co:lab

Thank you for attending Co:Lab! We are excited to share this early version of the Observed Practices, Mega model with the attendees.

This collection of good ideas was sourced from the field, and stands as a testament to both the power and importance of sharing and collaborating to move higher education toward equity. These learnings and case studies are meant to serve as a source of inspiration for institutional leadership teams and those that support them—which is an important step on the road to committing to a plan for transformation.

SOME TIPS FOR USE

This deck will become navigable when put into show mode—just click the “Slide Show” icon and you will be able to clink links to explore the information. When in “Normal” mode, the links will not work.

Please feel free to share this **work-in-progress** resource with your colleagues, but do not change the content.

We hope you find this resource interesting and useful, and we welcome your feedback on the content, form, or how the Observed Practices could be used in the future. Keep the exploratory, collaborative spirit of Co:Lab rolling by engaging in this effort with us. If you have any questions or comments, please contact colab@gatesfoundation.org.

NEXT

OBSERVED PRACTICES: MEGA

Good ideas from institutions that are making progress in narrowing attainment gaps and increasing student success.

This resources contains:

Synthesized learnings, hypotheses, and common threads found in successful approaches at large research institutions serving diverse populations.

INTRODUCTION

Delivered September 2016

The goals of this work

College is one promising path to a better life. Everyone should have access to an education that can lead them to meaningful, sustainable jobs and successful lives—no matter their zip code, family history, the color of their skin, or the amount of money they or their parents earn.

Higher education has long been a major driver of social mobility and economic growth in our country, and making education more accessible to more people creates preferable outcomes for all of us: **a more vibrant, equitable society and economy.**

The long term goal is to create a transformed postsecondary system that is more efficient and more equitable, with narrowed attainment gaps and increased completion rates.

That means getting low-income students, first-generation students, and students of color graduating at higher rates—and more students graduating across the board.

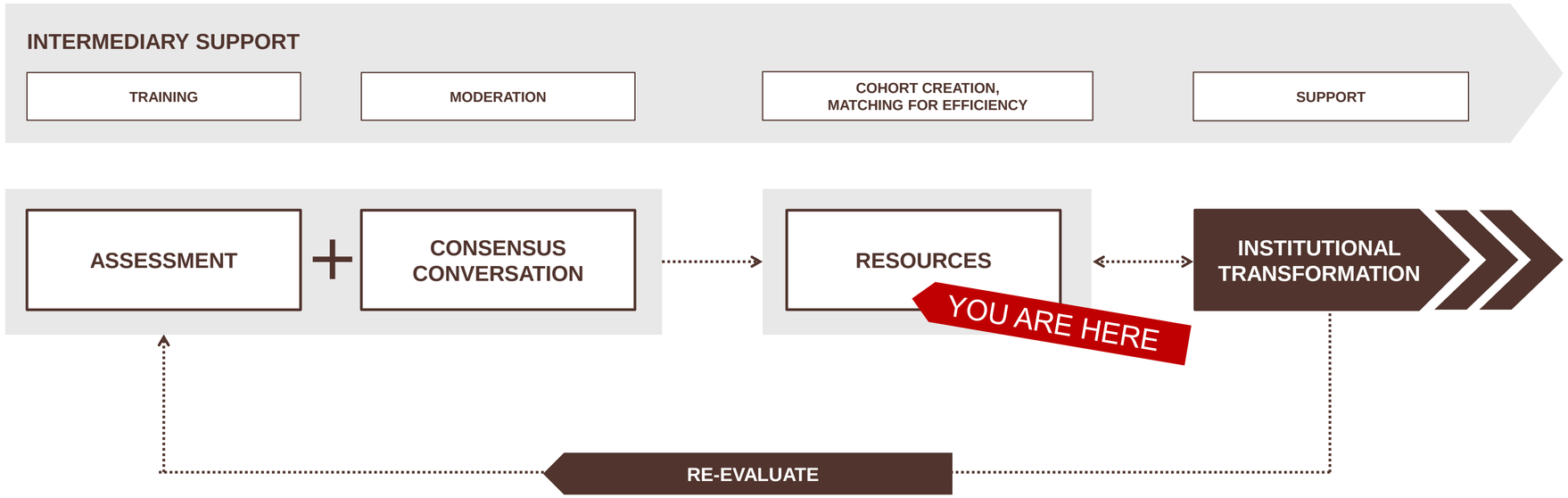
Some institutions are making progress in this—**they're enrolling, retaining, and graduating more students from disadvantaged backgrounds**.

Thankfully, many of these institutions are also sharing what they've learned so that others can follow their lead—**their tactics and findings are outlined here.**

Where the Observed Practices fit

This collection of Observed Practices fits within an end-to-end workflow, a system of tools that have been co-created by experts from across the field of postsecondary education and research with the goal of helping institutions be more efficient in their transformation efforts.

The system begins with the **Assessment**, which is a diagnostic tool that can help institutions see where their strengths and weaknesses are in regard to student centeredness. After taking the tool, intuitions **discuss** the results to prioritize actions—from there, **intermediaries** may step in to help access resources, one of which is these **Observed Practices**. Institutions may also directly access the resources on their own.



Context for work

The focus of the work explored in this collection is increasing disadvantaged populations' access to postsecondary education. The three institutions that this work is drawn from have been working to support a larger number of students to and through graduation with a wide variety of creative tactics.

They've been working to get more low-income students, first-generation students, and students of color enrolling, graduating, and getting real jobs. They've changed their tactics to meet the needs of the new student population, and have found success.

They've shared their work in the hope that others can learn from their experiences to go further, faster.

This collection details their practices as well as a view of the role of broader contextual factors and decisions.

These observed practices fed the development of the framework for transformation, which links this larger body of work and research together with an interconnected system of **Pathways, Solution Areas, and Operating Capacities.**

The three institutions included in this case study collection have been and are continuing to serve a growing base of socioeconomically diverse students. They've all taken different paths though, influenced by their unique situations:

Arizona State University is a research-intensive institution that has simultaneously focused on driving student success while also responding to deep state funding cuts by increasing out-of-state and international enrollment.

University of Central Florida, which is in a high-growth region, developed an online hybrid offering that both drives access and breaks the cost-quality compromise. They also formed close partnerships with two-year colleges, which helped them weather declines in state funding.

Georgia State University has undertaken a major student success orientation—and their recent consolidation with Perimeter College presents an opportunity for them to scale their student success interventions. They responded to declines in state appropriations with increases in tuition and fees set by the state, and increased state financial aid.

INTRODUCTION

Three case study institutions

The three case study institutions selected for this work are all on transformation journeys, making strides on student success while scaling enrollment and serving a more diverse student body in a fiscally sustainable manner.

	ASU Arizona State University	Georgia State University	UCF University of Central Florida
SCALE Student headcount (and increase since FY06)	**83,301** (+22K)	**32,600**[1] (+7K)	**63,016** (+16K)
STUDENT BODY DIVERSITY Percentage undergraduate Pell (and increase since FY062)	**36%** (+15ppt)	**59%** (+27ppt[2])	**38%** (+20ppt)
STUDENT OUTCOMES 6-yr graduation[3] (and increase since FY03 cohort)	**65%** (+9ppt)	**54%**[4] (+11ppt)	**70%** (+8ppt)

This work sought to observe practices the institutions adopted in their transformation journeys.

1. GSU recently consolidated with Georgia Perimeter College, adding 21.4K Associates degree students to the student population, for a combined total of 54.k students. 2. GSU comparison year is FY09 as Pell data for earlier years not available. 3. For students entering as first time freshmen. 4. A further ~12%transfer to other institutions. Note: Data is for most recent year available. Source: Institutional websites, data shared by institutions, leadership interviews.

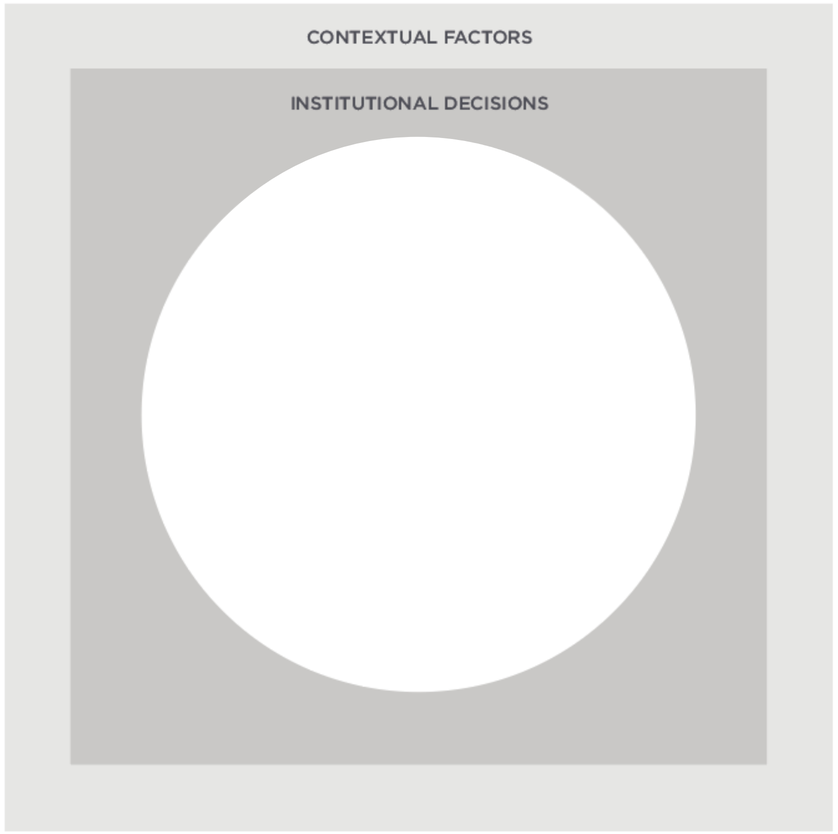
Summary of findings

The route an institution takes to better serve a socioeconomically diverse population is necessarily influenced by:

- **Contextual factors** include underlying demographic growth, availability of state funding, presence of state regulations (e.g., enrollment caps, tuition limits), extent of local consolidation (e.g., with two year institutions), and state of the local economy
- And **key institutional decisions** they've made around their goals, enrollment mix, educational delivery model, faculty model and research investment (which in turn impacts their economic model)

As an institution moves toward transformation, they should do so with an eye toward long term fiscal sustainability.

- This collection include scenarios that model the **fiscal impacts of key decisions** (e.g., the impact of enrollment mix as an institution scales, how much increasing class size impacts instructional costs)
- In order to achieve **fiscal sustainability** an institution should pursue strategies to grow revenues and reduce reliance on state appropriations (e.g., diversify enrollment mix, differential tuition, external research funding) and strategies to make the cost structure more efficient and effective (e.g., operational scale, change faculty mix, leverage technology)



Summary of findings

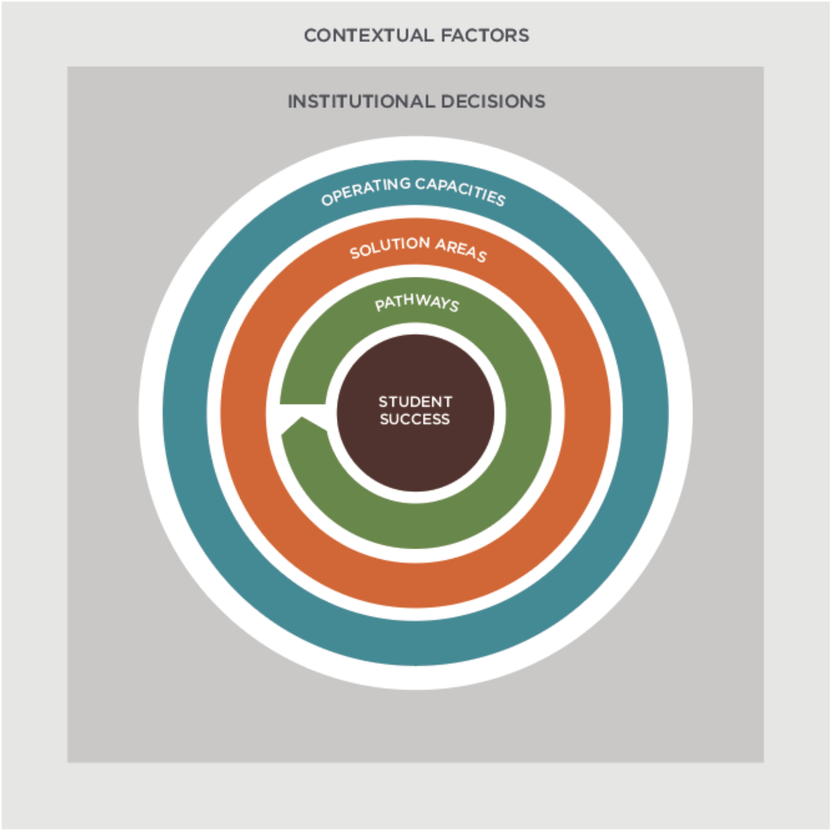
This work has uncovered a set of observed practices within Solution Areas and Operating Capacities that can help institutions drive student success, regardless of their unique context.

Some of the good ideas that have emerged include:

- Putting students at the center and centralizing functions related to student success
- Forming credentialing **pathways** driven by major maps, which are linked to data-enabled alerts that can help staff more effectively steer students
- Creating an advising engine with professional advising staff, low ratios, and predictive analytics
- Redesigning courses with high DFW (grades of D, F, or withdraw) rates through the use of adaptive coursework
- Professionalizing and centralizing research support staff to accelerate the research enterprise and free-up faculty time

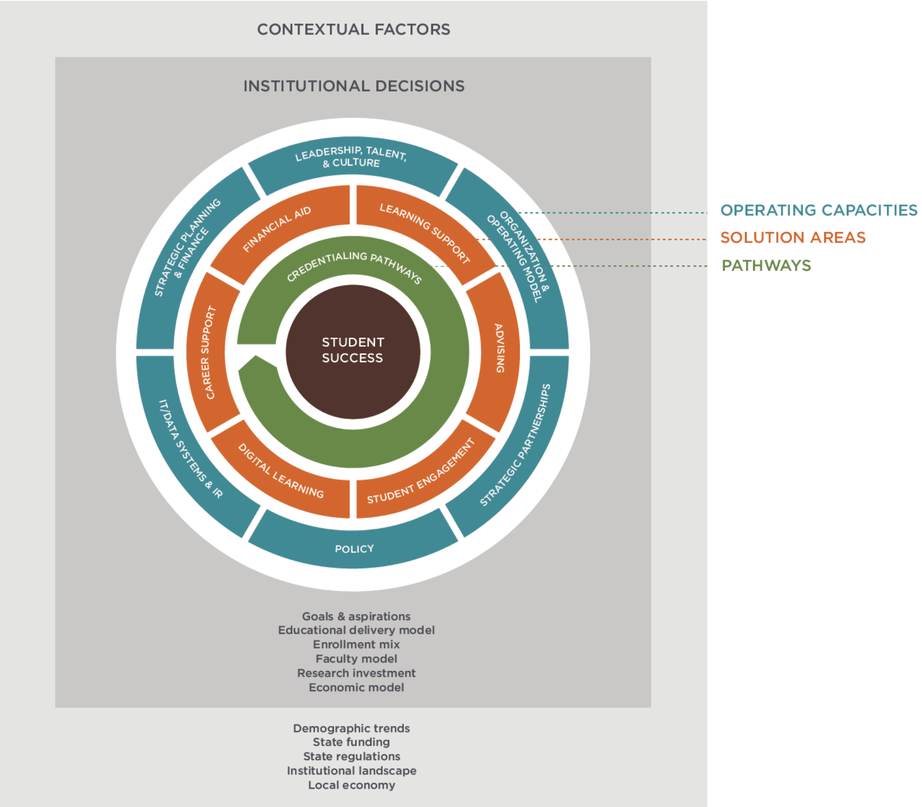
To undertake a transformation journey, an institution must proactively manage the change process by:

- Creating a roadmap with a clear sequence for transformation
- Building degrees of freedom for the leadership team to experiment and deliver against the change agenda
- Freeing up resources to support the transformation
- Developing a plan to manage key risks



Mega Model Framework

This framework was developed in consultation with higher education experts and the three case study institutions, to identify key elements of a transformation to serve a larger, more diverse student base with high quality education at an affordable cost to the student.



Contextual Factors provide both challenges and opportunities outside the present leadership's control.

Institutional Decisions are purposeful choices within the institution's control, setting the stage for pursuing transformation.

Operating Capacities enable the institution to mobilize to effectively serve a larger, more diverse student base.

Solution Areas are ways in which the institution attempts to improve student outcomes.

Pathways refers to the institution’s ability to help students see a clear route to a meaningful credential (and a career) and then support students to keep them on that path to success.

Different context and decisions at institutions show there are multiple ways to pursue large scale transformation

	Arizona State University	Georgia State University	University of Central Florida
CONTEXTUAL FACTORS	• In a **demographically growing region** • **Decline in state appropriations**	• In a **demographically growing region** • **Decline in state appropriations** • **State raised tuition and fees** following cuts in appropriations • Benefit from **state financial aid** • Required by the state to **consolidate with Georgia Perimeter College**	• In a **demographically growing region** • **Decline in state appropriations** • **State raised tuition and fees** following cuts in appropriations
INSTITUTIONAL DECISIONS	• **Increased out-of-state and international enrollment** with differential tuition to diversify revenue and subsidize in-state students • **Developed fully online offering** and partnered with a 3rd party to support marketing and boost enrollment growth • **Evolved faculty teaming model** to have strongest faculty enabled to extend teaching and research • **Built pipeline** with pathway agreements with community colleges • Invested heavily in **central research support and hiring research-grade faculty** to accelerate grant growth	• **Increased enrollment** in response to state cuts • Heavy focus on driving **tech-enabled student success interventions** • Have focused primarily on **on-ground offering** and expanding research • Now working on **successfully managing consolidation with GPC**	• Increased **enrollment** and drew on **reserves** to address state cuts • Prioritized student success through a programmatic approach, while growing **research-intensity** • **Online offering, with multiple modalities,** increases access and breaks cost-quality compromise, and was built in-house steadily over time • **Formed DirectConnect to UCF partnerships to deepen transfer enrollment** and create more prepared pipeline

Each institution found its own path to a large-scale transformation

Regardless of context, an institution must decide that large-scale transformation is a priority…

Decision to pursue a large scale transformation

First, an institution must decide to embark on, recommit to, or continue a large scale transformation to:

Scale: Serve a larger number of students

Increase access: Serve a more socioeconomically diverse student base

Improve outcomes: Focus on improving student success (retention and completion)

Ensure affordability: Ensure the total cost of attendance is affordable

...before making other key institutional decisions that will shape the transformation journey

Key institutional decisions during transformation (the list is not exhaustive)

GOALS & ASPIRATIONS

Choose which student success goals to pursue, with what targets and timelines

How many student success interventions to pursue / focus on, and how comprehensively to implement interventions

ENROLLMENT MIX

The key levers by which an institution will grow enrollment (e.g., pursue out-of-state and international, strengthen two year college pipelines, pursue new vs. existing markets)

Type of students to increase access to, and how selective to be in admissions (e.g., GPA/SAT threshold)

ECONOMIC MODEL

Level of aspiration to grow research enterprise and investment behind that (e.g., centralized grant writing team)

EDUCATIONAL DELIVERY MODEL

Online offering developed to increase access and break cost-quality compromise (form of offering, e.g., fully online, hybrid, a further choice)

FACULTY MODEL

Extent to which institution evolves its faculty model to improve cost efficiency, specialization, and quality (e.g., shift faculty mix, class sizes, shift to hybrid and fully online, faculty teaming model)

RESEARCH INVESTMENT

Level of institutional financial aid to subsidize access and affordability in light of available state support

The key levers by which an institution will achieve financial sustainability, and how much from growing revenues vs. reducing costs

To support transformation, institutions should consider key dimensions of managing the change process

Key dimensions needed to manage the change process

LEADERSHIP	**A strong leader and leadership team, and an organizational structure to support success**
ROADMAP	**A roadmap that has a clear sequence of building blocks to purse transformation, including quick wins**
FREEDOM TO EXPERIMENT	**Degrees of freedom for the leadership team to experiment and deliver against the change agenda** e.g., through stronger relationships with faculty, the state legislator, the Board
ECONOMIC MODEL	**Economic model that provides sustainable fiscal support to the transformation including the ability to invest in key strategic priorities**
RISK MITIGATION	**Consideration of context, decisions, and their consequences**

Institutions must build a strong leadership structure to support success

Institutions must build a strong leadership structure, including…

STRONG LEADER TO SET DIRECTION

A strong leader at the center setting the vision and guiding transformation, e.g.,

- President Michael Crow set a vision for ASU to excel across all its missions
- President John Hitt set 5 ambitious goals for UCF
- President Mark Becker spearheaded a strategic planning process that set 5 goals for GSU

CORE LEADERSHIP TEAM TO DRIVE KEY FUNCTIONS

A core leadership team is necessary to turn vision into real change and impact, e.g.,

- ASU formed a small sub-group of VPs who make decisions quickly
- UCF's VPs push toward goals across functions, rewarded by performance-based compensation
- GSU established a President's cabinet that elevated priority roles such as VP for student success

ORGANIZATIONAL STRUCTURE TO SUPPORT SUCCESS

An organizational structure geared towards driving student success, e.g.,

- UCF and GSU merged all student success functions under one leader to ensure consistency and accountability (e.g., admissions, orientation, financial aid, advising)
- ASU established EdPlus as a central team to rapidly experiment, focused on online offering

Perspective on sequencing of key building blocks to pursue

YEAR 1

LAY FOUNDATION

- **Establish the right team**
- **Conduct a diagnostic of strengths and gaps, and develop strategic plan**
- **Put in place foundational organizational elements** (e.g., merge student success functions)
- **Pursue building blocks for student interventions** (e.g., build major maps, professionalize advisors)
- **Achieve quick wins** (e.g., emergency financial aid, research support team)

YEARS 2-3

IMPLEMENT PRIORITY INITIATIVES

- **Implement priority initiatives** (e.g., invest in lower student: advisor ratio, pilot adaptive learning)
- **Introduce technology to enhance interventions** (e.g., predictive analytics to support advising)
- **Build strategic partnerships** (e.g., software providers for adaptive coursework, 2-year feeder institutions)
- **Communicate throughout change process**

YEAR 3+

CONTINUE IMPLEMENTATION

- **Continue implementing priority initiatives** (e.g., change institutional policies, invest behind student housing and broader engagement programs)
- **Build multimodal online offering**
- **Continue to communicate and celebrate successes**

Institutions should aim to meet the key milestones in the transformation

YEAR 1

LAY FOUNDATION

Established the right team to lead a transformation

Conducted diagnostic and developed strategy
- ☐ Engaged stakeholders in a listening tour; built a common vision
- ☐ Conducted a diagnostic to assess current strengths and gaps relative to vision
- ☐ Developed a strategic plan with core leadership; translated common vision and current state assessment into a set of priority initiatives and student success goals
- ☐ Established 3-year plan to increased fiscal sustainability and began making adjustments towards that path

Put in place foundational organizational elements
- ☐ Centralized student success functions
- ☐ Established data and institutional research capacity

Developed early building blocks for implementation
- ☐ Created major maps
- ☐ Redesigned and/or added supplemental instruction to high DFW courses
- ☐ Professionalized advising staff

Achieved quick wins to build momentum, e.g.,
- ☐ Built central research support team
- ☐ Established emergency financial aid for students nearing completion

YEARS 2-3

IMPLEMENT PRIORITY INITIATIVES

Implemented priority initiatives, e.g.,
- ☐ Professionalized and centralized advising; increased advisor: student ratio for 1st year
- ☐ Launched adaptive learning pilots for high DFW courses
- ☐ Began adjusting enrollment mix in line with goals

Introduced technology to enhance effectiveness of interventions
- ☐ Introduced predictive analytics and career data to advising

Built strategic partnerships
- ☐ Built partnerships with 2-year feeder institutions
- ☐ Partnered with software providers for adaptive pilots

Communicated throughout change process
- ☐ Delivered President's 'state of the university' address reiterating goals and calling out progress
- ☐ Established formal feedback loops with faculty and staff

YEAR 3+

CONTINUE IMPLEMENTATION

Continued implementing priority initiatives, e.g.,
- ☐ Began investing in student housing and broader engagement programs
- ☐ Created '101' course to set students up for success
- ☐ Changed institutional policies to support credentialing pathways and advising e.g., review major requirements

Built multimodal offering
- ☐ Built central instructional design team
- ☐ Built online or hybrid offering for high demand courses

Continued change communication
- ☐ Developed means for frequent communication of progress against goals
- ☐ Celebrated successes

Perspectives on quick wins to build momentum

POTENTIAL GUIDING PRINCIPLES FOR QUICK WINS	EXAMPLES FROM CASE STUDY INSTITUTIONS
START WITH INITIATIVES THAT HAVE LIMITED IMPACT ON FACULTY	• UCF pursued initiatives including **supplemental instruction**, improvements to **orientation**, establishment of a University Retention Board, and multiple **student engagement** programs
PRIORITIZE INITIATIVES THAT REASSURE OR SUPPORT FACULTY	• ASU, GSU and UCF built **central research proposal support** and project management teams to enhance faculty efficiency and chances of winning grants • ASU's President funded the Center for Conflict and Religion to show he had no bias toward science (his background) to win broader faculty support
IDENTIFY EARLY ADOPTERS TO ACT AS ROLE MODELS	• UCF encouraged **senior tenure track faculty to be first to teach online** to set an example for younger faculty and reassure them that it would be viewed favorably in promotion decisions • GSU piloted adaptive learning with younger, non-tenured faculty willing to experiment; positive results helped build voluntary uptake by other faculty
FOCUS ON INITIATIVES THAT SHOW IMPACT QUICKLY	• UCF added supplemental instruction to the ~30 courses with **highest DFW** rates, to quickly improve student success in those gateway courses • GSU implemented **emergency financial aid** for seniors, increasing completions • GSU and UCF **professionalized advising**, focusing on first year students first

Institutions built degrees of freedom for the leadership team to experiment and deliver against the change agenda

EXAMPLES OF HOW THEY BUILT DEGREES OF FREEDOM...	ASU Arizona State University	Georgia State University	UCF University of Central Florida
WITH THE STATE	• Showing sustained improvements in student outcomes • Continual provision of access to local students	• Demonstrated progress to state with data on student success • Pitched persuasively for support for priority initiatives and followed up with data	• Outperformed many peers in performance based funding • Pursued creative ways to make progress against goals (e.g., secured financing through subsidiaries)
WITH THE BOARD	• Created a nimble core leadership team who could make decisions quickly and act fast • Continued track record of student success	• Engaged the Board to support the transformation effort (e.g., got support for advising efforts) • Demonstrated quick wins and progress to the board with data	• Demonstrated sustained progress in driving access and student success • Showed commitment of leadership team through performance based compensation
WITH THE FACULTY	• President Crow convinced the state to appropriate ~$500M to 3 AZ universities for research buildings, with ~$200M to ASU, proving his intent to grow research	• Started with interventions less intrusive to faculty (e.g., advising and emergency financial aid) • Used data on effectiveness of adaptive in math to garner broader support	• Encouraged tenure track faculty to be first to teach online • Faculty led curriculum alignment with community colleges

Source: Leadership interviews

The institution's economic model should provide sustainable fiscal support to the transformation

GROW REVENUES

Strategies to grow revenues and reduce reliance on state appropriations include...

- Grow incoming enrollment
- Drive retention gains
- Diversify the enrollment mix
- Differentially increase tuition and fees
- Grow external research funding
- Manage auxiliary enterprises to breakeven at minimum

COST STRUCTURE EFFICIENCY

Strategies to make the cost structure more efficient and effective include...

- Achieve operational scale
- Evolve the instructional model (e.g., capacity utilization, faculty mix)
- Evolve organizational structure for efficiency
- Leverage technology to improve efficiency
- Manage procurement and partnership costs

Scenarios by which institutions can understand how to assess the fiscal impacts of their institutional decisions are included in Institutional Decisions

Source: Leadership interviews

Strategies to grow revenues and reduce reliance on state appropriations

GROW REVENUES

INCOMING ENROLLMENT	**Grow incoming enrollment** – e.g., through intensive marketing, build or expand online offering, strengthen two year college pipelines
STUDENT RETENTION	**Drive improvements in retention** and improve student outcomes by investing behind student supports (e.g., more personalized advising, supplemental instruction); especially critical in low growth environments
ENROLLMENT MIX	**Manage enrollment mix** to ensure sufficient subsidization of students with economic need (e.g., attract more out-of-state and international students who can pay higher tuition rates)
TUITION & FEES	**Differentially increase tuition and fees** with an emphasis on a subset of students who are willing to pay (e.g., out of state & international)
EXTERNAL RESEARCH FUNDING	**Grow external research funding** and grow the research enterprise with less institutional investment (e.g., through investing behind central grant writing and project management teams and building centers of excellence)
AUXILIARY ENTERPRISES	**Manage auxiliary enterprises to be breakeven** (e.g., by outsourcing services that provide a better cost-service offering, through strategic use of student fees, through creative financing of dorms and parking lots)

Strategies to make the cost structure of the institution more efficient and effective, while improving outcomes

COST STRUCTURE EFFICIENCY

SCALE IN ADMINISTRATION & OPERATIONAL COSTS	**Ensure costs do not increase at same rate as enrollment** so institution gets the benefit of scale in areas such as central administration and operational costs
INSTRUCTIONAL MODEL	**Evolve instructional model to lower instructional costs** (e.g., increase class sizes, increase hybrid or fully online courses, increase share of full time non TT faculty, extend faculty reach through teaming models)
ORGANIZATIONAL STRUCTURE	**Evolve the organizational structure to improve efficiency** (e.g., merge academic departments) **and effectiveness** (e.g., centralize student support functions to increase collaboration and focus on goals, streamline decision making, and improve utilization of resources)
TECHNOLOGY	**Leverage technology to improve labor efficiency** (e.g., more efficient advising with predictive analytics, online portal with enrollment and payment information to reduce enrollment support needs)
PROCUREMENT & PARTNERSHIPS	**Rigorously manage procurement and partnership costs** (e.g., centrally manage classroom technology costs, renegotiate revenue sharing partnerships)
OTHER STRATEGIES	**Strategies that were not a focus for large scale transformation case studies but promising** (e.g., streamlining number of majors and courses, streamlining redundant IT applications)

Achieving fiscal sustainability can help free-up resources to invest behind priority initiatives

Illustrative investments to support a large-scale transformation

Investments to support increased access and enrollment growth such as

- Expanded recruiting capabilities for in-state, out-of-state and/or international teams to support enrollment growth
- More dedicated staff to help drive transfer student growth
- Increased marketing budget to support online enrollment growth (either in-house or through a strategic partner)

Investments in student interventions to support increased retention gains such as

- Resources for additional advisors to lower the student:advisorratio
- Funds to support emergency financial aid to help retain juniors and seniors nearing graduation
- Stipends for peer tutoring / supplemental education

Investments in technology and technology platforms to support access and student success, e.g.,

- Digital learning solutions to improve access and student outcomes (e.g., adaptive overlay to address high DFW courses, hybrid instruction offering)
- Predictive analytics platform as an enabler to the advising solution
- Integration of career data into pathway and advising solutions

Investments in organizational capacity to support student success, e.g.,

- Institutional Research capacity to support better data-driven decision making on which student interventions to pursue and how to appropriately target them to relevant student populations
- Professionalized and centralized teams to support scaled and higher quality implementation (e.g., instructional design and media teams to support digital learning solutions, central grant writing and project management teams to enhance research productivity, U2B teams to support pursuing strategic partnerships)

Institutions should plan to mitigate key risks and seize opportunities presented by their context

	KEY RISKS & OPPORTUNITIES PRESENTED BY CONTEXT	HOW TO MITIGATE RISK OR SEIZE OPPORTUNITY
STATE FUNDING	If the institution is **heavily dependent on state funding** to fund the education and general budget and/or there is significant risk of **declining state funding**...	...then aggressively **expand and diversify revenue sources** through growing enrollment, changing the enrollment mix, increasing retention, differentially increasing tuition and fees, growing research funding, etc..
	If the **state does not offer significant aid programs**, or amount of aid has declined...	...then increase the availability of upfront and emergency **institutional financial aid** to help retain/progress students with financial challenges
STATE REGULATIONS	If the **state does not cap out-of-state/international enrollments...**	...then consider **recruiting out-of-state/international students**, and work with the Board of Regents/Governors to differentially raise tuition and fees to these groups in order to **subsidize aid** for other populations
INSTITUTIONAL LANDSCAPE	If **feeder 2-year institutions reduce transfer enrollments** (e.g., due to **consolidations** with 4-years)...	...then it is critical to **strengthen** existing 2-year institution **partnerships** (e.g., with guaranteed admission, curriculum alignment) and/or also **consolidate** with two year institutions

Institutions should plan to mitigate key risks and seize opportunities presented by their context

	KEY RISKS PRESENTED BY DECISIONS	HOW TO MITIGATE RISK
EDUCATIONAL DELIVERY MODEL & FACULTY MODEL	If the institution **evolves its instructional model** (e.g., larger class sizes, online) or **faculty model** (e.g., shift to full time non tenure track faculty) without a strong eye towards outcomes...	...then **make changes gradually**, first in pilots before scaling ...then put in place an **evaluation team** to enable continuous quality monitoring and improvement ...then ensure **robust resources** (e.g., instructional designers) are available to faculty to create quality online content
	If the institution desires to **expand online** but does not have accessible capital or the right skill set...	...then first **conduct a market analysis** to evaluate if the brand is strong enough to do this, and align on goals of online expansion e.g. drive enrollment, improve cost structure ...if brand strength exists, consider **partnering with an OPM provider for select services** (e.g., marketing, enrollment management) with a plan to bring some services in-house over time
ENROLLMENT MIX	If the institution is heavily dependent on **any single enrollment source** (e.g., two year feeders)...	...then **establish guaranteed admission** agreements ...then **embed staff on campuses** of 2-years and select high schools to support students in transition ...then **strengthen articulation agreements** to ease the transfer process
INSTITUTIONAL LANDSCAPE	If the institution **cannot free up enough resources to invest meaningfully behind student support interventions**...	...then **push for scale** in non-instructional areas to free up resources to invest in student support e.g., administration ...then explore areas where **technology can help drive student success** more efficiently e.g., advising
	If the institution needs to **expand physical capacity** to support growth but doesn't have sufficient capital...	...then explore **creative ways to finance capital outlays** (e.g., partnerships with the City or private developers)

There are also other considerations we did not observe at case study institutions

This work looked at only three case study institutions, but we recognize that other institutions may not experience the same contextual factors. Below we have presented a few key considerations for institutions looking to start a transformation journey in a context different to those of the three case study institutions included in this work. The potential mitigation approaches suggested here are based on broader experience and should be further refined based on exposure to institutions facing these contextual conditions.

	OTHER CONSIDERATIONS	POTENTIAL MITIGATION APPROACHES
DEMOGRAPHIC TRENDS	If the institution is in a city that **doesn't have a growing demographic base**...[1]	...then it is imperative to focus on **increasing retention** ...then build **deeper 2-year college and K-12 feeder/ enrollment pipelines** within and around the city (e.g., with guaranteed admission, increased outreach, etc..)
LOCAL ECONOMY	If the institution is in a city or region with **low or no economic growth**...[1]	...then focus on building **a regional set of partnerships** to help students find employment opportunities, and bring in **career data** to help steer students toward careers with supply-demand shortfalls
STATE REGULATIONS	If the institution is in a **state where faculty are unionized**...[1]	...then **start with initiatives that have the least impact on faculty** e.g., financial aid, professional advising ...then **establish clear two-way communication channels** with union representatives to stay abreast of faculty concerns and suggestions

Observed practices to consider as an institution implements its solution areas and operating capacities

Pathways: High Level Findings

Credentialing pathways that are driven by major maps linked to data-enabled alerts for real time progress tracking and steer students early to best-fit majors based on performance in early classes and alignment with career opportunities

> CREDENTIALING PATHWAYS

Observed practices to consider as an institution implements its solution areas and operating capacities

Solution Areas: High Level Findings

Creating a small **pool of available emergency financial aid resources** to help retain and graduate students close to completion but facing financial difficulties, in addition to up front aid	**FINANCIAL AID**
Putting in place a series of **learning supports** that are targeted towards at-risk students including supplemental instruction for high DFW classes, mandatory freshman introductory courses, and affiliation programs targeted to higher risk groups	**LEARNING SUPPORT**
Creating an advising engine through professionalizing the advising staff, lower student:advisor ratios, enabling advising through a predictive analytics platform, and centrally managing the advising function	**ADVISING**
Building different vehicles for student engagement especially within larger institutions to help retain and progress students (e.g., invest in student housing if capital resources available, group students in small learning communities)	**STUDENT ENGAGEMENT**
Redesigning courses with high DFW rates through the use of **adaptive** coursework to help students master material and reduce unintentional 'weeding out' of students	**DIGITAL LEARNING**
Integrating career planning more seamlessly into the student lifecycle (e.g., use market data to provide individualized career advising, build relationships with potential employers to support better employment opportunities for graduates)	**CAREER SUPPORT**

Observed practices to consider as an institution implements its solution areas and operating capacities

Operating Capacities: High Level Findings

Leadership and culture oriented around the student to focus on driving up access and putting in place measures that help students through and to graduation

> **LEADERSHIP, TALENT, & CULTURE**

Centralizing functions related to student success (e.g., enrollment, financial aid, advising, first-year supports) in order to provide a clear point of accountability and responsibility for improving student outcomes

> **ORGANIZATIONAL & OPERATING MODEL**

Partnering with stakeholders in the region to develop a talent pipeline and grow the local economy, conduct relevant research, and vitalize the region through campus expansions

> **STRATEGIC PARTNERSHIPS**

Making or modifying **institutional policies** to strengthen credentialing pathways and enhance effectiveness of interventions (e.g., requiring students to declare a major early, requiring departments to list all major requirements in a central website)

> **POLICY**

Adopting a culture of data-informed decision making that can help leadership remain focused on student success and help bring faculty along in the transformation journey

Professionalizing and centralizing research support staff to help accelerate growth of the research enterprise, and enable faculty to be more efficient with their time

> **IT/DATA SYSTEMS & IR**

Strategically pursuing revenues that are less susceptible to cuts in state appropriations and creating a **more efficient institutional cost structure**

> **STRATEGIC PLANNING & FINANCE**

Credentialing Pathways

OBSERVED PRACTICES	DESCRIPTION
ESTABLISH MAJOR MAPS	**Clearly articulate the courses students need to meet graduation graduate requirements for each major**
HELP STUDENTS NAVIGATE CHOICES	**Help first year students navigate breadth of major options to start earning credits early towards graduation** (e.g., students enter GSU through meta-majors)
STEER STUDENTS EARLY INTO BEST-FIT MAJORS	**Use performance in early classes to steer students into best fit majors and reduce excess credit hours** (use historical data to create success markers)
IMPLEMENT DATA-ENABLED ALERTS	**Implement data-enabled alerts mapped to major maps that inform advisors in real time when students go off-track** (e.g., GSU has 800 alert markers through EAB)
REDESIGN COURSES WITH HIGH DFW RATES	**Orient towards helping students successfully learn required material and away from unintentionally 'weeding' out students** (e.g., ASU re-evaluated high DFW freshman courses and revised curriculum to only include required content)
ALIGN POLICIES TO HELP STUDENTS PROGRESS	**Use observations from advisors to remove policy barriers that constrain student progression** (e.g., GSU advisors noticed students accumulating excess credits by retaking courses multiple times to raise their GPA)
LINK MAJORS WITH CAREER PATHWAYS	**Help students understand career opportunities to inform selection of a major** (e.g., transition advisors at GSU use Burning Glass data to share supply-demand gaps tied to career options)
ALIGN PATHWAYS WITH TWO YEAR INSTITUTIONS	**Alleviate transfer credit equivalency challenges through improved alignment of curriculum with partner two year institutions** (e.g., ASU has ~120+ pathway programs with CCs)

Financial Aid

OBSERVED PRACTICES	DESCRIPTION
OFFER TARGETED INSTITUTIONAL AID	**Offer targeted institutional aid to help expand access to socioeconomically diverse students**
PROVIDE EMERGENCY FINANCIAL AID	**Allocate budget for emergency financial aid to help students during financial challenges** (e.g., GSU's Panther Retention grant offers up to $2.5K to students with outstanding balances)
USE FINANCIAL AID TO INFLUENCE BEHAVIOR	**Design aid programs to incentivize students to receive academic support and advising** (e.g., GSU's Keep HOPE Alive grants requires advising, academic tutoring, and financial counseling)
CONDUCT SMALL PILOTS, EVALUATE, THEN SCALE	**Conduct small financial aid pilots and evaluate impact before scaling, in order to maximize impact of each financial aid dollar** (e.g., GSU added academic support and advising requirements to Keep HOPE Alive after evaluation of initial pilot found insufficient impact)
EXPLORE CREATIVE FUNDING MECHANISMS	**Explore creative funding mechanisms to fund financial aid** (e.g., GSU funds Panther Retention Grants through student fees, because state law prohibits funding with tuition, fees, or state funding)
DIFFERENTIALLY RAISE TUITION AND FEES TO FUND INSTITUTIONAL AID	**Differentially raise tuition and fees to a subset of students in order to provide institutional aid to socioeconomically diverse students** (e.g., ASU raised out-of-state and international tuition to help increase funding for in-state institutional aid)

Learning Support

OBSERVED PRACTICES	DESCRIPTION
PROVIDE SUPPLEMENTAL INSTRUCTION	**Provide opportunities for students to seek forms of supplemental instruction, particularly for high DFW courses or courses with very high enrollment** (e.g., supplemental instruction at UCF is offered in 55-60 high risk STEM courses with 30% or higher DFW rates)
CREATE AN 'INSTITUTION 101' COURSE	**Create a compulsory course for freshmen to build skills for academic success and navigate a multimodal large-scale university** (e.g., ASU101/ASU11 covers time management, awareness of ASU, getting to know your classmates, etc..)
FOCUS SUPPORT FOR 'AT-RISK' STUDENTS	**Establish small group programs for entering students identified as 'at risk', so they are not left behind by others in their large freshmen classes (**e.g., ASU's LEAD program for ~50 students selected using composite of GPA and SAT provides structured, seminar-style classes to equip students for success at ASU and beyond)
PROVIDE OUTREACH TO PREPARE THE PIPELINE	**Offer supplementary programming as outreach to potential students, building a more prepared pipeline** (e.g., ASU's Preparatory Academy and Global Freshman Academy both help build a prepared pipeline)

Advising

OBSERVED PRACTICES	DESCRIPTION
PROFESSIONALIZE THE ADVISING STAFF	**Hire and manage professional advisors to conduct student academic advising** (e.g., ASU, GSU, UCF all hired professional advisors)
ESTABLISH ~300:1 STUDENT:ADVISOR RATIOS	**Establish and maintain low student:advisor ratios. Benchmark observed practice is approximately 300:1** (e.g., GSU is ~300:1, ASU is ~350:1 with support from success coaches, UCF is ~400:1)
CENTRALLY MANAGE THE ADVISING FUNCTION	**Centrally manage the advising function in order to provide consistent, high quality advising regardless of major / college, and to more easily implement changes across the function** (e.g., GSU centralized first three years of student advising, UCF centralized first year only)
INVEST IN STUDENT TRACKING & PREDICTIVE ANALYTICS TECHNOLOGY	**Use technology to track students through their academic journey, and incorporate predictive analytics to alert advisors early if students are at-risk of becoming off track** (e.g., GSU's EAB predictive analytics platform has ~800 success markers to prompt advisors)
ESTABLISH FEEDBACK LOOPS FOR ADVISORS TO IMPROVE PATHWAYS	**Create formal feedback loops for advisors to identify and share challenges students are facing, in order for the institution to continuously improve its credentialing pathways** (e.g., GSU's advisors noticed students retaking easier courses to raise GPA and created policy to limit)

Student Engagement

OBSERVED PRACTICES	DESCRIPTION
FORM SMALL LEARNING COMMUNITIES	**Group students by similar academic interest to form a small learning community within a large research institution** (e.g., GSU created Freshmen Learning Communities of 25 students grouped by meta-majors)
MAKE ORIENTATION A MORE INDIVIDUALIZED EXPERIENCE	**Implement an orientation program that allows for a more individualized student experience** (e.g., UCF splits incoming students and their families into smaller groups in 33 two-day orientation sessions every Fall, including bi-lingual orientation sessions offered to Hispanic families)
INVEST IN STUDENT HOUSING	**Invest in student housing to encourage students to live on campus and have the full college experience** (e.g., UCF expanded and created freshmen-only housing; students in housing achieve 10+ppt difference in 6-yr graduation rate and 2+ppt difference in retention rates)
LEVERAGE MOBILE APPS FOR STUDENT ENGAGEMENT	**Use mobile apps to connect students to the community and use data to inform subgroup engagement programs** (e.g., ASU implemented a mobile app that allows students to register for events and receive prizes for attendance; data available helps track student behavior and potentially inform targeted student engagement programs)

Digital Learning

OBSERVED PRACTICES	DESCRIPTION
CREATE HYBRID ONLINE COURSES	**Create hybrid courses that mix face-to-face and online instruction in order to increase access, improve student outcomes, and reduce per student costs** (e.g., at UCF, hybrid courses reduced time to degree by 0.2 years and had up to 32% lower per student cost vs. face-to-face)
CENTRALIZE THE DIGITAL SUPPORT TEAM	**Centralize the digital support team** (e.g., instructional designers, media support) **in order to provide consistent, high quality support to faculty at scale** (e.g., ASU's EdPlus organization, UCF's Online @ UCF team, GSU's Office of Instructional Innovation and Technology)
OFFER PD ON DEVELOPING DIGITAL COURSES	**Offer professional development to faculty members on developing digital courses in order to ensure quality** (e.g., UCF faculty are required to complete an 80 hour training)
USE A CONSISTENT ASSESSMENT TO MEASURE IMPACT	**Implement a consistent assessment across digital and non-digital courses to measure effectiveness of implementing digital courseware** (e.g., GSU used a consistent assessment to measure the efficacy of its adaptive learning courses)
REDESIGN HIGH DFW COURSES USING ADAPTIVE LEARNING	**Redesign high DFW courses using adaptive learning and improve success rates** (e.g., ASU improved math success rates from 66% to 85%; currently 20K+ students take adaptive learning courses / year, and planning to build additional 15-30 courses in next 3 years)
ACCELERATE FACULTY ADOPTION	**Accelerate faculty adoption by using outcomes data from pilots to increase faculty buy-in** (e.g., GSU scaled adaptive math after reductions in DFW rates) **and by incentivizing faculty through grants and instructional design support** (e.g., GSU's Digital Champions Fellowships)
BUILD PARTNERSHIPS TO ACCELERATE ROLLOUT	**Build partnerships to accelerate implementation** (e.g., ASU Online's partnership with Pearson on online marketing, ASU and GSU exploring several adaptive learning platform partners)

Career Support

OBSERVED PRACTICES	DESCRIPTION
BUILD PARTNERSHIPS WITH POTENTIAL EMPLOYERS TO INCREASE ACCESS AND EXPERIENTIAL LEARNING	**Leverage partnerships and build relationships with potential employers to ensure institutional quality maintained through high employment rate for graduates, and regional demand met** (e.g., ASU and Starbucks developed the ASU Starbucks College Achievement Plan to provide career development programs; GSU offers cooperative education programs in which students engage in a 6-month rotational, field-based experience)
USE MARKET DATA TO INFORM INDIVIDUALIZED ADVISING	**Use market data, in addition to student data, to provide individualized career advising** (e.g., GSU advisors use student performance data from the EAB platform and market data from Burning Glass to give career advice to students)
DEVELOP MORE ACCESSIBLE CAREER PLANNING RESOURCES	**Develop online resources to make career planning tools readily available to students** (e.g., ASU, GSU and UCF leverage virtual career fairs and other online platforms to facilitate easy access to job search)
INVEST IN HIGH QUALITY INFRASTRUCTURE	**Invest in high quality infrastructure to allow students to easily connect with employers** (e.g., UCF invested $8M in new career services and experiential learning building which includes high-tech interview rooms and video-conference systems to facilitate communication between students and recruiting companies)

Leadership, Talent, & Culture

OBSERVED PRACTICES	DESCRIPTION
MAINTAIN STEADFAST LEADERSHIP FOCUS	**Establish and maintain a steadfast leadership focus on access and student success** (e.g., UCF goals set in 1992 remain the same today; ASU President consistently used the phrase 'teacher scholar' for the first ~5 years of his term)
ADOPT DATA-INFORMED DECISION CULTURE	**Adopt a culture of data-informed decision making** (e.g., GSU used EAB data on success markers to determine requirements for progression in a major; ASU Provost holds Deans accountable for progress against retention targets)
BRING FACULTY ALONG AS ACTIVE PARTNERS	**Bring faculty along in the transformation journey as active partners** (e.g., GSU used data on effectiveness of adaptive models in math to build support for broader uptake; UCF encouraged senior TT faculty to be first to teach online)
ELEVATE POSITIONS OF IMPORTANCE	**Elevate positions of importance to the transformation to the cabinet or top leadership team** (e.g., GSU elevated student success and innovation roles to be cabinet-level positions)
ADJUST EXECUTIVE COMPENSATION	**Adjust executive compensation to incentivize performance against goals** (e.g., UCF adjusted compensation of President and Vice Presidents to have ~14% of salary at risk against UCF's performance on key measures tied to the goals)
BUILD A CULTURE THAT SUSTAINS SUCCESS	**Build a culture that sustains success** by fostering collaboration, providing incentives, encouraging experimentation, being data-informed, and celebrating success (e.g., GSU student advisors provide front-line feedback on the effectiveness of policies)
BE WILLING TO RECRUIT OUTSIDE THE ACADEMY	**Be willing to recruit talent for key positions from outside the academy, bringing in leaders with different skillsets to drive strategic priorities** (e.g., GSU brought an external expert to the Chief Innovation Officer position; ASU brought in a former Coca-Cola and Outback Steakhouse marketing executive to be CMO)

Organizational & Operating Model

OBSERVED PRACTICES	DESCRIPTION
CENTRALIZE STUDENT SUCCESS FUNCTIONS	**Centralize student success functions under one leader to provide a clear point of accountability and responsibility for improving student outcomes** (e.g., Both UCF and GSU merged and centralized student success functions to accelerate student success efforts)
PROFESSIONALIZE AND CENTRALIZE RESEARCH SUPPORT	**Professionalize and centralize research support staff, both to help grow research enterprise and allow faculty to be more efficient** (e.g., ASU has a proposal development team of 50-60 people supporting the development of ~20K proposals per year, freeing up faculty time for research and teaching. *Note: This is one example of an initiative that requires some base scale before it is an effective accelerator e.g., need to first reach a critical mass of research-engaged faculty*)
BUILD STRONG FRONT AND BACK END TO ONLINE OPERATIONS	**Design and build online operations with strong front end (instructional design) and back end (evaluation) units to ensure quality** (e.g., ASU and UCF both have professional instructional designers working directly with faculty; UCF's Research Initiative for Teaching Effectiveness unit measures the impact of online courses)

Strategic Partnerships

OBSERVED PRACTICES	DESCRIPTION
ESTABLISH STRATEGIC PARTNERSHIPS TO BOOST CAPABILITIES	**Establish partnerships to acquire capabilities, especially related to technology, in order to accelerate time to impact and contain costs related to continuous innovation** (e.g., EAB predictive analytics, Ad Astra technology to forecast course demand, Pearson for online marketing)
PURSUE PARTNERSHIPS TO INCREASE ACCESS	**Pursue partnerships with two year institutions and companies to increase access and grow enrollment** (e.g., UCF's DirectConnect partnership with 6 community colleges driving ~60% transfer pipeline, ASU's partnership with Starbucks)
ENSURE KEY STAKEHOLDERS ARE INVOLVED	**Ensure appropriate stakeholders are involved with partnership decisions. For some institutions this may mean few leaders, for others stakeholders from every function affected by the partnership** (e.g., GSU's EAB partnership involved student success, the colleges, IT, IR)
ENSURE FACULTY HAVE OWNERSHIP AND FLEXIBILITY	**Ensure faculty members have ownership and flexibility on areas related to academic content and instruction** (e.g., content on adaptive platform)
CO-DEVELOP FOR CUTTING EDGE TOPICS	**On cutting edge topics, consider co-developing with a technology partner, which allows the institution to have more input over the technology** (e.g., GSU co-developed its predictive analytics software with EAB)
EXPLORE BRINGING IN-HOUSE OVER TIME	**Routinely revisit partnerships and where possible explore bringing more products and services in-house over time**

Policy

OBSERVED PRACTICES	DESCRIPTION
CREATE POLICIES THAT STRENGTHEN CREDENTIALING PATHWAYS	**Prioritize making institutional policies (or changing existing policies) to strengthen credentialing pathways and enhance effectiveness of interventions** (e.g., GSU set a policy requiring students to declare a pre-major; ASU and UCF introduced requirement to declare major at 45 credit hours; ASU required departments to list all major requirements, in sequence, in a central website, and clear all changes with central administration)
ENGAGE THE STATE AS POLICY ALLIES	**Build the operating capacity to engage the state Board of Regents/Governors as allies in the transformation** (e.g., ASU worked with the state to increase the out-of-state resident cap)
CREATE MECHANISMS TO REVISE POLICIES	**Put in place mechanisms to revise policies that are not in the interests of student progression** (e.g., GSU uses advisor feedback and data to find that a policy that allowed students to repeat a course to replace a B- or lower grade was not in students' interest – most students did not improve their grade when repeating, and were wasting money on a class they had already passed and slowing time to degree – GSU is now looking to adjust this policy to steer students away from 'repeat to replace' options)

IT/Data Systems & IR

OBSERVED PRACTICES	DESCRIPTION
ESTABLISH HIGH QUALITY INSTITUTIONAL DATA	**Establish a set of high quality institutional data that all stakeholders trust and are willing to use for decision making**
ADOPT CULTURE OF DATA-INFORMED DECISION MAKING	**Adopt a culture of data-informed decision making and experimentation.** This enables institutions to roll out targeted pilots to test what works and to scale what works, creates opportunity to have data-informed discussions with faculty on the case for change, and can contribute to creating leadership accountability based on measurable results
ENSURE DECISION-MAKERS WORK CLOSELY WITH IR TEAM	**Ensure key decision-makers work very closely with the Institutional Research staff / team** (e.g., GSU's institutional research analyst is embedded within the student success organization)
SHARE KEY METRICS PUBLICLY	**Share key metrics publicly** (e.g., enrollment, retention rates, and degrees conferred by college) **to create transparency and friendly competition / motivation across functions and colleges** (e.g., GSU IPORT, ASU Facts)

Strategic Planning & Finance

OBSERVED PRACTICES	DESCRIPTION
IMPLEMENT RIGOROUS STRATEGIC PLANNING	**Implement a rigorous strategic planning process to align around a set of core priorities and measurable goals, with student success at the center** (e.g., GSU moved from a 'everybody gets an ornament on the tree' strategic planning process to a set of five core priorities)
RELENTLESSLY PRIORITIZE INVESTMENTS	**Relentlessly focus investments toward core priorities, and upon high level allocation enable decision making to happen close to the action** (e.g., ASU University Planner ensured major investments were aligned to strategic plan, and then gave autonomy to Deans of Schools to creatively manage budgets)
ENLIST BOARD OF REGENTS AS AN ALLY	**Enlist the Board of Regents (BoR) as an ally to achieve strategic priorities** (e.g., GSU persuaded the BoR to provide ~$2M/year in funding to lower advisor ratios and to grant approval to fund emergency financial aid through student fees)
PURSUE CREATIVE FUNDING STRATEGIES	**Pursue creative strategies to fund priorities** (e.g., ASU and UCF partner with external developers to develop student housing to reduce upfront costs to the institution, GSU creatively leveraged indirect cost recovery to fund new facilities)

PATHWAYS

Pathways refers to the institution's ability to help students see a clear route to a meaningful credential (and a career) and then support students to keep them on that path to success.

Pathways also encompasses streamlining credit transfer from two-year institutions and utilizing data-enabled alert systems that help keep students on track.

CREDENTIALING PATHWAYS

OBSERVED PRACTICES	DESCRIPTION
ESTABLISH MAJOR MAPS	**Clearly articulate the courses students need to meet graduation graduate requirements for each major**
HELP STUDENTS NAVIGATE CHOICES	**Help first year students navigate breadth of major options to start earning credits early towards graduation** (e.g., students enter GSU through meta-majors)
STEER STUDENTS EARLY INTO BEST-FIT MAJORS	**Use performance in early classes to steer students into best fit majors and reduce excess credit hours** (use historical data to create success markers)
IMPLEMENT DATA-ENABLED ALERTS	**Implement data-enabled alerts mapped to major maps that inform advisors in real time when students go off-track** (e.g., GSU has 800 alert markers through EAB)
REDESIGN COURSES WITH HIGH DFW RATES	**Orient towards helping students successfully learn required material and away from unintentionally 'weeding' out students** (e.g., ASU re-evaluated high DFW freshman courses and revised curriculum to only include required content)
ALIGN POLICIES TO HELP STUDENTS PROGRESS	**Use observations from advisors to remove policy barriers that constrain student progression** (e.g., GSU advisors noticed students accumulating excess credits by retaking courses multiple times to raise their GPA)
LINK MAJORS WITH CAREER PATHWAYS	**Help students understand career opportunities to inform selection of a major** (e.g., transition advisors at GSU use Burning Glass data to share supply-demand gaps tied to career options)
ALIGN PATHWAYS WITH TWO YEAR INSTITUTIONS	**Alleviate transfer credit equivalency challenges through improved alignment of curriculum with partner two year institutions** (e.g., ASU has ~120+ pathway programs with CCs)

GSU improved its credentialing pathways to enable more students to graduate on time with a best-fit major

IMPROVEMENT LEVERS	SPECIFIC ACTIONS TAKEN
HELP STUDENTS NAVIGATE CHOICES	Created **meta major based Freshman Learning Communities**, where students choose a meta major (an area of interest spanning multiple majors – e.g., STEM, which includes chemistry, biology, etc..) when they enroll, and take all first semester courses with a cohort of students who chose the same meta major • All courses taken during the first semester can count toward any major in the meta major so students can explore majors without risking accumulating excess credits • In the first semester, students also participate in a **meta major specific GSU 1010 course**, which introduces students to various majors in the meta major • Having the student choose one out of the nine different meta majors helps students navigate a large and complex institution with ~3K courses and ~80 majors • Students are effectively self selecting into meta majors, with ~80% graduates graduating with a major within their original meta major

Source: GSU interviews, GSU Ithaka case study

GSU improved its credentialing pathways to enable more students to graduate on time with a best-fit major

IMPROVEMENT LEVERS	SPECIFIC ACTIONS TAKEN
STEER STUDENTS EARLY INTO BEST-FIT MAJORS	Used **historical data** (not faculty perception) to **create success markers in all majors** that predict timely graduation early in a student's tenure, thereby providing students with an early indication of their likelihood to succeed in a particular major **Revised first and second year course requirements** for majors with special admissions requirements to help prevent students from continuing in majors in which they weren't likely to be successful **Utilized Burning Glass career data** to inform students of different career opportunities, beyond the most popular within each major (e.g., doctors and lawyers)

Source: GSU interviews, GSU Ithaka case study

GSU improved its credentialing pathways to enable more students to graduate on time with a best-fit major

IMPROVEMENT LEVERS	SPECIFIC ACTIONS TAKEN
ALIGN POLICIES TO HELP STUDENTS PROGRESS	**Created new policies that limited students** from taking courses that would put them off track (e.g., repeating courses when not necessary) **Created new majors** with similar first and second year course requirements to allow students to switch majors without too many excess credits • Transitions to new majors supported by specialized transition advisors

Source: GSU interviews, GSU Ithaka case study

Credentialing pathways improvement example: Nursing at GSU

IMPROVEMENT LEVERS	SPECIFIC ACTIONS TAKEN IN NURSING / PRE-NURSING AT GSU
HELP STUDENTS NAVIGATE CHOICES	Redesigned major maps and grouped Pre-Nursing, Pre-Nutrition, and Pre-Respiratory Therapy into the **Health Sciences meta-major** Created a **Health Sciences FLC** for all students interested in Health Science majors. The FLC enabled students to explore Health Science majors, without accumulating excess credits • Includes the Health Sciences meta major GSU1010 course that introduces students to each major in the meta major

Prior to the change, ~29% students who declared pre-nursing graduated vs. institutional average across all majors of ~50%; Pre-nursing graduation rates have increased to be closer to the institutional average

Source: GSU interviews, GSU Ithaka case study

Credentialing pathways improvement example: Nursing at GSU

IMPROVEMENT LEVERS	SPECIFIC ACTIONS TAKEN IN NURSING / PRE-NURSING AT GSU
STEER STUDENTS EARLY INTO BEST-FIT MAJORS	**Revised first and second year course requirements** to reduce wasted credit hours. In particular: • Set a minimum GPA requirement in specific foundation courses (e.g., B or better in Math 1101) • Required all early foundation courses to be completed in the first year **Raised application requirement** from 2.8 to 3.5 GPA to more accurately reflect program

Prior to the change, ~29% students who declared pre-nursing graduated vs. institutional average across all majors of ~50%; Pre-nursing graduation rates have increased to be closer to the institutional average

Source: GSU interviews, GSU Ithaka case study

Credentialing pathways improvement example: Nursing at GSU

IMPROVEMENT LEVERS	SPECIFIC ACTIONS TAKEN IN NURSING / PRE-NURSING AT GSU
ALIGN POLICIES TO HELP STUDENTS PROGRESS	Limited the number of times courses could be retaken by only **allowing students two attempts** to meet requirements **Created new Health Informatics, Public Health, and Health Management majors** that Nursing prerequisites could also be applied to

Prior to the change, ~29% students who declared pre-nursing graduated vs. institutional average across all majors of ~50%; Pre-nursing graduation rates have increased to be closer to the institutional average

Source: GSU interviews, GSU Ithaka case study

Strong relationships with community colleges have built a strong steady pipeline of transfer students to ASU

Strong pipeline for transfers is built on relationships with community colleges

ASU has built ~120+ pathway programs with community colleges

- The ~120+ as of 2016 includes 21 colleges in Arizona, 65 in California, 12 in Washington, 8 in Illinois
- Pathway programs provide a clear path to an ASU credential from community college courses
- A business development team meets with community colleges to start the process of developing a pathway program; frequently this follows after a handful of students have come through ASU Online
- This model of working in collaboration with community colleges rather than in competition was encouraged by President Crow and Elizabeth Capaldi Phillips
- ASU no longer invests in formal articulation contracts; instead a public website allows students to compare requirements to their community college transcripts

MARICOPA COMMUNITY COLLEGES

Maricopa Community Colleges is the largest contributor of new transfers

- Maricopa students make up ~60% of new campus immersion transfers
- Maricopa students have access to a version of eAdvisor, allowing them to map pathways to completion of an ASU degree
- Maricopa to ASU Pathways Program (MAPP, available for 226 majors) provides guaranteed entry for students meeting requirements, and ensures ASU tuition level as it was when they first enrolled at Maricopa
- ASU and Maricopa are collaborating on online courseware

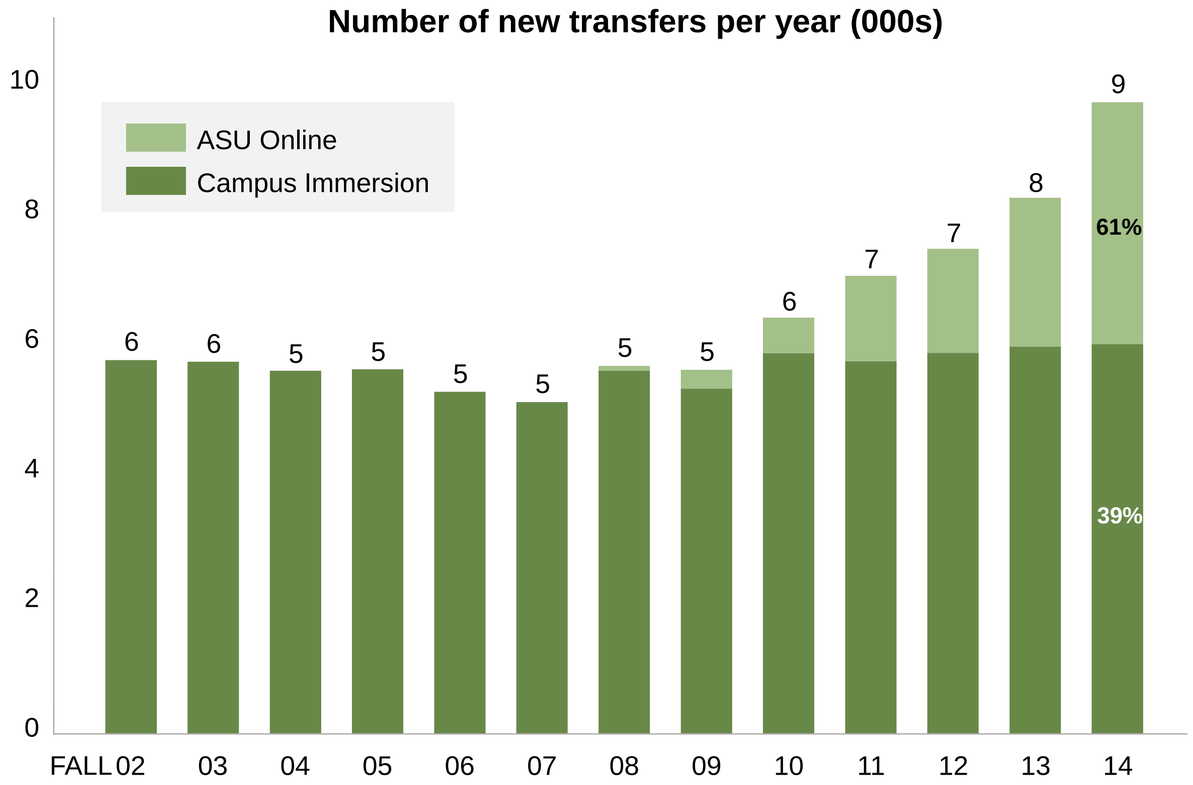
Source: ASU Facts website, ASU interviews

ALIGN PATHWAYS WITH TWO YEAR INSTITUTIONS

CONTEXT

Strong relationships with community colleges have built a strong steady pipeline of transfer students to ASU

ASU online has brought recent transfer growth



Source: ASU Facts website, ASU interviews

UCF and partner colleges have established a curriculum alignment process to improve student preparedness

What problem does curriculum alignment address?

- Students from partner colleges entering UCF are not equally well-prepared to succeed in the next level of courses
- Curriculum alignment addresses potential disparities in preparedness by ensuring learning outcomes from common courses are the same across institutions

UCF process for curriculum alignment

Information gathering

Meeting 1
Introduce curriculum alignment

Meeting 2
Information and data

Meeting 3
Review data and identify course outcomes

Meeting 4
Identify basic assessments, review pedagogy

Meeting 5
Action plan for next steps

Continuous review

This process takes ~1 year. In year 2, arrangements are made for changes to be in place by year 3.

Source: UCF interviews, UCF Draft Curriculum Alignment Handbook

Lessons learned by UCF and partner colleges establishing a curriculum alignment process

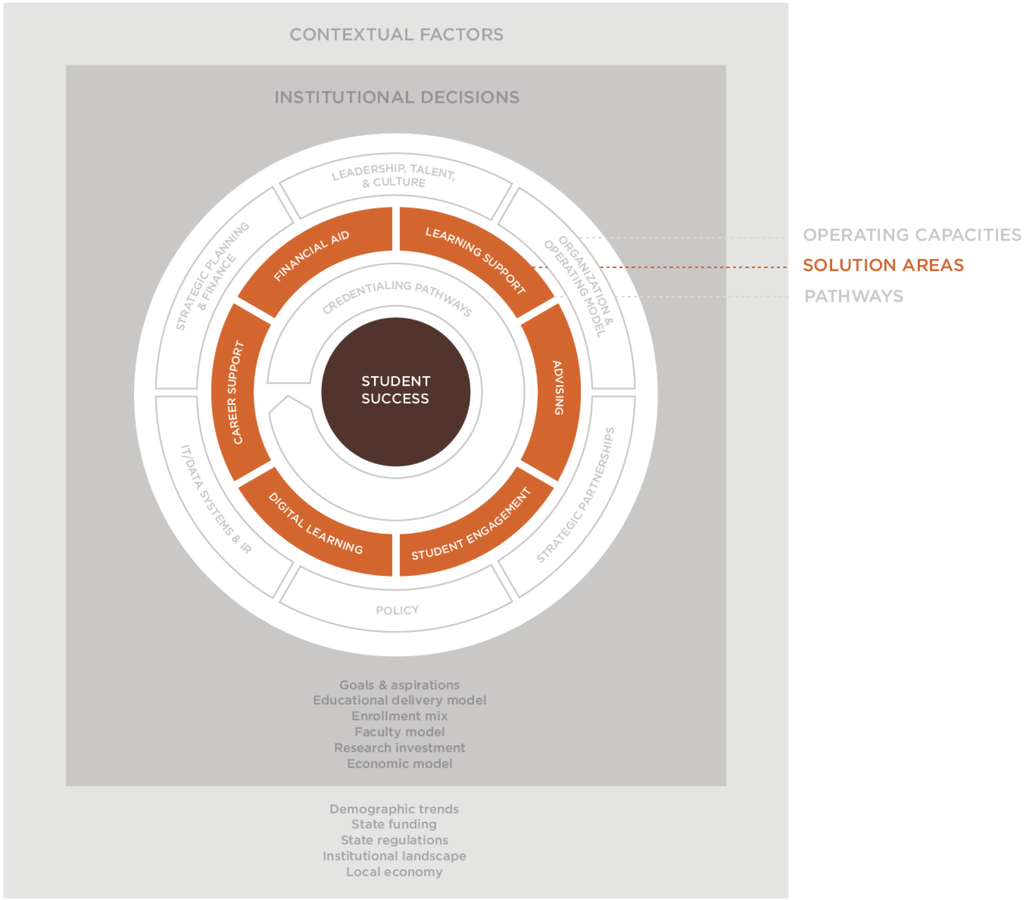
Aligning ~30 courses

- **Ensure a clear shared goal** for the process to keep all parties focused
- **Agree on what successful alignment looks like** so you can measure whether alignment efforts have worked
- **Use a neutral facilitator** to remove risk of bias and ensure blame-free framing of issues
- **Involve advisors** as well as faculty as they bring a student lens and bigger picture
- **Collect and use data** to focus discussions where change is needed, use evidence rather than political arguments, and to measure impact
- **Keep administration updated** as they have the power to ensure changes are implemented

Source: UCF interviews, UCF Draft Curriculum Alignment Handbook

SOLUTION AREAS

Solution Areas address both loss points and areas where there is potential to increase students' momentum toward a credential. Solution Areas work best when supported by robust capacities.



FINANCIAL AID

This section outlines:

Creative updates to financial aid that aim to serve more students more effectively, both by offering new kinds of aid and funding that aid with creative new mechanisms.

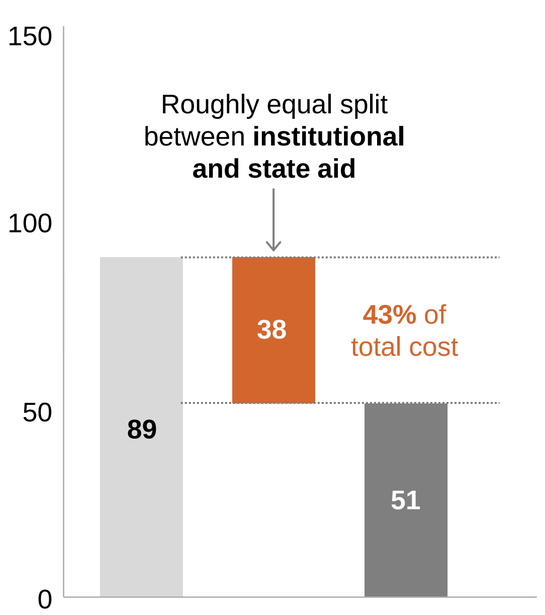
FINANCIAL AID

OBSERVED PRACTICES	DESCRIPTION
OFFER TARGETED INSTITUTIONAL AID	**Offer targeted institutional aid to help expand access to socioeconomically diverse students**
PROVIDE EMERGENCY FINANCIAL AID	**Allocate budget for emergency financial aid to help students during financial challenges** (e.g., GSU's Panther Retention grant offers up to $2.5K to students with outstanding balances)
USE FINANCIAL AID TO INFLUENCE BEHAVIOR	**Design aid programs to incentivize students to receive academic support and advising** (e.g., GSU's Keep HOPE Alive grants requires advising, academic tutoring, and financial counseling)
CONDUCT SMALL PILOTS, EVALUATE, THEN SCALE	**Conduct small financial aid pilots and evaluate impact before scaling, in order to maximize impact of each financial aid dollar** (e.g., GSU added academic support and advising requirements to Keep HOPE Alive after evaluation of initial pilot found insufficient impact)
EXPLORE CREATIVE FUNDING MECHANISMS	**Explore creative funding mechanisms to fund financial aid** (e.g., GSU funds Panther Retention Grants through student fees, because state law prohibits funding with tuition, fees, or state funding)
DIFFERENTIALLY RAISE TUITION AND FEES TO FUND INSTITUTIONAL AID	**Differentially raise tuition and fees to a subset of students in order to provide institutional aid to socioeconomically diverse students** (e.g., ASU raised out-of-state and international tuition to help increase funding for in-state institutional aid)

Approx. 40-50% of total attendance cost is met by aid at case study institutions; mix of state, federal, institutional

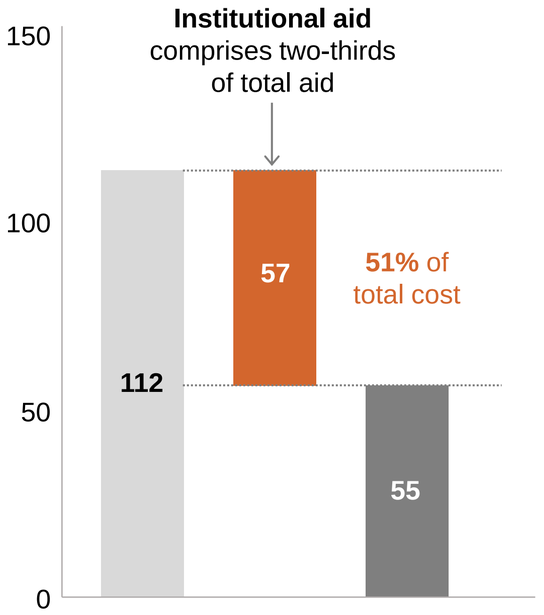
University of Central Florida

Cost ($K)



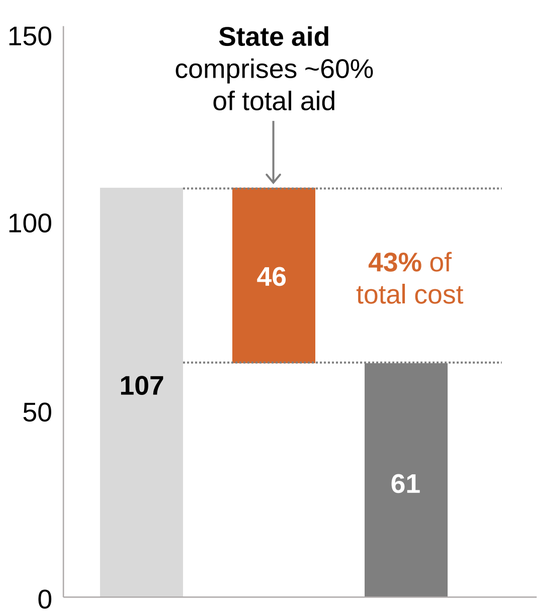
Arizona State University

Cost ($K)



Georgia State University

Cost ($K)



Total cost[1] | Total aid[2] | Net cost to student

1. Includes tuition/fees, books/supplies, housing, personal expenses. 2. Includes avg. $ of Pell grant (received by 32% of FTIC students), State aid (received by 87% of FTIC students) and Inst. aid (received by 44% of FTIC students). 3. Includes avg. $ of Pell grants (received by 26% of FTIC students) and Institutional aid (received by 86% of FTIC students). 4. Includes avg. $ of Pell grants (received by 57% of FTIC students) and state aid (received by 78% of FTIC students). Note: Assumes student is an in-state, Pell eligible, freshman student entering with fairly high level of preparedness, and living on campus all four years. Source: Univ. websites (AY2016-17 cost of attendance), IPEDS (Financial aid)

Increased criteria and reduced funding for Florida's state scholarship led UCF to offer replacement aid

When the Bright Futures state scholarship was cut back following financial crisis…

Bright Futures is a state level, merit-based scholarship designed to support high school graduates to pursue higher education

- Bright Futures has 2 types of grants:
  - Florida Academic Scholars (FAS), with funding of $103 per credit hour
  - Florida Medallion Scholars (FMS), with funding of $77 per credit hour

From FY13-15 Florida increased the eligibility criteria for Bright Futures scholarships to cut back the funding

- The number of students receiving Bright Futures aid dropped 26% and total disbursement declined 23%

…UCF established a replacement fund to maintain access for affected students

UCF established the Bright Futures Replacement initiative in FY15

- Students receive the same level of funding
- Students are eligible if they meet the original Bright Futures eligibility criteria

Replacement funding ensures continued access to UCF for students who may not otherwise be able to pay

2,264 students have benefited since FY15

- In 2014-15: 2,123 awards given to 1,222 students
- In 2015-16: 1,777 awards given to 1,042 students
- ~$3.2M (~50% of institutional aid for FTIC) disbursed annually since FY15; will be recurring annually

Source: Florida College Access website, UCF interviews, data shared by UCF

PROVIDE EMERGENCY FINANCIAL AID

GSU's Panther Retention Grants support students with outstanding balances to continue their studies

GRANT DETAILS

Grants between $300-$2500 are awarded to students who would be dropped from classes because of small remaining balances

- More than 1K well qualified students are dropped each semester due to the GA mandate to pay full balances by the first week of classes
- Large portion of students dropped were seniors who exhausted their financial aid

Funds are allocated right before drop day with **priority given to juniors and seniors,** followed by students with the smallest outstanding balances

HOW IT WAS PILOTED

President Becker and his wife, Laura Voisinet, gave a personal donation of $40K to student success efforts that supported initial intervention

FUNDING SOURCE

$2M from student fees

ACADEMIC IMPACT

More than 80% of recipients are retained or graduate within two semesters

Freshmen offered the grant in fall 2014 had 1-yr retention rate of 88%, and the university average was 83%

FINANCIAL IMPACT (2011-2014)

The **average grant is $900**; however GSU is able to **recapture $4,400 in full-time tuition/semester** that would have otherwise been lost

Rate of 'returnees' has been kept under 25%

Source: GSU interviews, Ithaka Case Study, CCG GSU cost of attendance calculator

Students maintaining GA HOPE Scholarship eligibility graduated at a greater rate than students who did not

GA HOPE Scholarship alleviates cost of attendance but can be difficult to maintain

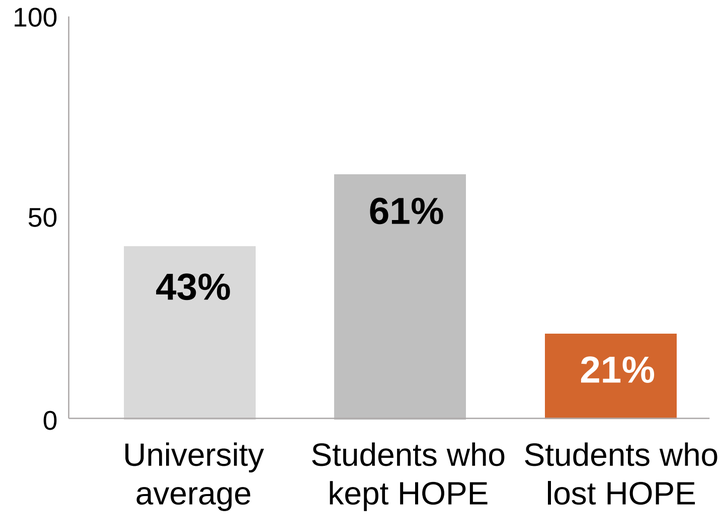
- HOPE Scholarship covers **82% of total tuition** for students who graduated high school with a 3.0 GPA or above and maintain eligibility through college
- GA uses **checkpoints** at 30, 60, and 90 credit hours and the end of every Spring semester, to **ensure students are maintaining eligibility** throughout college
- Students who do not have at least a 3.0 GPA lose HOPE Scholarship until the next checkpoint
- Students **can regain eligibility** and HOPE scholarship funding **only once** if they regain a 3.0 GPA at the next check point

Source: GSU leadership interviews, GSU Ithaka case study, Complete College Georgia 2015 report, University System of Georgia

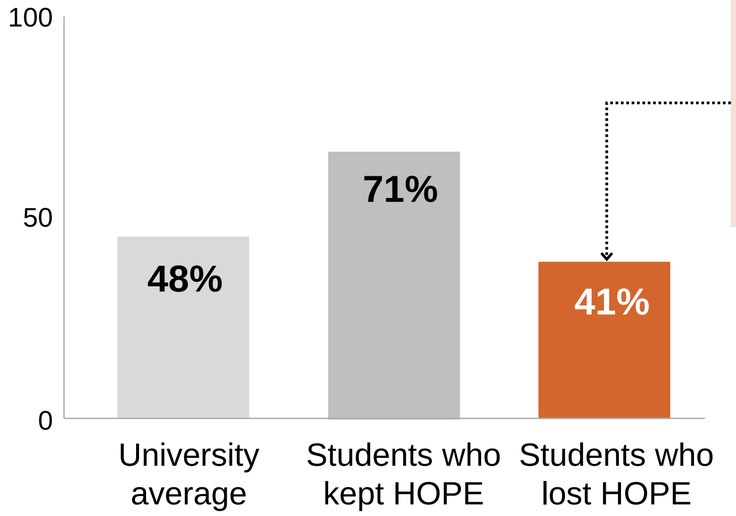
Students maintaining GA HOPE Scholarship eligibility graduated at a greater rate than students who did not

Students who lose the HOPE scholarship graduate at much lower rates, but these rates have almost doubled from 2008 to 2011

2008 graduation rate (%)



2011 graduation rate (%)



Significant improvement in grad rates for students who lost HOPE, in part driven by more students regaining HOPE

Source: GSU leadership interviews, GSU Ithaka case study, Complete College Georgia 2015 report, University System of Georgia

Keep Hope Alive (KHA) incentivizes GSU students to use academic and financial support to regain GA HOPE

GRANT DETAILS

Freshman and sophomore students that lose GA HOPE eligibility with a GPA between 2.75-2.99 receive a $1000 scholarship at the completion of the program contingent on:

- Complete targeted academic and financial advising
- Attend student success workshops
- Enroll in a minimum of 30 credit hours in the following academic yr..

Eligible students are invited to submit applications explaining their circumstances of losing HOPE and plan to regain eligibility

- Office of Financial Aid accepts students based on yearly budget (377 students from 2009-2015)

One full-time retention coordinator oversees the program while partnering with numerous offices (e.g., University Advisement Center, Office of 1st year and retention programs)

HOW IT WAS PILOTED

GSU awarded KHA to 20 students who lost HOPE eligibility in 2009. GSU realized funds would have more impact if tied to participating in programs designed to help students regain HOPE eligibility

ONGOING FUNDING

Donations from philanthropic organizations and GSU faculty

ACADEMIC IMPACT

58% of participants regain HOPE Scholarship, vs. only 9% of non-participants

FINANCIAL IMPACT (2011-2014)

# of total awards	377
Award size	$1000
Total Cost	**$377K**

# of students that regained HOPE	219
Average HOPE award size/year	$6990
Total HOPE $/year	**$1.52M**

Source: GSU interviews, Ithaka Case Study, GSU KHA website

Differential institutional financial aid supports access at ASU, particularly for resident freshmen

ASU uses institutional financial aid as an intervention to increase access

ASU spends ~$250M a year on institutional financial aid as a crucial intervention to increase access

- The Arizona Board of Regents requires 17% of revenue to be set aside for aid (up temporarily from 14%), and ASU has consistently exceeded this

Approx. $142M goes toward subsidizing tuition resident freshmen

- This reflects a commitment to serve Arizona students, and to increase access to a more socioeconomically diverse base of students
- ASU aspires to further increase institutional aid for resident freshmen as ASU continues to increase their share of socioeconomically diverse students – e.g., increase from 67%-~75% subsidization

Some funds are set aside for emergency 'just-in-time' financial aid, but only a small group (~100 students) receives this each year

- Emphasis is on up-front aid, initially by merit (at application), later topped up for need (FAFSA)
- ASU encourages students to plan ahead and explore all options rather than use emergency aid

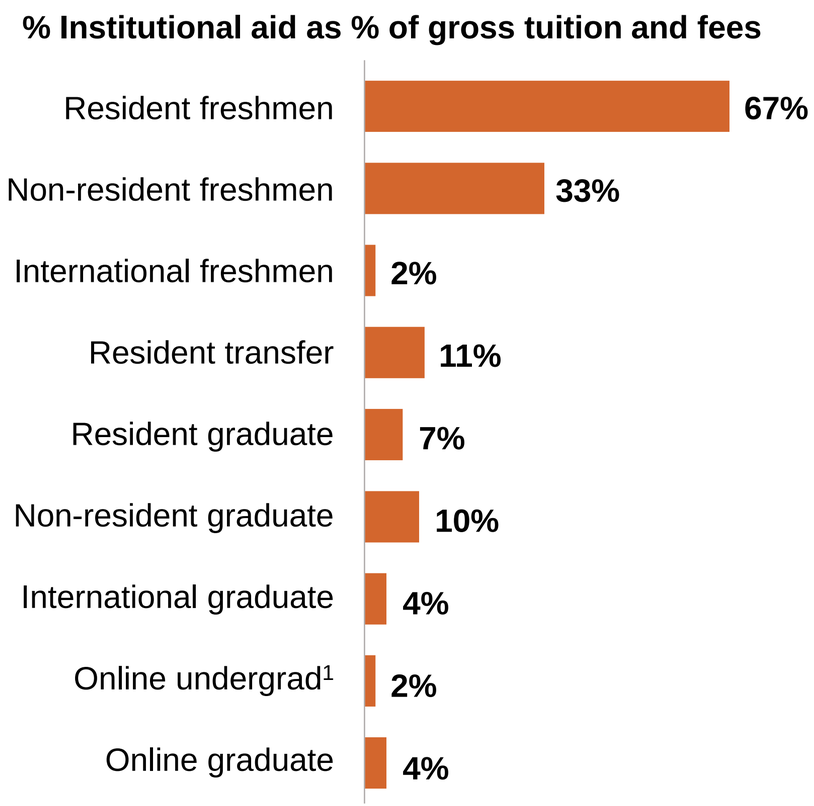
1. Using combined freshman and transfer institutional aid figures for online undergraduate programs, because only small % of students are freshman. Includes non-Starbucks students only
Note: Figures based on FY15. Source: ASU interviews

DIFFERENTIALLY RAISE TUITION & FEES TO FUND INSTITUTIONAL AID

CONTEXT

Differential institutional financial aid supports access at ASU, particularly for resident freshmen

Institutional aid subsidizes tuition heavily for resident freshmen

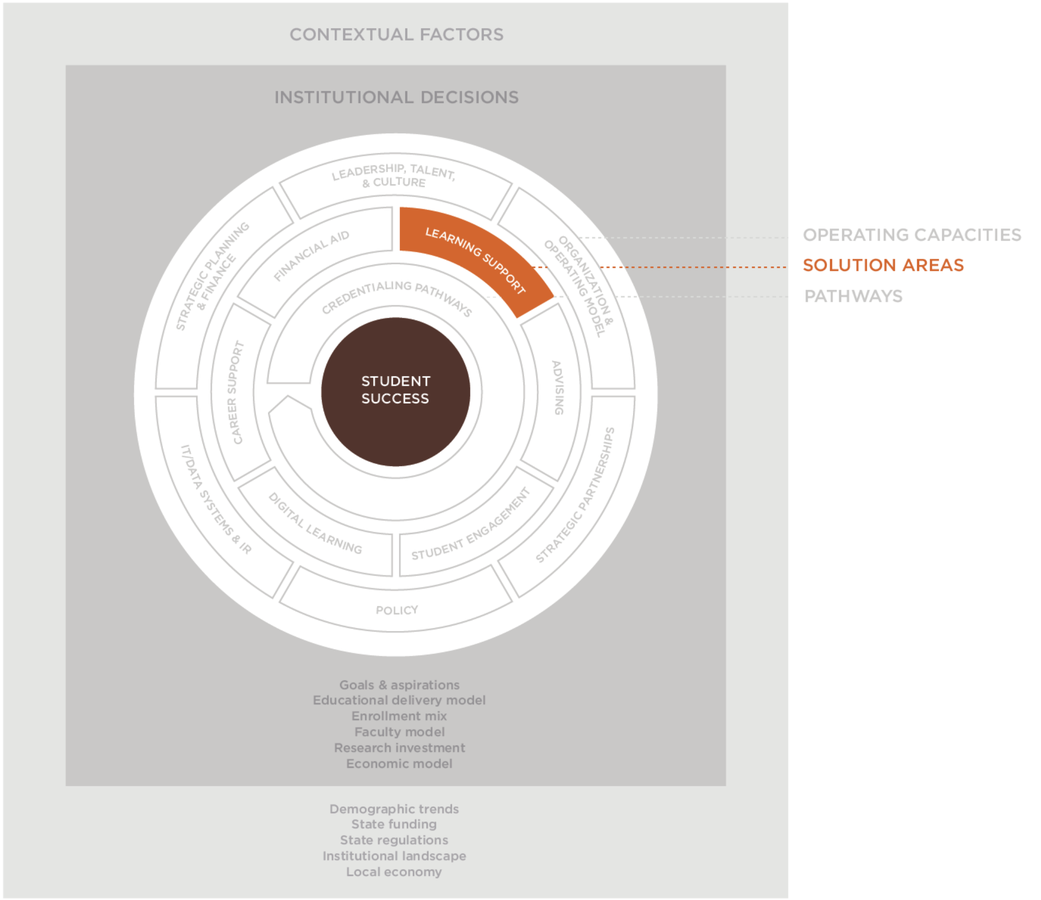


1. Using combined freshman and transfer institutional aid figures for online undergraduate programs, because only small % of students are freshman. Includes non-Starbucks students only
Note: Figures based on FY15. Source: ASU interviews

LEARNING SUPPORT

This section outlines:

Supplemental instruction tactics that aim to prepare students for their freshman year with preparatory programs and “Institution 101” courses, and also reduce DFW rates.



LEARNING SUPPORT

OBSERVED PRACTICES	DESCRIPTION
PROVIDE SUPPLEMENTAL INSTRUCTION	**Provide opportunities for students to seek forms of supplemental instruction, particularly for high DFW courses or courses with very high enrollment** (e.g., supplemental instruction at UCF is offered in 55-60 high risk STEM courses with 30% or higher DFW rates)
CREATE AN 'INSTITUTION 101' COURSE	**Create a compulsory course for freshmen to build skills for academic success and navigate a multimodal large-scale university** (e.g., ASU101/ASU11 covers time management, awareness of ASU, getting to know your classmates, etc..)
FOCUS SUPPORT FOR 'AT-RISK' STUDENTS	**Establish small group programs for entering students identified as 'at risk', so they are not left behind by others in their large freshmen classes (**e.g., ASU's LEAD program for ~50 students selected using composite of GPA and SAT provides structured, seminar-style classes to equip students for success at ASU and beyond)
PROVIDE OUTREACH TO PREPARE THE PIPELINE	**Offer supplementary programming as outreach to potential students, building a more prepared pipeline** (e.g., ASU's Preparatory Academy and Global Freshman Academy both help build a prepared pipeline)

DATA

At UCF, FTIC students who receive supplemental instruction (SI) achieve better outcomes

SI was introduced to foster student academic success in STEM courses

- **Introduced by the Student Academic Resource Center (SARC) in 1996**
- **SI sessions are course specific, voluntary and face to face**
- **Offered sessions in 55-60 high-risk STEM courses, with 30% or higher DFW rates**
- **3x 50-min sessions per week**
- **Facilitated by 50 peers, paid $1.2K/semester, who have taken part in a 2-day training session**

In the 2014-2015 Academic Year:

~2000 freshmen[2] participated

4,546 SI sessions held

$135K cost per year to UCF

1: DFW grading (D, Fail or withdrawn), Fall 2015 outcomes data. 2. ~12,000 students across all levels (17.2% freshmen). Source: UCF interviews, data shared by UCF

At UCF, FTIC students who receive supplemental instruction (SI) achieve better outcomes

SI has proven effective in improving student outcomes

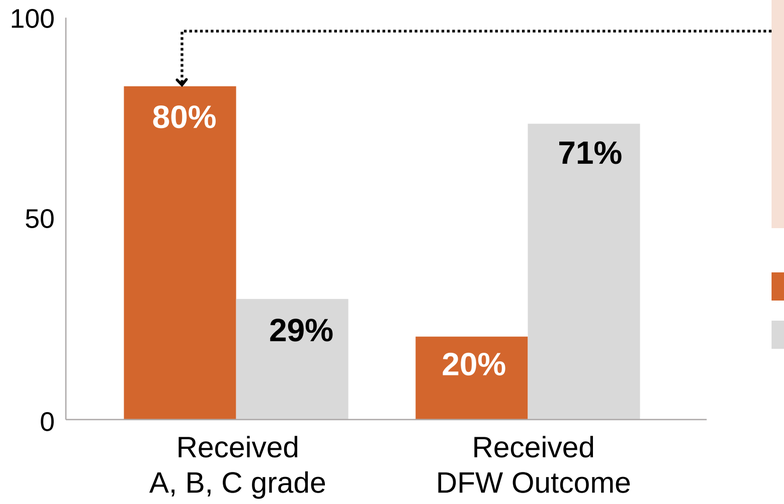
10% higher retention

FTIC students who participated in at least three SI sessions were retained at 10% higher rates

0.4 GPA Improvement

FTICs who attend SI show an average 0.4 improvement in GPA

Students (12K, at all levels) who receive SI achieve higher ABC and lower DFW[1] rates



Data may reflect self-selection bias; UCF has observed higher participation of B and C students who attend SI to achieve an A

1: DFW grading (D, Fail or withdrawn), Fall 2015 outcomes data. 2. ~12,000 students across all levels (17.2% freshmen). Source: UCF interviews, data shared by UCF

In addition to SI, peer tutoring at UCF has contributed to higher student success for a large number of students

FTIC students who participated in peer tutoring in AY 2014-15 were more likely to persist (92% vs. 80% persistence rate for non-participants) in Fall 2015

Higher frequency of participation in peer tutoring is linked to improvements in persistence

Outcomes also show correlation between the number of hours of engagement and academic success

Tutoring Hours (Fall 2015)	
1–3 Hours	**89%** persistence rate
4–5 Hours	**90.1%** persistence rate
6+ Hours	**92.8%** persistence rate

Background:

Introduced and managed by the Student Academic Resource Center (SARC) in 1988

35 peer tutors, covering 31 subjects per semester in STEM courses

Tutors are certified by the College Reading and Learning Association (CRLA) Level I and trained to facilitate learning; $7,514 spent with training per semester

Peer tutors are also involved in conducting final review sessions (Study Union) at the end of each semester

25,119[2] students participated (AY14); 10% are first year FTIC, 47% are minority students

1. While this means that peer tutoring is heavily used by upper classmen and transfers, 10% is 2.5K first year freshmen, which means ~42% of the first year / incoming freshmen class. 2. These are not unique students. UCF records student use of peer tutoring, but not by unique user. Source: UCF interviews, data shared by UCF, UCF website

MORE INFO

GSU offers supplemental peer tutoring to address high DFW* rates in traditionally difficult courses

Supplemental instruction reinforces lecture material in high DFW courses

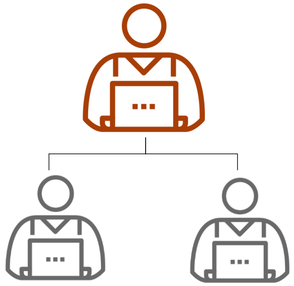
GSU began offering supplemental peer tutoring in order to address high DFW rates

- All peer instructors are current GSU students that have excelled in the course

Peer instructors reinforce course content by

Attending lectures for their assigned courses...

...then preparing activity-based sessions for each lecture



1. Spring 2016 participants 2. Fall 2014 1-yr retention. Source: Ithaka case study, GSU website

PROVIDE SUPPLEMENTAL INSTRUCTION

GSU offers supplemental peer tutoring to address high DFW rates in traditionally difficult courses

The program has expanded as it is continued to show positive outcomes

- **In 2016, there were more than 12x the number of supplemental instruction leaders as there were when first piloted in 2005 (100 in spring 2016 vs. 8 in spring 2005)**
- **In 2013, 9,700 students participated in supplemental instruction**
- **The program has showed positive GPA and retention impact**
  - Students attending 5 or more SI sessions earned **3.15 average GPA** in course vs. 2.75 for students who did not[1]
  - Students attending 3 or more SI sessions had a **91% one-year retention rate** vs. 84% for first year students overall[2]

By employing students, supplemental instruction is a low-cost, high-impact program for student success

1. Spring 2016 participants 2. Fall 2014 1-yr retention. Source: Ithaka case study, GSU website

PROVIDE OUTREACH TO PREPARE THE PIPELINE

MORE INFO

ASU Prep, Global Freshman Academy, and ASU101/ASU11 create a more prepared pipeline

ASU Prep and Global Freshman Academies help prepare a pipeline of students for success

ASU Preparatory Academy serves ~1000 students at its Phoenix campus, of which ~70% are on free/reduced lunch and ~80% are Hispanic or African American

Success draws from rigorous curriculum and strong involvement of ASU, families, and community

- Academic programming based on Cambridge Curriculum includes capstone projects, Learning Lab, research and writing workshops, after-school tutoring, and Saturday Scholars
- Fulton Teacher's College offers Professor in Residence for continuous teacher and curriculum development
- Families required to log 30 service hours in support of students
- Community partners contribute to learning experiences

Global Freshman Academy is a suite of courses delivered online at scale at low cost

- 20 online freshman-level courses, which can be taken as single-course or in "freshmen pathway" of 5+ courses
- Courses are free with option to pay for credit
- GFA will target four segments for growth: B2C adult learners, working learners, international students, and 11th and 12th graders

Source: ASU website, ASU interviews

ASU Prep, Global Freshman Academy, and ASU101/ASU11 create a more prepared pipeline

ASU101/ASU 11 sets up enrolled students for success

ASU101/ASU11 prepares enrolled students at ASU to succeed by introducing them to key skills and topics for study

- Key skills and topics include:
  - Time management
  - Value / economic return of a university degree
  - Awareness of ASU
  - Getting to know classmates

ASU101/ASU11 is a one credit hour freshman seminar course

- This is taught for 1 hour per week for a full semester

All students must take ASU101/ASU11, and it is customized by each college

Source: ASU website, ASU interviews

FOCUS SUPPORT FOR 'AT-RISK' STUDENTS

ASU's LEAD program supports academically at-risk students from their first day on campus

Students are selected for the program using a composite of their high school GPA and SAT scores

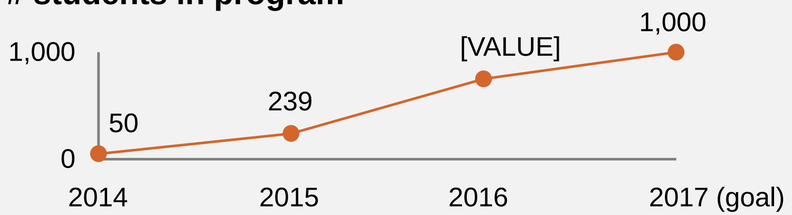
LEAD program focuses on equipping students for success at ASU and beyond through:

- Building critical reasoning and reading skills in relevant topic areas
- Accelerating students' communication skills including presentation and engagement skills
- Developing personal management skills through rigorous expectations during integrated courses
- Integrating program into necessary classes that count toward degree requirements

Program attributes

- Class size: 50 students
- Structured seminar-format
- Work conducted on project teams across three courses

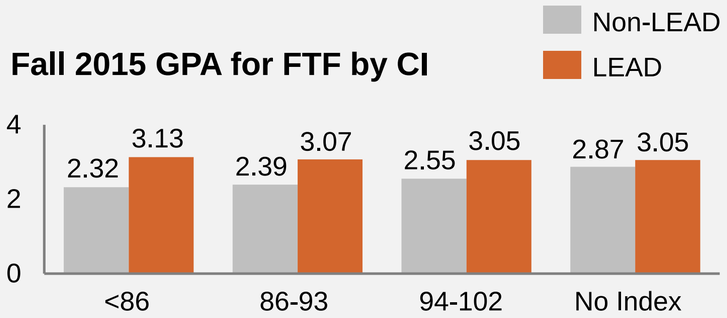
 # students in program



Outcomes to date

- **Retention** for Fall-to-Spring at **87.3% vs. 83.7%** for non-LEAD

Fall 2015 GPA for FTF by CI



Source: Retention to Graduation: A Process, ASU interviews

GSU offers a Summer Success Academy to support at-risk students early through academic support

The Summer Success Academy provides intensive academic support to at-risk students

Students entering with lowest SAT scores and HS GPA had much lower retention than their classmates

- In 2011, 10% students with lowest composite score had 50% 1 yr.. retention rate (vs. 83% overall)

In 2012, GSU began offering a Summer Success Academy, 7 weeks of intensive academic support and advising for the most at-risk students, taking place over the summer before freshman year

- 10% of most at-risk students in incoming class are eligible to participate
- Students enroll in 7 credit hours and need to earn a >2.5 GPA over the summer (in order to enroll in the fall)
- In addition to the summer program, support is provided throughout the year including:
  - Regular advising and academic support sessions
  - Participation in a SSA specific freshman learning community through the spring semester

Source: IPEDS, Ithaka Case Study

FOCUS SUPPORT FOR 'AT-RISK' STUDENTS

CONTEXT

GSU offers a Summer Success Academy to support at-risk students early through academic support

Driving significant improvement in retention, leading GSU to scale the program

Participant 1-yr retention exceeded average in 2015

1-yr Retention[1]

81%
All fall first-time enrolled students

87%
Summer participants

As compared to 50% for comparable population in 2011

More than tripled participation over 3 yrs.

105
students in 2012 (3.0% incoming freshman)

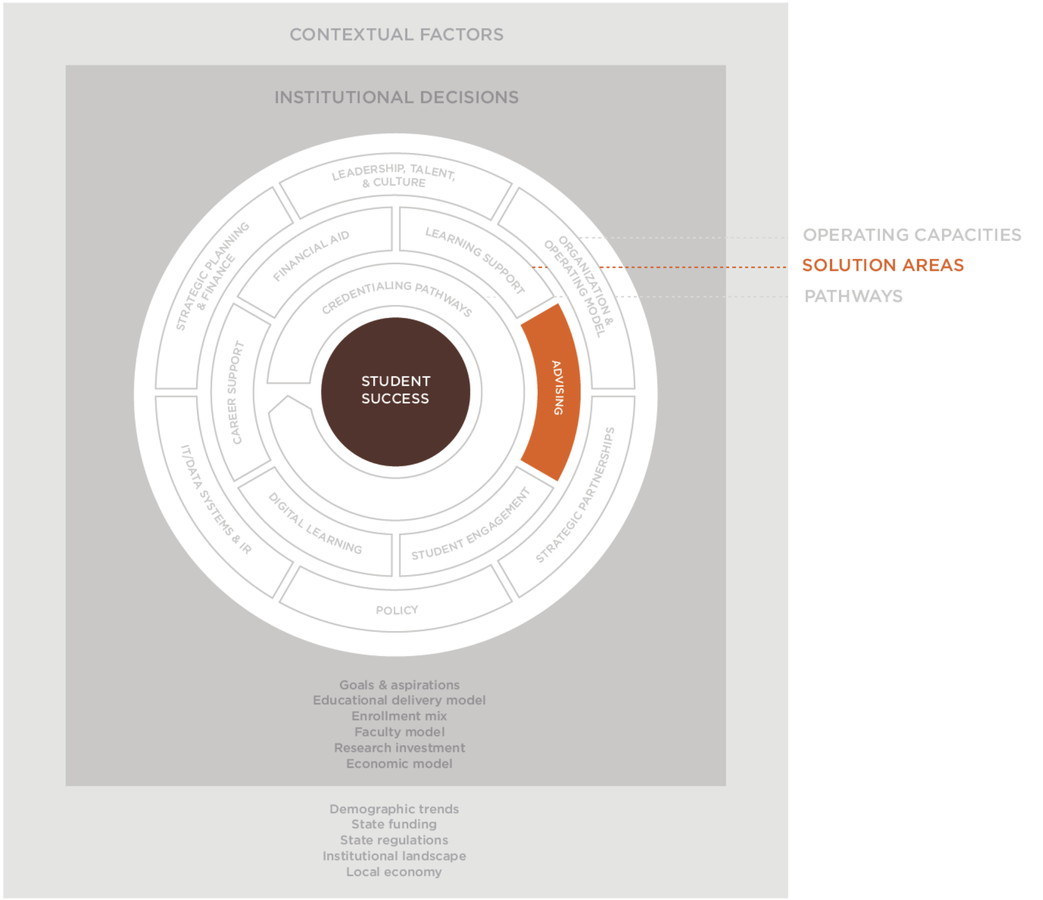
370
students in 2015 (9.5% incoming freshman)

Source: IPEDS, Ithaka Case Study

ADVISING

This section outlines:

Updated advising tactics that incorporate new technology and intentional management systems with lower student:advisor ratios for increased student success.



ADVISING

OBSERVED PRACTICES	DESCRIPTION
PROFESSIONALIZE THE ADVISING STAFF	**Hire and manage professional advisors to conduct student academic advising** (e.g., ASU, GSU, UCF all hired professional advisors)
ESTABLISH ~300:1 STUDENT:ADVISOR RATIOS	**Establish and maintain low student:advisor ratios. Benchmark observed practice is approximately 300:1** (e.g., GSU is ~300:1, ASU is ~350:1 with support from success coaches, UCF is ~400:1)
CENTRALLY MANAGE THE ADVISING FUNCTION	**Centrally manage the advising function in order to provide consistent, high quality advising regardless of major / college, and to more easily implement changes across the function** (e.g., GSU centralized first three years of student advising, UCF centralized first year only)
INVEST IN STUDENT TRACKING & PREDICTIVE ANALYTICS TECHNOLOGY	**Use technology to track students through their academic journey, and incorporate predictive analytics to alert advisors early if students are at-risk of becoming off track** (e.g., GSU's EAB predictive analytics platform has ~800 success markers to prompt advisors)
ESTABLISH FEEDBACK LOOPS FOR ADVISORS TO IMPROVE PATHWAYS	**Create formal feedback loops for advisors to identify and share challenges students are facing, in order for the institution to continuously improve its credentialing pathways** (e.g., GSU's advisors noticed students retaking easier courses to raise GPA and created policy to limit)

GSU offers a Summer Success Academy to support at-risk students early through academic support

WHAT ADVISING WAS LIKE BEFORE 2012

Each advisors supported ~1,000–1,600 students

- Difficult to target and track high-risk students
- Only students that were proactive, and mainly high achievers, received support

Centralized advising offered for the first 42 credit hours (~3 semesters)

- Individual colleges took over advising responsibilities after students were released
- Students floating between majors never successfully transferred

Students received inconsistent advisement from other faculty and staff

- Faculty and staff were not aware of all GSU core requirements

KEY ELEMENTS OF THE ADVISING TRANSFORMATION

PROFESSIONALIZE THE ADVISING STAFF

ESTABLISH ~300:1 STUDENT:ADVISOR RATIOS

Dedicated all advising functions to a professional staff of advisors; increased the number of advisors in order to lower the student: advisor ratio to ~300:1 and pay more specialized attention to each student

CENTRALLY MANAGE THE ADVISING FUNCTION

Centralized management of the advising function; Collocated all first to third year advisors to support students until they are secure in their major

INVEST IN STUDENT TRACKING & PREDICTIVE ANALYTICS TECHNOLOGY

Tracked students using technology; Incorporated predictive analytics to alert advisors when students got off-track

IMPACT & IMPLICATIONS

Advisors spend more time providing students with personalized services

- Personally contact every student each semester

Prompted 43K student-advisor meetings, with a stronger focus on medium-risk students

- While previously medium-risk students used to get missed, predictive analytics flagged these risks to get addressed (22% of meetings with high-risk students, 39% with medium-risk)[1]

Personalized advising contributed to:

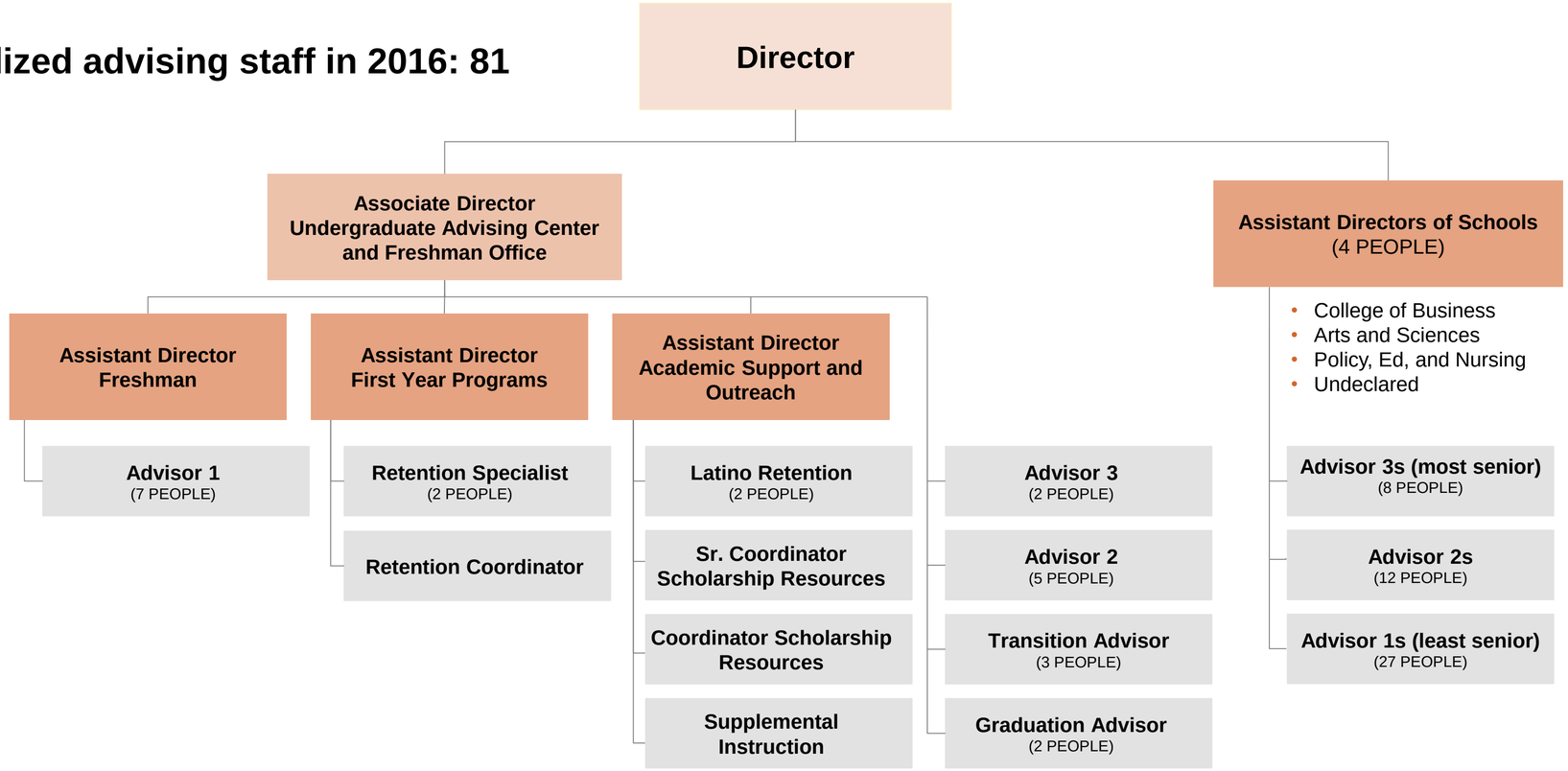
- Decline of 7 credit hours on average at the time of graduation
- 13 point increase in the percent of students in best fit majors
- 16 point increase in the percent of low-risk students

1. Calculated using Jan 2015-Jun 2015 data provided from GSU advising utilization workbook, excludes all 'undefined risk' students. Source: GSU Ithaka case study, GSU interviews

CENTRALLY MANAGE THE ADVISING FUNCTION

GSU's central University Advisement Center is organized by specialty (e.g., freshmen, transition), and by college

Total centralized advising staff in 2016: 81



Note: Initially hired 42 new advising staff in 2012 to augment the original ~13 advisors in the central advising function. The advising function has since grown further driven partially by increases in student enrollment, and potentially by adding additional specialty roles. Source: University Advisement Center org chart, GSU interview

GSU incorporated predictive analytics to allow advisors to proactively guide students to timely graduation

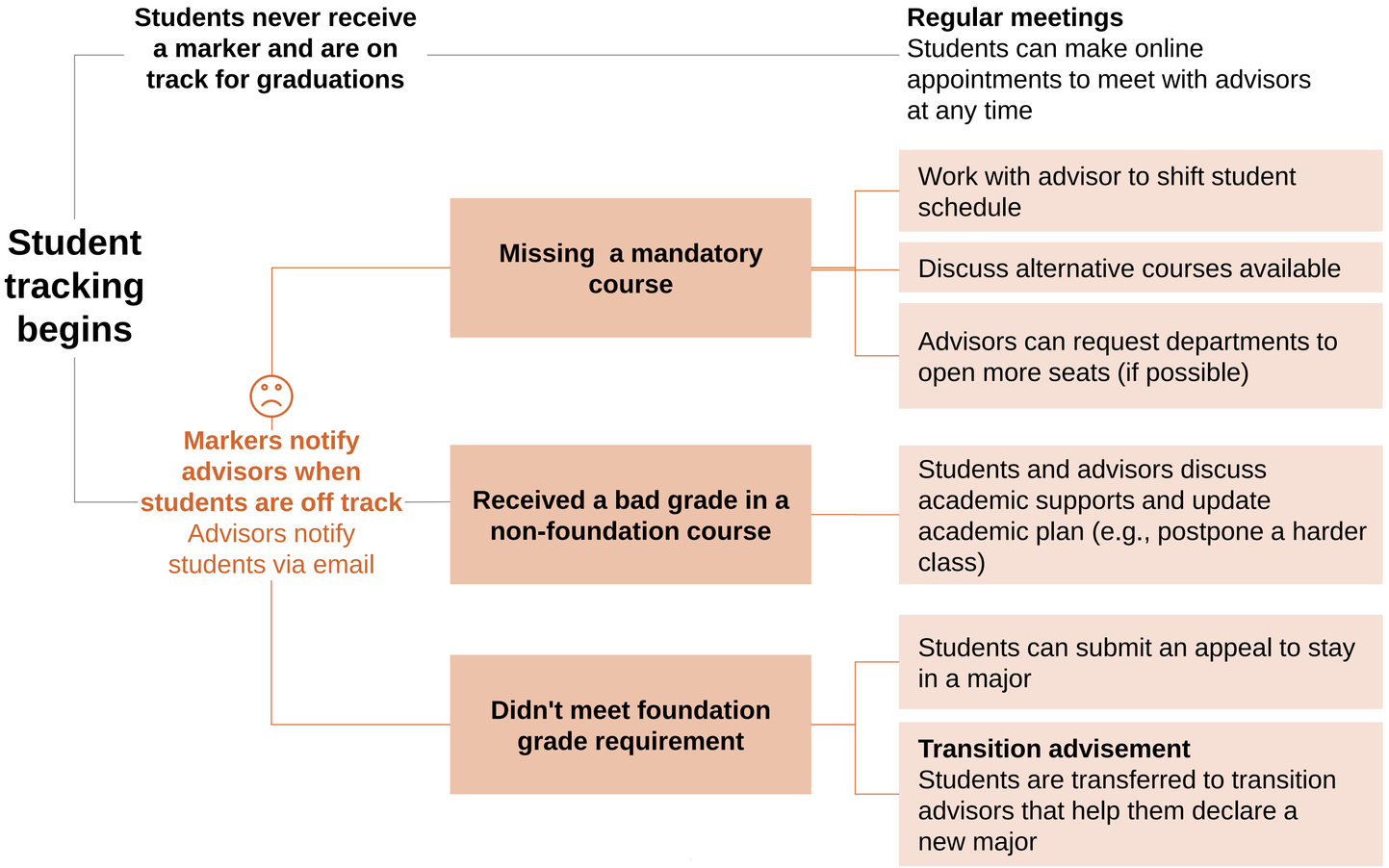
INITIAL STEPS STUDENTS TAKE FOR ADVISING

Freshman and transfer students declare majors at enrollment

Mandatory advisor meeting
Students must schedule a meeting with their assigned advisor in their first semester to remove a registration hold

Academic planning
Advisors leverage Burning Glass career data to discuss majors, share corresponding career opportunities, and create a personalized academic plan

Track your progress
GPS tracks students' GPA in prerequisites and enrollment in mandatory classes to ensure students are meeting graduation requirements



Source: GSU interviews, GSU Advising website

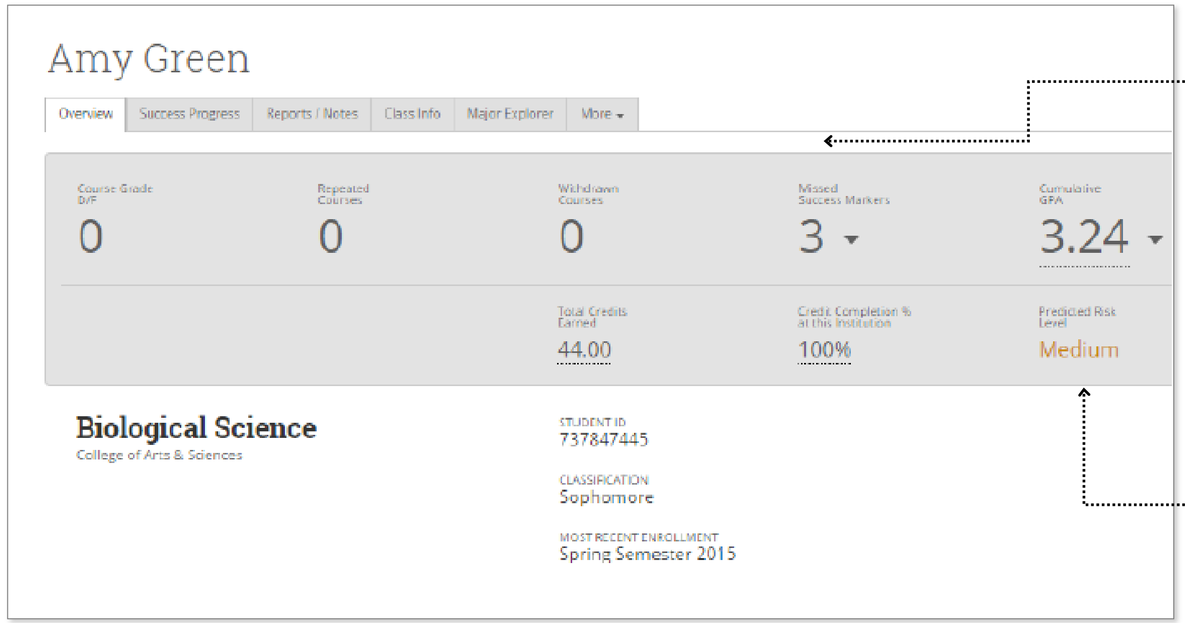
ESTABLISH FEEDBACK LOOPS FOR ADVISORS TO IMPROVE PATHWAYS

MORE INFO

Over 800 risk markers notify GSU advisors when students are off track

Advisors utilize tracking dashboard to proactively guide students

Dummy student dashboard



Dashboard lists key academic indicators including number of DFW courses, repeated courses, withdrawn courses, missed success markers, and cumulative GPA

EAB's predictive algorithm generates predictive risk level

Source: GSU leadership interviews, GSU University Advisement Center, EAB

ESTABLISH FEEDBACK LOOPS FOR ADVISORS TO IMPROVE PATHWAYS

Over 800 risk markers notify GSU advisors when students are off track

Data- informed success markers notify advisors if students are off track

Nursing (B.S.)

Maintain a cumulative GPA of 3.5 or Better

0 TO 15 EARNED CREDITS

- Complete 1 of ENGL 1101, ENGL 1102 or ENGL 1103 (B or Better)
- Complete MATH 1101 or Higher (B or Better)
- Complete 1 of CHEM 1151K, PHY 1111K, BIO2107K, or BIO 1103K (B or Better)
- Complete BIO 1110K (B+ or better)

15 TO 30 EARNED CREDITS

- Complete ENGL 1102 or 1103 (B or Better)
- Complete 1 of CHEM 1152K, PHY 1112K, CHEM1212K, BIO2108K, or BIO 1104K (B or Better)
- Complete BIO 1120K (B+ or Better)

Every major has similar alerts across all ranges of credit hours until graduation

Source: GSU leadership interviews, GSU University Advisement Center, EAB

Total cost of GSU advising transformation primarily driven by ~$2M/year ongoing cost to reduce advisor ratios

	PROFESSIONALIZE THE ADVISING STAFF ESTABLISH ~300:1 STUDENT:ADVISOR RATIOS	CENTRALLY MANAGE THE ADVISING FUNCTION	INVEST IN STUDENT TRACKING & PREDICTIVE ANALYTICS TECHNOLOGY
	Professionalized corps of academic advisors, with lower advisor ratios	**Centralization of advisors for advisors serving first three years of student experience**	**Predictive analytics that prompts advisors to contact students for ~800 risk indicators**
How this was implemented	• Received a grant from the Board of Regents to double the number of advisors • Built a career ladder (e.g., Advisor 1 - 3) in order to provide long term career development opportunities for advisors	• Relocated all new centralized advisors into one building, while leaving current advisors in individual colleges • Created an organizational structure within centralized advising including specialized advisors for each college	• Co-developed a personalized data base with EAB • Used 2.5M data points that addressed GSU's academic barriers to graduation • EAB was able to quickly further develop the database into a tracking dashboard
Initial investment	N/A	N/A	• None; upfront fee was waived given GSU staff's time investment to co-develop platform
Ongoing costs	• Initially ~$2.1M in incremental salaries and benefits for 42 new advisors to lower student ratios • Cost has increased with further expansion of advising staff	N/A	• $150K annual membership fee

Source: GSU Ithaka case study, GSU interviews

UCF reorganized first year advising to allow for better tracking and support for First-Time in College students

WHAT ADVISING WAS LIKE BEFORE 1995

Advising was not centralized for first year students; ~2,000:1 university wide student:advisorratio

- Difficult to target and track high-risk students
- Only students that were proactive, and mainly high achievers, received support

High turnover of advisors due to low and non-standardized salaries

- High turnover of advisors increased developmental and training challenges
- Less personalized advising; more undecided students

Students received inconsistent advising from different faculty and staff

- Several duplications of advising appointments

KEY ELEMENTS OF THE ADVISING TRANSFORMATION

PROFESSIONALIZE THE ADVISING STAFF

ESTABLISH ~300:1 STUDENT:ADVISOR RATIOS

Dedicated all advising functions to a professional staff of advisors; increased the number of advisors in order to lower the student: advisor ratio to ~300:1 and pay more specialized attention to each student

CENTRALLY MANAGE THE ADVISING FUNCTION

Began centrally managing all first year student advising and collocated all first year advisors

INVEST IN STUDENT TRACKING & PREDICTIVE ANALYTICS TECHNOLOGY

Established 45 credit hour policy for students to declare major

Created targeted advising services for at risk students (e.g., Knight Watch Program offers specialized advising for students with 2.6 or lower GPA)

IMPACT & IMPLICATIONS

Advisors spend more time providing students with personalized services

- Improved ability to identify and track high-risk students
- After orientation, 92% of First time In College (FTIC) students meet with an advisor[1]

Developed a more motivated advising staff and lowered turnover rates

Advisors implemented the Major Exploration Program which provides students with personalized support to choose a major

- Students have a mandatory appointment if their majors is undeclared
- Number of FTIC undeclared students declined by 20% from 2011 to 2015

Began offering mandatory advising appointments for students on probation

- Probation rates declined from 8.2% in Fall 2011 to 6.3% in Spring 2016

1. Data for 2015. Source: UCF interviews, UCF Supplemental Instruction Briefing document, data shared by UCF

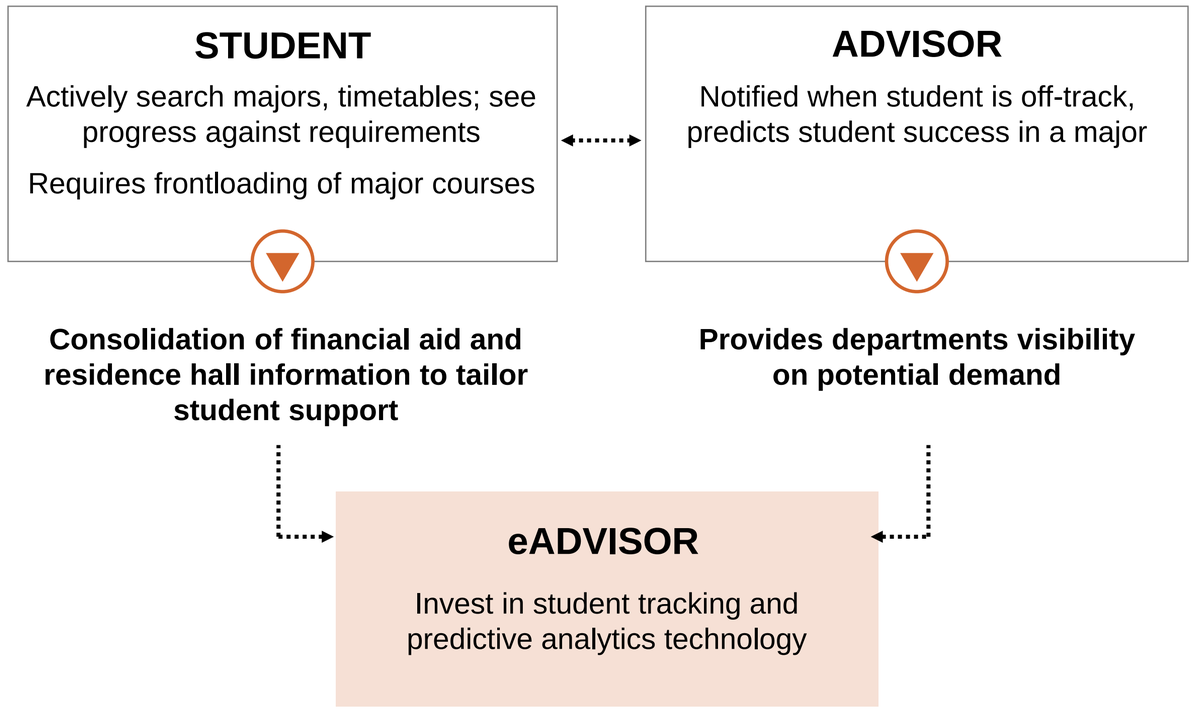
MORE INFO

ASU implemented a strong advisory system that integrates on-ground and online support

ASU's advising ecosystem maintained through eAdvisor

Establish ~300:1 Student:Advisor Ratios

- 350:1 students to advisors
- 90:1 students to success coaches, who are graduate students or upper classmen
- 1:1 meetings, particularly when off-track (required to meet by eAdvisor)



Source: Retention to Graduation: A Process, ASU interviews

ASU implemented a strong advisory system that integrates on-ground and online support

Works in practice due to set of critical success factors

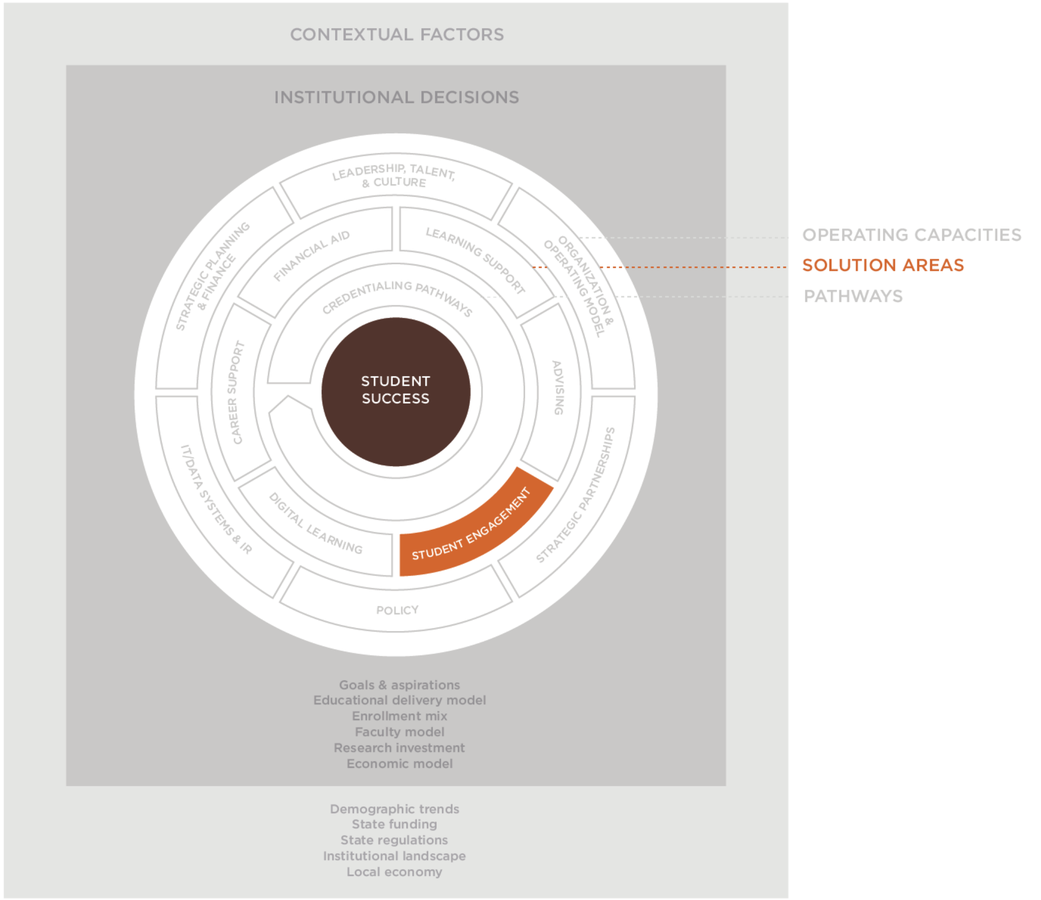
✓	**Integrated information source:** eAdvisor provides common 'source of truth' for each student
✓	**Early warning systems:** eAdvisor built with predictive capabilities to alert advisors before problem arises
✓	**Required advisor touchpoints:** eAdvisor requires in-person touchpoint for off-track students
✓	**Supply and demand matching:** Allows departments to plan courses to ensure graduation requirements can be met on time

Source: Retention to Graduation: A Process, ASU interviews

STUDENT ENGAGEMENT

This section outlines:

Increasing student engagement by creating meaningful orientation experiences and fostering campus community in various ways, including encouraging on-campus housing and creating useful mobile apps.



STUDENT ENGAGEMENT

OBSERVED PRACTICES	DESCRIPTION
FORM SMALL LEARNING COMMUNITIES	**Group students by similar academic interest to form a small learning community within a large research institution** (e.g., GSU created Freshmen Learning Communities of 25 students grouped by meta-majors)
MAKE ORIENTATION A MORE INDIVIDUALIZED EXPERIENCE	**Implement an orientation program that allows for a more individualized student experience** (e.g., UCF splits incoming students and their families into smaller groups in 33 two-day orientation sessions every Fall, including bi-lingual orientation sessions offered to Hispanic families)
INVEST IN STUDENT HOUSING	**Invest in student housing to encourage students to live on campus and have the full college experience** (e.g., UCF expanded and created freshmen-only housing; students in housing achieve 10+ppt difference in 6-yr graduation rate and 2+ppt difference in retention rates)
LEVERAGE MOBILE APPS FOR STUDENT ENGAGEMENT	**Use mobile apps to connect students to the community and use data to inform subgroup engagement programs** (e.g., ASU implemented a mobile app that allows students to register for events and receive prizes for attendance; data available helps track student behavior and potentially inform targeted student engagement programs)

FORM SMALL LEARNING COMMUNITIES

DATA

GSU established freshman learning communities and organized majors into meta-majors to support freshmen

Freshman Learning Communities (FLCs) (created in 1999)

Challenge

- Low retention (76% 1-yr retention in 1998)
- Concern students were not building a community at GSU

Action taken

- Created FLCs of 25 students each based on their academic interests
- Students took all fall semester classes together in a block schedule
- **Built community, made GSU feel smaller**
- In 2014, 95% non-honors freshman in FLCs

Meta-majors (created in 2012)

Challenge

- Students often switched majors, especially freshman year, and lost credit hours they weren't able to transfer to their new major

Action taken

- Organized similar majors into groups called meta-majors (e.g., STEM includes chemistry, bio)
- **Improved FLCs by organizing by meta-major,** and ensured all courses taken via FLC counted for all majors within meta-major

GSU has seen a **32% decrease** in the number of major changes students make before graduation

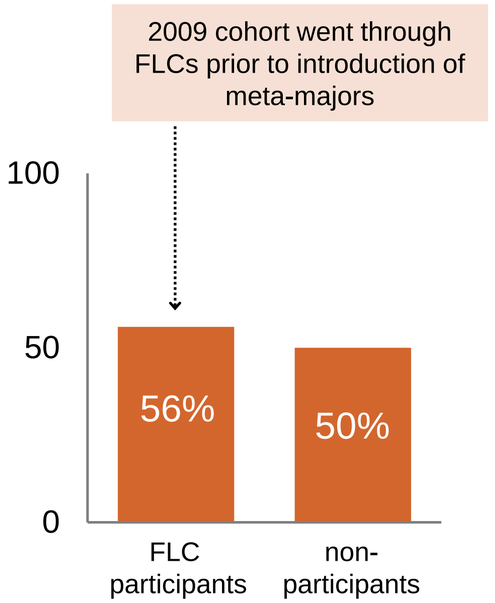
1. 2013-2014 AY data from Complete College Georgia 2. 2009 First-time full-time cohort. Source: GSU Institutional Research, Complete College Georgia, GSU interviews, GSU website

GSU established freshman learning communities and organized majors into meta-majors to support freshmen

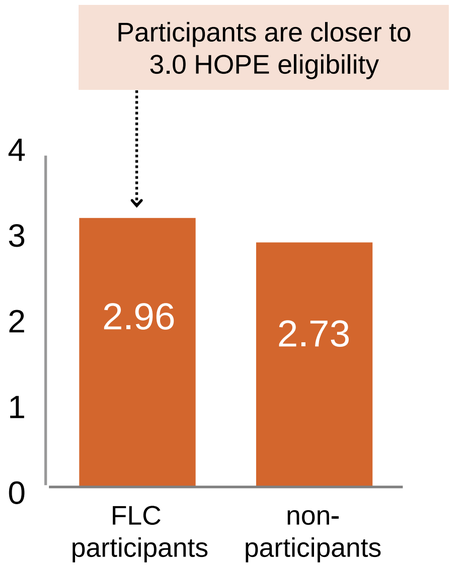
Students in FLCs organized by meta major showed higher first-year academic performance and first year retention; FLC students also showed higher graduation rates

GSU has seen a 32% decrease in the number of major changes students make before graduation

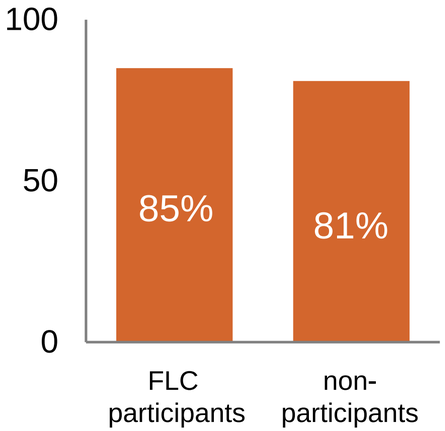
6 yr.. grad rate % (2009 cohort)



Average first yr.. GPA (AY13-14)



First yr.. retention % (AY13-14)



1. 2013-2014 AY data from Complete College Georgia 2. 2009 First-time full-time cohort. Source: GSU Institutional Research, Complete College Georgia, GSU interviews, GSU website

UCF re-designed its orientation program in order to provide a more individualized student experience

Focused on improving retention rates, UCF re-designed its orientation program

33 orientations are held every year, with ~500 students and parents per orientation

All orientation programs were made mandatory

Students were split into smaller advising groups of ~35 students per group; assisted by advisors, peers and registrar staff

Transfer orientation (one day) was created and separated from freshmen orientation (two days)

2 bi-lingual orientations were introduced to include Hispanic families

Additional focus on student athletes, multicultural, veterans and international

The new program covers a broad set of content to help students transition to college

ACADEMIC	Academic Advising	College Meetings	Academic Leadership Program
STUDENT SERVICES	Financial Aid session	Housing Tour	Mandatory Registration
COMMUNITY	Student Orgs	Campus Life	Mentoring Programs

Source: UCF interviews, UCF website

UCF expanded on-campus housing in efforts to integrate students into the community and improve retention rates

UCF prioritized housing investments to attract and integrate students

Expansion of housing capacity (total freshmen capacity 4.5K beds in 2016) and changes implemented drove increase in share of freshmen living on campus

$213M invested in	70% freshmen live on campus	Created freshmen-only housing
housing from 2000 to 2014[1]	(2015, up from 50% in 2001)	shifting away from mixing student levels

16 Living Learning Communities (AY16-17) grouping students into three categories: academic, interest, and special programs (e.g., Honors program, LEAD scholars)

UCF improved efforts to attract students to live on campus

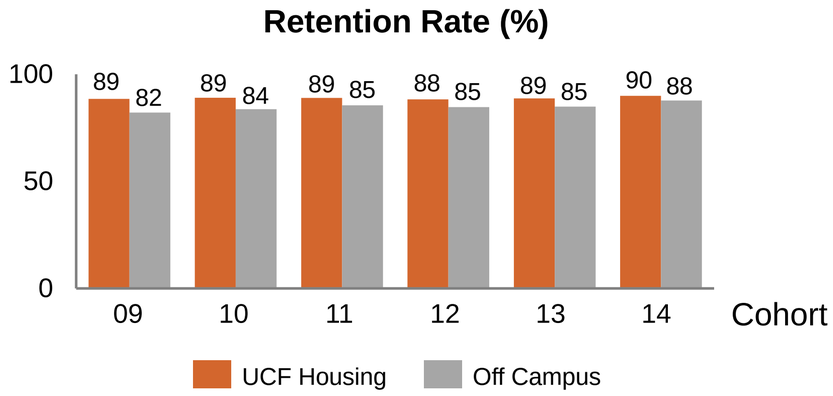
- Established the Top 10 Knight initiative, which guarantees on campus housing to high school students (merit based)

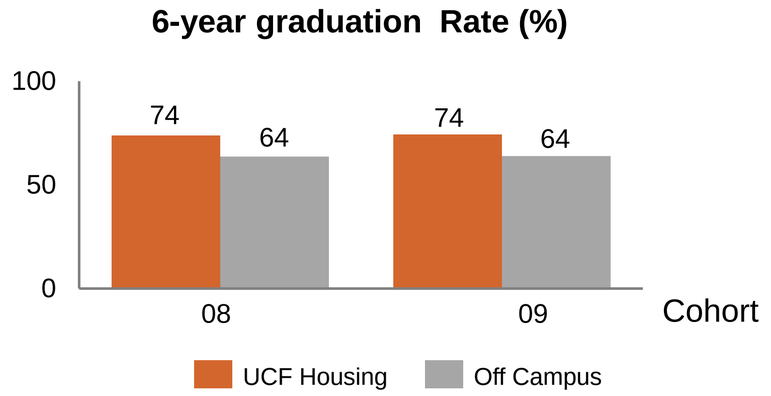
1. This investment covered the construction of 5,142 new bed capacity from 2000-2014, across all student levels, bringing total capacity to ~12K beds. Source: UCF website, UCF interviews, data shared by UCF (Housing Facilities Report 2000-2014)

UCF expanded on-campus housing in efforts to integrate students into the community and improve retention rates

UCF prioritized housing investments to attract and integrate students contributed to improved retention and graduation rates

FTIC students who live in UCF housing show higher retention (2+% point difference) and 6-yr graduation (10+% point difference) rates, and an incoming GPA of 3.18 vs. 3.12 for students who do not live on campus



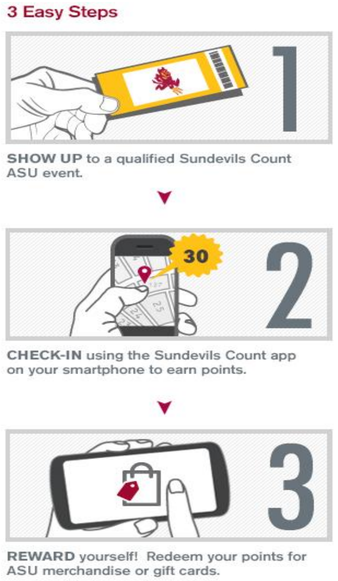


1. This investment covered the construction of 5,142 new bed capacity from 2000-2014, across all student levels, bringing total capacity to ~12K beds. Source: UCF website, UCF interviews, data shared by UCF (Housing Facilities Report 2000-2014)

ASU mobile app shows how student data can be used to inform student engagement programs

An ASU mobile app is one example of the way institutions can use data to inform student engagement programs

ASU's SunDevil Counts mobile tool allows students to register for events and receive prizes for attendance; data available allows ASU to track student interests and behavior



TRACK

- Mobile technology allows institutions to track students' involvement in campus organizations and attendance in events
- Institutions have access to student interest and behavior data, as students confirm attendance or 'check in' through mobile apps

ASSESS

- Real time data permits institutions to assess the state of involvement of specific groups of students
- Advisors and administrators have the ability to tailor programs to specific demographics and adjust initiatives on a more frequent basis

ENGAGE

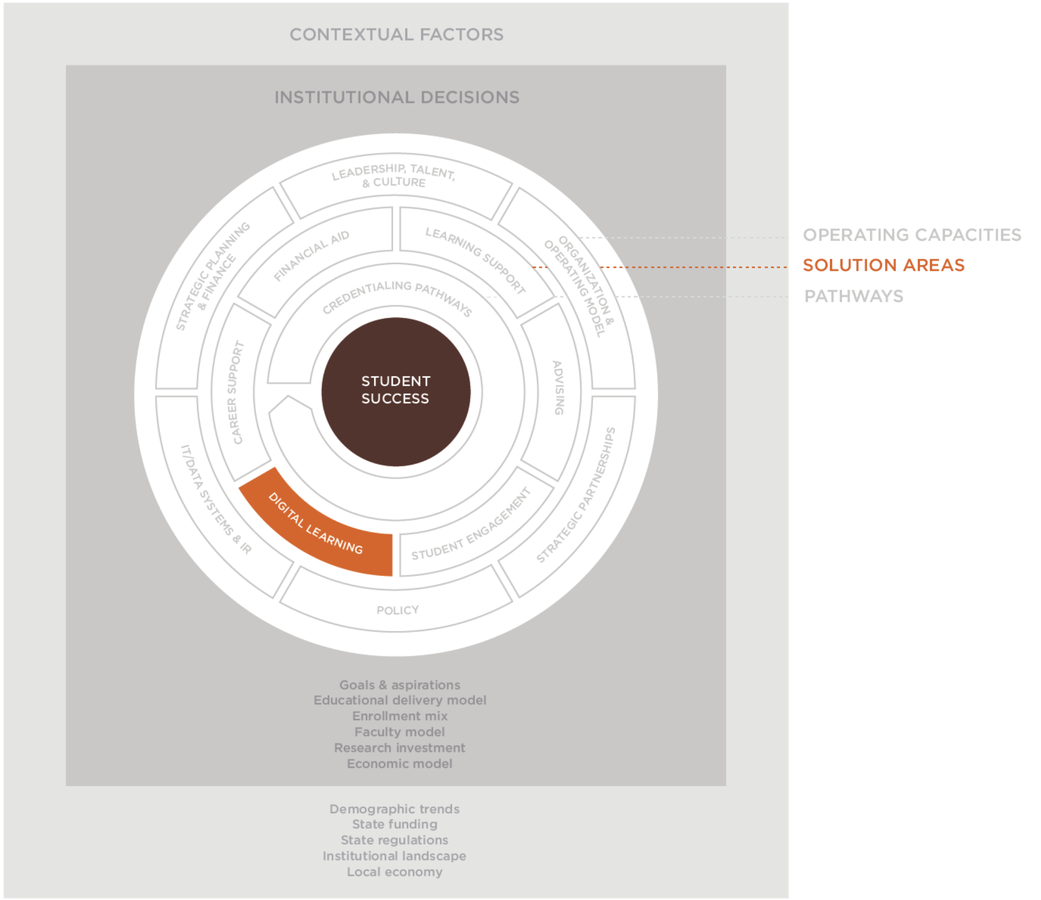
- Based on the data analysis, institutions can connect with students on a daily-basis and target the promotion of student engagement programs and events to the appropriate audience

Source: UCF, ASU and GSU websites

DIGITAL LEARNING

This section outlines:

Fully utilizing the potential of digital learning with both hybrid courses and adaptive learning—and increasing buy-in from faculty with professional development, incentives, and partnerships.



DIGITAL LEARNING

OBSERVED PRACTICES	DESCRIPTION
CREATE HYBRID ONLINE COURSES	**Create hybrid courses that mix face-to-face and online instruction in order to increase access, improve student outcomes, reduce per student costs** (e.g., at UCF, hybrid courses reduced time to degree by 0.2 years and had up to 32% lower per student cost vs. face-to-face)
CENTRALIZE THE DIGITAL SUPPORT TEAM	**Centralize the digital support team** (e.g., instructional designers, media support) **in order to provide consistent, high quality support to faculty at scale** (e.g., ASU's EdPlus organization, UCF's Online @ UCF team, GSU's Office of Instructional Innovation and Technology)
OFFER PD ON DEVELOPING DIGITAL COURSES	**Offer professional development to faculty members on developing digital courses in order to ensure quality** (e.g., UCF faculty are required to complete an 80 hour training)
USE A CONSISTENT ASSESSMENT TO MEASURE IMPACT	**Implement a consistent assessment across digital and non-digital courses to measure effectiveness of implementing digital courseware** (e.g., GSU used a consistent assessment to measure the efficacy of its adaptive learning courses)
REDESIGN HIGH DFW COURSES USING ADAPTIVE LEARNING	**Redesign high DFW courses using adaptive learning and improve success rates** (e.g., ASU improved math success rates from 66% to 85%; currently 20K+ students take adaptive learning courses / year, and planning to build additional 15-30 courses in next 3 years)
ACCELERATE FACULTY ADOPTION	**Accelerate faculty adoption by using outcomes data from pilots to increase faculty buy-in** (e.g., GSU scaled adaptive math after reductions in DFW rates) **and by incentivizing faculty through grants and instructional design support** (e.g., GSU's Digital Champions Fellowships)
BUILD PARTNERSHIPS TO ACCELERATE ROLLOUT	**Build partnerships to accelerate implementation** (e.g., ASU Online's partnership with Pearson on online marketing, ASU and GSU exploring several adaptive learning platform partners)

UCF's online offering breaks the compromise between access, quality and cost

UCF has a unique online offering: it is a dynamic model, where students can easily change their mix of courses in different modalities from semester to semester

This model helps UCF to break the compromise between access, quality and cost

Increases access

- **Flexibility** offered to students removes geographic and scheduling barriers to access
- 40% of credit hours now taught online, increasing at ~2% per year since 2008

Improves outcomes (quality)

- **Time to degree is lower** e.g., FTIC students taking 21-40% courses online complete in 4.1 years vs 4.3 with all face-to-face courses
- Success rates (% receiving A,B,C grade) are high e.g., blended courses have ~3 percentage point **higher success rates** than face to face
- Driven by **focus on quality**, with 80 hours mandatory training for faculty to design and teach online, and instructional designers working with faculty

Saves on cost

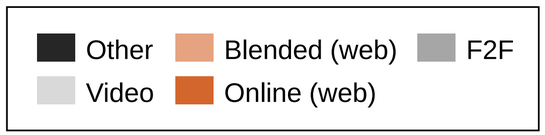
- Up to 32% **lower marginal cost** per undergraduate SCH for online vs F2F courses, mostly due to class sizes (51 vs 30) and avoided operations and maintenance cost

Source: UCF interviews, data shared by UCF

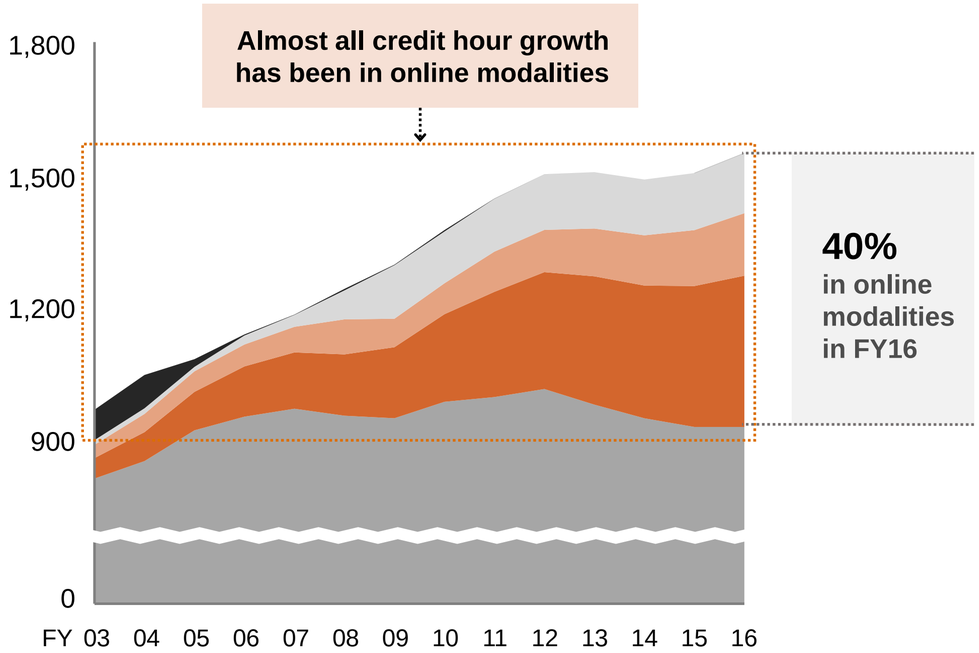
Flexible online offering has allowed UCF to increase enrollments and reduce time to degree

Recent credit hour growth is almost all online; 40% credit hours now online

Student course-taking behavior has been shifting toward online modalities



Student credit hours (000s)



1. First Time in College. 2. Percent online = student credit hours (SCH) taken in the following modalities: fully online, lecture capture (blended) and lecture capture (fully online). Blended courses (aside from lecture capture (blended)) are not included. Source: UCF interviews, UCF Institutional Knowledge Management

Flexible online offering has allowed UCF to increase enrollments and reduce time to degree

Online courses offer UCF students flexibility, reducing time to degree

UCF students can take both face-to-face and online courses, changing mix each semester

Take ¾ courses **face-to-face** in **semester A**

Then take ¾ courses **online** in **Semester B**

Flexibility allows students who take more SCH online[2] to finish their degree faster

% SCH taken online[2]	FTIC[1] full time	Transfer full time
0%	4.3 years	2.7 years
21-40%	4.1 years	2.8 years
61-80%	3.7 years	2.4 years

1. First Time in College. 2. Percent online = student credit hours (SCH) taken in the following modalities: fully online, lecture capture (blended) and lecture capture (fully online). Blended courses (aside from lecture capture (blended)) are not included. Source: UCF interviews, UCF Institutional Knowledge Management

Several factors contribute to UCF's high quality online offering including dedicated team and mandatory training

UCF built its online offering early and intentionally

UCF began building online courses in 1996

- Prompted by demand from a partner institution with online students
- Informed by the research of a professor and graduate student in the College of Education

UCF built in a focus on instructional quality

- Faculty must complete an 80 hour mandatory training before designing or teaching an online course, with $3K stipend offered
- No separate faculty for online
- Professional instructional designers work with faculty to develop / refresh courses

UCF used senior faculty to set example

- Senior tenure track faculty were first to be asked to teach online, so they could demonstrate its value
- It is now the norm that faculty at all levels teach online

UCF focused on getting '2 ends' right

- Front end: high quality instructional design
- Back end: dedicated evaluation team

1. Charged only on courses that are 80% or more online. Source: UCF interviews, UCF Center for Distributed Learning organizational chart, data shared by UCF

Several factors contribute to UCF's high quality online offering including dedicated team and mandatory training

Online operations are run by a 80+ person team

The Online@UCF team includes:

Course design & development (majority of staff are in this group)	Instructional design (~14 designers), programming and development, faculty development, dedicated call center for online learning
Research	Evaluation, support for research into online teaching
Infrastructure & compliance	Reporting, processes and implementation, infrastructure
Administration	Internal administration

Total: 80+ people, $8.6M cost per year
Costs predominantly covered by $18/credit hour distance learning fee[1]

1. Charged only on courses that are 80% or more online. Source: UCF interviews, UCF Center for Distributed Learning organizational chart, data shared by UCF

GSU's Center for Instructional Innovation offers instructional design and classroom design support

Centralized instructional design support

OFFERING

Centralized instructional design support to assist faculty members in designing new courses and in improving existing courses

Particular emphasis on leveraging technology

- e.g., designing flipped classrooms, integrating digital media to instruction and assignments, developing online faculty office hours

IMPACT

Centralization enables more consistent and higher quality support, improves the utilization of instructional designers, and improves the work experience for instructional designers

- Consistent standards, training and the opportunity to continuously collaborate with others enables consistency and quality
- Better capacity utilization compared to universities where designers may be fragmented across departments
- Clear career ladder

Source: GSU leadership interviews, GSU website

CENTRALIZE THE DIGITAL SUPPORT TEAM

GSU's Center for Instructional Innovation offers instructional design and classroom design support

Classroom design service with an eye toward cost management

OFFERING

Classroom design service to assist faculty members and colleges in designing technology enabled classrooms, labs, test proctoring environments, and collaboration spaces

- e.g., design classroom to offer adaptive learning

IMPACT

Beyond improving instruction, the service also helped lower classroom technology costs by adopting lower cost equipment without compromising instructional quality

Service reduced average cost to build a classroom from ~$29K to ~$16K. Some actions taken include:

- Replacing ~$4K projector with ~$350 alternative
- Replacing $2K-4K lectern with a simple adjustable table

Source: GSU leadership interviews, GSU website

Adaptive-Active Hybrid courses have improved student outcomes in core disciplines at ASU

Adaptive-Active Hybrid Courses change the instruction model

Adaptive tools support learning inside and outside the classroom

- Students receive content prior to class adaptively - e.g., using technologies that allow students to proceed at different speeds and learn in different ways based on underlying algorithms
- In class, students respond to the material in active learning sessions

This approach has been implemented in core freshman courses where pass rates correlated with retention e.g., math, chemistry and biology

Over the past 5 years, nearly 48K students have been enrolled in adaptive learning courses

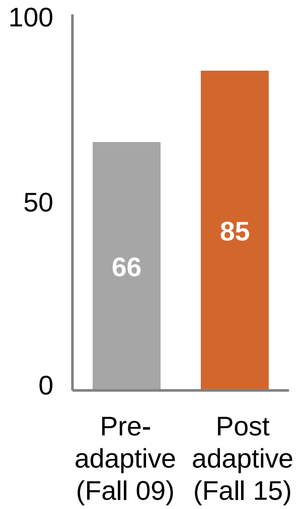
Note: Chemistry had 5 classes (3 lecture, 2 adaptive), and biology 13 classes (3 lecture, 10 adaptive). Source: ASU, EdPlus Annual Report FY15

Adaptive-Active Hybrid courses have improved student outcomes in core disciplines at ASU

Adaptive learning has improved student success in key courses

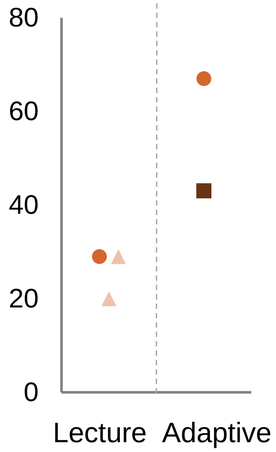
Key courses chosen for adaptive learning were key to both retention and continuation in a major

% success rate



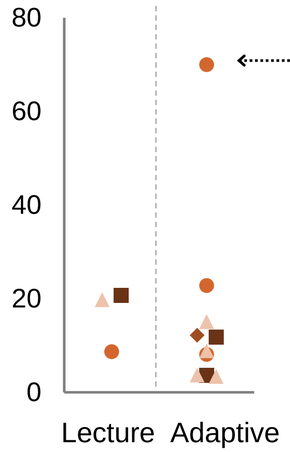
Math
(MAT110)

%Δ pre/post test



Chemistry
(CHM101)

%Δ pre/post test



Wider spread in adaptive courses

Shapes = different instructors

Biology
(BIO100)

Note: Chemistry had 5 classes (3 lecture, 2 adaptive), and biology 13 classes (3 lecture, 10 adaptive). Source: ASU, EdPlus Annual Report FY15

ASU will rollout more Adaptive-Active Hybrid courses to benefit a larger number of students

ASU has plans to roll out this approach

ASU will continue to roll out this approach to courses where:

- Poor pass rates are correlated with low retention, or
- Current performance is preventing students continuing on in their majors

ASU estimates the rollout will reach the vast majority of students

- Rollout of adaptive-active hybrid courses intended to ensure 75% of undergraduate students are helped to master competencies

Rollout requires investments in a number of areas:

- Building new adaptive-active hybrid courses
- Building additional classrooms set up for the adaptive model of teaching
- Hiring additional Learning Technologists to assist faculty transition to adaptive models

Key disciplines will be targeted

The Adaptive-Active Hybrid approach will be rolled out over the next three years to 15-30 courses, including:

IN DEVELOPMENT

Economics
Psychology
History
Math

PLANNED / PROPOSED

Science
Engineering
Accounting
Business Statistics
Calculus

Source: ASU interviews

GSU drove digital learning faculty buy-in with positive student success outcomes and fellowship incentives

GSU's Math Interactive Learning Environments (MILE) was grown voluntarily among math faculty

In 2005, MILE pilot was initiated by the central administration to address high DFW rates; Initially started with faculty willing to experiment

- Younger, non-tenured faculty tended to be more willing

Math department chair was not supportive of new changes; after several years, was replaced by central admin

MILE was grown voluntarily among faculty as they saw positive student outcomes, which helped to gain full buy-in

- Was implemented for all introductory math courses in 2013 (7,500 total student enrollments)

With support from BMGF grant, GSU is now piloting the adaptive model in five large social science courses

- For first year, will pilot multiple adaptive platforms
- Then, will scale the most successful platform across the five courses (20K total seats)
- In addition to improving outcomes, will explore opportunities to reduce per-student faculty and classroom costs

IN DEVELOPMENT

Macro and Microeconomics

Psychology

American Government

World Politics

Source: GSU interviews, Ithaka case study

GSU drove digital learning faculty buy-in with positive student success outcomes and fellowship incentives

Digital Champions Fellowship incentivizes faculty to build digital courses

OFFERING

Fellowship to incentivize and support faculty to:

- Develop and/or use adaptive learning courseware
- Develop fully online courses
- Build course materials using Open Educational Resources (OER) to lower textbook costs for the student

Fellowship provides grants (varies from $500-$55K) and instructional design support; In return, faculty publishes research on this topic

SCALE & REACH

In 2016, there were eight fellowships awarded. Awarded initiatives include:

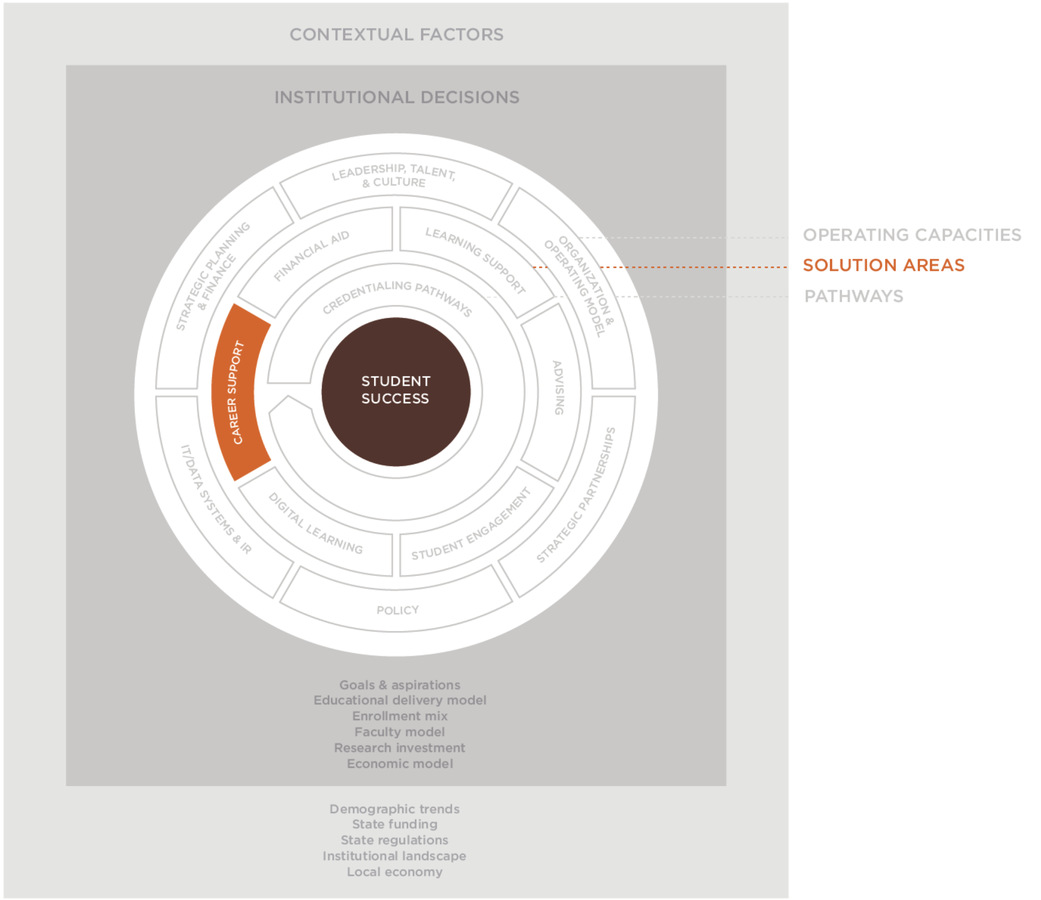
- Developing an adaptive learning micro and macroeconomics course
- Developing adaptive learning modules and an online course for introductory psychology
- Compiling interactive biological specimen OER materials for biology courses

Source: GSU interviews, Ithaka case study

CAREER SUPPORT

This section outlines:

Increasing employment opportunities for students with individualized, data-driven advising and career planning tools, as well as partnerships with potential employers.



CAREER SUPPORT

OBSERVED PRACTICES	DESCRIPTION
BUILD PARTNERSHIPS WITH POTENTIAL EMPLOYERS TO INCREASE ACCESS AND EXPERIENTIAL LEARNING	**Leverage partnerships and build relationships with potential employers to ensure institutional quality maintained through high employment rate for graduates, and regional demand met** (e.g., ASU and Starbucks developed the ASU Starbucks College Achievement Plan to provide career development programs; GSU offers cooperative education programs in which students engage in a 6-month rotational, field-based experience)
USE MARKET DATA TO INFORM INDIVIDUALIZED ADVISING	**Use market data, in addition to student data, to provide individualized career advising** (e.g., GSU advisors use student performance data from the EAB platform and market data from Burning Glass to give career advice to students)
DEVELOP MORE ACCESSIBLE CAREER PLANNING RESOURCES	**Develop online resources to make career planning tools readily available to students** (e.g., ASU, GSU and UCF leverage virtual career fairs and other online platforms to facilitate easy access to job search)
INVEST IN HIGH QUALITY INFRASTRUCTURE	**Invest in high quality infrastructure to allow students to easily connect with employers** (e.g., UCF invested $8M in new career services and experiential learning building which includes high-tech interview rooms and video-conference systems to facilitate communication between students and recruiting companies)

CAREER SUPPORT

BUILD PARTNERSHIPS WITH POTENTIAL EMPLOYERS TO INCREASE ACCESS & EXPERIENTIAL LEARNING

Partnerships with potential employers help keep employment of graduates high, maintaining reputation

ASU collaborates with Starbucks and Amazon to promote career development and support programs to students

- The ASU Starbucks College Achievement Plan sees Starbucks pay for employees' degrees, working toward a career development program
- Amazon is an ASU 'Signature Employer'; ASU promotes Amazon to students as a potential employer in exchange for Amazon providing career opportunities to students

Employment of undergraduate class (AY14-15)

- 87% of students reported employment or job offer[1]

GSU provides on the job experience through cooperative education (co-ops) and internships

- Co-ops allow students to engage in full time, 6-month long, career-related field experience; students do not take academic courses during this period
- Internships permit students to have a part-time job opportunity while taking academic courses during the semester

Data not available for GSU employment of undergraduate class

UCF collaborates with employers to promote experience-based learning to students

- Cooperative education and internships allow practical work experience in specific major field over multiple or one semester, respectively; Internships are held in partnership with the Washington Center
- Externship programs pair students with employer/alumni to facilitate a shadowing experience

Employment of undergraduate class (AY14-15):

- 71% of graduates employed vs. 65% avg. for Florida Public Universities (2014 Fall)[2]

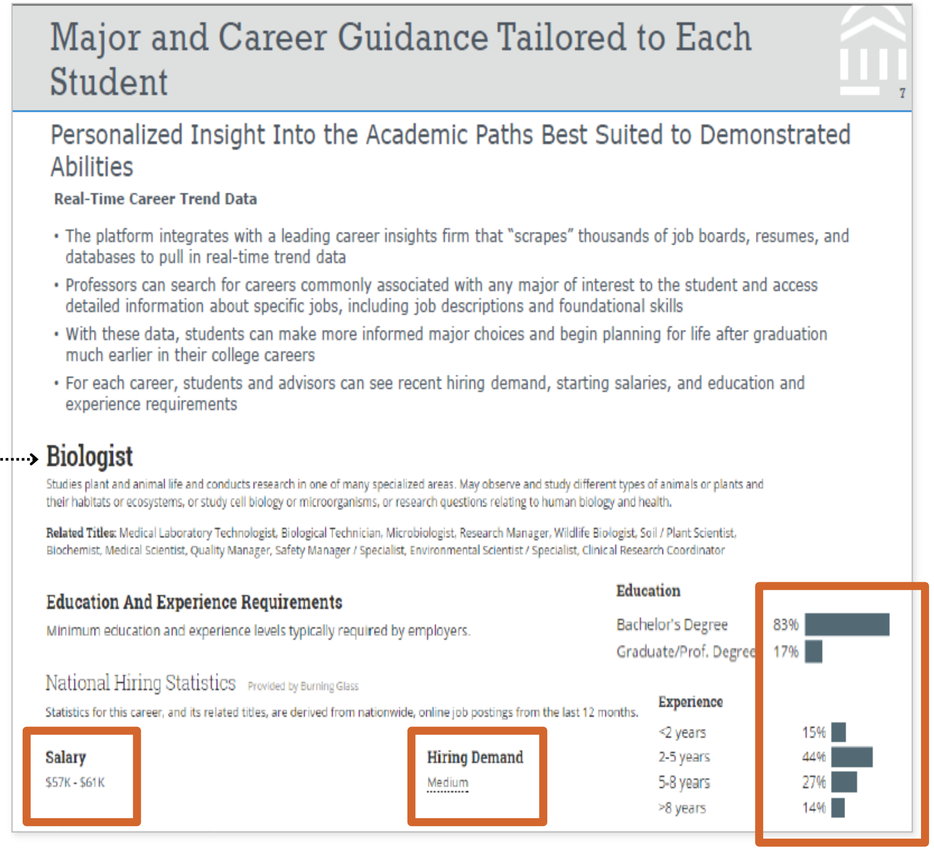
As institutions grow, high employability of graduates helps to maintain a quality reputation

1. Data pulled from the 90-day post graduation survey, 2.Data provided by the Florida Department of Education (Fall 2014). Source: UCF, ASU and GSU websites

USE MARKET DATA TO INFORM INDIVIDUALIZED ADVISING

GSU career advisors use predictive analytics and market data to support students with major and career decisions

Advisors use both the student's academic performance data and Burning Glass market data, via the EAB platform, to advise students on best fit career paths



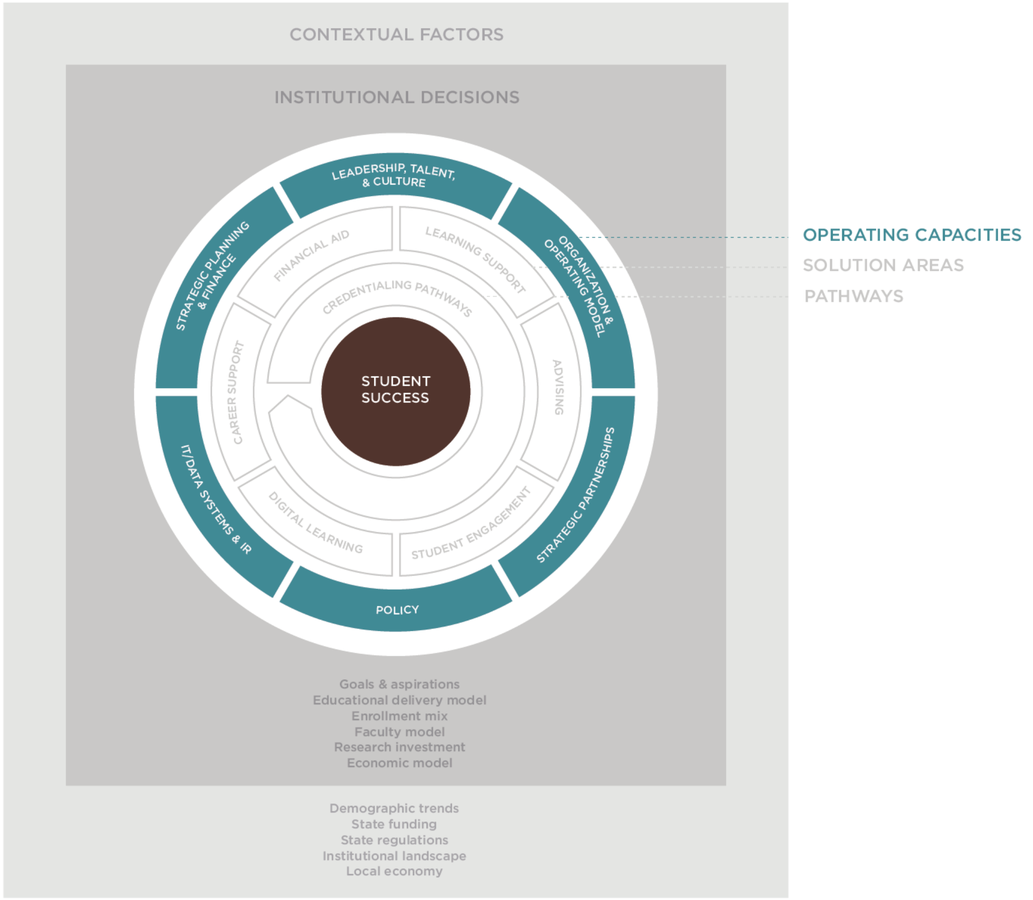
Illustrative screen shot from GSU's EAB platform

Data on salaries, hiring demand, required education and experience comes from Burning Glass

Source: Data shared by GSU

OPERATING CAPACITIES

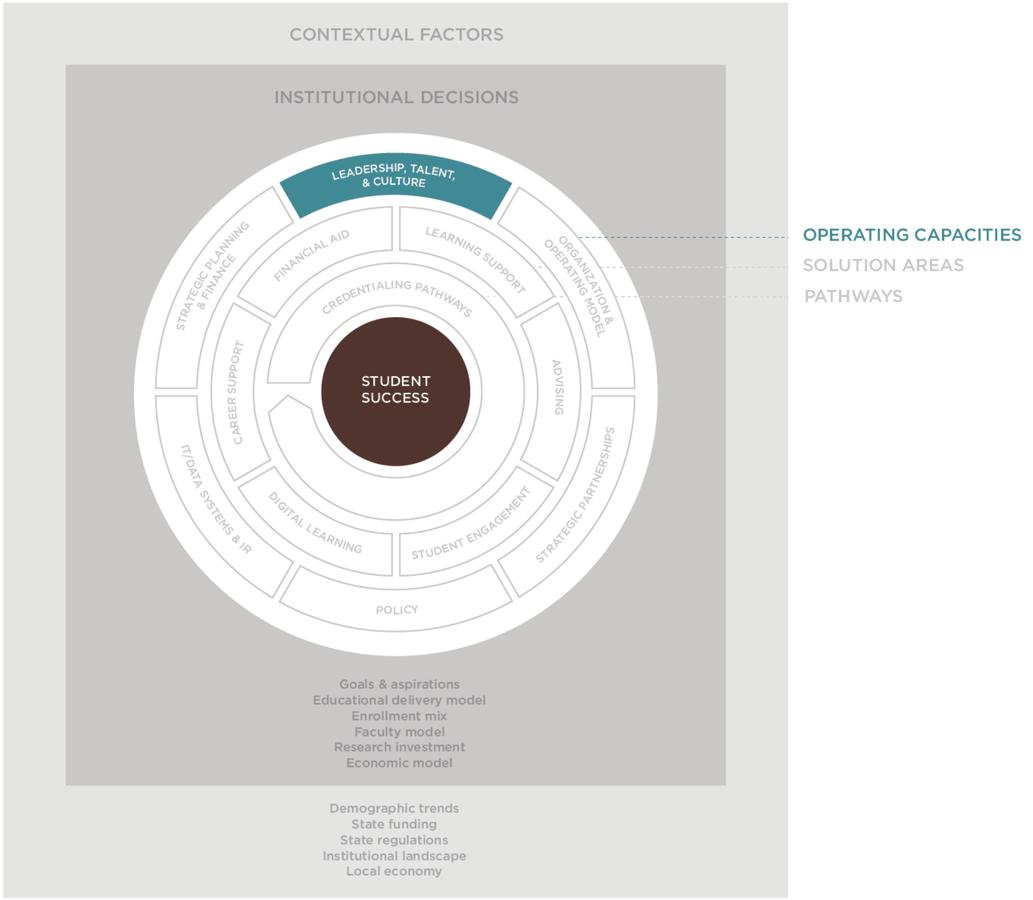
Operating Capacities reflect critical functions that enable the institution to effectively implement and deliver student-centered solutions. They broadly enable the institution to mobilize and more effectively serve a larger, more diverse student base.



LEADERSHIP, TALENT, & CULTURE

This section outlines:

Enhancing leadership with focused goals and a culture that sustains success. Tactics include incentivizing performance against key success measures, getting faculty more deeply involved in the journey, and using data to help drive big decisions.



LEADERSHIP, TALENT, & CULTURE

OBSERVED PRACTICES	DESCRIPTION
MAINTAIN STEADFAST LEADERSHIP FOCUS	**Establish and maintain a steadfast leadership focus on access and student success** (e.g., UCF goals set in 1992 remain the same today; ASU President consistently used the phrase 'teacher scholar' for the first ~5 years of his term)
ADOPT DATA-INFORMED DECISION CULTURE	**Adopt a culture of data-informed decision making** (e.g., GSU used EAB data on success markers to determine requirements for progression in a major; ASU Provost holds Deans accountable for progress against retention targets)
BRING FACULTY ALONG AS ACTIVE PARTNERS	**Bring faculty along in the transformation journey as active partners** (e.g., GSU used data on effectiveness of adaptive models in math to build support for broader uptake; UCF encouraged senior TT faculty to be first to teach online)
ELEVATE POSITIONS OF IMPORTANCE	**Elevate positions of importance to the transformation to the cabinet or top leadership team** (e.g., GSU elevated student success and innovation roles to be cabinet-level positions)
ADJUST EXECUTIVE COMPENSATION	**Adjust executive compensation to incentivize performance against goals** (e.g., UCF adjusted compensation of President and Vice Presidents to have ~14% of salary at risk against UCF's performance on key measures tied to the goals)
BUILD A CULTURE THAT SUSTAINS SUCCESS	**Build a culture that sustains success** by fostering collaboration, providing incentives, encouraging experimentation, being data-informed, and celebrating success (e.g., GSU student advisors provide front-line feedback on the effectiveness of policies)
BE WILLING TO RECRUIT OUTSIDE THE ACADEMY	**Be willing to recruit talent for key positions from outside the academy, bringing in leaders with different skillsets to drive strategic priorities** (e.g., GSU brought an external expert to the Chief Innovation Officer position; ASU brought in a former Coca-Cola and Outback Steakhouse marketing executive to be CMO)

A steadfast leadership focus, communicated consistently, is key to the success of a transformation

At ASU consistent communication brought faculty on board

President Crow has consistently communicated the vision over time

- Persistence has been key

> “The message to faculty was that teaching is still important and unless you are a true superstar, you will not get tenure if you are a bad teacher. **President Crow used the term 'teacher scholar' constantly for the first 4–5 years of his term”**

- Communication has come in the form of actions as well as words

> “President Crow was self aware of his background in science, so **one of the first things he did was fund the center for religion and conflict**... he knew he had to keep the faculty highly engaged”

Source: ASU interviews, UCF interviews

A steadfast leadership focus, communicated consistently, is key to the success of a transformation

At UCF consistency led to steady progress

President Hitt has consistently promoted increasing access and improving student success

- Quotations from leadership interviews:

> “President Hitt built **consistency** on the 5 goals, and he leans into those a lot.”
>
> “You can make a remarkable transformation with **consistency.”**
>
> “President Hitt put money where his mouth is; the goals are **used in the budgeting process.**”
>
> “The first goal helped to **focus** everyone's attention on **student success.”**

Source: ASU interviews, UCF interviews

Adopting a leadership culture of data-informed decision making supports student success

GSU's culture of data-informed decision making is supported by EAB

GSU has developed a culture of data-informed decision making, supported by the EAB platform e.g.,

EAB data showed success marker:
Students who succeeded in completing a Nursing degree achieved at least a B+ in Math 1101

This informed leadership decisions:
Adjusted requirements for progression in Nursing, requiring students achieve a B+ in Math 1101

GSU also uses data to hold college Deans accountable for measurable results

ASU's Provost also uses data to hold college Deans accountable for student success

Source: GSU interviews, ASU interviews, UCF interviews, data shared by UCF

Adopting a leadership culture of data-informed decision making supports student success

UCF's data-informed decision making is supported by cohort data

The head of Student Development and Enrollment Services looks at trends in cohort data at the end of each semester to identify at-risk groups

UNIVERSITY OF CENTRAL FLORIDA

Summer Continuing to Fall & Fall Full-Time FTIC Cohort Retention 2009–2010 to 2014–2015

GROUP	09 RETAINED	10 RETAINED	11 RETAINED	12 RETAINED	13 RETAINED	14 RETAINED
ALL	86.7%	87.3%	87.8%	87.1%	87.5%	89.1%
GENDER						
MALE	86.7%	86.6%	87.0%	85.7%	85.7%	87.4%
FEMALE	86.7%	87.8%	88.4%	88.2%	89.0%	90.7%
HOUSING						
UCF HOUSING	88.5%	89.0%	89.0%	88.2%	88.7%	89.9%
NOT IN UCF HOUSING	82.1%	83.6%	85.5%	84.6%	84.9%	87.8%
FALL ACADEMIC PERFORMANCE (GPA)						
FALL GPA UNDER 2.0	47.0%	46.3%	51.2%	51.2%	49.9%	56.0%
FALL GPA 2.0 TO 2.49	94.2%	84.5%	86.7%	85.2%	87.1%	87.8%
FALL GPA 2.5 TO 2.99	94.3%	92.3%	90.8%	90.6%	91.3%	93.7%
FALL GPA 3.0 TO 3.49	93.9%	93.7%	93.7%	91.9%	93.8%	93.4%
FALL GPA 3.5 TO 4.0	83.9%	96.1%	94.6%	94.5%	95.0%	95.2%

Based on this data, she and her team decide where to focus student interventions, and how to allocate resources accordingly

Source: GSU interviews, ASU interviews, UCF interviews, data shared by UCF

BRING FACULTY ALONG AS ACTIVE PARTNERS

The three case study institutions brought faculty along in their transformation journeys as active partners

ARIZONA STATE UNIVERSITY

COMMUNICATION	• President's **inauguration speech** sparked interest in the new goals • Delivered clear, consistent **messaging** on agreeable goals • **Celebrated successes** along the way e.g., becoming R1 university
QUICK WINS	• President made strategic choices in initial moves to win faculty support e.g., funded the Center for Conflict and Religion to **show no bias** toward science (his background)
ACADEMIC / DELIVERY MODEL SUPPORT	• Built central **instructional design** team to support faculty with online course development • Give $5K **incentive** to teach online • Developing **faculty teaming model**; academic and admin staff to support senior faculty
ACCOUNTABILITY	• Use data to **hold Deans accountable** against metrics
RESEARCH SUPPORT	• Built central **proposal support** and project management team • Developing **faculty teaming model** *(mentioned above)*

The three case study institutions brought faculty along in their transformation journeys as active partners

Georgia State University

COMMUNICATION	• President made **speech** on state of GSU; strong focus on professional advising and impact • Co-developed **strategic plan** • **Celebrated successes** along the way e.g., improvements in outcomes
QUICK WINS	• Started with interventions **least intrusive to faculty** • Piloted adaptive learning with younger, non-tenured faculty **willing to experiment**
ACADEMIC / DELIVERY MODEL SUPPORT	• Built central **instructional design** support team • Introduced Digital Champions Fellowship to **incentivize and support** faculty to develop adaptive learning and online courses
ACCOUNTABILITY	• Used data to **hold Deans accountable** against metrics • Used **data on effectiveness** of interventions to build support
RESEARCH SUPPORT	• Built central **proposal support** and project management team

BRING FACULTY ALONG AS ACTIVE PARTNERS

The three case study institutions brought faculty along in their transformation journeys as active partners

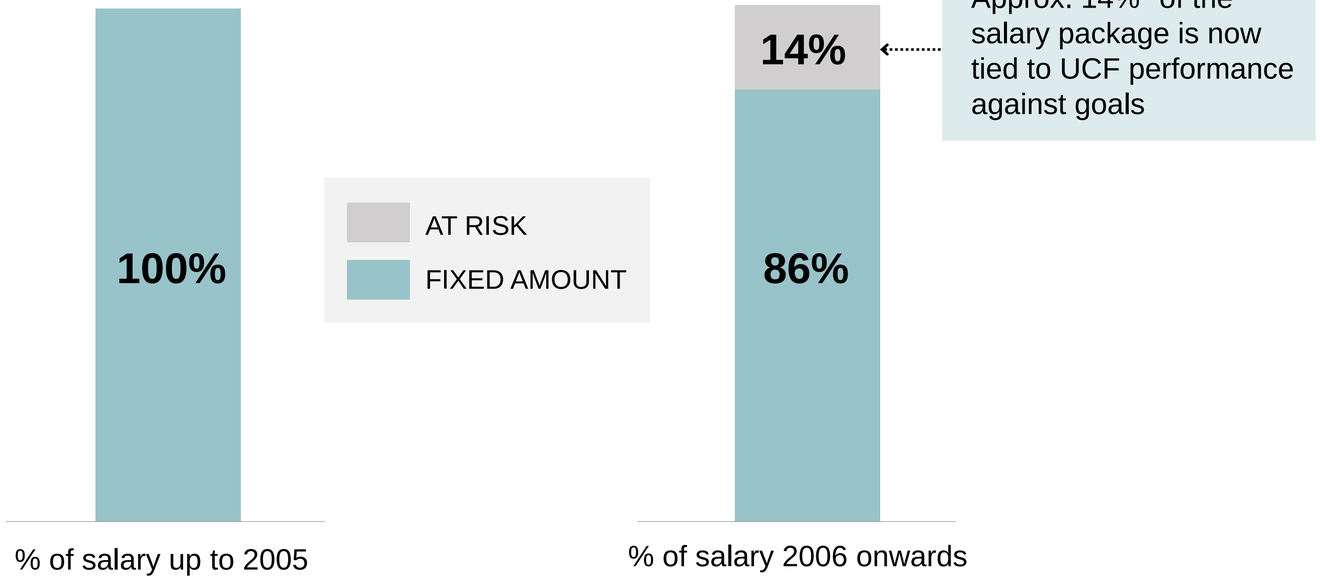
UCF
UNIVERSITY OF CENTRAL FLORIDA

COMMUNICATION	• President's **inauguration speech** inspired faculty with ambitious goals • Delivered clear, consistent **messaging** on agreeable goals • **Celebrated successes** along the way e.g., 10 years of DirectConnect
QUICK WINS	• Encouraged senior tenure track faculty to be **first to teach online**
ACADEMIC / DELIVERY MODEL SUPPORT	• Built central **instructional design** team to support faculty with online course development • Give $3K **incentive** to teach online • Developed **80-hour mandatory training** for faculty teaching online
ACCOUNTABILITY	• Use data to help Deans **set targets** and to hold them **accountable** • Faculty lead the **curriculum alignment** process
RESEARCH SUPPORT	• Built central **proposal support** and project management team

UCF incentivized leaders around shared targets through changes in compensation

Prior to 2006, the President, Provost and Vice Presidents received a fixed salary

In 2006, UCF Board changed the compensation structure of the President, Provost and all Vice Presidents, aligning them around the same targets



Approx. 14%[1] of the salary package is now tied to UCF performance against goals

~14% of salary is tied to UCF performance against 6 measures laid out in the Performance Unit Plan

- 6-yr FTIC graduation rate
- 1-yr FTIC retention rate
- 4-yr AA transfer graduation rate[2]
- Average research grants per FTE tenured/tenure track faculty member
- Total philanthropy to the Foundation and Athletics[3]
- Maintain UCF's top tier position in State performance funding rankings

These measures are set, and payouts to executives made, on a 3-year rolling cycle

- A minimum, target and maximum value is set for each measure, and compensation clearly tied to those
- Each measure is weighted e.g., 22% currently on 6-yr graduation rate

1. Varies slightly by position. 2. Summer and Fall, full time. 3. Excluding state matching funds. Source: Data shared by UCF, UCF Board and Compensation and Labor Committee Meeting notes, UCF interviews

Leadership team should build a culture that sustains success

FOSTER COLLABORATION

Encourage VPs to collaborate together and with other staff in pursuit of institutional goals
- e.g., UCF VPs meet frequently to collaborate on various student success initiatives

Create feedback loops and forums for student and staff involvement
- e.g., GSU student advisors provide front-line feedback on the effectiveness of policies

PROVIDE INCENTIVES

Incentivize staff to work toward achieving the transformation goals
- e.g., ASU and UCF provided a financial incentive to faculty to teach online courses
- e.g., ~14% of executive compensation at UCF is tied to institutional performance against goals

ENCOURAGE EXPERIMENTATION

Encourage VPs and college Deans to experiment and pilot student success interventions
- e.g., provide small amounts of funding, match college funding, or fund based on results

Roll out the pilots that are successful

BE DATA-INFORMED

Set a norm that all leadership decisions must be data-informed
- Ask to see the data behind recommendations before making a decision
- Draw on data when having conversations with Deans or heads of divisions

CELEBRATE SUCCESSES

Communicate quickly and widely each and every success story in the transformation
- Encourage colleges and divisions to report successes to the communications team
- Establish multiple channels for the communications team to communicate successes

ORGANIZATIONAL & OPERATING MODEL

This section outlines:

Centralizing and supporting student success functions with strong online and offline operations.

ORGANIZATIONAL & OPERATING MODEL

OBSERVED PRACTICES	DESCRIPTION
CENTRALIZE STUDENT SUCCESS FUNCTIONS	**Centralize student success functions under one leader to provide a clear point of accountability and responsibility for improving student outcomes** (e.g., Both UCF and GSU merged and centralized student success functions to accelerate student success efforts)
PROFESSIONALIZE AND CENTRALIZE RESEARCH SUPPORT	**Professionalize and centralize research support staff, both to help grow research enterprise and allow faculty to be more efficient** (e.g., ASU has a proposal development team of 50-60 people supporting the development of ~20K proposals per year, freeing up faculty time for research and teaching. *Note: This is one example of an initiative that requires some base scale before it is an effective accelerator e.g., need to first reach a critical mass of research-engaged faculty*)
BUILD STRONG FRONT AND BACK END TO ONLINE OPERATIONS	**Design and build online operations with strong front end (instructional design) and back end (evaluation) units to ensure** quality (e.g., ASU and UCF both have professional instructional designers working directly with faculty; UCF's Research Initiative for Teaching Effectiveness unit measures the impact of online courses)

CENTRALIZE STUDENT SUCCESS FUNCTIONS

GSU centralized its student success and support functions, which accelerated its student success efforts

PRE 2008

Office of Enrollment Management
- Admissions
- Registrar
- Freshman advising (~12 advisors)

Other functions
- Outreach
- Financial aid
- Student accounts
- International student services
- Special programs
- Career services

In 2008, Tim Renick was named Vice Provost for Office of Enrollment Management, and took the charge to shift what was a more traditional enrollment office to one that more holistically focused on student success.

BEFORE IMPACT OF ORGANIZATIONAL CHANGE

- **Siloed departments w/ minimal collaboration**
- **Central advising function only advised freshman. Students had to actively seek out college-based advising beyond freshman year**

BY 2010

The Office of Enrollment Management and Student Success
- Admissions
- Outreach
- Financial aid
- Student accounts
- Registrar
- Enrollment services
- Enrollment technology
- Student success
- Advising (~ 54 advisors)[1]
- International student services
- Special programs
- Career services

By 2010:
- The Office of Enrollment Management was consolidated with financial aid and student accounts
- A new Office of Student Success was created

AFTER IMPACT OF ORGANIZATIONAL CHANGE

- **Collaborative and steadfast focus across departments towards retention, progression and graduation goals**
  –e.g., weekly managers meeting across student success to review progress, identify challenges, address roadblocks
- **Centralized advising function advises all students with up to 90 credit hours. Advisors support students until they are more stable in their major**
- **An Institutional Research Associate was embedded in this function to conduct analytics for student success**

1. Added 42 new advisors that were hired when office was first centralized to previous 12; this has increased to 81 advisors now. Source: GSU interviews, Ithaka case study

ORGANIZATIONAL & OPERATING MODEL

CENTRALIZE STUDENT SUCCESS FUNCTIONS

Merging admissions, academic services and student affairs has supported UCF to drive student success

Enrollment and Academic Services
- Admissions
- Enrollment

Student Affairs
- Orientation
- Student engagement

In 1998, Enrollment and Academic Services merged with Student Affairs and became The Division of Student Development and Enrollment Services

The Division of Student Development and Enrollment Services (SDES)

- Admissions
- Outreach
- Financial aid
- Student outreach
- Registrar
- Orientation
- Student success interventions
- First-year advising

THE SDES MERGED STRUCTURE SUPPORTED DRIVING STUDENT SUCCESS

- SDES was better equipped to focus on the full **student lifecycle**; a comprehensive enrollment approach
- Provided clear point of **responsibility** for student success outcomes
- Enabled heavy **focus on first-year** interventions
- Having the registrar within SDES was instrumental in **ensuring classes available for freshmen**

Source: UCF interviews

ASU has optimized faculty time through development of research support and project management teams

	PROPOSAL DEVELOPMENT TEAM	PROJECT MANAGERS
PURPOSE	• Support faculty to find and win more research grants	• Support faculty to find and win more research grants
TEAM DETAILS	50-60 people	~10 people
ACTIVITIES	• Source research opportunities • Support proposal development (~20,000 proposals per year, or $1.65B in proposal submissions) • Provide feedback to faculty • Coordinate interdisciplinary teams	• Manage grant budget and finances over course of the grant period • Coordinate different parties involved • Ensure project is proceeding according to plan and on schedule
OPERATING BUDGET	• Office of Knowledge Enterprise Development operating budget, which includes the proposal development team and project managers, is $26.5M1 for FY16; • estimated ~$7M for these teams in particular	

1. Also includes costs for tech transfer operations, animal facilities, tech support, post-award accounting and reporting, and other general management. Source: ASU interviews

EdPlus, a professional team responsible for innovation, has been central to ASU Online growth

EdPlus, established in 2014, is responsible for ASU online

EdPlus was established in 2014, with an eye to accelerating growth

- EdPlus encompasses ASU Online and other growth innovations

EdPlus operates with significant autonomy

- Autonomy allows rapid design and implementation of new ideas, while still being integrated in the university

Professional instructional designers and new media personnel work directly with faculty to develop and refresh online courses

- EdPlus has ~15 instructional designers
- Each instructional designer will usually have 50-75 faculty on their "roster", with ~10-12 new course builds and 100-125 total courses in their project portfolio

EdPlus operating budget: $25M in FY16

Overview of the EdPlus team

113 people in May 2016

INSTRUCTIONAL DESIGN & NEW MEDIA	Course development together with ASU faculty
DESIGN AND DEVELOPMENT	U2B offerings, external partnerships, new opportunities
MARKETING	Marketing of ASU digital products and services
ACTION LAB	Research services, testing evidence-based approaches
DEAN & CEO OFFICE	Strategic direction, finances, human resources
TECHNOLOGY CORE	Technology to enhance student experience

Source: ASU interviews, data shared by ASU

STRATEGIC PARTNERSHIPS

This section outlines:

Enhancing the ability to forge partnerships with other institutions and companies to innovate and boost capacities.

STRATEGIC PARTNERSHIPS

OBSERVED PRACTICES	DESCRIPTION
ESTABLISH STRATEGIC PARTNERSHIPS TO BOOST CAPABILITIES	**Establish partnerships to acquire capabilities, especially related to technology, in order to accelerate time to impact and contain costs related to continuous innovation** (e.g., EAB predictive analytics, Ad Astra technology to forecast course demand, Pearson for online marketing)
PURSUE PARTNERSHIPS TO INCREASE ACCESS	**Pursue partnerships with two year institutions and companies to increase access and grow enrollment** (e.g., UCF's DirectConnect partnership with 6 community colleges driving ~60% transfer pipeline, ASU's partnership with Starbucks)
ENSURE KEY STAKEHOLDERS ARE INVOLVED	**Ensure appropriate stakeholders are involved with partnership decisions. For some institutions this may mean few leaders, for others stakeholders from every function affected by the partnership** (e.g., GSU's EAB partnership involved student success, the colleges, IT, IR)
ENSURE FACULTY HAVE OWNERSHIP AND FLEXIBILITY	**Ensure faculty members have ownership and flexibility on areas related to academic content and instruction** (e.g., content on adaptive platform)
CO-DEVELOP FOR CUTTING EDGE TOPICS	**On cutting edge topics, consider co-developing with a technology partner, which allows the institution to have more input over the technology** (e.g., GSU co-developed its predictive analytics software with EAB)
EXPLORE BRINGING IN-HOUSE OVER TIME	**Routinely revisit partnerships and where possible explore bringing more products and services in-house over time**

OPERATING CAPACITIES

STRATEGIC PARTNERSHIPS

ESTABLISH STRATEGIC PARTNERSHIPS TO BOOST CAPABILITIES / PURSUE PARTNERSHIPS TO INCREASE ACCESS

ASU developed multiple strategic partnerships to boost progress on access and outcomes, and research

PARTNERSHIP		IMPROVES OUTCOMES	INCREASES ACCESS & REACH	GROWS RESEARCH
STARBUCKS	College Achievement Plan	■	■	
PEARSON	Pearson and ASU Online	■	■	
KNEWTON, McGraw Hill Education, SMART SPARROW	Multiple partnerships on adaptive learning	■		
MARICOPA COMMUNITY COLLEGES	Pathway agreement	■	■	
NASA	Multiple partnerships		■	■
intel, HEEAP	Improving Higher Ed. in Vietnam		■	■
MAYO CLINIC	Establishing medical school		■	■
Tecnológico de Monterrey	Multiple research partnerships			■
KING'S College LONDON, UNSW THE UNIVERSITY OF NEW SOUTH WALES	PLuS Alliance		■	

Selected examples; non-exhaustive

Source: ASU website, ASU interviews

Preference for partnerships when it comes to improving outcomes:

"All things equal, we have a slight bias to partner rather than build in-house. If we can find a partner, we would rather go with a partner—they've done the legwork..."

Developing strong community college partnerships has driven UCF's growth in transfer students

UCF has strong community college partnerships, especially DirectConnect

In 2006, UCF established DirectConnect to UCF, guaranteeing admission to UCF for associate degree graduates from 4 (now 6) community colleges

Valencia College
Seminole State College of Florida
Lake-Sumter State College
Eastern Florida State College — Explore. Achieve. Succeed.
Daytona State College
College of Central Florida

UCF has advising[1], enrollment support and financial aid staff on site at partner college campuses

UCF works in close collaboration with partners

- Frequent meetings to plan joint efforts (e.g., 3x per year with Valencia College), and open discussions to agree on partners offering new 4-year degrees
- Curriculum alignment conference annually, plus additional sessions (~30 courses covered so far)

UCF markets directly to students in partner colleges

- UCF encourages students who do not gain admission to UCF to participate in DC
- Students indicate transfer intention on partner application forms; 120K in pipeline
- UCF communicates directly with pipeline students

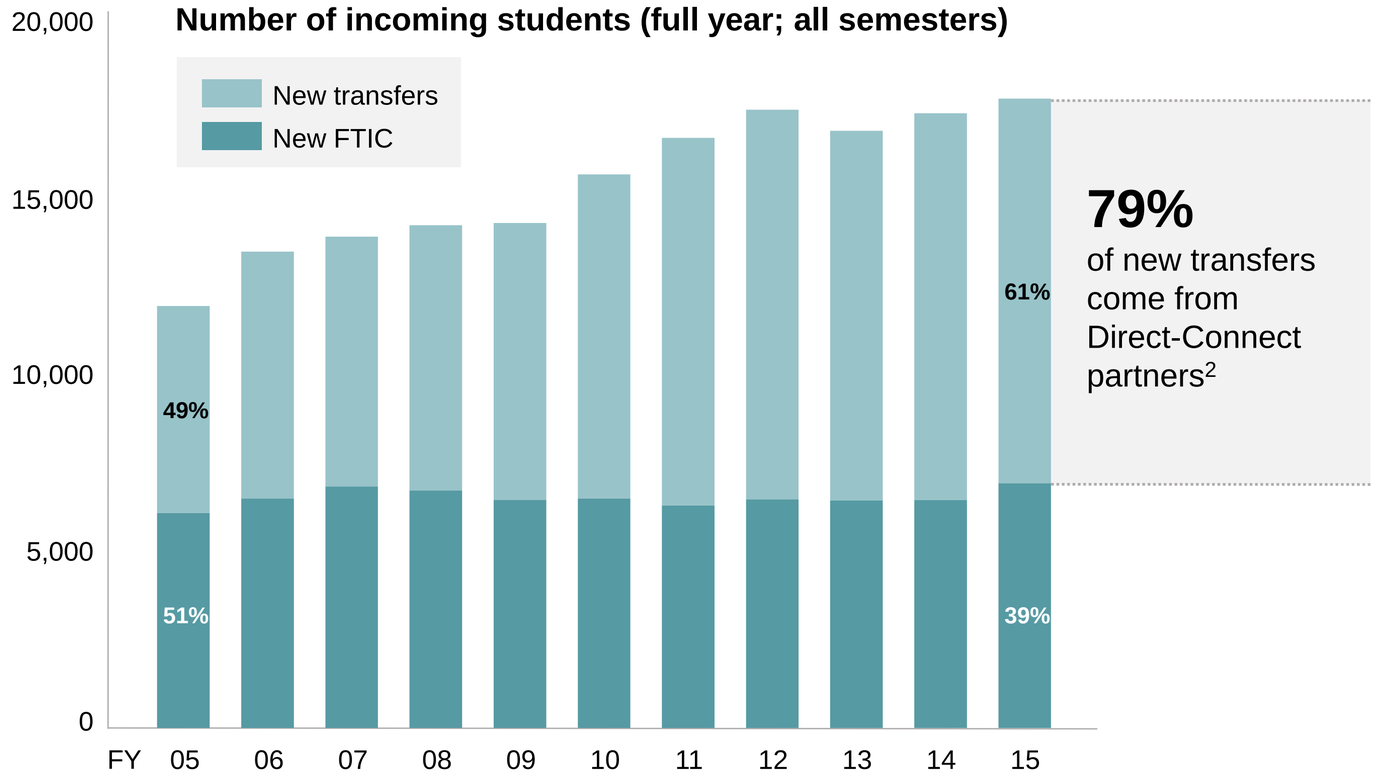
1. Advisors recorded 1,382 advising contacts in the 2015-16 academic year. Less than half of these students were from DirectConnect to UCF Institutions. 2. Note that not all students coming from the 6 DirectConnect partner institutions are considered 'DirectConnect' students. Source: UCF interviews, UCF website, Board of Governors, UCF Institutional Knowledge Management

PURSUE PARTNERSHIPS TO INCREASE ACCESS

CONTEXT

Developing strong community college partnerships has driven UCF's growth in transfer students

UCF's community college partnerships drove transfer growth to 61% incoming students; most DirectConnect



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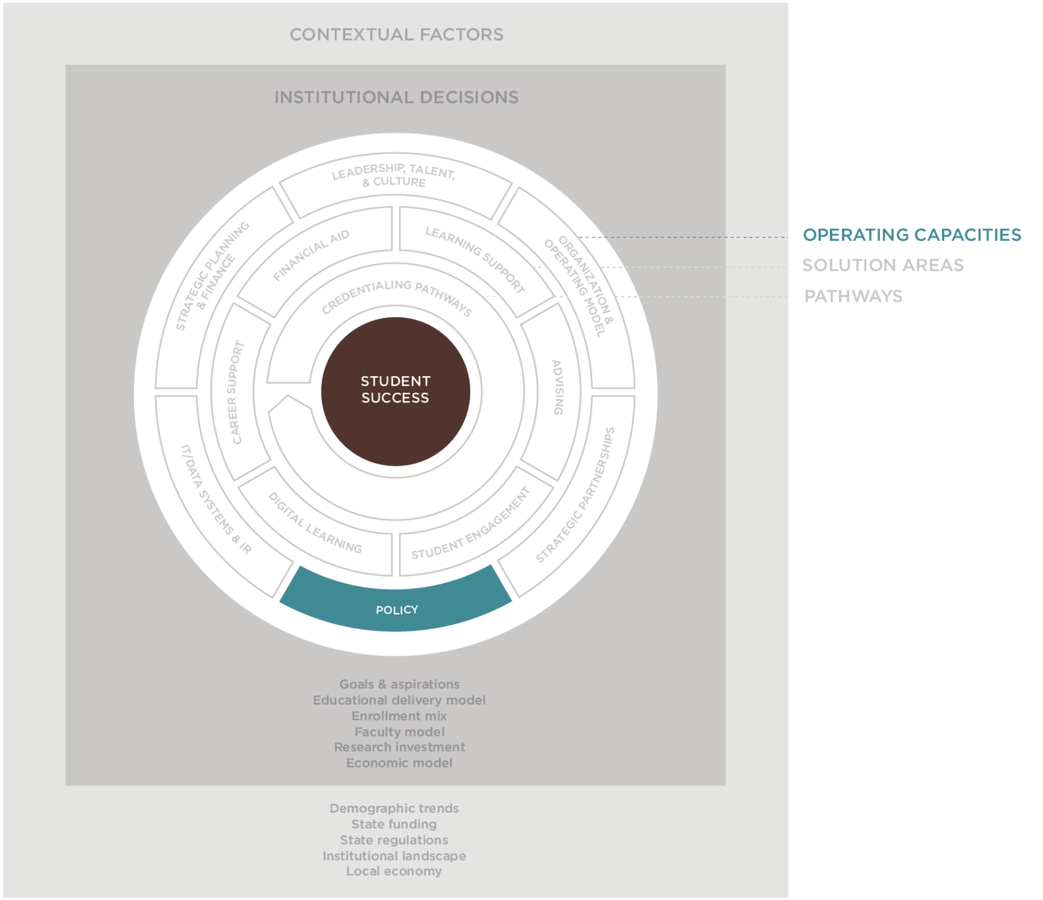
POLICY

This section outlines:

Developing and strengthening internal policies, while also engaging political allies to sway external policies.



POLICY

OBSERVED PRACTICES	DESCRIPTION
CREATE POLICIES THAT STRENGTHEN CREDENTIALING PATHWAYS	**Prioritize making institutional policies (or changing existing policies) to strengthen credentialing pathways and enhance effectiveness of interventions** (e.g., GSU set a policy requiring students to declare a pre-major; ASU and UCF introduced requirement to declare major at 45 credit hours; ASU required departments to list all major requirements, in sequence, in a central website, and clear all changes with central administration)
ENGAGE THE STATE AS POLICY ALLIES	**Build the operating capacity to engage the state Board of Regents/Governors as allies in the transformation** (e.g., ASU worked with the state to increase the out-of-state resident cap)
CREATE MECHANISMS TO REVISE POLICIES	**Put in place mechanisms to revise policies that are not in the interests of student progression** (e.g., GSU uses advisor feedback and data to find that a policy that allowed students to repeat a course to replace a B- or lower grade was not in students' interest – most students did not improve their grade when repeating, and were wasting money on a class they had already passed and slowing time to degree – GSU is now looking to adjust this policy to steer students away from 'repeat to replace' options)

Internal policy and process changes at ASU supported student success by making interventions more effective

	CHANGE MADE	IMPACT OR RATIONALE
ADMISSIONS	• Reduced admissions decisions from 2 weeks to 24 hours (2007) • Eased the evaluation of transfer credits	• Faster admissions decisions; improved access • Smoother entry; improved access
ACADEMIC MAJOR REQUIREMENTS	• Required departments list all major requirements, in sequence • Shifted requirement information to central website (2007) • Required changes to major requirements be cleared with central administration • Required that courses required for a major be offered and have enough seats for all students majoring	• Better informed student choices • Predictability and clarity • Students are not held up e.g., if course offered every other year
MAJOR SELECTION	• Required students choose one of four 'tracks of exploration' at entry (2007) • Required students declare a major after 45 credit hours instead of 80 credit hours (2007)	• Made departments responsible for their students sooner, and reduced % of students with undeclared major at entry from 33% to 8%
EVALUATION	• Centralized evaluation of lower-division courses (began 2008)	• Prevented department-driven delays
RETENTION RESPONSIBILITY	• Shifted from departments being paid for retention of students within a major to retention of students within the university (2007)	• Removed the disincentive to keep students in a major that wasn't the best fit for them

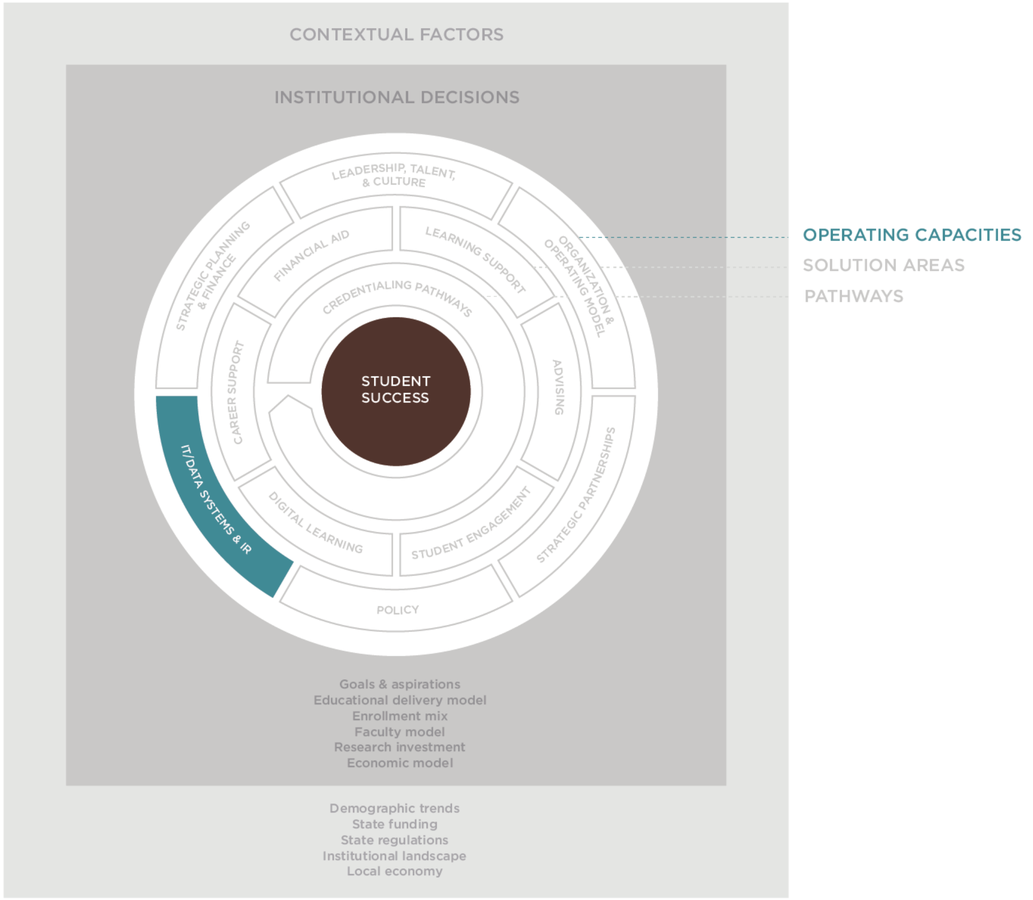
Many of these changes supported advising effectiveness by making credentialing pathways clearer

Source: ASU interviews

IT/DATA SYSTEMS & IR

This section outlines:

Gathering data and using it effectively, which includes fully adopting a culture of data-informed decision making and sharing key metrics publicly.



IT / DATA SYSTEMS AND IR

OBSERVED PRACTICES	DESCRIPTION
ESTABLISH HIGH QUALITY INSTITUTIONAL DATA	**Establish a set of high quality institutional data that all stakeholders trust and are willing to use for decision making**
ADOPT CULTURE OF DATA-INFORMED DECISION MAKING	**Adopt a culture of data-informed decision making and experimentation.** This enables institutions to roll out targeted pilots to test what works and to scale what works, creates opportunity to have data-informed discussions with faculty on the case for change, and can contribute to creating leadership accountability based on measurable results
ENSURE DECISION-MAKERS WORK CLOSELY WITH IR TEAM	**Ensure key decision-makers work very closely with the Institutional Research staff / team** (e.g., GSU's institutional research analyst is embedded within the student success organization)
SHARE KEY METRICS PUBLICLY	**Share key metrics publicly** (e.g., enrollment, retention rates, and degrees conferred by college) **to create transparency and friendly competition / motivation across functions and colleges** (e.g., GSU IPORT, ASU Facts)

IT / DATA SYSTEMS AND IR

SHARE KEY METRICS PUBLICLY

GSU's IPORT is a new web-based dashboard that shares key institutional metrics to the public

Data available on IPORT includes:

Student: Historical student enrollment, credit hours taken and demographic information

- Aggregate level, and disaggregated by campus, degree level, college, department, major, etc..

Admissions: Applicant counts, acceptance rates, and yields

Courses: Grade distributions, DFW rates, and course counts

Faculty: Faculty mix on a headcount and credit hour basis

Graduation: Degrees conferred

Sharing key institutional metrics publicly creates transparency and friendly motivation across functions and colleges

Source: GSU IPORT

STRATEGIC PLANNING & FINANCE

This section outlines:

Prioritizing investments around student success as part of a rigorous and broad strategic planning process.

STRATEGIC PLANNING & FINANCE

OBSERVED PRACTICES	DESCRIPTION
IMPLEMENT RIGOROUS STRATEGIC PLANNING	**Implement a rigorous strategic planning process to align around a set of core priorities and measurable goals, with student success at the center** (e.g., GSU moved from a 'everybody gets an ornament on the tree' strategic planning process to a set of five core priorities)
RELENTLESSLY PRIORITIZE INVESTMENTS	**Relentlessly focus investments toward core priorities, and upon high level allocation enable decision making to happen close to the action** (e.g., ASU University Planner ensured major investments were aligned to strategic plan, and then gave autonomy to Deans of Schools to creatively manage budgets)
ENLIST BOARD OF REGENTS AS AN ALLY	**Enlist the Board of Regents (BoR) as an ally to achieve strategic priorities** (e.g., GSU persuaded the BoR to provide ~$2M/year in funding to lower advisor ratios and to grant approval to fund emergency financial aid through student fees)
PURSUE CREATIVE FUNDING STRATEGIES	**Pursue creative strategies to fund priorities** (e.g., ASU and UCF partner with external developers to develop student housing to reduce upfront costs to the institution, GSU creatively leveraged indirect cost recovery to fund new facilities)

PURSUE CREATIVE FUNDING STRATEGIES

ASU found innovative ways to finance development of facilities

WHAT WAS FINANCED	HOW WAS IT FINANCED	MAGNITUDES OF INVESTMENT
Downtown Phoenix campus established in 2006	Capital funding from City of Phoenix in partnership agreement; City issued bonds in order to pay for the buildings – bonds are paid through tax revenue. Ownership transferred to ASU at end. Costs to utility use and operations are ASU's responsibility, while City only accounts for debt service	$223M in funding of Phase 1 ($186M for buildings; remainder to upgrade streets, add parks etc.)
***Upcoming:* Buildings for programs in Downtown Mesa**	City of Mesa providing funding in similar format as for the Downtown Campus, with a 99 year lease	$70M in initial phase (still in development)
Student housing in Tempe and West campuses	Private developers American Campus Communities provided equity investment, ASU provided ground lease to ACC who built and now operate student housing, with ASU providing student services	$425M invested to date, including one large project that is underway
Student housing in downtown Phoenix	Capstone Development issued bonds, City of Phoenix provided ground lease, and ASU provides student services	$120M
Student housing in Polytechnic campus	Inland America provided equity investment, ASU provided ground lease to Inland America, and ASU provides student services	$13M
Solar panels on campus	Arizona Public Service and subsidiaries provided equity/bond investment to install over 25MW capacity. ASU provides sites for installation, and purchases electricity at a contracted rate (lower than buying from utilities; not quite as low as owning panels, which would require significant upfront investment)	$175M to date

In many cases, initially the cost, risk and benefits are accrued to investors; over time ASU takes the asset on

Source: ASU interviews

Framework element definitions

CREDENTIALING PATHWAYS	Clear student-centered pathways toward achieving credentials
FINANCIAL AID	Up-front merit and need-based, and emergency, aid for students
LEARNING SUPPORT	Supplemental programs to support student learning
ADVISING	Student-centered support to guide students toward credential
STUDENT ENGAGEMENT	Programs to engage students in the institution's community
DIGITAL LEARNING	Digital courseware or course delivery modalities
CAREER SUPPORT	Initiatives to support student transition to employment
LEADERSHIP, TALENT, & CULTURE	Senior leadership and culture to lead and sustain transformation
ORGANIZATIONAL & OPERATING MODEL	Structure and operating approach of academic and support units
STRATEGIC PARTNERSHIPS	Range of partnerships to support achieving goals
POLICY	Internal policies, and ability to mobilize external policy support
IT/DATA SYSTEMS & IR	Infrastructure and processes to inform timely interventions
STRATEGIC PLANNING & FINANCE	Ability to reorient resources around strategic priorities

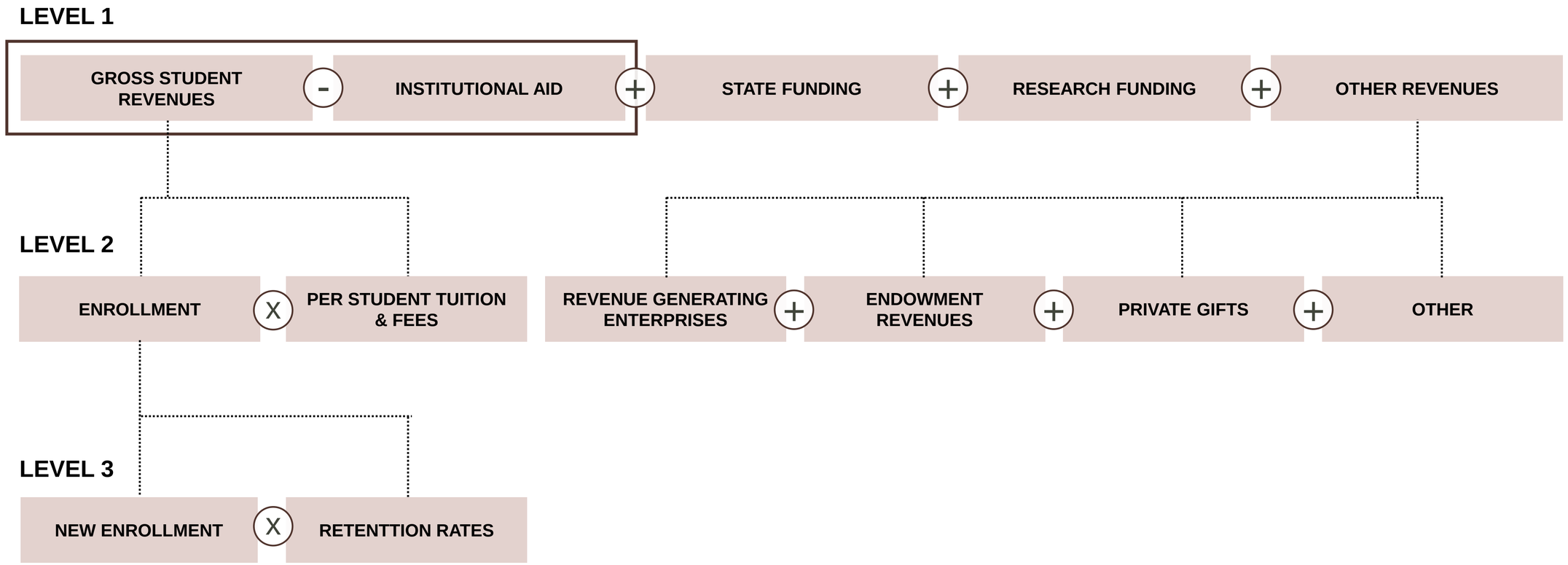
DEMOGRAPHIC TRENDS	Demographic growth, and pool of students available
STATE FUNDING	State appropriations and other state funds given to the institution
STATE REGULATIONS	Regulations enhancing or constraining institutional actions
INSTITUTIONAL LANDSCAPE	Competitive landscape, including level of consolidation
LOCAL ECONOMY	Local economic growth e.g., for employment, partnerships, R&D
GOALS & ASPIRATIONS	Aspirational goals and targets and how they are communicated
EDUCATIONAL DELIVERY MODEL	Choices around on-ground and online delivery modalities
ENROLLMENT MIX	Choices made around target student mix e.g., residency
FACULTY MODEL	Choices made around target student mix e.g., residency
RESEARCH INVESTMENT	Choice on how deeply to invest in research
ECONOMIC MODEL	Choices made to financially operationalize against the goals

INSTITUTIONAL DECISIONS

This section outlines:

This section outlines the impact, fiscal and otherwise, of institutional decisions about components like enrollment and faculty mix, class size, online instruction—complete with cost driver trees and other contextual information.

Revenues driver tree



Costs driver tree

LEVEL 1

INSTRUCTION + ACADEMIC SUPPORT + STUDENT SERVICES + RESEARCH + INSTITUTIONAL SUPPORT + FACILITIES & REAL ESTATE + DEPRECIATION + INTEREST ON DEBT + AUXILIARY ENTERPRISES + PUBLIC SERVICE

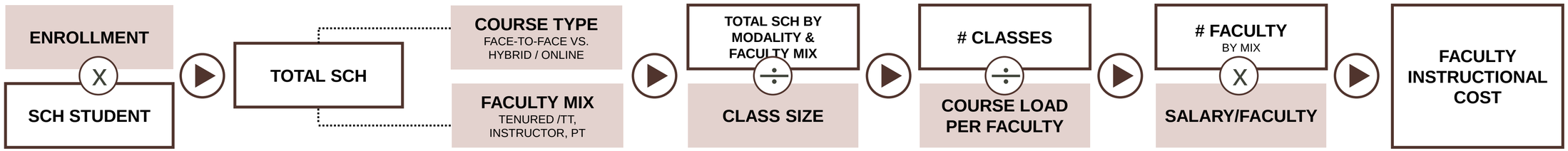
LEVEL 2

FACULTY INSTRUCTIONAL COSTS + OTHER INSTRUCTIONAL COSTS

LEVEL 3

FACULTY INSTRUCTIONAL MODEL DEEP-DIVE
DIFFERENTIATED BY ON-GROUND VS. ONLINE

Approach to modeling faculty instructional costs



KEY

INPUTS CHANGE BY SCENARIO	INPUTS DO NOT CHANGE BY SCENARIO

Context for how scenario fiscal analysis can be used

What these scenarios can be used for:

A guide to understand the types of revenue, cost and investment requirements that are associated with making key institutional decisions

A proxy to understand the rough magnitude of fiscal impacts based on a generic large-scale institution

What these scenarios should NOT be used for:

An extrapolation of specific fiscal implications of strategic choices your institution might make (these are only examples based on illustrative financials)

Scenario overview: Institutional decisions for which we have modeled fiscal impacts

OBSERVED PRACTICES	DESCRIPTION
CHANGE ENROLLMENT MIX	As an institution scales enrollment, how should it think about changing its enrollment mix in order to ensure overall fiscal sustainability, including its ability to cross-subsidize target student segments (e.g., local low-income students) if that is a core part of its strategy? How much marketing investment is needed to grow the target student segments?
IMPROVE RETENTION	How much enrollment growth and subsequent incremental revenue might an institution achieve by improving its 1-3 year student retention rates by 3 percentage points each over a 5-10 year period? How much investment in student success would be needed to achieve that gain?
ACHIEVE SCALE IN CENTRAL COSTS	How much scale might an institution achieve in its central administration and operations costs by increasing its enrollment by 20%?
INCREASE AVERAGE CLASS SIZE	If an institution grows its enrollment, and thereby increases its average class size by 25%, how much will its instructional costs decrease?
SHIFT FROM FACE-TO-FACE TO FULLY ONLINE OR HYBRID	If an institution grows its enrollment, and during this growth shifts 20% of current face-to-face instruction to hybrid and fully online (assuming face-to-face is currently 80% of instruction), how much can it expect its instructional and facility operations costs to decrease?
SHIFT FACULTY MIX	If an institution grows its enrollment, and through this growth shifts 5% of its instructional delivery from tenured and tenure-track faculty to full time non-tenure track faculty, how much can it expect its instructional costs to decrease?

Context and set-up for the enrollment mix scenario

Access-oriented institutions often **do not break even on in-state students due to the lower level of tuition and fees, and higher level of institutional financial aid typically provided to that segment**

One tactic that institutions could use to break even is increasing the share of **other student segments** (e.g., out-of-state, international) who **can pay differentially higher tuition rates** to cross-subsidize in-state students

However, doing so will require **investments in additional marketing and recruiting capabilities** to expand into new markets

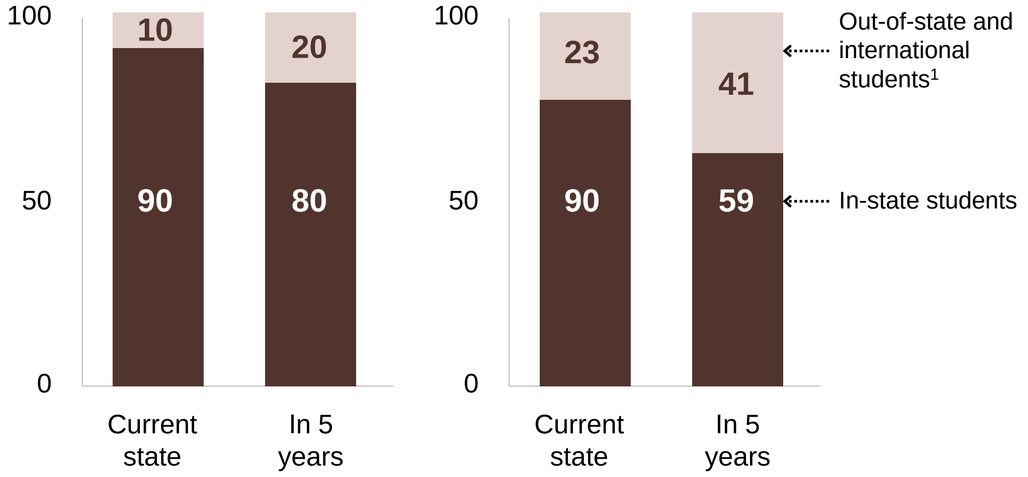
Enrollment mix should account for variation in incremental value of different student types

Because the incremental value of a student varies widely across segments...

ANNUAL FIGURES	IN-STATE FRESHMEN	OUT-OF-STATE FRESHMEN	INTERNATIONAL STUDENT
LIST TUITION AND FEES	**$10K**	**$25K**	**$30K**
STUDENT ACQUISITION AND ENROLLMENT	$1K	$1K	$1.5K
FINANCIAL AID	$6.5K (65% subsidy)	$8K (~30% subsidy)	Negligible
INSTRUCTIONAL COSTS	$9K	$9K	$9K
STUDENT SUPPORT	$1K	$1K	$1K
CENTRAL ADMINISTRATION	$0.1K	$0.1K	$0.1K
TOTAL COSTS	**$17.6K**	**$19.1K**	**$11.6K**
TOTAL INCREMENTAL VALUE	**-$7.6K**	**$5.9K**	**$18.4K**

Many institutions do not break even on in-state students

...growing the share of out-of-state and international students can disproportionately drive revenues



1. For the enrollment and revenue mix analysis, assumes 50/50 split between out-of-state and international enrollment

Illustration of fiscal impact of changing enrollment mix

The underlying economics of out-of-state and international students are more favorable than in-state students

- These segments typically pay 2-3x higher list tuition and fees and get much smaller fraction of institutional aid

Investing in growing these segments requires investing behind more recruiting capabilities

- Institutions might pursue a two-pronged marketing strategy with both domestic on-ground and international in-country teams to expand enrollment in these segments (e.g., adding 10-15 team members for this coverage model could cost $1.5M+ on an annual basis[1])

An institution that grows its share of out-of-state and international students creates a larger revenue pool...

- If each out-of-state or international student brings in on average ~$6-18K incremental value to the institution annually (average of ~$12K)...
- ...increasing the share of these two segments from being 10% of the student body to 20% (on a 50K student body) will yield 5,000 more students, each of whom will bring in ~$12K per year in incremental value

...which at an estimated ~$60M per year can be used to support institutional priorities which may include expanding access to lower income in-state students and/or investing behind student supports

- If an institution wishes to increase the level of subsidization for in-state students from 65% to 75% of list tuition and fees ($10K each in this illustrative scenario), that would require spending ~$40M (or roughly 2/3 of the value pool created by out-of-state and international expansion) in order to impact ~40K in-state students

1. For the enrollment and revenue mix analysis, assumes 50/50 split between out-of-state and international enrollment

Context and set-up for retention gains scenario

Retention gains have multiple impacts

Retention gains for students in their **first three years grow overall enrollment**

Retention gains achieved through students taking fewer breaks in their coursework simultaneously serve to **accelerate many students' time to degree**

- This shows up through declining retention rates for students in years 4-8

Retention gains most importantly **increase the total number of graduates**

Retention gains serve to **improve an institution's reputation** and thereby its ability to recruit more students

Achieving these retention gains will require investing in student success

Student success investments likely to include...

- Establishing academic advising supported by professional advisors, which can be further boosted through a predictive analytics platform
- Allocating emergency financial aid to retain students who face financial challenges
- Providing supplemental instruction to at-risk students

Investments could cost up to ~$5M annually if targeted towards the 5-20% most at risk students in a 50K sized institution

- ~$2M annually for increased investment in advising, which assumes getting to a best practice 300:1 student: advisor ratio for roughly 20% of the student body who represent the approximate share of first time freshmen and early transfers
- ~$2.5M annually for emergency financial aid to 5% of the student body (preference for juniors and seniors as they are closer to graduation) who are given an average of ~$1K in aid
- ~$250K annually for supplemental instruction to the 20% highest risk students assuming an annual stipend of $2.5K for a peer tutor serving 100 students

A $5M investment spread over the full 50K student body works out to a ~$100 per student impact on the cost structure.

Impact of retention gains on enrollment growth

In this example, let's assume an institution improves its 1-3 year retention rates by 3 percentage points each

- Retention rate defined here as % retained from 1st year cohort (3 year retention means % of 1st year students who return for 4th year)

The institution will simultaneously experience an acceleration in time to degree for students taking fewer breaks in their coursework

- This results in 4-8 year retention rates declining by 1 percentage point

These two effects will lead to enrollment growth of ~600 students for a 50K sized institution

- The improvement in 1-3 year retention rates will grow the enrollment of students in their second to fourth years
- While less in magnitude, the acceleration in time to degree will reduce enrollment of students in their fifth to ninth years

1-8 year retention rate now, and in 5-10 years

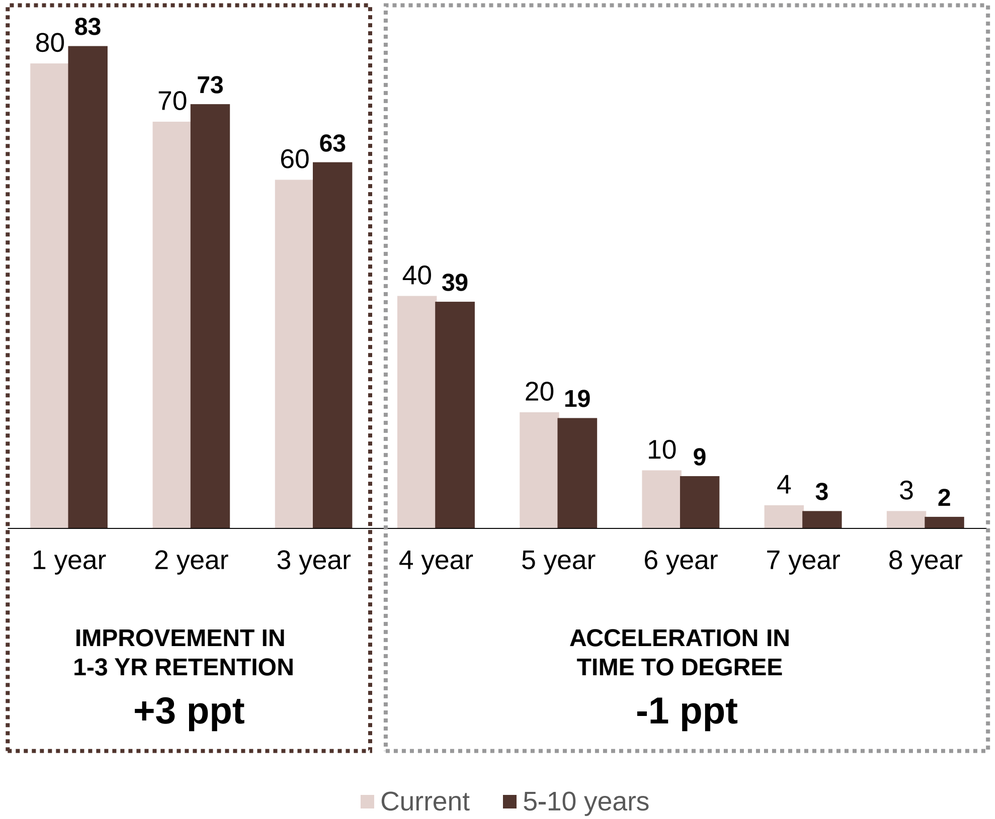


Illustration of fiscal and academic impacts of driving retention gains

Retention gains of up to three percentage points for 1-3 year retention rates is estimated to lead to a growth in enrollment of 600 students for a 50K sized institution (see prior page for specific analysis)

This enrollment growth will contribute to an estimated ~$7M in incremental annual revenues...

- Assumes that the mix of retained students reflects the overall enrollment mix and tuition and fee levels from Scenario A (i.e. 90% in-state at $10K, 5% out-of-state at $25K, and 5% international at $30K)

..and even more importantly increases the number of graduates produced per year by ~1,000+ students

- The estimated increase in number of graduates is based on graduation rate improvements seen in similarly sized institutions that have invested deeply behind retention interventions

Achieving these outcomes will necessitate investments which could total $5M+ towards the institution's most at risk students in order to support retention gains

- Investments include reducing the advising ratio for first time freshman and early transfer students to 300:1, providing emergency financial aid to a subset of juniors and seniors who are close to graduating but unable to pay their balances, and targeting supplemental peer tutoring to a subset of the highest risk students
- Targeting these types of investments towards the 5-20% of most at risk students in an institution can total to $5M+ annually which spread out over the full 50K student body roughly equates to a ~$100 cost per student
- Institutions may decide to roll out additional interventions such as adaptive learning to support retention gains, which would be additive to this estimate; the three categories described above represent some of the larger investment areas to support retention

Context and set-up for economies of scale scenario

Growing enrollment can enable an institution to achieve scale in certain costs

Scale is defined as **costs growing slower than enrollment** and **declining on a per student basis** for that cost category

It is likely for an institution to **achieve scale in central administration and operations costs** assuming that these are areas that are adequately staffed and resourced at the institution's pre-growth size of 50K students

In this scenario we will explore which cost categories typically might see scale effects and at what magnitude as an institution grows its enrollment by 20%

Achieving this enrollment growth likely requires investments in recruiting capabilities

Achieving a 20% enrollment growth likely requires investments in additional recruiting capacity and capabilities

- While underlying factors such as demographic growth, growth at feeder institutions, and improving institutional reputation can all contribute to some of the overall enrollment growth, they are not likely to be sufficient

The types of areas that might benefit from more investment include:

- More capacity in the admissions team for in-state and out-of-state recruiting
- More staff on site at two-year feeder institutions to drive transfer growth
- If an institution has a significant portion of its student enrollment online and has a strategic partner supporting marketing, it should budget more towards the revenue share for student acquisition

A generic large-scale institution can spend from $800-$1400 per on-ground student on marketing and recruiting costs

- While a portion of these costs may scale as enrollment grows, the portion which is more directly correlated to serving students (e.g., outreach staff) will require additional investment [assumed at 50% of the average marketing spend per student in this scenario, or roughly 50% of $1000 per student which results in $500 per student]

Growing enrollment can enable an institution to achieve scale in central administration and operations costs

COST CATEGORY	TYPE OF ENROLLMENT GROWTH COST WILL SCALE BY (OVERALL VS. ON-CAMPUS) & ANNUAL GROWTH RATE		ANNUAL COST GROWTH RATE	DIFFERENCE BETWEEN ENROLLMENT & COST GROWTH RATE	COST CATEGORY	
PUBLIC SERVICE		n/a	No growth	n/a		
CENTRAL ADMINISTRATION	Overall enrollment	3.7%	2.7%	(1%)	Overall enrollment	Achieve scale
OPERATION & MAINTENANCE OF PLANT[1]	On-campus enrollment only	3.0%	2.0%	(1%)	On-campus enrollment only	
INSTRUCTIONAL COSTS	Overall enrollment	3.7%	3.7%	No difference	Overall enrollment	Grow in line with enrollment
AUXILIARY ENTERPRISES (E.G., DORMITORIES, FOOD SERVICE)	Overall enrollment	3.7%	3.7%	No difference	Overall enrollment	
SCHOLARSHIPS AND FELLOWSHIPS	Overall enrollment	3.7%	3.7%	No difference	Overall enrollment	
INTEREST ON DEBT	Overall enrollment	3.7%	3.7%	No difference	Overall enrollment	
ACADEMIC SUPPORT	Overall enrollment	3.7%	4.7%	+1%	Overall enrollment	Costs grow faster than enrollment, and signify investment
STUDENT SERVICES	Overall enrollment	3.7%	4.7%	+1%	Overall enrollment	
RESEARCH	Overall enrollment	3.7%	4.7%	+1%	Overall enrollment	

1. Facilities expansion primarily needed for on-ground students hence why it scales with only on-campus enrollment, and excludes portion of student body that may be pursuing their degrees online

Illustration of fiscal impact of growing enrollment and achieving scale

Assume a 50K sized institution grows enrollment by 20% over five years (or ~4% / year) to 60K students, and achieves scale in central administration, plant operations and maintenance, and public service

- Assume the institution grows costs at 1% per year less than enrollment growth for central administration and 1% less than on campus enrollment growth for plant ops and maintenance
- Assume the institution has no growth in public service as this is typically not an area that requires more investment as enrollment grows

Achieving this type of growth will require investment in additional recruiting capabilities...

- Areas of increased investment need might include growth in the admissions staff and more staff placed on two-year institutions to help accelerate transfer students
- These types of investments are estimated at ~$500 per student based on similarly sized institutions; for 10K additional students that would necessitate ~$5M annual incremental recruiting spend

...but in five years can lead to an estimated savings of ~$26M annually, or ~$430 per student

- Assumed an average per student cost of $21K as was observed at case study institutions
- Growing central administration costs of $115M at 1% per year less than overall enrollment growth can contribute ~$7M per year in savings or ~$110 per student
- Growing plant operations and maintenance costs of $85M at 1% per year less than on-campus enrollment growth can contribute ~$8M in savings per year or ~$140 per student
- Keeping public service costs constant at ~$55M per year can save ~$11M per year or ~$180 per student

These savings enable the institution to re-invest in priority areas such as student success and research

- E.g., the institution can invest ~$10M in student success (equivalent to growing academic support and student service costs of ~$175M at 1% greater than enrollment growth for five years) and ~$9M in research (equivalent to growing research costs of ~$160M at 1% greater than enrollment growth for five years)

Context and set-up for the increase class size scenario

When an institution grows enrollment, it should consider changes to its instructional model that could drive further efficiency

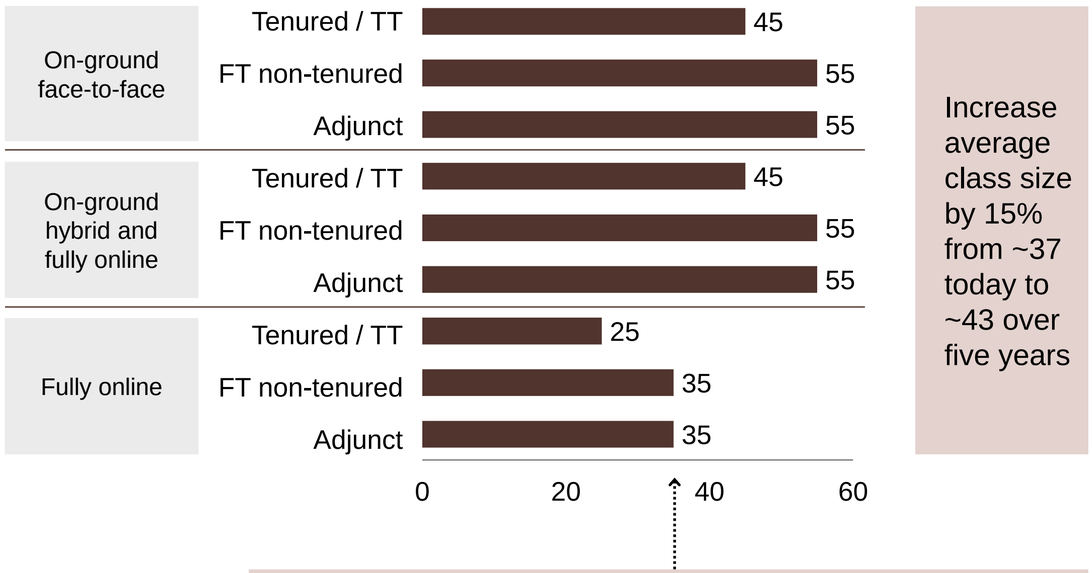
One of these changes is to increase average class size by improving class capacity utilization and optimizing course scheduling as an institution grows

It is critical that these changes are made without negatively affecting outcomes. Tactics to do this include:

- Ensuring that support resources for faculty remain in place as changes are made (e.g., TA and graduate student support, instructional design)
- Ensuring courses that require smaller class sizes to be effectively delivered (e.g., courses that require intensive student engagement in class) continue to have smaller class sizes
- Making changes gradually (introduce through a pilot before scaling widely)

When growing enrollment, an institution can increase its average class size to drive further efficiency

Increasing overall average class size by 15%...

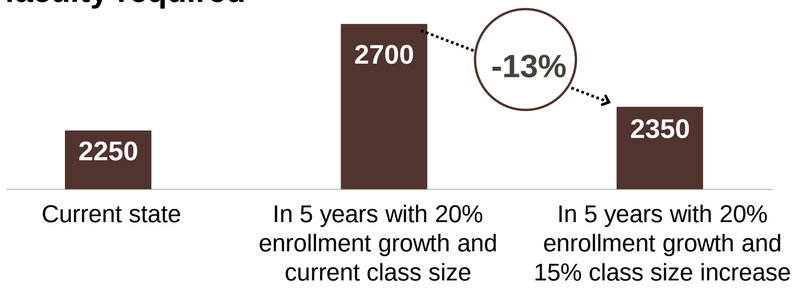


Increase average class size by 15% from ~37 today to ~43 over five years

Average class size can be increased evenly across faculty type, modality, subject, lower / upper division, or increased disproportionately in specific segments

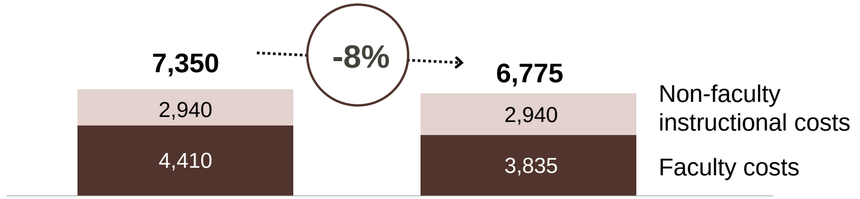
...could reduce the # of faculty needed by ~13%

Number of faculty required



...and reduce per-student instructional costs by ~8%

Per student instructional cost ($)



Faculty as % instructional cost

60 **53**

Context and set-up for the shifting instructional modalities scenario

Another change an institution can make to its instructional model to drive efficiency in its cost structure is to shift more of the credit hours that a student takes from face-to-face instruction to hybrid and fully online

Hybrid and fully online instruction can drive several positive impacts if implemented well:

ACCESS

Hybrid and online instruction can provide students with flexibility around place and time of course offering that can help drive access to students

OUTCOMES

It is possible for hybrid and fully online instruction to be implemented in a high quality way, and for outcomes to be on par with or better than on-campus face-to-face instruction

- If implemented well, hybrid and fully online instruction can accelerate time to degree by providing students with more flexibility
- Promising practices observed at case study institutions include ensuring the best faculty teach across modalities, offering intensive training to faculty on hybrid and online courses (e.g., 80 hours), providing instructional design support, and establishing a dedicated team to evaluate results and drive improvement

COST

Hybrid and online instruction can reduce per student instructional costs

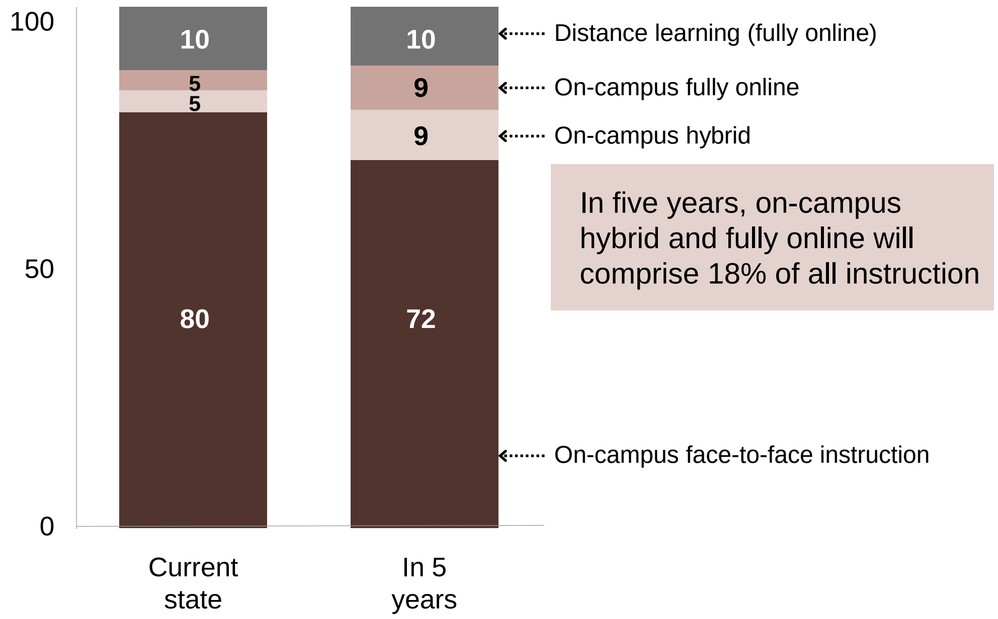
- Typically hybrid and online courses can be offered with higher average class sizes, reducing the number of faculty members and instructors required
- Second, hybrid and online courses lower classroom operations costs

FOCUS FOR THE SCENARIO

Shifting from face-to-face instruction to hybrid and fully online can drive efficiency in several ways

Shifting modality mix from face-to-face instruction to hybrid and fully online instruction...

Modality mix (%)



In five years, on-campus hybrid and fully online will comprise 18% of all instruction

...could drive efficiency by having higher average class sizes and lower classroom operational costs

DESCRIPTION	ANNUAL SAVINGS
Having higher average class sizes for the 10% of face-to-face courses that are shifting to hybrid and online (assumes courses shift from ~33 students per class in face-to-face to ~53 students per class in hybrid and online)	~$8M
Reducing classroom space by shifting to fully online (based on case study institution benchmark of ~$800 of savings per year for shifting one student from face-to-face to fully online instruction)	~$2M
Reducing classroom space by shifting to hybrid (assumes hybrid achieves half of the savings of shifting to fully online)	~$1M
TOTAL SAVINGS	**~$11M**

Illustration of fiscal impact of shifting from face-to-face instruction to hybrid and fully online

Let's assume that a 50K sized institution grows its enrollment by 20%, and shifts 10% of its current face-to-face instruction to hybrid and fully online instruction

- This means that a 60K sized institution (50K multiplied by 120%) with 80% of its student credit hours conducted through face-to-face instruction, shifts 10% of 80%, or 8% of its total student credit hours, to hybrid and fully online instruction. Assume half of the shift is to hybrid instruction, and the other half is to fully online instruction
- Depending on what capabilities an institution already has, growing hybrid and online may require investments in online operations, including instructional design, evaluation, and training capabilities (e.g., ~$5M-10M / yr. based on observations at similar sized institutions)

This should drive efficiency by...

...having higher average class sizes for the 10% of face-to-face courses that are shifting to hybrid and online

- Assumes courses shift from ~33 students per class in face-to-face to ~53 students per class in hybrid and online[1]
- This increase in class size translates to saving ~$8M per year on faculty costs[2]
- This is equivalent to ~3% savings in faculty costs, and ~2% savings in total instructional cost (faculty costs are 60% of total instructional costs), and ~1% savings in total cost (instructional costs are 35% of total costs)

...reducing the classroom space needed to support the enrollment growth

- Shifting to fully online instruction will save ~$2M per year on classroom operations costs, and shifting to hybrid instruction will save ~$1M per year on classroom operations costs (based on a case study institution benchmark of ~$800 of savings per year for shifting one student from face-to-face to fully online instruction; assumes shifting to hybrid generates approximately half of the savings)
- This is equivalent to ~3.5% savings in plant operations and maintenance costs

Combined, the total savings from shifting 10% of face-to-face instruction to hybrid and online is ~$11M / year

- There will be additional one-time savings from reducing capital investments due to less classroom space needed

1. Weighted average across faculty type assuming faculty mix from Scenario D.
2. Assuming average faculty compensation from Scenario D

Illustration of fiscal impact of shifting faculty mix

Another change an institution can make to its instructional model to drive efficiency is to shift more of the instructional delivery load from tenured and tenure-track faculty to full-time non-tenure track faculty

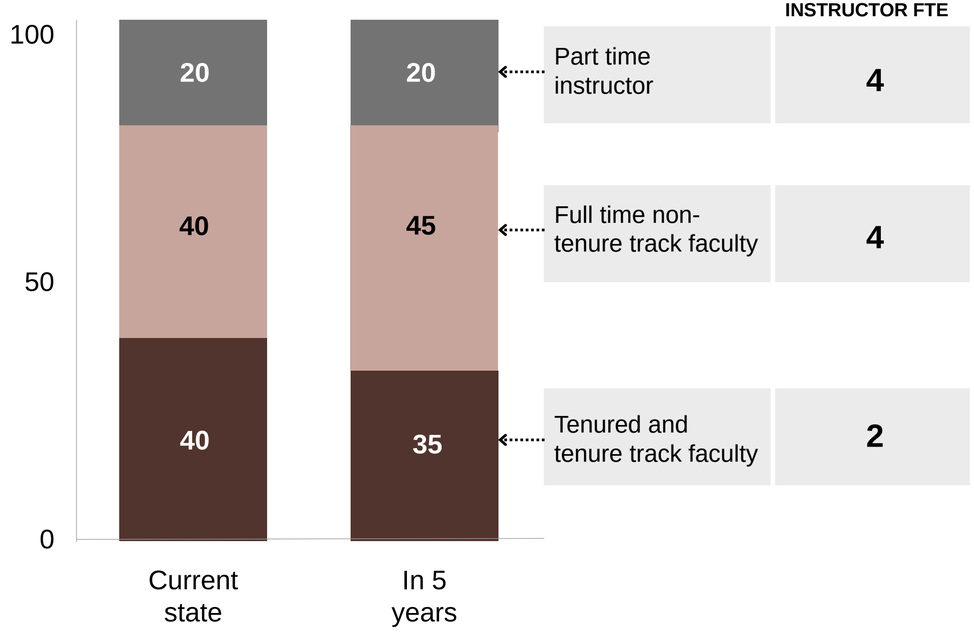
It is critical that this shift is conducted without negatively impacting outcomes. Tactics to do this include:

- Hiring high quality full-time non-tenure track faculty who are committed to the institution, and appropriately supporting these faculty members (e.g., mentorship from tenured faculty, instructional design support)
- Ensuring courses that require tenured and tenure-track faculty to effectively deliver the course (e.g., courses covering cutting edge research topics) continue to be taught by tenured and tenure-track faculty
- Making changes gradually (introduce through a pilot before scaling widely)

Shifting instructional delivery from tenured / TT faculty to FT non-TT faculty can drive

Shifting faculty mix from tenured and tenure-track faculty to FT non-tenure track faculty...

Modality mix (%)



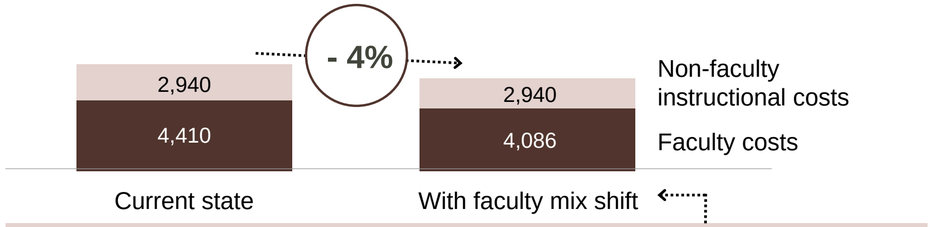
...could reduce the # of tenured and TT faculty needed by ~16%, and lower the total # faculty required by ~3%

Number of faculty members	CURRENT STATE	IN 5 YRS WITH CURRENT FACULTY MIX	IN 5 YRS WITH FACULTY MIX SHIFT
TENURED AND TT FACULTY	900	1,080	910
FULL-TIME NON-TT FACULTY	900	1,080	1,170
PART TIME INSTRUCTOR	450	540	540
TOTAL	**2,250**	**2,700**	**2,620**

Lower total # driven by higher average course-load for FT non-TT faculty

...and reduce per-student instructional costs by 4%

Per student instructional cost ($)



Driven by reducing # faculty hired, and hiring a greater share of lower cost faculty members

Illustration of fiscal impact of shifting faculty mix

Let's assume that a 50K sized institution grows its enrollment by 20%, and simultaneously shifts faculty mix from 40% tenured and tenure track faculty to 35%, with 5% instruction shifted to being delivered by full-time non-tenure track faculty...

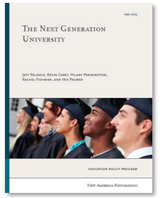
- If the institution did not shift its faculty mix, the institution would have needed to hire ~180 additional tenured and tenure-track faculty members, and ~180 full-time non-tenure track faculty members to manage the enrollment growth
- With this faculty mix shift, the institution could instead hire ~10 additional tenured and tenure-track faculty members and ~270 additional full-time non-tenure track faculty members
- This shift enables hiring ~80 fewer faculty overall, because full-time non-TT faculty members are able to take on a higher instructional load (assume tenured / TT faculty teach 2 courses per semester, vs. full-time non-TT faculty teach 4)

...this drives ~$20M per year in savings through hiring fewer faculty overall and by hiring more lower cost faculty members and fewer higher cost faculty members, equivalent to ~4% savings in total instructional costs and ~2% savings in total costs

- Assumes the difference between the average tenured / TT faculty compensation (~$150K per year) and the average full-time non-TT faculty compensation (~$75K per year) is ~$75K per year
- This translates to ~7% savings in faculty costs, ~4% savings in total instructional costs (faculty costs comprise 60% of total instructional costs), and ~2% savings in total costs (instructional costs comprise 35% of total costs)
- Note that these savings can be further increased if an institution set class sizes to be larger for full-time non-tenure track faculty members, enabling the institution to hire even fewer faculty members

Publications with some overlap with model work

Case studies – Think tanks, foundations, other non-profits

NAME/SOURCE	OVERVIEW	OUTREACH	DIFFERENCES VS. MODELS WORK
New America Foundation, "Next Generation University," 2013 	• Focuses on 6 public research institutions (including ASU, GSU and UCF) that expanded enrollment/improved grad rates in a cost-effective manner	• NAF, BMGF, GfE websites • Live panel event, YouTube footage • Press releases by each of the 6 institutions	**Most similar to Mega work, but has many differences:** • Focuses on policy recommendations at the institutional, state and national level, rather than on lessons for implementation or adoption at other institutions • Does not include as much rich detail on how interventions and capacities were built, nor include artifacts such as organizational charts etc.. • Presents key themes, but not a framework or model for transformation • Is written almost entirely in prose; includes only two tables
Completion by Design "Building Guided Pathways," 2016 	• Lessons learned at partner colleges in NC, FL, OH • Multi-intervention "guided pathways" approach • Toolkit for others to use	• Cross-posted on multiple sites (e.g., CCRC, JFF, Grantmakers For Education)[1]	• Covers only community colleges • Focuses predominantly on credentialing pathways, but doesn't cover other interventions or operating capacities (e.g., institutional research, organizational and operating model) that would be needed

1. Columbia University's Community College Research Center, Jobs for the Future

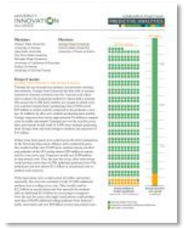
Publications with some overlap with model work

Case studies – Think tanks, foundations, other non-profits

NAME/SOURCE	OVERVIEW	OUTREACH	DIFFERENCES VS. MODELS WORK
Ithaka, 2015-2016 	• Series of "Educational Transformation" in-depth profiles (ASU, GSU, Valencia) • Based on interviews with leadership at each school	• Ithaka website • Institution website, podcast	• Focuses only on 1 institution's story in each document • Does not go into the economics of how changes were operationalized i.e., how revenues and costs shifted over time to enable transformation and in response to external effects • Does not include lessons for aspiring schools • Does not include as much rich detail on how interventions and capacities were built, nor include artifacts such as organizational charts etc..
UIA "Success Stories," 2016 	• Overview of GSU and ASU as "mentor" institutions for predictive analytics • Also links to popular press (e.g., UCF article in Orlando Sentinel, ASU article in New York Times)	• Misc. articles in popular press • UIA attended White House summit Dec. 2014	• Presents only press coverage of success stories for each institution • Does not include any original research or material

Publications with some overlap with model work

Case studies – Think tanks, foundations, other non-profits

NAME/SOURCE	OVERVIEW	OUTREACH	DIFFERENCES VS. MODELS WORK
UIA "Predictive Analytics" publication 	• Brief overview of predictive analytics success at ASU, GSU and UT Austin	• UIA website • 'Mentorship' relationships	• Currently the first and only published 'scaling initiative'; very brief and focused on only one aspect

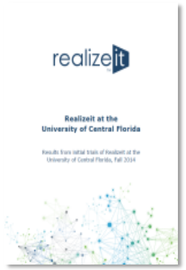
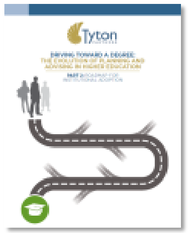
Publications with some overlap with model work

Case studies – Providers and associations

NAME/SOURCE	OVERVIEW	OUTREACH	DIFFERENCES VS. MODELS WORK
Education Advisory Board Student Success Collaborative, 2015 	• Series of articles/case studies highlighted EAB's work with GSU on predictive analytics	• EAB's work with GSU has been covered in a number of trade journals	• Focuses on a single institution (GSU) with business implications for EAB • Does not include lessons learned
Pearson, 2015 	• Short case study highlighting Pearson-ASU partnership on predictive analytics and online learning	• ASU's efforts have been covered widely in popular press (e.g., NYT)	• Focuses on a single institution (ASU) with business implications for Pearson • Does not include lessons learned

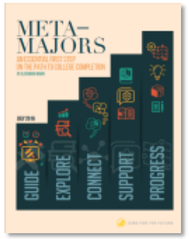
Publications with some overlap with model work

Case studies – Providers and associations

NAME/SOURCE	OVERVIEW	OUTREACH	DIFFERENCES VS. MODELS WORK
RealizeIT 	• Series of case studies for customer institutions, incl. UCF, on adaptive learning platform	• RealizeIT, UCF, EdSurge websites • Webinar & YouTube	• Focuses on a single institution (UCF) with business implications for Pearson • Does not include lessons learned
Tyton Partners, "Driving Toward a Degree," 2015 	• 2-part series that profiles providers in the higher ed planning and advising space; includes institutional roadmap	• Tyton, Educause, BMGF websites • Own website	• Benchmark of providers, not focusing on mega-models

Publications with some overlap with model work

Reports on a single intervention

NAME/SOURCE	OVERVIEW	OUTREACH	DIFFERENCES VS. MODELS WORK
Jobs for the Future, "Meta Majors," 2016 	• Focuses on "meta majors"[1] • Profiles 2 community colleges (Lorain County CC and Miami-Dade) • Toolkit for others to use	• JFF website • Linked by some universities e.g. Illinois State's news page	• Only community colleges • Emphasis on a single intervention (meta-majors)
Jobs for the Future, "Using Data to Support Student Success," 2016 	• Part of JFF series on "Rethinking the 12th grade" • Focuses on data sharing best practices btw high schools and colleges	• JFF website • Broader series on ERIC, NCSL, CCRC websites and a CCRC conference	• Narrow focus on data sharing • Focus on K-12/HE pipeline vs mega-models

1. Meta majors are sets of courses that fulfill the academic requirements of a broad discipline (e.g., STEM, business) so students who are undecided on a degree path can complete the core academic requirements of their broad subject area

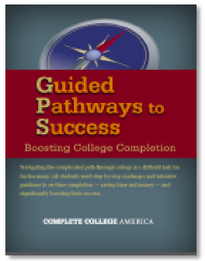
Publications with some overlap with model work

Reports on a single intervention

NAME/SOURCE	OVERVIEW	OUTREACH	DIFFERENCES VS. MODELS WORK
Lumina 	• Occasional reports on priority Lumina areas (e.g., outcomes-based funding)	• Lumina, ERIC, Inside Higher Ed, NASFAA websites	• Narrow focus on Lumina-priority topics
Eduventures 	• Occasional reports on certain topics (e.g., predictive analytics that mentions ASU)	• Eduventures, Lumina, IBM websites	• Narrow focus on Eduventures-priority topics

Publications with some overlap with model work

Reports on a single intervention

NAME/SOURCE	OVERVIEW	OUTREACH	DIFFERENCES VS. MODELS WORK
Lumina 	• Occasional reports on priority areas (e.g., Guided Pathways) • Some mention mega models in passing	• CCA, CCCCO, Lumina, some university system or state websites	• Only community colleges

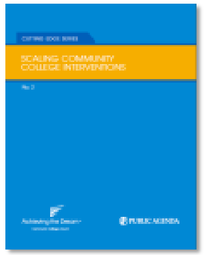
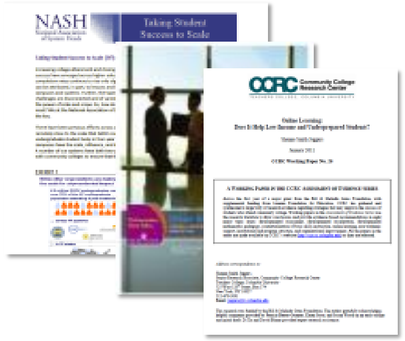
Publications with some overlap with model work

Other reports and case studies

NAME/SOURCE	OVERVIEW	OUTREACH	DIFFERENCES VS. MODELS WORK
National Assoc. of System Heads, "Taking Student Success to Scale," 2014 	• New initiative launched at 2014 White House Summit on College Opportunity • Policy brief calls on state systems to use analytics to increase attainment	• NASH website	• Policy brief, not a case study on successful models • Describes the need but not lessons learned
Community College Research Center, "Redesigning Community Colleges for Student Success," 2014 	• Lit review and toolkit for guided pathways approach in community colleges • Includes design principles/timeline for aspiring institutions	• CCRC website • Fed into a conference paper • Became a book	• Minimal focus on specific institutions (only 3 by name, 2 in CUNY system)

Publications with some overlap with model work

Other reports and case studies

NAME/SOURCE	OVERVIEW	OUTREACH	DIFFERENCES VS. MODELS WORK
Public Agenda's "Cutting Edge" series on student success 	• 3-part series with Achieving the Dream on scaling community college student success interventions • Includes case studies and checklists for institutions	• Public Agenda, AtD, AACC websites • Press coverage	• Focus on community colleges • Covers some interventions but not all
Ad hoc reports on community college success efforts 	• Reports from orgs such as Achieving the Dream, CCRC, etc.. on various community college student success efforts	• Organizations' websites	• Exclusive focus on community colleges • Cover some interventions but not all