GRAY™
DECISION INTELLIGENCE

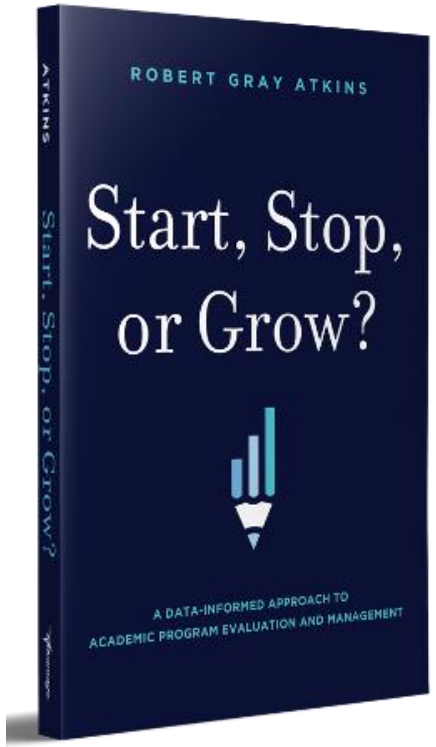
Foundations of Academic Program Evaluation

March 4, 2025

Today's Speaker

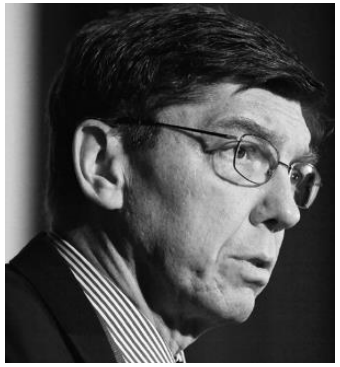
Robert Gray Atkins

Founder and CEO
Gray Decision Intelligence



We have all heard the pessimistic prognostications about higher ed.

Pessimism is not wisdom.



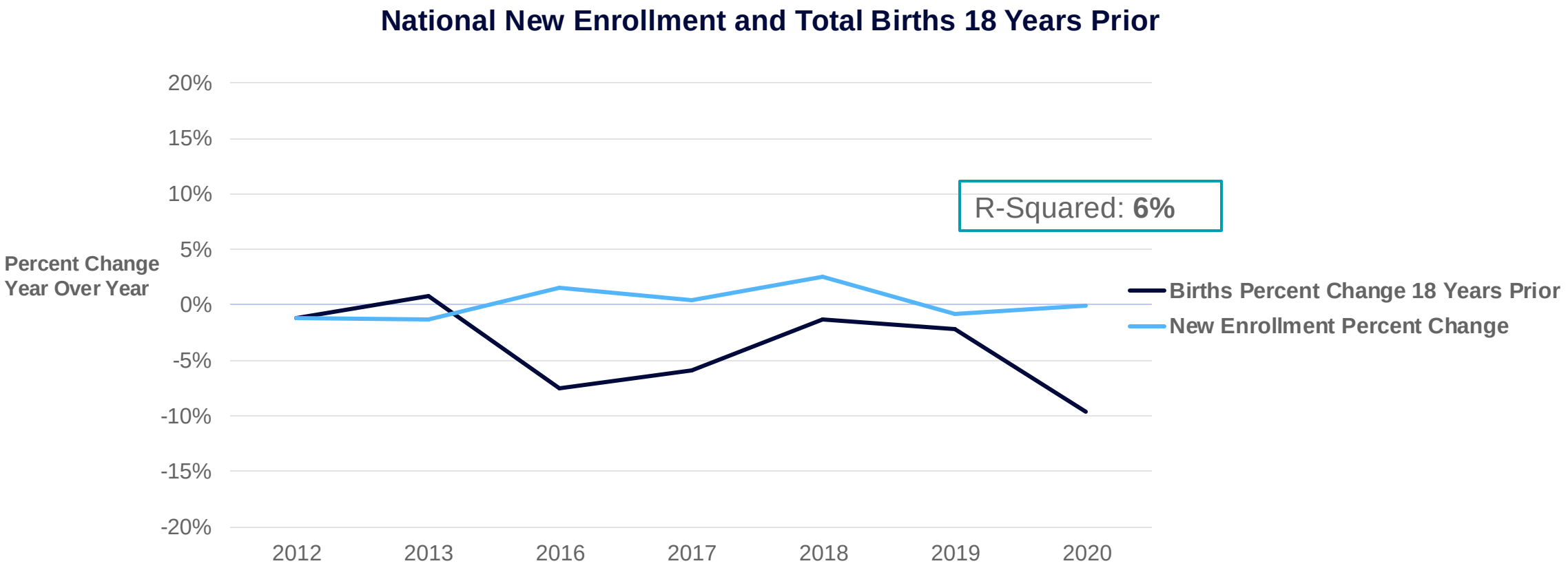
“In 15 years from now, half of US universities may be in bankruptcy.”

– Clayton Christensen, 2013

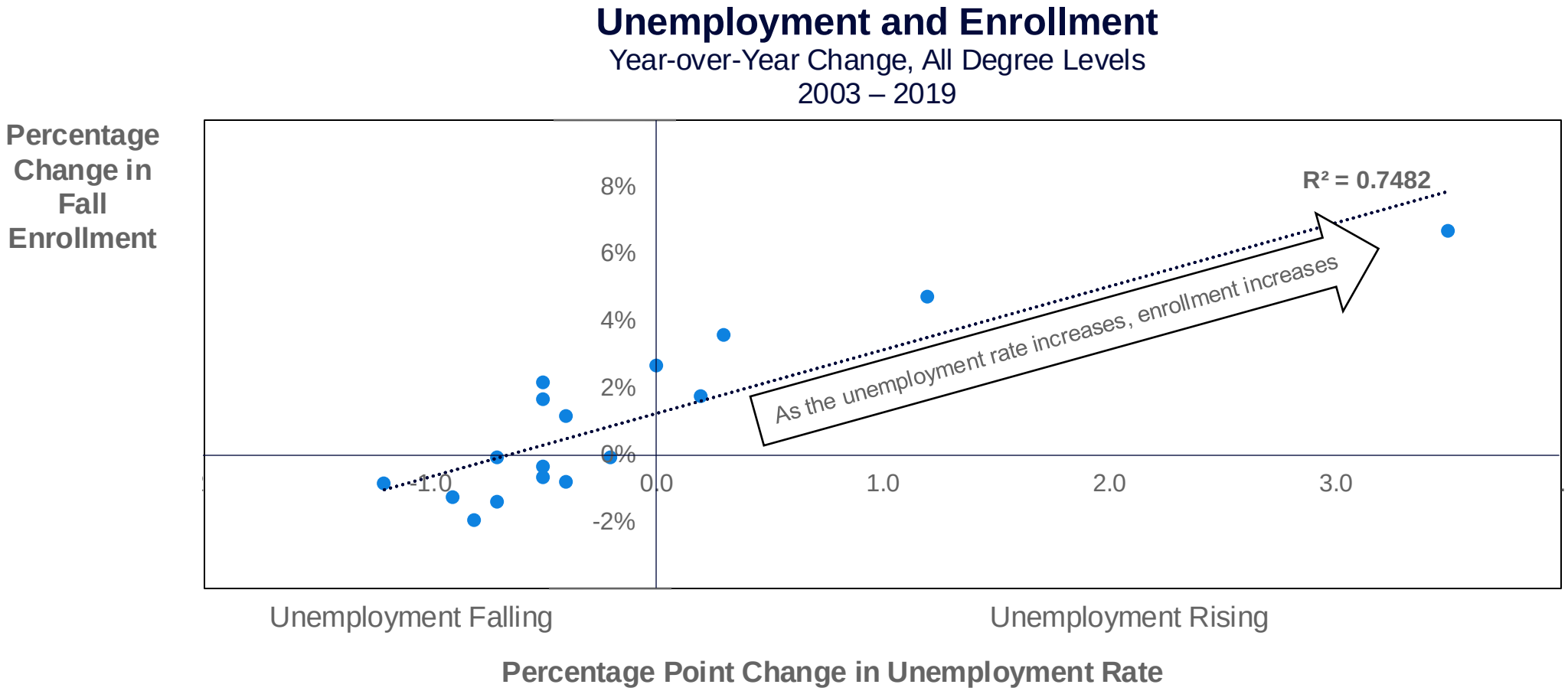
"In the year 1999, seventh month, from the sky will come a great king of terror.”

– Nostradamus

The Demographic "Myth": There is a weak correlation between enrollment and demographics.



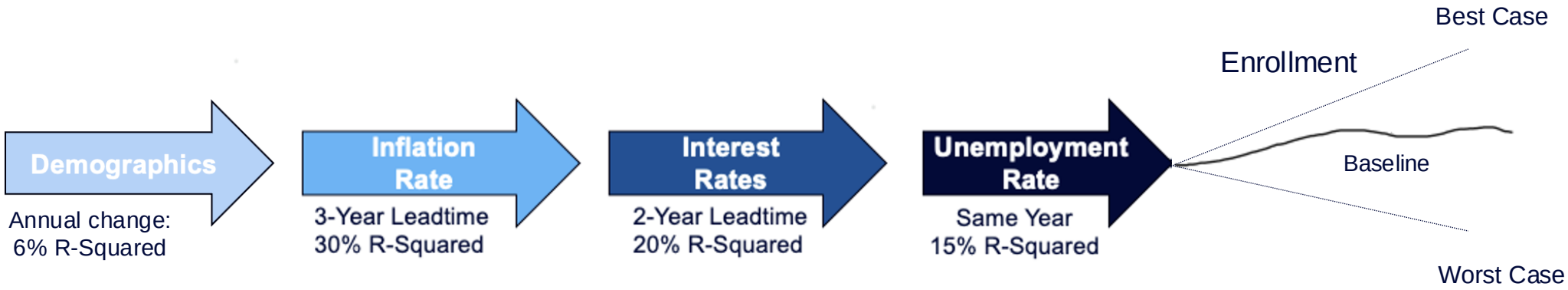
Unemployment heavily influences college enrollment.



Sources: US Bureau of Labor Statistics; https://www.bls.gov/cps/cpsa2022.xlsx; National Center for Education Statistics IPEDS Data Trends, Fall Enrollment

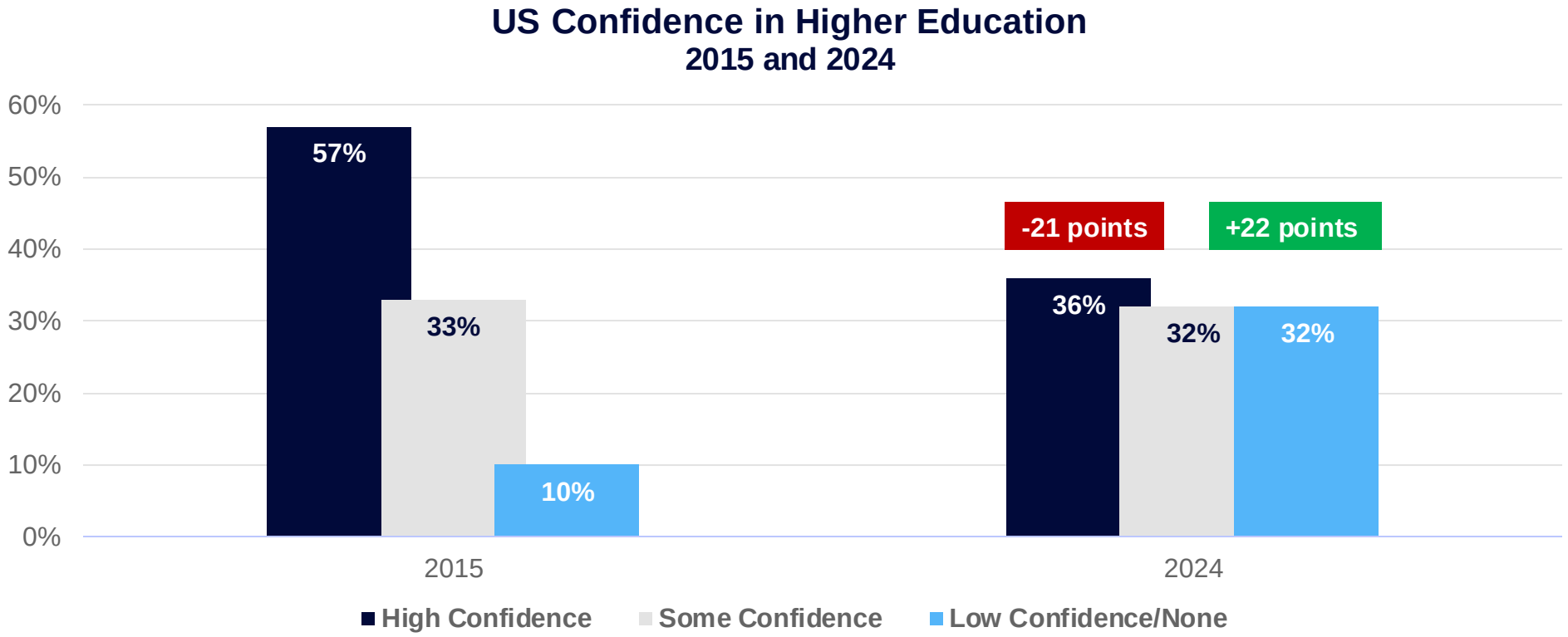
Inflation, interest rates, and unemployment also influence enrollment.

Changes in the economy foreshadow changes in enrollment.



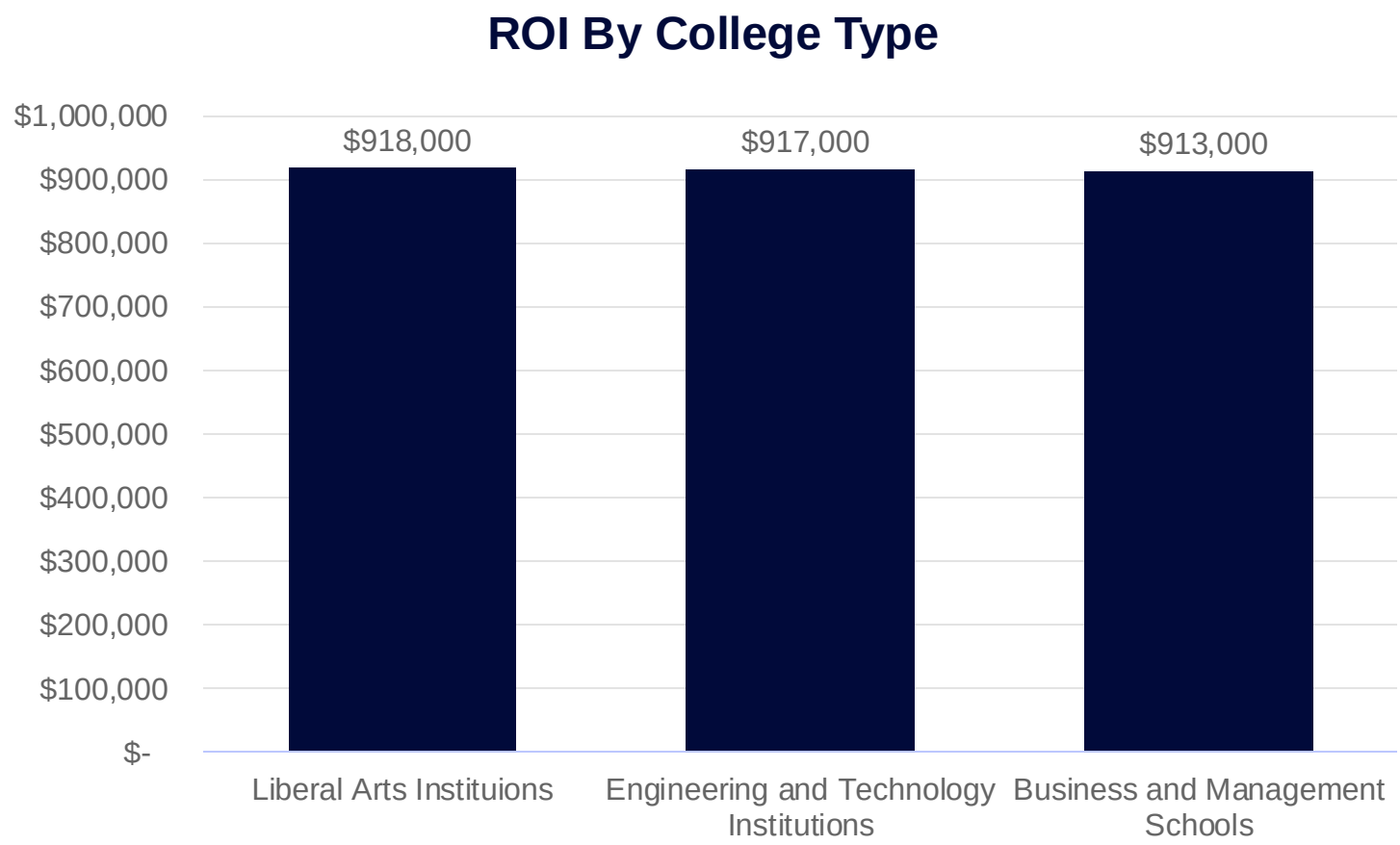
Confidence in US Higher Education continues to drop.

From 2015 – July 2024, high confidence dropped 21 points; low-to-none rose 22 points.



Sources: Gallup, "U.S. Confidence in Higher Education Now Closely Divided," July 2024

College is worth it.



Source: Georgetown University Center on Education and the Workforce

Predicting prosperity doesn't get much press.

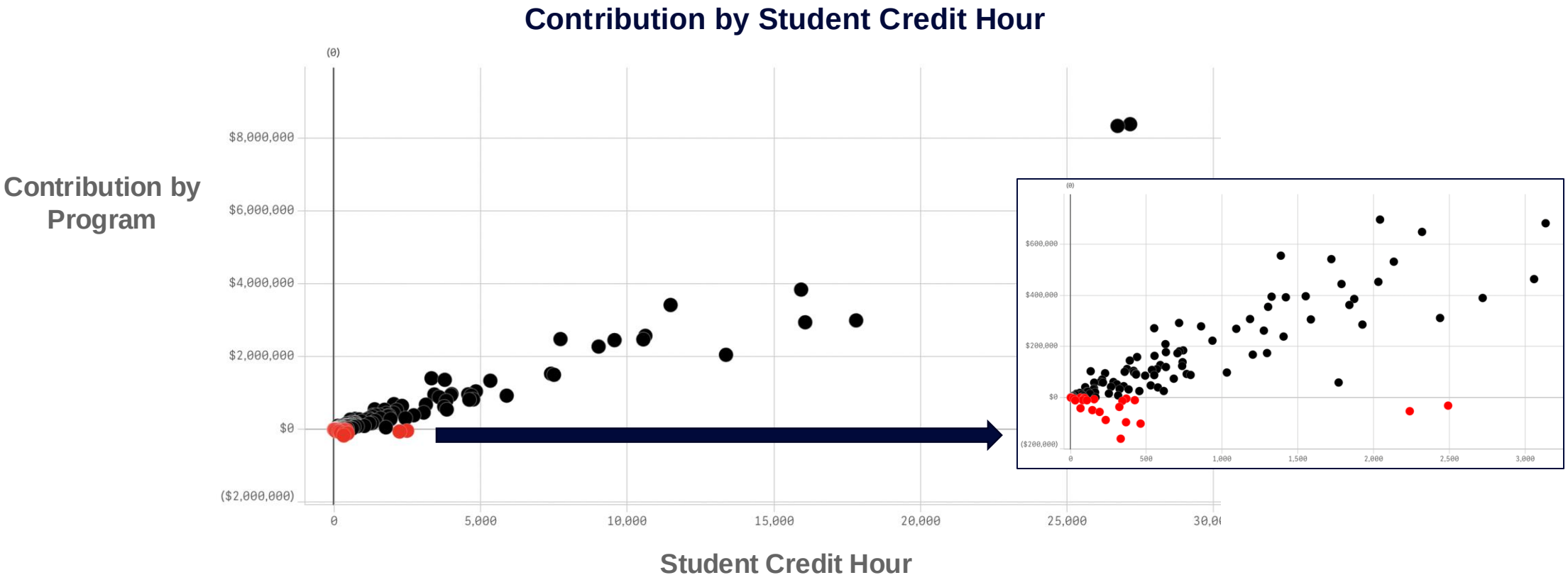
Pessimism can drive mistakes and inhibit the actions required to grow.

Predicting prosperity doesn't get much press.

Pessimism can drive mistakes and inhibit the actions required to grow.

Avoid Dumb Cuts: Program Economics

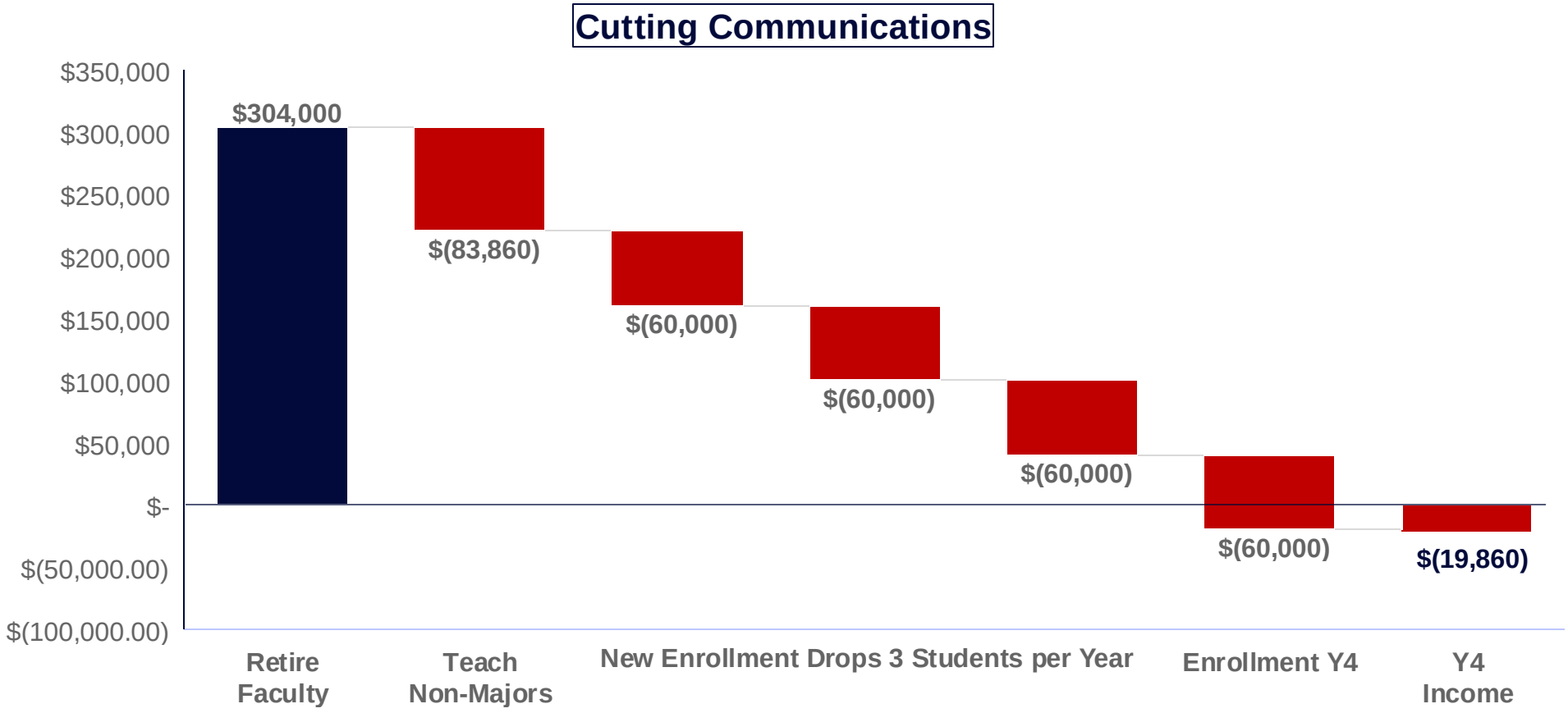
Most programs make money; even small ones.



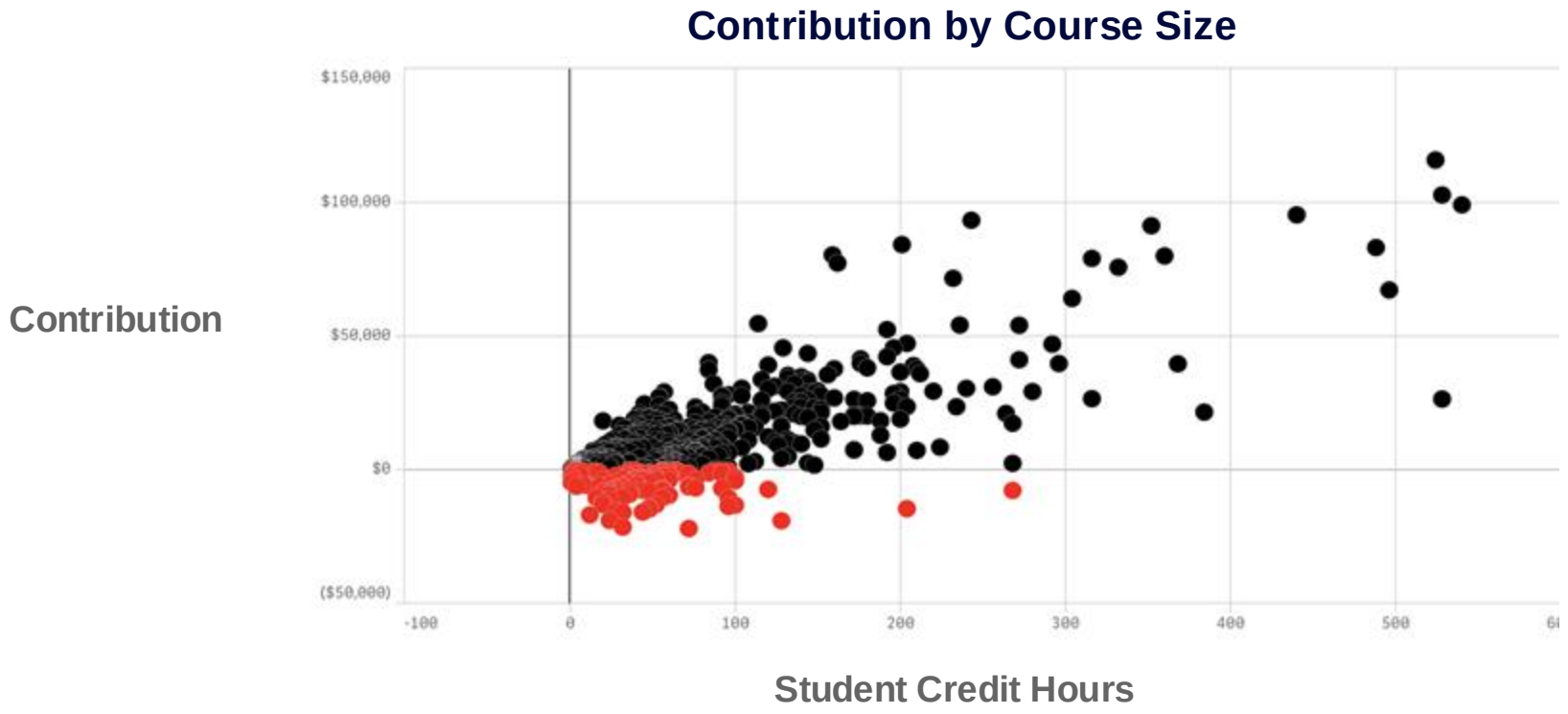
Source: Gray DI's PES Economics and Outcomes

Cutting the wrong small programs may hurt long-term financial performance.

Example: Cut program with six new enrolls, 22 total enrolls, 2.9 faculty, and $104,000 margin.

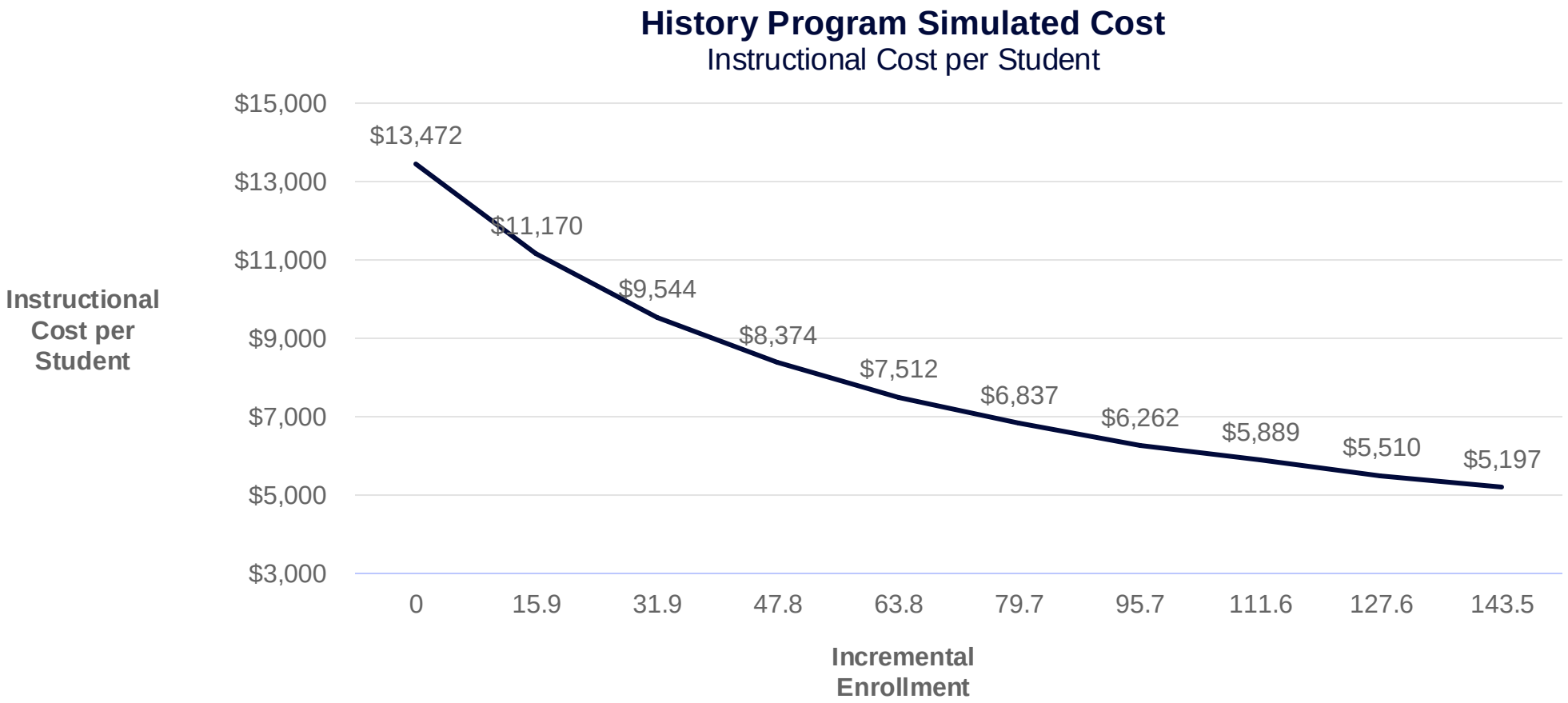


Courses Cost Money

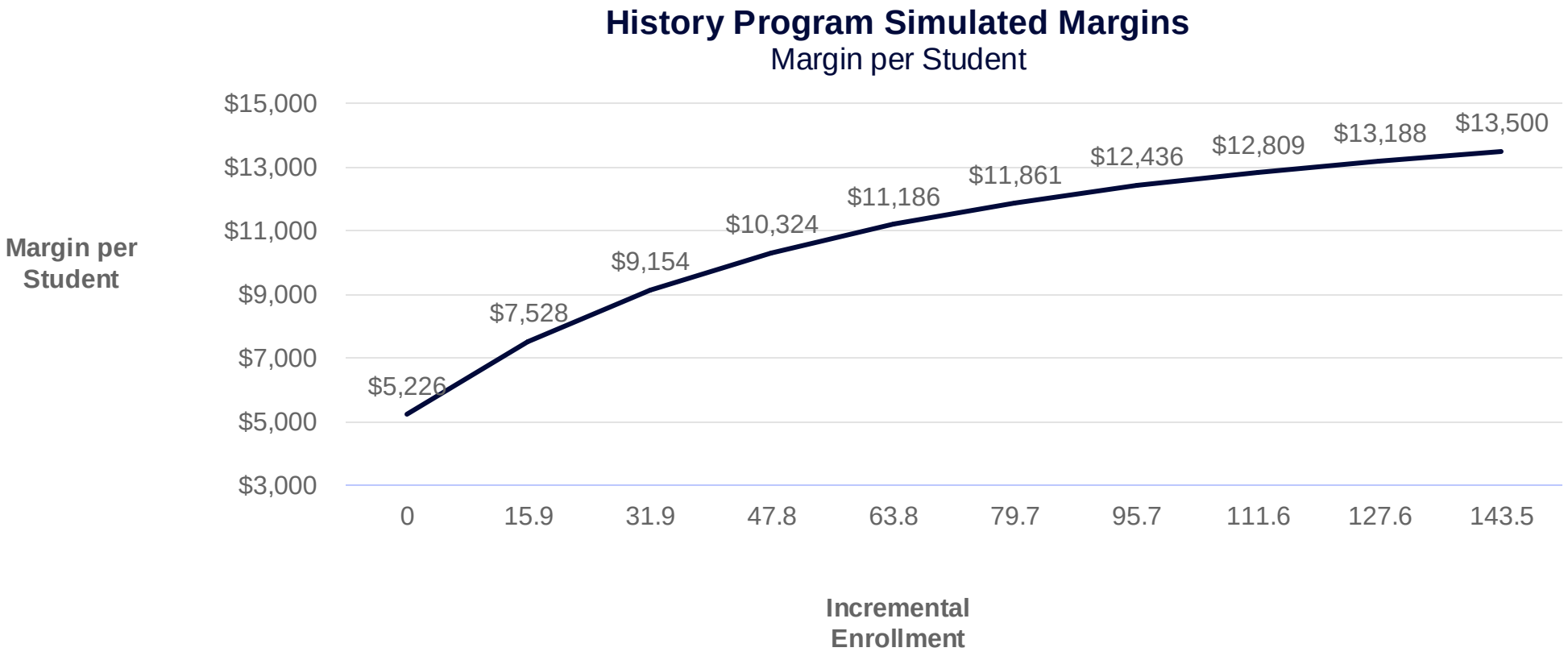


Source: Gray DI's PES Economics and Outcomes

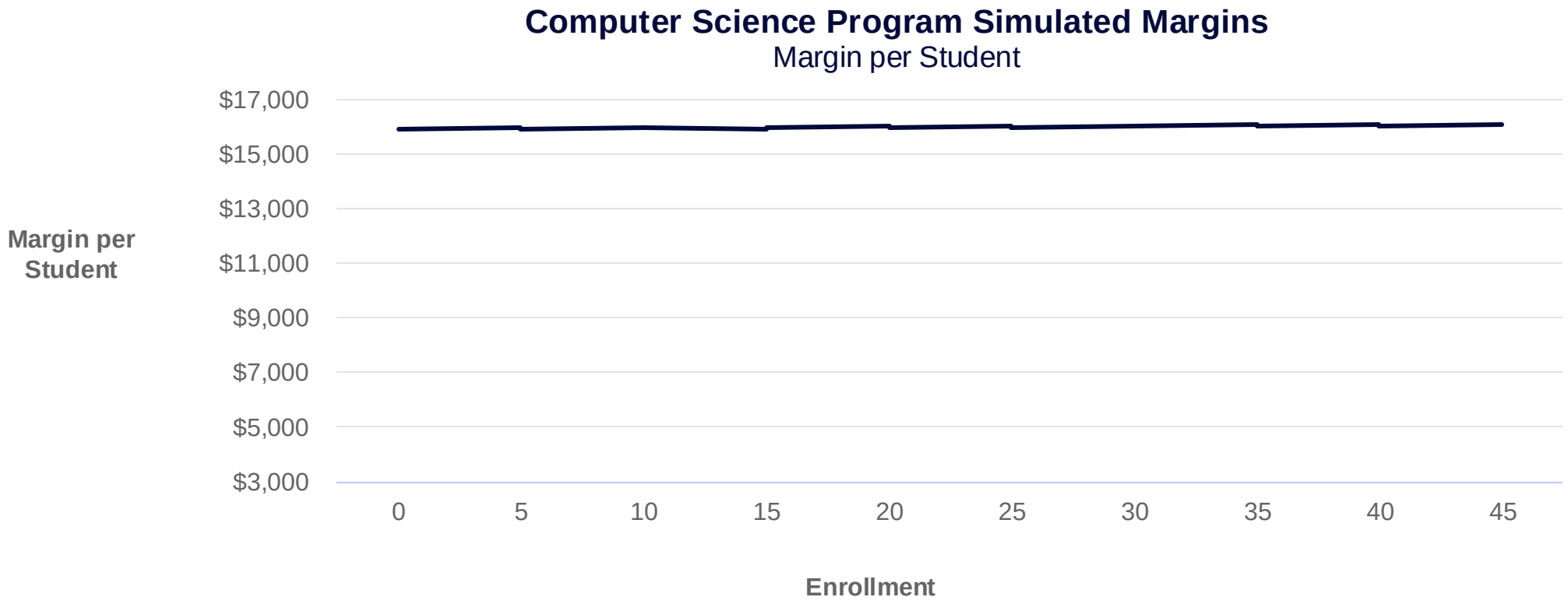
Incremental Cost: History Program (60 student program)



Incremental Margins: History Program



Incremental Margins: Computer Science Program (300-student Program)

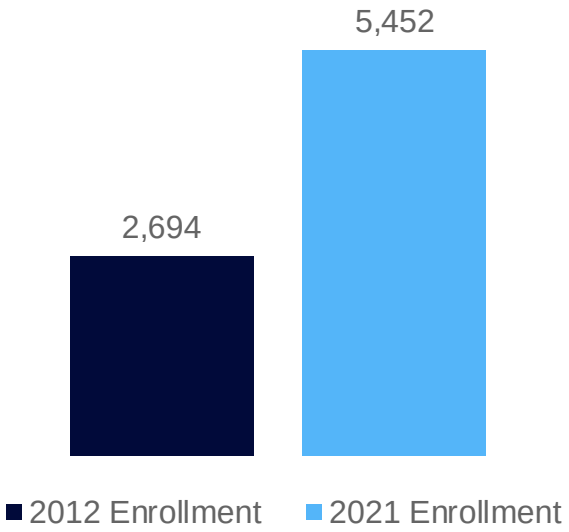



There are rays of hope…

Any college can grow – even small rural colleges.

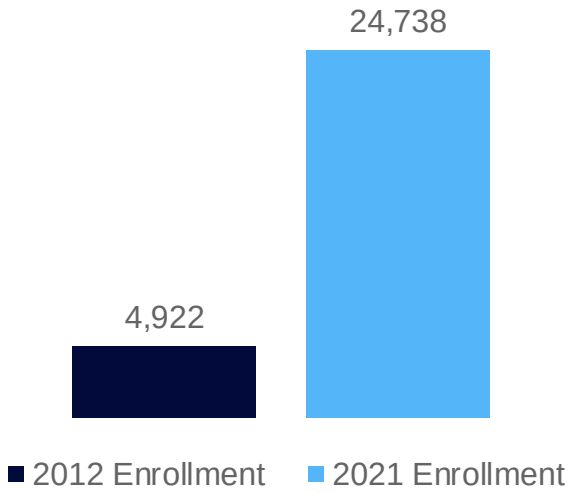
Small, Semi-Rural College

102% Growth*



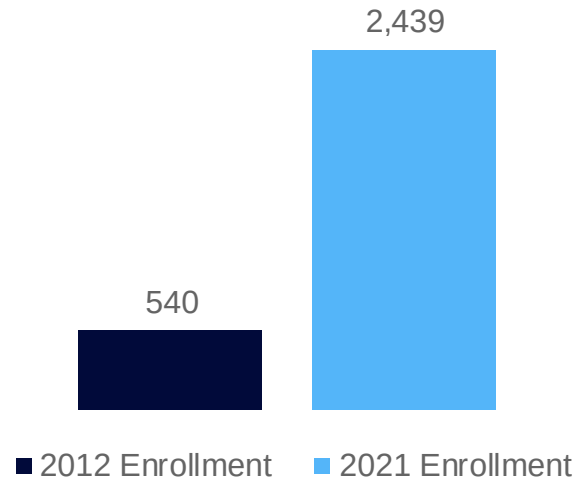
Small Private College in Appalachia

403% Growth*



Tiny Private College in Maine

352% Growth*



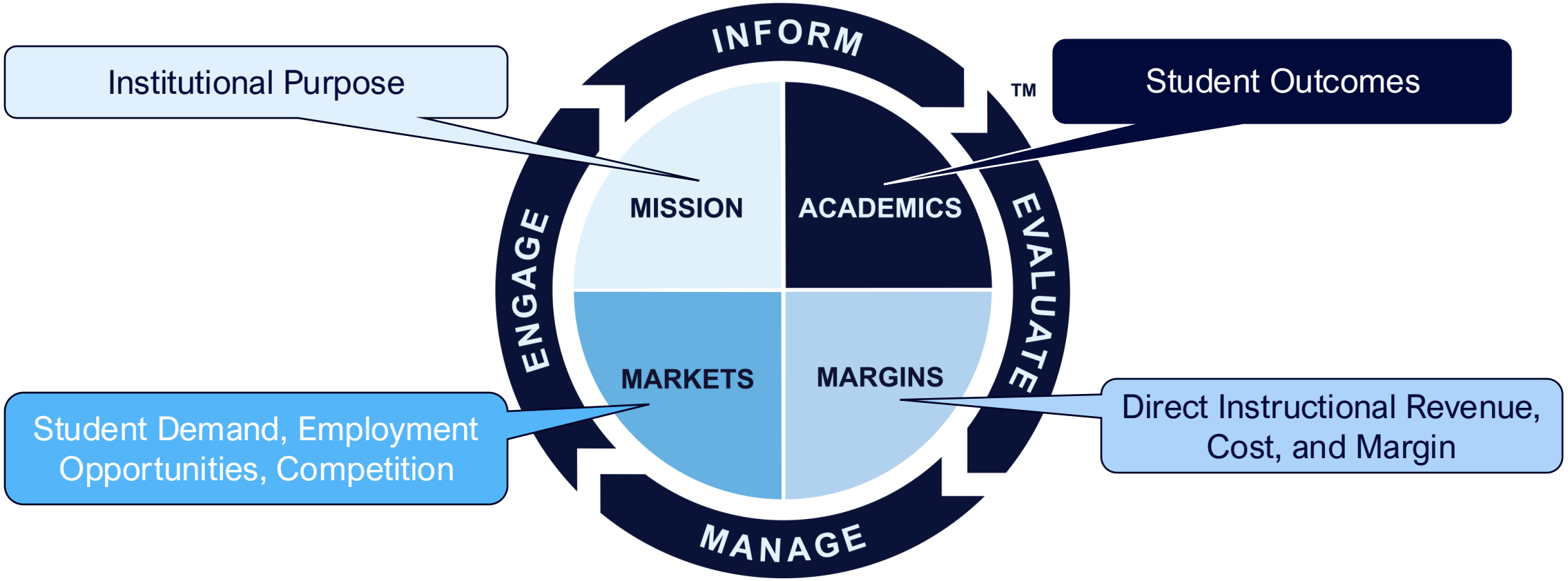
Source: Undergraduate enrollment - National Center for Education Statistics, IPEDS (Data Trends) for annual enrollment. *Fall Enrollment 2012-2021

*

Take Charge of Your Destiny

- Growth is essential to health.
  - Generates incremental revenue
  - Lowers cost per student
  - Reduces upward pressure on tuition
- Growth is achievable.
  - There are many proven strategies.
  - Some will be right for you.
- **The right new programs can drive growth.**

Use a complete Program Evaluation System.



Pick a program and drill down to specific metrics.

US Program Rank

Program	Overall Score	Student Demand	Competitive Intensity	Jobs
11.0701 Computer Science	100	100	79	100
51.3801 Registered Nursing	100	99	95	99
11.1003 Cyber Security/ Info. Assurance	99	100	64	99
14.1001 Electrical/Electronics Engin'g	99	99	97	99
45.0601 Economics (incl. Quant Econ and Econometrics)	99	99	97	97
52.0201 Business Admin. and Mgmt, General	99	99	95	88
30.7102 Business Analytics	99	99	90	97
52.0801 Finance, General	99	99	74	95
30.7101 Data Analytics and/or Data Science	99	99	64	99
11.0103 Information Technology	99	99	50	99

Total Percentile	0	20+	40+	70+	90+	95+	98+	100
Total Score	-62	-31	-19	-2	10	18	27	68

Source: Gray DI's PES Markets

CIP: 11.1003 Cyber Security/ Info. Assurance	Award Level: Bachelors	Market: National	Total Score: 60	Percentile: 99

Student Demand
Score: 30 Percentile: 100

Category	Pctl	Criterion	Value	Score
Size	99	Google Search Volume (12 Months)*	3,747,419	6
	99	International Page Views (12 Months)	14,832	NS
	99	New Student Enrollment Volume (12 Mo.)	13,686	6
	95	On-ground Completions at In-Market Institutions	4,418	3
	99	Online Completions by In-Market Students	4,858	4
	97	Sum of On-ground and Online Completions	9,276	3
Growth	88	Google Search YoY Change (Units)*	103,799	0
	99	New Student Enrollment Vol. YoY Change (Units)	2,424	2
	99	Completion Volume YoY Change (Units)	1,634	2
	46	Google Search YoY Change (%)*	3%	0
	81	New Student Enrollment Vol. YoY Change (%)	22%	2
	86	Completion Volume YoY Change (%)	21%	2

Competitive Intensity
Score: 5 Percentile: 64

Category	Pctl	Criterion	Value	Score
Volume of In-Market Competition	4	Campuses with Graduates**	248	2
	1	Campuses with Grads YoY Change (Units)**	28	NS
	2	Institutions with Online In-Market Students**	72	1
In-Market Program Sizes	67	Average Program Completions	18	0
	61	Median Program Completions	9	0
	82	YoY Median Prog. Compl. Change (Units)	1	0
	76	YoY Median Prog. Compl. Change (%)	11%	0
In-Market Saturation	7	Google Search * Cost per Click**	$22	0
	34	Google Competition Index**	0.27	2
National Online Competition	2	National Online Institutions (Units)**	79	NS
	89	Nat'l Online % of Institutions	26%	NS
	93	Nat'l Online % of Completions	52%	NS

Employment
Score: 25 Percentile: 99

Category	Pctl	Criterion	Value	Score
Size: Entry Jobs	98	Job Postings Total (12 Months)	26,645	4
	98	BLS Current Employment	122,337	1
	98	BLS Annual Job Openings	10,413	1
Underemployed	96	Underemployed Percent of Graduates**	25%	3
Growth: Entry Jobs	7	BLS 1-Year Historical Growth	2.7%	0
	18	BLS 3-Year Historic Growth (CAGR)	2.8%	0
	97	BLS 10-Year Future Growth (CAGR)	1.1%	1
Saturation: Entry Jobs	98	Job Postings per Graduate	2.9	4
	97	BLS Job Openings per Graduate	1.1	1
Weighted-Avg BLS Wages	92	Entry 25th Percentile	$69,834	8
	53	Post Entry Median	$84,180	2
		Post Entry w/Associates Median	NA	NS
	65	Post Entry w/Bachelors Median	$82,747	NS
	75	Post Entry w/Masters Median	$106,833	NS
		Post Entry w/Doctoral Median	NA	NS
National American Community Survey Bachelor's Degree Outcomes*	15	% with Any Graduate Degree*	20%	NS
	25	% with Masters*	18%	NS
	17	% with Doct/Prof Degree*	3%	NS
	35	% Unemp. (Age <30)**	3%	NS
	95	% in Direct Prep Jobs*	49%	NS

Degree Fit
Score: 0 Percentile: 50

Category	Pctl	Criterion	Value	Score
Cost Benchmarking	78	Average Cost per SCH Index**	0.79	NS
	81	Median Cost per SCH Index**	0.73	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	24%	24%	9%	
Associates	16%	16%	31%	9%
Bachelors	31%	31%	32%	46%
Postbaccalaureate Certificate	4%	4%	0%	
Masters	25%	25%	25%	23%
Post-masters Certificate	0%	0%	2%	
Doctoral	0%	0%	1%	3%

CIP Description:
A program that prepares individuals to assess the security needs of computer and network systems, recommend safeguard solutions, and manage the implementation, auditing, and maintenance of security devices, systems, and procedures. Includes instruction in computer architecture, programming, and systems analysis; networking; telecommunications; cryptography; security system auditing and design; applicable law and regulations; risk assessment and policy analysis; contingency planning; user access issues; investigation techniques; and troubleshooting.

Total Percentile	0	20+	40+	70+	90+	95+	98+	100
Total Score	**-20**	**-16**	**2**	**15**	**27**	**34**	**42**	**67**

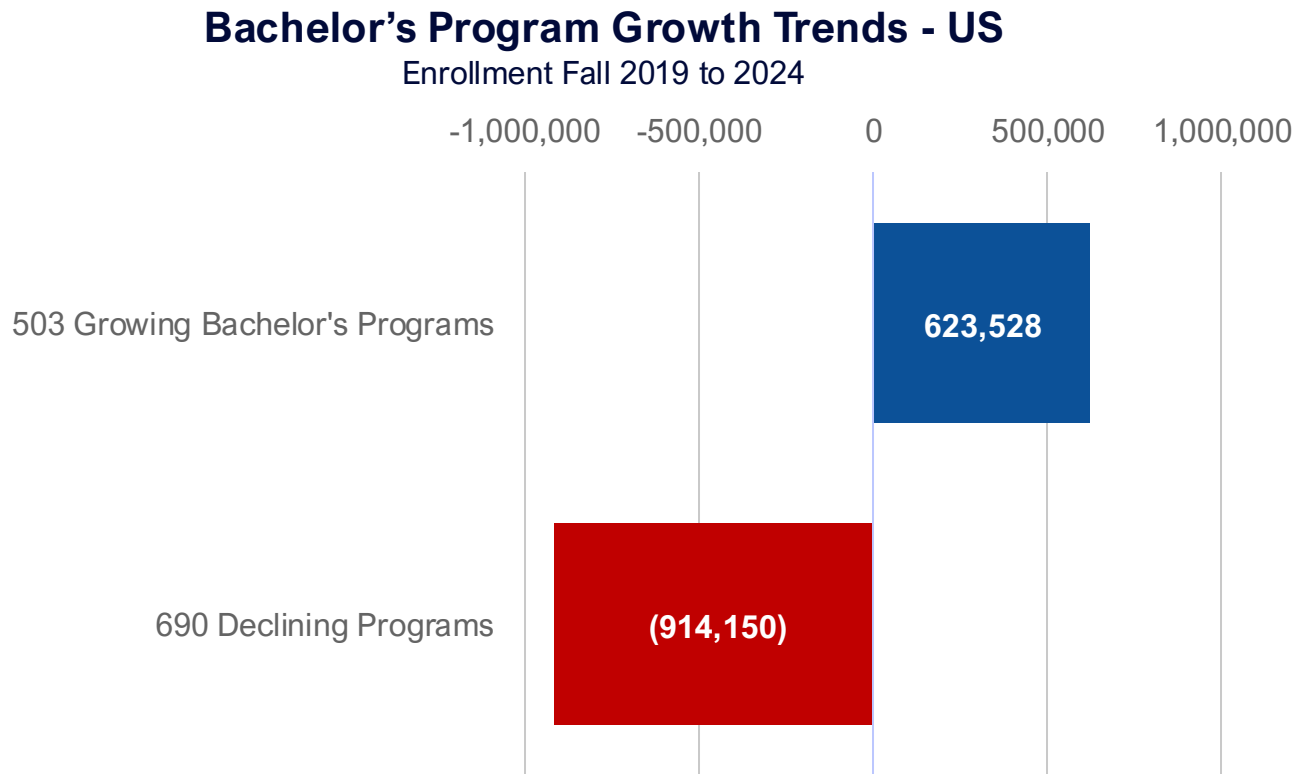
* - Google search do not filter by award level.
** - Percentiles are displayed in reverse (100% minus the percentile).
NA - No data available/not currently tracked.
NS - Not Scored in Rubrics (values = 0).
PCTL - Percentile

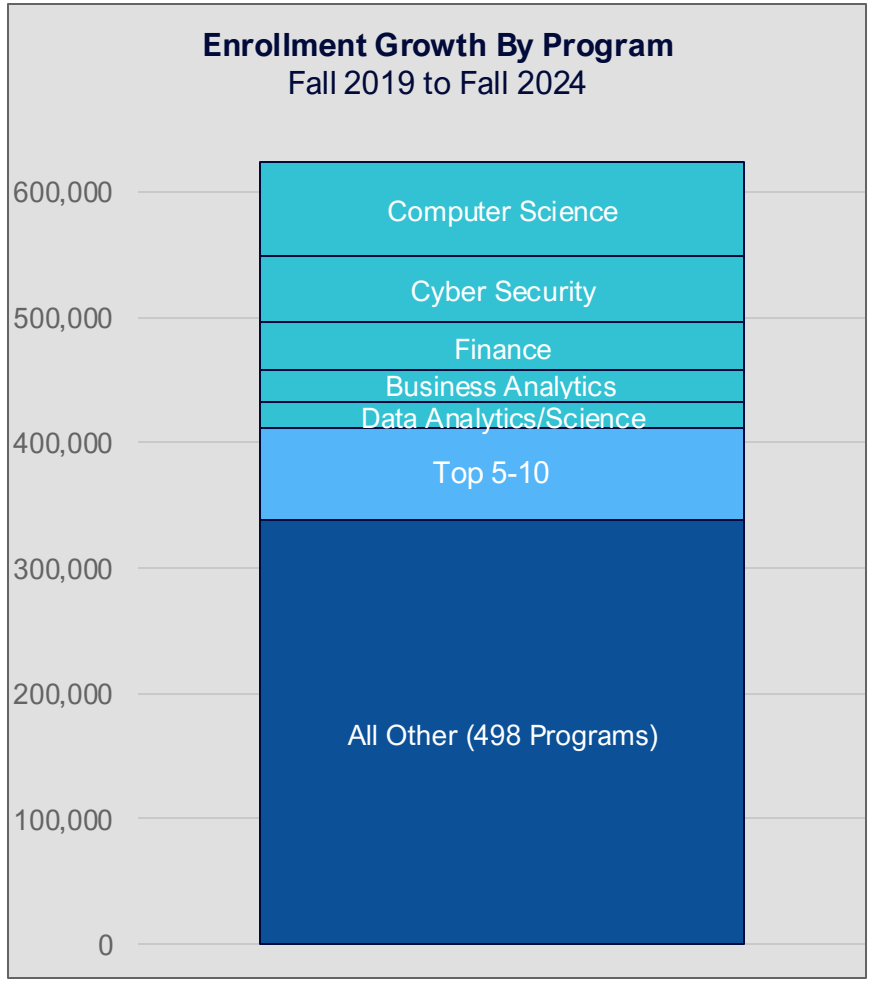
GRAY DI

Source: Gray DI's PES Markets

Five programs have accounted for 34% of all growth in bachelor's enrollment since fall 2019.

10 programs accounted for 46% of all growth.

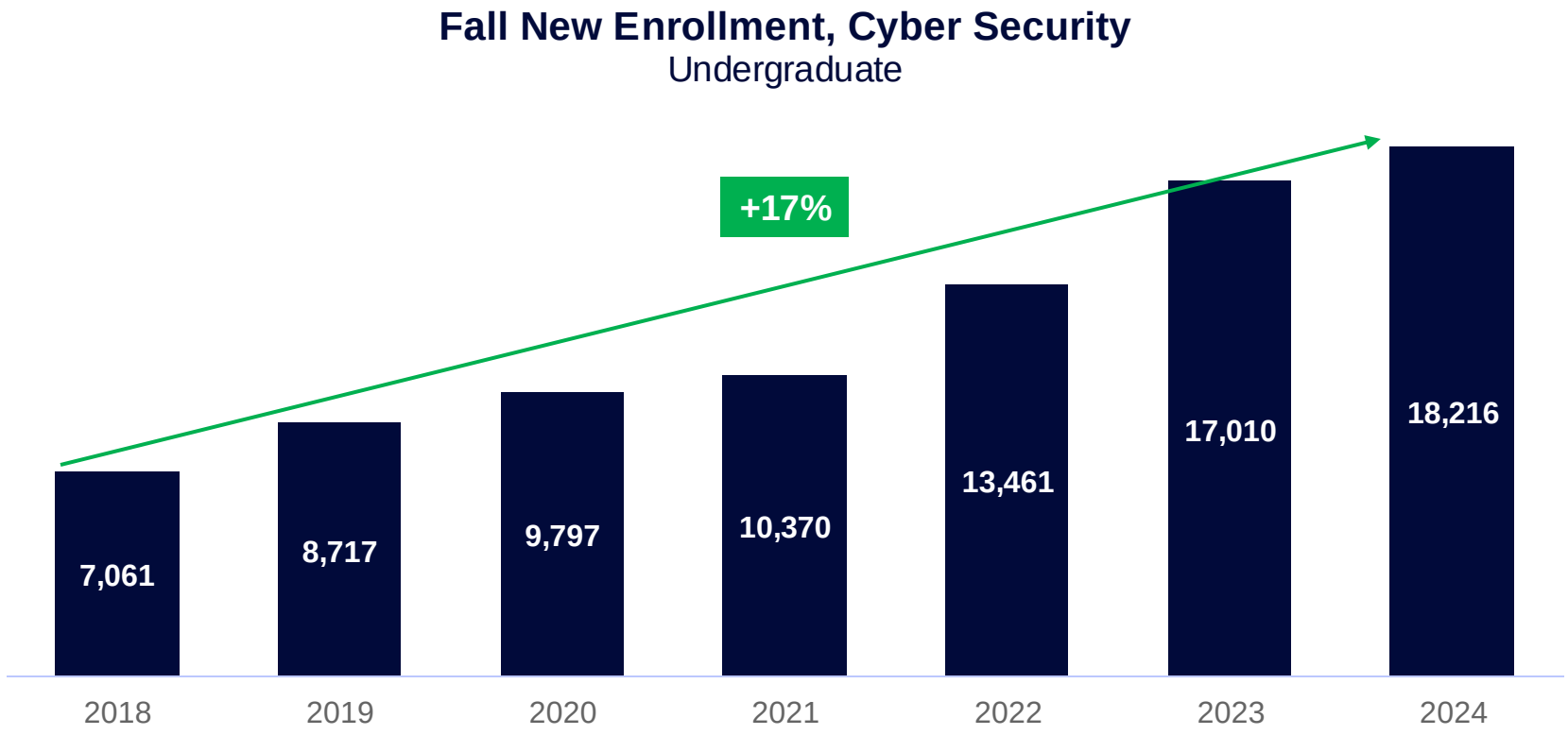




Source: Gray DI Program Enrollment Dashboard

New Enrollment

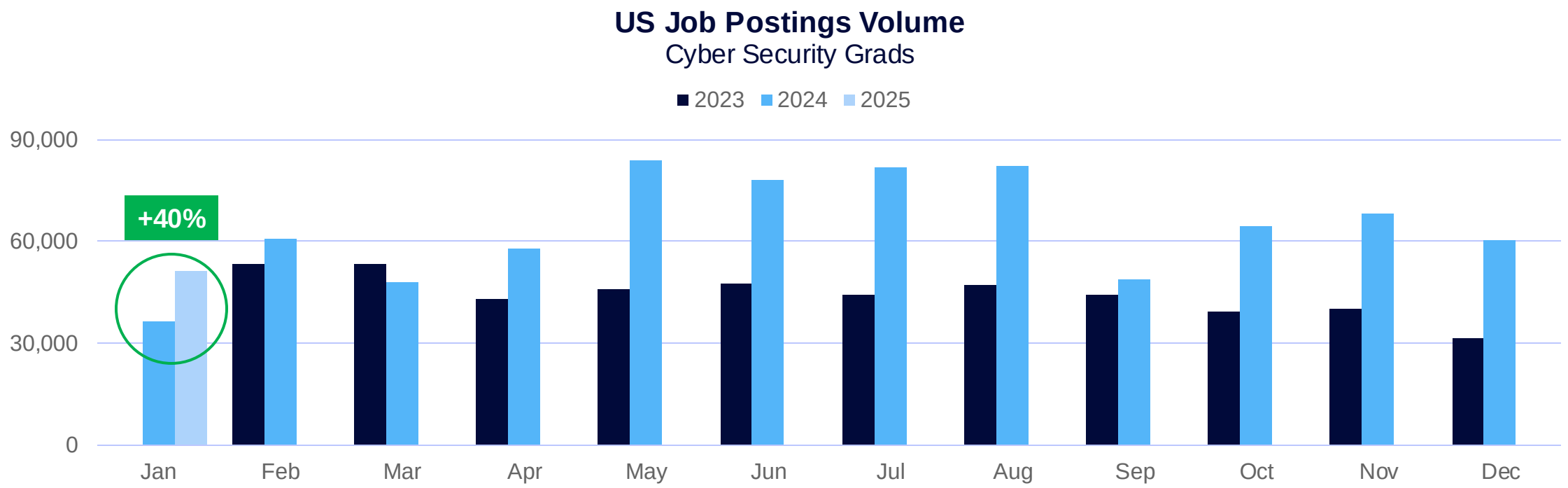
From Fall 2018–2024, Cyber Security new undergraduate enrollment rose 17% annually on average.



Source: Gray DI's Program Enrollment Dashboard

Employment: Cyber Security Graduates

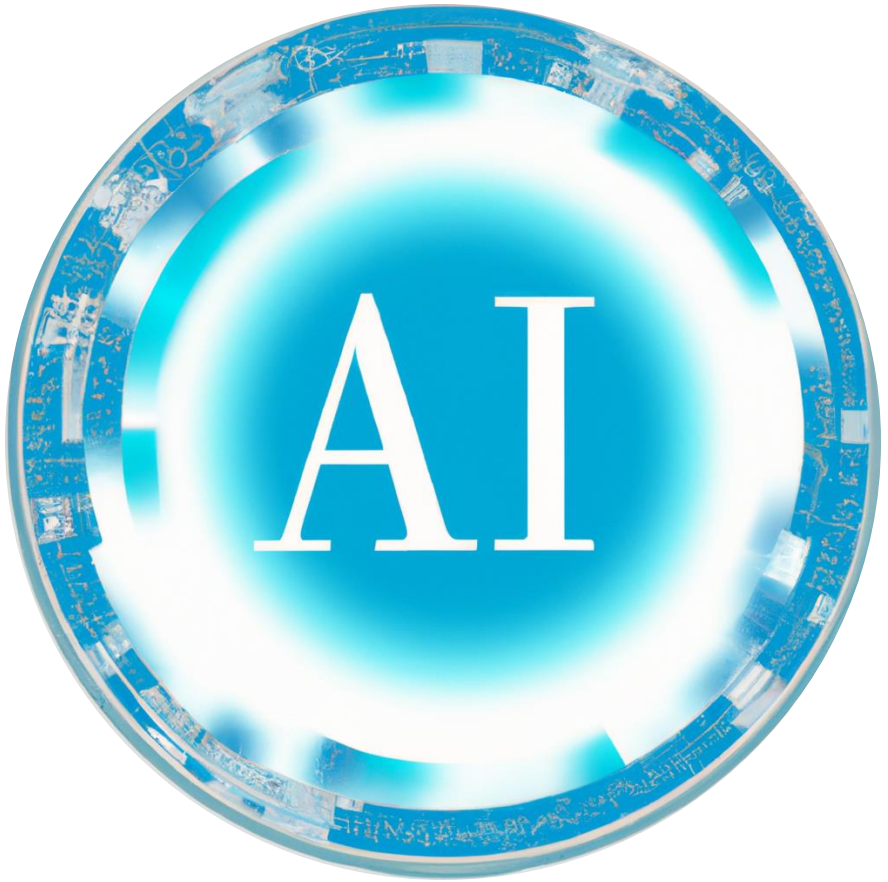
In January 2025, job postings for Cyber Security professionals grew 40% year-over-year.



Source: Gray DI's Job Postings Insights Dashboard

The Biggest Growth Opportunity in Decades

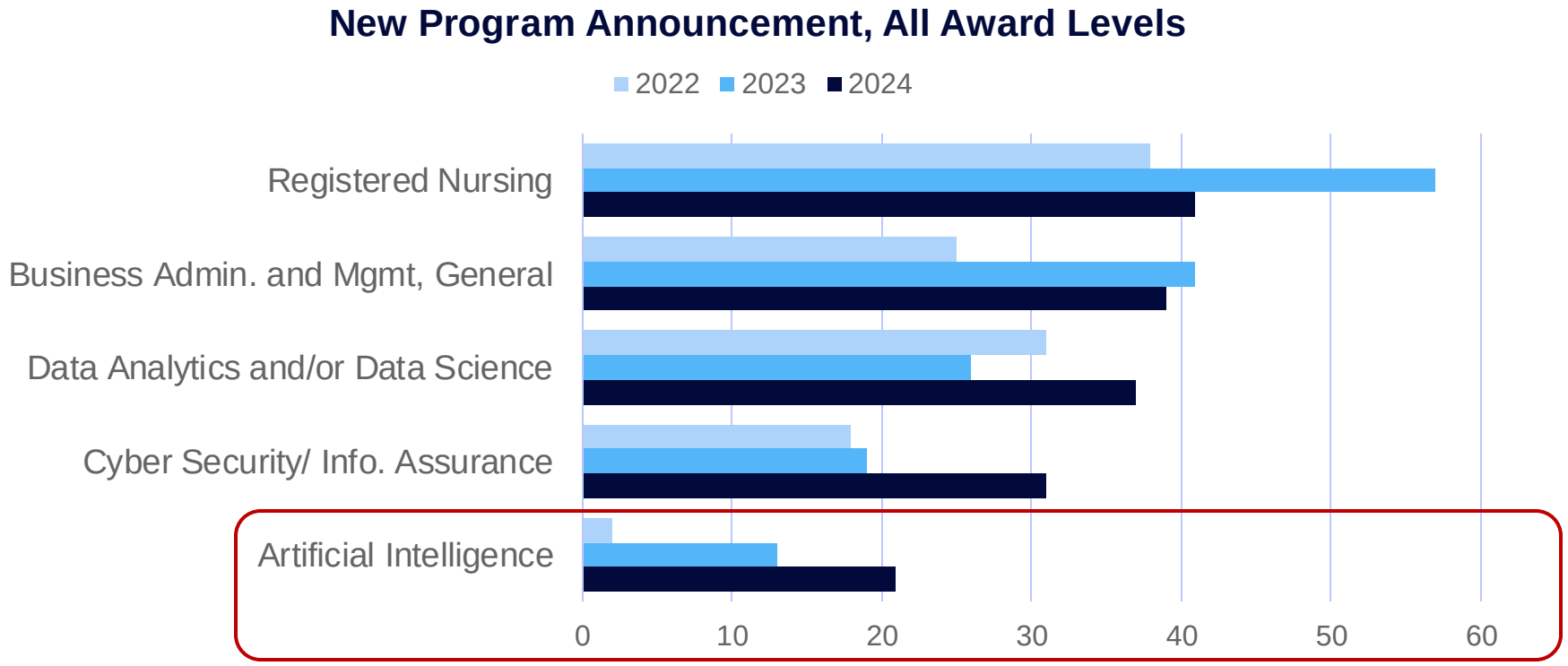
- New Programs that teach AI
- Integration of AI into existing programs
- Leverage vendors who use AI to reduce cost and grow



- A program to teach professors how to integrate AI into their disciplines
- New programs that combine AI with existing disciplines
- Access to AI technologies to attract students and researchers

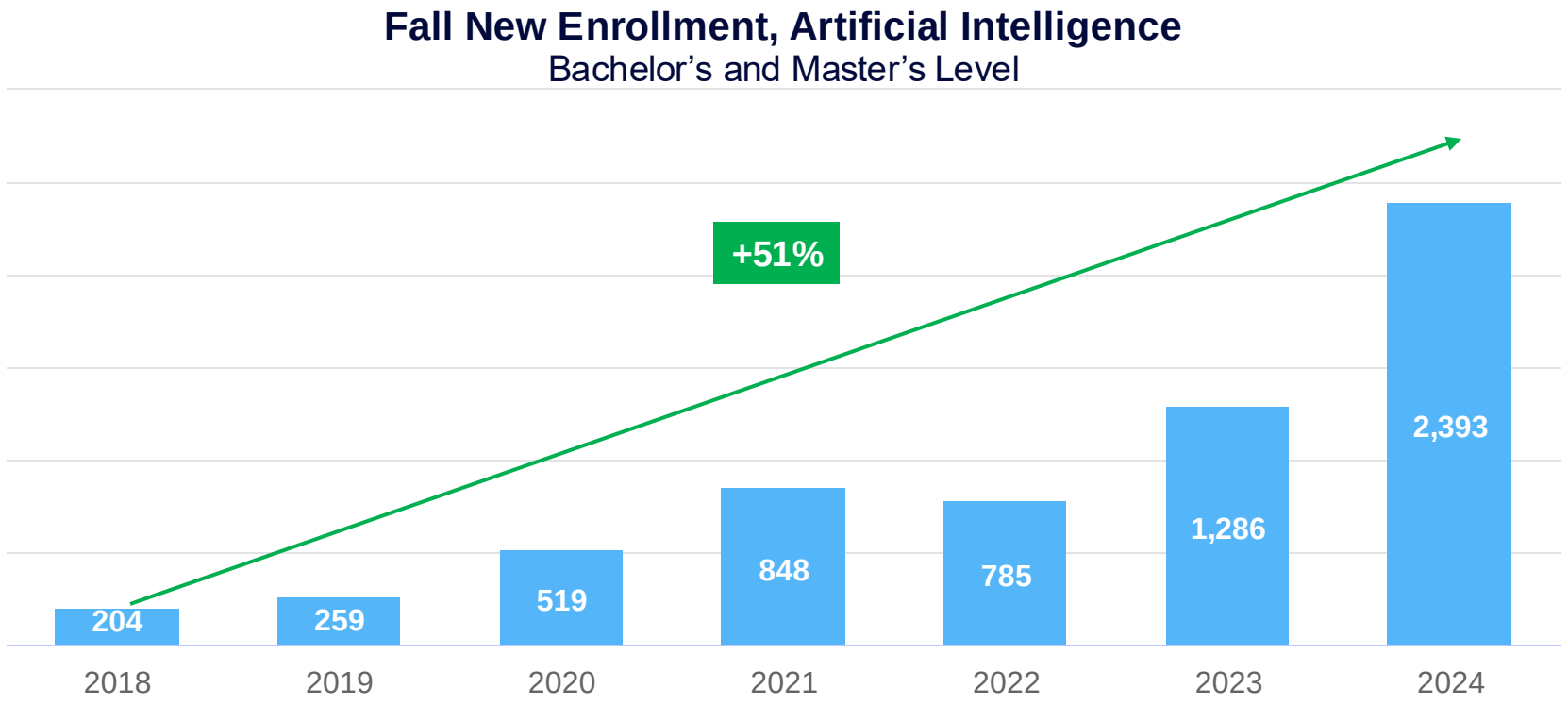
Grow: Artificial Intelligence Programs; Is there still time?

In 2022, two AI programs were launched; in 2024, AI had the fifth-highest number of launches.



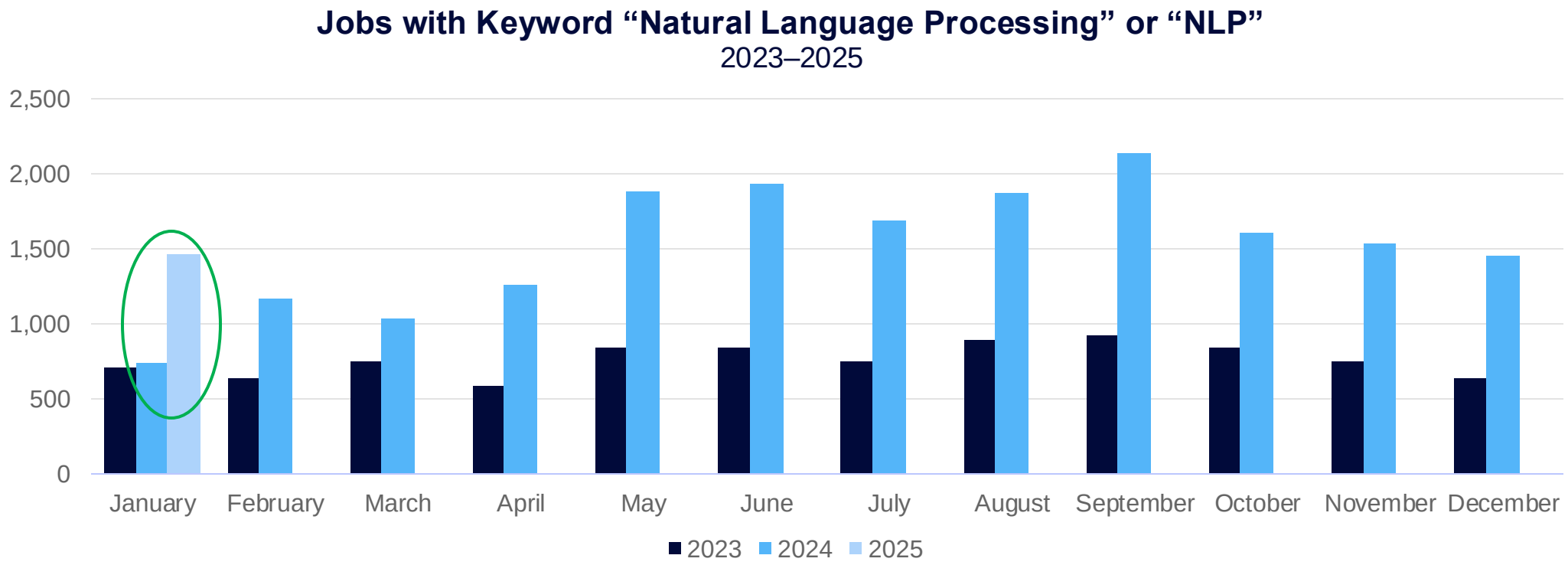
Artificial Intelligence: There Is Still Time To Start a New Program.

From Fall 2018–2024, new enrollment in AI programs is rising 51% *per year*.



Artificial Intelligence Jobs

In January, Natural Language Processing jobs grew 99% year-over-year.



Healthcare + AI

Artificial intelligence will transform healthcare.

- **Drug Discovery and Development**
  - Target identification and validation
  - Clinical trial optimization
  - Repurpose existing drugs
- **Medical Imaging and Diagnostics**
  - Early diagnosis and disease detection
  - Predictive analytics for personalized treatment
  - Automated image analysis
- **AI-Assisted Robotics**
  - Surgery
  - Rehabilitation
  - Elder care
- **Patient Care and Monitoring**
  - Smart wearables for patient monitoring
  - Medication management software
  - Clinical decision support systems
  - Predictive analytics for patient risk assessment
  - Process automation for administrative tasks

Florida Atlantic University
BSN to MS in Artificial Intelligence

University of California San Francisco
MS in Artificial Intelligence and Computational Drug Discovery and Development

University College London
Artificial Intelligence and Medical Imaging MSc

Johns Hopkins Univ
MSE, ***Robotics - Specialization in Medical Robotics***

Summary

There is cause for optimism – and need for action.

- Most of the pessimism surrounding higher education is unwarranted.
- Poorly informed cost reduction can do more harm than good.
- Institutions that seize opportunities are growing.
- Programmatic growth opportunities are substantial and enduring.
- To pick the right programs, you need the right data and decision-making processes.
- The data should include:
  - Mission
  - Academic Outcomes
  - Markets
  - Margins
- The process should be data-informed and inclusive.

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 and Sustaining Program Evaluation
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 EST