



1. Strategy Refresh

WACUBO BMI

August, 2022



I am looking forward to working with you!



Paul N. Friga, Ph.D.

- **AGB Practice Area Lead – Strategic Transformation of Public Higher Education; AGB Senior Consultant**
- Clinical Associate Professor of Strategy – UNC Chapel Hill
- Former Chief Strategy Officer, HelioCampus
- Leading higher education thought leader with over 16 articles in the Chronicle of Higher Ed and InsideHigherEd and numerous webinars over the past 12 months; significant consulting projects
- Former consultant – McKinsey & PwC
- Former Trustee – Saint Francis University, Loretto, PA
- Former Board Chair – Saints Francis & Clare Church, Greenwood, Indiana
- Founded ABC Insights, a leading higher ed benchmarking consortium
- Created NACUBO Master Class in Financial Transformation for CFOs
- Author of *The McKinsey Mind* and *The McKinsey Engagement*

[Paul N. Friga, Ph.D.](#)

Practice Area Leader: Strategic Transformation of Public Higher Education

About

Paul is one of the foremost higher education thought leaders and strategists. With 20 years of experience as a professor, researcher and consultant at UNC CH and Indiana University, Paul understands how public education really works and how it should change. His former experience as a consultant with PwC (earned CPA and CMA designations as) and McKinsey (including projects in public higher education) round out additional relevant experience. He has also served as a Trustee at Saint Francis University and the Board Chair at Saints Francis and Clare Church in Greenwood, Indiana. He has an MBA and Ph.D. from UNC Chapel Hill.

For the past 6 years, Paul has been researching best practices in strategic resource allocation in higher education, presenting at international conferences, and co-founded ABC Insights, a premier higher education benchmarking consortium that was acquired by HelioCampus. Over the past twelve months, Paul has authored 16 articles in the Chronicle of Higher Education and InsideHigherEd on strategies for change in higher education for surviving the COVID crisis and positioning universities for the long-term. He has also conducted many strategic planning projects for universities, not-for-profit entities, and corporations. He has written two best-selling books on team problem-solving (*The McKinsey Mind* and *The McKinsey Engagement*) and is an award-winning teacher of strategy and consulting for undergrads, MBAs, and Executives.

1.

The Strategy Content

2.

The Strategy Process

3.

Strategy Examples

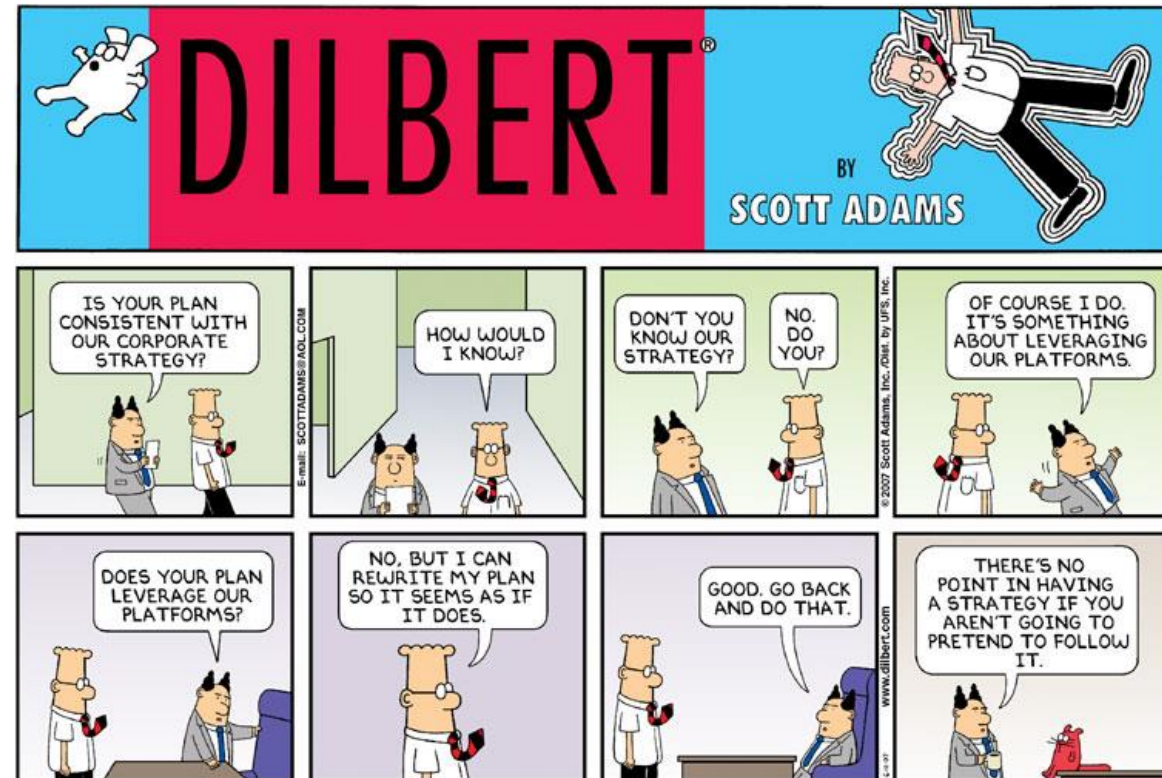
- 1.** **The Strategy Content**
- 2.** **The Strategy Process**
- 3.** **Strategy Examples**

What is strategy?

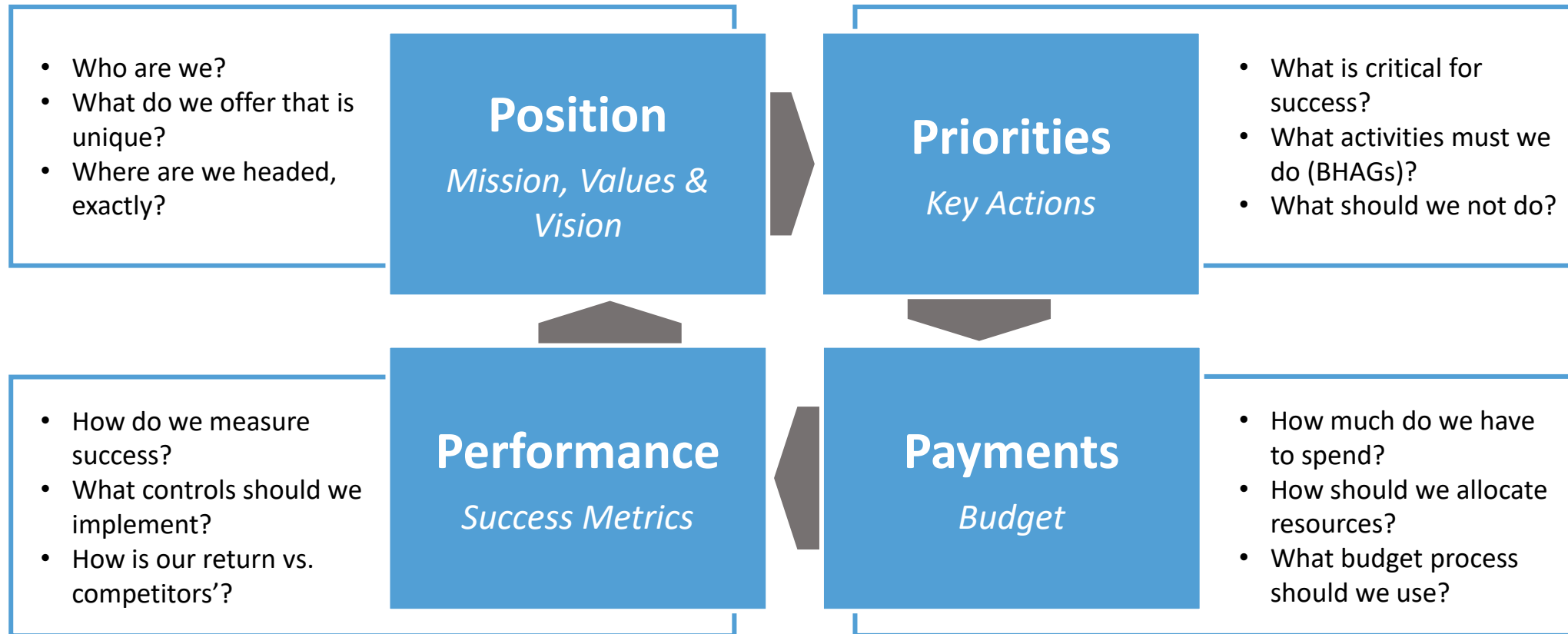
Strategy

Noun.

*An elaborate
and systematic plan
of action.*



The Content: Paul's Four P's of Strategy



It is helpful to create core strategy statements

Mission Statement

Statement which specifies a firm's purpose or "reason for being" and the primary objective toward which the firm's programs & plans should be aimed. Statement specifying the firm's key constituents and how the firm will serve them. It must be clear and understood.

It "makes you proud."

Vision Statement

Statement describing what the firm strives to be at some future time. It should be specific and motivating.

It "makes you excited."

Values

It is what we believe in, our guiding principles, and how we interact.

It "makes you belong."

The T-Shirt Theory (Strategy on one page)

Mission
Vision
Values

Priorities
Objectives
Initiatives
Actions

Key questions for evaluating strategy

- 1. *Is it concise, clear and communicated?***
- 2. *Is it aligned with higher level strategies?***
- 3. *Does it address the 4 Ps?***
 - Positioning (mission, values, and vision)
 - Priorities (no more than 3 for an overall unit)
 - Payments (resource allocations)
 - Performance (clear metrics)

***Does it guide daily
decision making?***

1.

The Strategy Content

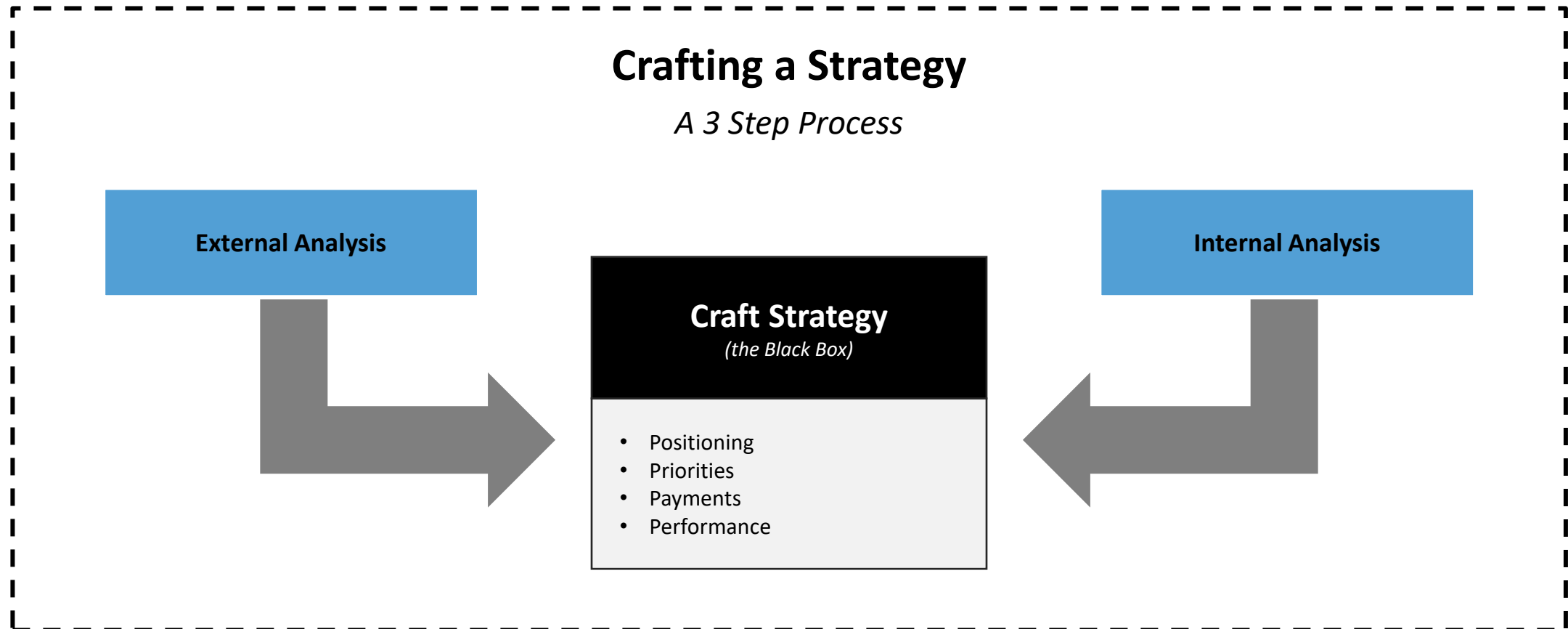
2.

The Strategy Process

3.

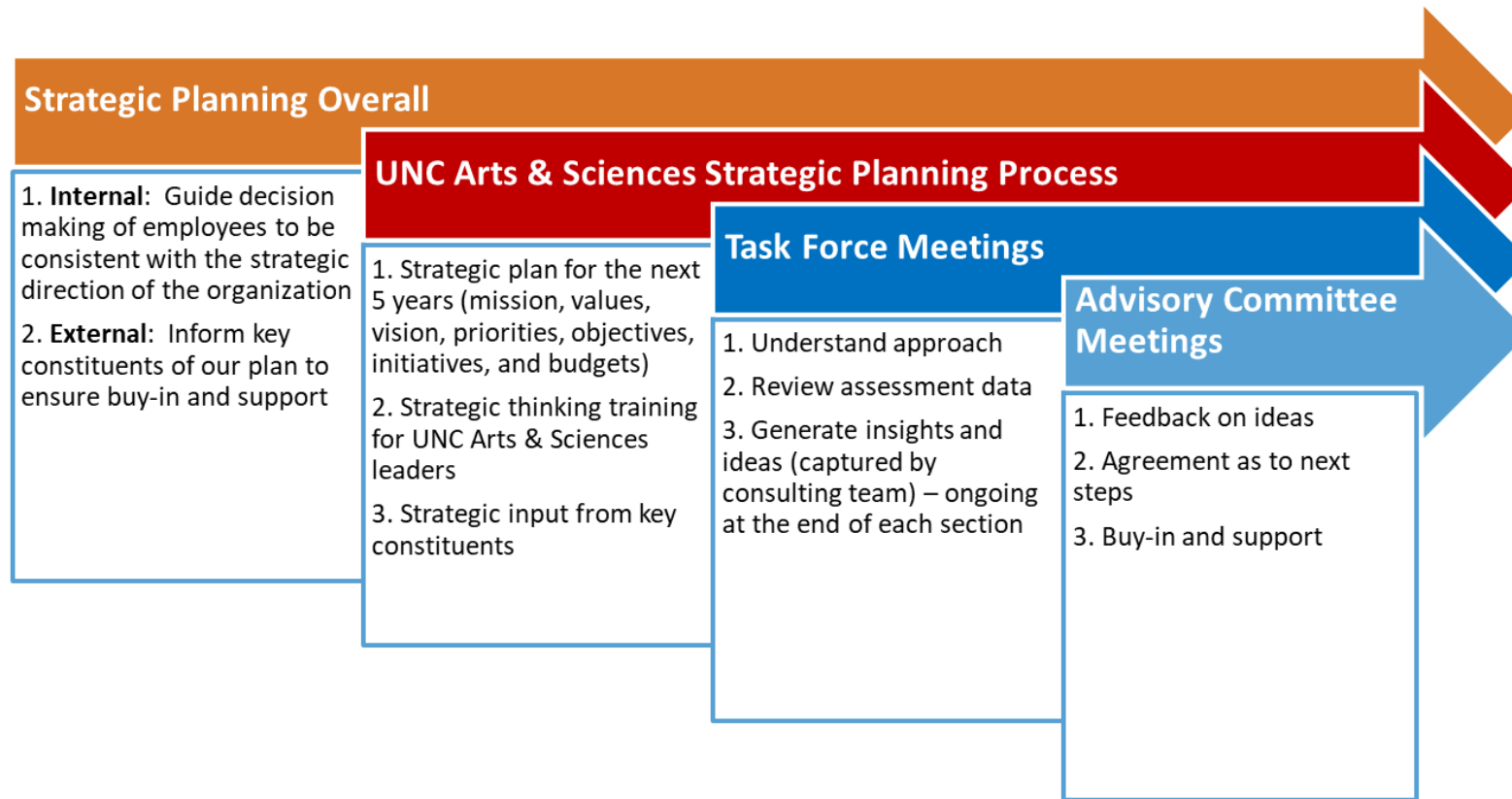
Strategy Examples

How do firms create strategies?

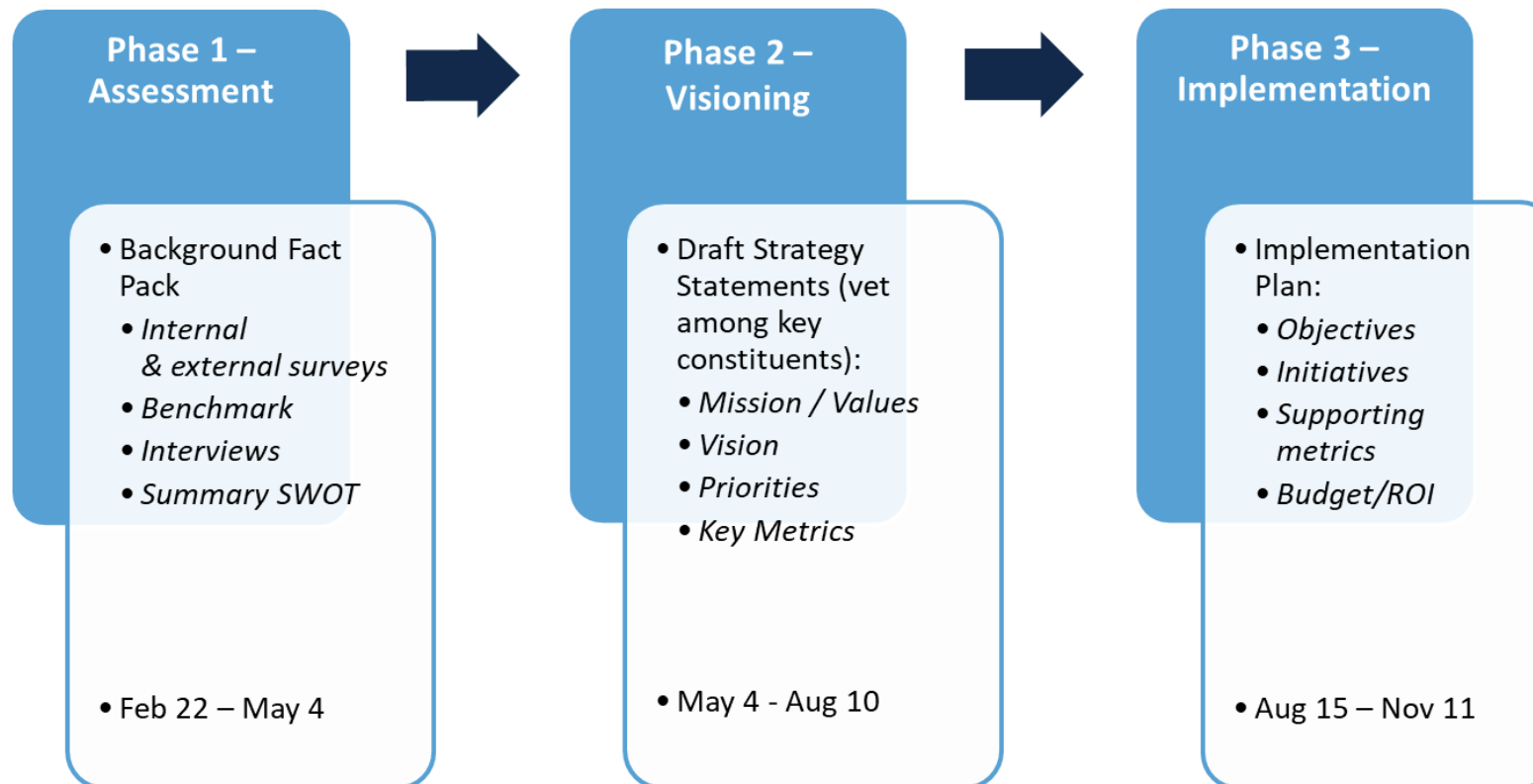


An overview of my suggested planning methodology

UNC CH College of Arts & Sciences Example



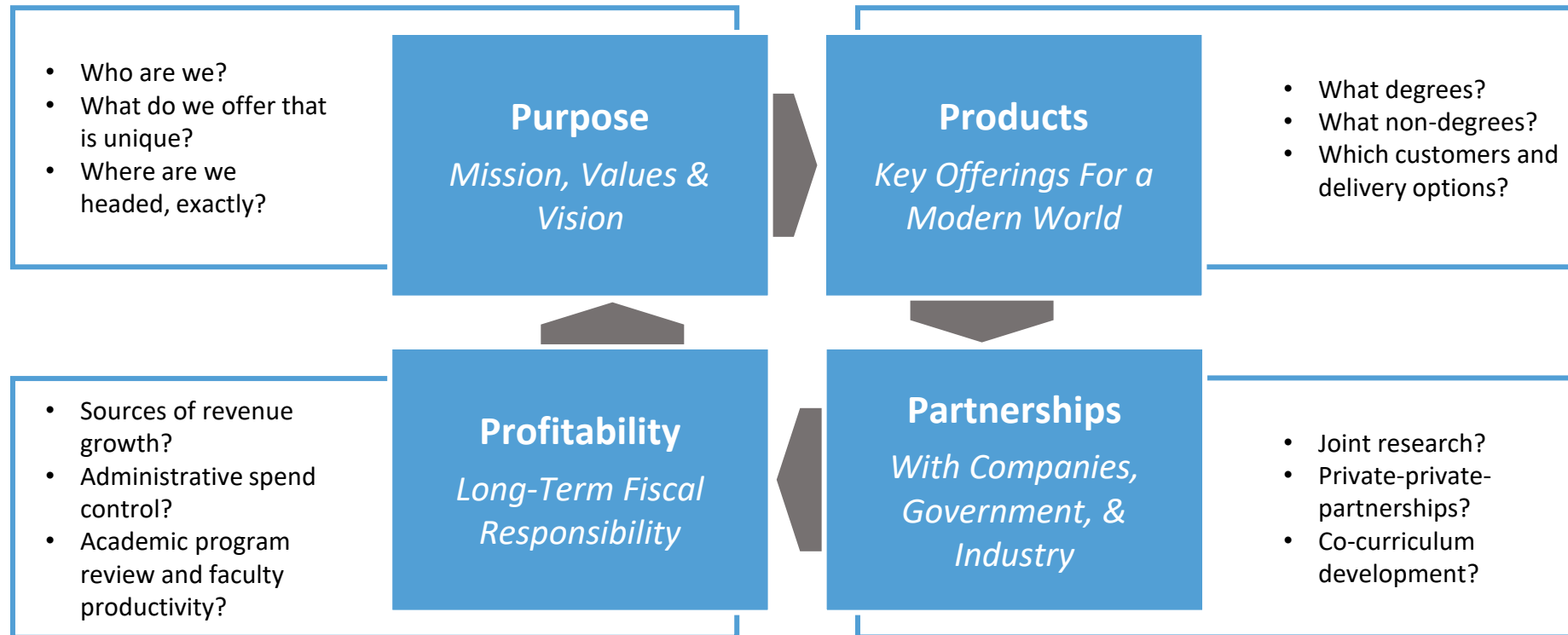
And the suggested planning process flow – typically 3-8 months



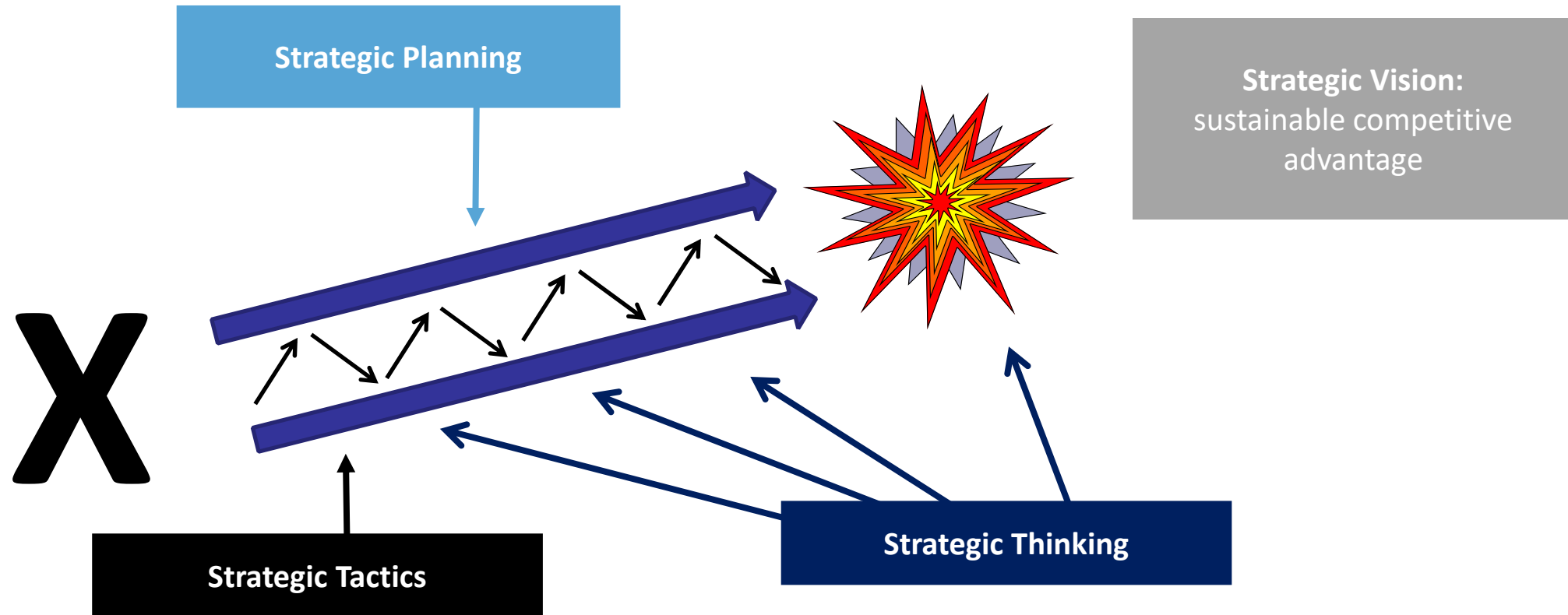
A Strategy Refresh is shorter and more focused

| Dimension | Traditional Strategic Plan | Strategy “Refresh” |
|------------------------|--|---|
| Purpose | Guide decision-making and Build Morale | Guide Decision-making and Build Morale |
| Situational Assessment | SWOT | SWOT |
| Scope | Broad | Narrow |
| Participants | Many | Few (with some survey/open house opportunities) |
| Time | 6 months-1 year | 3 months max |
| Strategy Statements | Full | Leverage but shorten (use slogans/mottos) with emphasis on new priorities and initiatives |

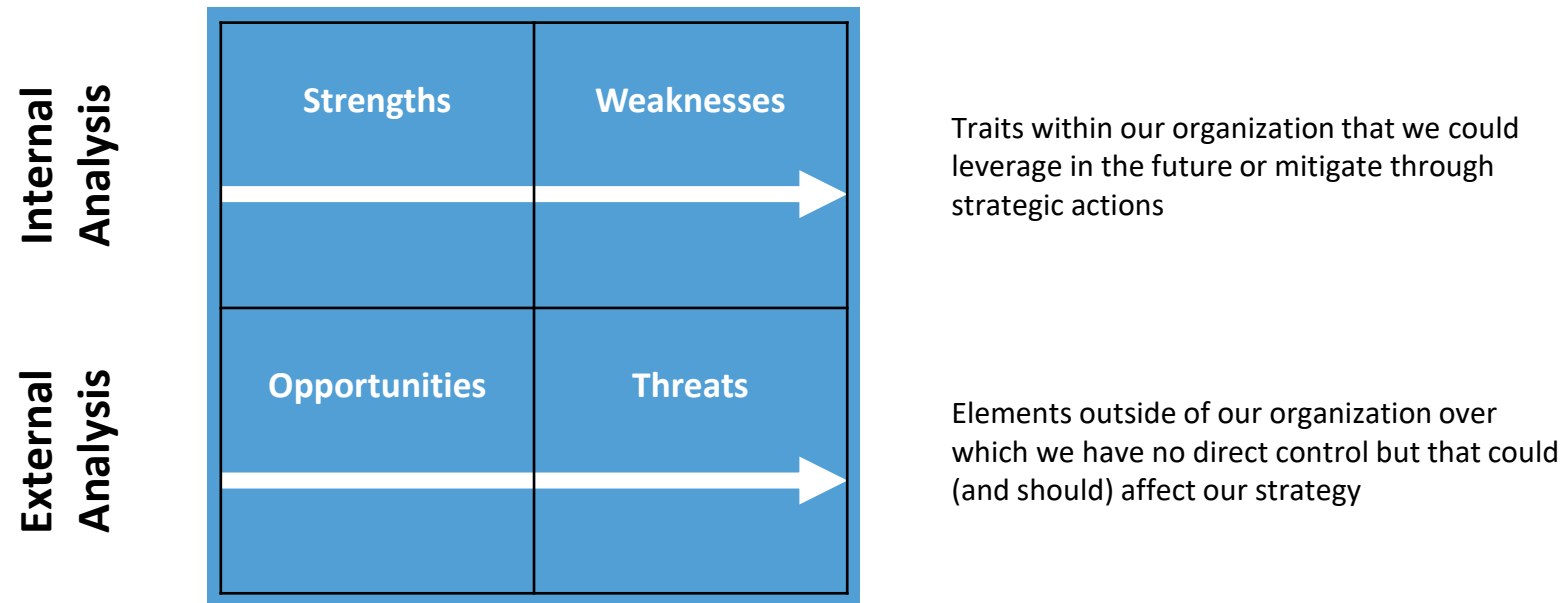
The modern topics to consider in your strategy refresh



There are different tools in the strategy process



A SWOT analysis is a great starting point (tip: no more than 3 per box!)



SWOT example – Carolina Athletics



1.

The Strategy Content

2.

The Strategy Process

3.

Strategy Examples

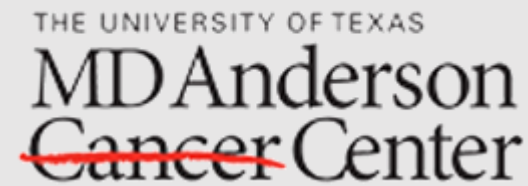
Our starting point is the mission statement

Mission Statement

Statement which specifies a firm's purpose or "reason for being" and the primary objective toward which the firm's programs & plans should be aimed. It must be clear and understood.



We have fun.



We cure cancer.

Other mission statement examples

3M: To solve unsolved problems innovatively

Cargill: To improve the standard of living around the world

Fannie Mae: To strengthen the social fabric by continually democratizing home ownership

Hewlett-Packard: To make technical contributions for the advancement and welfare of humanity

Lost Arrow Corporation: To be a role model and a tool for social change

Pacific Theatres: To provide a place for people to flourish and to enhance the community

Mary Kay Cosmetics: To give unlimited opportunity to women

McKinsey & Company: To help leading corporations and governments be more successful

Merck: To preserve and improve human life

Nike: To experience the emotion of competition, winning, and crushing competitors

Sony: To experience the joy of advancing and applying technology for the benefit of the public

Telecare Corporation: To help people with mental impairments realize their full potential

Wal-Mart: To give ordinary folk the chance to buy the same things as rich people

Walt Disney: To make people happy

Next we establish core values

Values

It is what we believe in, our guiding principles, and how we interact.



I CARE

Integrity, Compassion,
Accountability, Respect,
Excellence

Other values statements examples

| | |
|--|---|
| Merck <ul style="list-style-type: none">• Corporate social responsibility• Unequivocal excellence in all aspects of the company• Science-based innovation• Honesty and integrity• Profit, but profit from work that benefits Humanity | Sony <ul style="list-style-type: none">• Elevation of the Japanese culture and national status• Being a pioneer - not following others; doing the impossible• Encouraging individual ability and creativity |
| Nordstrom <ul style="list-style-type: none">• Service to the customer above all else• Hard work and individual productivity• Never being satisfied• Excellence in reputation; being part of something special | Walt Disney <ul style="list-style-type: none">• No cynicism• Nurturing and promulgation of "wholesome American values"• Creativity, dreams, and imagination• Fanatical attention to consistency and detail• Preservation and control of the Disney magic |

Then we draft a vision to drive us forward

Vision Statement

*Statement describing what the firm strives to be at some future time.
It should be specific and motivating.*



To be #1 or #2 in market share
in each sector we serve.



Before this decade is out, this nation
should land a man on the moon and return
him safely to Earth.

Other vision statement examples

- Target BHAGs can be quantitative or qualitative
 - Become a \$125 billion company by the year 2000 [Wal-Mart, 1990]
 - Democratize the automobile (Ford Motor Company, early 1900s)
 - Become the company most known for changing the worldwide poor-quality image of Japanese products (Sony, early 1950s)
 - Become the most powerful, the most serviceable, the most far-reaching world financial institution that has ever seen (City Bank, predecessor to Citicorp, 1915)
 - Become the dominant player in commercial aircraft and bring the world into the jet age (Boeing, 1950)
- Common-enemy BHAGs involve David-versus-Goliath thinking
 - Knock off RJR as the number one tobacco company in the world (Philip Morris, 1950s)
 - Crush Adidas (Nike, 1960s)
 - *Yamaha wo tsubusu!* We will destroy Yamaha! (Honda, 1970s)
- Role-model BHAGs suit up-and-coming organizations
 - Become the Nike of the cycling industry [Giro Sport Design, 1986]
 - Become as respected in 20 years as Hewlett-Packard is today (Watkins-Johnson, 1996)
 - Become the Harvard of the West (Stanford University, 1940s)
- Internal-transformation BHAGs suit large, established organizations
 - Become number one or number two in every market we serve and revolutionize this company to have the strengths of a big company combined with the leanness and agility of a small company (General Electric Company, 1980s)
 - Transform this company from a defense contractor into the best diversified high-technology company in the world (Rockwell, 1995)
 - Transform this division from a poorly respected internal products supplier to one of the most respected, exciting, and sought-after divisions in the company (Components Support Division of a computer products company, 1989)

Example 1 – Carolina Athletics



Mission

We educate and inspire
through athletics.

Values

| | |
|----------------|--------------------------------------|
| Responsibility | Do what is right. |
| Innovation | Find a better way. |
| Service | Put others first. |
| Excellence | Work hard. Play smart. Win together. |

Vision

We will lead in all that we do ...
Academics, Athletics &
Administration

Priorities

- Alignment**
Align our operations to fulfill the mission of the university.
- Academic Achievement**
Achieve a top 3 academic finish in the conference and a top 10 finish nationally in each sport.
- Athletic Performance**
Achieve a top 3 athletic ranking in the conference and a top 10 ranking nationally in each sport.
- Administrative Engagement**
Engage internal and external constituents to relentlessly pursue the resources and administrative structures necessary for success.

Example 2: McKinsey

MISSION

- Help clients make distinctive, lasting, substantial improvements in performance
- Build a great firm that attracts, develops, excites, and retains exceptional people

VALUES

SERVING CLIENTS:

Adhere to professional standards, Follow the top management approach, Assist the client in implementation and capability building, and Perform consulting in a cost effective manner;

BUILDING THE FIRM:

Operate as One Firm, Maintain a meritocracy, Show a genuine concern for our people, Foster an open and nonhierarchical working atmosphere, and Manage the Firm's resources responsibly;

BEING A MEMBER OF THE PROFESSIONAL STAFF:

Demonstrate commitment to client service, Strive continuously for superior quality, Advance the state of the art of management, Contribute a spirit of partnership through teamwork and collaboration, Profit from the freedom and assume the responsibility associated with self-governance, and Uphold the obligation to dissent

Example 3: Four Seasons

MISSION

- Only offer experiences of exceptional quality in hospitality industry and satisfy discriminating customers.
- Our objective is to be recognized as the company that manages the finest hotels, resorts and residence clubs wherever we locate.

VALUES

What We Believe:

Our greatest asset, and the key to our success, is our people.

We believe that each of us needs a sense of dignity, pride and satisfaction in what we do. Because satisfying our guests depends on the united efforts of many, we are most effective when we work together cooperatively, respecting each other's contribution and importance.

How We Behave:

We demonstrate our beliefs most meaningfully in the way we treat each other and by the example we set for one another. In all our interactions with our guests, customers, business associates and colleagues, we seek to deal with others as we would have them deal with us.

How We Succeed:

We succeed when every decision is based on a clear understanding of and belief in what we do and when we couple this conviction with sound financial planning. We expect to achieve a fair and reasonable profit to ensure the prosperity of the company, and to offer long-term benefits to our hotel owners, our shareholders, our customers and our employees.

Example 4: Arizona State – “The New American University”

ASU Charter

ASU is a comprehensive **public research university**, measured not by whom it excludes, but by **whom it includes** and how they **succeed**; advancing **research and discovery** of public value; and assuming **fundamental responsibility** for the economic, social, cultural and overall health of the **communities** it serves.

Arizona State University (ASU) has become the foundational model for the **New American University**, a new paradigm for the public research university that transforms higher education. ASU is committed to **excellence, access and impact** in everything that it does.

No.1 university for innovation (ahead of Stanford and MIT)
— **US News & World Report (2016, 2017, 2018, 2019)**

Top 1 percent of the world's most prestigious universities
— **Times Higher Education**

A top producer of Fulbright U.S. students
— **The Institute for International Education**

A top “Best College Value” in public higher education
— **Kiplinger Personal Finance**

Top public university of choice for international students
— **The Institute for International Education**

Mission & Goals

Demonstrate leadership in academic excellence and accessibility

- Maintain the fundamental principle of accessibility to all students qualified to study at a research university.
- Maintain university accessibility to match Arizona's socioeconomic diversity, with undifferentiated outcomes for success.
- Improve freshman persistence to **greater than 90 percent**.
- Enhance university graduation rate to **greater than 85 percent** and more than 32,000 graduates.
- Enhance quality while reducing the cost of a degree.
- Enroll **100,000** online and distance-education degree-seeking students.
- Enhance measured student development and individual student learning to national leadership levels.
- Engage all learners on all levels.

Establish national standing in academic quality and impact of colleges and schools in every field

- Attain national standing in academic quality for each college and school (top 5 percent).
- Attain national standing in the learning value added to our graduates in each college and school.
- Become the leading university academically (faculty, discovery, research, creativity) in at least one department or school within each college and school.

Establish ASU as a leading global center for interdisciplinary research, discovery and development by 2025

- Become the leading American center for discovery and scholarship in the integrated social sciences and comprehensive arts and sciences.
- Enhance research competitiveness to more than **\$815 million** in annual research expenditures.
- Transform regional economic competitiveness through research and discovery and value-added programs.
- Become a leading American center for innovation and entrepreneurship at all levels.

Enhance our local impact and social embeddedness

- Strengthen Arizona's interactive network of teaching, learning and discovery resources to reflect the scope of ASU's comprehensive knowledge enterprise.
- Co-develop solutions to the critical social, technical, cultural and environmental issues facing 21st-century Arizona.
- Meet the needs of 21st-century learners through the universal learner initiative by increasing individual success through personalized learning pathways and promoting adaptability to all accelerated social-technical changes.

Eight **design aspirations** guide ASU's ongoing evolution as a **New American University**. ASU integrates these institutional objectives in innovative ways to demonstrate excellence, access and impact.

Leverage Our Place
ASU embraces its cultural, socioeconomic and physical setting.

Transform Society
ASU catalyzes social change by being connected to social needs.

Value Entrepreneurship
ASU uses its knowledge and encourages innovation.

Conduct Use-Inspired Research
ASU research has purpose and impact.

Enable Student Success
ASU is committed to the success of each unique student.

Fuse Intellectual Disciplines
ASU creates knowledge by transcending academic disciplines.

Be Socially Embedded
ASU connects with communities through mutually beneficial partnerships.

Engage Globally
ASU engages with people and issues locally, nationally and internationally.

Learn more: president.asu.edu
Twitter: [@asupresoffice](https://twitter.com/asupresoffice)

Revised 2019

“Measured not by whom it excludes, but whom it includes and how they succeed”

***1B. Scenario Planning –
One of the Most Important Tools for
Strategy***

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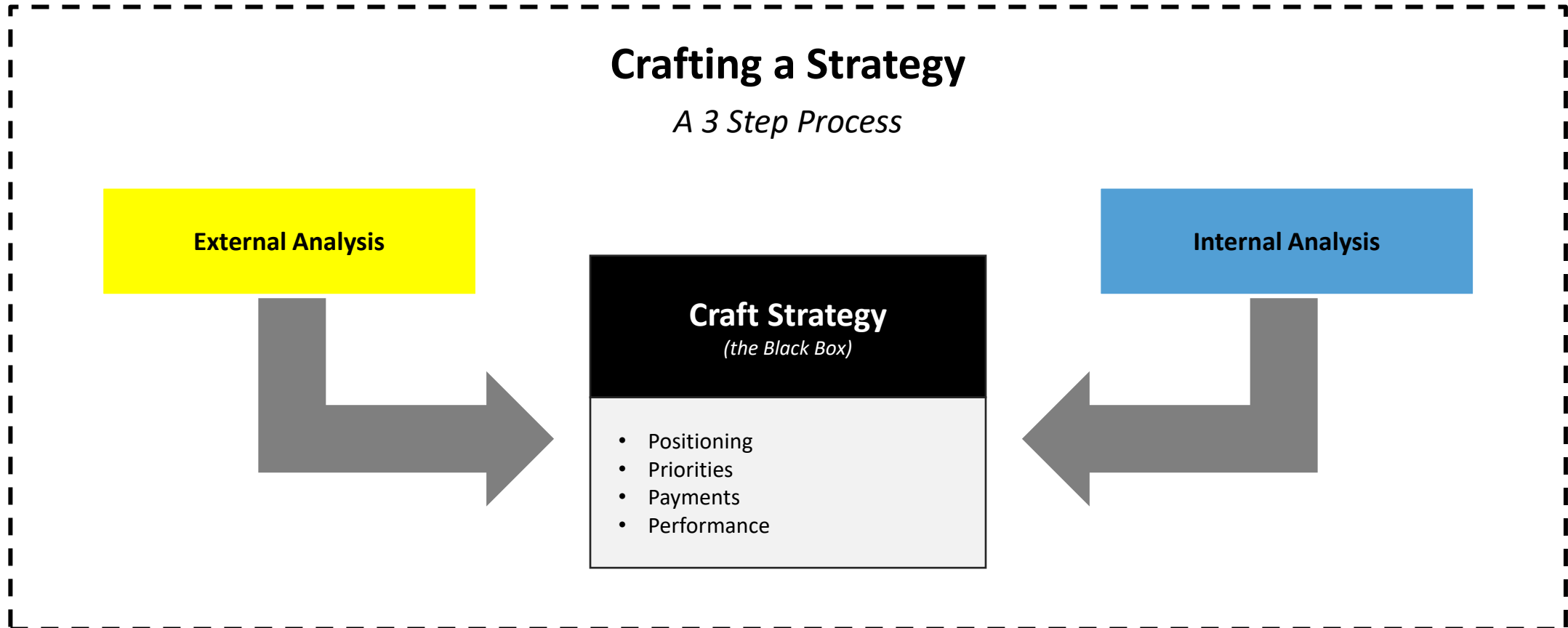
August, 2022



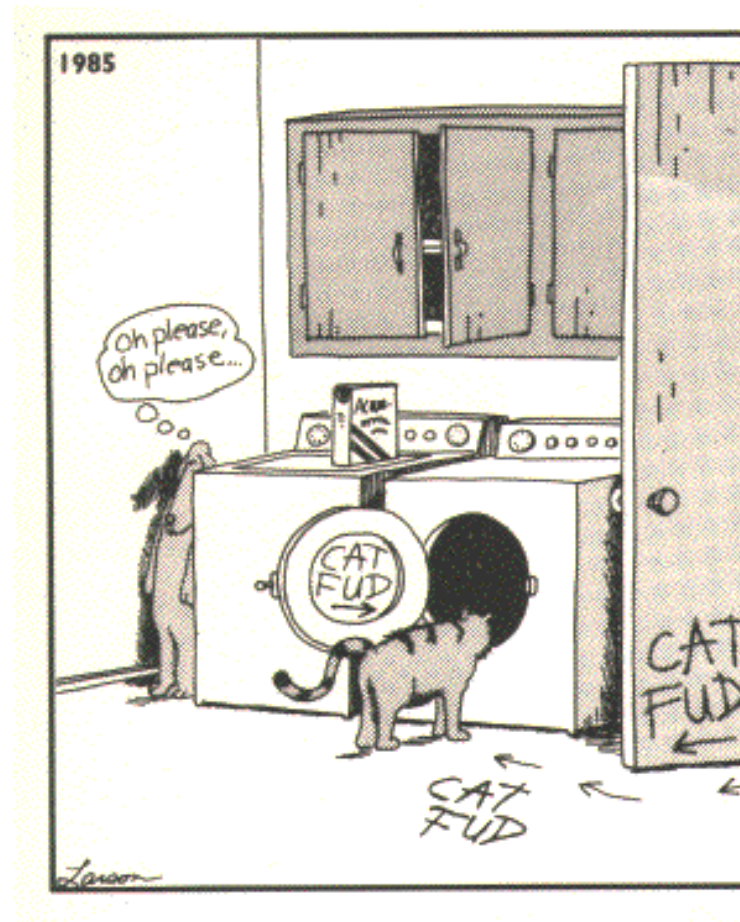
Scenario Planning at a high level

1. Understand the base line strategy and related assumptions
2. Review the external environment
3. Develop a list of key factors that may affect strategy
4. Prioritize the 2 most important factors
5. Develop 4 scenarios (with names) and display in a 2x2
6. Identify key strategic initiatives in each scenario

The Process: How do firms create strategies?



You must be aware of the environment



Analysis Tools – External Environment

1. STEEP (or 6 Factor Model) – *what is going on outside of our organization?*
2. Customer Analysis – *whom do we serve?*
3. Competitor Assessment – *what are others doing?*

STEEP – Macro Environmental Analysis

Social/demographic factors

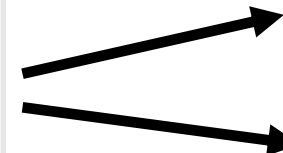
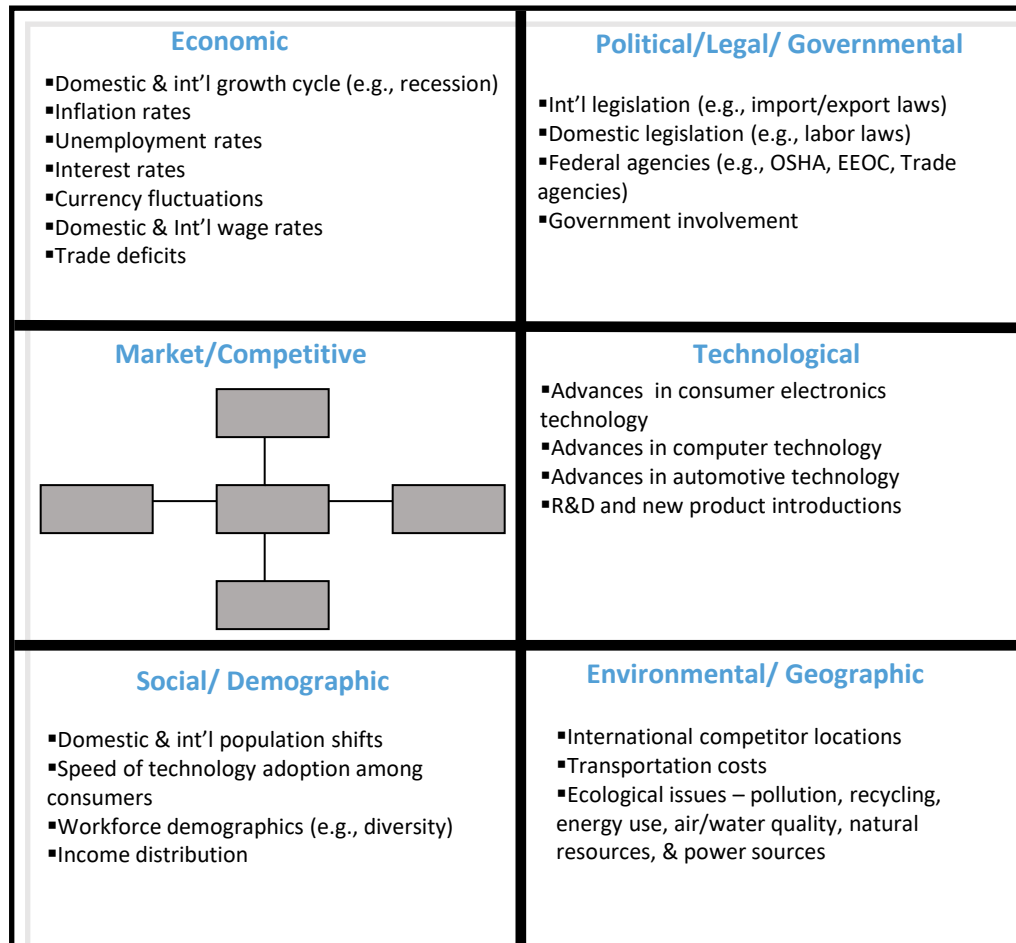
Technological factors

Economic factors

Environmental/geographic factors

Political/legal/government factors

The STEEP framework measures importance and impact of external environment

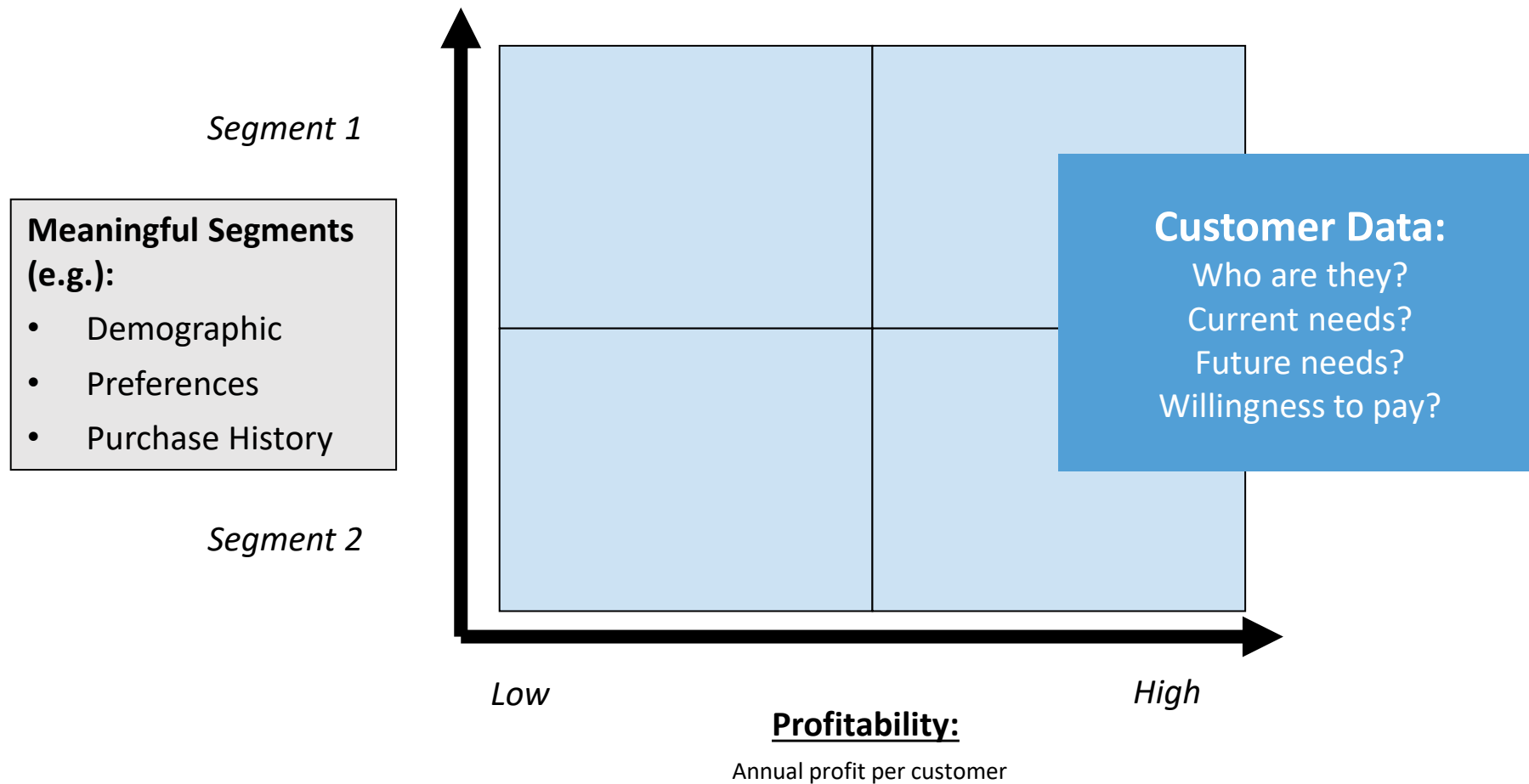


Importance:
Overall, how important is each factor?
(H M L)

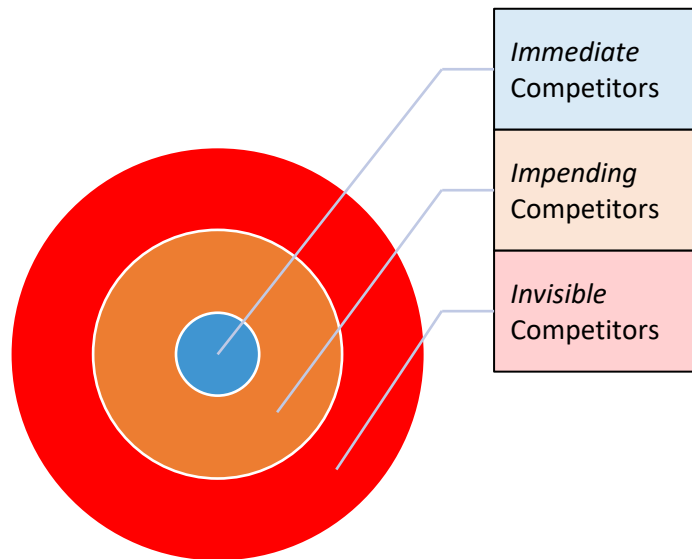
Identify the top 5
Issues - Implications

Impact:
Overall, does each factor have a positive, negative or neutral impact?
(+ - 0)

Customer Value Analysis – apply the 80/20 rule



3 I's Competitor Radar Screen

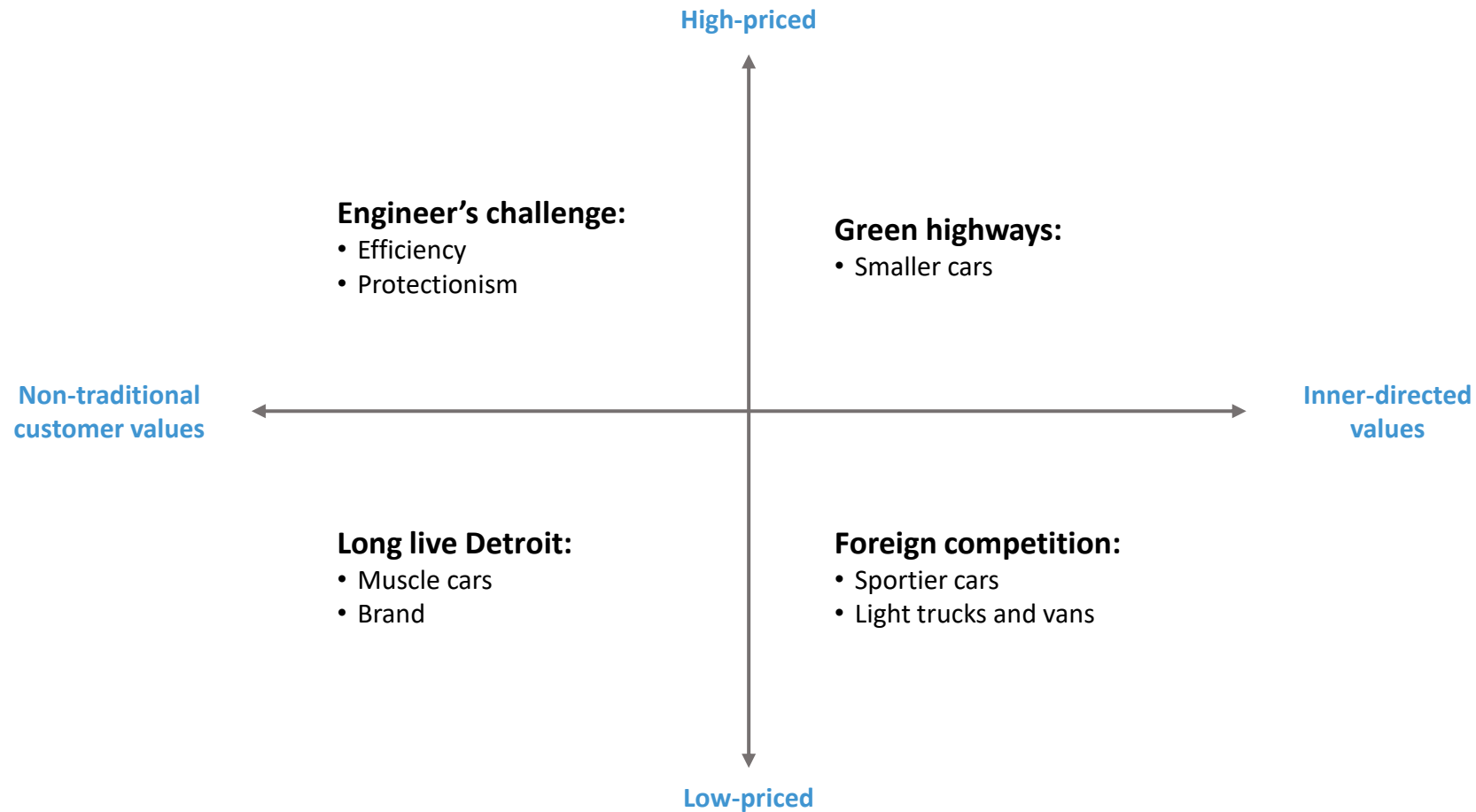


| | |
|------------------------------|--|
| Immediate Competitors | Already a major player in your particular industrial segment (s); Publicly admits competitive position and market share; High knowledge base |
| Impending Competitors | Small players making a move for growth and market share capture; Major players from other industrial segments (related) announcing entry into your market; Medium knowledge base |
| Invisible Competitors | Large players considering an unanticipated move from other industrial segments (unrelated) into your market – in secret; Low knowledge base |

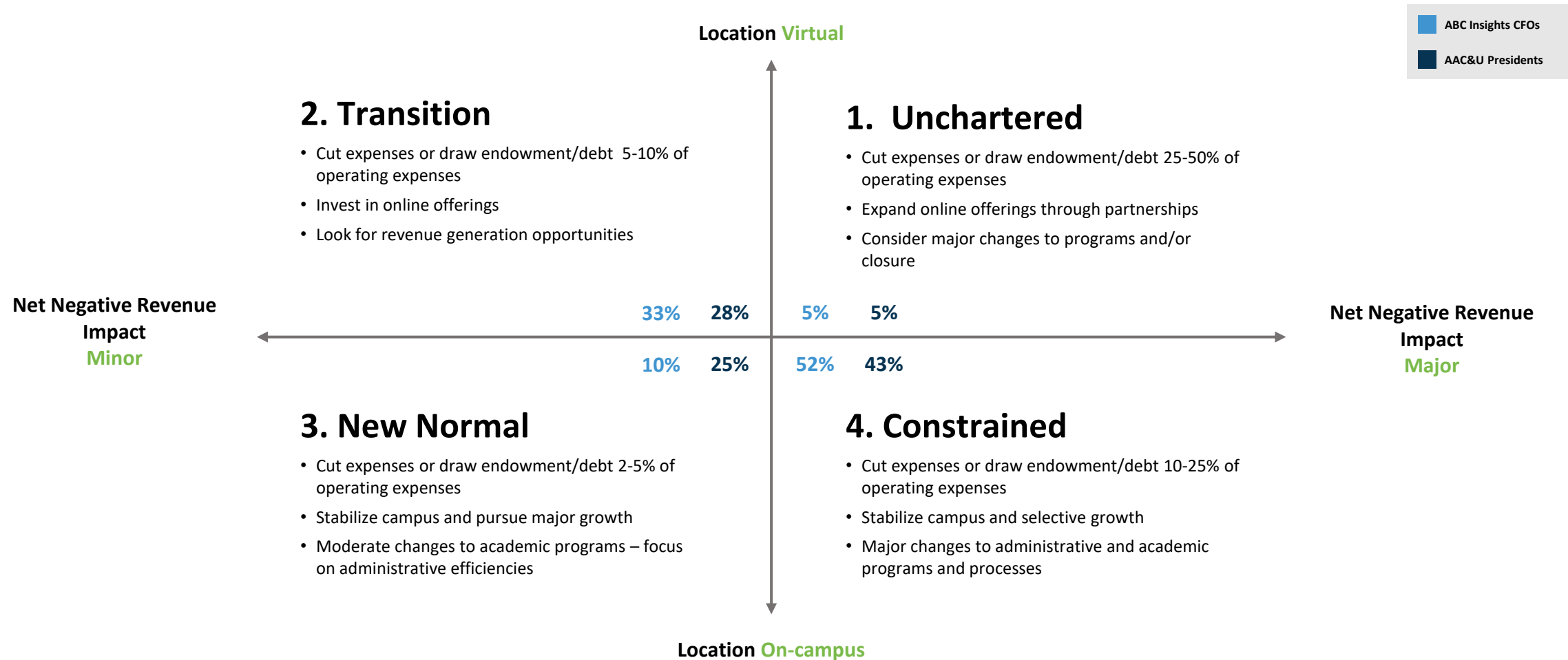
The Macro Trends in Higher Education – Paul’s Predictions

| Dimension | Current | Future |
|--------------------------------|--------------------|---------------------------------|
| Tuition | Medium - High | Free - Low |
| Differentiation of Providers | Low | High |
| Accessibility | Low | High |
| Online Education | Low | High |
| Partnerships with Employers | Medium | High |
| Virtual Campus Services | Low | High |
| Inter-University Collaboration | Low | Medium |
| Relevance | Low | High |
| Faculty | Single-University | Multi-University / Free Agent |
| Students | 18 - 24-Year Old | 18 - 80-Year Old |
| National Universities | Few | Many |
| Credentials | 2 & 4-Year Degrees | Degrees + Badges + Certificates |

Scenario Planning Example – Automobiles in the 80s

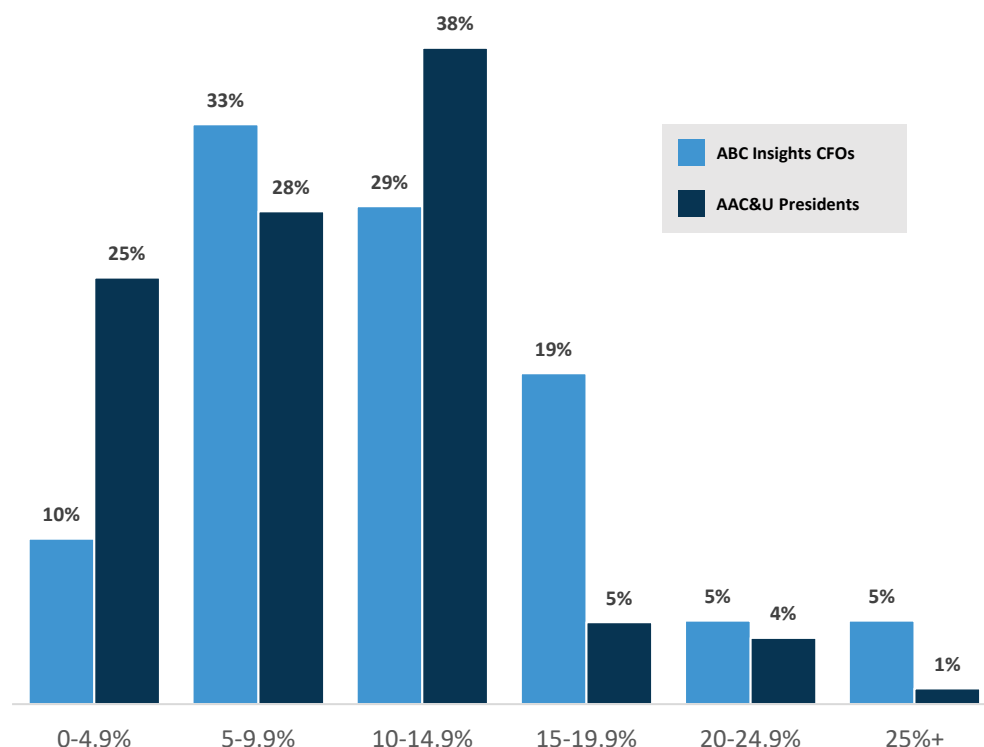


Scenario Planning is focused on modeling the magnitude of students returning to campus and the impact on revenues



Presidents and CFOs believe the impact will be significant on their respective campuses

Expected Potential Decreases to Revenue in FY21



Presidents Say

"I worry about cuts in state and county funding. ... I worry that I won't have the **workforce resources** to help lead the economic recovery."

"Beyond the well-being of our students and staff, which comes first, **I am worried about the lack of sufficient relief for higher education** from state and federal governments."

"**Sharply declining revenue due to loss of paying students** and a new 'free college' program in our state."

"**All income streams are under stress** — tuition, development, endowment."

CFOs Say

"**State subsidy will be reduced, auxiliary funds will be reduced** due to lack of events, athletics impacted negatively."

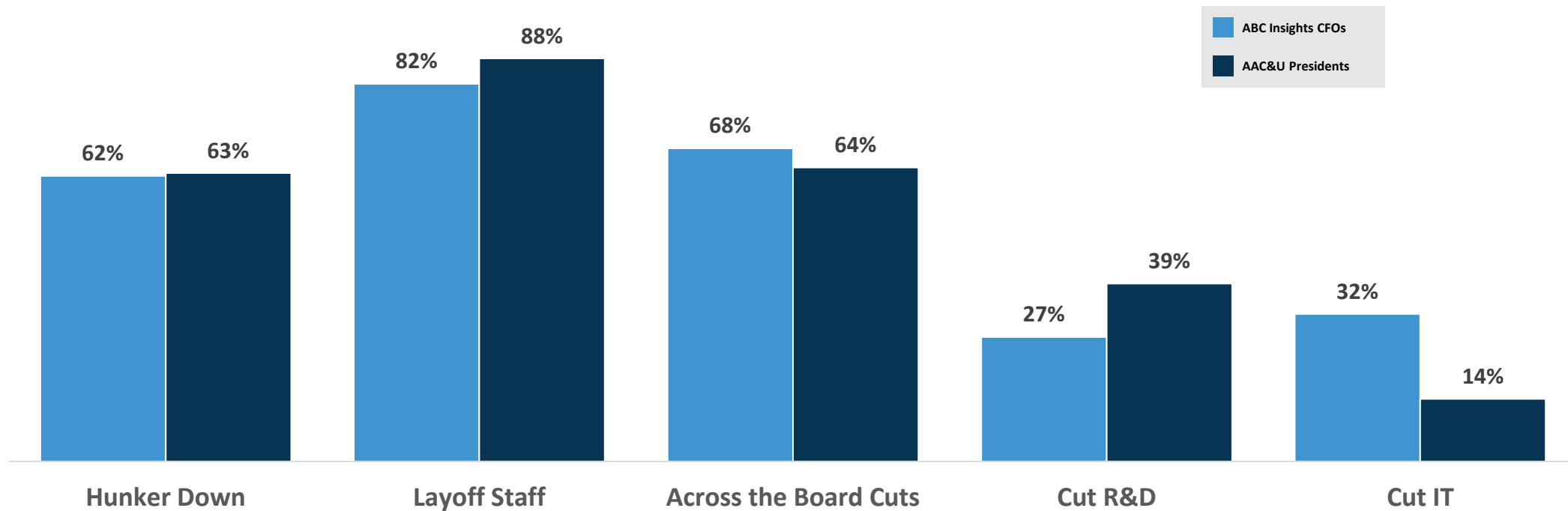
"We are expecting **25% cuts in State support** as well as enrollment impacts."

"**Lost revenue is the main issue** and the need to maintain physical infrastructure without revenue"

"**Out of state revenues** account for [a majority] of our revenue."

Presidents and CFOs are preparing to make personnel and budget cuts to deal with decreasing revenues

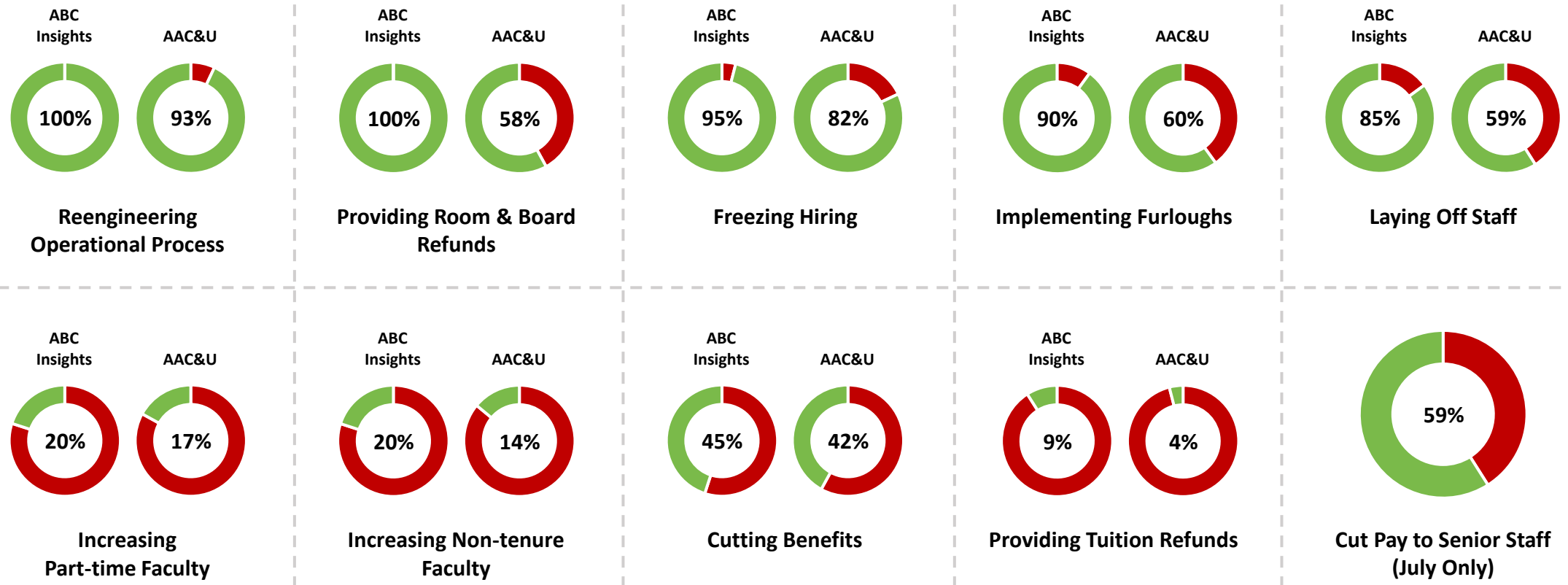
Future Considerations in Dealing With COVID-19



Presidents and CFOs are generally aligned about potential actions to mitigate financial impact, with a few exceptions

Yes No

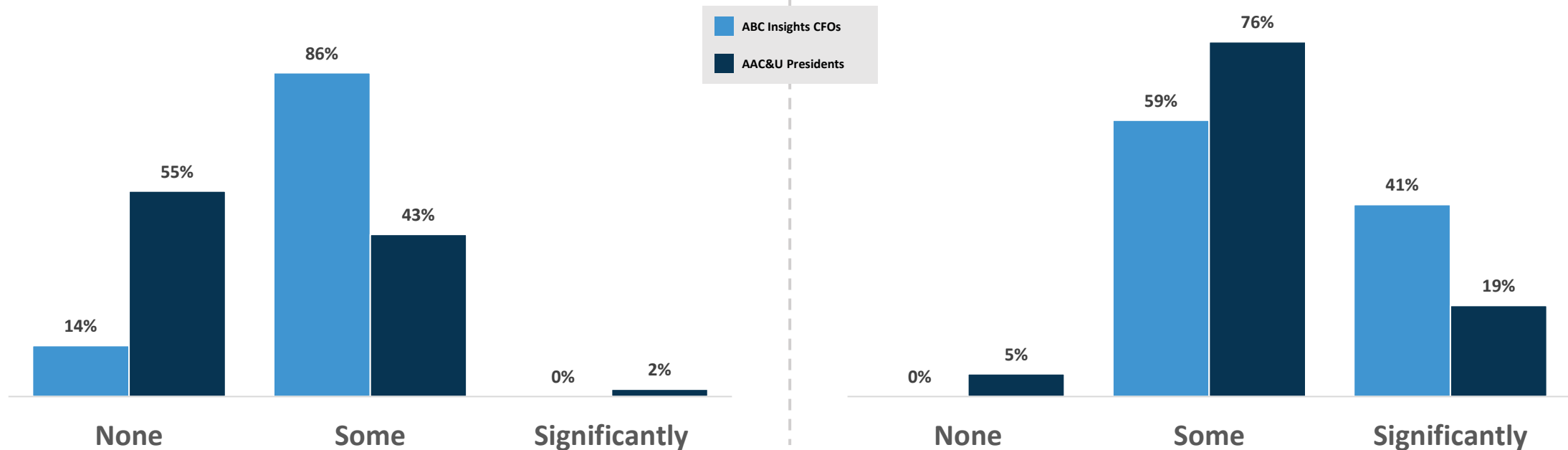
How Many Participants Anticipate Taking the Following Actions



Campus leaders plan cuts to administration and academics, with an emphasis on the former

How Significantly Participants Anticipate Cutting **Academic** Programs in FY21

How Significantly Participants Anticipate Cutting **Administrative** Costs in FY21



Campuses are seeking efficiency savings opportunities

\$1B

Total Opportunity across
32 institutions

\$29M

Average opportunity per
institution

Methodology

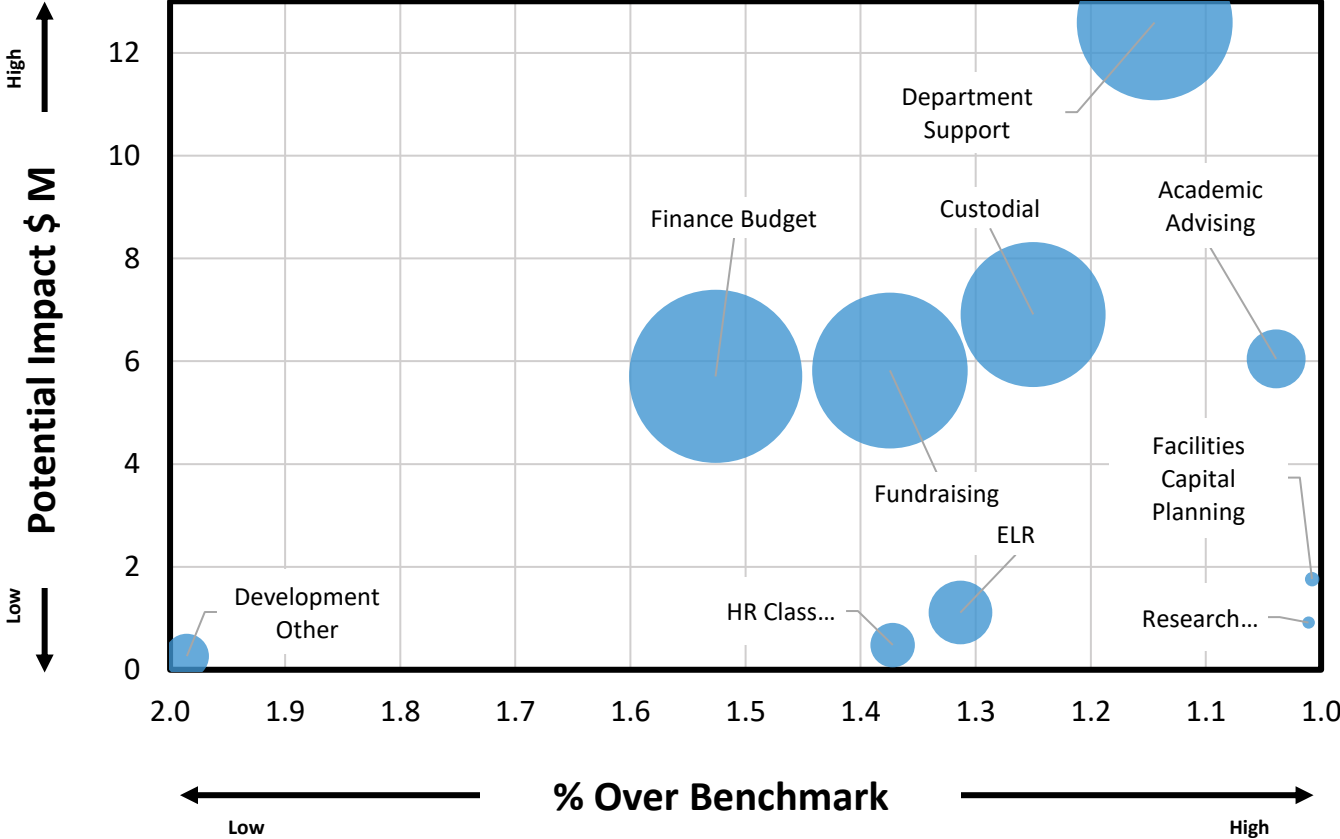
ABC normalizes FTE by relevant analysis
factor for each sub-activity

ABC calculates the percent difference if FTE per
analysis factor is higher than benchmark average

ABC calculates the total FTE that would be reduced if
the benchmark's average FTE per analysis factor was
reached

ABC quantifies the potential savings in dollars using
university's average salary per FTE for the sub-activity

ABC Insights ROI Framework
Potential Opportunity– University of XYZ



All universities are exploring ways to be more efficient and effective

ABC Insights ROI = More efficient and effective universities will result in higher returns for investment





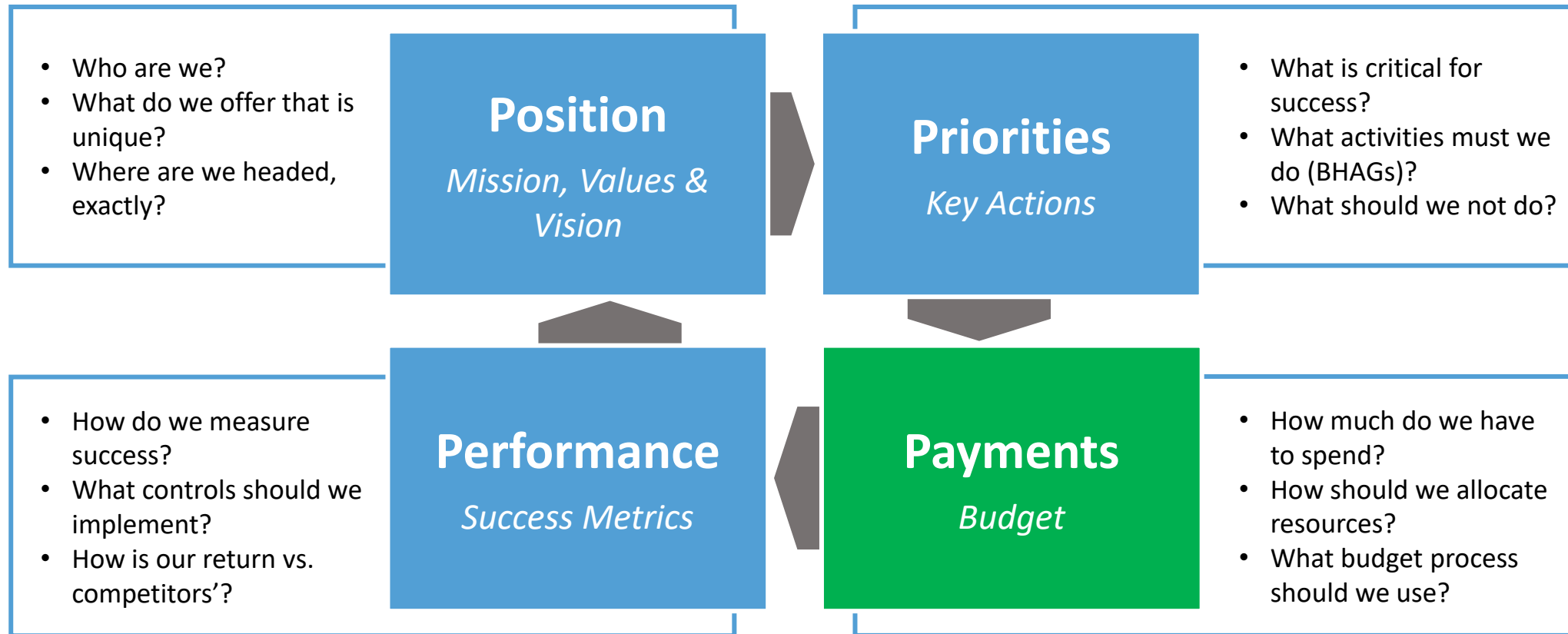
2. Strategic Resource Allocation

WACUBO BMI

August, 2022



A reminder of the content of strategy – Paul's 4 P's



Example – UNC College of Arts & Science Strategy

| Mission | Proposed Priorities |
|---|---|
| Think. Communicate. Collaborate. Create. ...For meaningful lives. | <ol style="list-style-type: none">1. Develop a modern, innovative, inclusive, and global curriculum2. Expand high-impact and interdisciplinary research3. Tell the story of the College of Arts & Sciences |
| Vision | |
| Reimagining the arts & sciences for the public good | |
| Values | |
| Student Focus Scholarly Excellence Strategically Bold | |

Definitions for Implementation Plan terminology

Priority – thing we do to live our mission and achieve our vision; first of mind; more important than other things; could be noun or verb statement

- **Objective** – A thing aimed for; goal/target that if accomplished would indicate significant progress on the priority
 - **Initiative** – summary statement of actions; usually lead with a verb

Priority 1: Develop a modern, innovative, inclusive, and global curriculum

Objectives and Examples of Initiatives

A Reinvent General Education

1. Develop a planning process and timeline for curriculum development and campus-wide review/approval
2. Identify key guiding principles based on current literature, national models of excellence, and key stakeholder input
3. Evaluate and prioritize knowledge areas and student outcomes for potential inclusion in the curriculum
4. Consult with a wide range of user groups on inclusiveness, implementation, and feasibility (e.g., students, faculty, advisors, registrar)
5. Develop an annual general education assessment plan for each included component
6. Provide the curriculum blueprint for review and critique by major campus review groups and implement new curriculum by fall 2019
7. Assess the functioning of the curriculum after one complete academic cycle

B Reimagine the Humanities Ph.D.

1. Create new, innovative graduate courses that integrate an introduction to the discipline and its methods with professional development activities and an exploration of public engagement;
2. Explore alternative formats to the monograph-based humanities dissertation (e.g. digital, interdisciplinary collaboration/team-based, etc.)

C Expand and develop instructional methods based on evidence-based inquiry

1. Maintain student focus
2. Increase instructor professional development about student learning
3. Leverage and integrate new technologies
4. Secure appropriate spaces
5. Introduce new ways of measuring student learning
6. Utilize predictive analytics

D Generate interdisciplinary, experiential, and global learning opportunities

1. Increase public and private partnerships for student learning
2. Expand credit and non-credit bearing global learning opportunities for all students
3. Provide interdisciplinary courses in hybrid (in-person-online) and other formats

Priority 2: Expand high-impact and interdisciplinary research

Objectives and Examples of Initiatives

A Strengthen basic and applied research portfolio

1. Identify top priority research expansion areas based upon department and center input
2. Leverage new strategic resource pools for key high-impact research

B Harness interdisciplinary talent for addressing global issues

1. Encourage opportunities/new structures that go beyond single departments for research
2. Measure and reward interdisciplinary grants, projects and major partnerships

C Build adaptive research facilities

1. Build new APS/Tech development building for translational research
2. Renovate Wilson Hall to improve animal model research and support flexible laboratories for biology.
3. Renovate Phillips Hall as a home for CoSMS Institute
4. Encourage and expand makerspaces, including app development space for students

D Increase commercialization of research

1. Notice and celebrate our successes
2. Build incubator space
3. Create college-level incentive for translating research
4. Build better database of "expertise", "facilities", and "capabilities" to connect with entrepreneurial networks

Priority 3: Tell the story of the College of Arts & Sciences

Objectives and Examples of Initiatives

A Raise the national profile of the College of Arts & Sciences

1. Promote innovative College research and teaching
2. Identify key graduate programs to raise the profile of to improve U.S. News ranking

B Create awareness at the local and State level of the role of the College as research entity, economic driver, and source of innovation

1. Promote awareness of companies, start-ups, patents, products, nonprofits created by College faculty, alumni, students
2. Raise profiles of College institutes and centers working on “big problems”—environment, energy, water, racial/religious intolerance, social justice, and others

C Instill a culture of strategic planning and thinking that creates and shares the story of the College

1. Complete College and Department level strategic planning
2. Raise awareness among faculty—and the greater UNC-Chapel Hill campus community as a whole —of strategies and research and teaching innovations and outcomes
3. Create more effective external communications channels to collect and promote College successes

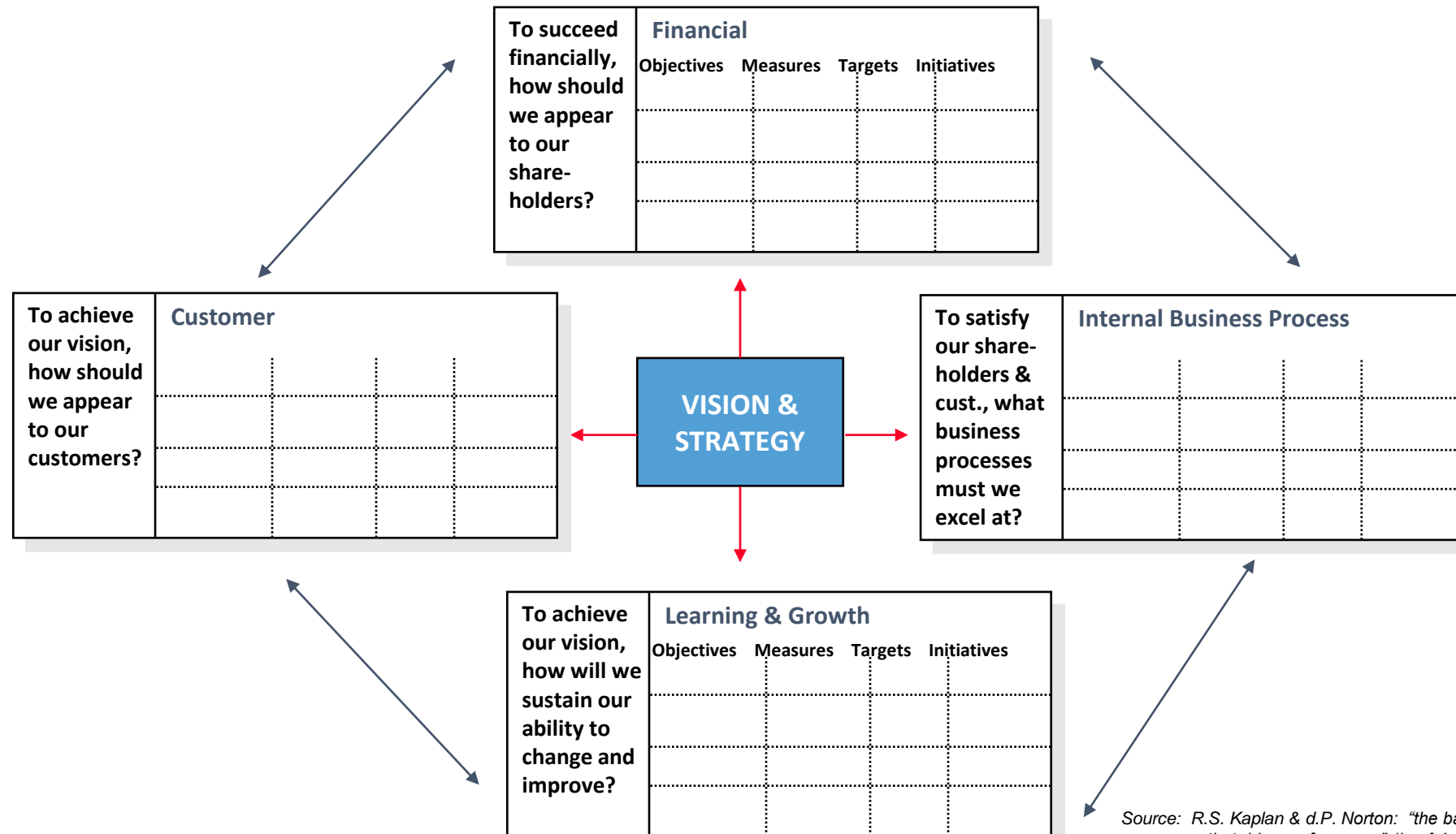
D Raise \$600M + for the college as part of the University’s capital campaign

1. Refine College campaign priorities
2. Engage volunteers and advisory boards
3. Prepare and launch mini-campaigns to highlight and secure support for key priorities

Metrics need to be tracked and reported out regularly – Example: UNC College of Arts & Sciences

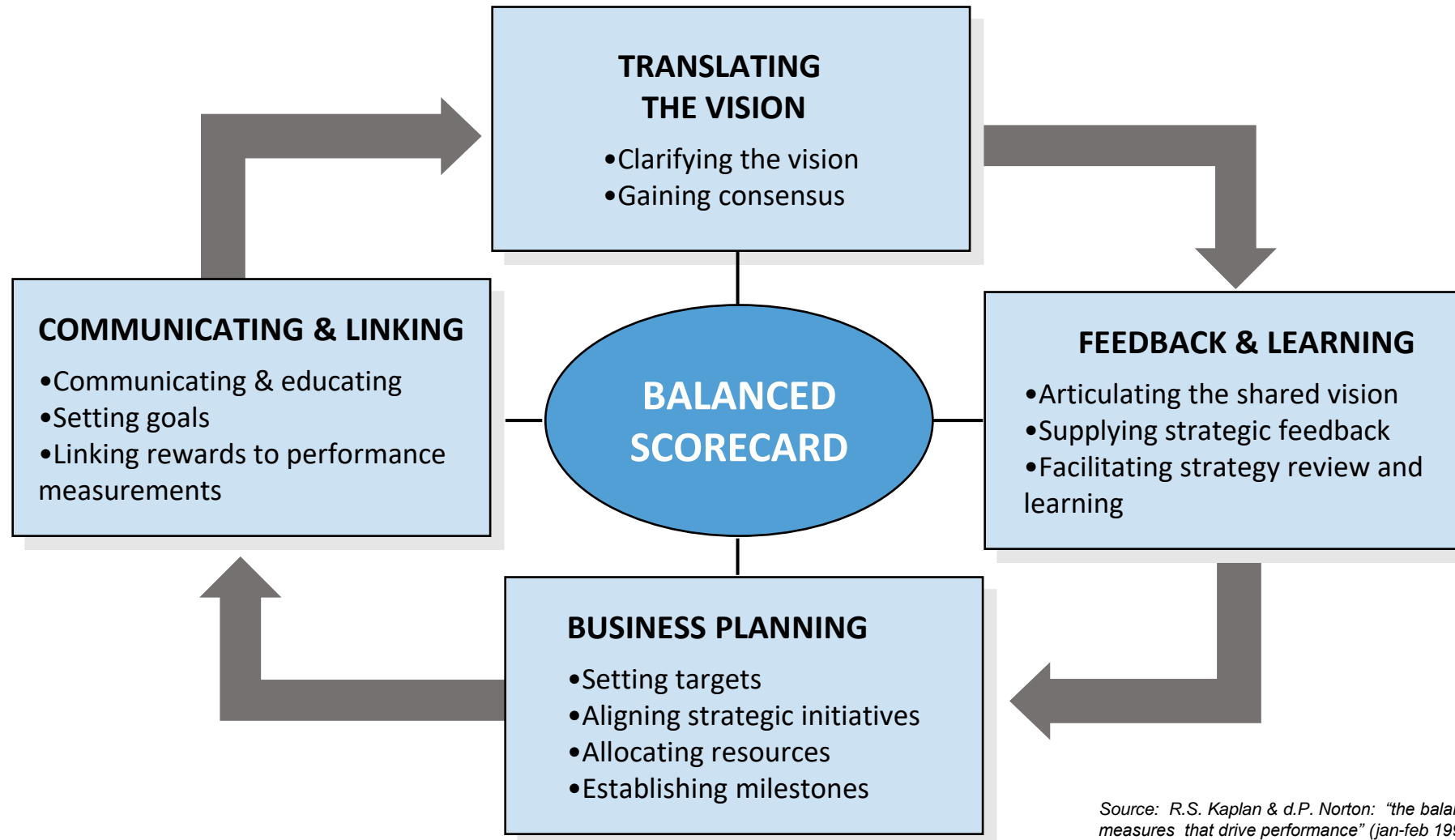
| Element | Description | Metrics |
|------------|---|--|
| Mission | Think. Communicate. Collaborate. Create. For meaningful lives | Student satisfaction (net promotor) Faculty satisfaction (net promotor) Alumni satisfaction (net promotor) |
| Vision | Reimagining the arts & sciences for the public good | External review assessment of performance/alignment Annual faculty and staff survey |
| Priority 1 | Develop a modern, innovative, inclusive, and global curriculum | Learning outcomes % adoption of modern teaching % initiatives completed % students with global credit bearing experience % students with internship/work experience % students with directed research % securing full time jobs/graduate school # cross listed/interdisciplinary courses % of students in cross listed/interdisciplinary courses |
| Priority 2 | Expand high-impact and interdisciplinary research | \$ total research grants awarded % faculty applying for grants # of new buildings % faculty in joint grants # publications # patents # licenses # start-ups # IPOs # STTRs/SBIRs |
| Priority 3 | Tell the story of the College of Arts & Sciences | Rankings – national and international (e.g. US News, Kiplinger, etc.) \$ raised from donors \$ raised from corporate partners (for research and operations) % of strategic objectives and initiatives completed |

The Balanced Scorecard is a tool to link strategy to initiatives



Source: R.S. Kaplan & d.P. Norton: "the balanced scorecard -- measures that drive performance" (jan-feb 1992), "putting the balanced scorecard to work" (sep-oct 1993), & "using the balanced scorecard as a strategic management system" (jan-feb 1996) harvard business review.

The Balanced Scorecard Process

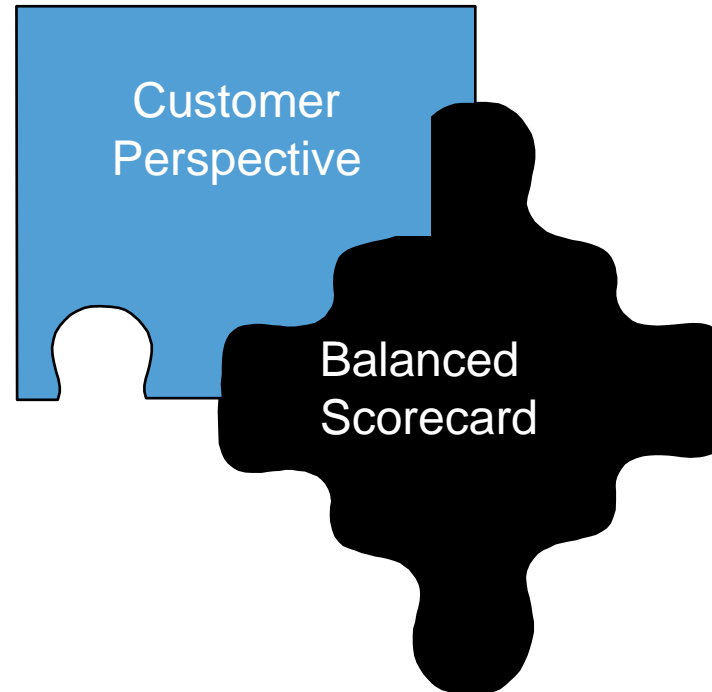


Source: R.S. Kaplan & d.P. Norton: "the balanced scorecard -- measures that drive performance" (jan-feb 1992), "putting the balanced scorecard to work" (sep-oct 1993), & "using the balanced scorecard as a strategic management system" (jan-feb 1996) harvard business review.

The Balanced Scorecard - Customer

How do customers see us?

Translation of general mission statement on customer service to specific measures that reflect the factors that really matter to customers.



Examples

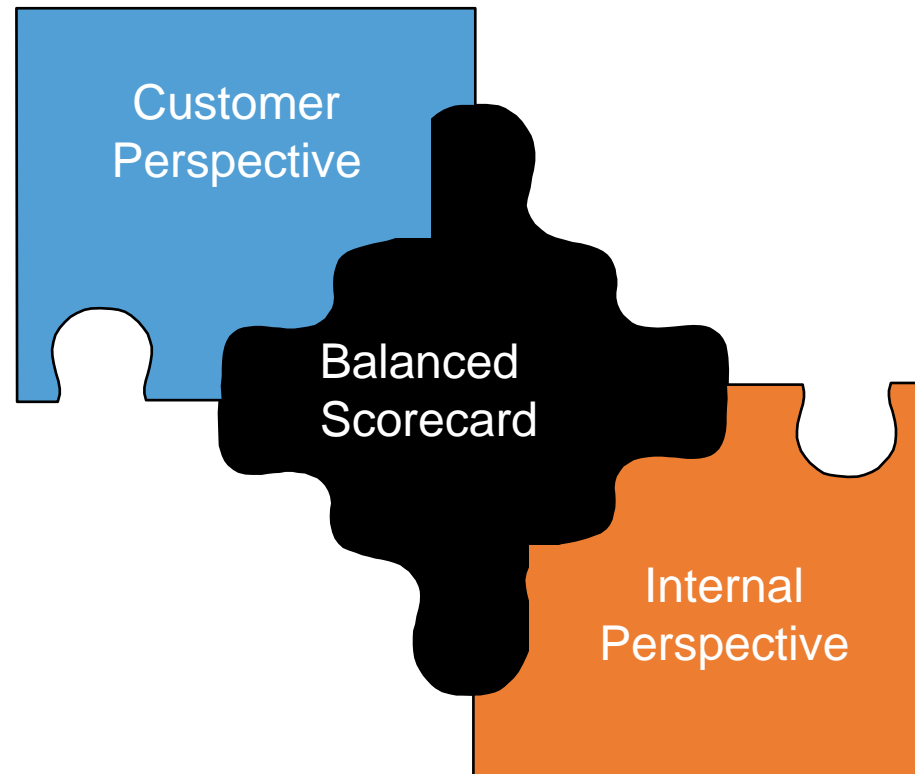
- New products
 - % sales from new products
 - % sales from proprietary products
- Responsive service
 - On-time delivery defined by the customer
- Preferred supplier
 - Share of accounts' purchases
 - Ranking by key accounts
- Customer relationships
 - Number of cooperative relationships

Source: R.S. Kaplan & d.P. Norton: "the balanced scorecard -- measures that drive performance" (jan-feb 1992), "putting the balanced scorecard to work" (sep-oct 1993), & "using the balanced scorecard as a strategic management system" (jan-feb 1996) harvard business review.

The Balanced Scorecard - Internal

At what must we excel?

Translation of measures of what the company must do internally to meet customers' expectations.



Examples

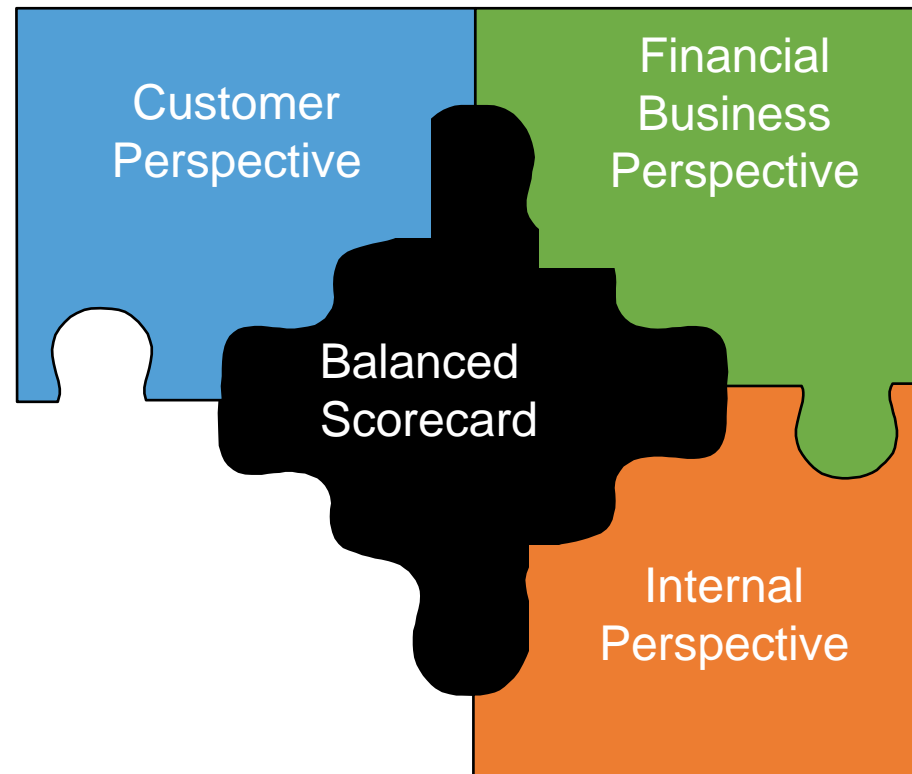
- Technological Capability
 - Mfg. capability vs. competition
- Manufacturing Excellence
 - Cycle time, unit cost, yield
- New product introductions
 - Actual product introduction schedule vs. plan

Source: R.S. Kaplan & d.P. Norton: "the balanced scorecard -- measures that drive performance" (jan-feb 1992), "putting the balanced scorecard to work" (sep-oct 1993), & "using the balanced scorecard as a strategic management system" (jan-feb 1996) harvard business review.

The Balanced Scorecard - Financial

How do we look to shareholders?

Are the company's strategy, implementation, and execution contributing to bottom-line improvements?



Examples

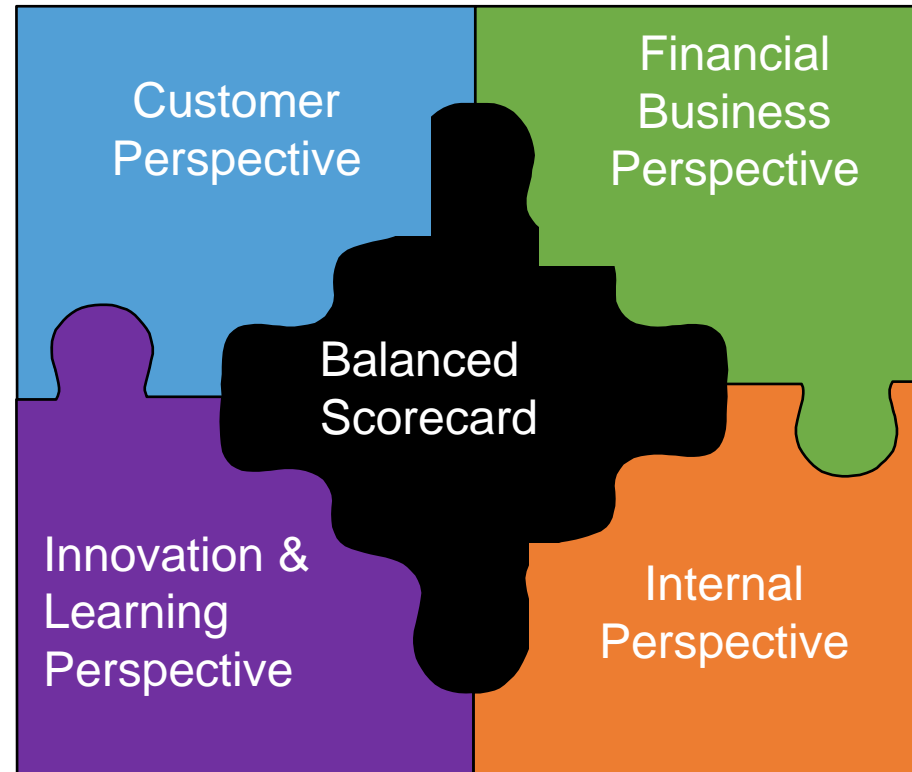
- Survive
 - Cash flow
- Succeed
 - Sales growth
 - Operating income by division
- Prosper
 - Increased market share
 - ROE

Source: R.S. Kaplan & d.P. Norton: "the balanced scorecard -- measures that drive performance" (jan-feb 1992), "putting the balanced scorecard to work" (sep-oct 1993), & "using the balanced scorecard as a strategic management system" (jan-feb 1996) harvard business review.

The Balanced Scorecard – Innovation

How do we continue to improve and add value?

Measuring the company's ability to innovate, improve and learn



Examples

- Technical leadership
 - Time to develop next generation
- Manufacturing Learning
 - Process time to maturity
- Product focus
 - % of products that = 80% of sales
- Time to market
 - Time from new product introduction to completion

Source: R.S. Kaplan & d.P. Norton: "the balanced scorecard -- measures that drive performance" (jan-feb 1992), "putting the balanced scorecard to work" (sep-oct 1993), & "using the balanced scorecard as a strategic management system" (jan-feb 1996) harvard business review.

The different types of budgets – in general and in higher ed



Budget Processes

- Overall processes
 - Incremental
 - Formula
 - Zero-based
 - Responsibility center
- Special purpose
 - Initiative-based
 - Performance-based

Source <https://corporatefinanceinstitute.com/resources/knowledge/accounting/types-of-budgets-budgeting-methods/#:~:text=There%20are%20four%20common%20types,%3A%20CFI's%20Budgeting%20%26%20Forecasting%20Course>

Source: NACUBO



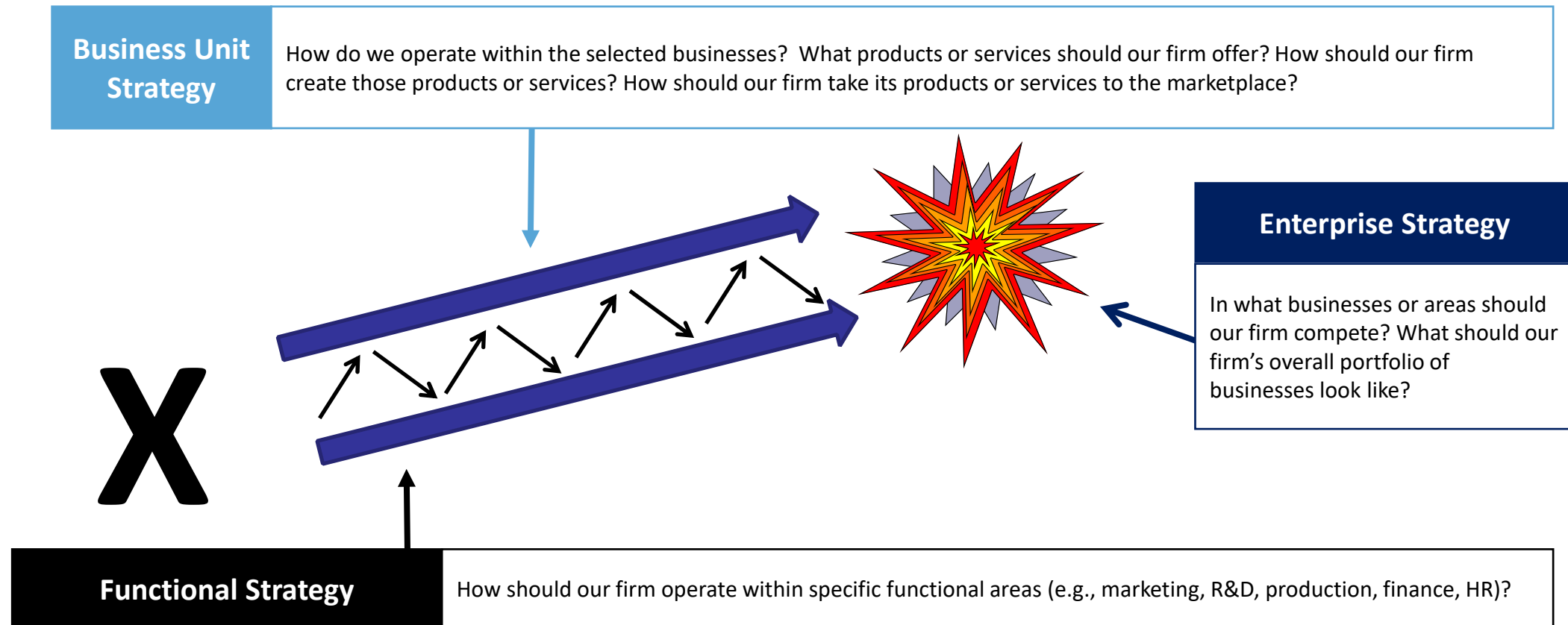
3. Aligning Enterprise and Unit Strategy

WACUBO BMI

August, 2022



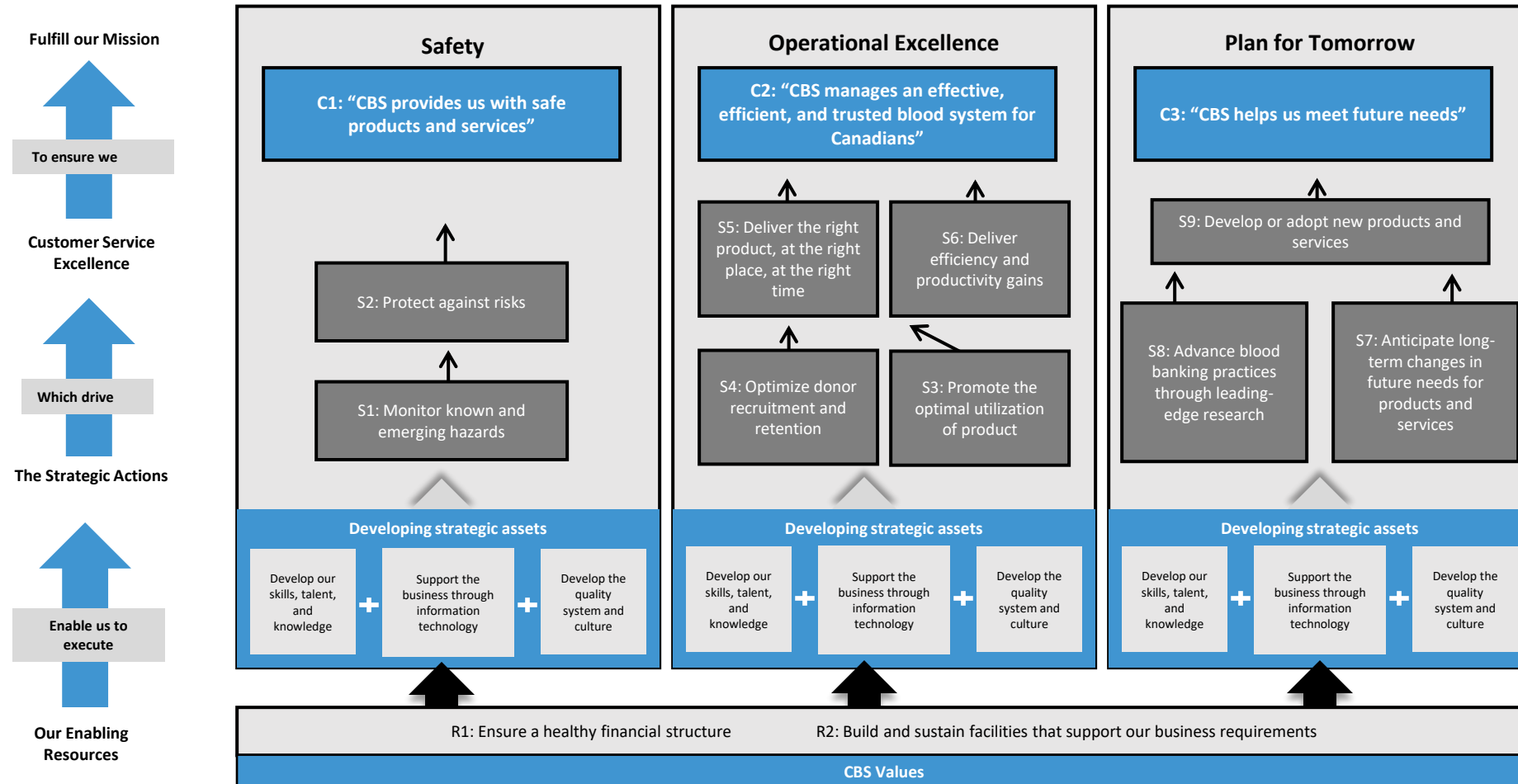
Strategy occurs on multiple levels in an organization



Aligning the strategies in an organization is straight-forward but also complex

| Alignment Process | Objective | Barriers | Enabling Tools |
|---|---|--|--|
| 1. Align Business Units <i>How do we align business units to create corporate synergies?</i> | Cascade and embed corporate strategy into business unit strategies. | Business unit strategies typically are developed and approved independently, without the guidance of a corporate perspective; lack of integration across business units. | <ul style="list-style-type: none">• Cascading of strategy maps to business units• Vertical and horizontal alignment |
| 2. Align Support Units <i>How do we align support units to business units and corporate strategies?</i> | Ensure that each support unit has a strategy that enhances the performance of corporate and business unit strategies. | Support units treated as “discretionary expense centers,” with goals to minimize costs rather than to support enterprise and business unit strategies. | <ul style="list-style-type: none">• Service-level agreements• Support unit strategy maps and scorecards |
| 3. Align Employees <i>How do we motivate employees to help us execute the strategy?</i> | All employees understand the strategy and are motivated to help successfully execute the strategy. | Most employees are not aware of or do not understand the strategy. Their objectives and incentives focus on local, tactical performance, not strategic objectives. | <ul style="list-style-type: none">• Formal communication strategy• Employee objectives with clear line of sign to strategic objectives• Incentive and reward programs• Competency development |

Example: Theme-based Strategy Map at Canadian Blood Services (CBS)



Your goal is to capture your unit level strategy

Mission Statement

Statement which specifies a firm's purpose or "reason for being" and the primary objective toward which the firm's programs & plans should be aimed. Statement specifying the firm's key constituents and how the firm will serve them. It must be clear and understood.
It "makes you proud."

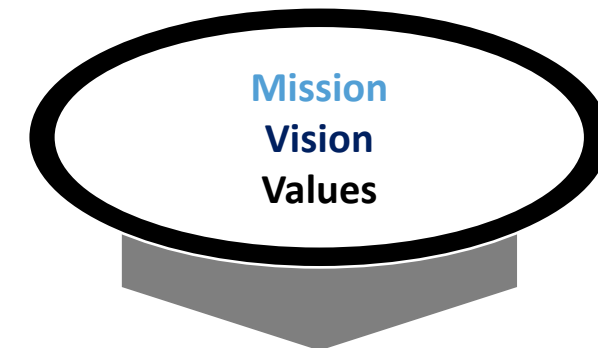
Vision Statement

Statement describing what the firm strives to be at some future time. It should be specific and motivating.
It "makes you excited."

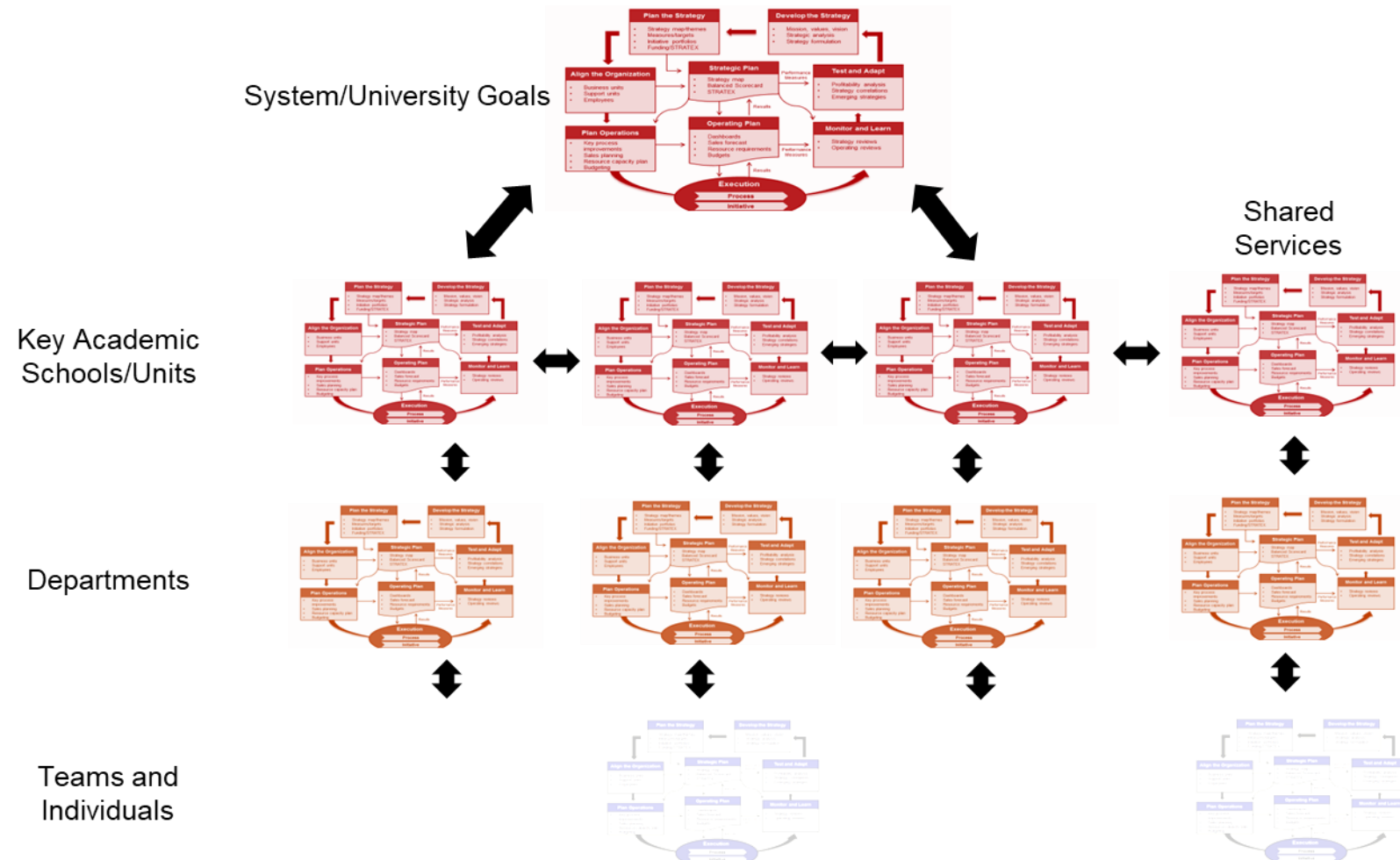
Values

It is what we believe in, our guiding principles, and how we interact.
It "makes you belong."

The T-Shirt Theory (Strategy on one page)



The goal of alignment is connect the strategies both vertically and horizontally



Start at the top with the enterprise level mission and priorities

Case Example: UNC Higher Education System

UNC's Mission: It encompasses the 17 diverse constituent institutions and other educational, research, and public service organizations. Each shares in the overall mission of the University. That mission is to discover, create, transmit, and apply knowledge to address the needs of individuals and society.



ACCESS

The UNC system must continue its proud heritage of access and student diversity.



AFFORDABILITY AND EFFICIENCY

Ensure a UNC education is within the financial means of all in the state.



STUDENT SUCCESS

Increase degree attainment and ensure value and relevance for students.



ECONOMIC IMPACT AND COMMUNITY ENGAGEMENT

Deepening partnerships that strengthen local communities and the state's economy.



EXCELLENT AND DIVERSE INSTITUTIONS

Help institutions achieve excellence within individual missions.

Then key objectives are set for all 17 campuses

ACCESS

Increase Low-Income Enrollment

Increase Completions by Low-Income Students

Increase Rural Enrollment

Increase Completions by Rural Students

Improve Transition from K-12 to College

AFFORDABILITY & EFFICIENCY

Increase 5-Year Graduation Rate

Increase Undergraduate Degree Efficiency

Close Achievement Gaps

Implement a Survey of Current Students and Alumni

STUDENT SUCCESS

Commit to Affordable Tuition

Increase Operational and Financial Flexibility

ECONOMIC IMPACT & COMMUNITY ENGAGEMENT

Increase Critical Workforce Credentials

Increase Research Productivity

Increase Investment in Strengthening North Carolina Communities

EXCELLENT & DIVERSE INSTITUTIONS

Identify Academic 'Areas of Distinction'

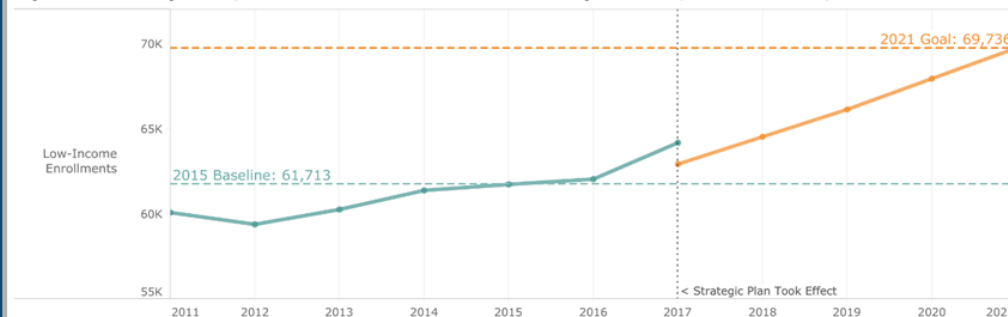
Focus on Human Capital

And then each campus sets its own specific goals and initiatives

UNC System Dashboard

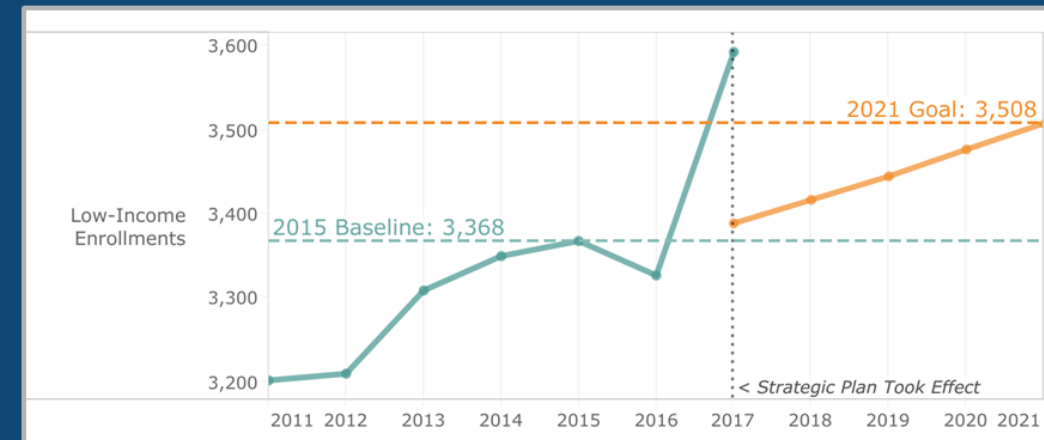
Increase Low-Income Enrollment

System Goal: By 2021, increase low-income enrollment by 13.0% (over 2015 baseline)



UNC Chapel Hill Dashboard

Increase Low-Income Enrollment



This also allows for differentiation at the unit level

| University | Distinct Area 1 | Distinct Area 2 |
|--|--|--|
| Appalachian State University | Envisioning a Just and Sustainable Future | Global Engagement: Education Abroad |
| East Carolina University | Cultural Champion | Social Mobility |
| Elizabeth City State University | Aviation Science Program | Student Success |
| Fayetteville State University | Facilitating Higher Education Attainment by Military-Affiliated Students | High Quality and Affordable Online Education |
| North Carolina A&T University | Minority Engineer Production | COBE Accountants Production |
| North Carolina Central University | Jazz Studies | Intellectual Property Legal Education |
| North Carolina School of Science and Math | Equity of Access for High School Students Statewide | Increasing Participation in Research |
| North Carolina State University | Lab to Market Innovation – Partnerships with the Private Sector | Engineering and Agriculture, Our Land-Grant Foundation |
| University of North Carolina at Asheville | High Impact Practices in Liberal Arts Education | Co-curricular Learning Experiences |
| University of North Carolina at Chapel Hill | Creating Scientists: Learning by Connecting, Doing, and Making | Undergraduate Business Education |
| University of North Carolina at Charlotte | Data Science Initiative | Community Engagement |
| University of North Carolina at Greensboro | Health and Wellness | Visual and Performing Arts |
| University of North Carolina at Pembroke | Regional Health | Regional Economic Development |
| University of North Carolina at Wilmington | UNCW and the Marine Sciences | New Academic Programs Serving Regional Needs |
| University of North Carolina School of the Arts | Expand and Enhance Filmmaking Programs | Increase AP Participation |
| Western Carolina University | Cultural and Environmental Immersion | Service and Outreach |
| Winston-Salem State University | Signature Liberal Education Experience | Signature Graduate and Professional Programs |

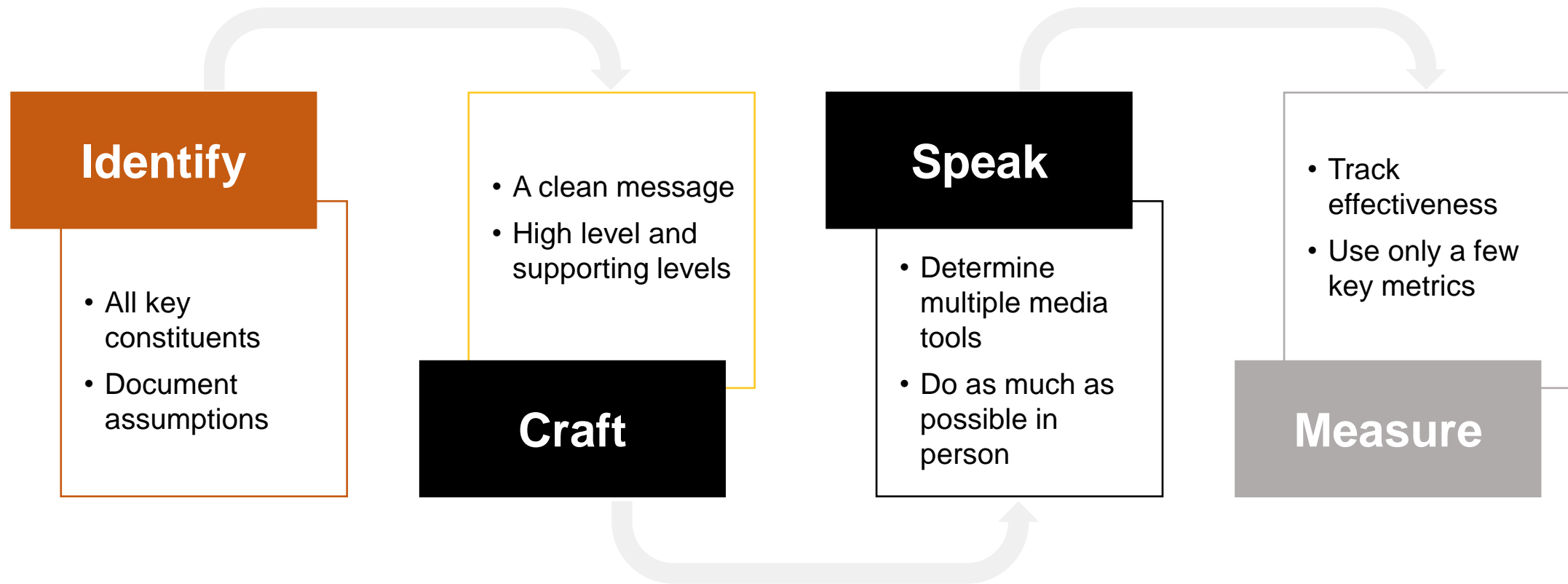
Strong communication makes “cents” and is key for alignment

- Companies that communicate effectively have a 19.4 percent **higher market premium** than companies that do not.
- **Shareholder returns** for organizations with the most effective communication were over 57 percent higher over the last five years (2000-2004) than were returns for firms with less effective communication.
- Firms that communicate effectively are 4.5 times more likely to report high levels of **employee engagement** versus firms that communicate less effectively.
- Companies that are highly effective communicators are 20 percent more likely to report **lower turnover** rates than their peers.

Effective communication is a leading indicator of an organization's financial performance.



Critical success factors for strategic communication



Strategic Communication Example – Mission

To refresh the world

in body, mind, and spirit

To inspire **moments of optimism** through our brand and our actions

To create value and make a difference everywhere we engage

The Coca-Cola Company

Coca-Cola successfully integrates its communication with internal and external stakeholders, via its mission.

Welcome to Nordstrom

NORDSTROM

Our number one goal is to provide outstanding customer service.

Nordstrom Rules:

Rule #1 Use your good judgment in all situations.

There will be no additional rules.

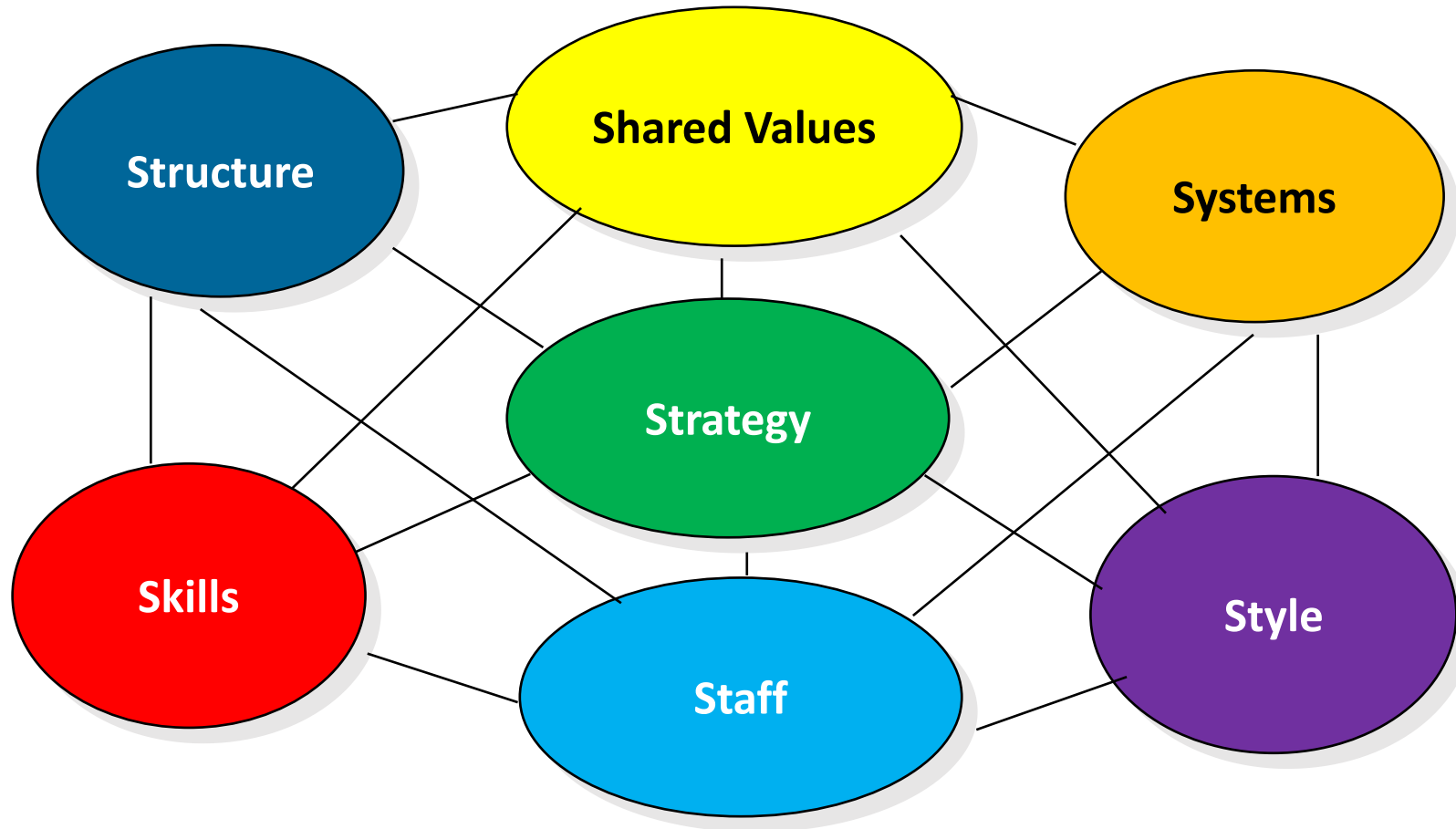
a **place** of
your own

Sometimes simple communication is the most effective.

STAR Program and Consulting Strategies at Kenan-Flagler

| | 2009 | 2010 | 2011 | Goals |
|---|---|--|---|---|
| STAR Projects <i>Mission: Provide students with real-world opportunities to help N.C. companies with major business issues</i> | Formalize <ul style="list-style-type: none"> • Organize team • Develop methodologies • Engage faculty | Enhance <ul style="list-style-type: none"> • Raise funds • Market externally • Consolidate other project based work | Grow <ul style="list-style-type: none"> • Increase # projects • More programs • Include more faculty | <ul style="list-style-type: none"> • 75% of students participate • 4/5 satisfaction ratings |
| MBA Consulting <i>Mission: Teach MBA students about the consulting industry, train skills, and connect with top consulting firms</i> | Redesign <ul style="list-style-type: none"> • Streamline concentration • Revamp courses • Host consultants | Engage <ul style="list-style-type: none"> • Raise funds • Market externally • Visit firms | Recruit <ul style="list-style-type: none"> • Add consulting faculty • Conduct research • Assist admissions | <ul style="list-style-type: none"> • 40 students in consulting concentration • 30 placements/yr |
| BSBA Consulting <i>Mission: Teach BSBA students about the consulting industry, train skills, and connect with top consulting firms</i> | Create <ul style="list-style-type: none"> • Launch consulting concentration • Offer new courses • Institute open consulting club | Establish <ul style="list-style-type: none"> • Create "Consulting Corps" • Market externally • Visit firms | Connect <ul style="list-style-type: none"> • Support STAR programs • Hold Consulting Day • Host alumni | <ul style="list-style-type: none"> • 40 students in concentration • 30 placements/yr |

McKinsey 7S Model is a great tool for alignment in your organization – Assess each category systematically



Definition

*The ways in which competitive advantage
will be achieved.*



Sample Questions

- What are the company's sources of sustainable competitive advantage? (e.g., cost, quality, service, technical leadership)
- What are the company's key strategic priorities? (e.g., penetrating new markets, new product development, speed-to-market, improving customer service)

Definition

The way in which tasks and people are specialized and divided, and authority is distributed. The basic grouping of activities and reporting relationships into organizational sub-units. The mechanisms by which the activities of the members of the organization are coordinated.



Sample Questions

- What is the basic structural form?
- How centralized versus decentralized is the organization?
- What is the relative status and power of the organizational sub-units?

Definition

The formal processes and procedures used to manage the organization, including the management control systems, performance measurement and reward systems, planning, budgeting, and resource allocation systems, information systems, and distribution systems.



Sample Questions

- Does the organization have the systems it needs to run its business? (e.g., does it have a system for monitoring customer satisfaction)
- What are the management systems that top management uses to run the company? Which ones do they pay the closest attention to?

Definition

The people, their backgrounds, and competencies. The organization's approaches to recruitment, selection, and socialization. How people are developed; how recruits are trained, socialized, and integrated; and how their careers are managed.



Sample Questions

- How does the organization recruit and develop its people? (e.g., formal training, mentoring programs, stretch assignments)
- What are the demographic characteristics of the management team? (e.g., background, education, age, gender, nationality, professional identity, experience outside the company)
- Where are the strongest leaders found in the organization (e.g., in which functions)? The weakest?

Definition

The distinctive competencies that reside in the organization. Typically the distinctive competencies of people, but can also include management practices, systems, and/or technology.



Sample Questions

- What business activities is the company distinctively good at performing?
- What new capabilities does the organization need to develop, and which ones does it need to “unlearn,” to compete in the future?

Definition

The leadership style of top management and the overall operating style of the organization. Style impacts the norms people follow and how they work and interact with each other and with customers.



Sample Questions

- How does top management make decisions? (e.g., participatory versus top-down, analytic versus “arm-chair”)
- How do managers spend their time? (e.g., in formal meetings, informal conversations, in the field, with customers in the lab)

Definition

The core or fundamental set of values that are widely shared in the organization and serve as guiding principles of what is important. Usually these values are communicated in simple ways, and may even seem trivial from the outside. But to the organization's members, they have great meaning because they help focus attention and provide a broader sense of purpose.



Sample Questions

- Do people have a shared understanding of why the company exists?
- Do people have a shared understanding of the vision of the company?
- What types of issues receive the most and least top-management attention? (e.g., short run versus long run, internal versus external)
- How do people describe the ways in which the company is distinctive (e.g., focus on quality, emphasis on people)

Sample Full Unit Strategic Planning Deliverable – UNC Department of Biomedical Engineering

UNC/NC State Department of Biomedical Engineering

| Program | | Chair | | | Timeline Overview |
|------------------------|---------|----------------------|----------|-------|---|
| Biomedical Engineering | | Dr. Nancy Allbritton | | | <ul style="list-style-type: none">• 2003: Year Joint Department founded• 2010: The Department moved into the new NCSU Engineering Building III• 2013: Five new faculty hires• 2013-2018: Additional ten faculty to be hired- see appendix (6-8 in the next 3 years)• 2016: Move into 2 floors of MEJ at UNC |
| Enrollments | UNC SOM | UNC CAS | NCSU COE | Total | |
| Faculty (FTE) | 10.5 | 2.5 | 15.7 | 28.7 | |
| Staff (FTE) | 4.6 | 1 | 9 | 14.6 | |
| Undergraduate | 0 | 69 | 174 | 243 | |
| Graduate | 52 | 0 | 55 | 107 | |
| Post-doctorate | 6 | 0 | 8 | 14 | |

BME Task Force

Key responsibilities include weekly meetings to generate draft strategy statements and support data, interactions with key constituents, and reporting to the Advisory Committee



Nancy Allbritton
Chair, Joint
Department of BME



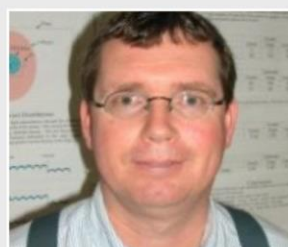
Paul Dayton Professor
and Associate Chair,
BME



Fran Ligler
Lampe Distinguished
Professor of BME



Elizabeth Loba
Assoc. Prof. and
Assoc. Chair, BME



Jack O'Daly
Director of Research



Paul Sheeran
Graduate Student,
BME, UNC-based



Emily Smith
Graduate Student,
BME, NCSU-based



Steven Soper
Professor
of BME

Consulting team



Mayank Agrawal

UNC MBA 2014



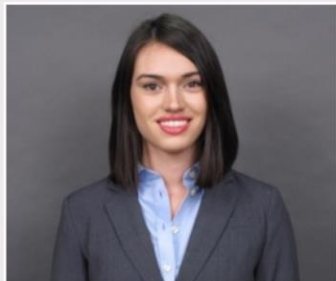
Clyde Atkins

UNC BSBA 2014



Paul Friga

Assoc. Professor, Director-
Consulting Program UNC KFBS



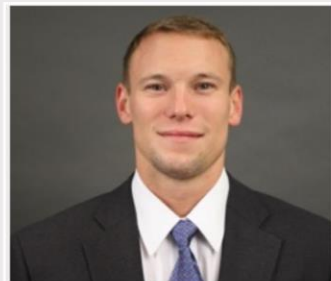
Leah Gonzalez

UNC BSBA 2015



Erika Keil

UNC BSBA 2014



Randal Walters

UNC MBA 2014

**Key responsibilities
include primary &
secondary research,
constituent interviews,
analysis of options, slide
deck creation, and
updates to key
constituents**

Advisory Committee

| Name | Affiliation |
|--------------------|--|
| Warwick Arden | NCSU Provost |
| Martin Baucom | NCSU COE Associate Executive Director of Development |
| Ruben Carbonell | NCSU Kenan Institute (KIETS Director) |
| Lowry Caudill | UNC-CH Board of Trustees |
| Haywood Cochrane | UNC-CH Board of Trustees |
| Judith Cone | UNC Special Assistant to the Chancellor |
| Joe DeSimone | UNC Kenan Institute of Private Enterprise, Director |
| Charles Duckett | UNC-CH of Trustees |
| Cam Enarson | Vice Dean for Finance and Administration, UNC SOM |
| Barbara Entwisle | UNC Vice Chancellor for Research |
| Kevin M Fitzgerald | Chief of Staff UNC GA |
| Karen M. Gil | Dean UNC-CH College of Arts and Sciences |
| John Gilligan | Executive Associate Dean NCSU College of Engineering |
| Kevin Guskiewicz | Senior Associate Dean Natural Sciences UNC-CH CAS |
| Michael Jay | Professor and Chair, UNC ESOP Molecular Therapeutics |
| Lisa B. Johnston | Interim Director UNC-CH Division of Physical Therapy |
| Myla Lai-Goldman | Managing Partner, Personalized Science, LLC |
| Ross Lampe | President and CEO SMD Software (SiteLink) |

| Name | Affiliation |
|------------------|--|
| Gayle Lanier | NCSU Board of Trustees |
| Weili Lin | Director UNC Biomedical Research Imaging Center |
| Terri Lomax | NCSU Vice Chancellor for Research |
| Paul Lunn | Dean NCSU College of Veterinary Medicine |
| Terry Magnuson | Vice Dean for Research UNC School of Medicine |
| Mark Meares | UNC Director of Corporate and Foundation Relations |
| Kate Meurs | Associate Dean of Research NCSU CVM |
| Tom K Miller | Executive Director of the NCSU Entrepreneurship Initiative |
| Peter Mucha | Chair, Department of Applied Physical Sciences, UNC-CH |
| David F. Myers | VP, Engineering and Technology, RTI International |
| Michael Petr | Undergrad NCSU- BME Club President |
| Shruthi Rajan | Undergrad UNC- BME Club President |
| Maria Rapoza | VP, Sci. and Tech. Dev. Program NC Biotechnology Center |
| William Starling | CEO Synecor |
| Sam Tetlow | CEO, Clear View Limited |
| Edward White | Chairman of the Board Field2Base, Inc. |
| Rick Wysk | BME Rehabilitation Engineering Center Director |

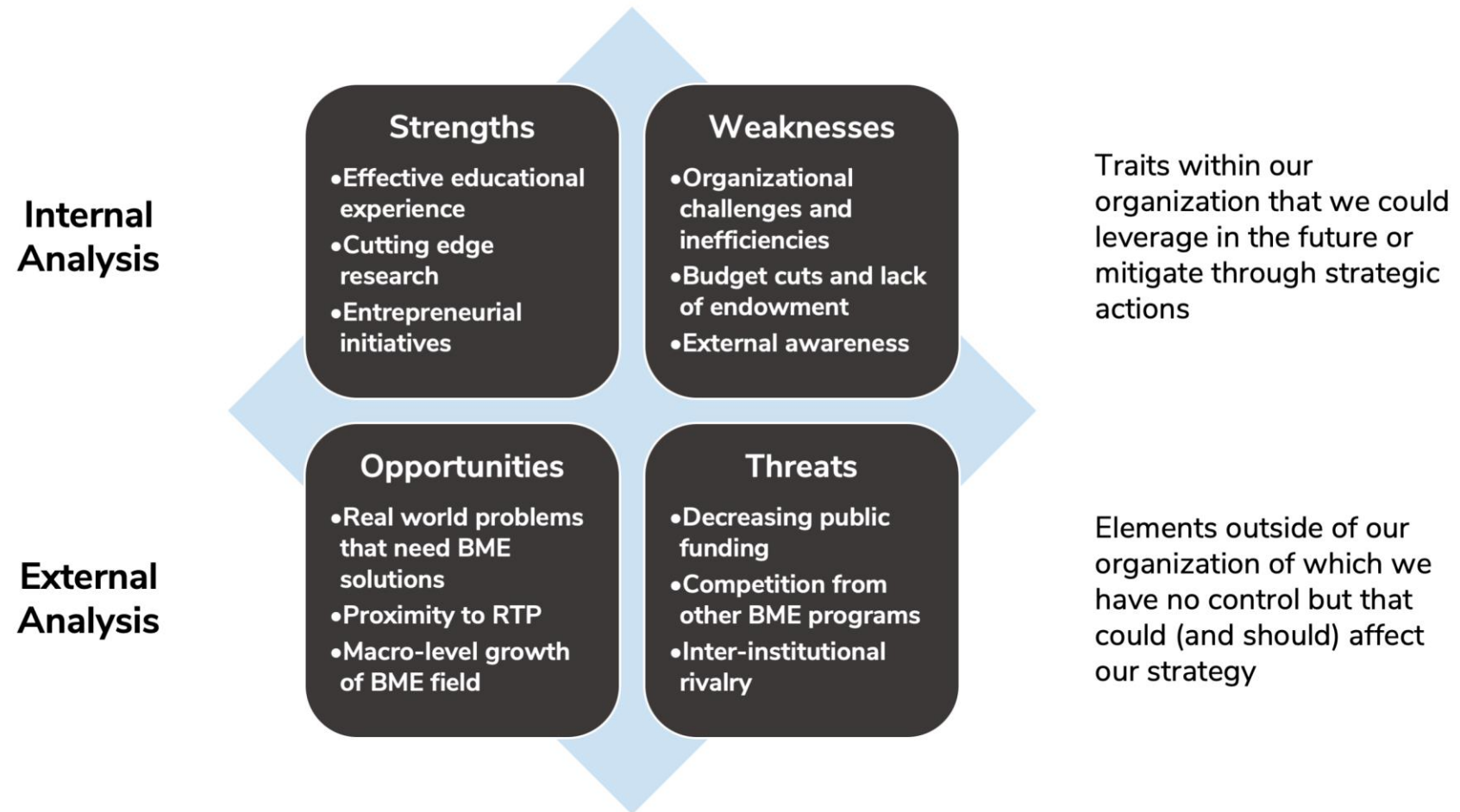
Key responsibilities include attendance at two advisory committee meetings, feedback on ideas presented, and input on overall strategic planning

Overall Process

We conducted and analyzed an internal survey; interviewed chairs from other BME departments; held weekly task force meetings; and analyzed >20 secondary reports.



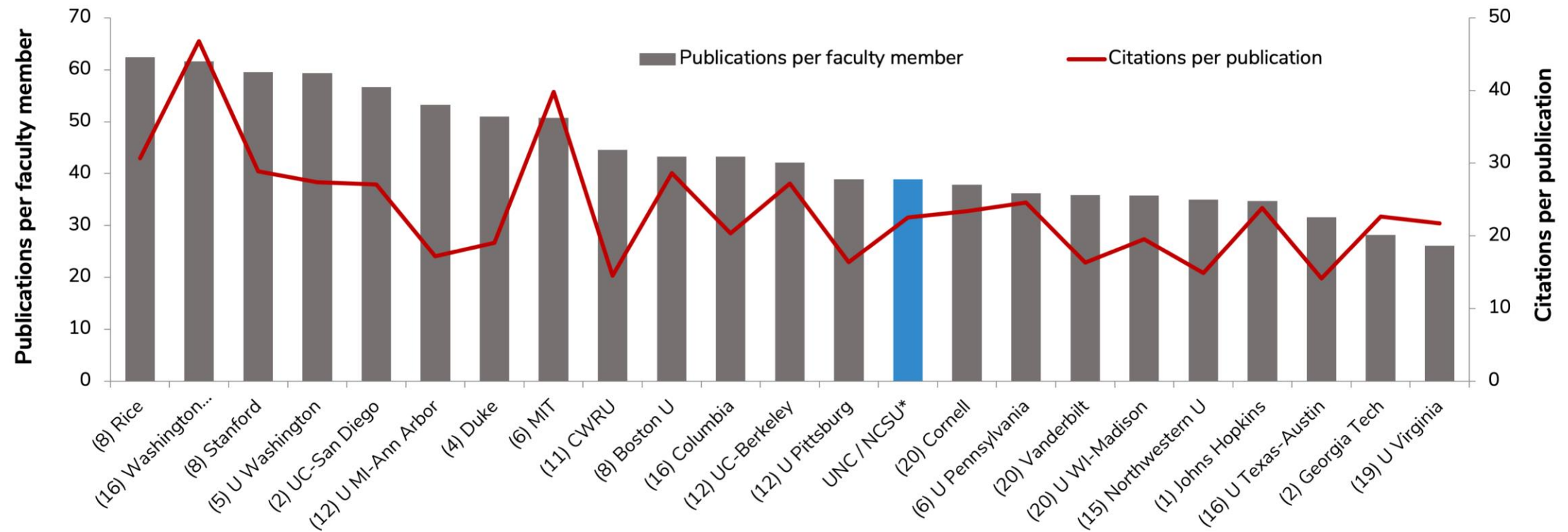
We completed a SWOT analysis to inform our strategy



Strength 2: Our department's faculty conducts cutting edge research on par with top programs

Research Publications: UNC / NCSU vs. Top 20 BME Programs (2002 – 2012)

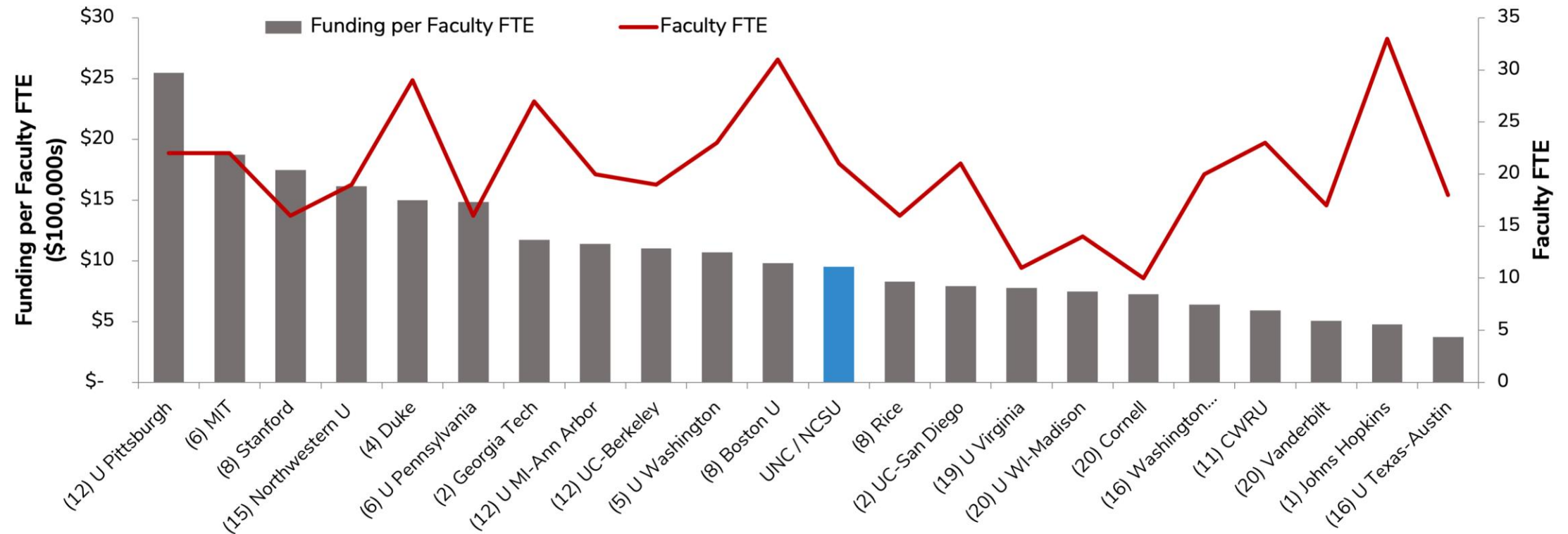
Rankings Shown in Parentheses



*Reflects combined totals from UNC and NCSU - Historically, we have reported research productivity separately

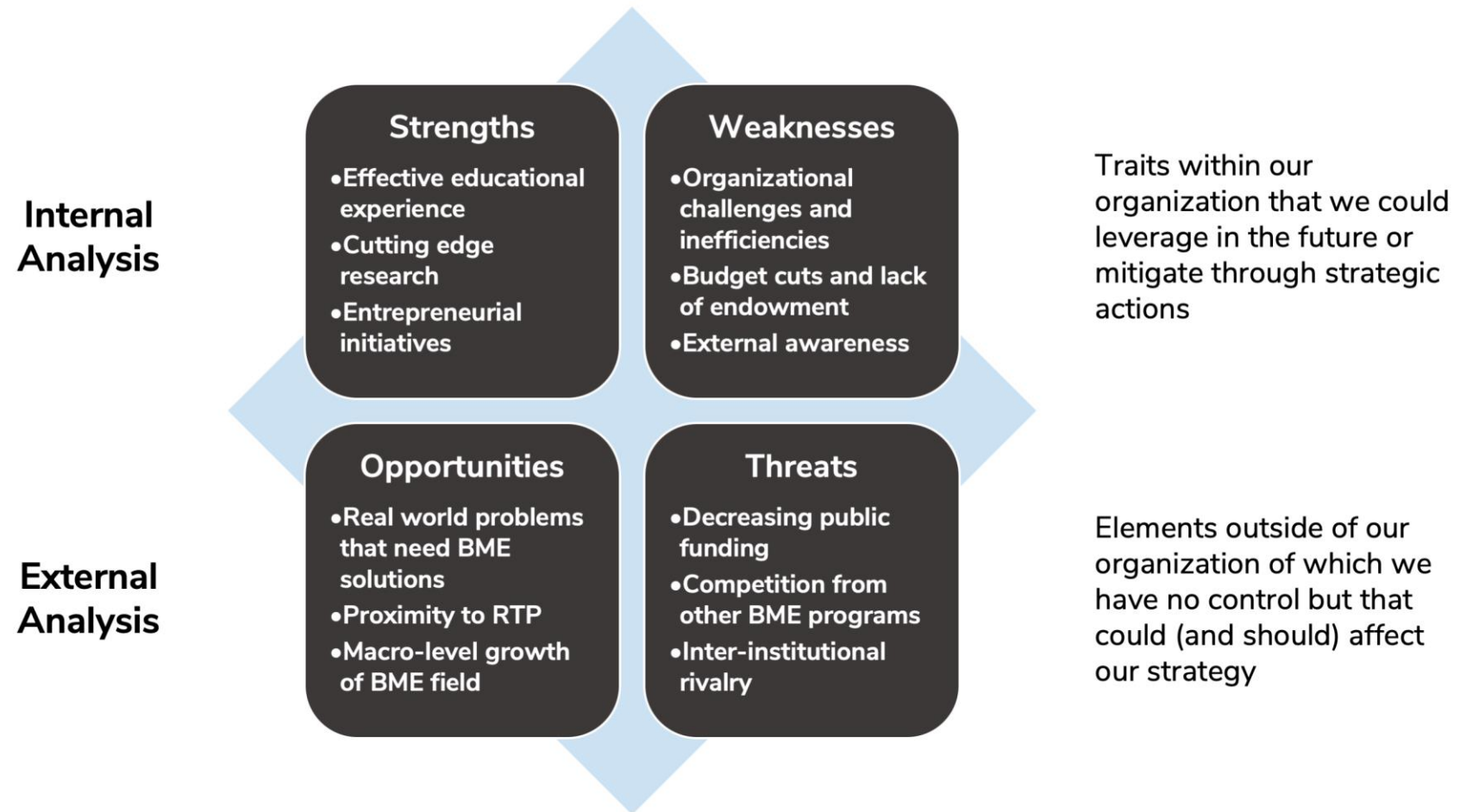
Strength 2 (cont.): Our BME program's extramural funding is on par with funding levels at top programs

Funding per Faculty Member: UNC / NCSU vs. Top 20 BME Programs (2012)
Rankings Shown in Parentheses

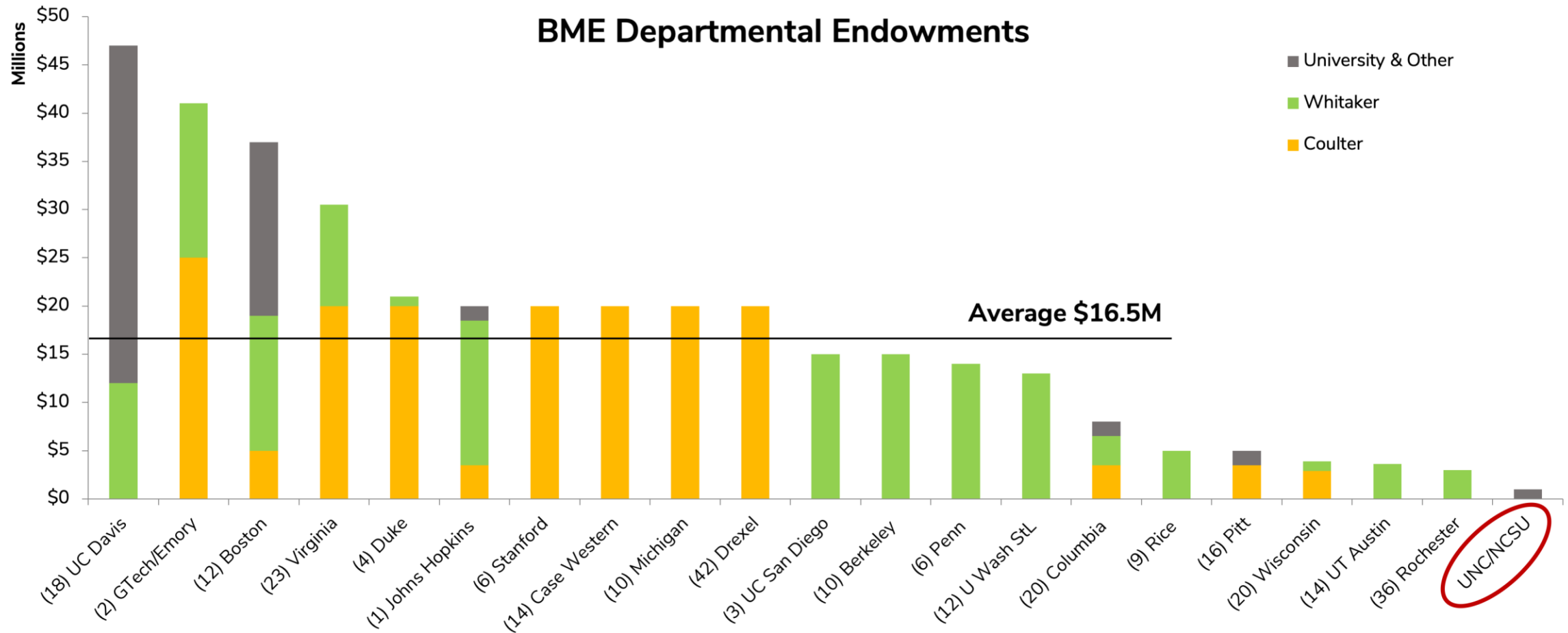


*Reflects combined totals from UNC and NCSU - Historically, we have reported research productivity separately

We completed a SWOT analysis to inform our strategy



Weakness 2: The lack of an endowment decreases the funding available for research, students and faculty



Weakness 3: Our BME program lacks external awareness and regard and does not promote itself as much as the competition

The BME department's reputation is one of its top 3 weakness

- "Lack of visibility of the program as a whole" –UNC-based, Graduate
- "Recognition among other BME programs in the US" –UNC-based, Graduate
- "PR" –NCSU-based, Graduate

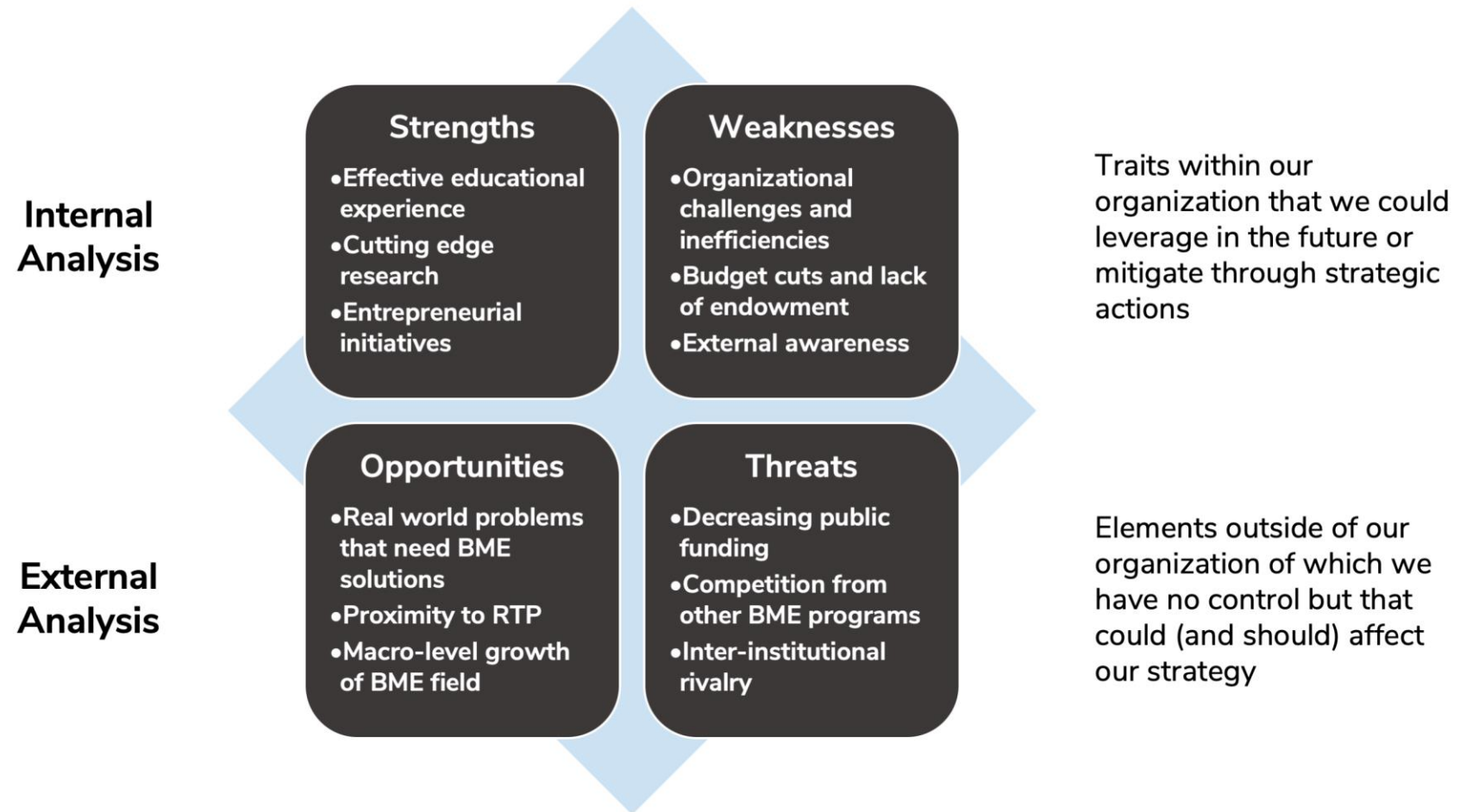
Sponsorship at national conferences influences program recognition

- 77% of top 20 programs sponsored a booth or reception at the 2013 BMES Meeting

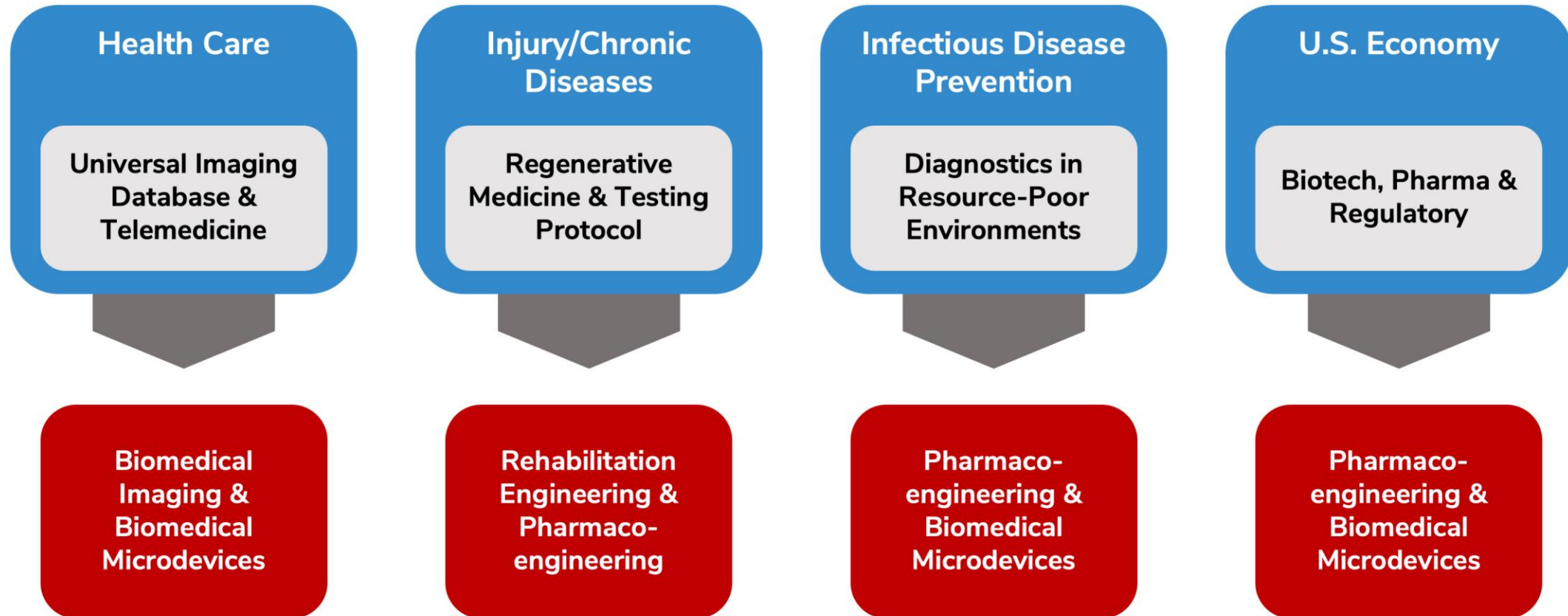
Top programs dedicate resources to PR

- \$60,000/yr, University of Texas at Austin
- \$50,000/yr, University of Washington
- \$10,000/yr, University of Virginia
- Georgia Tech/Emory hosted 2012 BMES Conference
- University of Maryland holds the Fischell Festival (\$10,000/yr)

We completed a SWOT analysis to inform our strategy



Opportunity 1: BME can translate market demand into department strengths

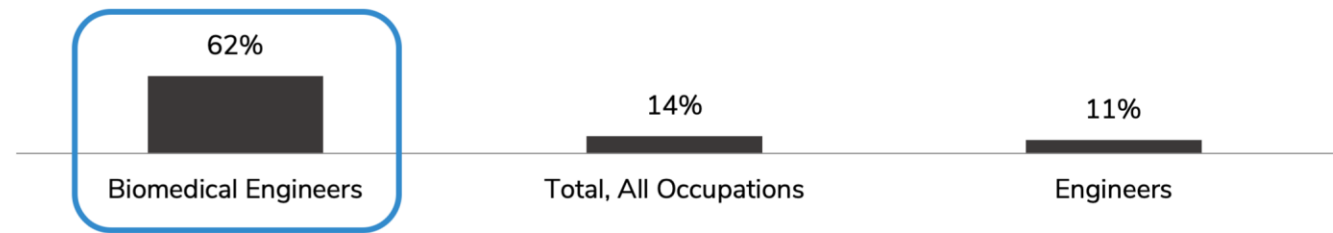


Opportunity 3: BME employment is projected to grow

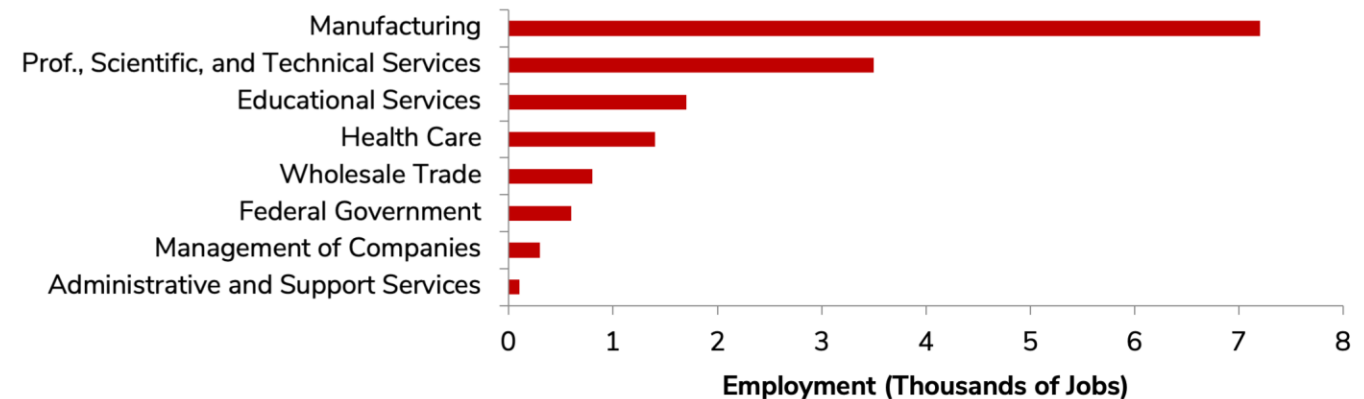
Macro Trends in BME

- Jobs expected to increase with aging population's demand for medical devices
- BME's median salary (\$81,540) is comparable with other engineering fields' (\$83,340)
- Of the top 30 high-growth job areas, BME graduates earn the greatest salaries

Percent Change in Employment, Projected 2010-2020

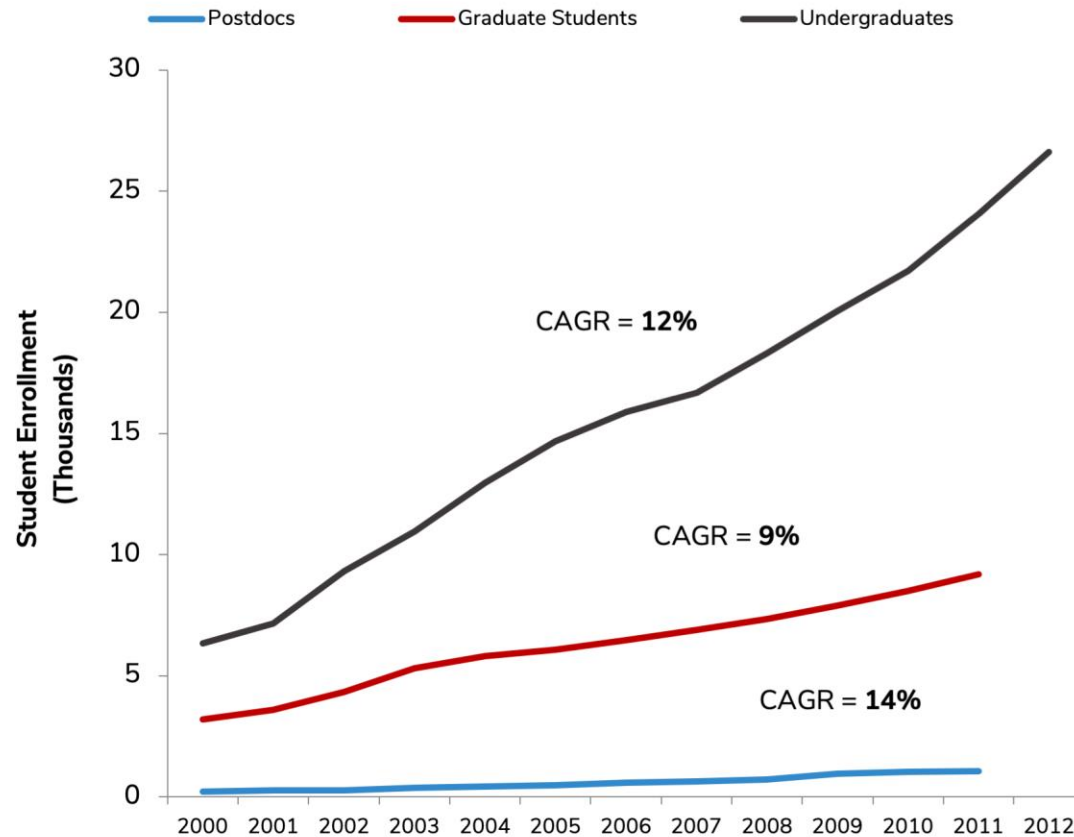


2010 BME Employment



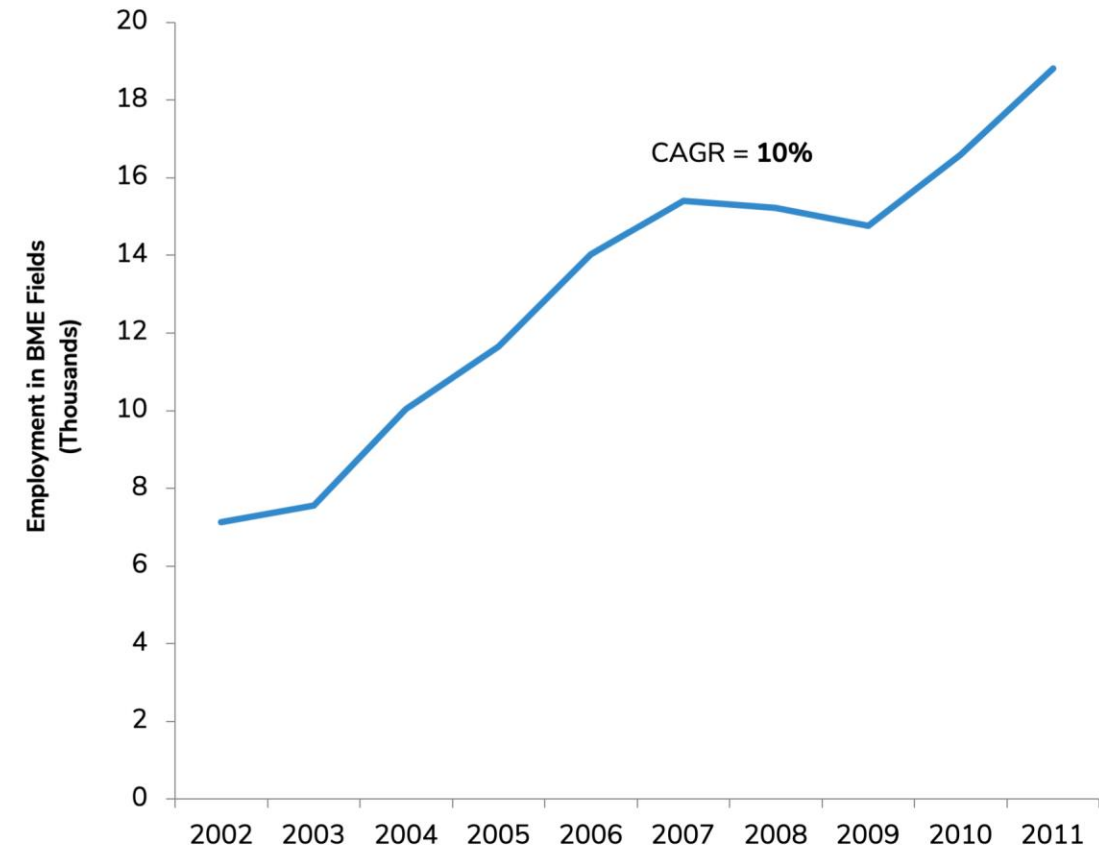
Opportunity 3 (cont.): BME student enrollment and employment have surged over the past ten years

BME Student Enrollment, 2000-2012

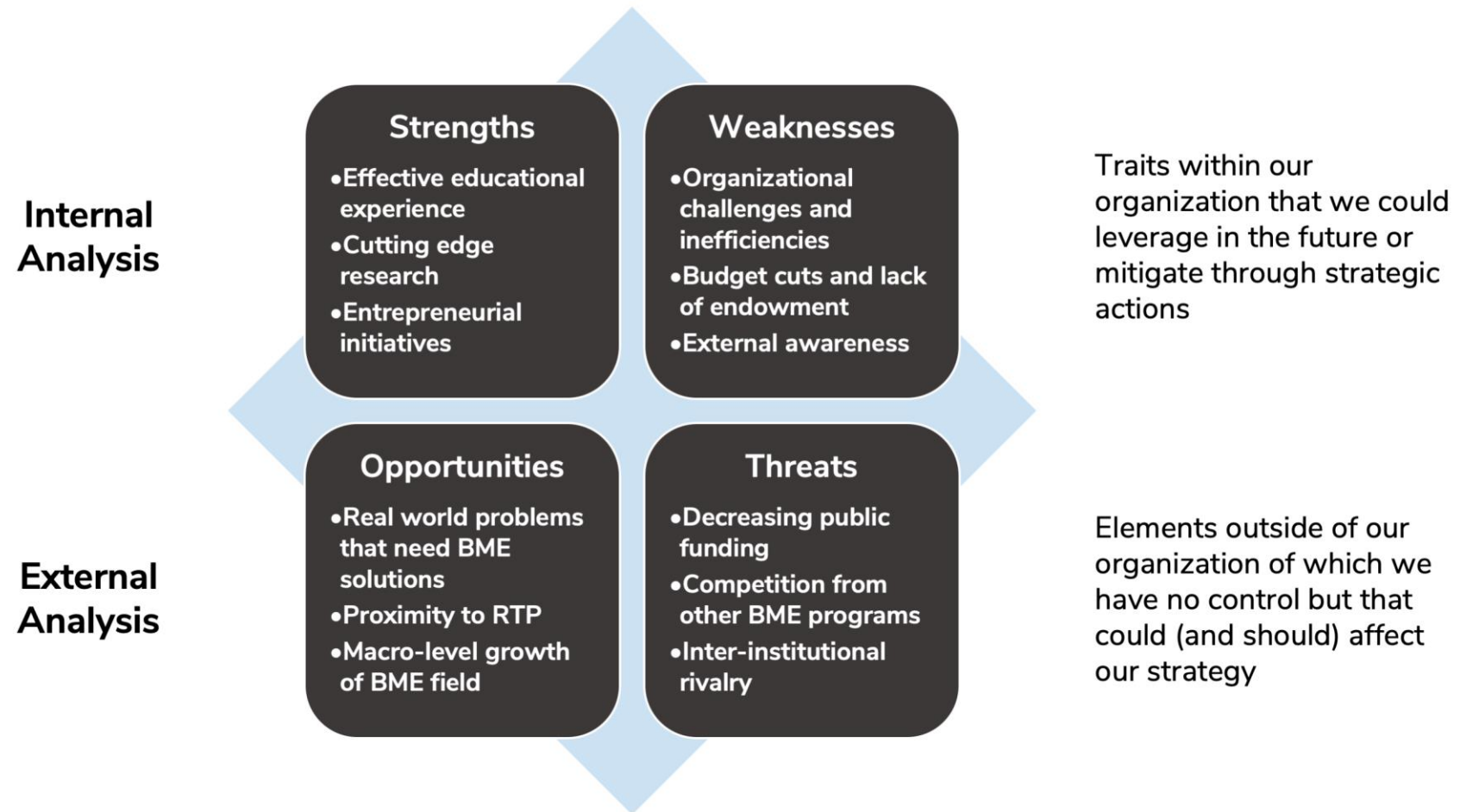


Note: CAGR = Cumulative Annual Growth Rate

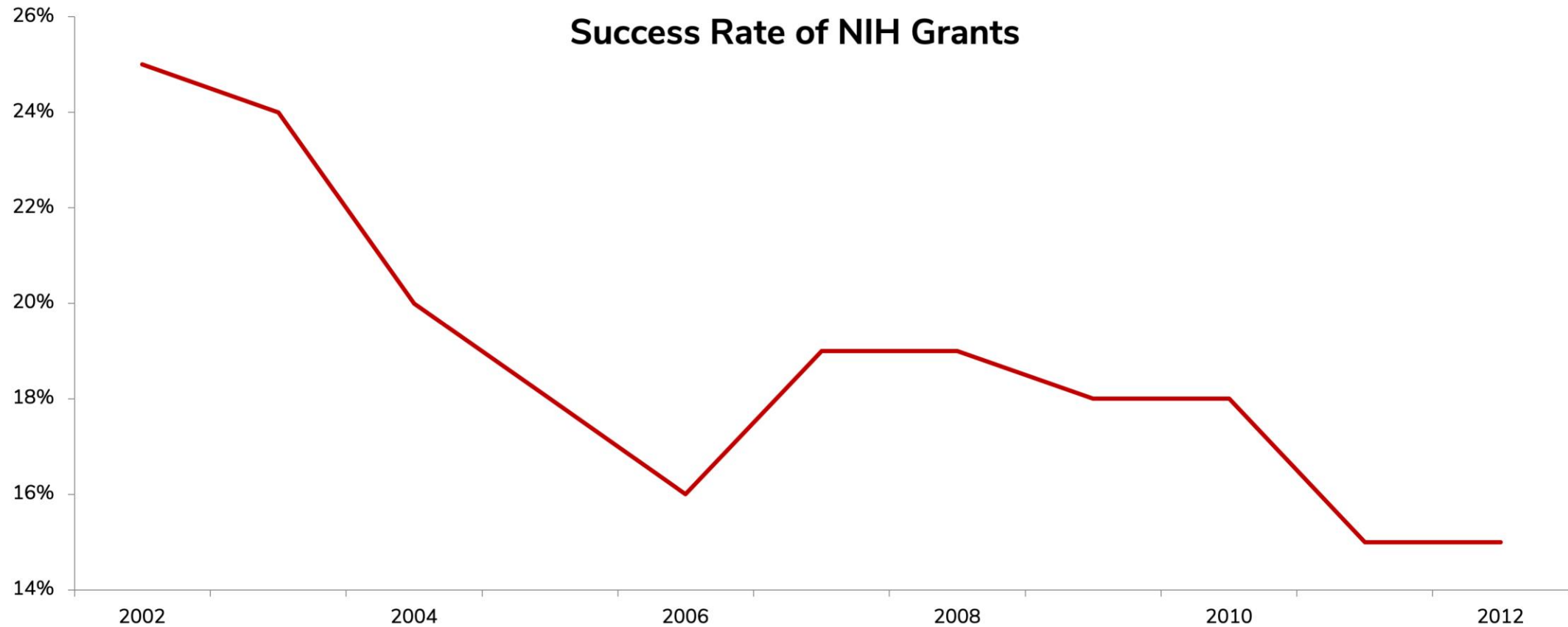
BME Employment, 2002-2011



We completed a SWOT analysis to inform our strategy



Threat 2: NIH is awarding fewer grants despite the number of grants submitted and reviewed increasing



Note: Success rate= # awards given/# applications for awards

We also sought input through extensive interviews with other top BME departments in the US

Features of the ideal BME department– no program has all of these traits

Non-traditional department structure

- Fluid appointments, money transfer, and engineer/clinician engagement, i.e. be seamless

Funding from multiple sources

- NIH, NSF, DOD, industry, endowments, foundations, private donors

Translational culture

- Brings products to market that address global challenges and needs

Provost-Level Reporting

- Support at the provost-level for fluid faculty/student engagement and removing barriers for inter-institutional partnerships

Marketing Resources

- PR / Marketing / Outreach staff and regular PR and student recruiting activities at key events

Additional Features

- A global reputation, students with a strong engineering foundation, facilitated technology transfer, and an active Corporate Advisory Board

We have developed strategic priorities and related initiatives

Strategic Priorities

**Create a transformative
inter-institutional model**

Grow global impact

Secure resources to enable strategy

Initiatives (2014-2019)

1. Create a BME charter
2. Reposition the Department externally
3. Enable joint departmental personnel and students

1. Be the world-renowned leader in 3-5 focus areas
2. Educate a high quality workforce
3. Translate and transition technology

1. Establish a BME endowment
2. Grow industrial partnerships
3. Create new revenue-generating programs

Priority 1: Inter-institutional collaboration model – Initiatives and actions

| Initiative Area | 2014-2015 | 2015-2016 | 2016-2017 | 2017-2018 | 2018-2019 |
|--|---|--|------------------------------|--|-------------------------------|
| Create a BME charter | Plan and draft BME charter | | Revise agreements as needed | | |
| | Assemble administrative board to help guide BME program | | | | |
| | Work with provosts to align BME across universities | | | | |
| | Plan for single budget (faculty, grad, staff) | | | Implement single budget (faculty, grad, staff) | |
| | Plan new finances for combined UG degree | Implement combined UG budget | | | |
| Reposition the department externally | Negotiate joint external reporting | Implement joint reporting | Sponsor a national meeting | | |
| | Develop unified brand | Build web and social media presence | | | |
| | Support BMES receptions and booths | | | | |
| | Sponsor an international meeting | Sponsor distinguished lecture series | | | |
| | Form partnerships with international universities | | | | |
| Enable joint departmental personnel & students | Joint senior design program | Plan joint UG program | Implement joint UG program | | Assess joint UG program |
| | Prepare for NCSU and UNC ABET | | Develop joint registration | | Prepare ABET for joint degree |
| | Align graduate policies | | | Assess joint graduate program | |
| | Plan for joint faculty/staff | Implement joint faculty/staff | Align faculty reward systems | | |
| | Align faculty expectations | Staged alignment of faculty/staff pay scales | | | |

Priority 2: Global external impact – Initiatives and actions

| Initiative Area | 2014-2015 | 2015-2016 | 2016-2017 | 2017-2018 | 2018-2019 |
|-------------------------------------|--|---|--|-----------|--|
| Educate a high-quality workforce | Create a Corporate Advisory Board | Continuously improve offerings based upon industry need at graduate and undergraduate level | | | Launch new programs for next five years |
| | Expand experiential learning: internships and co-ops | | | | |
| | Track post-degree activities on annual basis and create networking opportunities with graduates | | | | |
| | Broaden graduate student recruiting (increased quantity, quality, and diversity) | | | | |
| Accomplish high-impact research | Focus on team science, obtain collaborative grants over \$5M | | | | Conduct research impact assessment |
| | Expand internal collaborations (CVM, SOP, COT) and external partnerships (military, FDA, RTP, and global universities) | | | | Assess global impact |
| | Spotlight results through awards and external professional activities | | | | |
| | Make strategic hires at junior and senior faculty levels | | | | |
| Translate and transition technology | Hire student/faculty-industrial needs coordinator | Expand intellectual property portfolio | | | |
| | Educate faculty in IP process | | Market and license patents | | Evaluate BME tech transfer process |
| | Expand clinical and industrial partnerships | | Establish clinical/industrial consortium | | Roadmap future translational opportunities |

Priority 3: Secure resources – Initiatives and actions

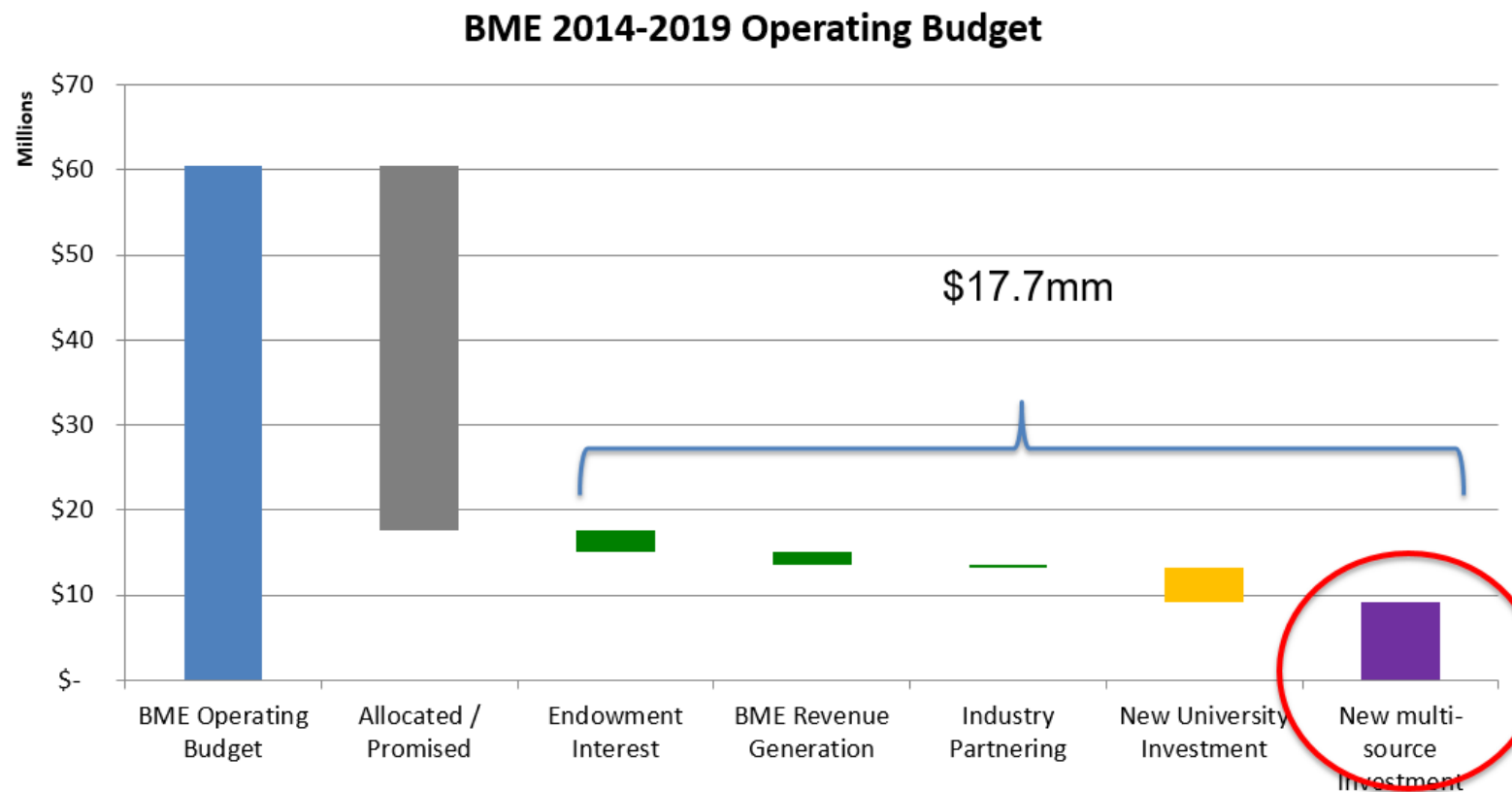
| Initiative Area | 2014-2015 | 2015-2016 | 2016-2017 | 2017-2018 | 2018-2019 |
|--|---|--|-----------------------|---|---------------------------------|
| Grow industrial partnerships | Start Corporate Advisory Board | Expand department and industry interactions (industry coordinator) | | Assess success at industry-student interactions | |
| | | Implement best suggestions from annual Corporate Advisory Board meetings | | | |
| | Grow industry interactions through universal student partnerships program (internships and co-ops in research, industrial, or clinical areas) | | | | |
| | Develop industrial consortia and sponsors | | | | |
| Create new revenue-generating programs | Submit PSM degree requests | Plan Professional Science Masters e.g. Medical Technologies | | Enroll initial students | |
| | Generate F&A via collaborative grants over \$5M | | | | |
| | Plan Med Tech summer course | Advertise summer course | Enroll initial class | Grow class and assess outcomes | |
| Establish a BME endowment | Hire FT development staff | Create BME foundation | Engage BME Foundation | | Generate revenue from endowment |
| | | Participate in cross-university fundraising and capital campaign | | | |
| | Facilitate active fundraising by chair | | | | |
| | Engage alumni and donors | | | | |

An outstanding BME Department will have significant impact

| Priorities | 2014-2019 Initiatives | Potential Impact |
|--|---|--|
| Create a transformative inter-institutional model | <ol style="list-style-type: none">1. Create BME charter2. Enable joint departmental personnel and students3. Reposition the Department externally | <ul style="list-style-type: none">• NC leads in Biomedical Engineering• Global university/industrial collaborations• Integrated roadmap: education, design, discovery development, demonstration, production |
| Grow global impact | <ol style="list-style-type: none">1. Educate a high-quality workforce2. Accomplish high-impact, innovative research3. Translate and transition technology | <ul style="list-style-type: none">• Skilled workforce improves healthcare• Research produces break through health products e.g. targeted cancer and diabetes therapies• Global companies made in NC |
| Secure resources to enable strategy | <ol style="list-style-type: none">1. Establish a BME endowment2. Grow industrial partnerships3. Create new revenue-generating programs | <ul style="list-style-type: none">• BME faculty with high national/international visibility• Strong interactions with biotechnology companies• New research capabilities• Faculty/students globalized |

And of course, you must identify your operating budget

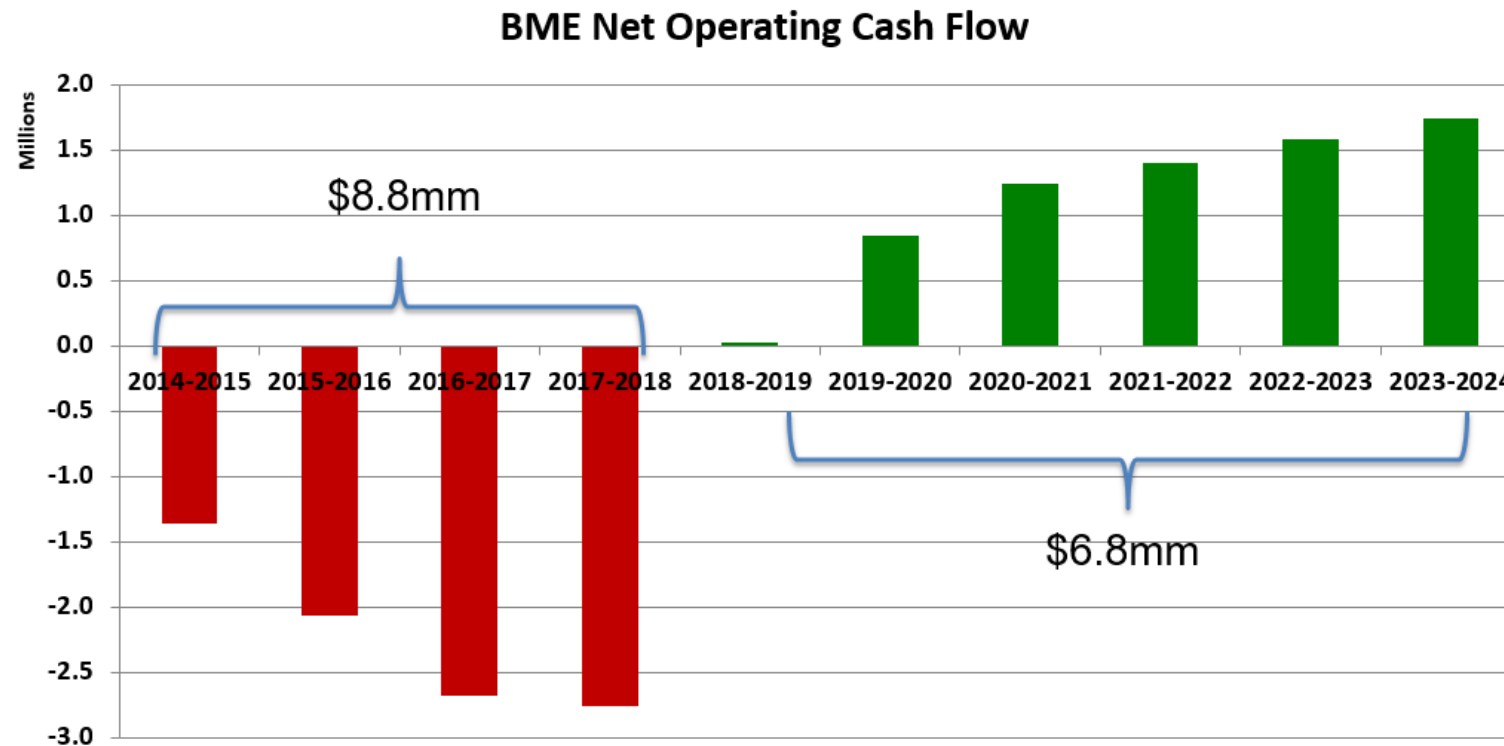
Most funding is already sourced, new temporary sources are required to invest in BME strategic priorities



See detailed assumptions and calculations in appendix

And calculate estimated financial impacts over time

A short term investment of \$8.8 million is needed to support BME growth before its endowment and programs allow it to invest in itself



Surplus cash flow is re-invested into retaining and attracting talent and initiating new programs



4. The Future of Higher Education

August, 2022



Systemic Issues Requiring Transformational Solutions – prior to and even after COVID

- 43 million consumers with \$1.7 Trillion of student debt
- An industry with poor quality of earnings
- Nine consecutive years of enrollment decline on a national basis – leading to lower net tuition pricing
- More supply of brick-and-mortar colleges than student demand
- More than 1,200 colleges that are either at or approaching – “not financially viable” status according to DOE Financial Composite Scores
- Changing consumer behaviors
- Migration from degrees to credentials and certificates
- Corporate workforce development influence on higher education
- Technology requirements, substantially increasing
- New entrants impacting student demand
- An economic model that does not support continuous investments into functional areas critical to long-term success

And the COVID Pandemic has changed everything!

Paul's predictions of the future of higher education – Macro trends that should be reflected in your strategy

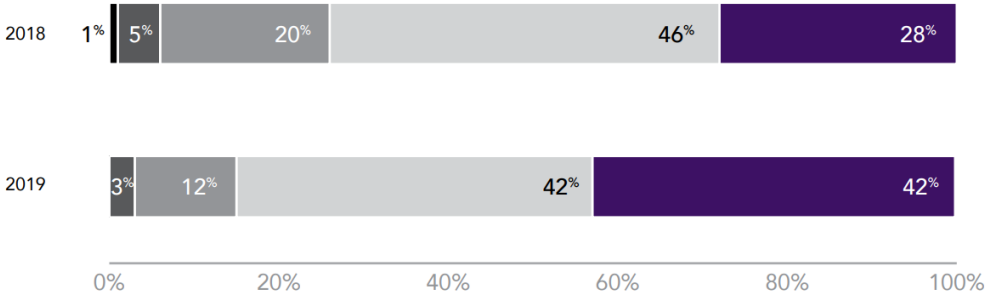
| Dimension | Current | Future |
|--------------------------------|--------------------|---------------------------------|
| Tuition | Medium - High | Free - Low |
| Differentiation of Providers | Low | High |
| Accessibility | Low | High |
| Online Education | Low | High |
| Partnerships with Employers | Medium | High |
| Virtual Campus Services | Low | High |
| Inter-University Collaboration | Low | Medium |
| Relevance | Low | High |
| Faculty | Single-University | Multi-University / Free Agent |
| Students | 18 - 24-Year Old | 18 - 80-Year Old |
| National Universities | Few | Many |
| Credentials | 2 & 4-Year Degrees | Degrees + Badges + Certificates |

Source: Dr. Paul N. Friga

We are aware of the challenges facing higher education – and public institutions are most concerned with financials and relevance

Looking ahead to the next 10 years, how concerned, if at all, are you about the future of the higher education sector in the U.S.?

1 - Not at all concerned 2 3 4 5 - Very concerned



| Rank | Public |
|------|--|
| 1 | The financial sustainability of higher education institutions (25%) |
| 2 | Price of higher education for students and their families (24%) |
| 3 | Decrease in state funding of higher education (10%) |
| 4 | Public perception of the value of a college degree (9%) |
| 5 | Relevance of higher education in helping graduates obtain a better job/career (8%) |
| 6 | Student debt (7%) |
| 7 | Incoming students' preparedness for college (6%) |
| 8 | Other (6%) |
| 9 | Equal access to higher education among different demographic groups (5%) |

Demand is on the decline for traditional higher ed

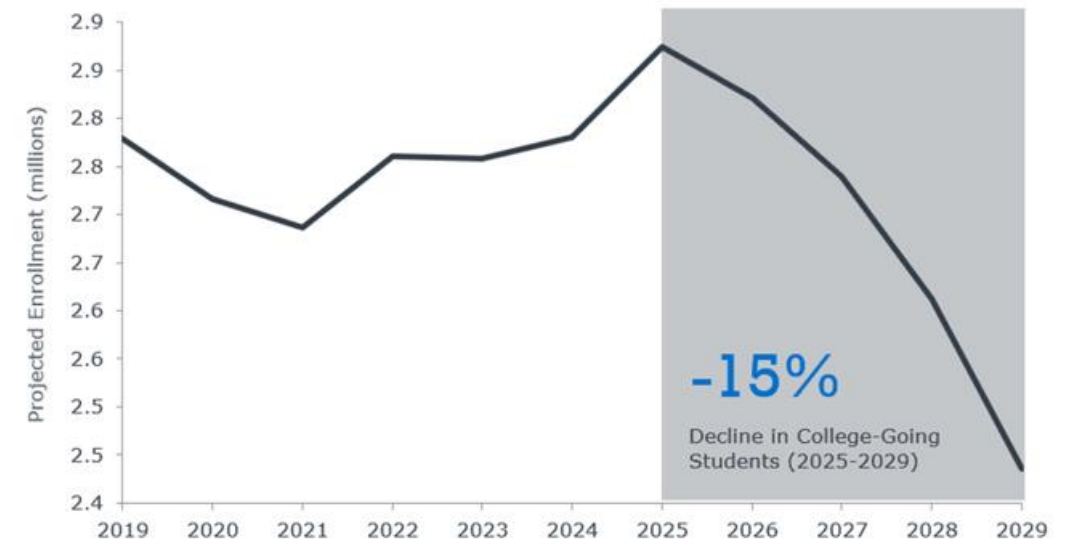
The higher education market has experienced nine consecutive years of enrollment decline on a national basis; contracting from approximately 21M to 18M students



- Only 34% of institutions met their 2019 fall enrollment targets – declining market for degrees
 - Fall of 2020 private college enrollment was down ~4%
 - Arizona State University enrollment grew by 23% in the fall of 2020
- There is more capacity than student demand for traditional brick and mortar institutions
- Students are choosing alternative knowledge pathways versus degrees, including credentials, certificates, work-force related skill-sets

Enrollment Projected to Drop Sharply After 2025

Forecasted Number of College-Going Students in the U.S. (millions), by Year of High School Graduation

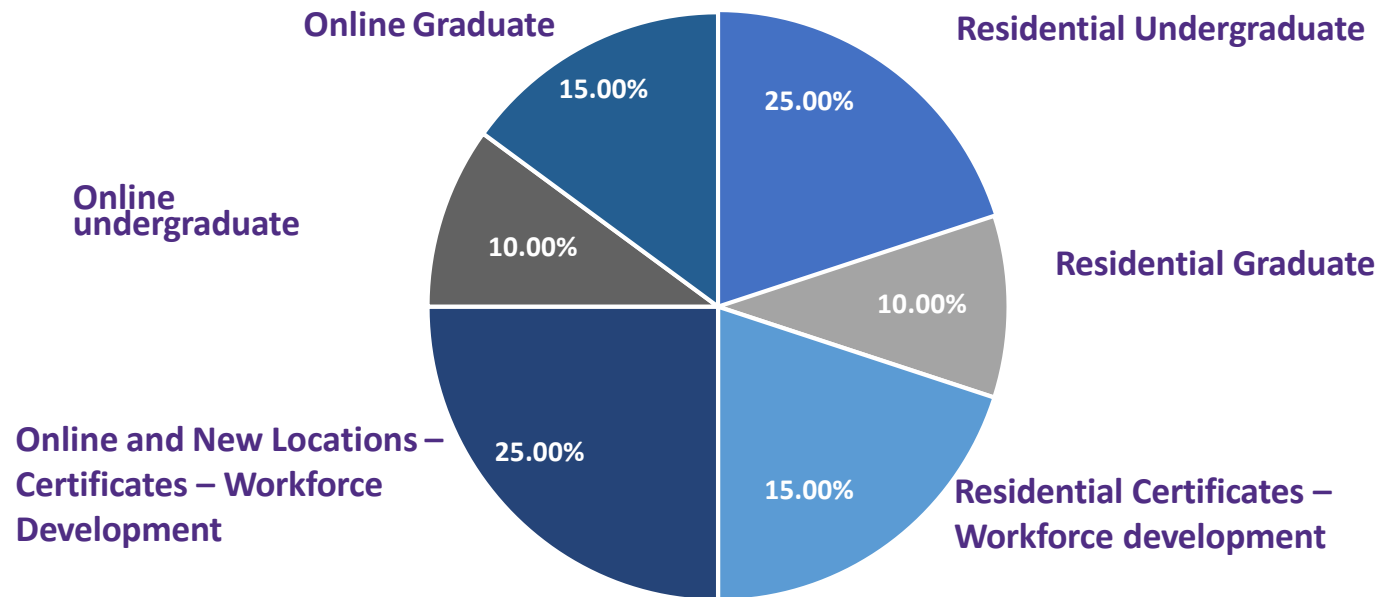


Source: <https://www.insidehighered.com/quicktakes/2019/05/30/college-enrollment-declines-continue#:~:text=College%20enrollment%20in%20the%20U.S.,National%20Student%20Clearinghouse%20Research%20Center.&text=The%20overall%20decline%20this%20spring,300%2C000%20students%2C%20the%20center%20found.>

Future economic models will be quite different

Creating a comprehensive portfolio of major revenue segments:

Example of a diversified portfolio



Creating **strategic growth building blocks (SGBBs)**

There are tremendous opportunities to serve new markets with new program offerings as a pathway towards revenue growth and diversification