Stony Brook University

IE+ AT THE CABINET LEVEL: AN ORGANIZATIONAL CASE STUDY

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May 30, 2024 | AIR Annual Forum (Denver, CO)

“Never let a serious crisis go to waste.”

- Rahm Emmanuel
  White House Chief of Staff (2009-10)
  Mayor of Chicago (2011-19)

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Overview

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Current State

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25,865 Fall 2023 headcount enrollment	**1400** Median SAT 2023 (test optional)	**93.5** Avg. high school GPA
68% Undergrad **32%** Graduate	**38%** Receive Pell grants	**30%** White **28%** Asian **19%** URM
16,309 Fall 2023 employees incl. health system	**3,028** Fall 2023 faculty full-time & part-time	**#58** U.S. News & World Report Rank 2024
4.5 Billion USD annual budget 2024	**1957** Founded	**2001** Joined AAU

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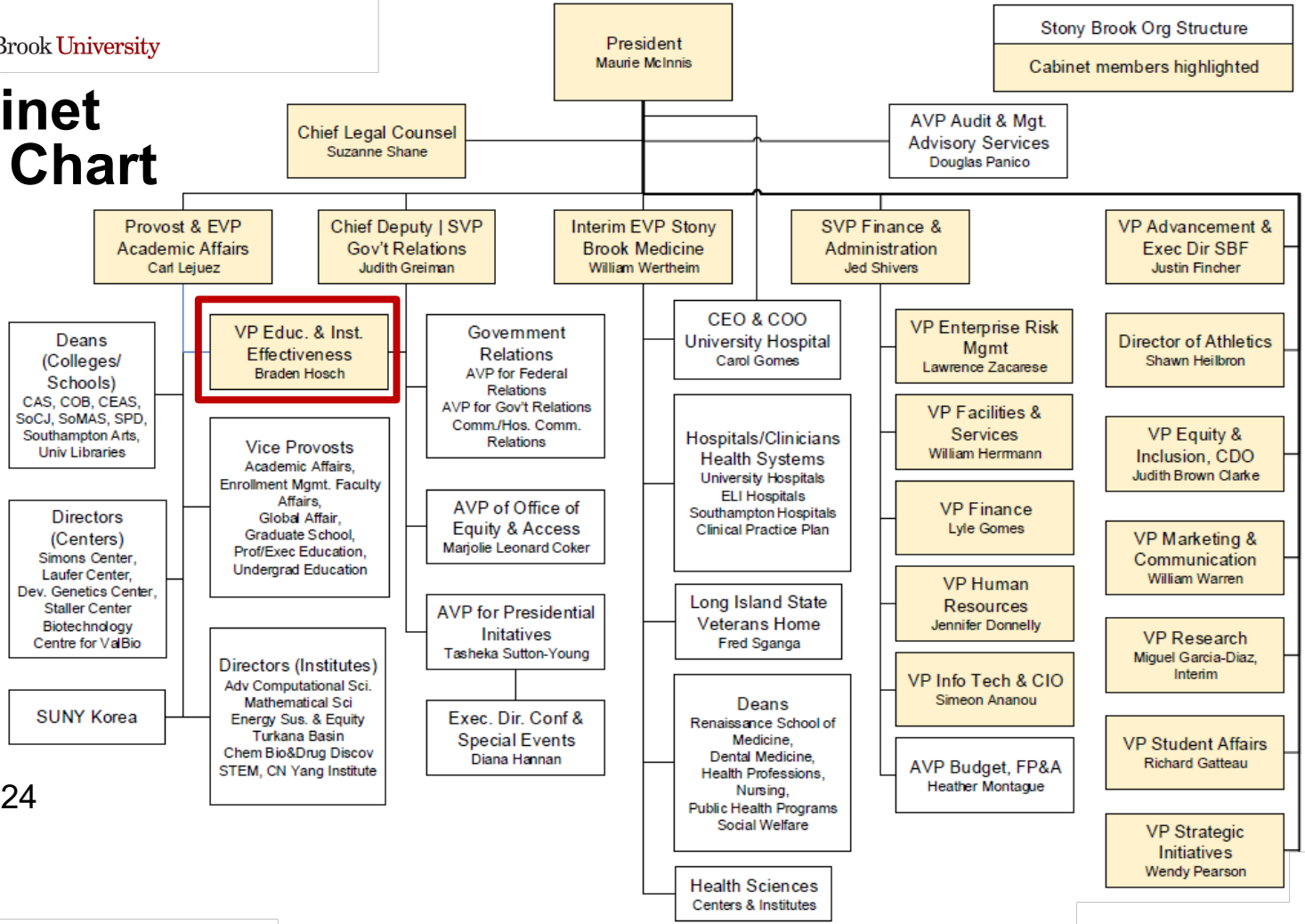
Cabinet Org Chart



May 2024

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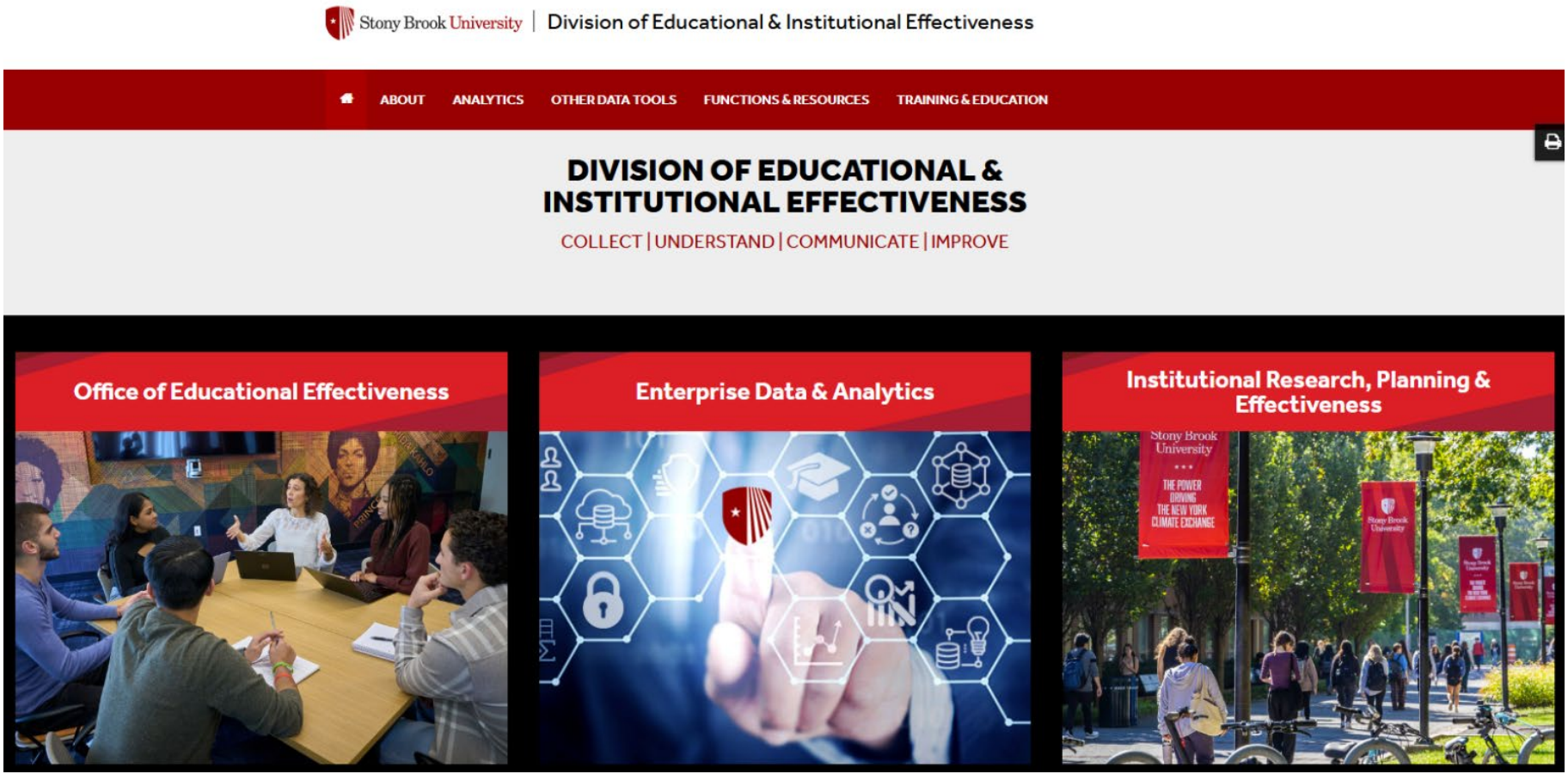

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https://www.stonybrook.edu/effectiveness/

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Mission and Strategic Goals

We enable Stony Brook University to improve through the collection, analysis, and use of data.

Collect administrative and contextual data using high-quality processes for extraction, storage, curation, indexing, and disposition.

Understand the data collected by us and by others to know its meaning, context, limitations, and implications for action.

Communicate data and analyses clearly and effectively to internal and external audiences.

Improve how the university and all members of its community achieve their goals.

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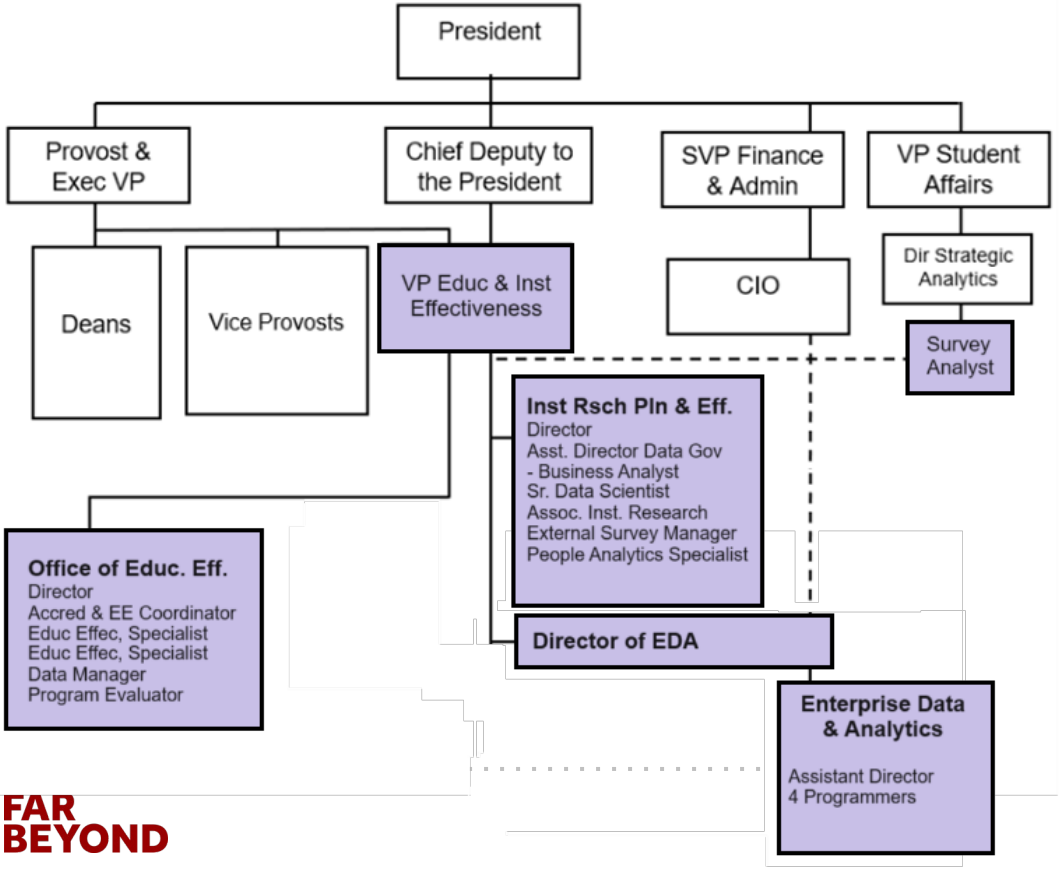
Org chart Sept 2022 and later



Cross-functional responsibilities

- Accreditation
- Strategic Plan Monitoring
- Data Governance

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Collaborations Made Easier By Cabinet-Level Position

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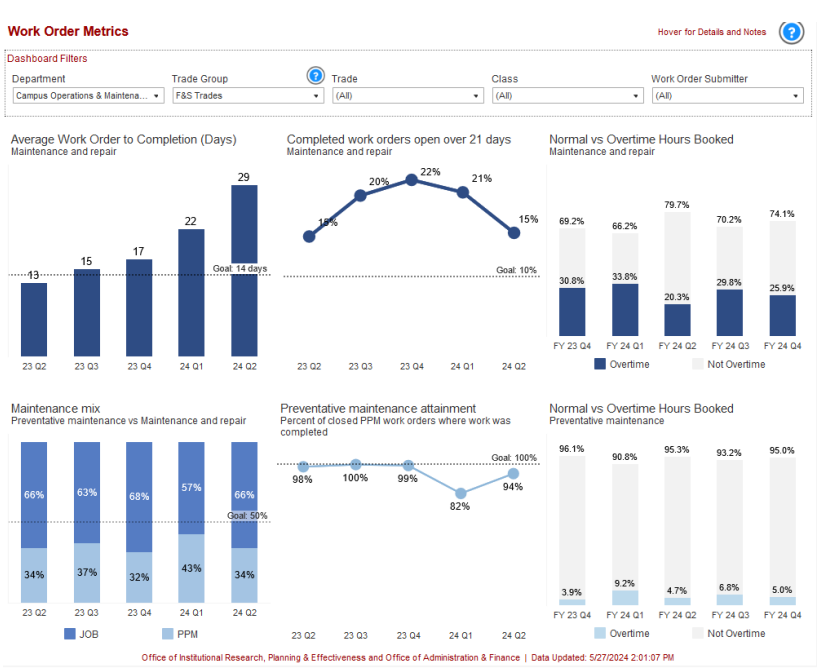
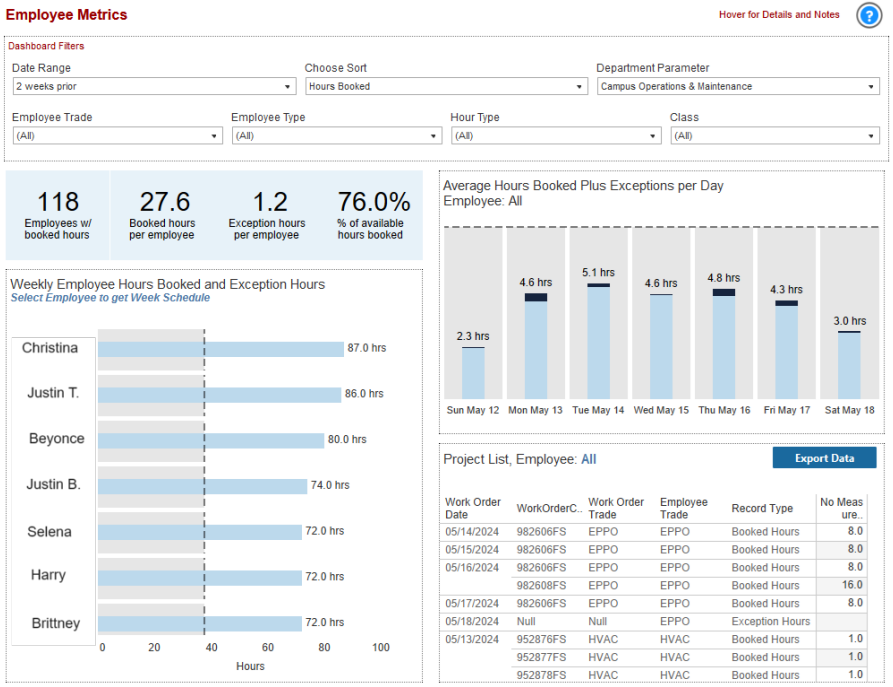
Work Orders Dashboards
Partners: Institutional Research, Analytics, Facilities & Services





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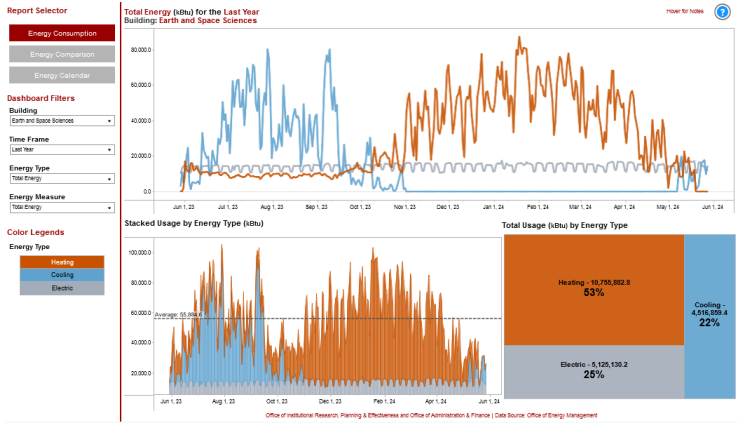
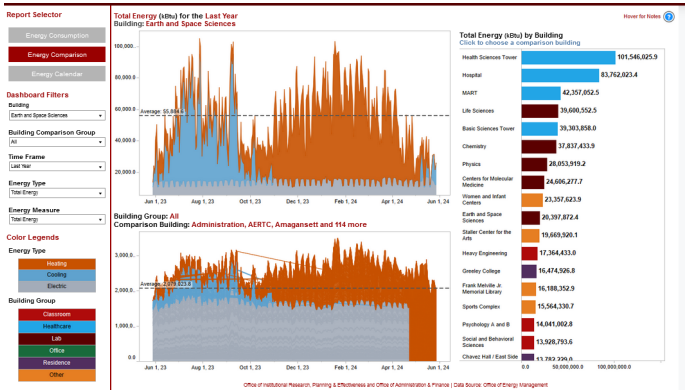
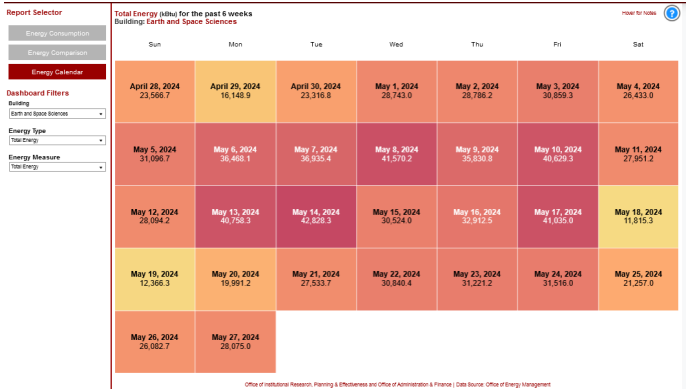
Energy Dashboards
Partners: Analytics, Data Warehousing, Sustainability







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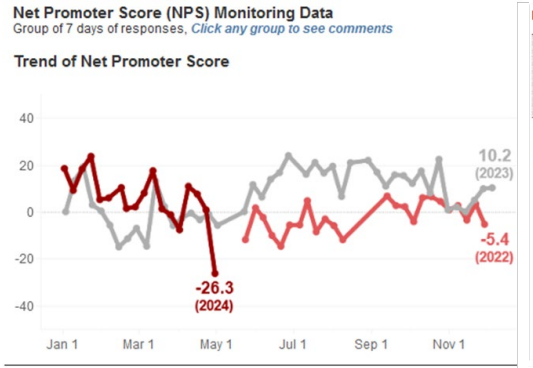
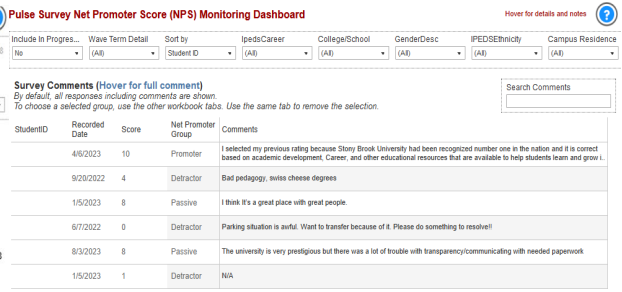
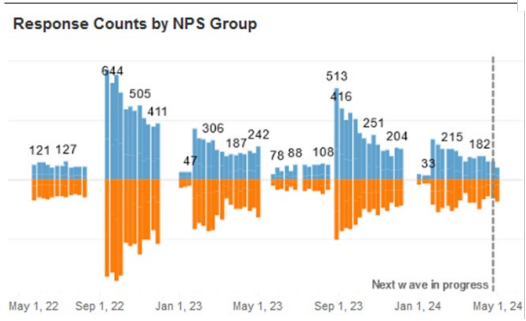
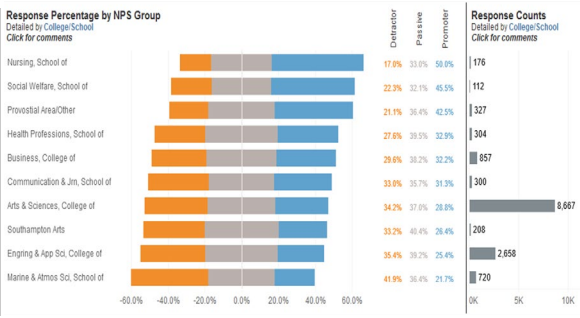
Weekly Pulse Survey
Partners: Institutional Research, Analytics, Student Affairs









Themes from coded comments (2022-23)

	Activities	Professors	Support	Academics	Total	Program	Dining	Cost UGRD	Cost GRAD	Parking
Promoters	36%	38%	38%	34%	***17%***	30%	14%	17%	15%	6%
Passives	45%	31%	29%	35%	***28%***	30%	40%	35%	20%	25%
Detractors	19%	31%	33%	31%	***25%***	41%	46%	48%	65%	70%
NPS	17	8	5	3	-8	-11	-31	-31	-51	-64

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Program Outcomes
Partners: Educational Effectiveness, Institutional Research

Anthropology B.A.

LEARNING OBJECTIVES

1. Upon completion of the degree, students should be able to identify how we differ from and are similar to each other, non-human primates, and non-primates from biological, behavioral, and cultural perspectives.

2. Upon completion of the degree, students should be able to describe the biogeographic and environmental contexts in which modern humans and our living (and fossil) primate relatives originated, adapted, evolved, and live today.

3. Upon completion of the degree, students should be able to recognize how biology, cognition, society, and technology has changed and is changing over space and time in the human lineage.

4. Upon completion of the degree, students should be able to explain interconnections between social and biological (including environmental) systems and processes in past and present times and describe how anthropologists evaluate these relationships.

5. Upon completion of the degree, students should be able to describe primate (including humans; living and extinct) evolutionary relationships and their behavioral and anatomical connections with their environments.

6. Upon completion of the degree, students should be able to apply anthropological method & theory to analyze and contextualize interactions between groups of people (past or present, on global or local scales).

7. Upon completion of the degree, students should be able to identify connections that anthropologists make between their research and current environmental, economic, and social issues.

8. Upon completion of the degree, students should be able to locate and assemble prior research on anthropological topics from different sources and evaluate accessed information for factual accuracy and relevance to evolutionary, historical, and contemporary anthropological issues.

9. Upon completion of the degree, students should be able to describe methods that anthropologists use to acquire new data to analyze biological and social phenomena, and/or select data and methods appropriate to investigating a research question.

10. Upon completion of the degree, students should be able to analyze data using quantitative and/or qualitative approaches to address specific anthropological questions, interpret analytical results, and apply them to larger issues.

11. Upon completion of the degree, students should be able to discuss the ethical responsibilities of anthropologists to the human and nonhuman individuals and populations whose lives and material remains they document, as well as those who may be affected by research activities, findings, and their implications.

12. Upon completion of the degree, students should be able to author a multi-page paper consistent with academic standards in Anthropology.

13. Upon completion of the degree, students should be able to deliver an oral presentation consistent with academic standards in Anthropology.

SUCCESS RATES

94.1%
6-year graduation rate

4.30
Avg. years to degree

MEDIAN EARNINGS

$67,494
10 years after graduation

$51,272
5 years after graduation

$26,031
1 year after graduation

PLACEMENT
2 years after graduation

62.2%
Working in New York

37.1%
Continuing Education

CAREERS ANTHROPOLOGY B.A. GRADUATES PURSUE

- Archaeological Field Specialist
- Primatologist
- Museum Administrator
- Market Research Analyst
- Cultural ambassador
- Freelance Contributor
- Cultural Resource Manager
- Urban Planner
- Teacher / Professor
- Social worker

English B.A.

LEARNING OBJECTIVES

1. Upon completion of the degree, students should be able to read texts closely with attention to nuances of language, content, and form; such texts include published works and drafts of student writing for the purposes of peer review.

2. Upon completion of the degree, students should be able to locate, evaluate, synthesize and incorporate relevant primary and secondary source materials into thesis-driven, interpretive essays of increasing length and complexity.

3. Upon completion of the degree, students should be able to understand conventions of literary study, including: familiarity with literary terms, genres, devices; knowledge of poetic, dramatic, narrative and rhetorical forms; awareness of literary criticism and theory.

CAREERS ENGLISH B.A. GRADUATES PURSUE

- Author
- Television / Entertainment Writer
- Copywriter / Editor / Journalist
- Speech Writer
- Educational Products/Services Manager
- Teacher (many variations)
- Librarian
- Attorney
- Social Media Manager
- Grant Writer

SUCCESS RATES

74.6%
6-year graduation rate

4.20
Avg. years to degree

MEDIAN EARNINGS

$65,139
10 years after graduation

$51,662
5 years after graduation

$29,093
1 year after graduation

PLACEMENT
2 years after graduation

74.8%
Working in New York

48.3%
Continuing Education

Mechanical Engineering B.E.

LEARNING OBJECTIVES

1. Students will demonstrate an ability to apply knowledge of mathematics, science, and engineering.

2. Students will demonstrate an ability to design and conduct experiments, as well as to analyze and interpret data.

3. Students will demonstrate an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.

4. Students will demonstrate an ability to function on multidisciplinary teams.

5. Students will demonstrate an ability to identify, formulate, and solve engineering problems.

6. Students will demonstrate an understanding of professional and ethical responsibility.

7. Students will demonstrate an ability to communicate effectively.

8. Students will demonstrate the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.

9. Students will demonstrate a recognition of the need for, and an ability to engage in life-long learning.

10. Students will demonstrate a knowledge of contemporary issues.

11. Students will demonstrate an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

12. Students will demonstrate an ability to apply the principle of mathematics through multivariate calculus and differential equations.

13. Students will demonstrate an ability to model, analyze, design and realize physical systems, components, or processes.

14. Students will demonstrate an ability to work professionally in both thermal and mechanical systems areas.

CAREERS MECHANICAL ENGINEERING B.E. GRADUATES PURSUE

- Academia/Teacher
- Automotive Engineer
- Environmental Engineer
- Refrigeration Engineer - HVAC (Heating, ventilation, and air conditioning)
- Thermodynamics Engineering Consultant
- Aerospace Engineering
- Energy Specialist
- Manufacturing/Production Engineer
- Reliability/Testing Engineer

SUCCESS RATES

79.6%
6-year graduation rate

3.94
Avg. years to degree

MEDIAN EARNINGS

$104,573
10 years after graduation

$83,392
5 years after graduation

$57,625
1 year after graduation

PLACEMENT
2 years after graduation

71.4%
Working in New York

39.0%
Continuing Education

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Transformation

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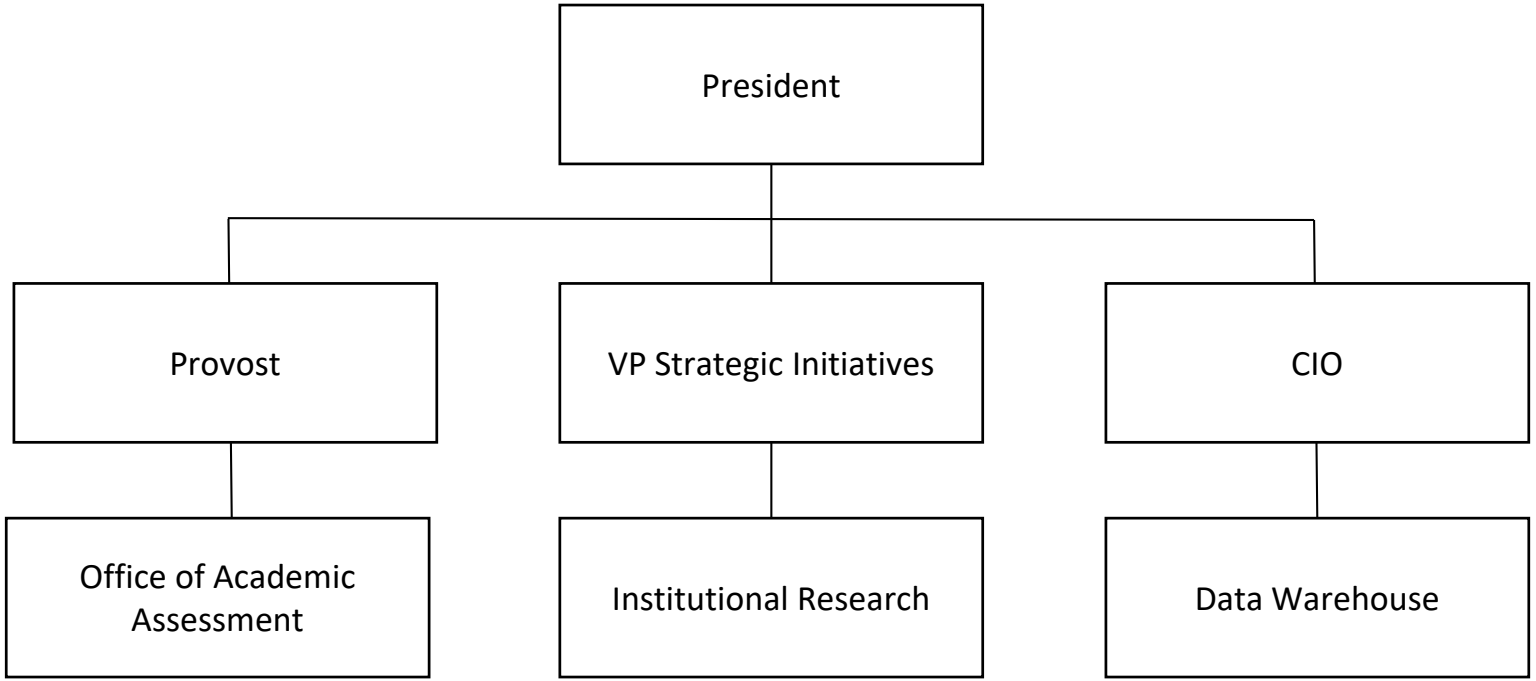
Prior State Org Charts



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Transformation of Assessment Function

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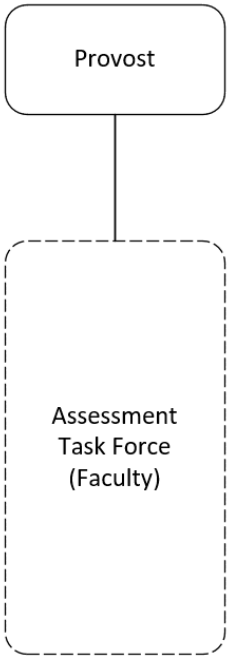
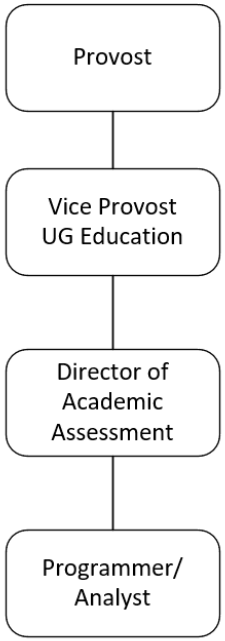
Assessment Structures Prior to 2022

Assessment Task Force
2011-2014



Numerous accreditation recommendations about assessment (2014)

Office of Academic Assessment
2017-2021



SLOW Progress. Disbanded 2021

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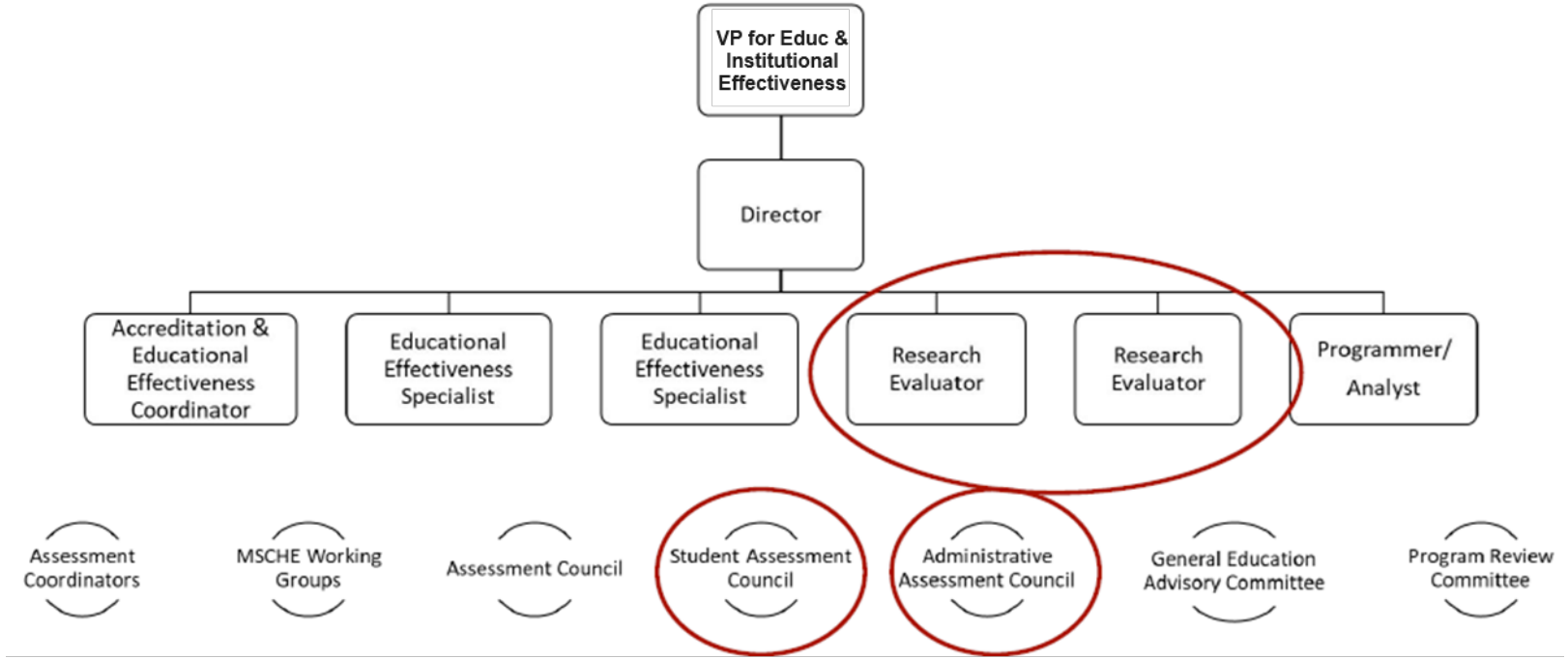
Office of Educational Effectiveness (2022 -)



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Accomplishments - Assessment

Academic Programmatic Assessment

- Every academic program has an identified assessment coordinator.
- Achieved a 95% collection rate of academic assessment reports in both 2022 and 2023.
- Collected a total of 350 assessment reports across two years.

General Education Assessment

- Evaluated 39,612 duplicated students.
- Assessed performance across all 69 learning outcomes.
- Conducted assessments in 210 course sections involving 107 faculty members.

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Accomplishments – Groups, Policies & Procedures

Assessment Council

- Assessment policy
- Feedback mechanism

General Education Advisory Committee (GEAC)

- Student learning outcome alignment and modification

Re-Booted Program Review

- Staffed ad hoc committee to develop program review policy & procedures
- Facilitation of 8 programs through new process in 2023-24

Accreditation Advisory Group

- Liaisons from programs with specialized accreditation

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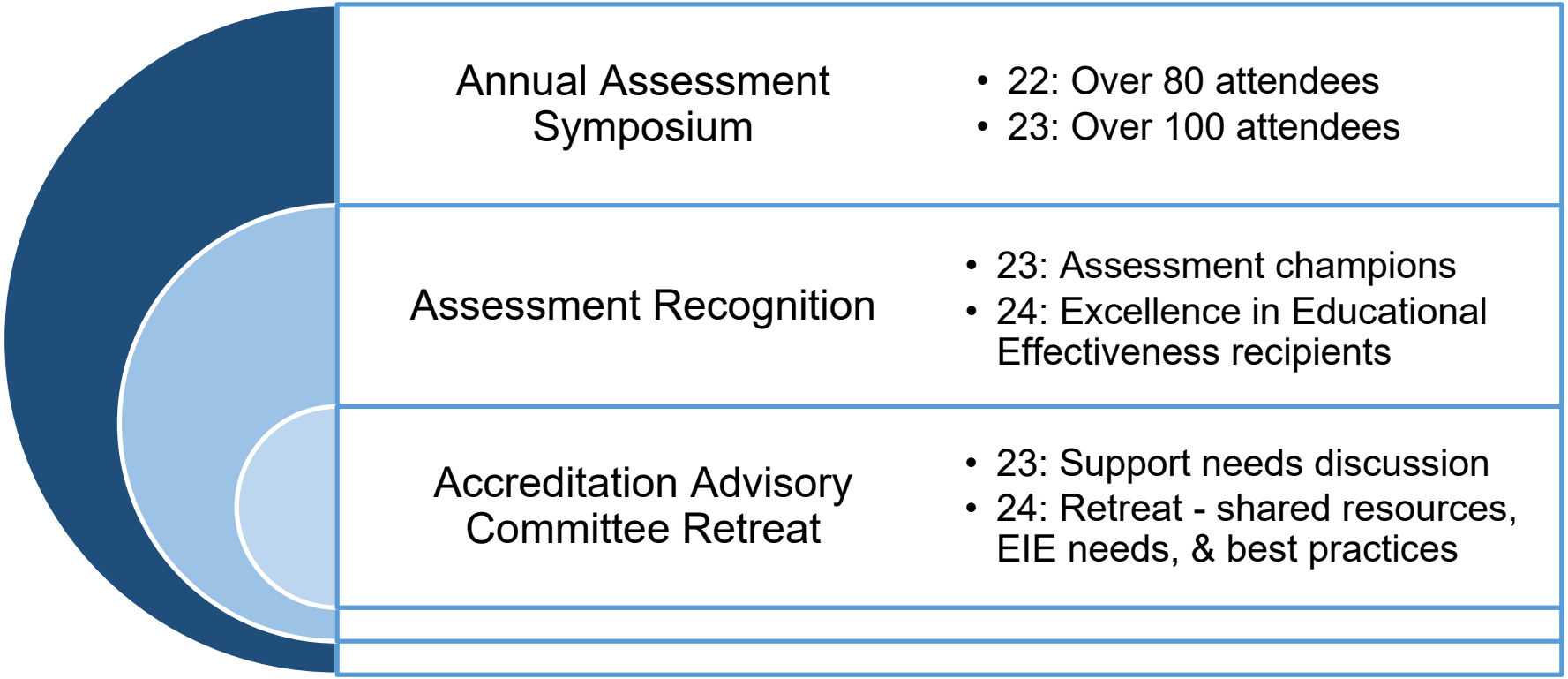
Accomplishments - Events



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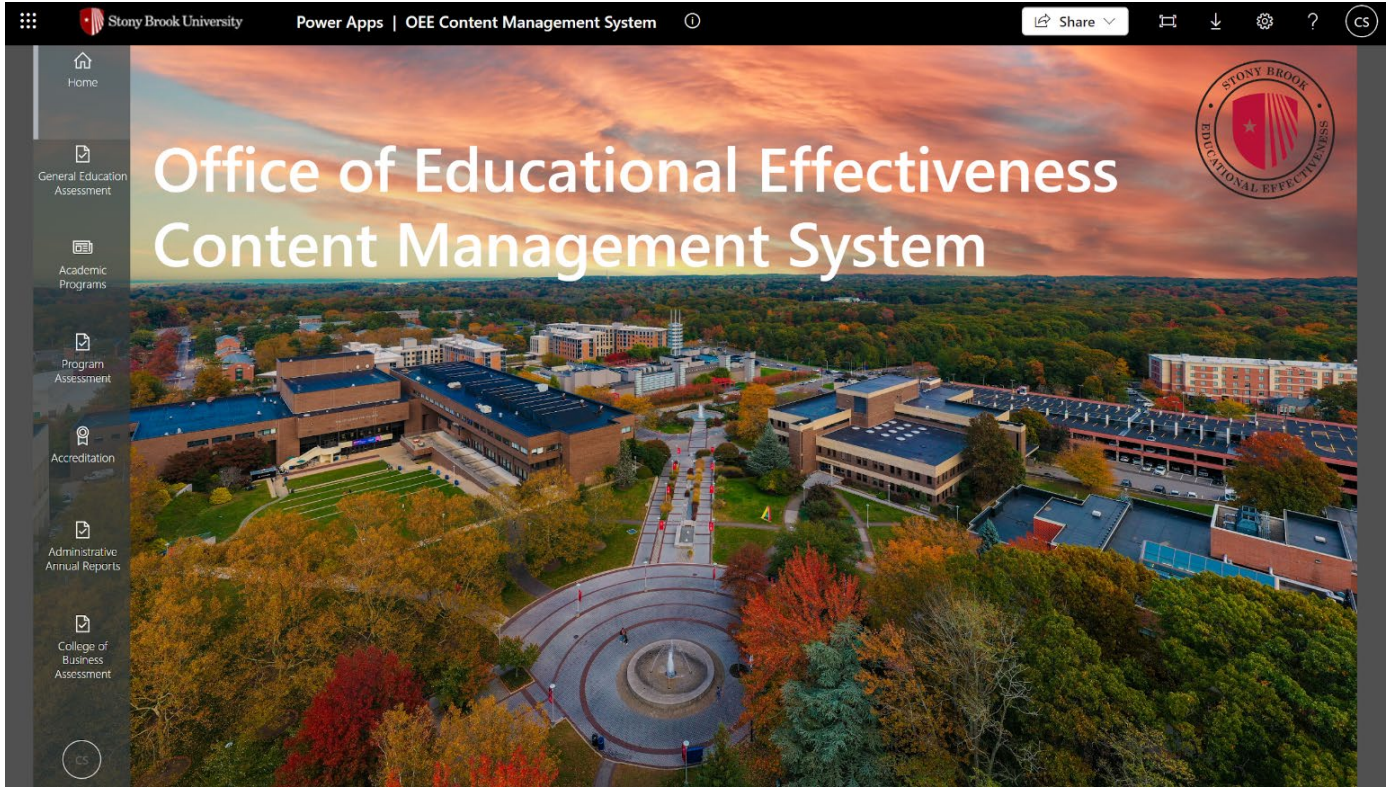
Accomplishments – Homegrown Content Management System



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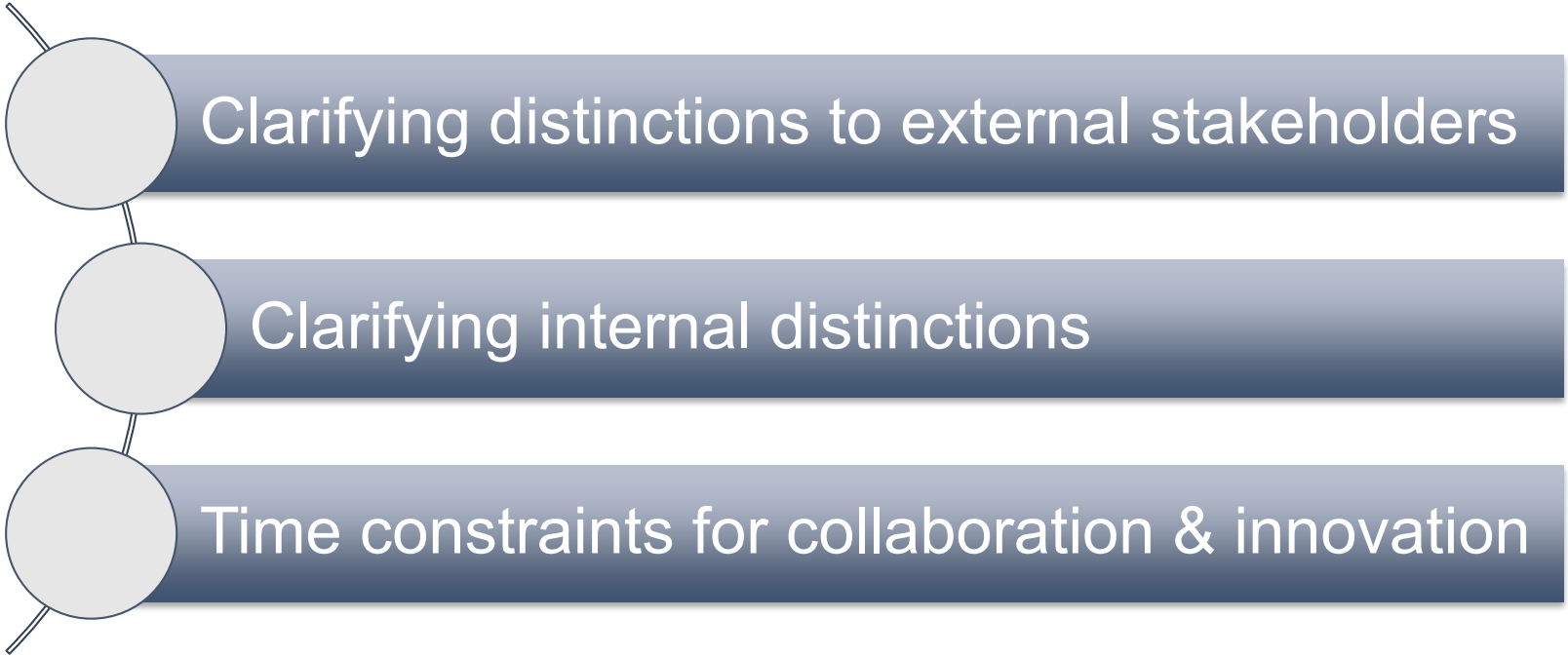
Challenges



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Transformation of IR/IE Function

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Evolution from Institutional Research to IE+

Prior State (until 2010)	Transformation (2013-2018)	Advanced Analytics (2019 - 2022)	Expanded Scope (2022 -

• Traditional IR
  • Students
  • Courses
  • Faculty
• "We deal with numbers without the dollar sign"
 	
• Leader: Director
	• New leadership
	• New mission/scope
	• Restructuring
	• New technology
	• Embedded EDA Director
	• Data governance
	
	• Leader: Asst. VP
		• Data strategy
		• Visualization
		• Modeling
		• Policy analysis
		
		• Leader: Assoc. VP
			• Accreditation
			• Assessment
			• Strategic plan monitoring
			• Analyst consolidation
			
			• Leader: VP

- To what extent are we accomplishing our mission? How do we know? How do we improve?

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Structural and Cultural Differences

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Institutional Research, Business Intelligence, & Assessment Structural Differences

	Business Intelligence	**Institutional Research**	Assessment
Organizational Reporting	IT	Provost (sometimes Planning)	Provost
Data Realms	ERP	Student & Faculty	Programmatic
Responsibilities	Data Warehouse Reporting Environment [Data Distribution]	Official Reporting Ad Hoc Requests [Data Analysis]	Process Management [Motivate others to prepare reports]
Constituencies	Internal Admin. Functions Deans	Internal & External Academic Functions Deans & Central Admin	Internal Academic External Accreditors
Data Usage	Operational Decision Support	Official Reporting Decision Support	Internal decision support External accountability
Age of Organization	Newer	Well Established (Predates BI)	Since late 1990s early 2000s

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BI & IR from Childers, H. (2016). “Can business intelligence and IR teams be combined?” Annual Forum of the Association of Institutional Research, New Orleans. Assessment features added by Hosch & Scott.

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Institutional Research, Business Intelligence, & Assessment Cultural Differences

	Business Intelligence	Institutional Research	Assessment
Educational Background	BA/BS, MS, IT-related	PhD common, Social Sci or Stats	MA/MS or PhD Education / Soc Sci.
Career Background	Not Academic Sometimes Not Higher Ed	Higher Ed	Higher Ed
Career Opportunities	Outside Higher Ed	Higher Ed	Higher Ed
Data Manipulation	A Crime	A Requirement	Another unit's responsibility
Data Openness	"Democratization of Data"	Manage Carefully	Manage Very Carefully
Data Quality	Provenance Fidelity to Source	Conform to Definition; Fitness for Use; Consistency	Accepted as Imperfect
Data Understanding	Operational & Managerial Context	Institutional & Strategic Context	Programmatic Context
Agility	Generally Slow & Deliberate Enterprise Perspective	Responsive to Ad Hoc Requests	Iterative; limited by partner and institutional capacities
Attitude	Optimistic	Skeptical	Collegial
Organizational IQ	Can be Strong in ERP- Related Areas	Strong in Academic-Related Functions	Strong Interpersonal Skills, Esp. w Faculty

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From Childers, H. (2016). "Can business intelligence and IR teams be combined?" Annual Forum of the Association of Institutional Research, New Orleans.

Final Thoughts

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Takeaways-How we got here

Organizational difficulties drove many of the developments

Pre-existing relationships among leaders (standing meetings, committees, etc.); evolved into structure based strengths

Leaders had multiple organizational plans prepared for when opportunities arose

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Takeaways-Why it works

- More than IR is required in the portfolio of a cabinet member
- Resources are required (and were provided) to operate at a high level
- The right (talented) people into the right roles
- Transparency/ communication is a new value; the matrixed structure enables this and requires it.

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