



PRESENTATION HANDOUT

The Imperative for Innovation in Student Success at Scale

Examples from an R1 University

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University Dean for Educational Initiatives and
CEO of EdPlus at Arizona State University

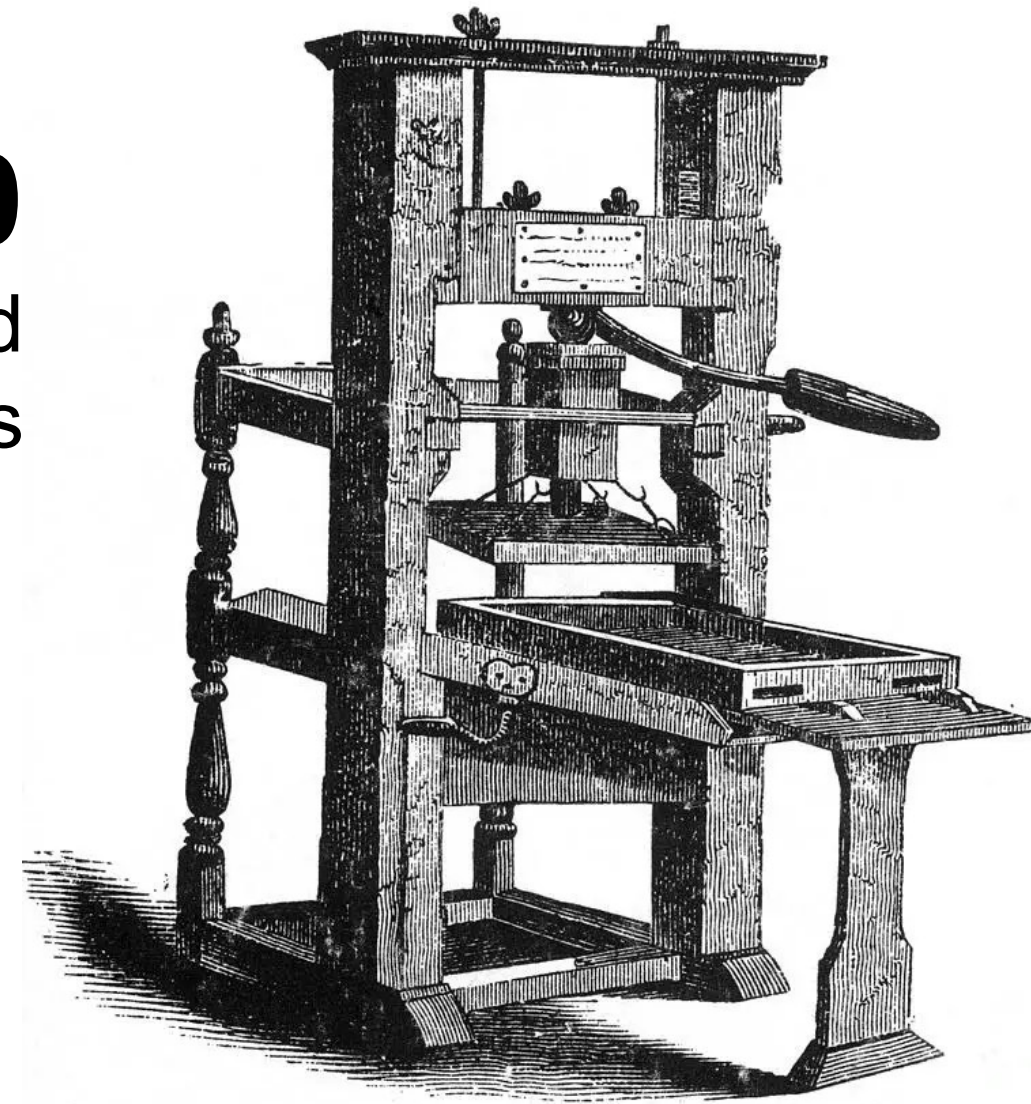


Enabling technologies allow
institutions to scale . . .

And for over 400 years, the printing press has been the primary enabling technology of universities.

1440

Movable type and
the wooden press



1584

First publication from
Cambridge
University Press



A historical map of the Atlantic Ocean, showing the Americas on the left and Europe and Africa on the right. The map is titled 'ATLANTIC OCEAN' and includes various geographical features like 'NEW AMERICA', 'NORTHERN OCEAN', and 'AFRICK'. A white line with arrows at both ends connects a blue dot on the North American coast (representing Boston) to a red dot in Europe (representing Cambridge).

1713

A scholar traveling
from Boston to
Cambridge, and back,
having spent a year
taking courses from
Sir Isaac Newton

1713

Cambridge University
Press publishes
Newton's *Principia*.

PHILOSOPHIÆ
NATURALIS
PRINCIPIA
MATHEMATICA.

Autore ^{adco} J. S. NEWTON ^{Equitis Aurato,} Trin. Coll. Cantab. Soc. Matheseos
Professore *Lucasiano*, & Societatis Regiæ Sodali.

et Societatis Regiæ Societatis præside.

IMPRIMATUR.
S. PEPYS, Reg. Soc. PRÆSES.
Julii 5. 1686.

LONDINI,

Jussu Societatis Regiæ ac Typis Josephi Streater. Prostat apud
plures Bibliopolas. Anno MDCLXXXVII.

THE
New-England
PRIMER

Enlarged.

For the more easy attaining the true
Reading of ENGLISH.

To which is added,
The Assembly's Catechism.

PHILADELPHIA:

Printed and Sold by *B. Franklin*, and
D. Hall, in *Market-street*, 1764.

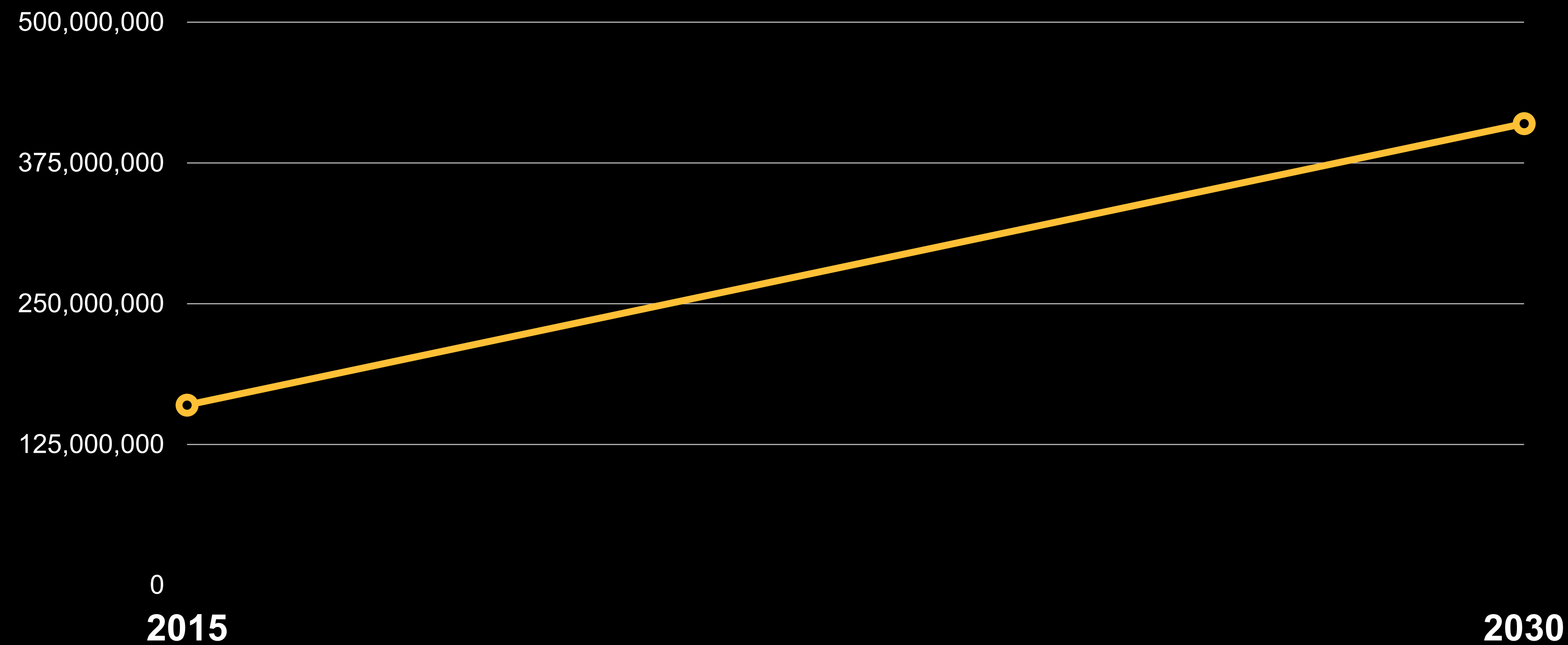
The textbook

The background features a dark gray field with a series of concentric circles and a spiral pattern in lighter shades of gray, creating a sense of depth and movement.

The current state:

**It is imperative that universities
continue to scale**

The demand for higher education will grow from
160,000,000 to 410,000,000*



** UNESCO Global High-Level Forum, Paris Report, June 2015*

The demand for higher education will grow from
160,000,000 to 410,000,000*

To meet that demand the world would have to build 4
universities that each serve 80,000 students...

80K

80K

80K

80K

...every week, every year, for 15 years.

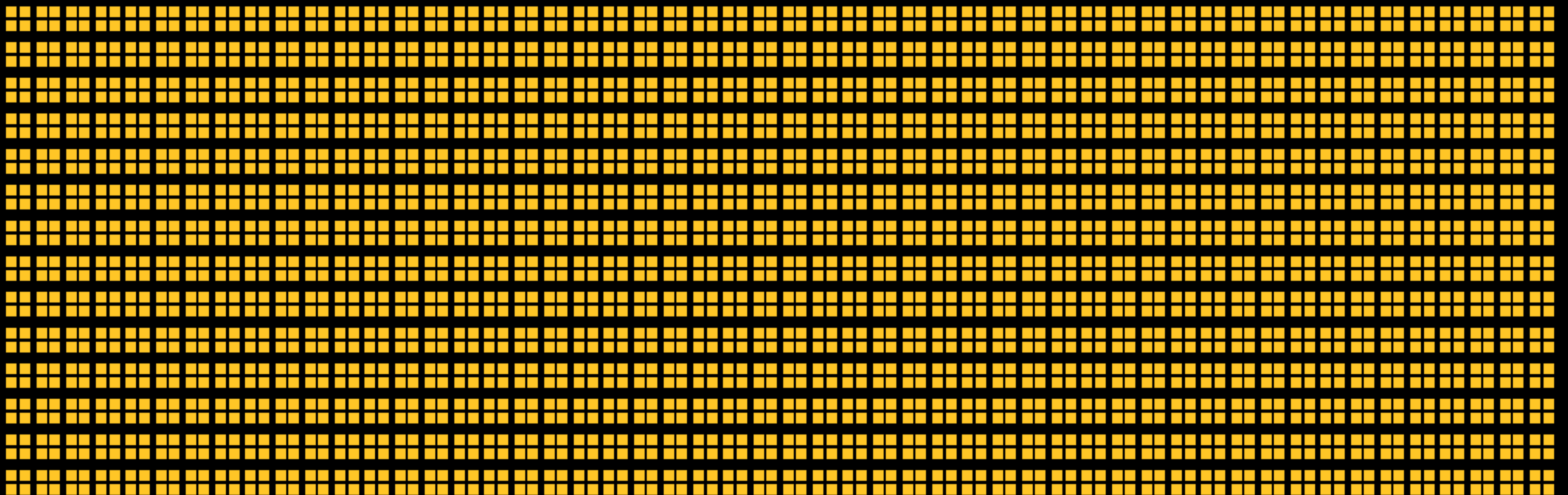
Every week



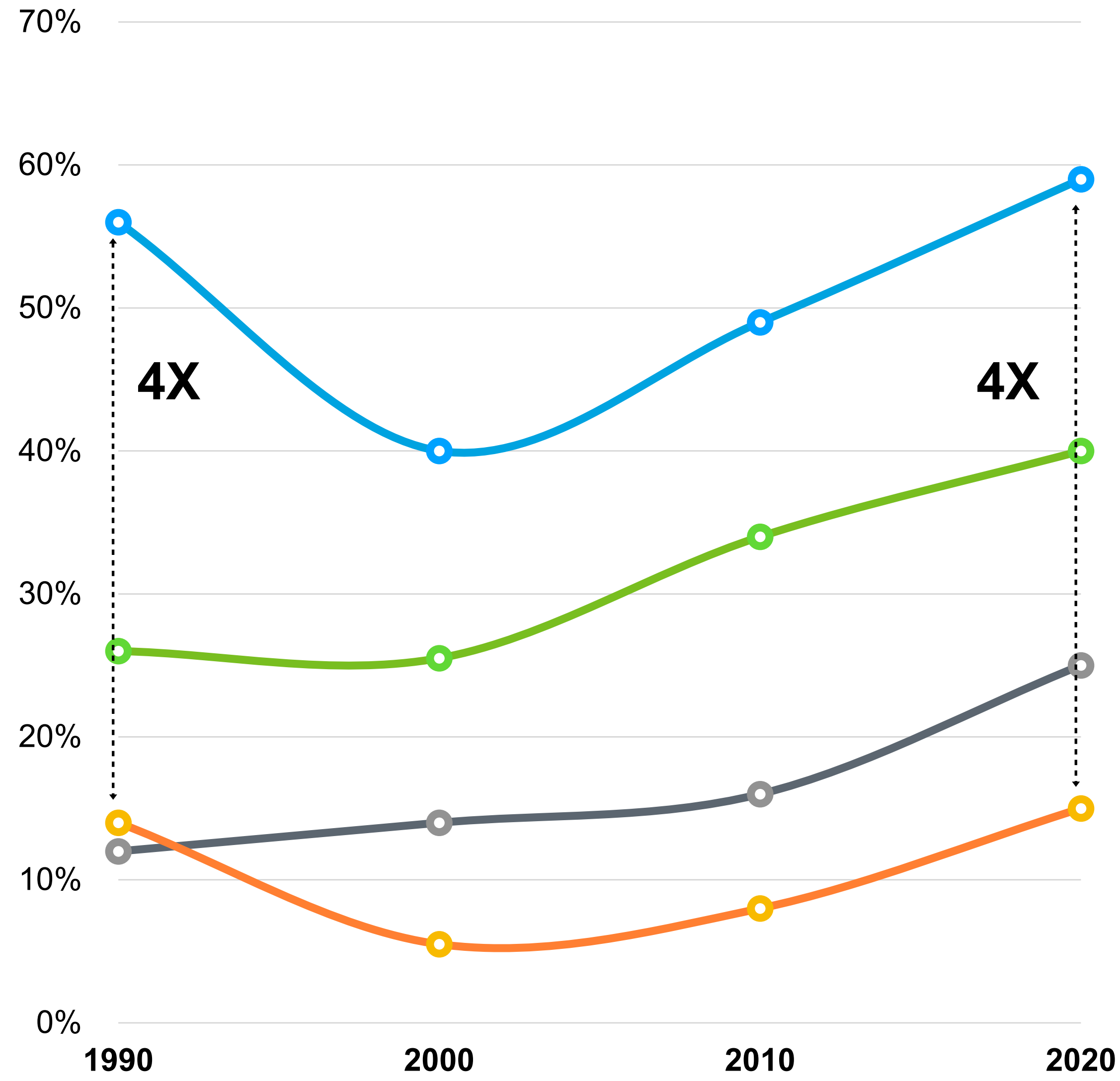
Every year



For 15 years



Estimated bachelor's degree attainment by age 24 for dependent family members by family income quartile: 1970 to 2020



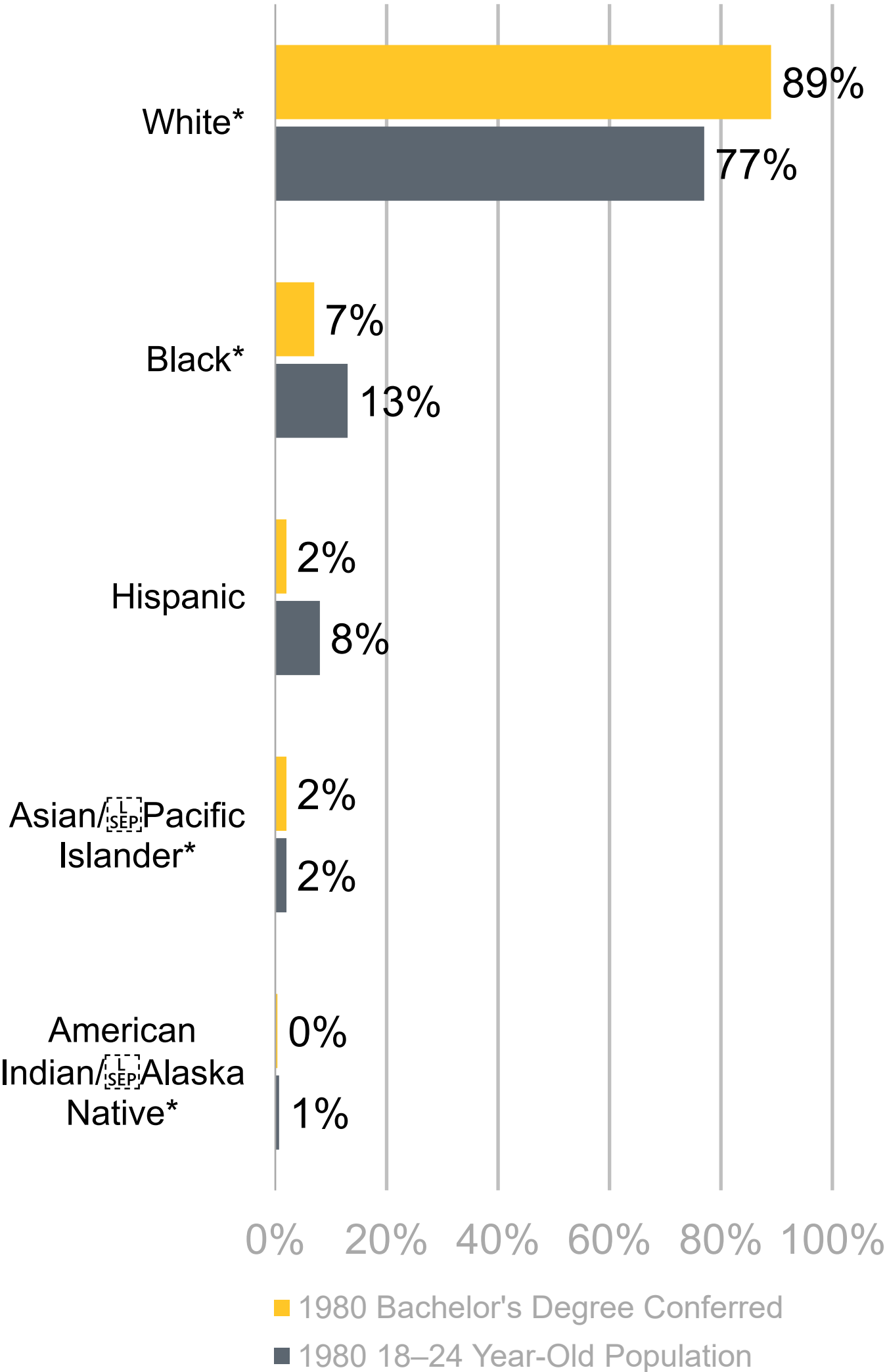
Comparing 1990 to 2020, there has been **high persisting inequality in the percentage of bachelor's degrees awarded to the richest and poorest dependent students by age 24**

1990	2020
4 times more likely	4 times more likely
for highest quartile to attain bachelor's degree than lowest quartile	for highest quartile to attain bachelor's degree than lowest quartile

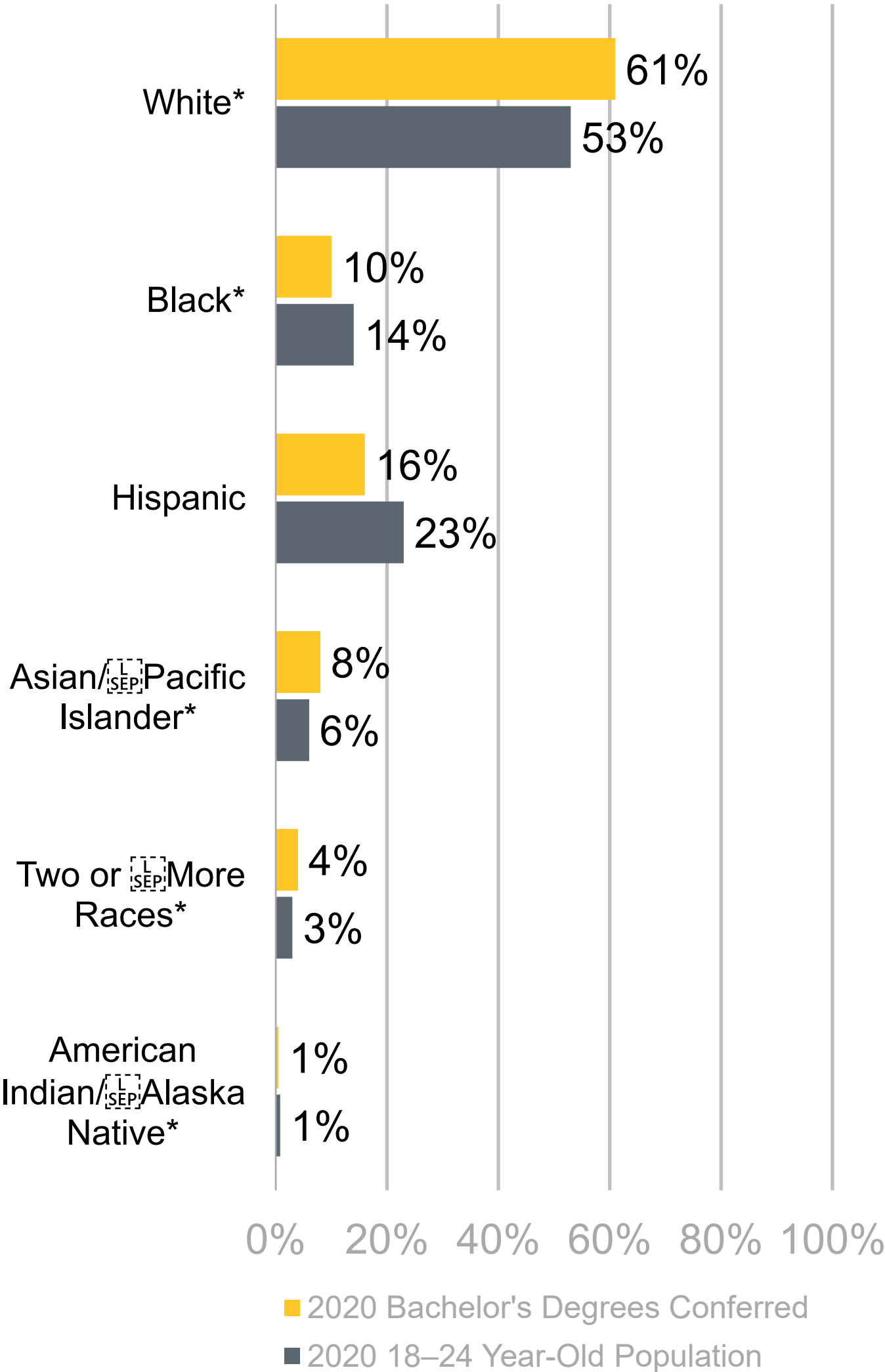
- Fourth (Highest) Quartile
- Third Quartile
- Second Quartile
- First (Lowest) Quartile

Distributions of associate's and bachelor's degrees conferred to U.S. citizens
and distribution of the civilian population by race/ethnicity: 1980 and 2020

1980 Associate's and Bachelor's



2020 Associate's and Bachelor's

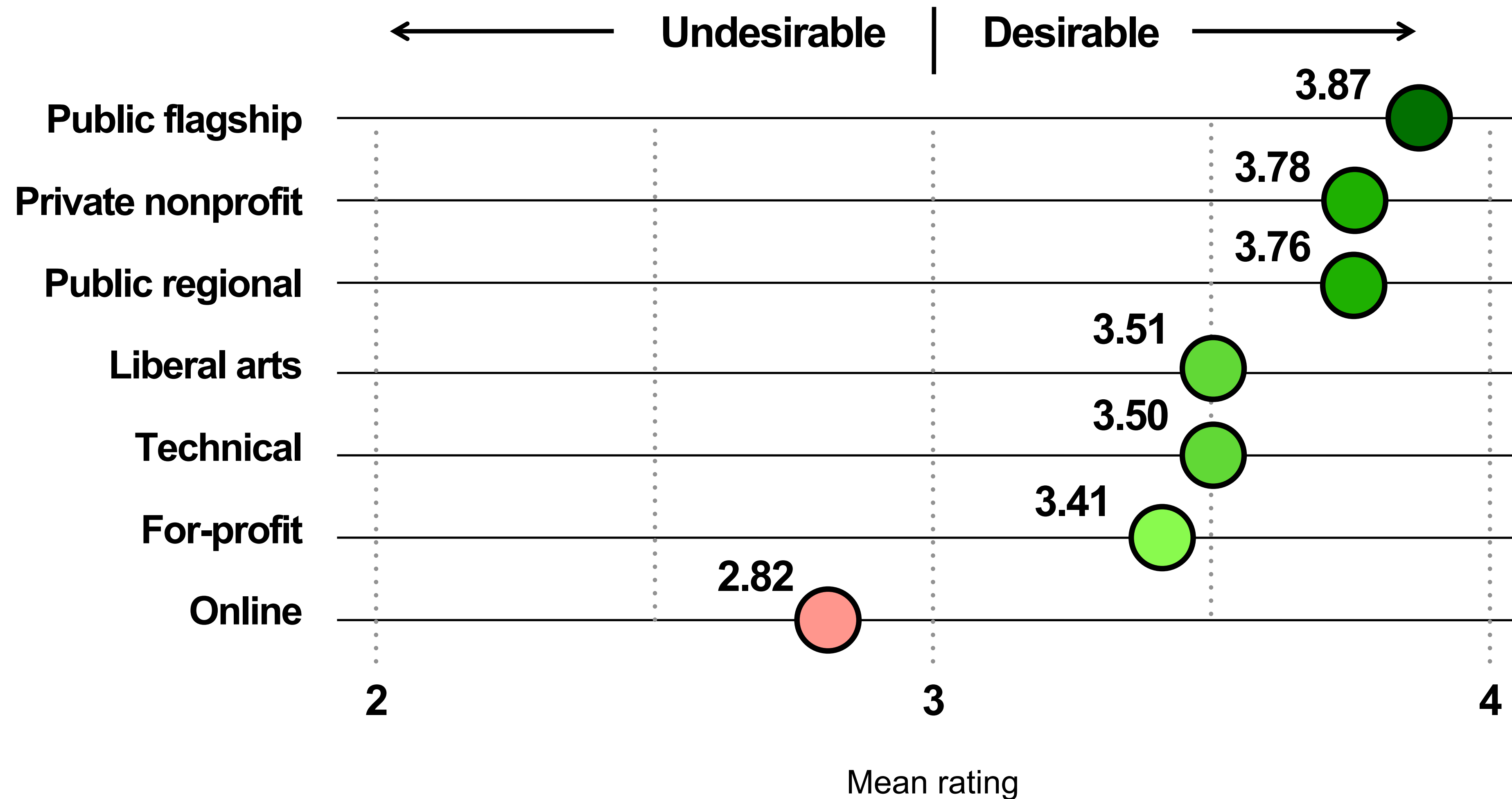


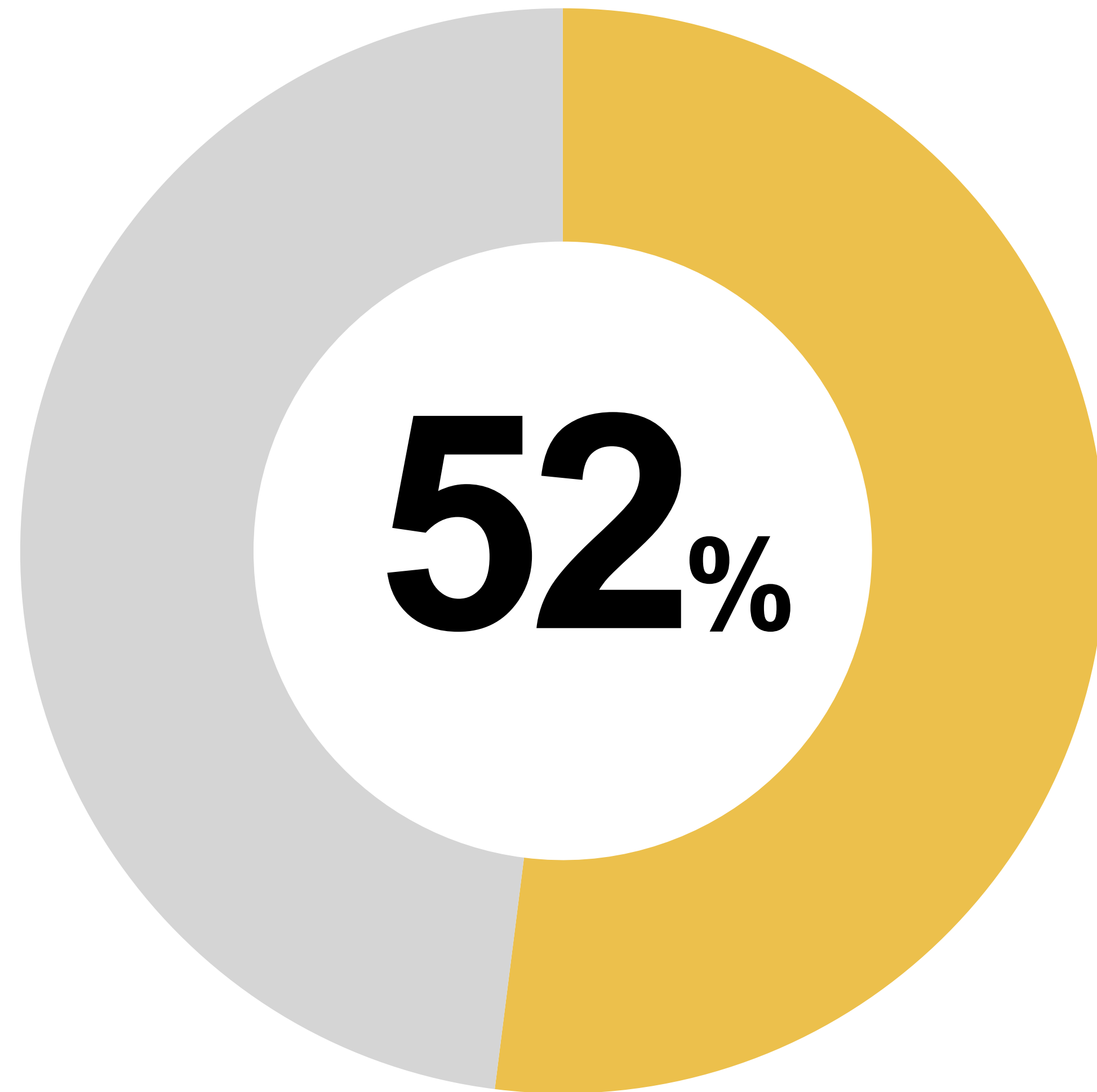
The representation of Blacks and Hispanics among degree recipients has increased since 1980, but **Blacks and Hispanics continue to be underrepresented among degree recipients** relative to their representation in the population.

The current state:

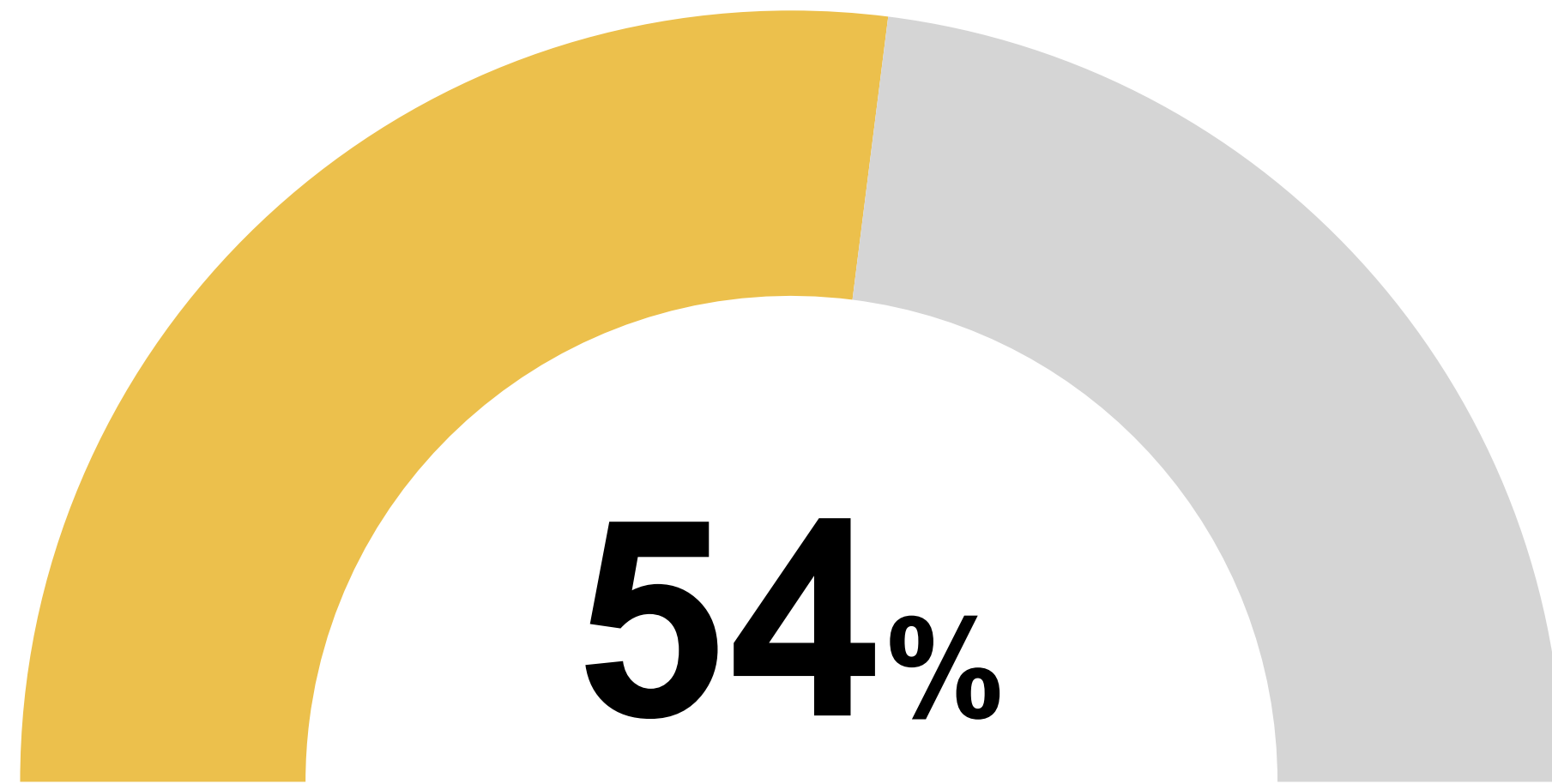
Higher education attempts to scale have done so with little attention to quality.

Employers prefer all types of colleges — except those online.

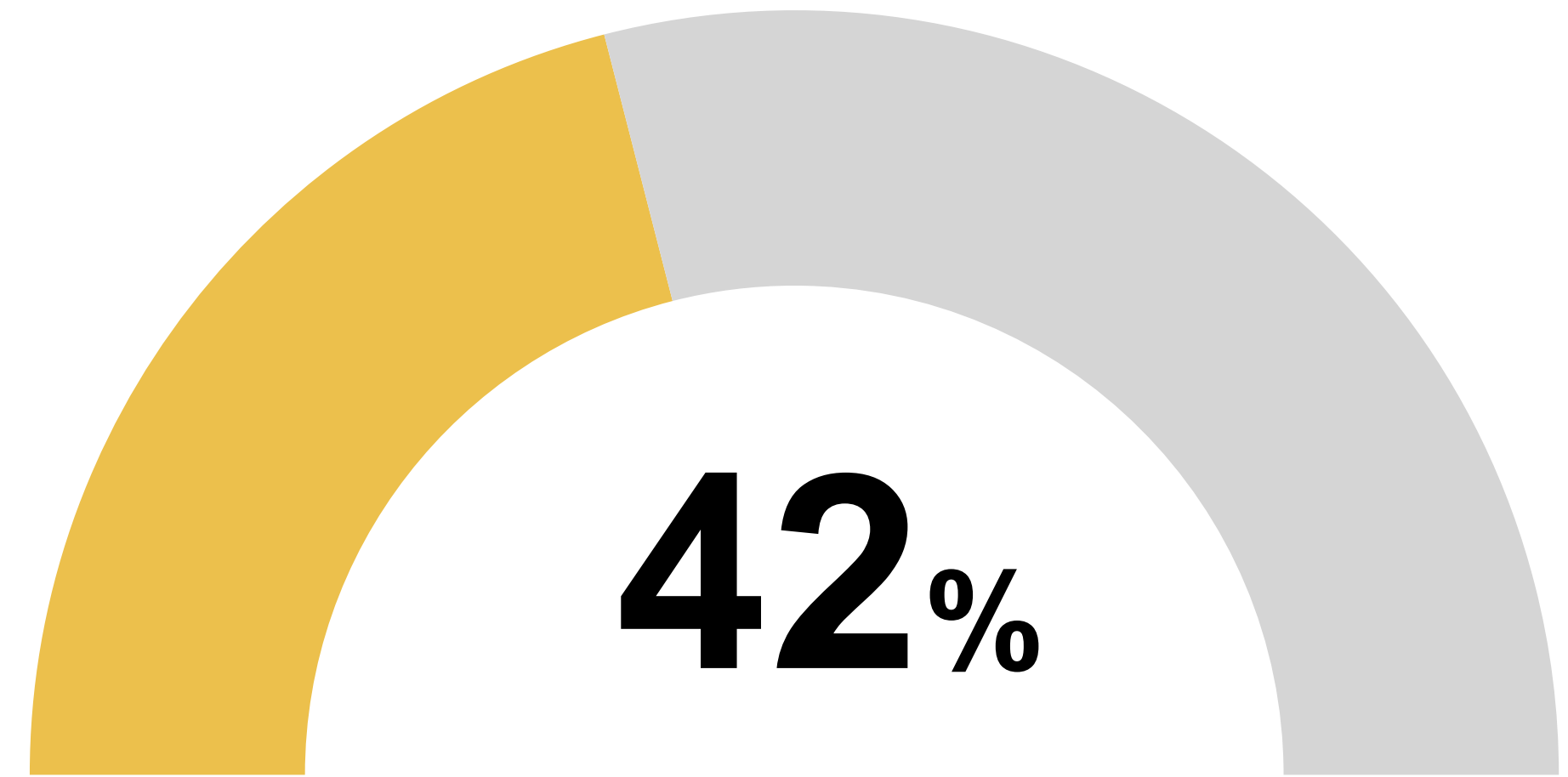




Adjunct faculty have complete control of the design and/or content of over half of all online courses.



Most online adjuncts are not given policies on time requirements for **responding to student discussion posts or grading assignments.**



Many online adjuncts receive no set guidance on the time they have to **respond to student inquiries.**

“

The pandemic showed us that online experiences aren't all the same — it's more than just the content, its also the services that create a holistic student experience”

Kristi DePaul, Inside Higher Ed

U.S. News and World Report rankings (as a quality indicator) mostly exclude the mega online schools.



148,000
online students

**Does not
submit**



135,000
online students

**Does not
submit**



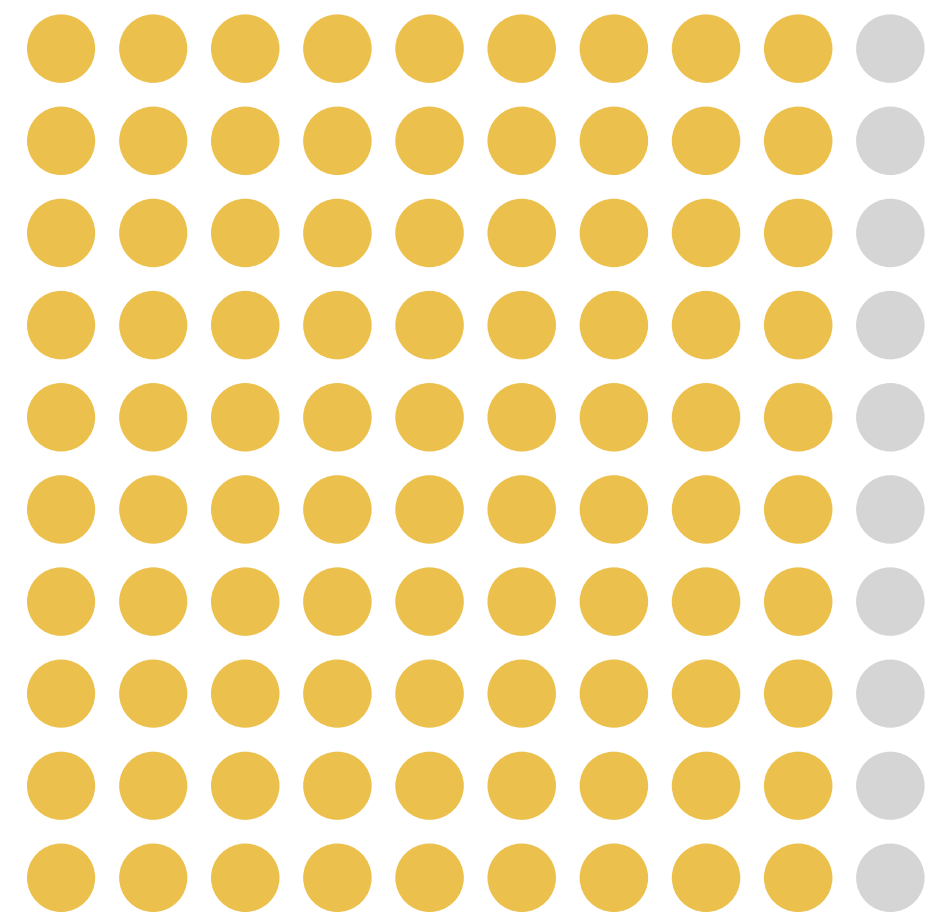
108,000
online students

**Ranked
259**

The current state:

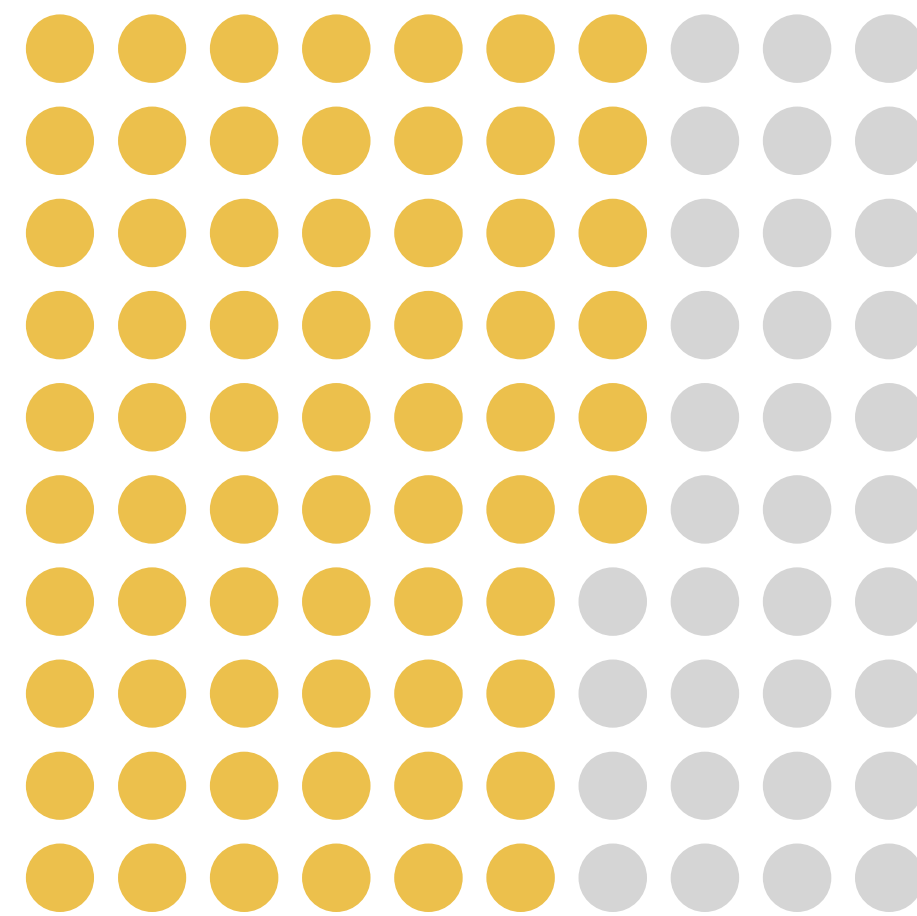
**Higher ed is increasingly
tasked with serving students
who are not prepared, and
we are failing them.**

Today's higher education system lets down more people than it empowers.



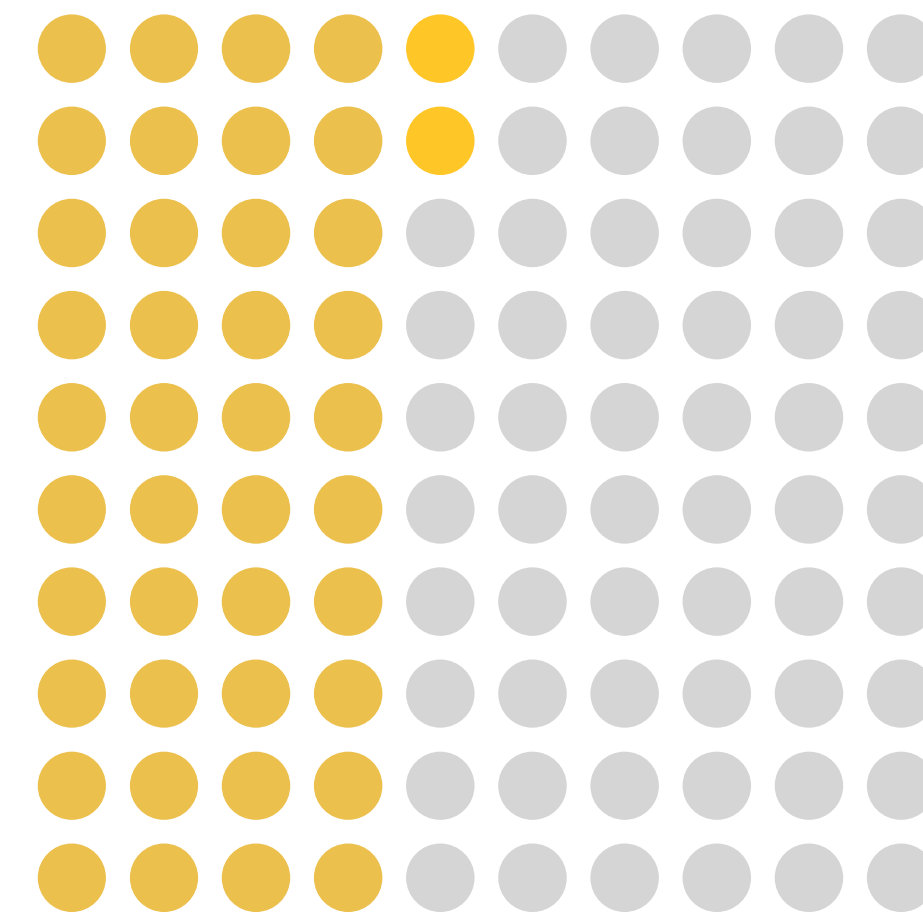
90%

of high school students
say they want to earn
a degree



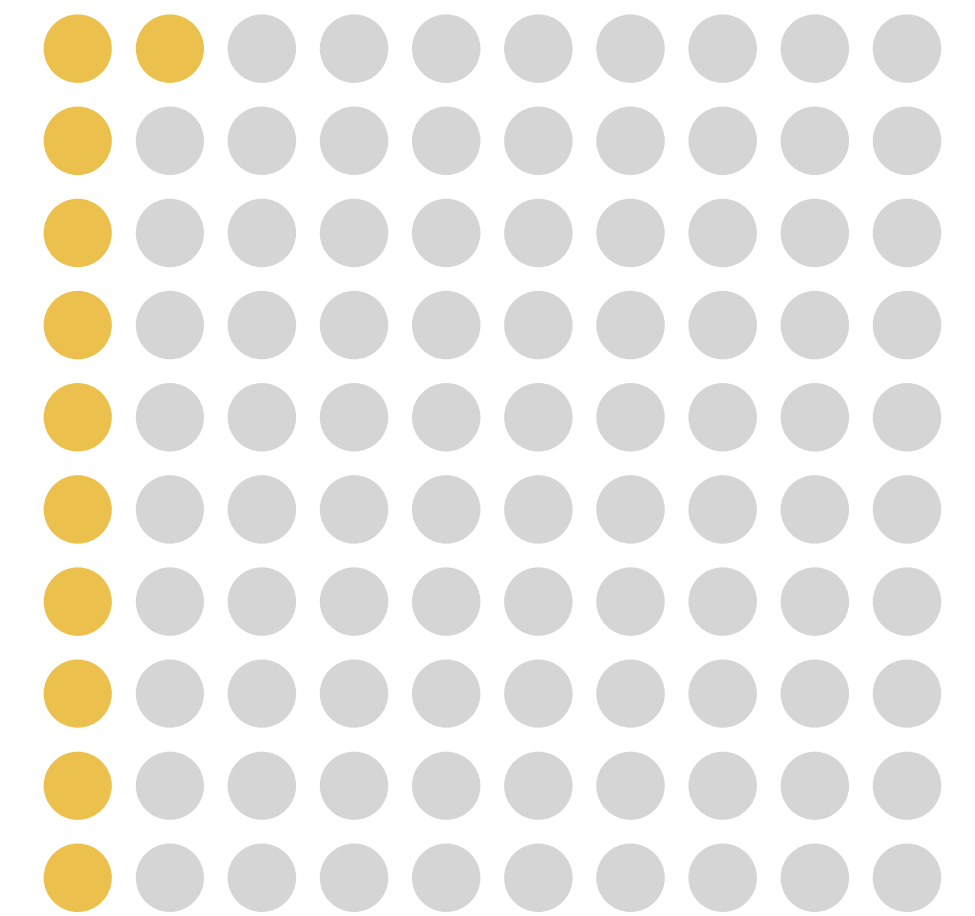
66%

will enroll in college



42%

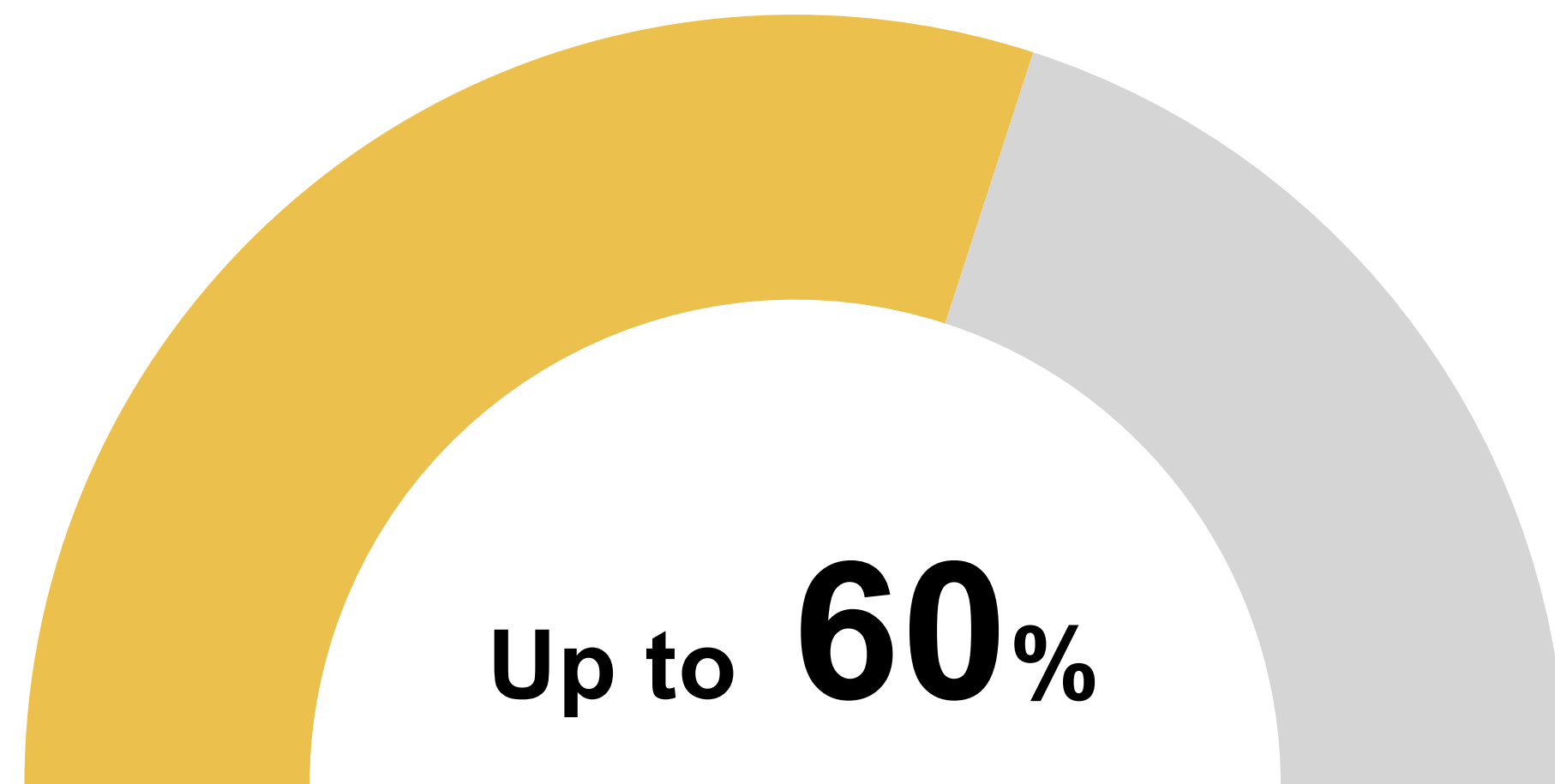
will graduate within six
years



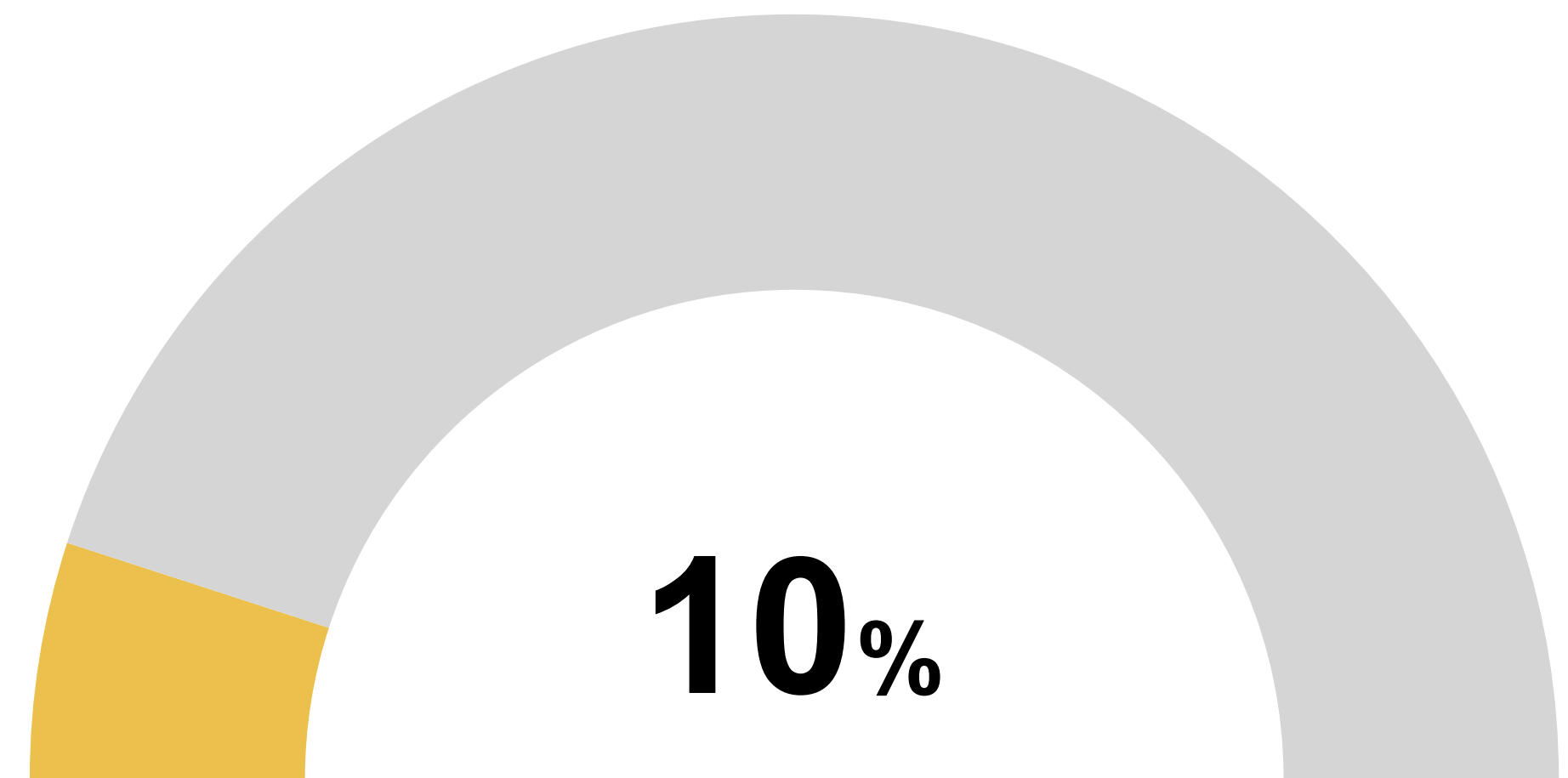
11%

of students from the
lowest income quartile
families will earn a
degree by age 24

National rates on remediation are a significant problem.



Up to 60% of first-year students need remediation in English, Math or both



For those who need remediation, graduation odds drop to 1 in 10.

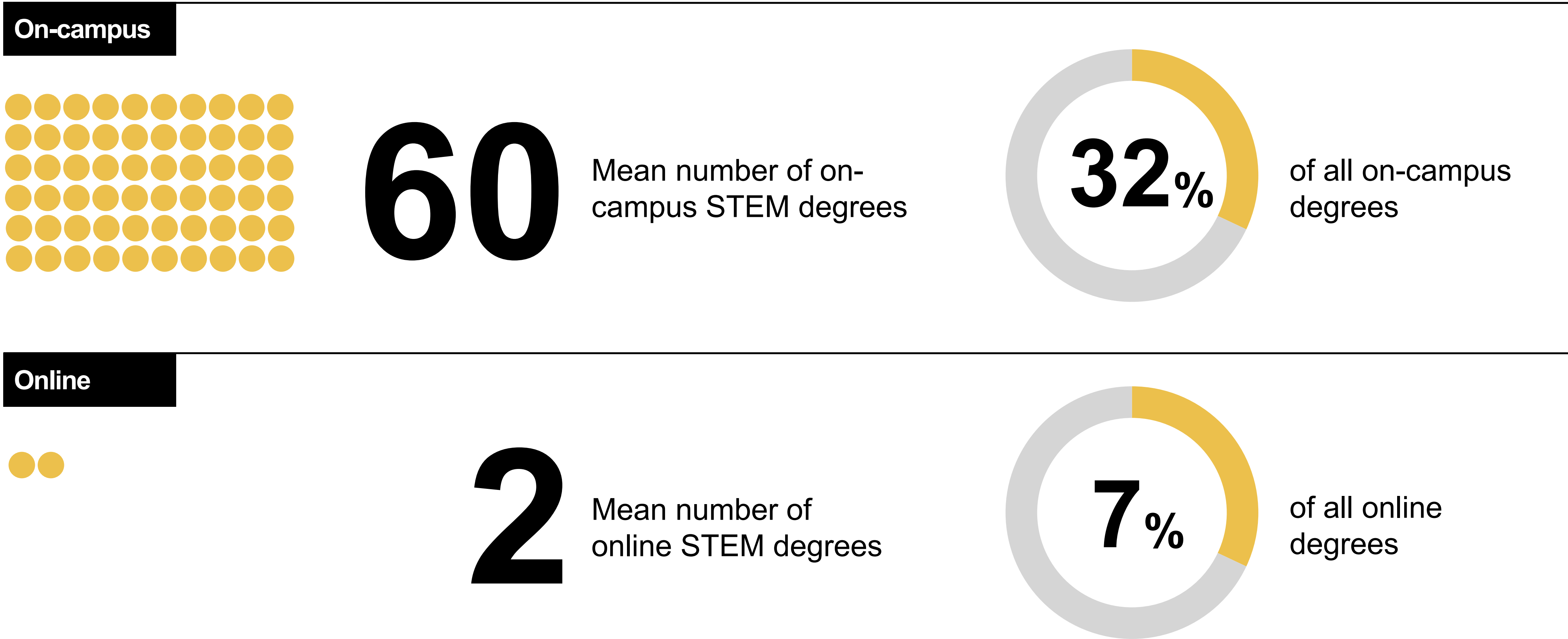
The current state:

**Many offering online programs
don't focus on STEM.**

Throughout the 2020s, more than 1,000,000 STEM jobs are projected to be added, representing a nearly **38% higher growth rate** than all other industries.

STEM and non-STEM undergraduate degree programs from six comprehensive state universities*

* Penn State University, Ohio State University, University of Florida (UF), University of Maryland, University of Minnesota, and University of Wisconsin (all are land-grant, AAU institutions with medical schools).



The current state:

**OPMs as technology enablers
face major challenges**



OPMs can't help us scale all the way.

Operationally: OPMs take a big cut of revenue (40% to 60%) and have the agency problem of difficulty in funneling sufficient leads once they reach a certain size.



OPMs face daunting political challenges.

Politically: The Department of Education believes OPMs are contributing to rising tuition and have insufficient accountability.

The current state:

Trying to achieve scale by purchasing an online school is a risky strategy.

UNIVERSITY OF
ARKANSAS

GRANTHAM
UNIVERSITY

“

The hope that combining a for-profit institution with a well-known public university brand will kickstart demand hasn't been borne out.”

“U of Arkansas System is combining 2 online colleges to boost growth. Will it work?”

Higher Ed Dive



“

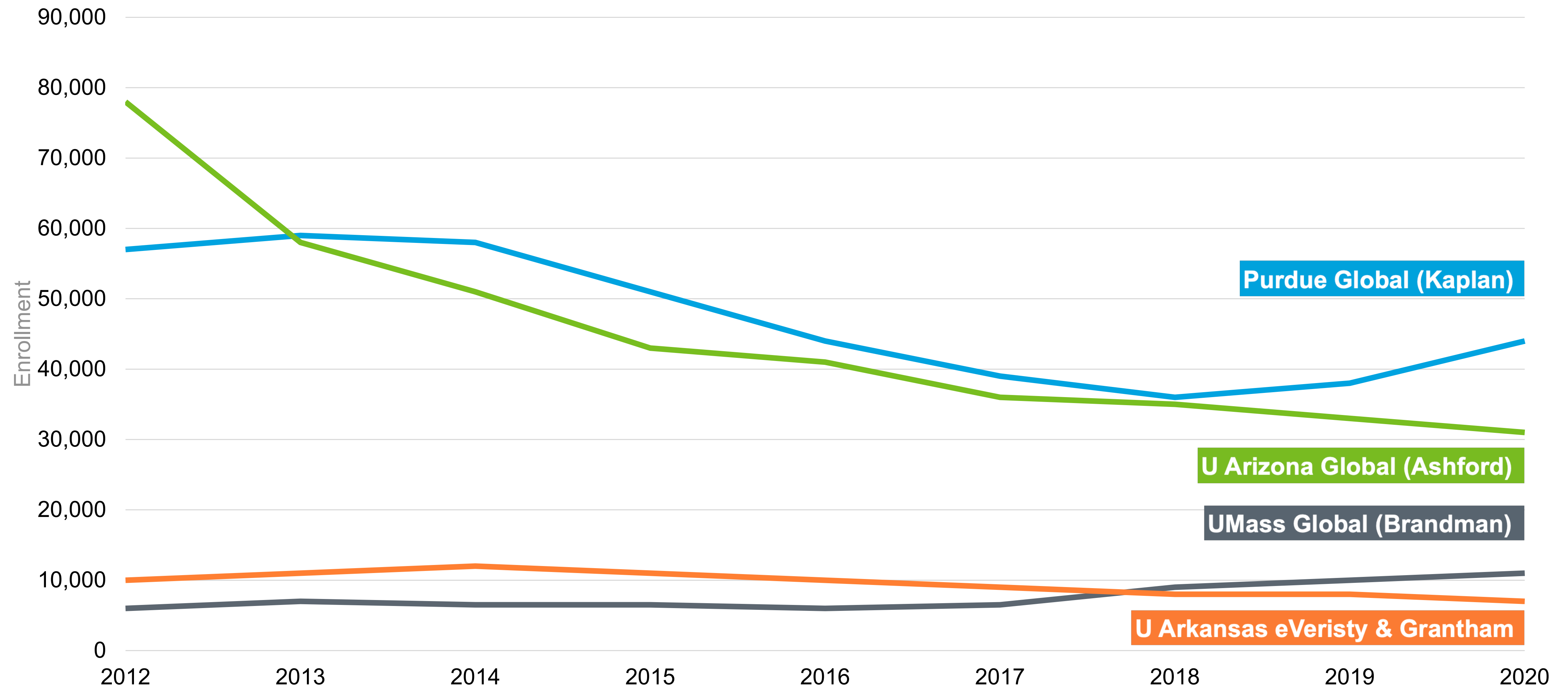
The court ordered Ashford University and Zovio to pay more than \$22.37 million in penalties for **encouraging students to enroll by giving them misleading information** about cost and financial aid, job market outcomes, the pace of degree programs, and transfer credits.”

"Lawsuit Against Ashford University and Zovio Prevails"

Inside Higher Ed

Total Enrollment: “Global” Campuses

per IPEDS Data



These current market solutions lead
to worse outcomes for **everyone**.

Quality

Student
Preparedness

Degrees
Available

OPMs

Spending \$1

Students

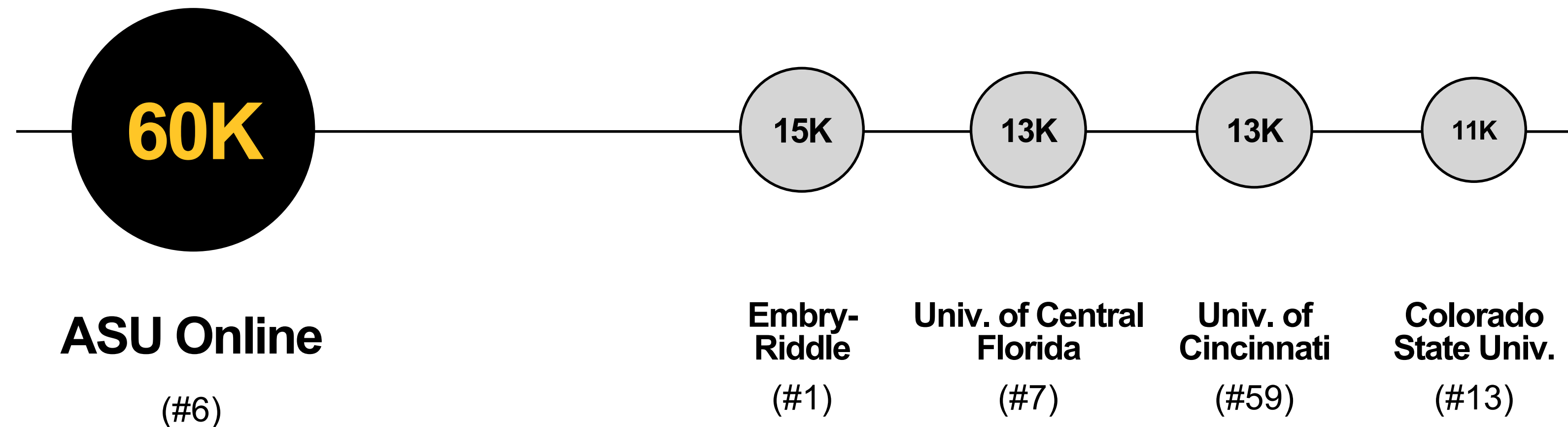
Workforce

Society

It is possible to scale with quality.

Out of the top 100 institutions ranked by U.S. News and World Report in its online undergraduate rankings,

only 5 have enrollments >10,000



137

**ASU Online
STEM programs**

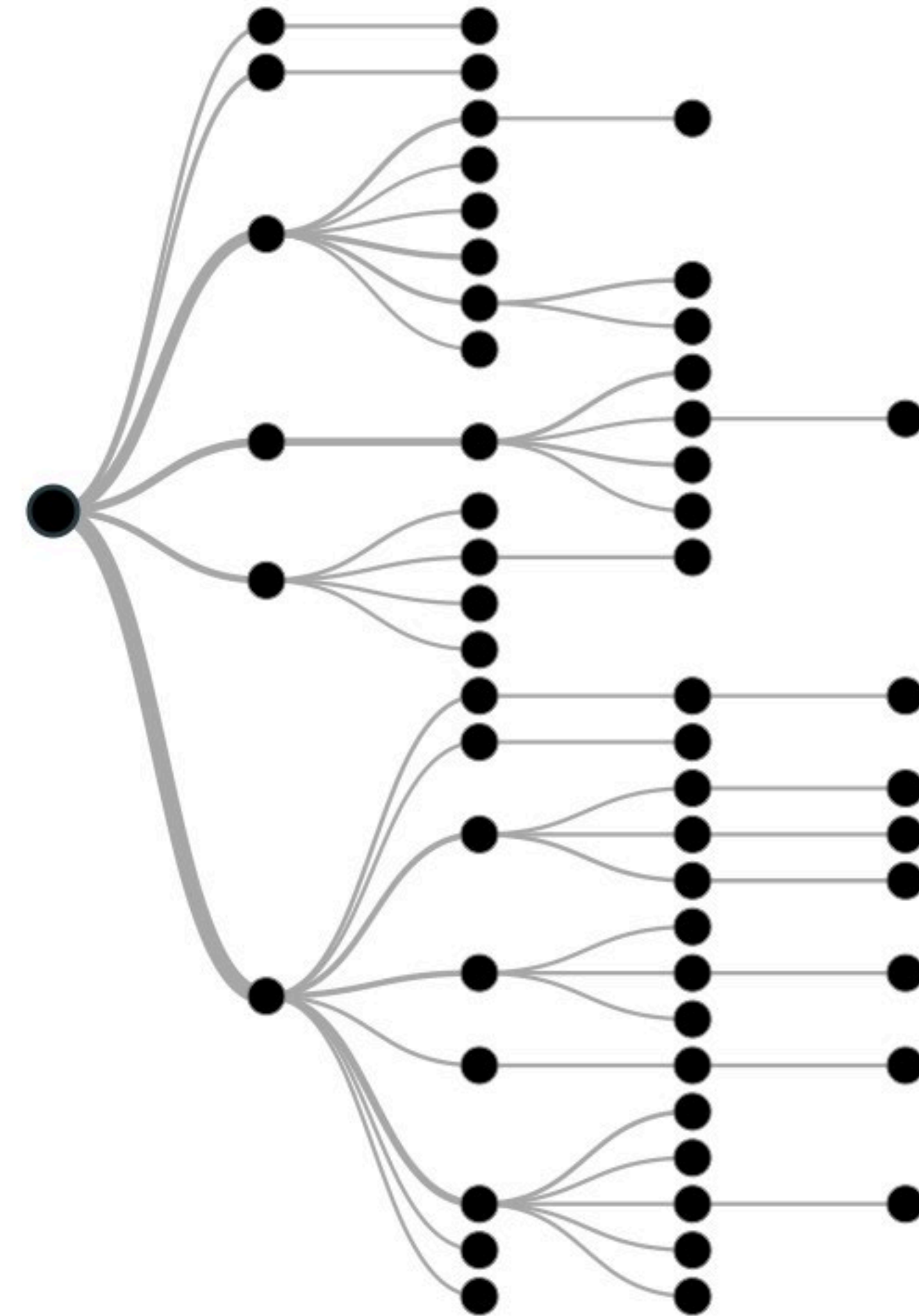
(UG and Grad)

46%

**of all ASU Online
programs**

(UG and Grad)


The future state:
Intentional design
a way to
scale with
quality





Organic change

Adapt in response to
external pressure or
environmental stimulus;
incremental in scale
and scope



Designed change

Devise a course of action
aimed at changing existing
situations to preferred ones

Intentional Design has
been a comprehensive
strategy and approach to
organizational change at
Arizona State University

Transformational change at ASU

Key organizational characteristics

**Clear guiding
cultural values**

**Carefully selected
leadership team**

**Dedicated design and
management professionals**

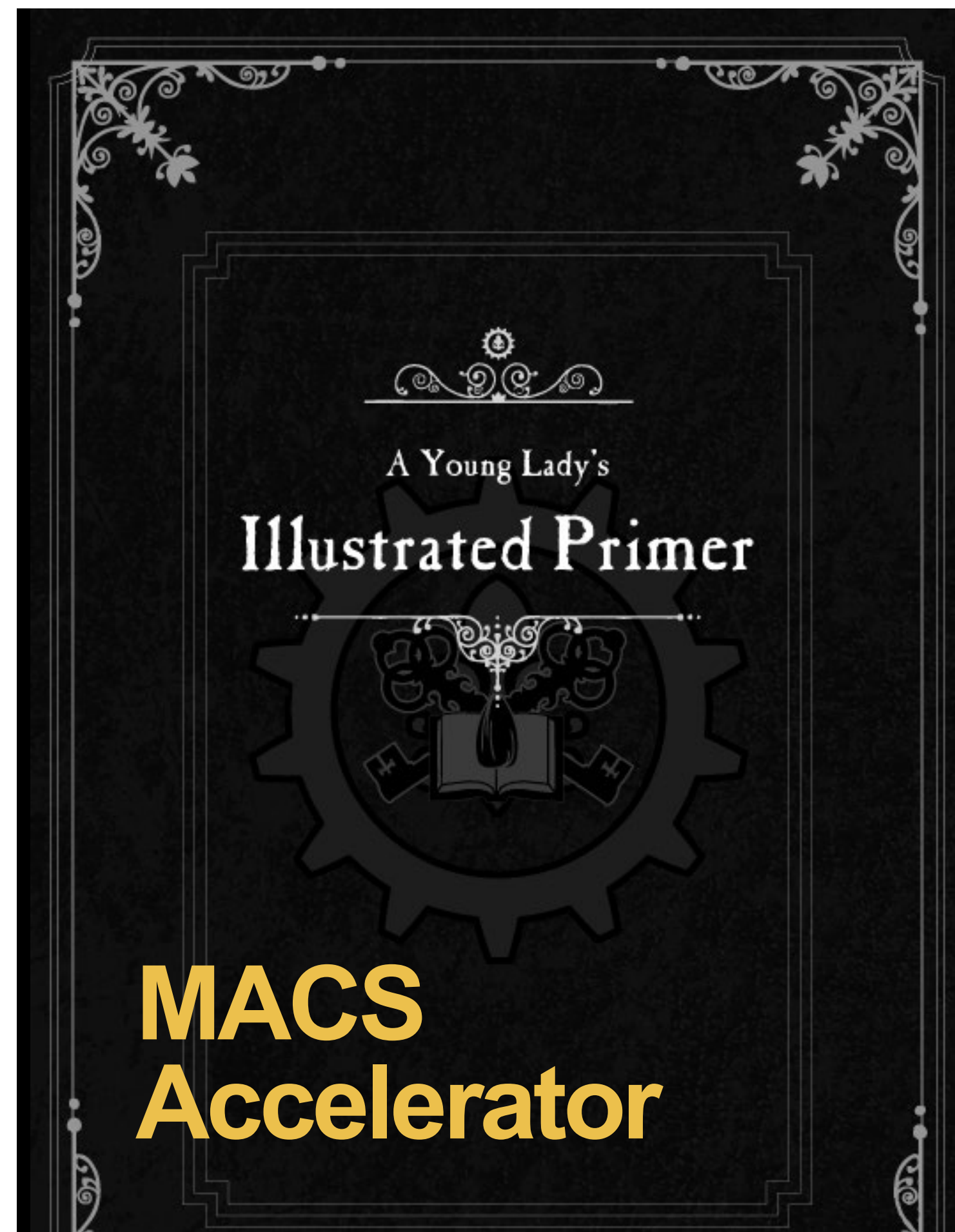
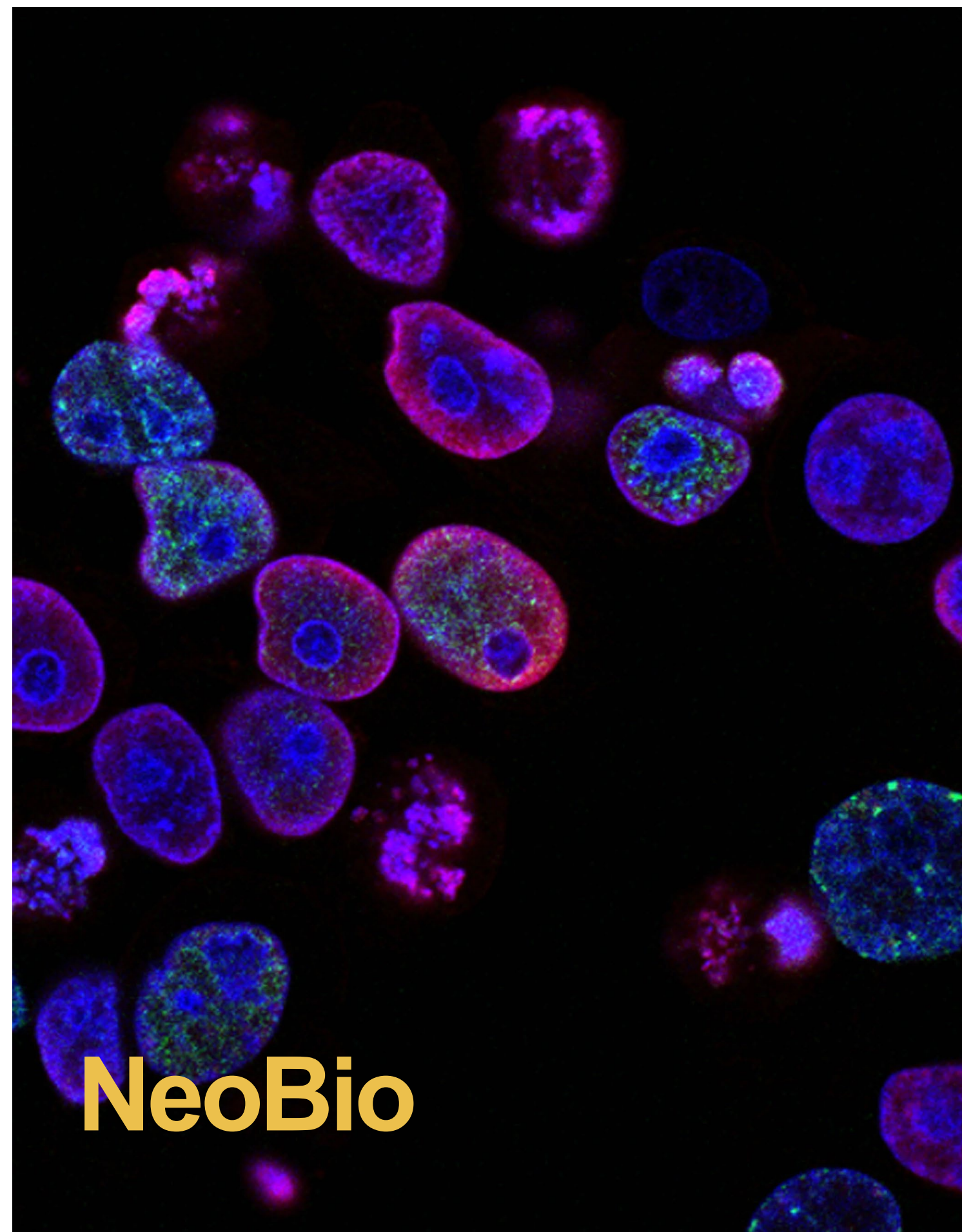
**Matrixed organizational
structure**

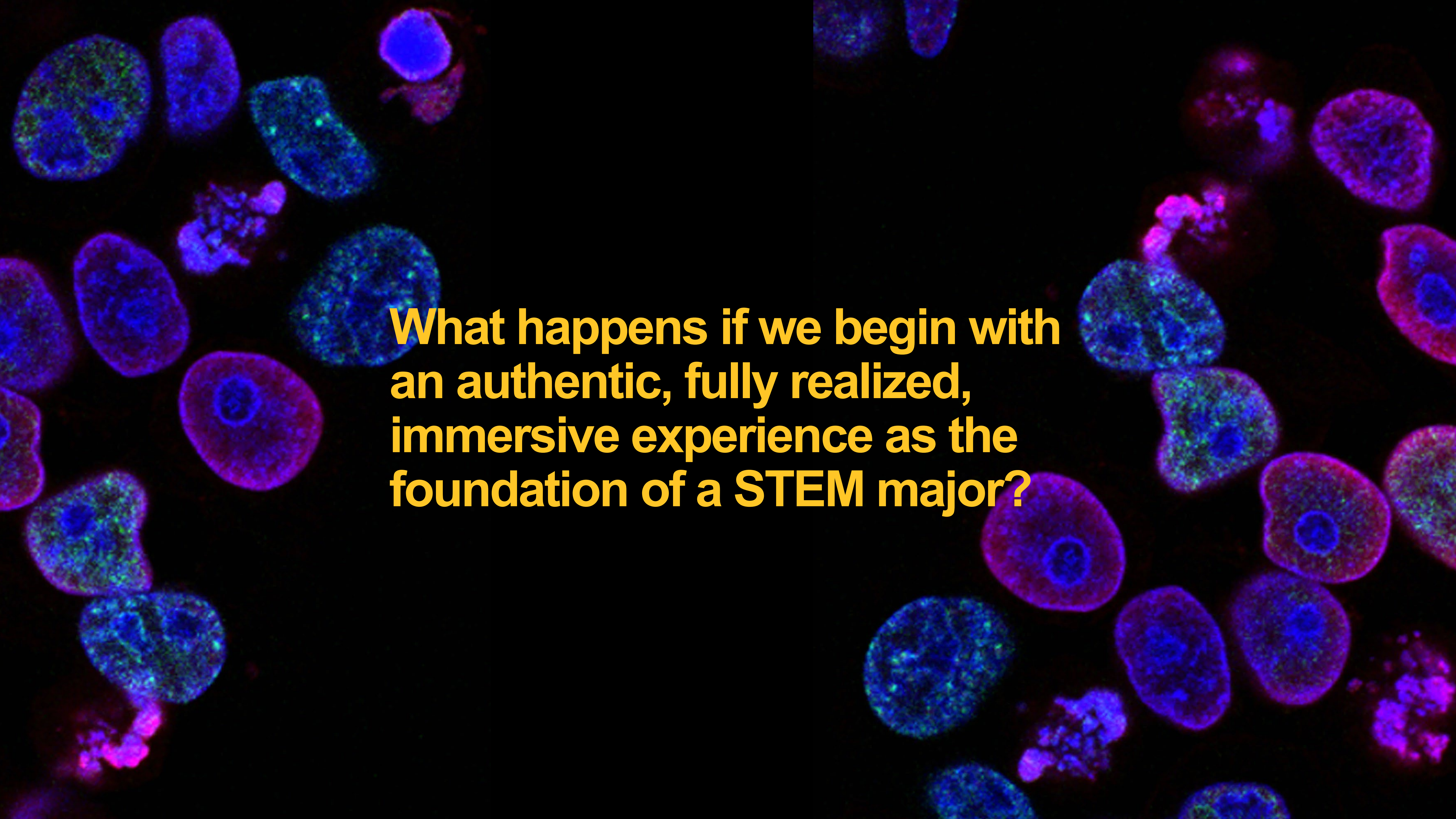
**Outcomes-focused
approach**

**Centralized support
services**

**Dual management
reporting structure**

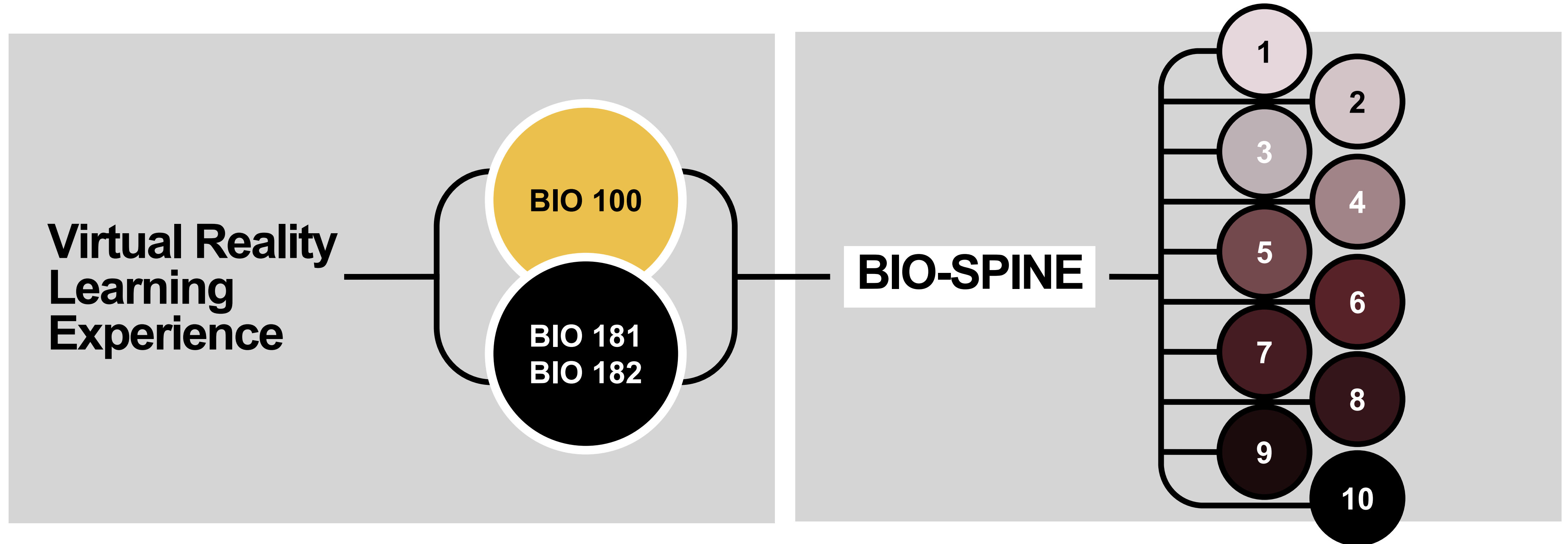
Three future-facing examples:



A fluorescence microscopy image showing numerous cells. The cells are stained with two different dyes, resulting in blue and red/purple colors. The blue staining appears to be in the nuclei, while the red/purple staining is in the cytoplasm and other cellular structures. The cells are of various shapes and sizes, some appearing more rounded and others more elongated. The background is dark, making the stained cells stand out.

**What happens if we begin with
an authentic, fully realized,
immersive experience as the
foundation of a STEM major?**

The NeoBio degree in Biological Sciences



**Immersive
foundational
courseware**

**AI-powered adaptive curriculum across
10 courses, starting with:**
BIO 340 - Genetics
BIO 345 - Evolution

**Realizing the Young Lady's
Primer: Creating an adaptive,
self-paced pathway from
middle school math to a
STEM credential.**



The MACS Accelerator

Accelerator Initial Projects

Intelligent Tutor
Adaptive math diagnostic assessment tool that provides personalized learning and granularity in solving math problems, step by step.

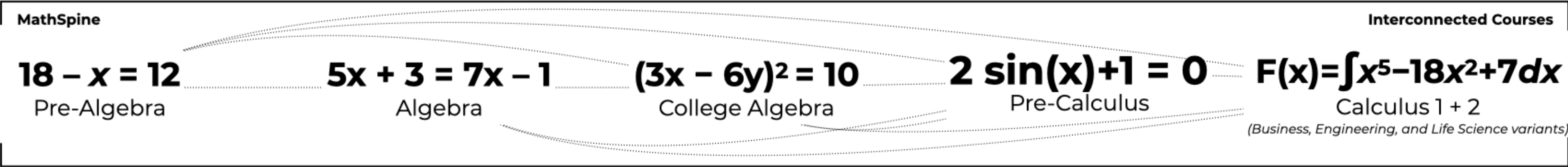
Operation Math
Active and adaptive learning course redesign, impact analysis and feedback loop to improve and equalize student success across modalities and demographic groups, addresses learning loss, reduces drop rates, and increases pass rates.

Accelerator Initial Assets

The Cambridge Maths Framework
Map of all math concepts from K-Calculus identifying all connections and dependencies informing design and remediation.

Cambridge University Press Content
Rich content aligned to the framework

ASU Knowledge Core
R1 faculty, ASU Prep Digital expertise, and laboratory to incubate these interventions.



Gradarius
Gradarius interprets every step a student takes to a solution, keeping track of any errors, analyzes the fundamental misconceptions, and provides tailored feedback.

Orchard
Adaptive system of interconnected learning objects and assessments.

CogBooks
Personalized learning platform that provides just in time learning content at just the right level.

PASS
PASS leverages real-time data to message students with the most relevant just-in-time resources to support learning and path to success.

InScribe
Leverages the power of community and artificial intelligence to connect individuals to the answers, resources, and people they need to succeed.

Accelerator Initial Technologies

Bridging the gap between high school aspirations and university success





STUDY HALL



ASU and Crash Course are launching two new video series on YouTube to reach the **18 million people in the U.S. either considering college, transitioning between colleges or returning to college**, to help them pursue an undergraduate degree.

3,000,000

views across the program

23,000

subscribers on the new
Study Hall channel
(launched in March 2022)

220

community colleges,
universities and high
schools, representing 45
states across the U.S.
are using Study Hall
videos

ASU's YouTube channel was the fastest growing university channel during our initial pilot

Transformational change at your institution

Factors to consider

**Environmental
factors**

**Clear
alignment**

**Measuring
success**

**Institutional appetite
for partnerships**

Governance

Leadership

**Organizational
structure**


Funding

Competencies

Universities still have two things no company has:

ability to give degrees
and award credit

genius faculty
resources



We need to focus on those two things and move from a philosophy and mindset of scarcity, to a mindset of abundance.

