201	\$240	-16%	\$118,690	92%	82%	30	42	117	136	1,844

Illustrative

Agenda

Let's Navigate: Program Economics

- Methodology
- Benchmarking
- Natural-Language Querying

Efficiency Strategies



The Economics Agent is a conversational AI tool with a multi-agent architecture.

User

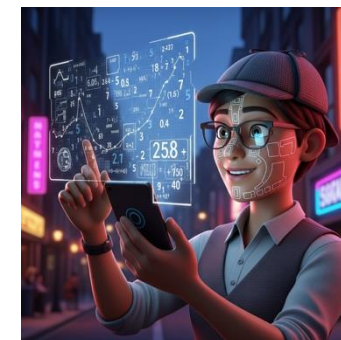


Economics Agent

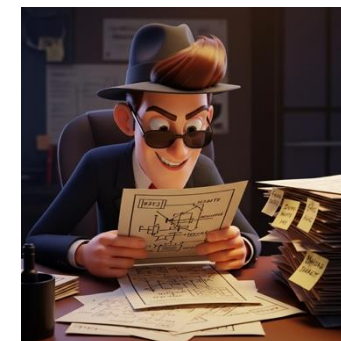


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Numerical Agent



Document Agent



ABC



How We Built the Economics Agent

Designed to answer numerical and contextual questions through grounding in:

- Gray DI's data model
- Gray DI's methodology
 - **And** documentation of each institution's unique context
- Term glossary
- Sample queries



Poll 2

Is your institution's data AI-ready?

- A. Yes! We have access to data through agents.
- B. This is a work-in-progress.
- C. I'm not sure.
- D. No, we have policies in place that prohibit agentic development.



A Simple Interface for Complex Data

Trust the Economics Agent to extract the data needed to answer your question.

- Empower users who may not be comfortable navigating numbers.
- Lessen the burden on a “super user” to know all the answers.
- Get exactly what you asked for when you need it.

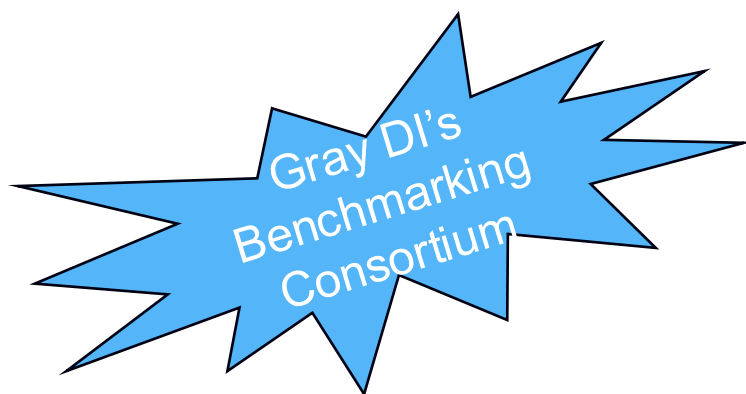


Ask me about your economics data...





What is my cost of instruction, and how does that compare to others?



Economics AI Agent

Hello! 🏡 I am an AI virtual assistant designed to help you understand your institution's Program Economics. I can provide numerical and contextual answers.

Here are some example questions:

How many student credit hours were taken in English last semester?

What share of English course enrollment are Math majors?

What does contribution mean?

List the top 5 programs in descending order based on contribution per SCH.

What share of sections were taught by full-time faculty?

What does it cost me to teach undergraduate english?

For the most recent period 2024-25, the total instructional cost to teach undergraduate courses in the **English & World Languages** department was **\$919,560**.

Please note that AI-generated content should be verified independently

New messages

FAQ

What other questions do you have?



Agenda

Let's Navigate: Program Economics

- Methodology
- Benchmarking
- Natural-Language Querying

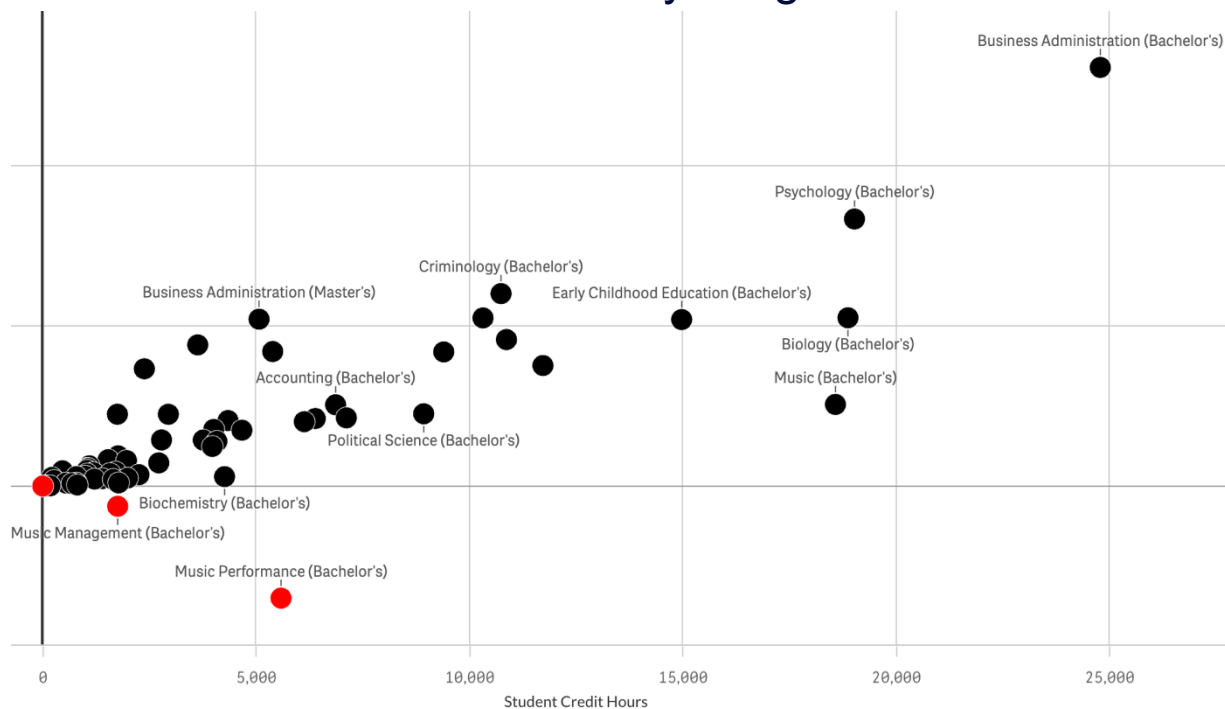
Efficiency Strategies



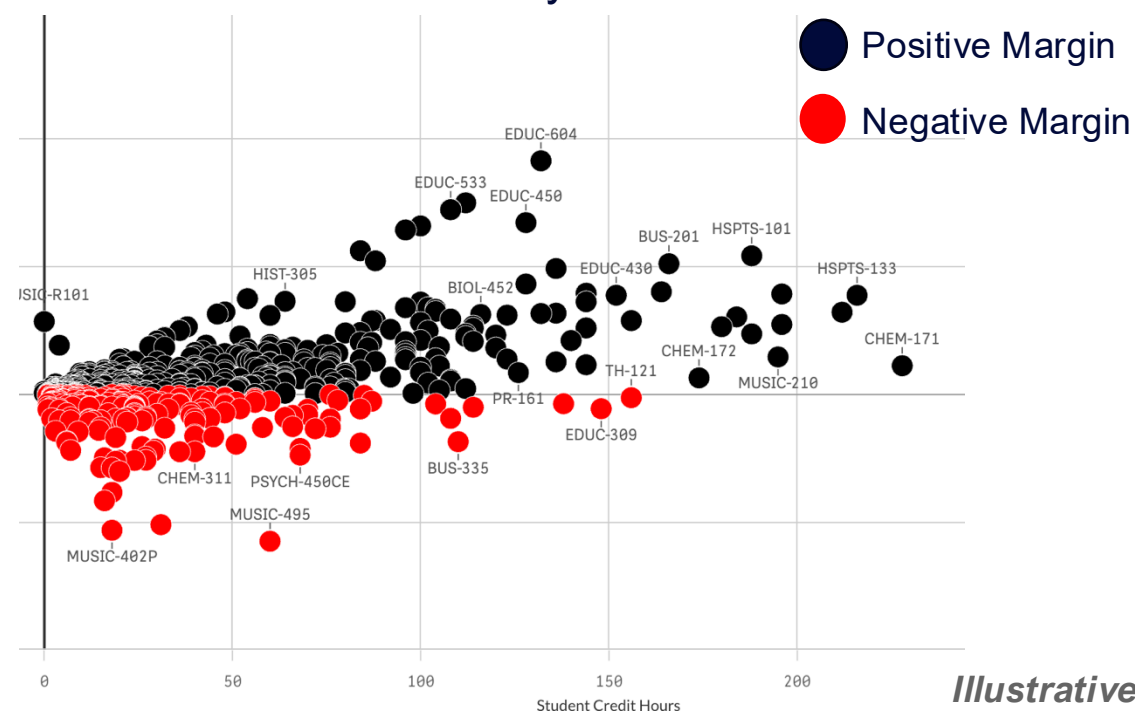
Programs tend to be contribution-positive – courses cost money.

Reduced course offerings don't make the news, but program cuts do.

Contribution by Program



Contribution by Course

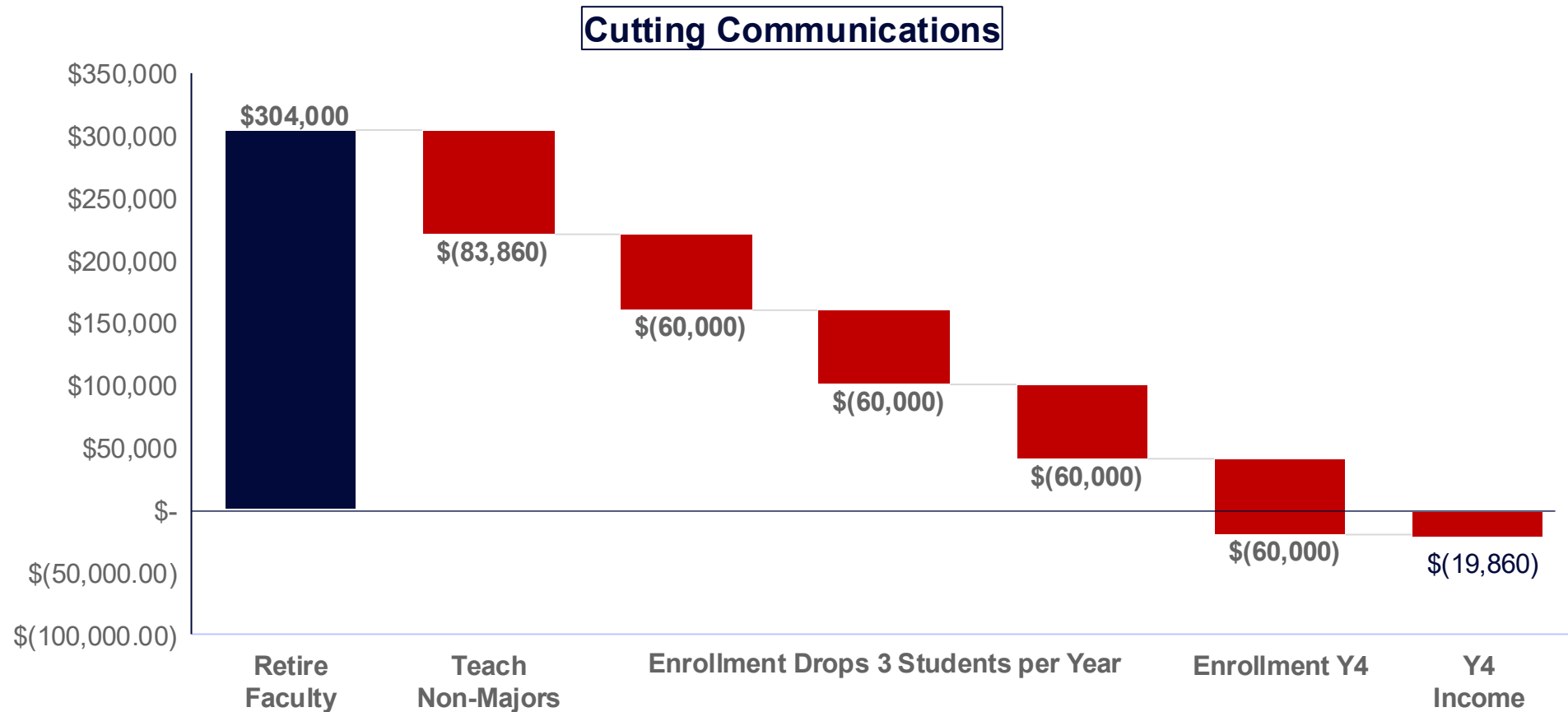


Illustrative



What happens when you cut a program?

Example: Cut program with six new enrolls, 22 total enrolls, 3 faculty, and \$104,000 margin.



Illustrative



The goal of curricular efficiency analysis is to identify ways to reduce the total teaching workload so that you can:

- Minimize the extent to which budget cuts translate into higher workloads or inferior education
- Free up resources to enable growth in existing and new programs
- Reduce the need to hire more faculty
- Make college more affordable



Checklist for Class Size Opportunities

Here are some of the critical levers and helpful questions for improving curricular efficiency:

- Course frequency and modality
- Course proliferation
 - Gen Eds
 - Higher-level courses and electives
 - Courses with duplicative content (e.g., “Introductory Statistics” in different departments)
 - Courses with duplicative purposes
- Class size caps and targets, and the number of sections
- Independent studies, other special projects, study abroad, etc.
- Clinicals, internships, and student teaching
- Classes where the assigned faculty workload units are higher than the assigned student credit hour value
- Cross-modality, cross-location, or cross-institution opportunities



Recurring Decisions that Drive the Class Size Mix

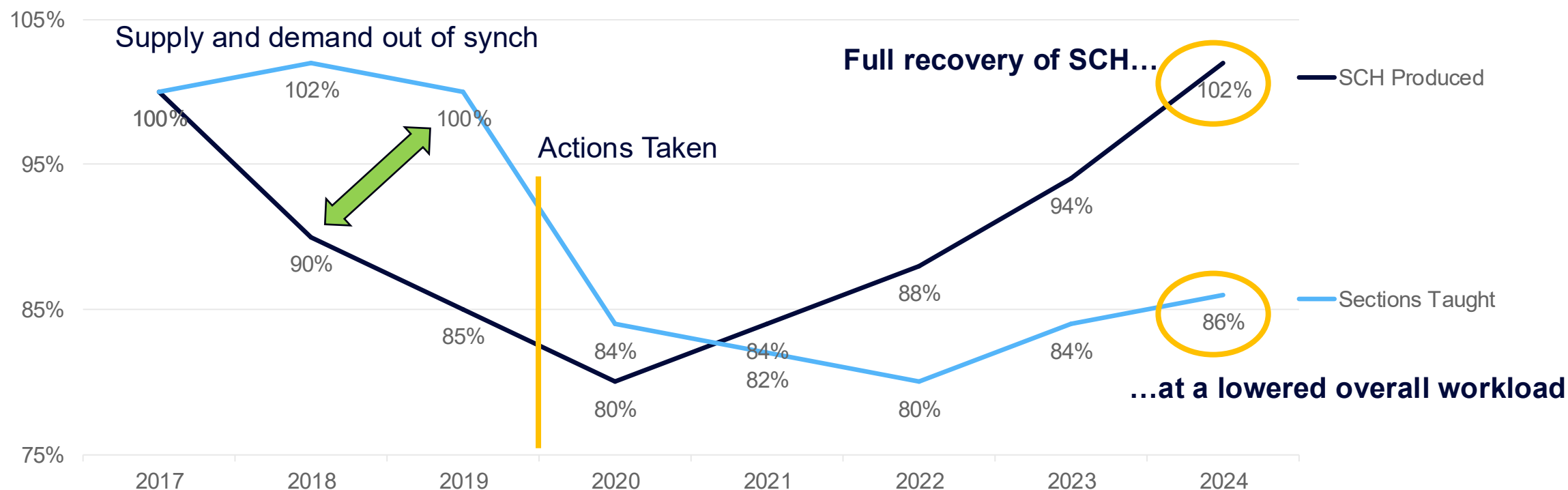
How can you manage your class size mix?

- **Scheduling:** Which courses and how many sections should we offer each term – by location and modality?
- **Assessing hiring needs:** Which retiring staff should be replaced by new faculty with similar skills, and which staffing resources should be redeployed?
- **Program and curriculum planning:** Where can we increase class sizes by adjusting course sequencing requirements? Where are there opportunities to consolidate courses with other departments where there is substantial content overlap?
- **New course development:** If we are going to develop and offer a new course, will it attract additional students?
- **Reviewing requests for independent studies and other customized offerings:** Why do we need to offer this as an independent study? Does it reflect a gap in our scheduling or advising practices? Is the number of independent studies offered consistent with desired academic outcomes and faculty workloads?



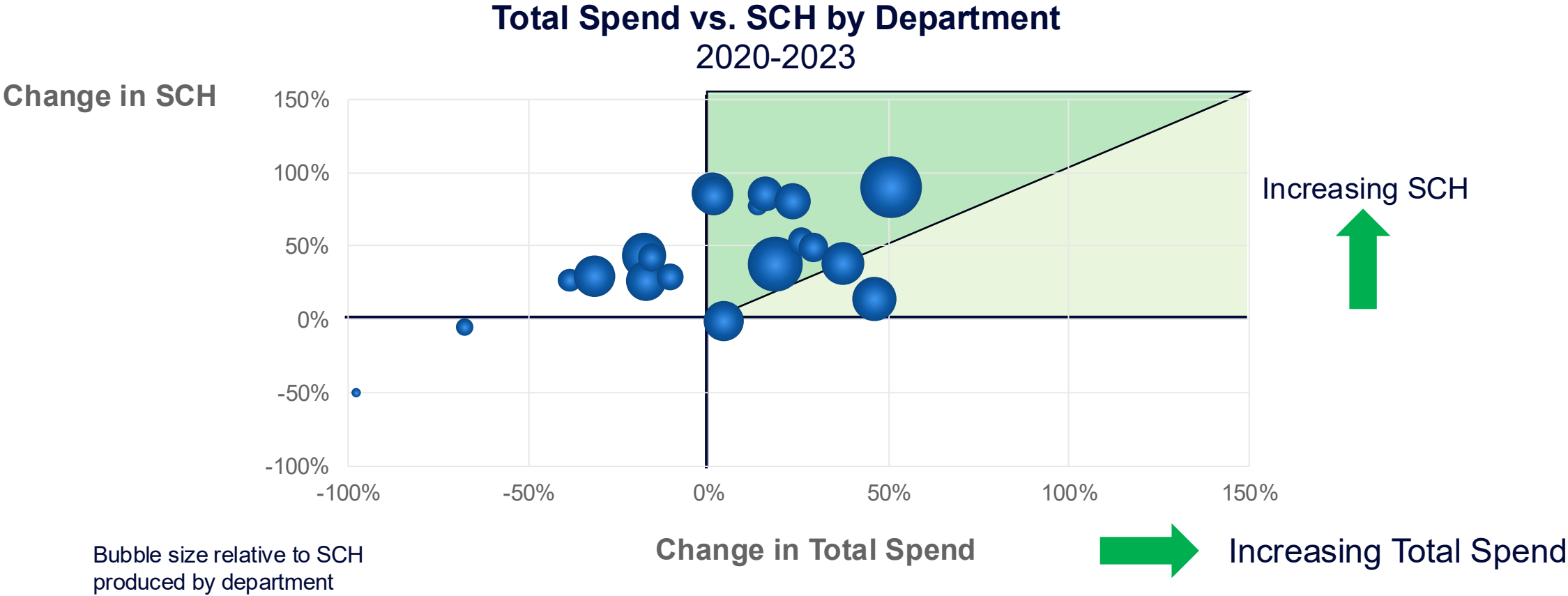
If cuts are necessary, data-informed decisions can prevent harm to the long-term viability of an institution.

Change in Sections Taught and SCH Produced from Base
Gray DI's Exemplar Institution





The exemplar institution was able to pivot and invest in growth.

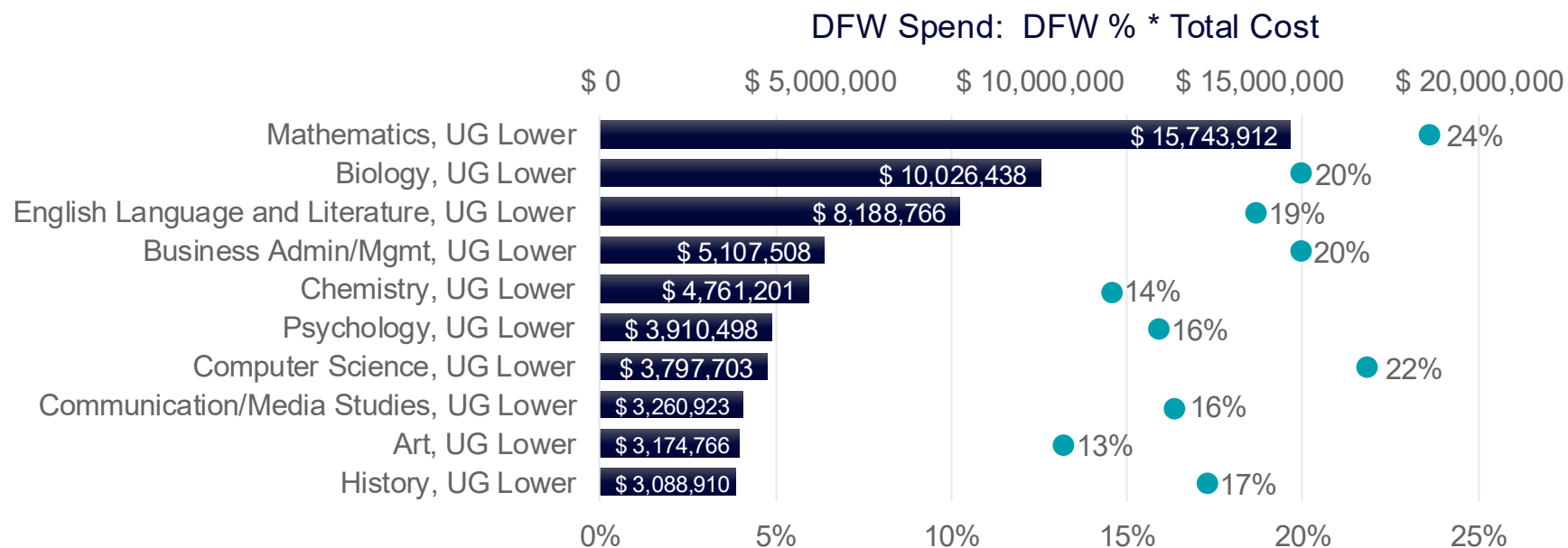




Improve course completion, improve efficiency.

Student success is an important ingredient in efficient economics.

Top 10 Course Subjects with Largest DFW Spend



UG Lower: Undergraduate lower-level courses, 0-299

Encourage interdisciplinary collaboration.

Data democratization can help departments improve and innovate together.

- Is there program-specific content that needs to be integrated into the math curriculum?
- How can the Business school incorporate more math practice into the curriculum?

Program Name	Course Subject	Students	DFW Rate
Business Administration (Bachelor's)	Math	312	31%
Biology (Bachelor's)	Math	226	22%
Computer Science (Bachelor's)	Math	124	17%
Marketing (Bachelor's)	Math	85	29%
Kinesiology and Exercise Science (Bachelor's)	Math	81	23%

Illustrative



A program economics system supports a healthy institution:

- It creates a consistent method of evaluating a program's financial health.
- Key stakeholders have access to the same information.
- Data are kept current to best inform decisions.

A healthy institution is able to:

- Offer the courses and programs that will fund long-term viability
- Pivot and adjust to fast-changing student demand
- Sustain mission-critical activities and programs



Navigating the rapids is difficult.

Your mission makes it worth it!





Next up in our Master Class Series:

All classes are from 2-3 PM ET.

Date	Topic
Tues., March 10	Higher Education in the Roaring 20s
Tues, March 17	Market Demand for Academic Programs
Tues, March 24	Program Economics and Outcomes
Tues, March 31	Predict Program Size and Remix
Tues, April 7	Innovations in Academic Program Evaluation

Demand Trends Monthly Webinar

March 26th
2 PM ET

