

# Academic Portfolio and Efficiency/Productivity Reviews: rpk GROUP Project Samples

**rpk** GROUP  
from mission to market  
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# rpk GROUP Philosophy and Approach

# rpk GROUP has Done the Work

**10** years

**100+**

Colleges, Universities,  
Associations, and  
Foundations

**25+** states,  
**3** Continents

Mix of **public, private,**  
**two-year,** and **four-**  
**year** institutions

Specializing in  
**sustainable financial**  
**models, strategic**  
**finance,** and **academic**  
**portfolio reviews**

[“How college leaders find efficiencies and prepare for the changing financial landscape,”](#) *The Chronicle of Higher Education*

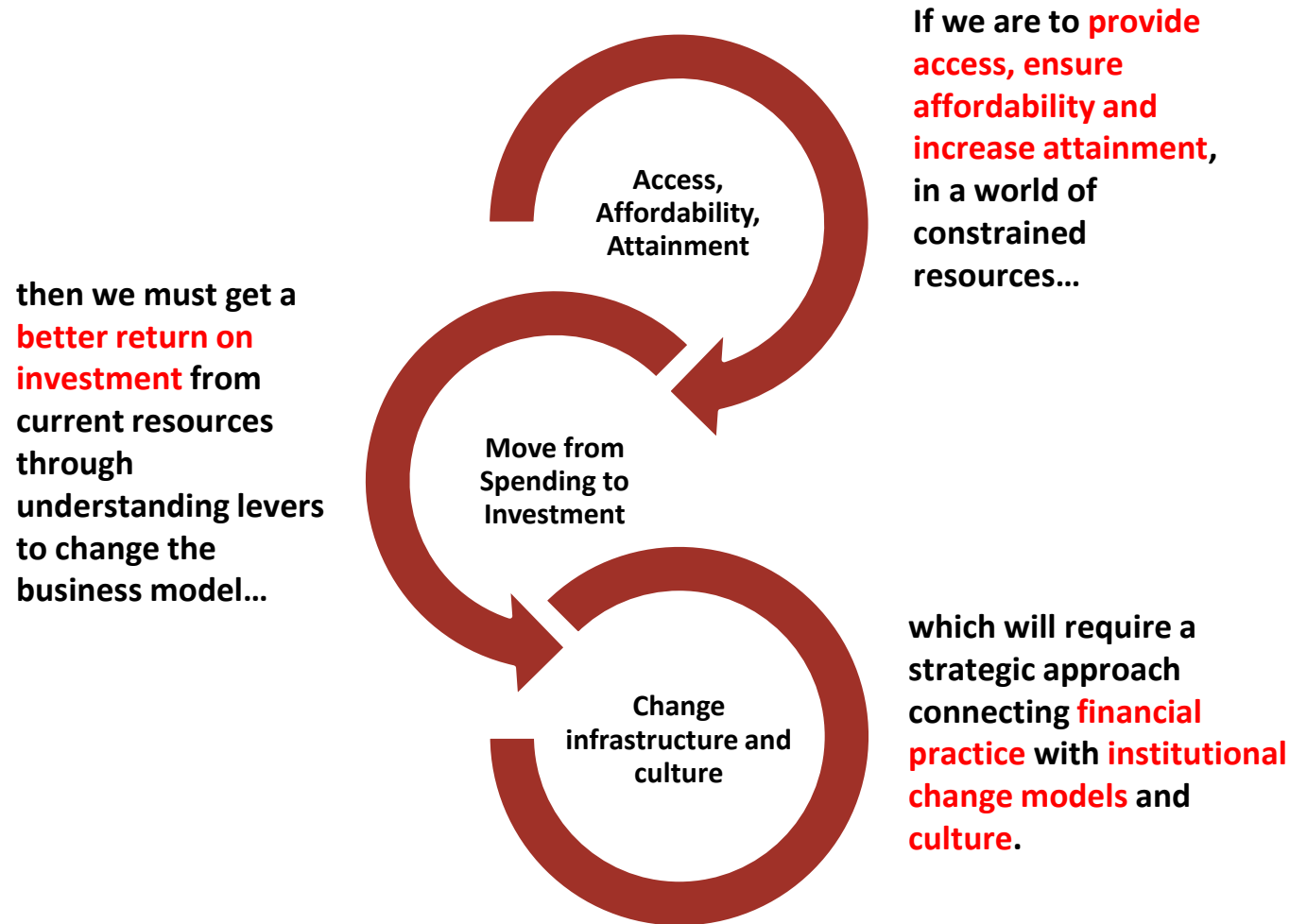
[“How Ohio Community Colleges Use ROI to Make the Most of Student Success,”](#) *JFF*

[“Applying an ROI Lens to Student Success,”](#) *Educause*

# Our Approach

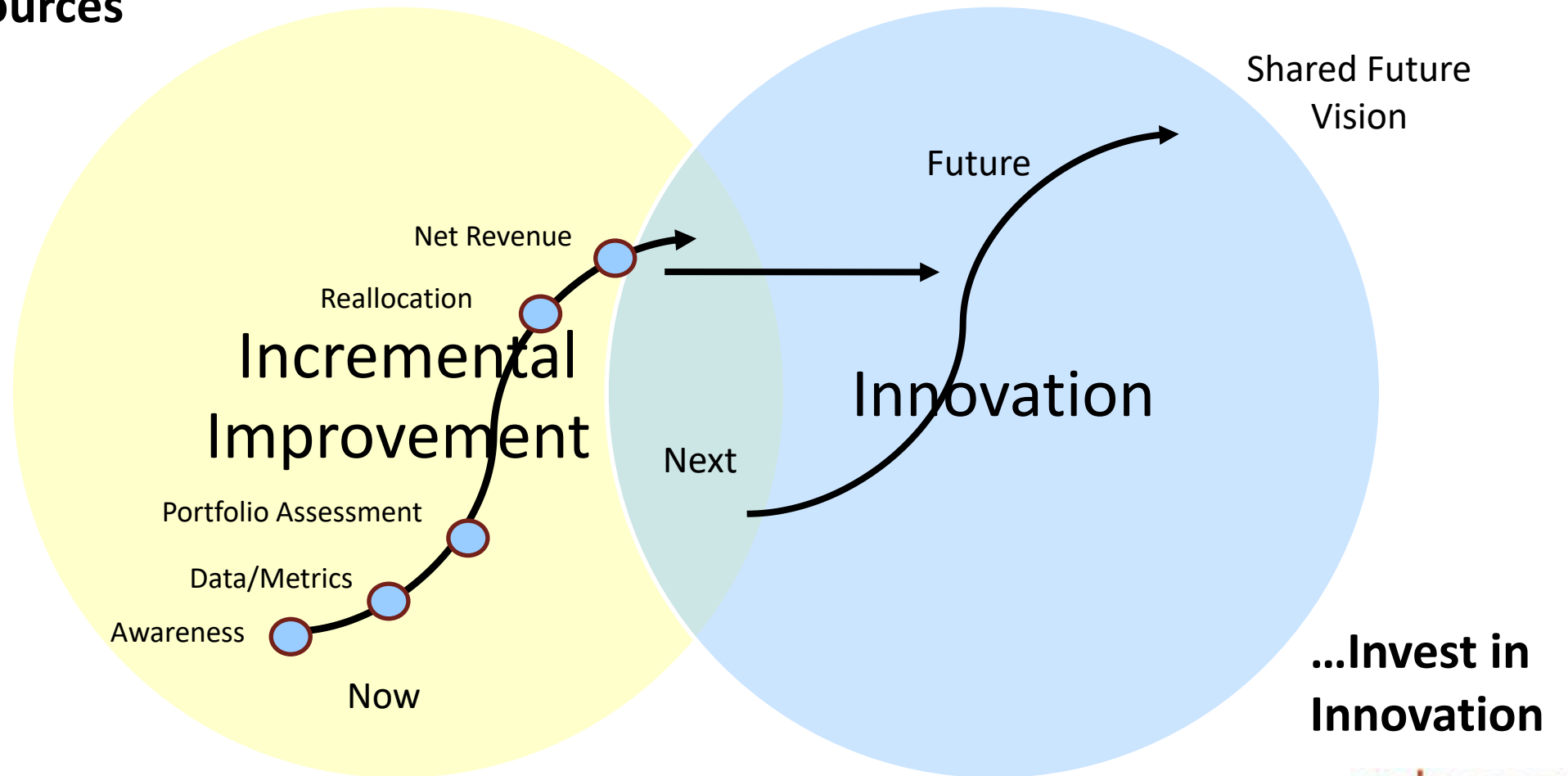
## Why Talk About Business Models in Higher Education?

Shifting the Frame from Cost Cutting to **Maximizing** Return on Investment

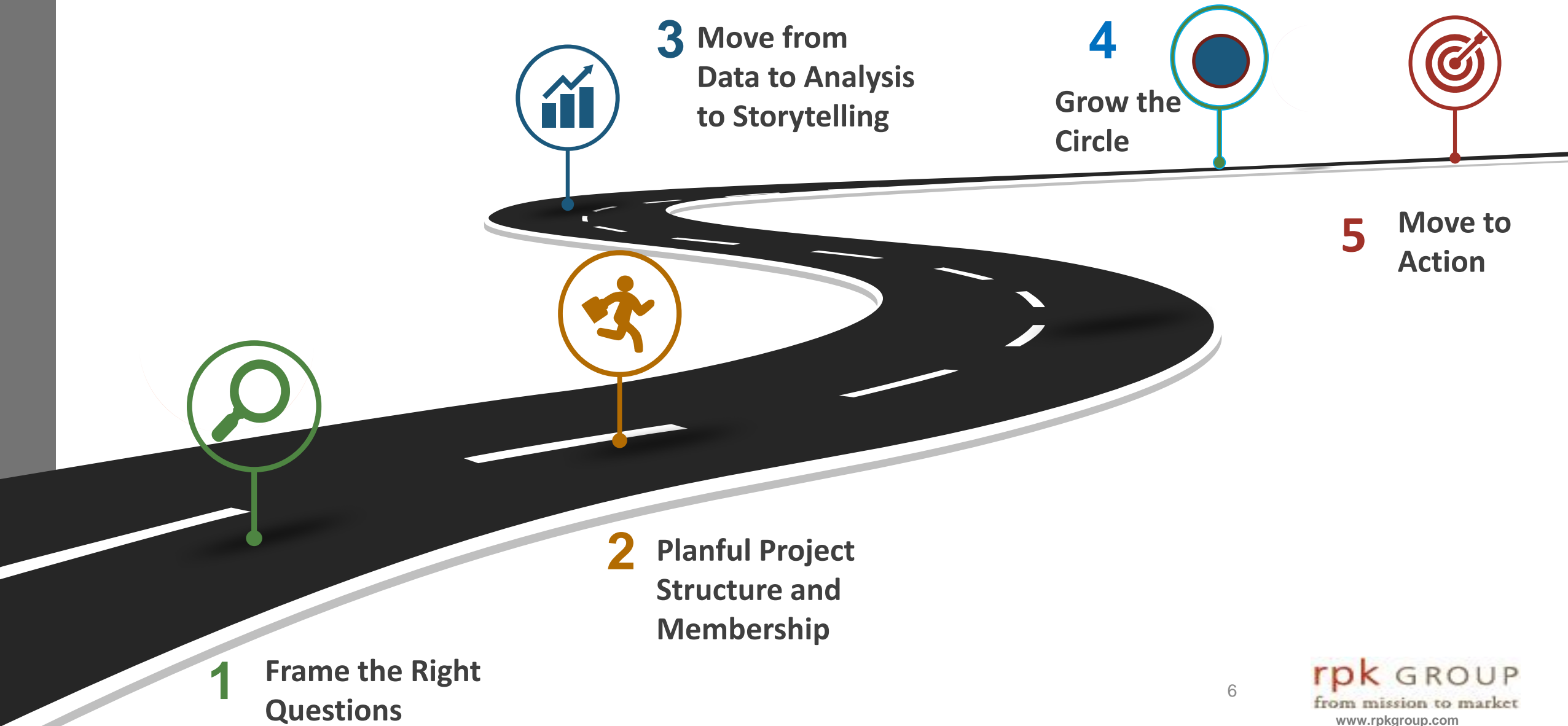


# How Does Academic Portfolio Work Support Innovation?

**Harvest Resources  
to....**



# Achieving Project Success: A Proven Approach



# Academic Portfolio and Efficiency Review: Project Sample

# Project Details

- Public, four-year institution
- Twelve month, multi-phase project
- Academic portfolio review and efficiency/productivity analysis
- Market analysis
- Academic structure review
- Academic leadership development and capacity building
- Faculty training on data utilization

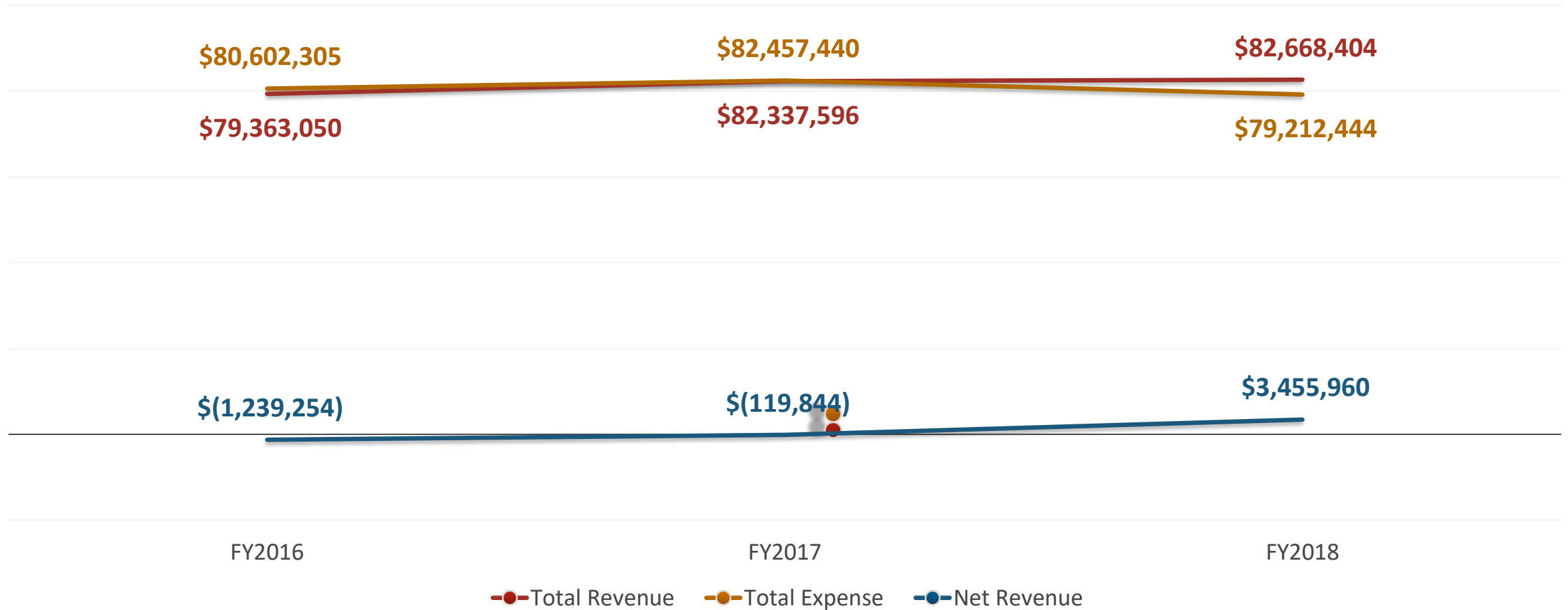


# Framework – Academic Portfolio Review

- Revenue and expenses – What’s the overall financial health of the institution?
- Student demand and yield – Who is interested in these programs, and do they come?
- Instructional activity – Where are the compressions in the portfolio?
- Outcomes – How successful are we with these students?
- Market comparison – How well do programs compare to peers and market demand?

# Financial Trend: Positive Net Revenue In FY18 Due to Cuts in Expenses

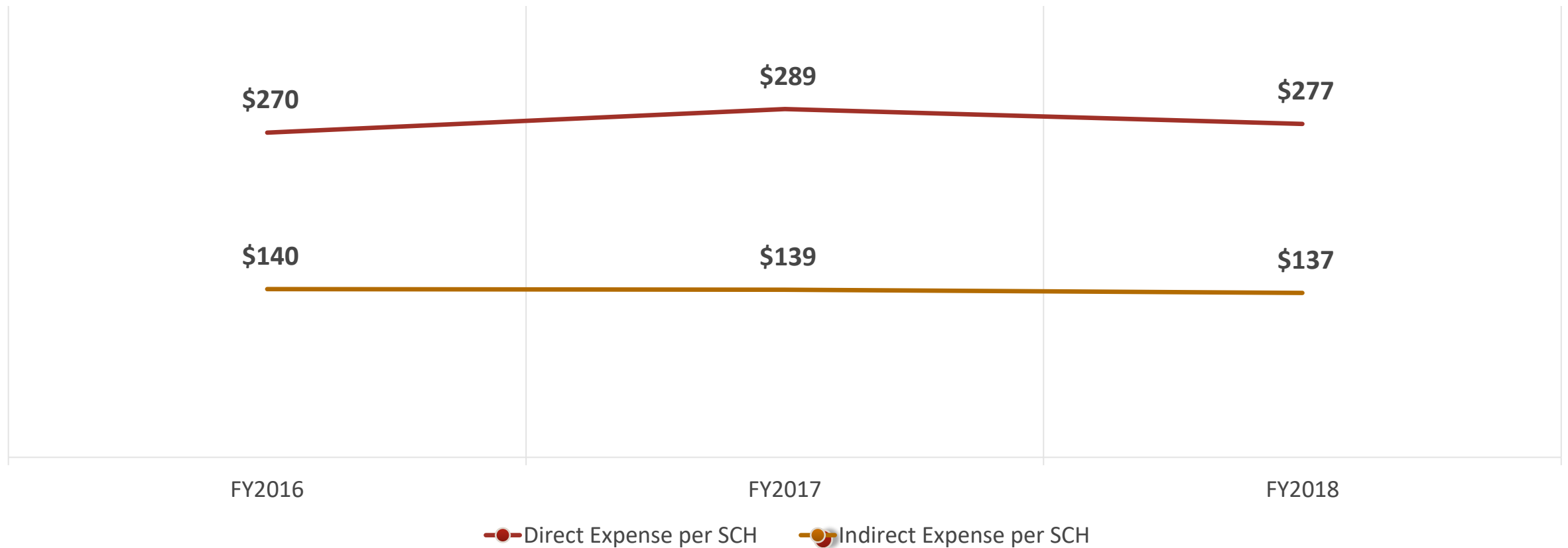
## Total Revenue, Expense & Net Revenue



# Financial Trend: Opportunity to Increase Efficiencies Within the Academic Portfolio

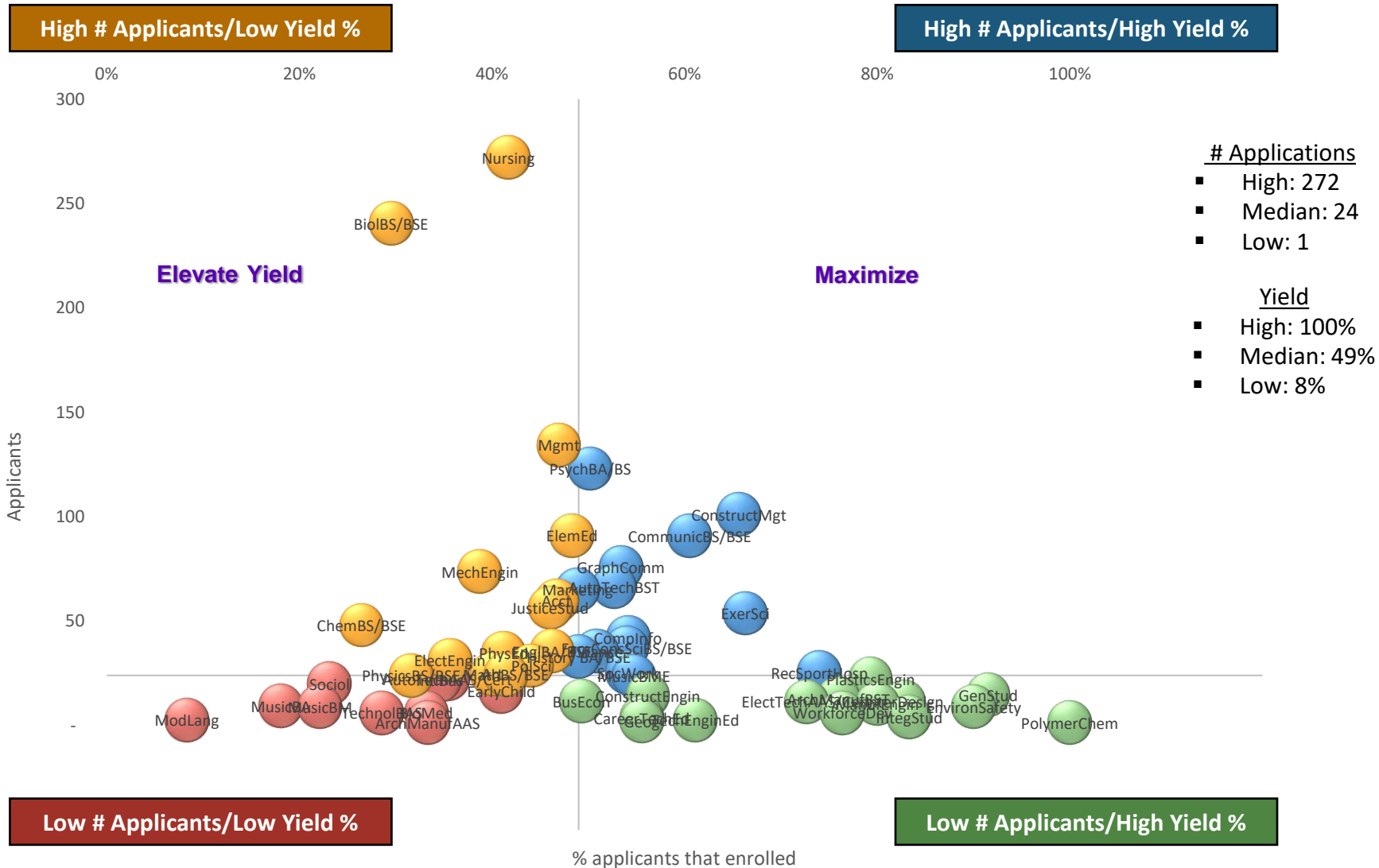
Direct Expense per SCH Increased 3% While Indirect per SCH Declined 2%

### Direct and Indirect Expense per SCH



Note: Indirect expenses are net of indirect other revenue.

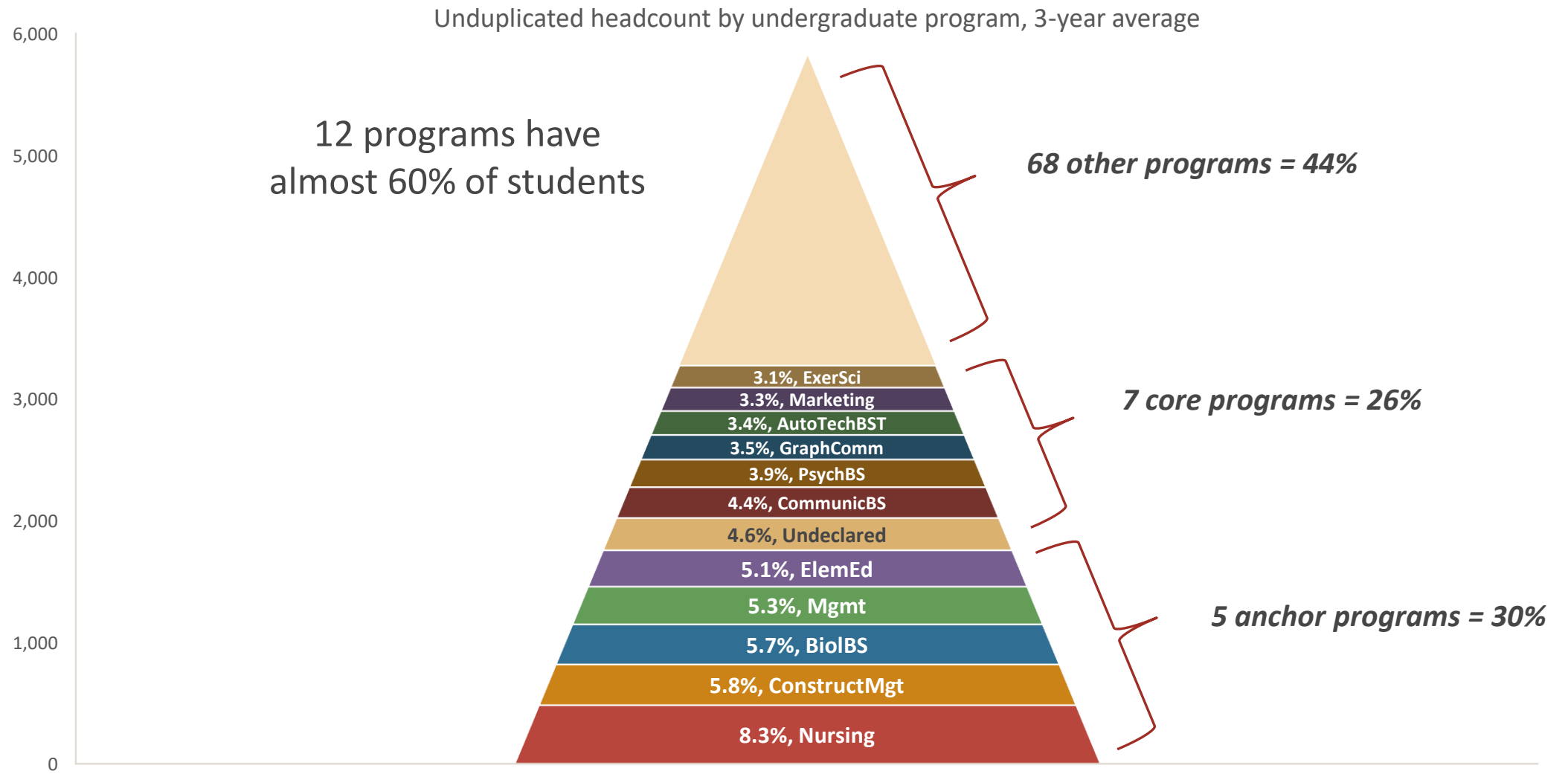
# Demand/Yield: Who is Interested in the Programs, and Do They Come?



1. How can we further invest in majors with high demand and high yield?
2. What are opportunities to build on majors with high demand but low yield?

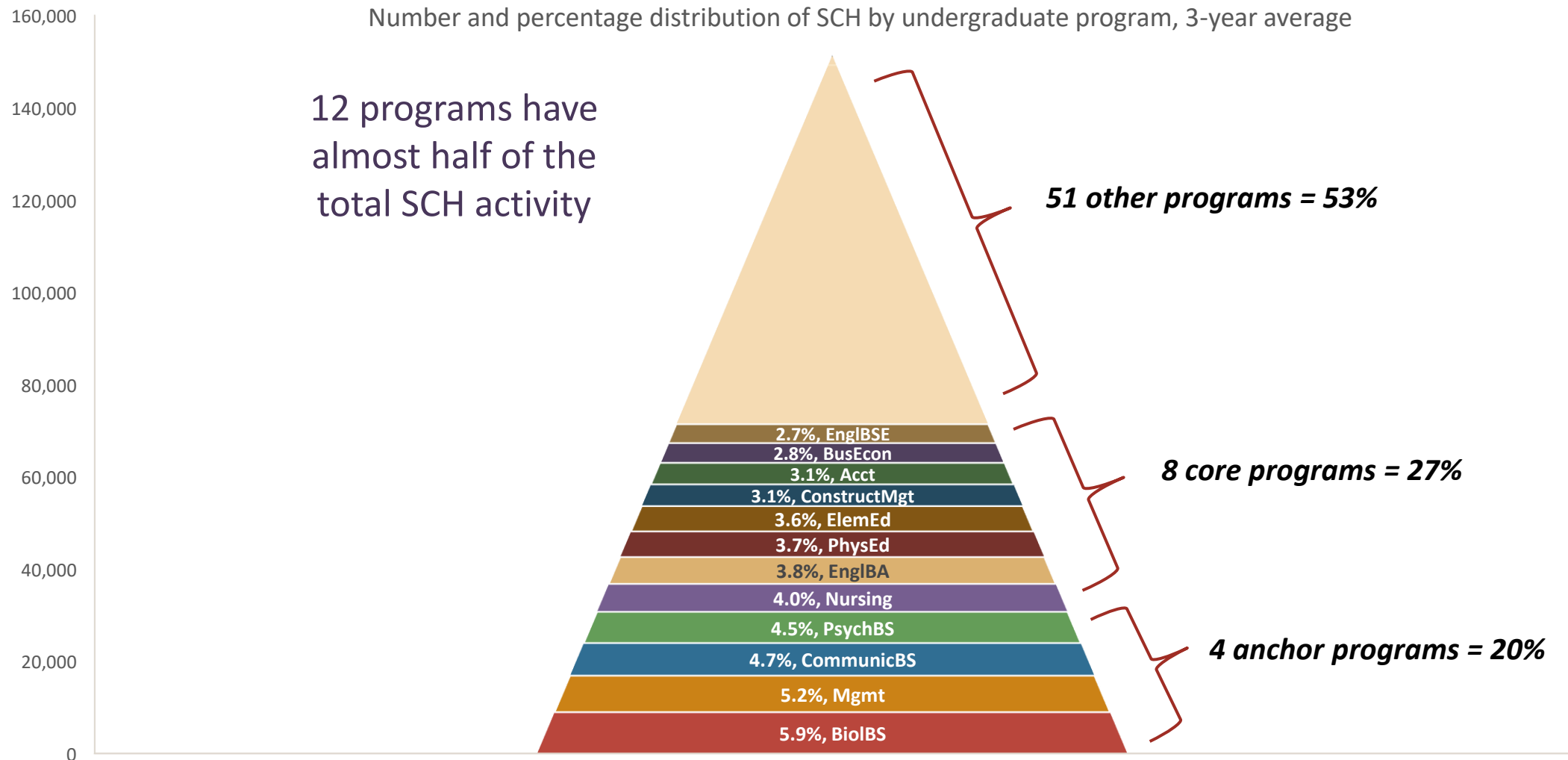
Note: Yield is defined as % of applicants that enrolled. Based on 3-year averages.

# Activity: Where are the Compressions in the Portfolio? (Headcount)



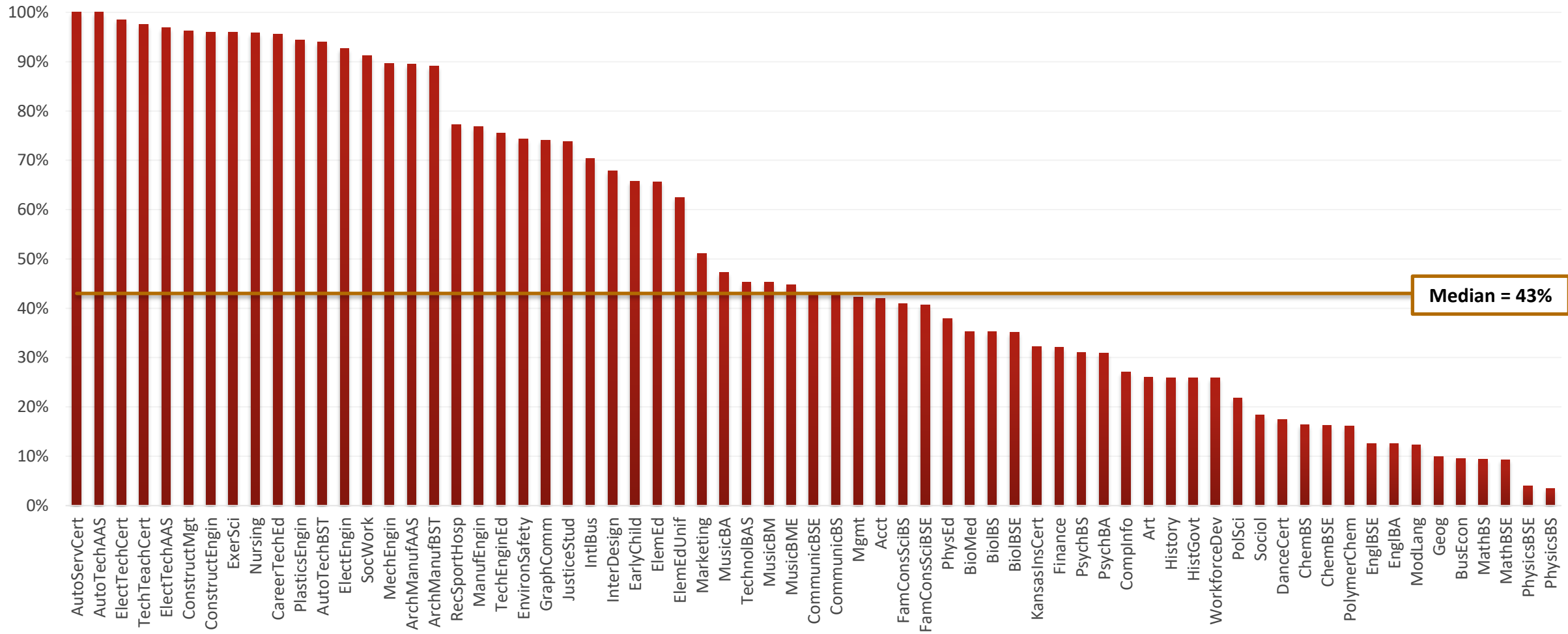
Note: Percentages may be rounded for presentation purposes.

# Activity: Where are the Compressions in the Portfolio? (SCH)



# Activity: Programs Play Different Roles in the Portfolio

% of total SCH taken by program majors, by undergraduate program, 3-year average

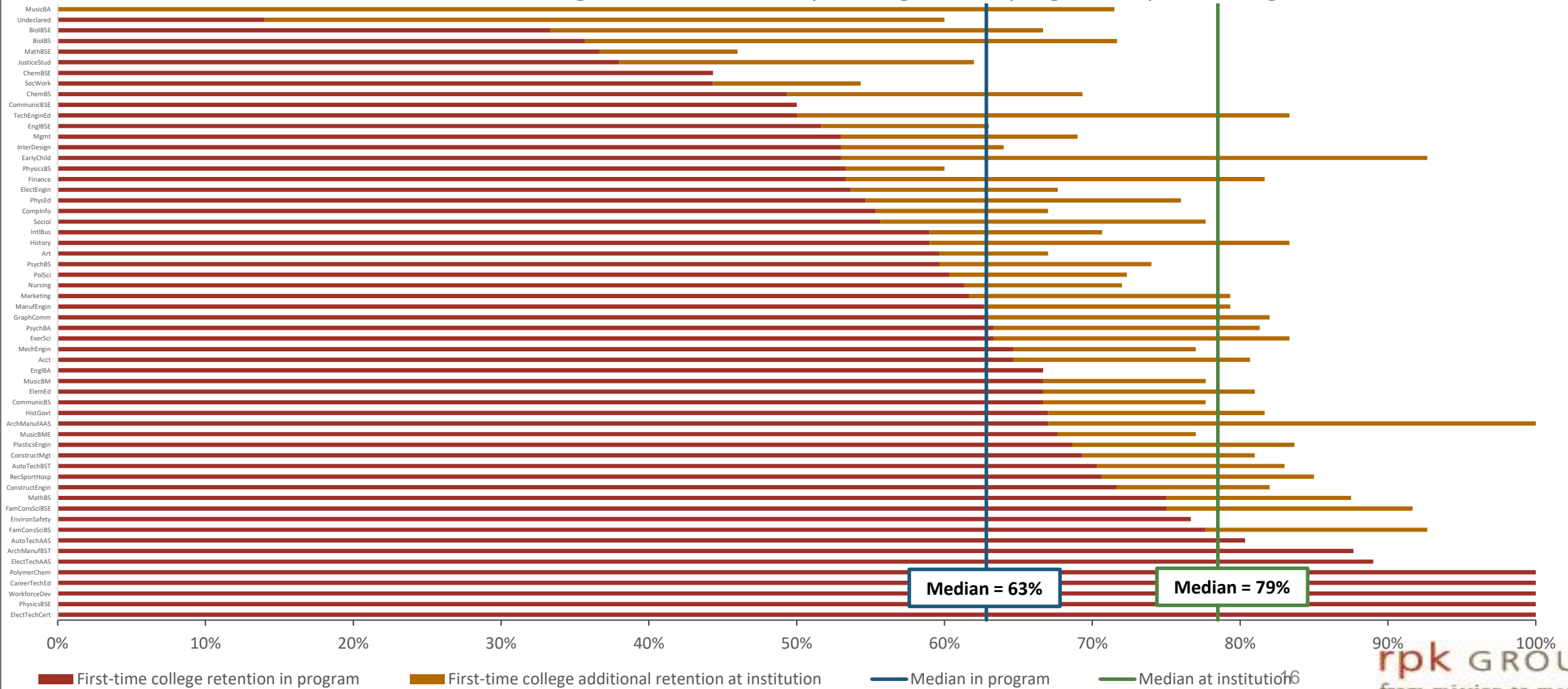


Median = 43%

# Outcomes: How successfully does the institution retain students?

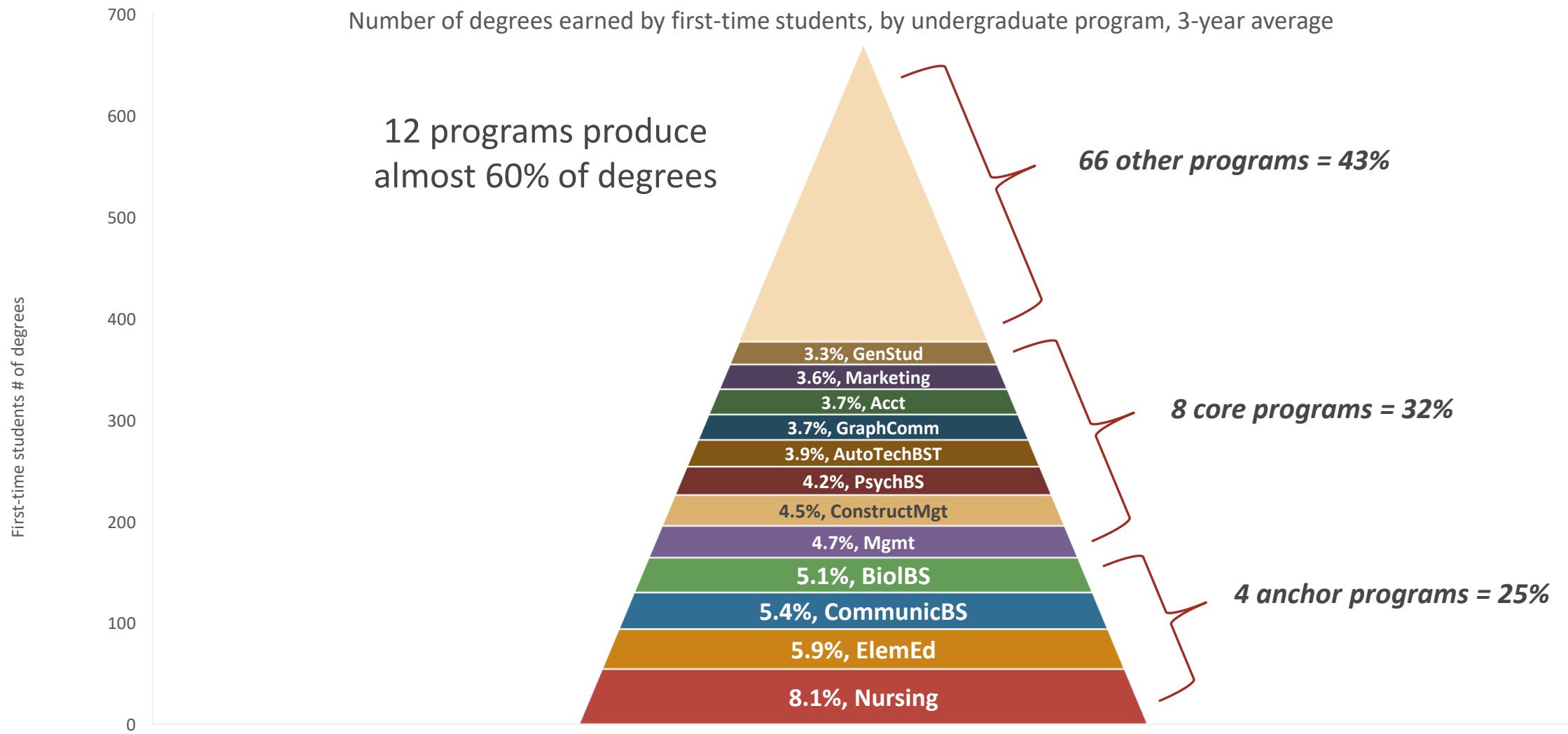
Many Students Change Programs in Their First Year, But Remain at Institution

First-time college retention rates, by undergraduate program, 3-year average





# Outcomes: What percentage of degrees does each program produce?



Note: Percentages may be rounded for presentation purposes.

# Net Revenue - Two Approaches

## Transcript Approach

- Focuses on the student taking credits for courses offered by any department/program/major, not only the unit in which the student is majoring.
- Considers all the credits “consumed” by students as part of their degree program.
- Answers questions such as, what does it cost to educate a specific type of student?
- The market focused variables such as demand/yield are best matched with the transcript net revenue approach.

## Delivery\* Approach

- Starts from the perspective of the delivery unit (department or program) that is offering/generating the courses.
- The courses may be taken by students with majors in that subject, or taken by non-major students.
- The delivery approach focuses primarily on the efficiency/productivity of the department.
- To get net revenue by program, we allocate the net revenue by department down to programs using SCH, number or percentage of majors, or course prefixes.

\*Under this model, program refers to both course credits taken by majors in the program and course credits taken by non-majors; i.e., the net revenue of the Biology program is inclusive of all Biology coursework taught in a given time period, both to majors and non-majors

# Bringing It All Together - Total Net Revenue by Program - Undergraduate

	# applic	% applic that enroll	# degrees
<b>High demand, low yield, high degrees</b>			
Nursing	401	41%	92
BiolBS/BSE	293	34%	55
Mgmt	196	49%	62
PsychBS/BA	179	50%	63
ElemEd	141	51%	65
MechEngin	96	46%	27
Acct	85	49%	41
JusticeStud	76	51%	23
ChemBS/BSE	62	31%	13
PhysEd	58	49%	22
Finance	53	53%	23
EnglBA/BSE	52	49%	21
History BA/BSE	49	51%	15

<b>High demand, low yield, low degrees</b>			
ElectEngin	45	45%	11
Art	36	44%	8

<b>Low demand, low yield, high degrees</b>			
AutoTechAAS/Cert	24	53%	14

<b>Low demand, low yield, low degrees</b>			
MathBS/BSE	35	47%	12
PolSci	34	44%	6
EarlyChild	29	40%	10
IntlBus	29	40%	6
PhysicsBS/BSE	28	36%	1
Sociol	26	27%	5
BusEcon	16	50%	0
MusicBM	11	31%	2
BioMed	9	39%	3
MusicBA	9	18%	0
ModLang	6	52%	2

=net revenue above the median  
 =net revenue below the median

	# applic	% applic that enroll	# degrees
<b>High demand, high yield, high degrees</b>			
ConstructMgt	150	70%	54
CommunicBS/BSE	127	61%	57
GraphComm	104	58%	40
Marketing	88	55%	39
AutoTechBST	84	56%	39
ExerSci	82	66%	28
SocWork	62	65%	25
FamConsSciBS/BSE	60	62%	37
CompInfo	59	57%	21
RecSportHosp	39	74%	15
GenStud	39	92%	49
TechnolBAS	37	68%	25

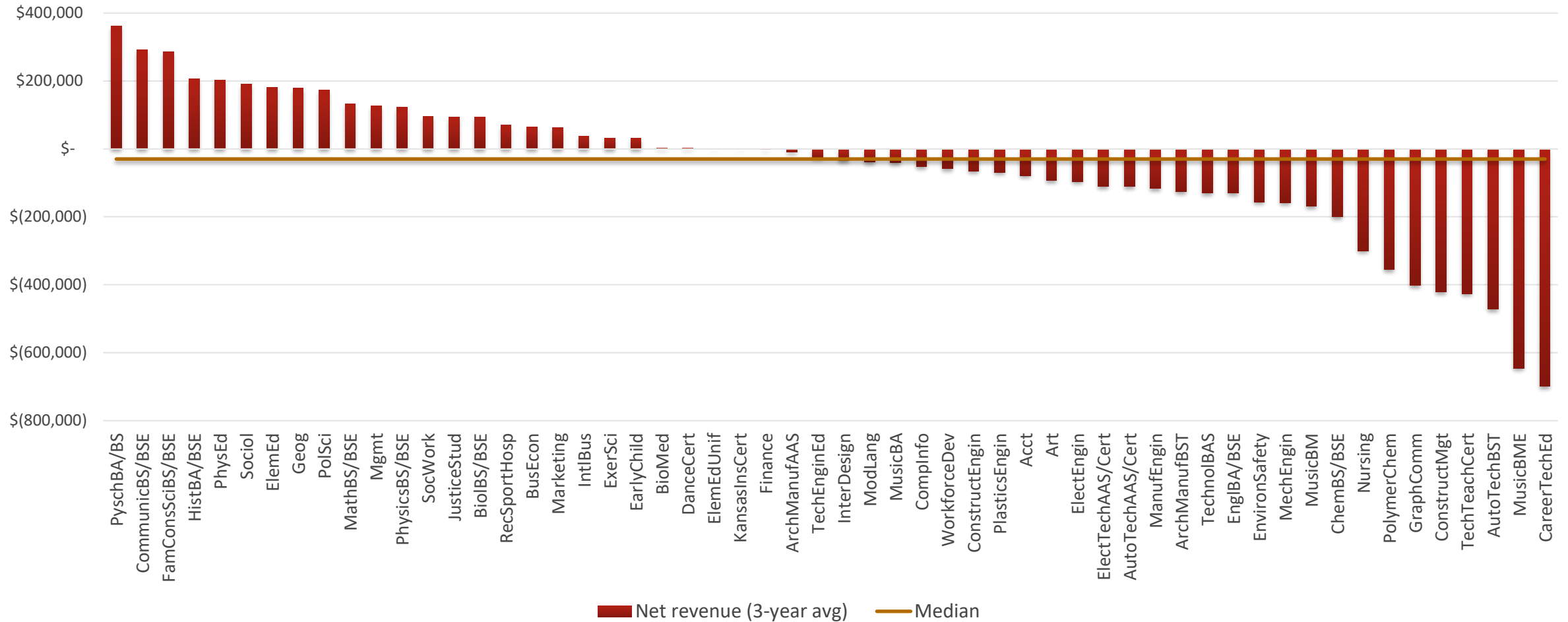
<b>High demand, high yield, low degrees</b>			
<b>Low demand, high yield, high degrees</b>			
PlasticsEngin	30	81%	13
ElectTechAAS/Cert	20	70%	20

<b>Low demand, high yield, low degrees</b>			
WorkforceDev	29	61%	9
MusicBME	28	60%	8
ConstructEngin	20	58%	5
EnvironSafety	20	86%	11
ArchManufBST	17	73%	8
CareerTechEd	17	74%	4
InterDesign	17	82%	4
ManufEngin	17	80%	9
TechEnginEd	7	78%	5
IntegStud	6	92%	5
Geog	3	75%	2
ArchManufAAS	2	58%	0
PolymerChem	2	100%	1

Note: Data represent 3-year averages. Quadrants were defined using median demand/yield and degrees for first-time students and transfer students combined. Some programs were combined in the quadrant analysis because demand/yield data could not be broken out by degree type. Net revenue numbers for programs are the same regardless of quadrants used. Median for net revenue includes all programs.

# Net Revenue: Psych Has Highest Total Net Revenue by Program

Distribution of total net revenue by undergraduate program, 3-year averages

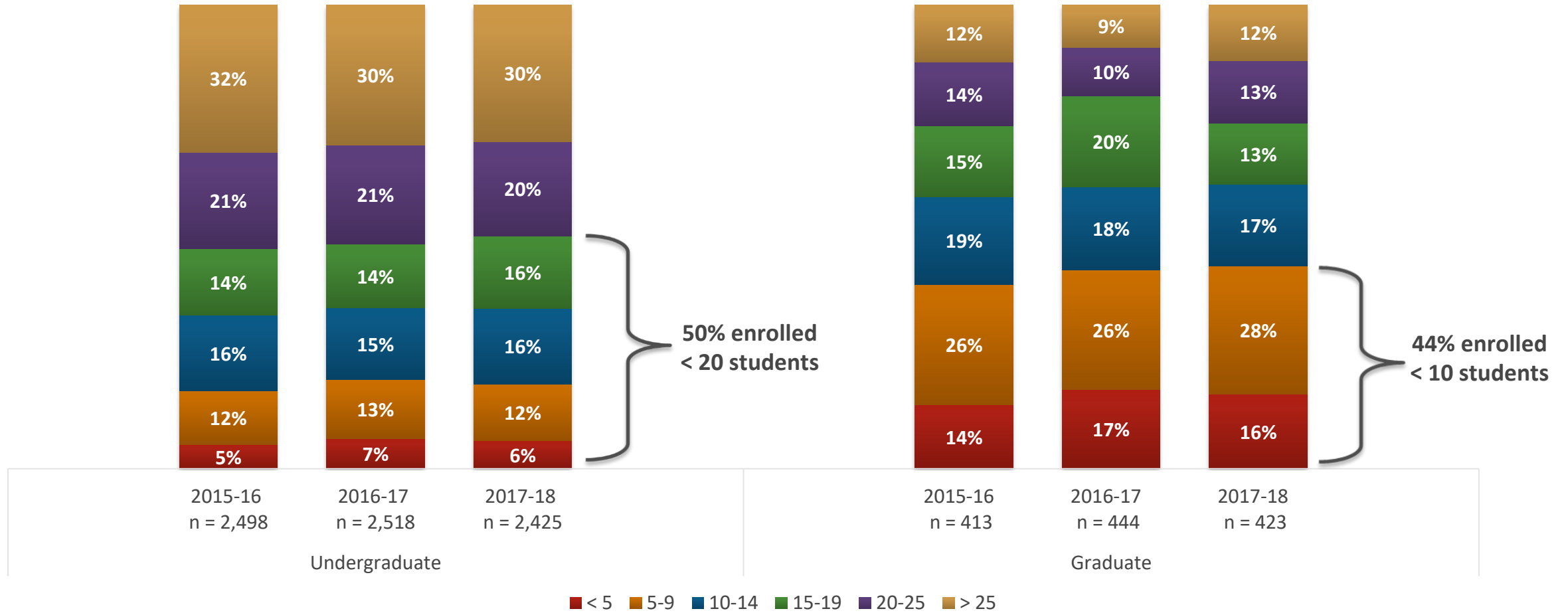


# Framework – Efficiency and Productivity Review

- Levers: How does the institution perform relative to the levers that impact the financial bottom line?
- Outcomes: What cost savings can be achieved from adjusting those levers?
- Benchmark: How does the institution compare to IPEDS peers?

# Lever: Reduce number of low-enrolled sections

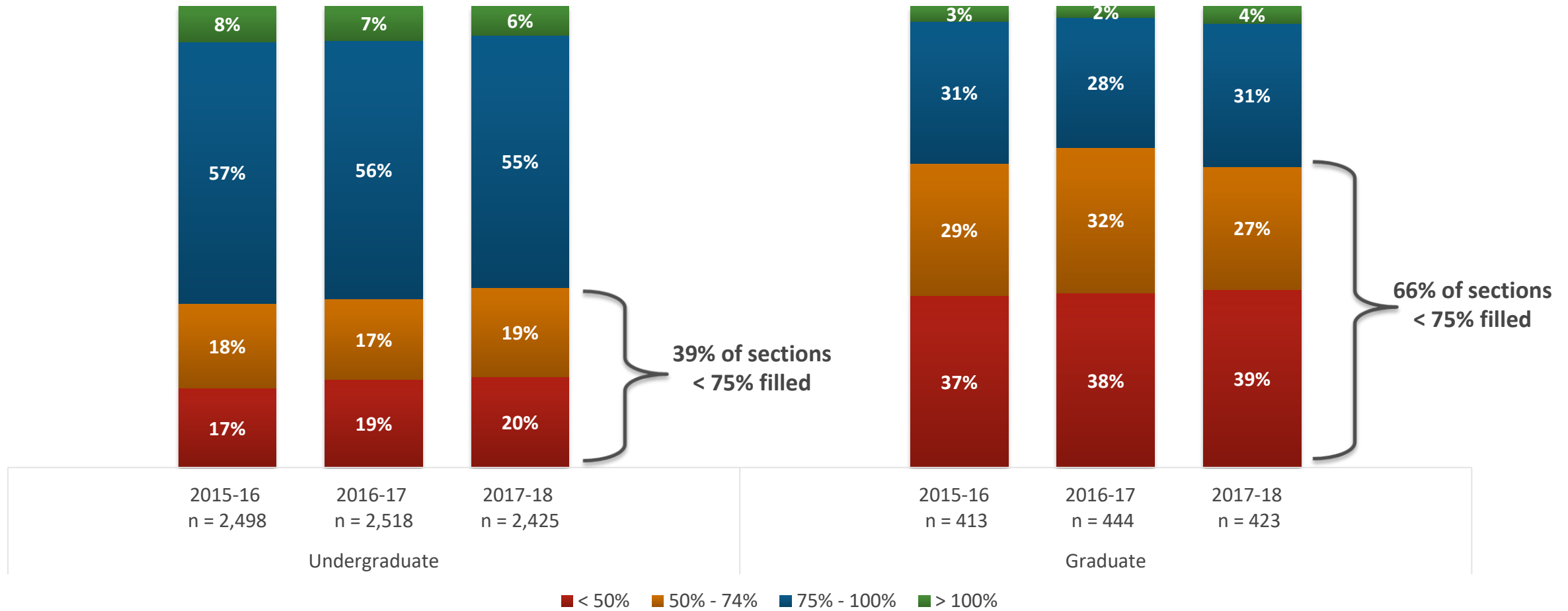
## Percent Distribution of Course Sections by Average Class Size



Excludes: Cross-listed, dual credit and off campus sections

# Lever: Improve fill rates

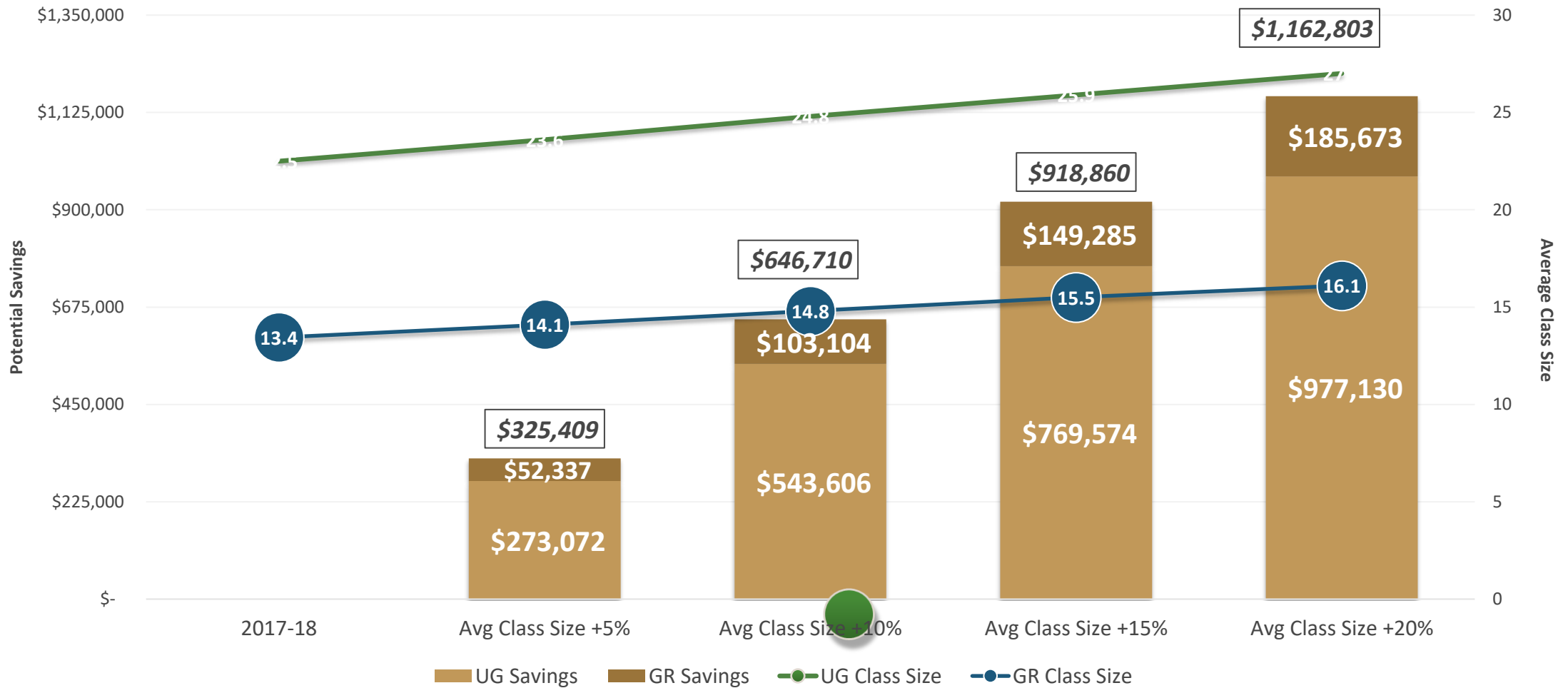
## Percent Distribution of Course Sections by Average Fill Rate



Based on university's definition of maximum capacity per section.  
 Excludes: Cross-listed, dual credit and off campus sections

# Outcome: Higher Average Section Size Results in Potential Savings

## Impact of Change in Average Class Size

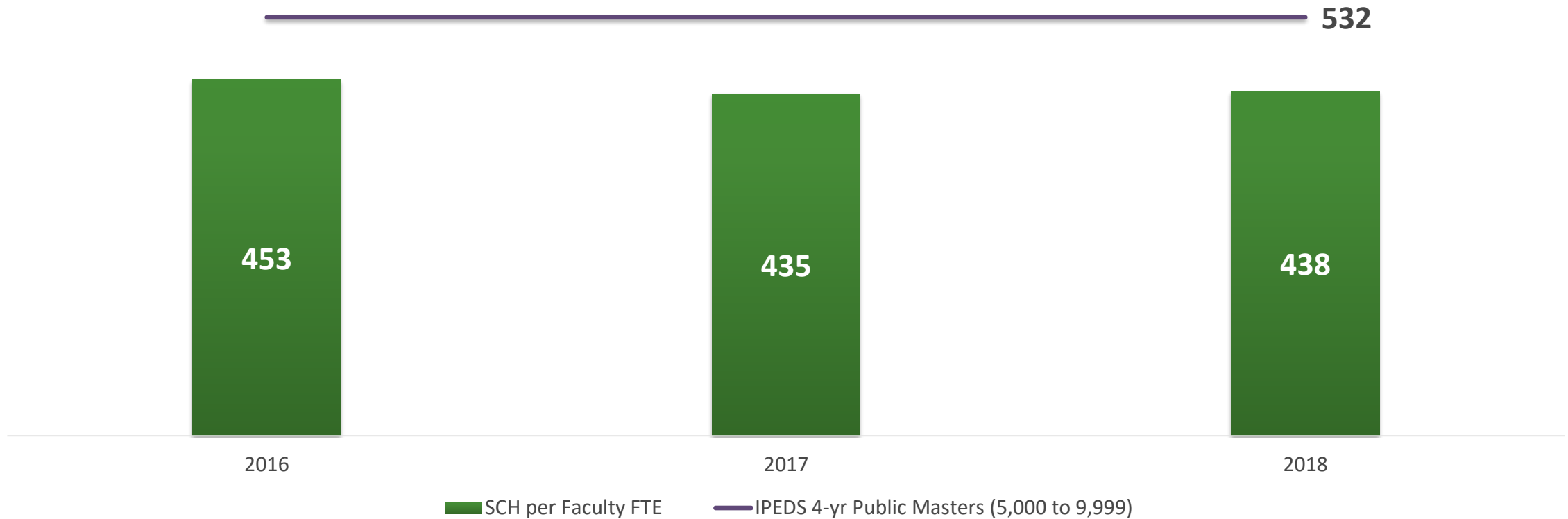


Note: Savings calculated using average part-time faculty rate



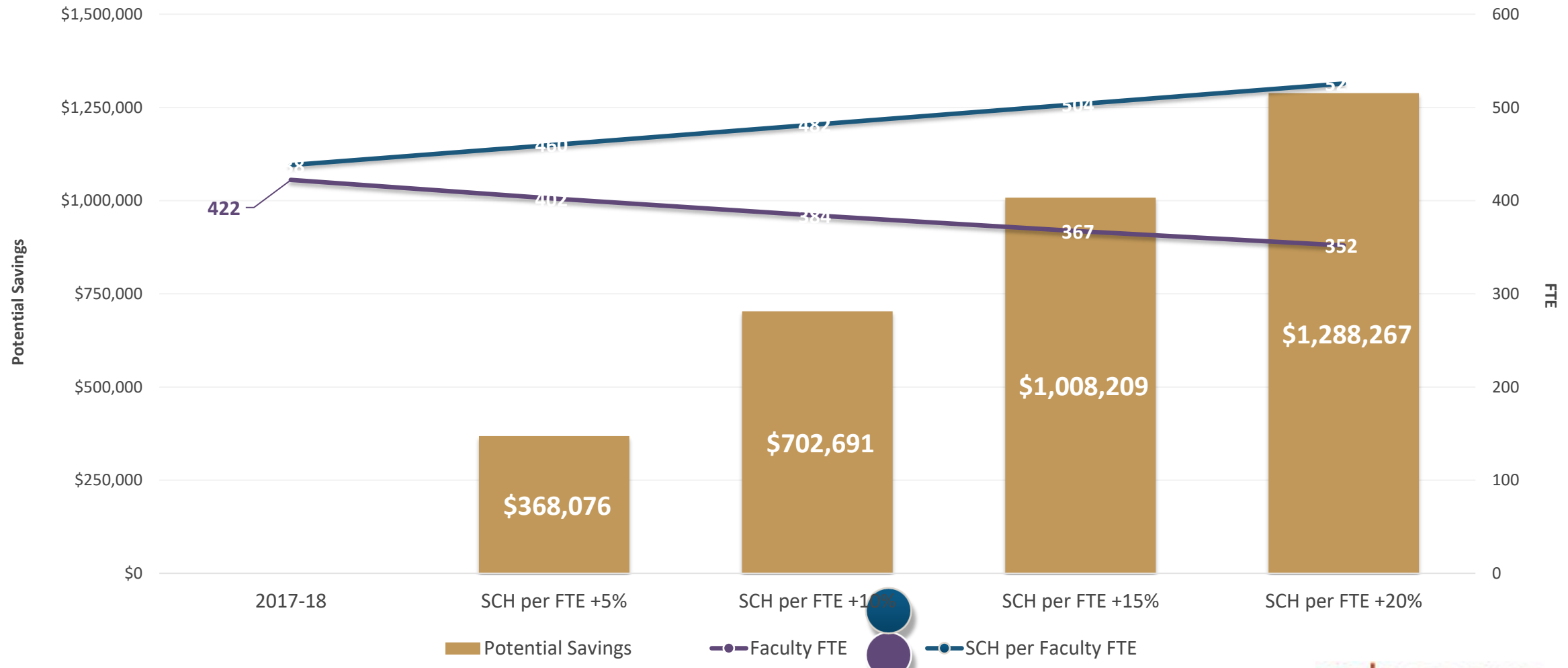
# Benchmark: SCH per Faculty FTE Below Benchmark & Declined 3% Since FY16

## Total Faculty FTE and SCH per Faculty FTE



# Outcome: Increasing SCH per Faculty FTE Has Potential Faculty Savings & Improved Productivity

## Impact of Change in SCH per Faculty FTE



Note: Savings calculated using average part-time faculty rate

# Data-Informed Decision-Making to Drive Reinvestment

- Savings generated through right-sizing the student-to-faculty ratio and increasing fill rates can be reinvested into the portfolio.
- Sample Institution identified \$107,000 in potential personnel savings just by increasing fill rates and reducing the number of polymer chemistry elective classes, which they plan to reinvest into the creation of certificate programs replacing minors they are phasing out.

Course	Year	Credits	Enrollment
Physical Chem II	2016-17	3	1
Physical Chem II	2017-18	3	1
Chem Lab	2016-17	2	1
Chem Lab	2016-17	2	1
Conducting Polymers*	2015-16	3	1
Conducting Polymers*	2017-18	3	1
Polymers in Nanotechnology*	2015-16	3	2
Polymers in Nanotechnology*	2016-17	3	6
Polymers in Nanotechnology*	2017-18	3	2

\*Optional electives, students can choose from multiple

# Market Review: How does the institution compare to peers?

Performed Better

Neutral

Performed Below

Based on a variance of +/- 10

Program	Competitor #1	Competitor #2	Competitor #3	Competitor #4	Competitor #5	Competitor #6	Competitor #7	Competitor #8	Competitor #9	Competitor #10	Competitor #11	Competitor #12
School of Business (Management)	Neutral	Neutral	Performed Better	Performed Better	Performed Better	Performed Below	Performed Better	Performed Better	Performed Better	Performed Below	Neutral	Performed Below
Teaching and Leadership (Elementary Ed K-6)	Performed Better	Performed Below	Performed Below	Performed Below	Performed Better	Performed Below	Performed Better	Performed Better	Performed Better	Performed Below	Performed Better	Neutral
Engineering Tech (Mechanical ET)	N/A	N/A	N/A	Performed Better	N/A	N/A	Neutral	Performed Better	N/A	Performed Below	Neutral	Performed Below
Hist Phil Soc Sci (Justice Studies)	Performed Below	Performed Below	Performed Better	N/A	Performed Better	Performed Below	Performed Below	Performed Below	N/A	N/A	Performed Below	N/A
Interdisc (General Studies)	Performed Below	Performed Below	Neutral	Performed Better	Performed Better	Performed Below	N/A	Performed Below	N/A	Performed Below	Performed Below	Performed Below
Family and Consumer Sci	N/A	Performed Below	N/A	Performed Below	N/A	N/A	N/A	N/A	N/A	Performed Below	Performed Below	N/A
Art	Neutral	Performed Below	Performed Below	Performed Below	N/A	Performed Below	Performed Below	Neutral	Neutral	Performed Below	Performed Below	Performed Below
Mathematics (BS)	Neutral	N/A	Neutral	Performed Below	Neutral	Neutral	N/A	Neutral	Neutral	Neutral	Neutral	Neutral
Chemistry	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Performed Below
Hist Phil Soc Sci (Sociology)	Performed Below	Neutral	Performed Below	Performed Below	Neutral	Performed Below	Neutral	Neutral	N/A	Neutral	Neutral	Performed Below
Hist Phil Soc Sci (History)	Neutral	Neutral	Performed Below	Performed Below	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Performed Below

\*Comparison of degrees conferred by program for 2018

# Market Review: Are program graduates in demand in the region?

Program	Average Increase	Total New Jobs
Business Administration and Management, Commerce/General	1.13%	1380
Construction Management	0.93%	160
Finance, General	1.61%	564
Human Resources Development	1.29%	107
International Business/Trade/Commerce	N/A	0
Marketing/Marketing Management, General	2.59%	406
Printing Management	-0.49%	-9
Speech Communication and Rhetoric	1.47%	71
Computer Systems Analysis/Analyst	2.10%	299
Biology Teacher Education	2.06%	36
Counselor Education/School Counseling and Guidance Services	1.36%	126
Education, Other	0.89%	14
Educational Leadership and Administration, General	1.61%	63
Educational/Instructional Technology	1.22%	37
Elementary Education and Teaching	1.00%	361
English/Language Arts Teacher Education	1.55%	26
Family and Consumer Sciences/Home Economics Teacher Education	1.23%	3
History Teacher Education	1.64%	11
Mathematics Teacher Education	1.51%	20
Music Teacher Education	1.80%	41
Physical Education Teaching and Coaching	1.74%	135
Psychology Teacher Education	1.85%	21
Spanish Language Teacher Education	1.79%	10
Industrial Technology/Technician	0.43%	8

# Combining program growth, market demand, and net revenue

Grow	Maintain	Shrink	Reevaluate				
College	Program	Short Name	Internal Growth (Up, Down, Neutral)	Performance Based on Competitor (Better, Worse, Neutral, N/A)	Workforce Findings (In demand, not in demand, neutral)	Net Revenue Performance 2018	Net Revenue Performance 3Y Avg.
College of Arts & Sciences	ART	Art	Down	Worse	Not In Demand	(\$105,580)	(\$92,116)
College of Arts & Sciences	BIOLOGY	BiolMS	Neutral	Neutral	Neutral	\$23,762	\$22,975
College of Arts & Sciences	BIOLOGY BS	BiolBS	Up	Better	Neutral	\$125,561	\$88,940
College of Arts & Sciences	BIOLOGY BSE	BiolBSE	Neutral	Better	Neutral	\$5,904	\$4,910
College of Arts & Sciences	BIOLOGY-MEDICAL TECHNOLOGY	BioMed	Down	Better	Neutral	\$4,723	\$3,079
College of Arts & Sciences	CHEMISTRY	ChemMS	Down	Better	Neutral	\$14,401	\$11,501
College of Arts & Sciences	CHEMISTRY BS	ChemBS	Down	Neutral	Neutral	(\$112,943)	(\$181,663)
College of Arts & Sciences	CHEMISTRY BSE	ChemBSE	Up	Better	Neutral	(\$16,471)	(\$17,574)
College of Arts & Sciences	POLYMER CHEMISTRY	PolymerChem	Up	Better	N/A	(\$444,201)	(\$355,665)
College of Arts & Sciences	POLYMER CHEMISTRY	PolyChemMS	Neutral	Neutral	N/A	(\$294,482)	(\$360,870)
College of Arts & Sciences	COMMUNICATION	CommMA	Down	Worse	Neutral	\$106,246	\$125,318
College of Arts & Sciences	COMMUNICATION BS	CommunicBS	Up	Better	Neutral	\$342,255	\$280,872
College of Arts & Sciences	COMMUNICATION BSE	CommunicBSE	Up	Better	Neutral	\$14,881	\$10,876
College of Arts & Sciences	ENGLISH	EnglMA	Down	Worse	Neutral	\$25,554	\$32,016
College of Arts & Sciences	ENGLISH BA	EnglBA	Down	Neutral	Neutral	(\$14,687)	(\$75,898)
College of Arts & Sciences	ENGLISH BSE	EnglBSE	Down	Neutral	Neutral	(\$10,281)	(\$53,567)
College of Arts & Sciences	MODERN LANGUAGES	ModLang	Neutral	Worse	Neutral	(\$25,282)	(\$38,995)
College of Arts & Sciences	CAREER AND TECHNICAL EDUCATION	CareerTechEd	Down	Better	In Demand	\$109,361	\$121,502
College of Arts & Sciences	FAMILY AND CONSUMER SCIENCES	FamConsSciBS	Down	Neutral	Neutral	\$196,485	\$213,989
College of Arts & Sciences	FAMILY AND CONSUMER SCIENCES EDUCATION/BSE	FamConsSciBSE	Up	Neutral	Neutral	\$90,874	\$71,806
College of Arts & Sciences	GEOGRAPHY	Geog	Down	Worse	Neutral	\$175,093	\$178,825
College of Arts & Sciences	HISTORY	History	Down	Neutral	Neutral	\$51,277	\$66,881
College of Arts & Sciences	HISTORY	HistMA	Down	Neutral	Neutral	\$73,571	\$89,260
College of Arts & Sciences	HISTORY/GOVERNMENT	HistGovt	Up	Neutral	Neutral	\$167,326	\$139,912
College of Arts & Sciences	JUSTICE STUDIES	JusticeStud	Down	Worse	In Demand	\$104,949	\$94,101
College of Arts & Sciences	POLITICAL SCIENCE	PolSci	Down	Worse	In Demand	\$196,156	\$173,679
College of Arts & Sciences	SOCIAL WORK	SocWork	Down	Worse	Not In Demand	\$104,642	\$95,850
College of Arts & Sciences	SOCIOLOGY	Sociol	Down	Worse	Neutral	\$246,312	\$191,718

## Insights after a decade of doing this work...

- This is not a math problem – the makeup of any academic portfolio is complex, and many factors must be considered when growing, maintaining, shrinking, or reevaluating programs.
- The most important outcome is informed decision-making.
- Change happens at the speed of trust – constant communication, opportunities for input and feedback, and authentic engagement with all stakeholders are essential for actual data utilization.

## To continue the dialog.....

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