

Office of Research Update to the Faculty Senate

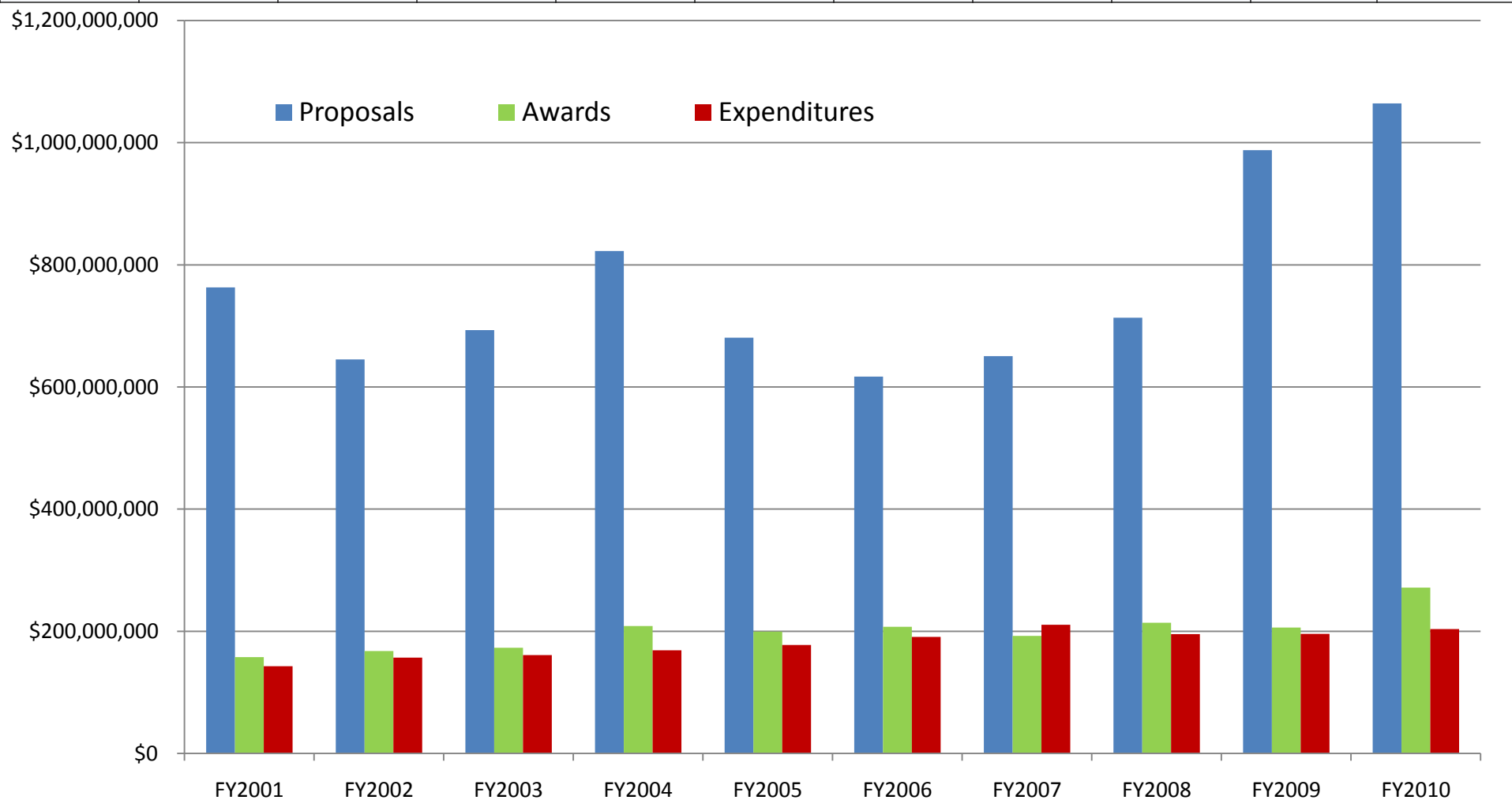
7 September 2010

Terri L. Lomax

Vice Chancellor for Research

10 Year History of Total Funding Flow

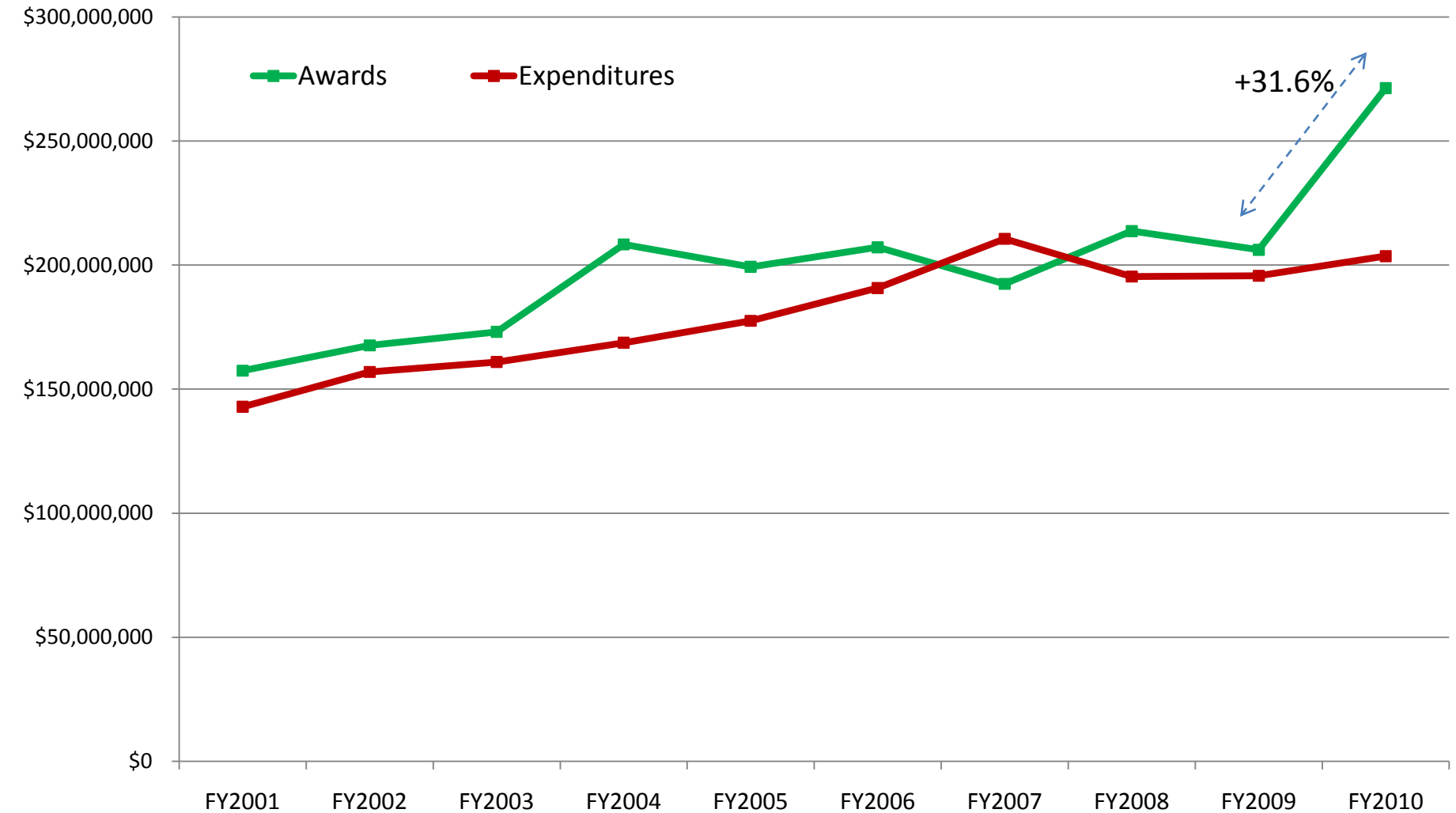
	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010
Proposals:	\$763,215,448	\$645,152,893	\$693,006,525	\$822,663,124	\$680,743,461	\$617,045,252	\$650,460,961	\$713,194,776	\$987,682,247	\$1,064,334,896
Awards:	\$157,434,033	\$167,625,526	\$173,085,339	\$208,322,664	\$199,276,233	\$207,176,903	\$192,414,997	\$213,685,540	\$206,143,934	\$271,317,138
Expenditures:*	\$142,868,505	\$156,920,562	\$160,944,453	\$168,686,735	\$177,511,507	\$190,738,898	\$210,559,553	\$195,392,338	\$195,668,545	\$203,588,766



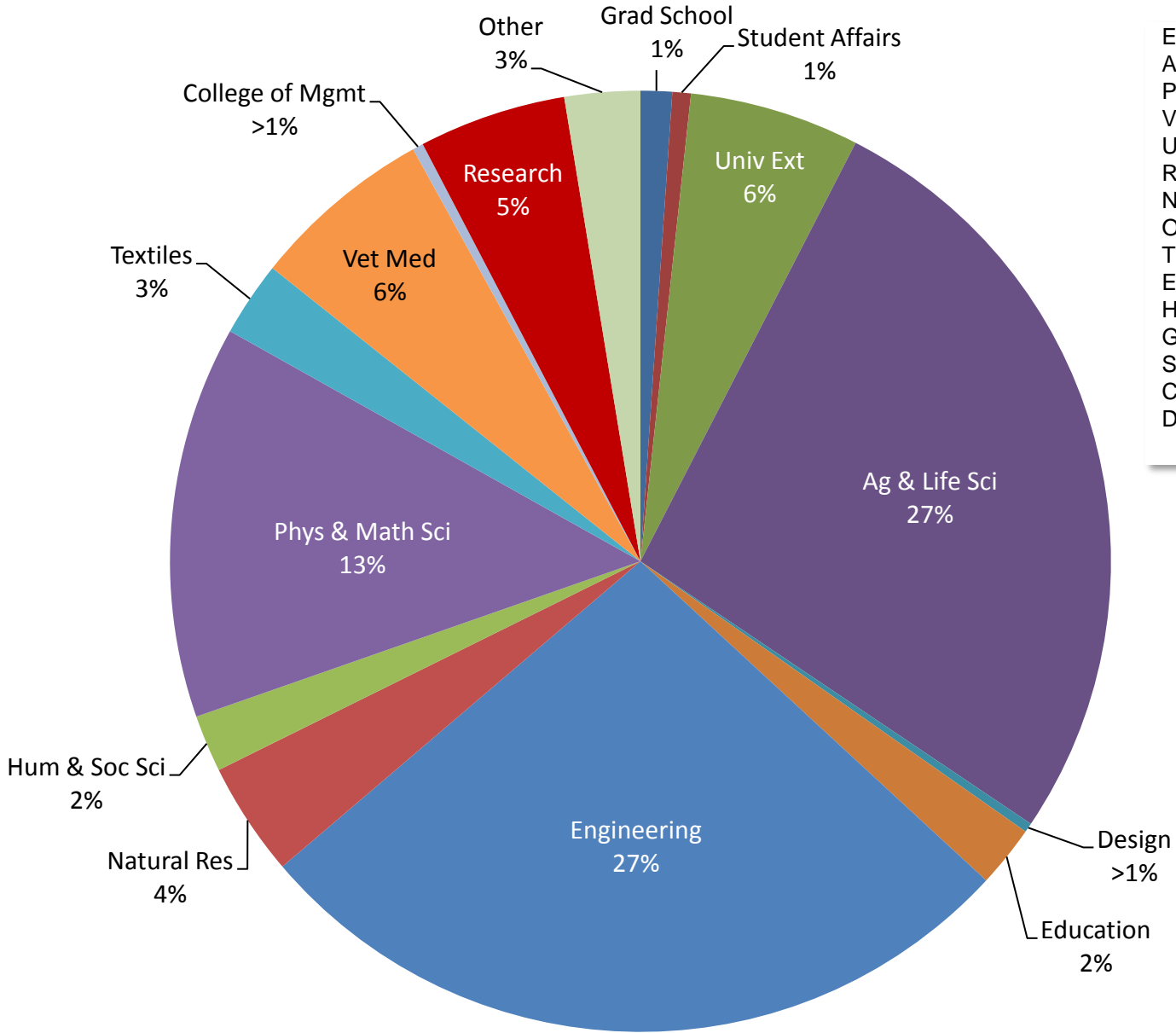
*Proposals, Awards, and Expenditures do not include Financial Aid

10 Year History of Awards to Expenditures

	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010
Awards:	\$157,434,033	\$167,625,526	\$173,085,339	\$208,322,664	\$199,276,233	\$207,176,903	\$192,414,997	\$213,685,540	\$206,143,934	\$271,317,138
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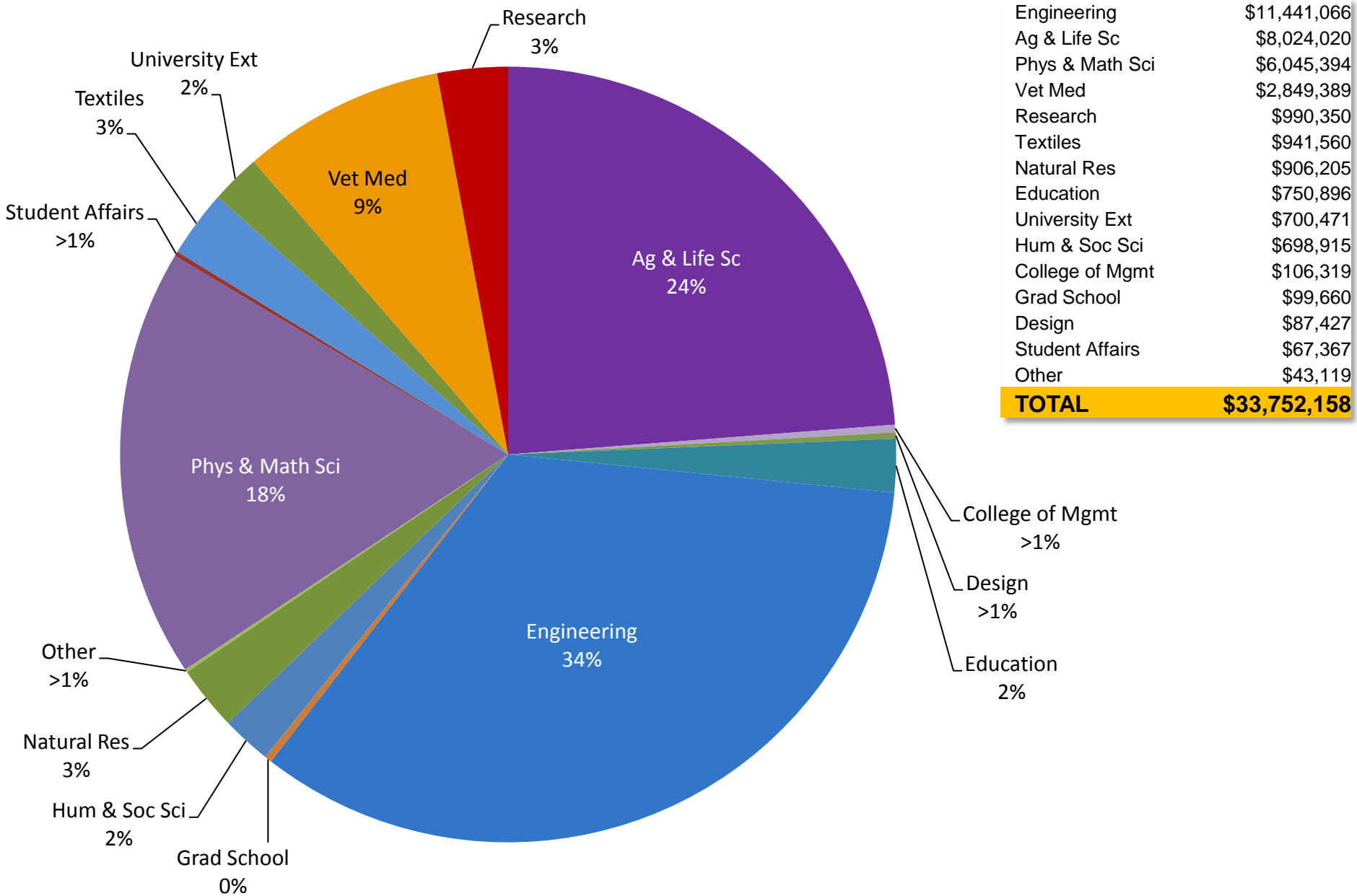
Total Expenditures by NC State Unit – FY 2010



Engineering	\$ 54,769,544.00
Ag & Life Sci	\$ 54,679,037.00
Phys & Math Sci	\$ 27,454,655.00
Vet Med	\$ 12,764,620.00
University Ext	\$ 11,900,573.00
Research	\$ 10,308,128.00
Natural Res	\$ 7,985,239.00
Other	\$ 5,281,135.00
Textiles	\$ 5,240,180.00
Education	\$ 4,326,850.00
Human&Soc Sci	\$ 3,987,357.00
Grad School	\$ 2,200,506.00
Student Affairs	\$ 1,294,690.00
College of Mgmt	\$ 749,664.00
Design	\$ 646,588.00

\$203,588,766

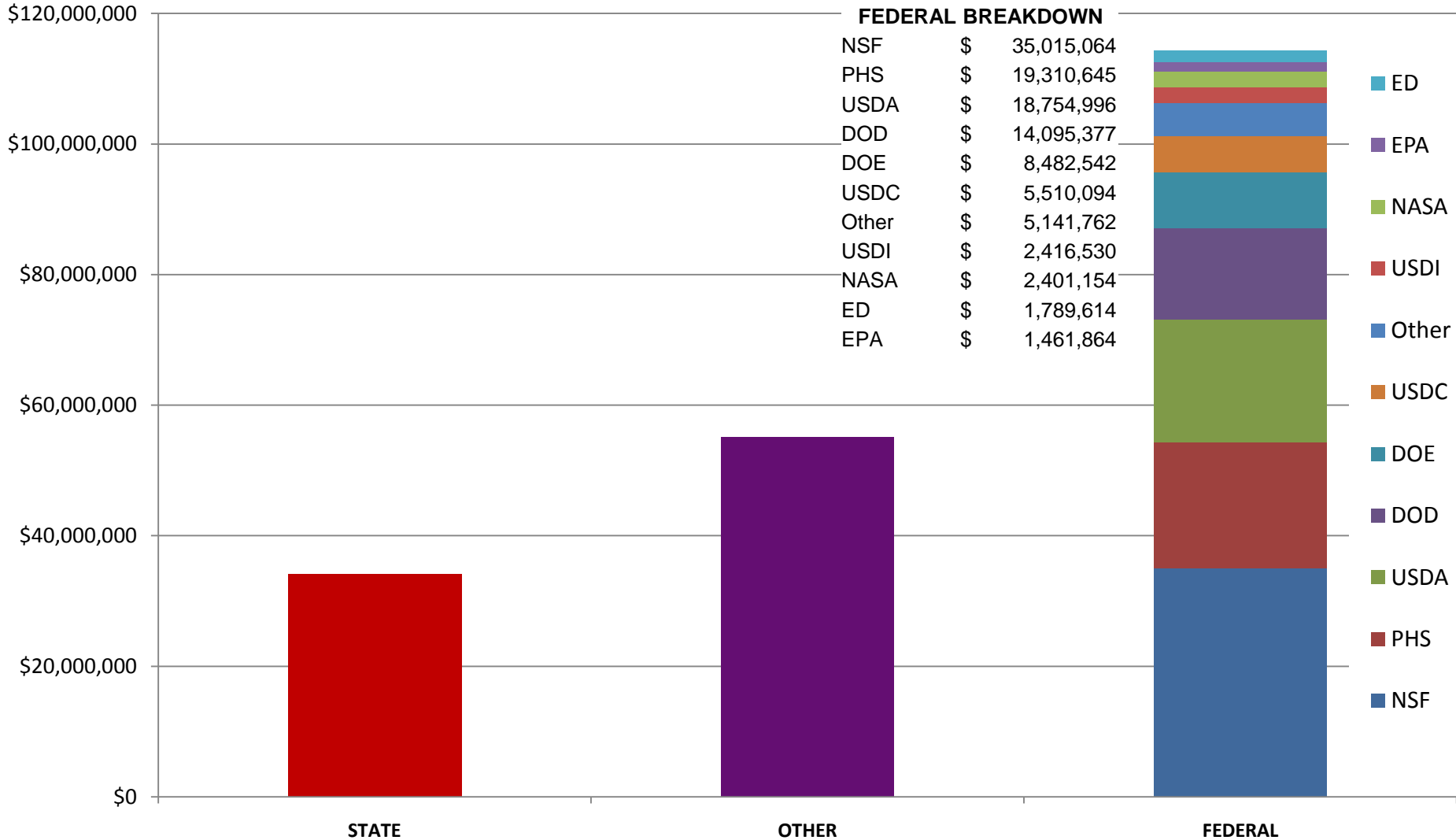
F&A Generated by NC State Unit – FY 2010



Engineering	\$11,441,066
Ag & Life Sc	\$8,024,020
Phys & Math Sci	\$6,045,394
Vet Med	\$2,849,389
Research	\$990,350
Textiles	\$941,560
Natural Res	\$906,205
Education	\$750,896
University Ext	\$700,471
Hum & Soc Sci	\$698,915
College of Mgmt	\$106,319
Grad School	\$99,660
Design	\$87,427
Student Affairs	\$67,367
Other	\$43,119
TOTAL	\$33,752,158

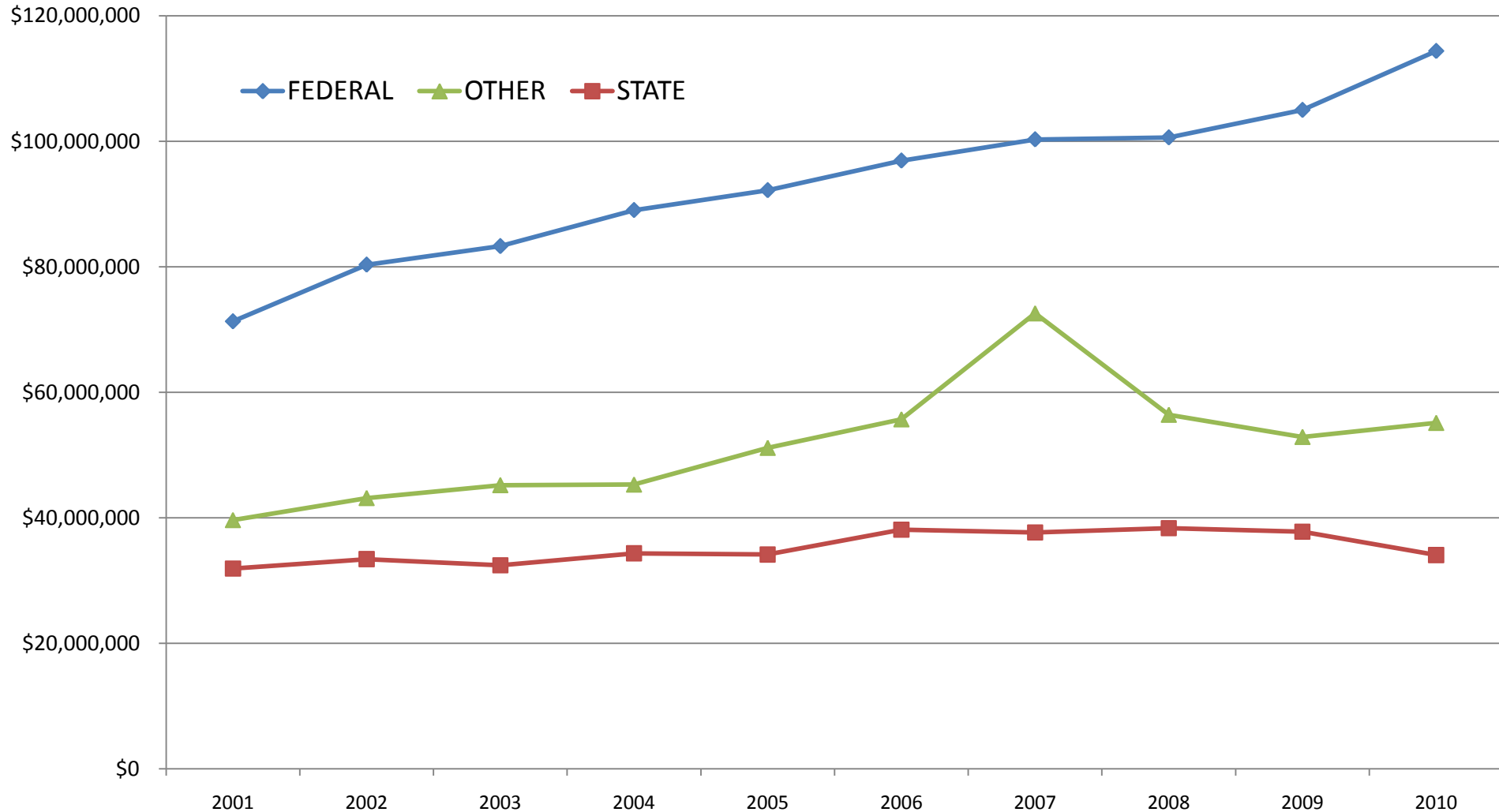
Expenditures by Sponsoring Agency – FY 2010

STATE	OTHER	FEDERAL	TOTAL
\$ 34,079,694	\$ 55,129,430	\$ 114,379,642	\$ 203,588,766

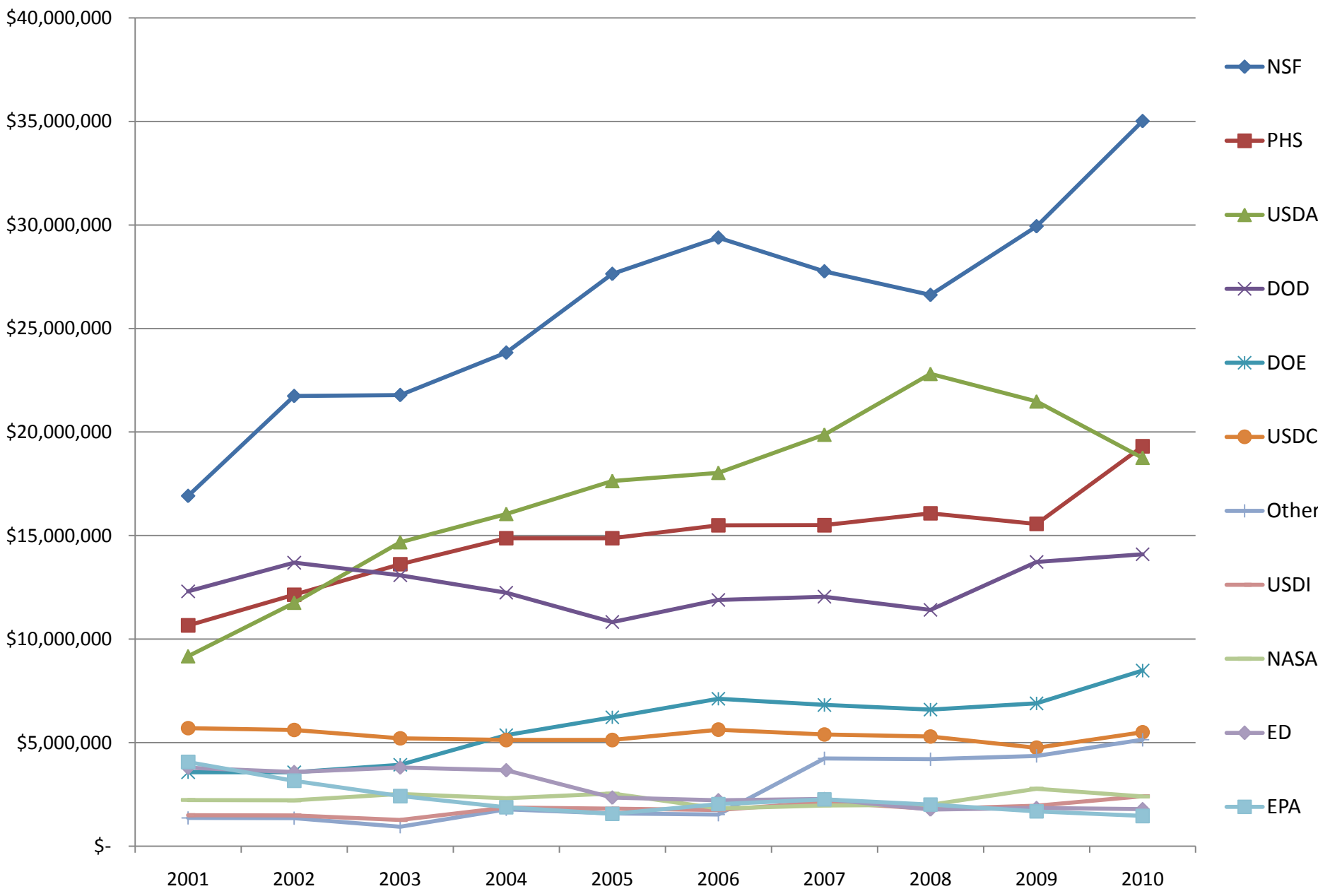


Expenditures by Sponsoring Agency – TRENDS

	6/30/01	6/30/02	6/30/03	6/30/04	6/30/05	6/30/06	6/30/07	6/30/08	6/30/09	6/30/10
FEDERAL	\$71,298,716	\$80,335,740	\$83,287,361	\$89,028,478	\$92,198,762	\$96,917,686	\$100,296,497	\$100,609,855	\$104,984,038	\$114,379,642
OTHER	\$39,651,170	\$43,161,837	\$45,216,835	\$ 45,306,121	\$51,157,370	\$55,700,218	\$72,580,100	\$56,426,133	\$52,896,723	\$55,129,430
STATE	\$31,918,619	\$33,422,986	\$32,440,257	\$ 34,352,136	\$34,155,375	\$38,120,994	\$37,682,956	\$38,356,350	\$37,787,784	\$34,079,694
TOTAL	\$142,868,505	\$156,920,563	\$160,944,453	\$168,686,735	\$177,511,507	\$190,738,898	\$210,559,553	\$195,392,338	\$195,668,545	\$203,588,766



Expenditures by Federal Sponsor – TRENDS



NC State F&A Distribution

Background:

- **F&A = Facilities and Administration.**
 - A federally negotiated rate to cover the cost to the University of research that **cannot** be directly attributed to a specific research grant
 - Current on-campus research rate = **49%**, off-campus = **26-27%**, instructional = **47/26%**, public service = **35/20%**
 - F&A is reimbursed **after** the direct costs are expended
- **In 2008-2009:**
 - Total research expenditures were **>\$360 M**
 - Sponsored research activity was **\$206 M (Federal = \$144 M)**
 - Total F&A collected was **\$30,031,263**
(~8% of exp., ~15% of sponsored, ~20% of federally sponsored)
- **Diverse Models of Distribution**
 - Colleges vary greatly in how they distribute F&A based on the types of research they carry out
 - Colleges with higher needs for expensive equipment, start-ups, and retentions tend to retain more at the college level
 - Most of the College F&A comes back to benefit the faculty PIs
 - Efforts are on-going to document allocation at the department and PI level

NC State F&A Distribution

Total F&A Budgeted for Distribution (\$30,000,000 in 2008-9)

-1% Contingency Reserve (-\$300,000 for audits, etc.)

15% Strategic Research Fund (SRF)

- Building use → 13.7%

85% Earned F&A

36.9% College (32%)

- Usage Adjustments
(e.g., Vet, HPC, waste)

63.1% University

- Building use → 53.9%

2008-9 SRF Allocation

32% Start-ups/Retentions
26% Grant Match/Cost Share
12% Faculty Res. Funding
11% Res. Admin. Support
8% Memberships/Res. Access
6% ID Center/Inst./Initiatives
5% Student Support

College F&A Allocations

+ Building use, & SRF →
46.1%

University Allocation Formula

39.7% Institutional Admin.
(32.7%)
9.3% Building Use (10.3)
(CC Rent and Debt Service)
7.0% IT (5.7%)
4.4% Research Admin. (3.7%)
2.7% Library (2.3%)

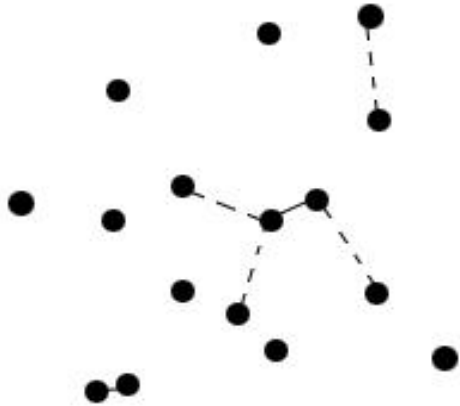
2008-9 College F&A Allocations

College Notes:

- In CALS, the departments receive 50% of their proportional amount after deducting University usage adjustments and a 15% hold for departmental equipment grants.
- In CED, the Friday Institute receives 50% return, the same as the departments.
- In COE, departments pay 25% and the college pays 75% of rent from returned F&A. In addition, the departments located on Centennial Campus pay 25% of the annual cost of the \$8M note taken out by COE to pay for capital costs on Centennial Campus and the balance of the loan payments are paid by the College.
- Of the earned F&A that is returned to COE, the Departments receive 25-50% of their proportional amount. The exact fraction is determined through a calculation involving the ratio of F&A earned/total faculty salaries within the department.
- COE faculty whose F&A return to the college exceeds \$50K in a year receive 25% of their earned F&A directly.
- In CNR, the 3 dept heads each allocate F&A returned to them (58%) to the individual faculty that earned the F&A. The amount each faculty member receives (0-100%) is dependent on how much they brought in (proportionately), and/or how the dept head is using F&A in support of overall dept activities.
- In PAMS, in addition to the 15% allocation, the college covers all rental expenses; all research staff salaries paid out of F&A (including support for a grant accounting technician in each department, and instrumentation shop personnel); 2/3 of the costs of start-ups; the support for Centers and Institutes; and the majority of proposal matching, faculty retention costs, and laboratory renovations.
- CVM made the strategic decision to invest a significant portion of returned F&A into expanding their research building to increase research capacity.

NC State Innovation

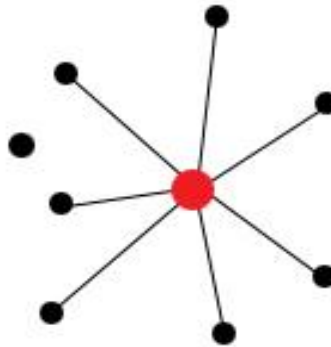
Where we are today



Innovation Components:

- Innovation services, training, and facilities available w/o a structured framework.
- Collaboration encouraged, but the responsibility of each innovation unit.
- Components and opportunities available on and off campus, but may be difficult to find.

Vision: 2010-11



Early Stage Innovation Portal:

- Strategic, structured framework
- Single, comprehensive point-of-entry for external and internal engagement and collaboration to unify the innovation components.
- Units can work toward full innovation capacity with structure, training, and services solidly in place.
- The portal serves as the connection point.

Vision: 2011-12

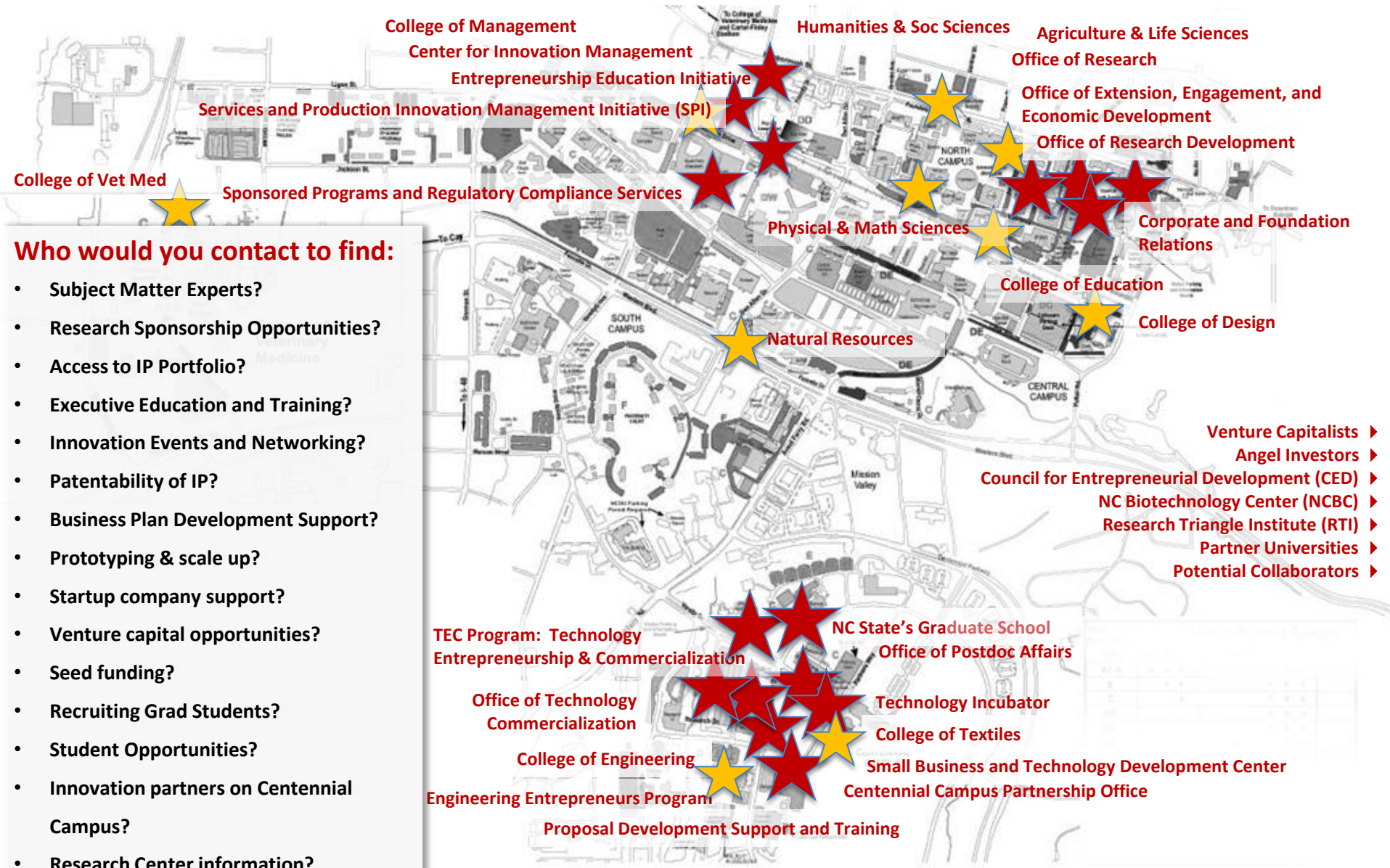


Fully Integrated Innovation Network:

- Portal has become a network that provides point of entry for new researchers and new partners.
- Also serves as catalyst for full integration, collaboration, and cross-linking of innovation components.
- Those involved are freed up to meet more internal participants, bring in more partners, and participate in networking events and easily accessible training - to **THINK**, to **RESEARCH**, and to **DISCOVER**.

Navigating our innovation components . . .

where would you start if you were an R&D exec or a new faculty member?



Who would you contact to find:

- Subject Matter Experts?
- Research Sponsorship Opportunities?
- Access to IP Portfolio?
- Executive Education and Training?
- Innovation Events and Networking?
- Patentability of IP?
- Business Plan Development Support?
- Prototyping & scale up?
- Startup company support?
- Venture capital opportunities?
- Seed funding?
- Recruiting Grad Students?
- Student Opportunities?
- Innovation partners on Centennial Campus?
- Research Center information?

NC State Innovation Efforts/Gaps

	Undergrads	Graduate Students	Faculty & Postdocs	External Partners
Education & Training	<ul style="list-style-type: none"> • Entrepreneurship Initiative (Provost) <ul style="list-style-type: none"> • eGames • Entrpr Concentr & Minor (COM) • Entrepreneurs Program (COE) <ul style="list-style-type: none"> • Entrpr & New Product Dev (COT) 	<ul style="list-style-type: none"> • TEC Program and Grad. Certificate (COM) <p>GAP (education and training)</p>	<p>GAP (education and training)</p>	<ul style="list-style-type: none"> • SBTDC (VCEED) • Industrial Extension Service (COE) <ul style="list-style-type: none"> • NC State Incubator • Center for Innovation Management Studies (COM)
Services	<p>GAP (relationship management and coordination)</p>			
	<ul style="list-style-type: none"> • Office of Technology Transfer (OTT): Inventor Resource Center <ul style="list-style-type: none"> • Technology Brokering and Intl Partnership <ul style="list-style-type: none"> • Intellectual Property Committee • Intellectual Property Licensing <ul style="list-style-type: none"> • TechRevolution Series • NC State Innovation Showcase 			<ul style="list-style-type: none"> • SBTDC • IES • CIMS (COM)
Funding	<p>GAP (Proof-of-concept, pre-seed, seed, and early acceleration funding)</p>			
	<ul style="list-style-type: none"> • Daugherty Endowment (\$25K/yr) 			

A framework for our innovation components . . .

What if there was one place that provided full access & integration?

culture

events.

networking.

collaboration through community.

innovative leaders.

inspiration.

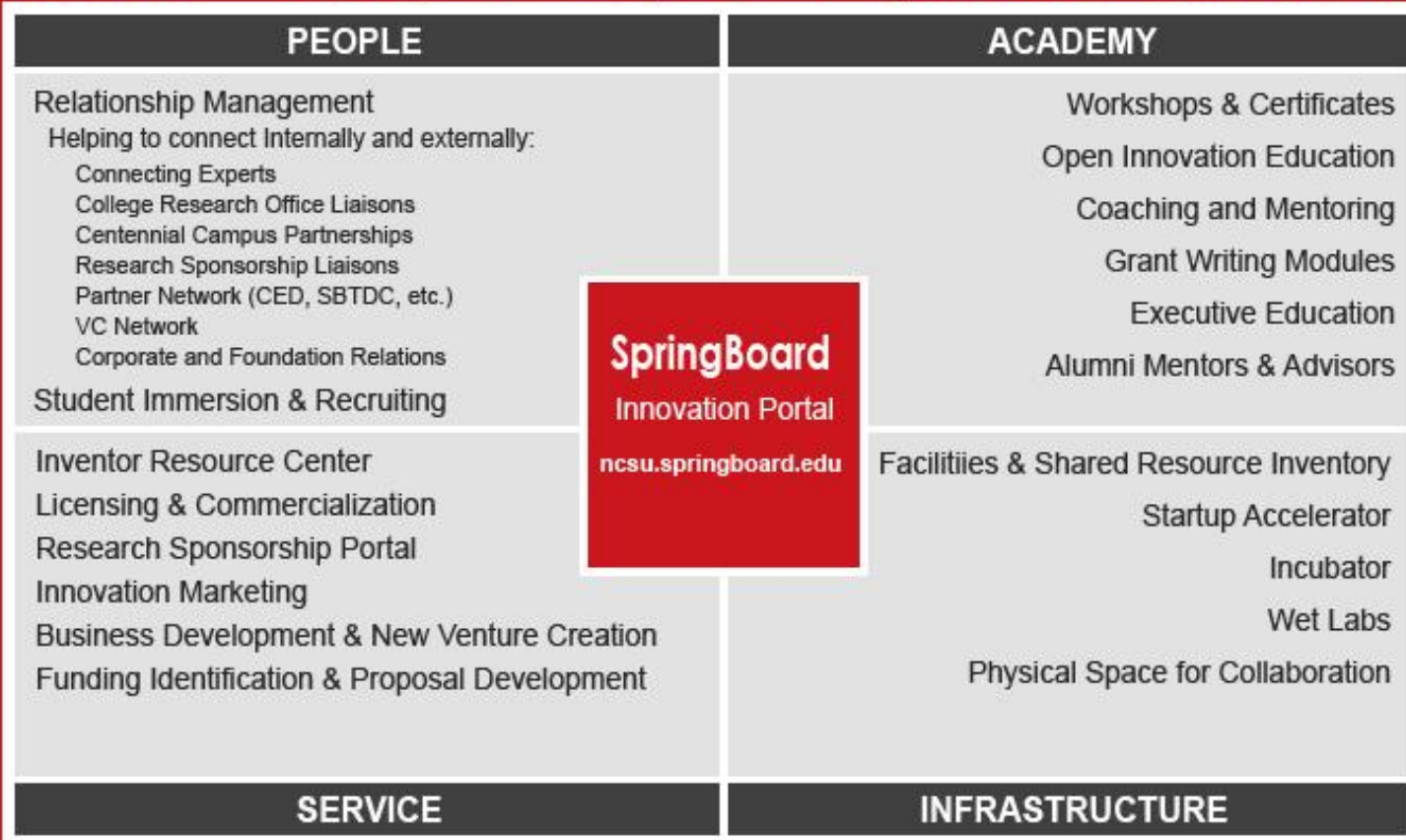
framework

accessibility.

streamlined policies.

central point of contact.

internal cohesion.



SpringBoard

Innovation Portal

ncsu.springboard.edu

allows innovators to navigate quickly.

solidarity.

allows potential partners to navigate quickly.

less frustration.

common areas: interactive design exhibits.

recognition.

Innovation Hall of Fame.

Locally Responsive. Globally Engaged.

Proposed Additions to improve Innovation at NC State

- ✓ Portal to create “one-stop shopping” and synergies for innovation at NC State
- Physical spaces for collaboration
- Champion for innovation
- Innovation fund – pre-seed and proof-of-concept funding
- External Innovation Board
- New campus culture – rewarding innovation (RPT, recognition through awards)
 - ✓ New Awards – Inventor of the Year (OTY), Entrepreneur OTY, Innovation Partner OTY
- ✓ Faculty and Postdoc Training
- Training for External Partners
- Proof-of-Concept Lab/Innovation Design Center
- ✓ New Analytic Tools – REACH NC (UNC-GA collaboration) and j-Start (IBM collab.)
- ✓ Streamlined License
- New Patent Policy
- ✓ Innovation Enterprise Services – New emphasis for Industrial Extension Service
- Accelerator
- ✓ Venture partners

Springboard Training Opportunity

Technology Commercialization



Options for the Academic Researcher

Monday, October 18

8:00 a.m.–Noon

North Carolina State University – Centennial Campus
Monteith Research Center
Room 136
2410 Campus Shore Drive
Raleigh, NC 27606

To register:

Contact Natoiya Hasan at 252-737-1384
or visit www.sbtcd.org/register

Agenda

*Introduction to Technology
Commercialization:
Roles for the Researcher*

*Fundamentals of Assessing
the Market Opportunity*

*Introduction to Intellectual
Property: Patents/Copyrights/
Trademarks/Trade Secrets*

*University Technology
Transfer Resources*

Another Opportunity

CI Days at NCSU:

The Excitement and Future of Cyberinfrastructure

TONIGHT: Free, public keynote address on "Beyond the Web" by Dom Sagolla, co-creator of Twitter and Founder of DollarApp. 8 PM Stewart Theater

TOMORROW: Vision sessions – Some of the top minds in the world wrestle with how CI can be used to reach technological, organizational, and intellectual goals. 8 AM - 3 PM, Stewart Theater