

## Committee Meeting Minutes

### ACADEMIC AFFAIRS COMMITTEE

Lavery Hall 320

June 5, 2017

#### Board Members Present

Tom Ryan, chair, Greta Harris, Debbie Petrine, Monty Abbas (faculty representative), Tara Reel (graduate student representative). Jim Chapman, rector.

#### Guests

Beth Armstrong, Janice Austin, Tom Bluestein, Kris Bush, Mary Grace Campos, Sheila Carter Tod, D'Elia Chandler, Rami Dalloul, Karen DePauw, Juan Espinoza, John Ferris, Jack Finney, Mike Friedlander, Rachel Gabriele, Cathy Grimes, Kay Heidbreder, Rachel Holloway, Robin Jones, Peggy Layne, Paul Lendway, Roxanna Link, Marc Lewis, Theresa Mayer, Steve McKnight, Brett Netto, Kim O'Rourke, Ellen Plummer, Steven Poelzing, Menah Pratt-Clarke, Thanassis Rikakis, Hans Robinson, Micah Roediger, Karen Eley Sanders, Timothy Sands, Sara Simpkins, Ken Smith, Natasha Smith, Rick Sparks, Judy Taylor, Audra Van Wart.

#### OPEN SESSION

1. **Welcome.** Tom Ryan, chair of the Academic Affairs committee, welcomed committee members and guests and invited participants to introduce themselves.
2. **Approval of Minutes. A motion passed unanimously to approve the minutes of the committee's April 3, 2017 meeting.**
3. **Report of Closed Session Action Items.** The Academic Affairs committee considered one reappointment to Alumni Distinguished Professor, one appointment to Emerita status, one appointment to Endowed Professorship, and 89 promotion and tenure appointments. **All resolutions considered in the committee's Closed Session passed unanimously.**

The Resolution for the Exception to the Virginia Conflict of Interests Act was withdrawn by the Committee and was not considered.

#### 4. **Faculty Affairs**

**a) Reappointment to Endowed Professorship.** Jack Finney, vice provost for faculty affairs, reported on the reappointment of Mark Hanigan as the David R. and Margaret Lincicome Professor of Agriculture.

## 5. Academic Administration

- a) **Pratt Fund 2017-18 Budgets. The committee reviewed and unanimously approved the 2017-2018 Pratt Fund Budget.**

This resolution is presented to the full board by the Finance and Audit Committee for approval.

- b) **Resolution to Clarify Language on Instructional Faculty in the Faculty Handbook Regarding Teaching Responsibilities and Expectations.**

The committee reviewed and unanimously approved the resolution.

- c) **Resolution to Amend Procedures for Faculty Appointments with Tenure.**

The committee reviewed and unanimously approved the resolution.

- d) **Resolution to Amend the Promotion Guidelines for Faculty on Restricted Appointments.**

The committee reviewed and unanimously approved the resolution.

- e) **Resolution to Amend the Promotion Guidelines for Non-Tenure-Track Collegiate Faculty Appointments.**

The committee reviewed and unanimously approved the resolution.

- f) **Resolution Clarifying Standards of Appeals Language in Faculty Handbook.**

The committee reviewed and unanimously approved the resolution.

- g) **Resolution to Revise the Constitution of University Council.**

The committee reviewed and unanimously approved the resolution.

## 6. Academic Affairs

- a) **Resolution to Approve the Degree Title Change from Doctor of Philosophy in Human Development to Doctor of Philosophy in Human Development and Family Science.**

**The committee reviewed and unanimously approved the resolution.**

- b) **Resolution to Approve the Degree Title Change from Master of Science in Human Development to Master of Science in Human Development and Family Science.**

**The committee reviewed and unanimously approved the resolution.**

- c) **Acceptance of Annual Report of the Enrollment Management Group.** Juan Espinoza, director of diversity and access initiatives, Karen Eley Sanders, associate vice provost for college access, and Elizabeth Armstrong, director of university scholarships and financial aid, presented to the committee the annual report on enrollment management. In fall 2017, Virginia Tech will enroll its largest and most diverse (both domestically and globally) entering cohort. As of this date (and subject to change), the university accepted 1,007 transfer students 700 of whom transferred to Virginia Tech from the Virginia Community College System. Included in the report are strategic enrollment initiatives that include outreach and access, recruitment, and yield efforts. Committee members encourage the university to continue to aggressively pursue all efforts to increase the diversity of admitted students.

**The committee voted unanimously to accept the report of the Enrollment Management Group.**

- d) **Resolution to Establish a Master of Science in Translational Biology, Medicine and Health.** Audra Van Wart, director of education and training at the Virginia Tech Carilion Research Institute, presented a resolution requesting approval of a master of science in translational biology, medicine and health.

**The committee reviewed and unanimously approved the resolution.**

## **7. Provost's Update**

- a) **Evidence-based Assessing and Incentivizing of a Global, Beyond Boundaries Land Grant and Towards a Beyond Boundaries Scorecard.** Thanassis Rikakis, executive vice president and provost, Ken Smith, vice provost for academic resource management, and Jack Finney presented to the committee an overview of the elements associated with implementing the Beyond Boundaries vision in academic colleges and departments. Colleges and departments are participating in efforts to identify cross-university strategic strengths. Metrics, performance budgeting, and

supporting faculty success will advance the implementation of strategic strengths across all departments and colleges. The committee suggests that this information be shared with the full board in an information session.

**SUMMARY**

**Reappointments to Endowed Chairs, Professorships, or Fellowships (1)**

**June 5, 2017**

**College of Agriculture and Life Sciences**

Mark Hanigan

David R. and Margaret Lincicome  
Professor of Agriculture

**ENDOWED PROFESSORSHIP**  
**David R. and Margaret Lincicome Professorship of Agriculture**

The David R. and Margaret Lincicome Professorship was established in the College of Agriculture and Life Sciences by a gift from David R. and Margaret Lincicome. The endowed funds are directed towards funding support for an endowed chair or professorship in the college and directed towards recognition of a faculty member who is making significant contributions to research and teaching in animal related programs in the College of Agriculture and Life Sciences. On the recommendation of the College of Agriculture and Life Sciences honorifics committee, Dean Alan Grant nominates Dr. Mark Hanigan for reappointment to the David R. and Margaret Lincicome Professorship.

Dr. Hanigan is currently a faculty member in Dairy Science and received his Ph.D. from the University of California, Davis in 1991. He has established credentials as a leading authority in the modeling of nitrogen utilization by dairy animals. This work has two significant impacts. First, improved knowledge of nitrogen metabolism in ruminants enables enhanced production of milk proteins. Second, the capacity for improved nitrogen utilization reduces the impact of animal production on the environment.

Dr. Hanigan has an international reputation and is widely recognized as a world leader in the area of modeling mammary metabolism. He has given numerous invited talks, published numerous papers and book chapters, and is a member of the Nutrient Requirements of Dairy Cattle Committee for the National Academics of Sciences, Engineering, and Medicine. Dr. Hanigan is an outstanding instructor and advises undergraduate students, M.S. and Ph.D. students, and post-doctoral scientists. He and his collaborators have also secured more than \$17M funding to support the research program. Dr. Hanigan embodies the best qualities of a faculty member in a land-grant university and particularly Virginia Tech. Dr. Hanigan's actions mirror our motto "Ut Prosim" and are evident in his willingness to satisfy not just his professional success, but to do what is best for the future of his department and college.

**REAPPOINTMENT:**

The president and executive vice president and provost have confirmed the reappointment of Dr. Mark Hanigan as The David R. and Margaret Lincicome Professorship of Agriculture for a five-year period effective July 1, 2017 with a salary supplement as provided by the endowment and, if available, with funds from the eminent scholar match program.

June 5, 2017

# Enrollment Management Report

Board of Visitors—June 2017



# College Access Collaborative





**Goal: Increase campus and community-based STEM-H experiential learning opportunities**

**8,744 elementary, middle and high school students engaged**

# **Goal: Enhance school counselors' knowledge about the college application and financial aid processes**

**53** counselors from **44** schools



# **Goal: Align curricula with expectations of first-year of college**

**152 teachers/faculty from 30 schools/community colleges**

- English Curriculum Alignment
- Southern Virginia STEM Summit
- Spring Conference on the Teaching of Writing
- Vocabulary, Math and Science Curricular Alignment
- Teacher Perceptions of Bias in Teaching Math and Science
- The Game Changers, English-based Coding Language
- Research Experience for STEM High School Teachers
- GenCyber Camp for Secondary School Teachers
- Problem-based Science Instruction

**Goal: Increase engagement with  
prospective community college  
transfer students**

**1,652 community college students**



Virginia Tech junior J'Nai Phillips, right, and fellow student Alyssa Johnson at the 2016 Annual Biomedical Research Conference for Minority Students in Tampa, Florida.

*“Research led me to food chemistry, which then led me to food science as a whole. After seeing the good I could do as a food scientist (and as someone with a passion for food), I worked hard to get my prerequisites done so I could transfer into the program at Virginia Tech.”—J'Nai Phillips*

# Undergraduate Admissions



# Undergraduate Admissions Diversity Efforts

- Expanded the **holistic application review** to include an opportunity for students to share their unique stories through video (ZeeMee)
- Prior to final decisions being released, all **underrepresented decisions were reviewed** by members of the College Access Collaborative
- **Expand fee waiver program** to allow for more underserved students to submit an application (1868 fee waivers granted for 2017)

# Diversity Programming

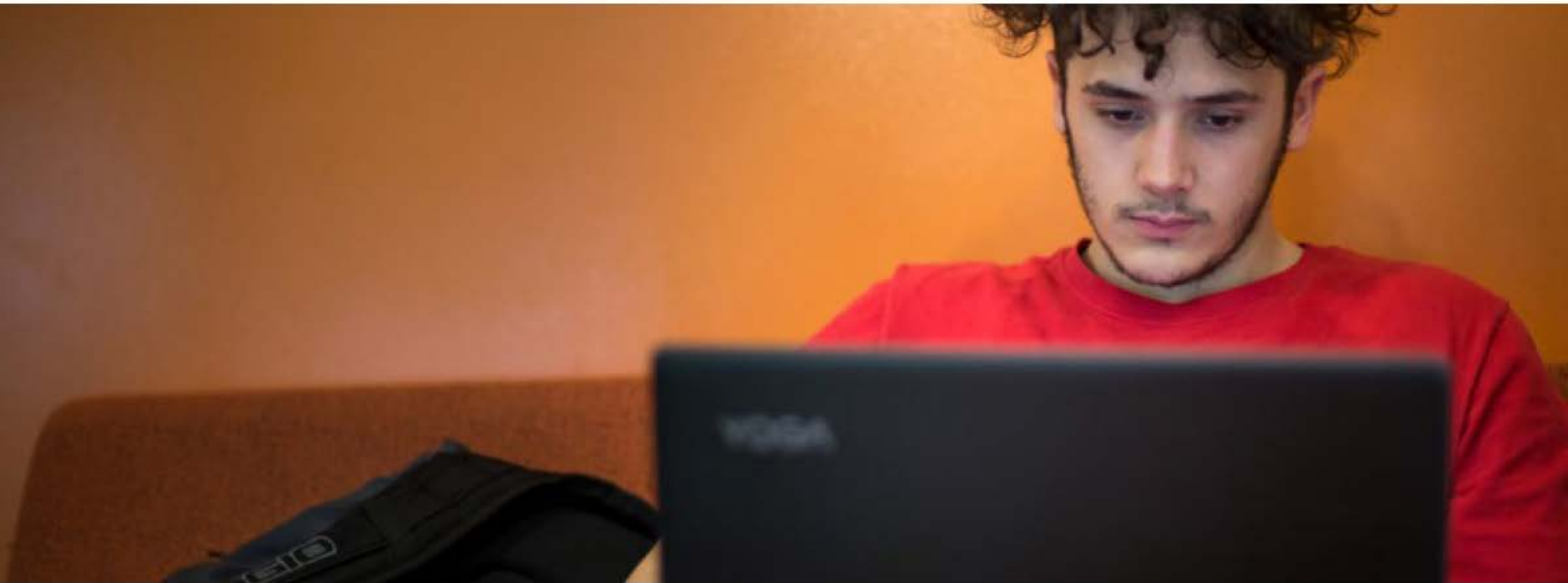
- Fall Visitation
- Gateway
- Yates Project/Mentors
- Hispanic College Institute
- Project 2022 Recruitment Day
- Project 2022 Yield Program



# International Recruitment Efforts

- Created **international recruitment plan** focused on emerging markets
- Diversity of country and diversity of major
- Traveled to over **20 countries** for recruitment
- Executed effective **communication plan**

# Financial Aid



# Initiative

## Leverage and enhance scholarships

- College + university awarding synergy
- Enhanced university scholarship awards
- Scholarship management system

# Initiative

## Helping Students and Their Families Understand Debt:

- **“Know Your Loans and What It Means to Borrow”**  
sessions for students offered annually each fall to all students.
- **Loan Repayment Sessions** offered in late fall to December graduates and late spring to May graduates.

# Initiative

## Removing Barriers for students and families:

- **Retention:** Enhanced aid to financially at risk
- **Retention:** Campus partnerships for the financially at risk

# Acceptance of Report

# Evidence-based Assessing and Incentivizing of a Global, Beyond Boundaries Land Grant *and Towards a Beyond Boundaries Scorecard*

**Thanassis Rikakis, Executive Vice President and Provost**

**Ken Smith, Vice Provost for Resource Management and Institutional Effectiveness**

**Jack Finney, Vice Provost for Faculty Affairs**

**Virginia Tech Board of Visitors, Academic Affairs Committee**

**June 5, 2017**

# Key Components of a Global, Beyond Boundaries (BB) Land Grant that need to be Assessed and Incentivized

## I) Strategic strengths of scale – that can achieve national and global prominence

- Require customized benchmarking with peers and aspirational peers (bottom-up process)
- In most cases, it needs to be multifunction (research, education, engagement)
- Requires a multi-layer approach (and right-sizing per layer)
  - Departmental
  - College
  - Interdisciplinary
  - Transdisciplinary

## II) Important functions to maintain a comprehensive regional land grant

- Requires right-sizing

## III) Understand size, sites, and scope of university within the context of these Beyond Boundaries goals

## IV) Align resources to strategic planning



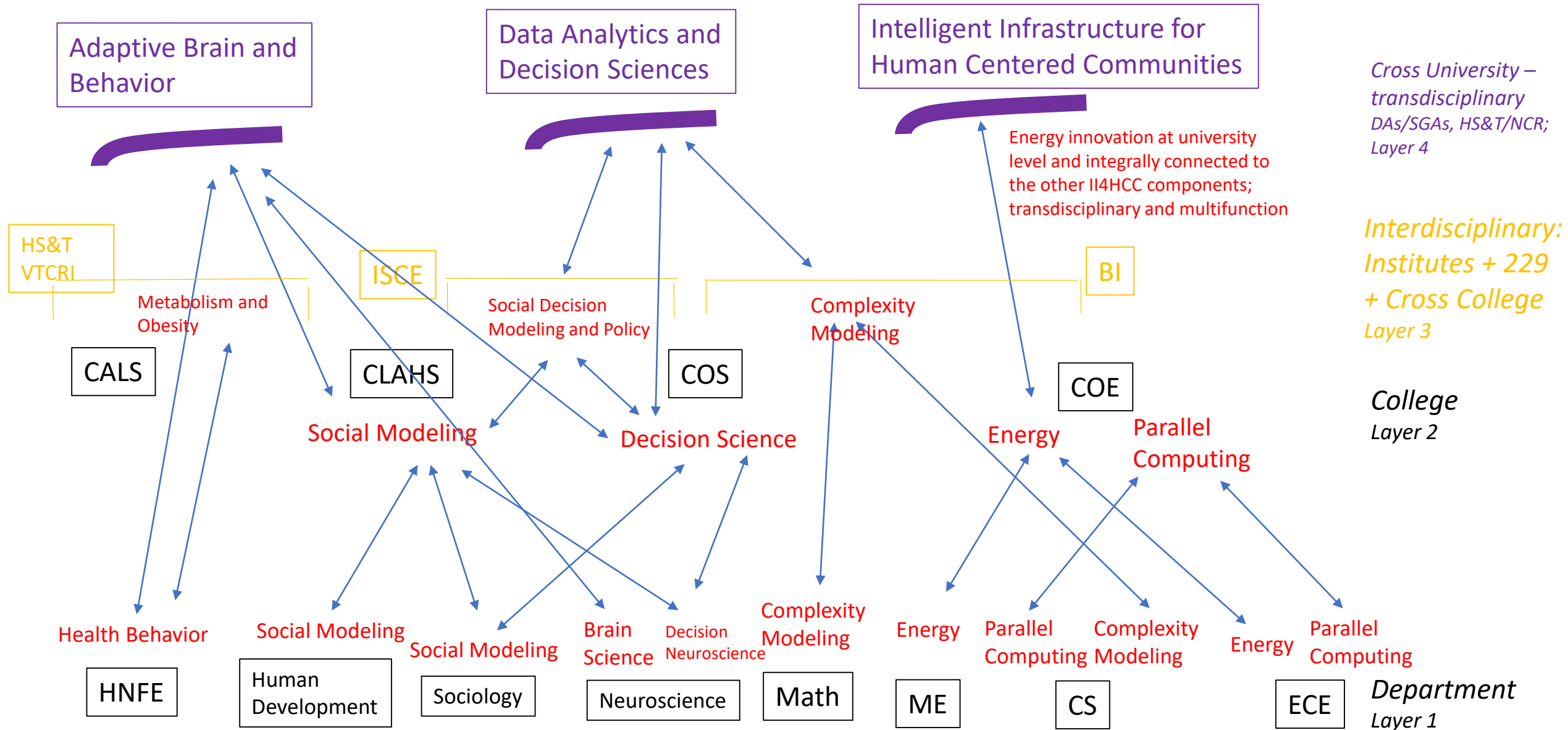
Strategic Reduction

Maintain Comprehensive Nature

Strategic Strengths



# An Example of a Multi-layer Network of Strategic Strengths



# Multi-layer Network of Strengths and VT-Shaped Knowledge

- The Verticals: Departmental and college disciplinary strengths

- Benchmarked (through bottom-up input) and monitored and supported through growth funding from new budget model: Partnership for Incentive Based Budget (PIBB)
- College/administrative partnering on focused outcomes as necessary



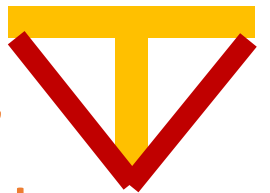
- The Horizontals: Destination Areas (DA), Pathways general education (and X+T), institutes, IGEPS, new interdisciplinary cohorts

- Benchmarked (through new BB metrics) and monitored and supported through partnership models (that are also integrated in college and administrative budgets (PIBB))
- Coordinated through cross-cutting committees: strategic research, VT-shaped learning, Advance VT, DA and institute stakeholders
- Multisite approach (cross-cutting, site-specific opportunities)



- The V

- Develop large-scale, multi-function (research, education, engagement, philanthropy) partnerships with industry and community with significant potential for societal engagement, service, and impact (HS&T, VANR and NCR growth within this context)
- Utilize partnerships and student life opportunities to advance formal and informal experiential learning (internships, research experiences, joint labs, live learn communities, and many more)



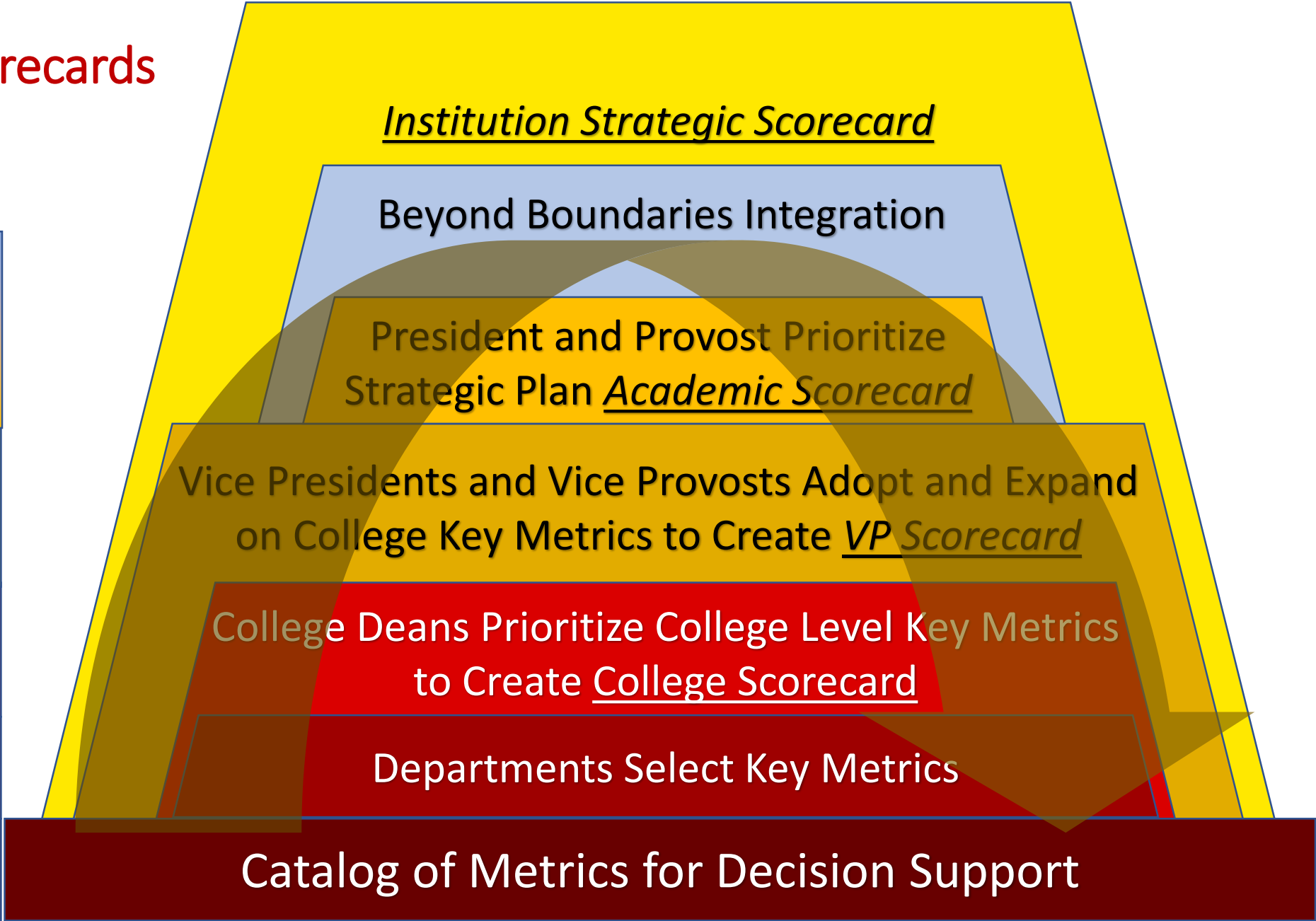
# Faculty Success in a Beyond Boundaries Context

- Support customized combination of activities across vertical, horizontal, and the V
- Allow dynamic, adaptable career paths
  - Five-year thesis concept
  - Multisite possibilities and rotations
- Customized paths to success
  - Customized sets of outcomes showing national recognition/distinction
  - Customized national cohorts of peers per group of faculty, or even individual faculty, for evidence of national recognition/distinction
  - Record customized agreements through MOUs
- Combine strengths of faculty to create an appropriately structured faculty for each unit's goals
  - Leadership for department head

# Update on Metrics and Performance Budget

# Metrics and Scorecards Development

Aug-Oct
May-Jul
Mar-Apr
Jan-Feb
Nov-Dec



# Metrics Categories

The Catalog of Metrics for Decision Support is organized by type and groups of metrics.

Unit Allocation Metrics are directly connected to resource generation and the strategic shaping of resource generating activities.

Scorecard Metrics include a broad range of possible measurements that track both quantity and quality outputs and outcomes and are more customizable to individual colleges and departments.

Validity. Does a measure count what is intended? Many of the measures count participants in various activities. In order for participation to be a valid measure of outcomes, a robust system of assessment and oversight of important metrics will be developed along with the data system.

Type	Group
Unit Allocation	Teaching – Student Credit Hours
	Enrollment - Headcounts
	External Fundraising
	External Sponsored Expense
Faculty Success Scorecard	Faculty Scholarship
	Faculty Teaching
	Faculty Engagement
	Faculty Diversity
Student Success Scorecard	Entering Students
	Continuing Students
	Graduating Students
	VT Shaped Students
	Student Diversity
Administrative Effectiveness Scorecard	Financial Management
	Continuous Improvement
	Efficiency and Cost Containment

# Unit Allocations

There are 22 unit allocation metrics that will ultimately be included in the performance budget model.

All unit allocation metrics apply to all colleges and the value associated with each is the same for each college.

Each unit allocation metric has a corresponding assigned value that represents either a baseline value for the output or a premium value associated with desired additional outcomes.

Group	Sub-Group	Short Description
Teaching – Student Credit Hours (SCH)	Credit Hour Baseline	SCH Baseline
	Credit Hour Premiums	SCH Course Rating
		SCH Depend Courses
		SCH Destination
		SCH Diversity Course
		SCH DWF Rates
		SCH Honors Course
		SCH Other Major
		SCH Pathways Course
		SCH Section Size
SCH Technology Assisted		
Enrollment - Headcounts	Enrollment Baseline	Majors Baseline
	Enrollment Premiums	Majors Destination Area Enrolled
		Majors Destination Area Facilitation
		Majors Not Primary
		Majors Out-of-State
		Majors Pathways Enrolled
Majors Pathways Facilitation		
External Fundraising	Fundraising Baseline	Annual Gifts
	Fundraising Premiums	Endowment Annual Gifts
External Sponsored Expense	Sponsored Expenditures Baseline	Sponsored Expenditures
	Sponsored Expenditures Premium	Industry Sponsored

Faculty  
Success  
Scorecard  
– with  
emerging  
trends  
from  
colleges

Faculty Success		Data Exists?		On Current Scorecard?
		Internal	Benchmark	
Faculty Scholarship	Refereed Publications	✓	✓	✓
	Citations Index	✓	✓	
	Conference Proceedings			
	Grant Activity	✓		✓
	Creative Works – Design, Performance etc.	✓		
Faculty Teaching	SCH per Faculty	✓	✓	
	Course Ratings	✓		
Faculty Engagement	Diversity Activities			
	International Activities			
	Service/Extension Impacts			
Faculty Diversity	Diverse Faculty Total	✓	✓	✓
	Diverse New Hires	✓		



Student Success Scorecard – with emerging trends from colleges

Student Success (part 1)		Data Exists?		On Current Scorecard?
		Internal	Benchmark	
Entering Students	Number of Applicants	✓	✓	
	Percent Offered That Enroll	✓	✓	
	Internal and External Transfers	✓		
Continuing Students	Degrees Awarded	✓	✓	✓
	Retention Rates	✓	✓	
	4 & 6 Year Graduation Rates	✓	✓	
Graduating Students	Working in Field	✓		
	Average Salary	✓	✓	

Student Success Scorecard – with emerging trends from colleges

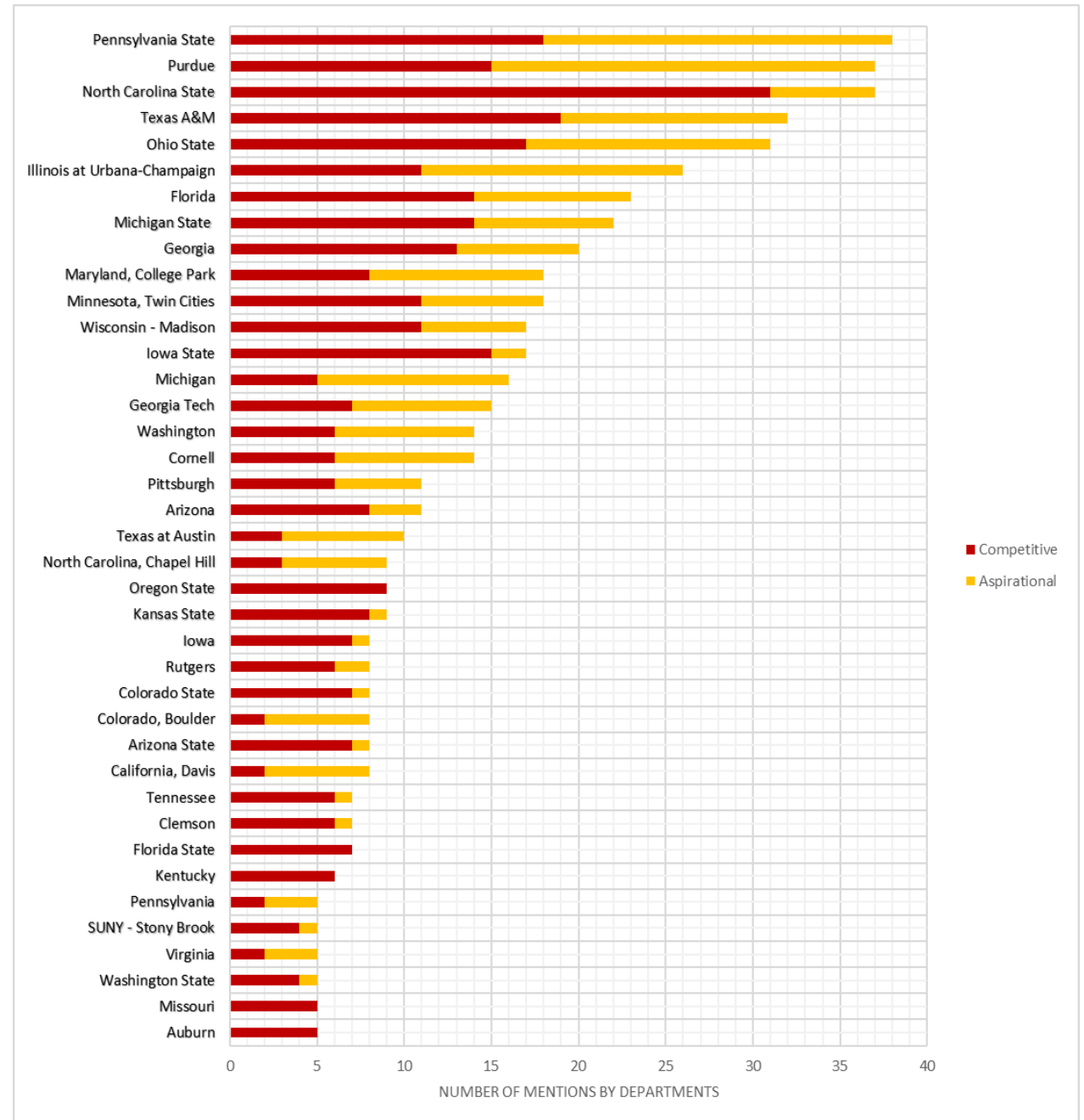
Student Success (part 2)		Data Exists?		On Current Scorecard?
		Internal	Benchmark	
VT Shaped Students	Undergraduate Research	✓		✓
	Study Abroad	✓		✓
	Internships	✓		✓
	Experiential and Service Learning	✓		✓
Student Diversity	Total Diverse Students	✓	✓	
	Diverse Applicants	✓	✓	
	Diverse 4 & 6 Year Graduation Rates	✓	✓	

# Benchmark Institution Identification

We asked each academic department to identify programs at other universities against which they would compare themselves.

Each department identified several programs including:

- The name of the institution
- The particular department or program at that institution
- Whether the program was a competitive or aspirational peer
- Whether that competition or aspiration was in the area of instruction, research or both.



# Most Common Benchmark Institutions and Other National and International Rankings

This table arrays the institutions receiving 10 or more mentions among all departments by the following external ranking metrics:

- **US News and World Report – data and opinion surveys.**
- **The QS World Ranking – data and opinion surveys**
- **QS Employability Ranking – employer surveys**
- **Academic Analytics Faculty Scholarly Productivity Index Score – counts of scholarly productivity weighted and compared within disciplines.**

The self-selected benchmark institutions list appears to skew toward aspirational institutions based on external comparison measures.

Benchmark Institution (* indicates AAU)	USNWR Rank	QS World Rank	QS Employ Rank	AA Index	Total Mentions	Internal Asp/Comp
Cornell University*	15	16	13	0.3	14	
University of Michigan*	27	23	27	0.4	16	
Georgia Institute of Technology*	34	71	NA	0.3	15	
University of Illinois at Urbana-Champaign*	44	66	151-200	0.3	26	
University of Wisconsin - Madison*	44	53	91-100	0.3	17	
Pennsylvania State University, The*	50	95	101-150	0.1	38	
University of Florida*	50	185	201+	0.3	23	
Ohio State University, The*	54	88	101-150	0.2	31	
University of Washington*	54	59	81-90	0.3	14	
University of Georgia	56	431-440	NA	0.0	20	
University of Texas at Austin, The*	56	67	71-80	0.4	10	
Purdue University*	60	92	91-100	0.0	37	
University of Maryland, College Park*	60	131	NA	0.2	18	
University of Pittsburgh*	68	145	NA	0.2	11	
University of Minnesota, Twin Cities*	71	NA	NA	0.0	18	
Texas A&M University*	74	160	151-200	0.0	32	
<b>Virginia Tech</b>	<b>74</b>	<b>361</b>	<b>201+</b>	<b>0.0</b>		
Michigan State University*	82	160	151-200	0.1	22	
North Carolina State University	92	277	101-150	0.0	37	
Iowa State University*	111	421-430	NA	0.0	17	
University of Arizona, The*	124	233	201+	0.1	11	

# Scorecard Metrics and the Performance Budget Model

Performance budgets are a function of accomplishments in both the unit allocation metrics and the scorecards

Semi-annual summits will be held to review trends, goals and outcomes in the Student Success and Faculty Success domain metrics

Summits will include deans and academic vice presidents and vice provosts responsible for strategic outcomes in each domain

Data from the decision support system will be available to support and facilitate the evaluation of progress toward expected goals

In scorecard areas where progress toward expected goals are not being achieved, portions of funding will be redirected to a "Partnership Planning Fund" for strategic allocation to achieve desired performance.

College Scorecard Evaluation			Unit Allocation and PIBB Calculation				
Faculty Success Metrics	Comment	Summit Evaluation	Unit Allocation Metric	Predicted Goal	Approved Goal	Base Unit Value	Unit Allocation Budget
Refereed Publications			SCH Baseline	108,000	108,000	\$ 106.50	\$ 11,502,000
Citations Index			SCH Course Rating				
Conference Proceedings			SCH Depend Courses				
Grant Activity			SCH Destination Areas				
SCH Per Faculty			SCH Course Diversity				
Average Course Ratings			SCH DWF Rates				
Diverse Faculty Total	Three year trend is down	-0.010	SCH Honors Course				
Diverse New Hires	No new hires for 3 years	-0.010	SCH Other Major	23,500	23,500	\$ 9.75	\$ 229,125
<b>Faculty Success Unit Allocation Qualifier Score: 98.00%</b>			SCH Pathways Course				
<b>Student Success Metrics</b>			SCH Section Size				
			SCH Technology Assisted				
			Majors Baseline	4,328	4,400	\$ 695.00	\$ 3,058,000
			Majors DA Enrolled				
			Majors DA Facilitation				
Undergraduate Applicants	Three year trend is down	-0.001	Majors Not Primary	650	650	\$ 49.00	\$ 31,850
Percent Offered That Enroll			Majors Out-of-State	1,215	1,215	\$ 463.00	\$ 562,545
Degrees Awarded			Majors Pathways Enrolled				
First to Second Year Retention Rate			Majors Pathways Facilitation				
Graduates Working in Field			Annual Gifts		\$ 6,500,000	\$ 0.07	\$ 481,000
Average Salary of Graduates			Endowment Annual Gifts		\$ 2,200,000	\$ 0.03	\$ 70,400
Undergraduate Research			Sponsored Expenditures		\$ 4,500,000	\$ 0.11	\$ 495,000
Study Abroad			Industry Sponsored		\$ 300,000	\$ 0.02	\$ 6,000
Diverse Applicants			Total Unit Allocation Budget			68%	16,435,920
Diverse First to Second Year Retention Rate			Related Scorecard Budget			32%	7,734,551
<b>Student Success Unit Allocation Qualifier Score: 99.90%</b>			<b>PIBB Allocation before Self-Generated Revenue 24,170,471</b>				
<b>Partnership Planning Funds</b>							
Faculty Success Unit Allocation Qualifier		98.00%	Student Success Unit Allocation Qualifier				99.90%
Faculty Success Unit Qualifier Weight		50%	Student Success Unit Allocation Qualifier				50%
Faculty Success Partnership Planning Funds		\$ 241,705	Student Success Partnership Planning Funds			\$	12,085
<b>Parameters for Faculty Success Partnership Planning Funds: Funds to be allocated to college upon certification by the VP for Inclusion and Diversity and VP for Faculty Affairs search and hiring practices that support the diversity in the faculty.</b>				<b>Parameters for Student Success Partnership Planning Funds: Funds to be allocated to strategic marketing plan to be developed in coordination with VP Enrollment Management.</b>			

# Promotion and Tenure

# Faculty Success

- **Promotion from assistant to associate professor with tenure**
  - National recognition for research and scholarly work
- **Promotion to professor**
  - National or international distinction and leadership
- **The faculty member's profile should connect to:**
  - Department's and college's scholarship aspirations
  - VT-shaped approach to education, research, and outreach

# Department Narrative of the Benchmarking Exercise

- **Department head and faculty create a written narrative that identifies performance expectations for promotion**
  - Based on metrics, benchmarks, and strategic directions for the department
  - Placed in the context of national peer departments
- **Quantitative and qualitative indicators of research and scholarly work**
  - Examples: articles in peer-reviewed, high impact journals; books published by top academic presses; citation indexes reflecting scientific impact; and alternative metrics reflecting social impact
  - Account for variations across sub-disciplines within the department
    - books vs. journal articles vs. installations vs. building commissions
- **Department's document becomes a standardized, transparent, nationally-validated, inclusive context for peer evaluation**



# Guidance for Individual Tenure-track Faculty Success

- **Candidate develops the narrative and context for scholarly productivity and impact**
  - Early in the probationary period
  - Collaborate with department head and senior faculty to connect faculty work to department's goals and aspirations
- **Mentoring is critical, from both internal and external mentors**
- **National peer cohort identified to develop a customized, nationally informed set of performance goals**
  - Tailored to the faculty member's specialty and from appropriate peer departments
- **Department heads coach faculty members to identify their strengths, interests, and ways in which they can be successful and best contribute to the department, college, and university**

Disciplinary | Transdisciplinary/Destination Areas | VT-shaped/Engagement

# Fall 2017

- **Feedback and revision of department's document**
- **Workshops for department heads on customizing faculty assignments**
- **Workshops on promotion and tenure**
  - Department heads and promotion committee members
  - Candidates
- **Workshop on promotion to professor**

Questions?