

# Research at NC State



# Sponsored Programs Extramural Support (\$)

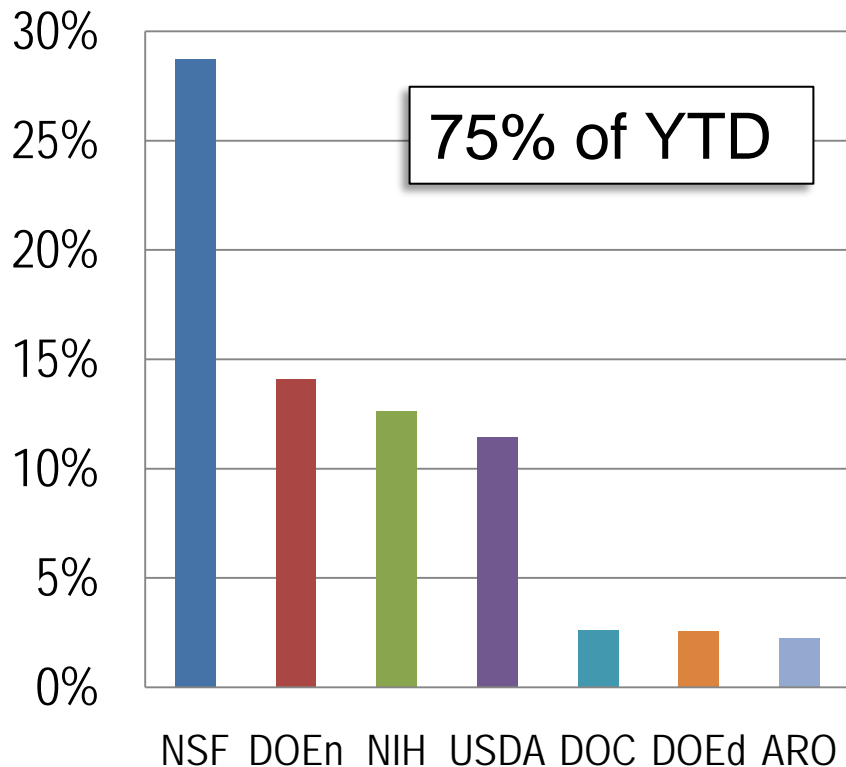
Sponsor	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	Average
Federal Gov't	149,962,892	136,158,982	151,613,178	145,291,265	200,018,655	156,608,994
NC State Gov't	25,669,086	21,291,974	29,191,964	28,617,503	35,335,000	28,021,105
Industry	22,082,246	17,215,713	20,360,634	19,499,966	19,592,484	19,750,209
Nonprofit	8,022,399	15,493,895	10,826,671	10,968,475	9,758,802	11,014,048
Universities (other)	288,487	345,331	520,811	419,180	1,272,195	569,201
NC Local Gov't	282,330	639,454	623,904	815,365	665,415	605,294
Foreign Gov't	488,293	127,501	400,611	50,000	446,780	302,637
Non-NC Gov't	377,745	1,095,814	147,767	457,180	346,404	484,982
Other	3,425	46,333	0	0	13,042	9,587
Totals	207,176,903	192,414,997	213,685,540	206,143,934	267,448,777	217,374,030

Source: RADAR, NC State University

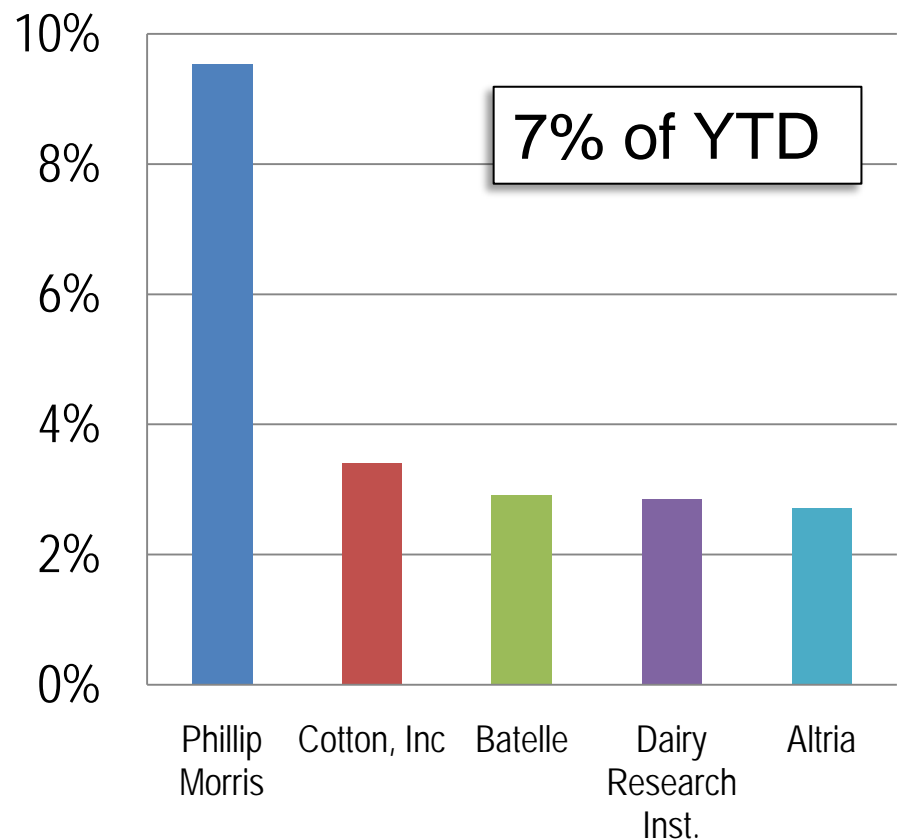
# Sponsored Programs Extramural Support

## Top Sources YTD September 30

### Top Federal Sources

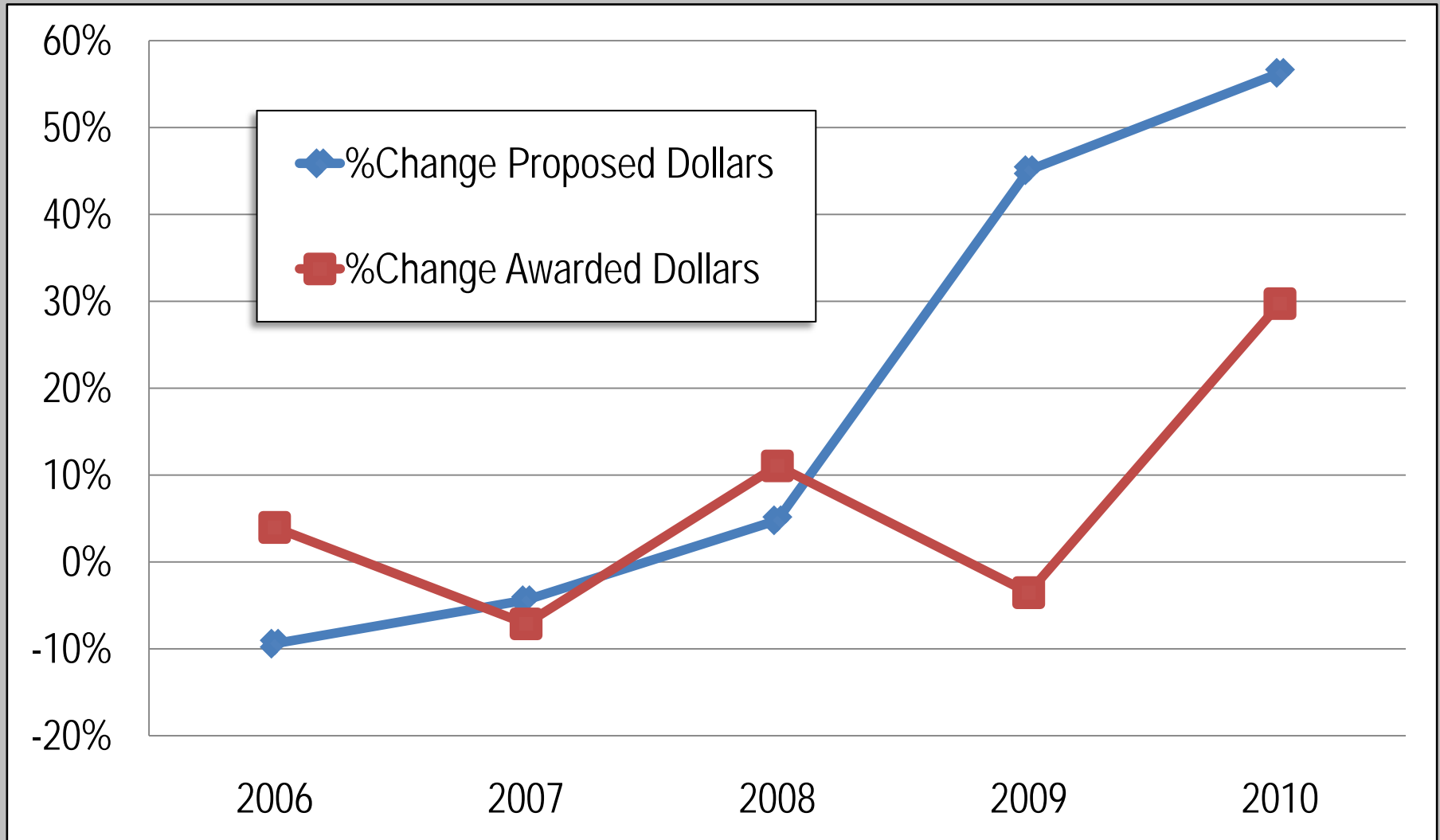


### Top Industry Sources



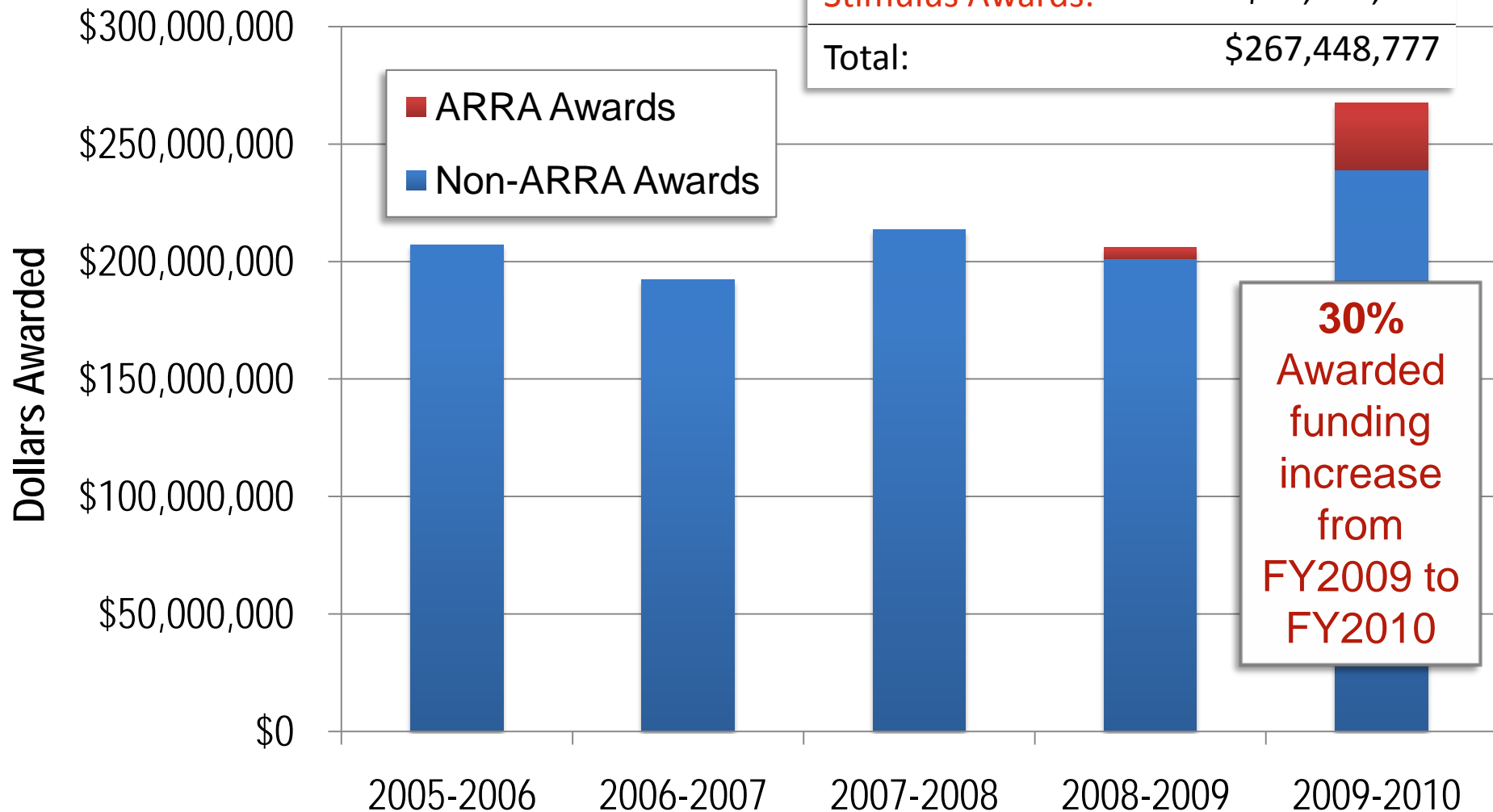
Source: RADAR, NC State University

# % Change in Proposed and Awarded Dollars



Source: RADAR, NC State University

# ARRA Funding Trends



Source: Sponsored Programs Extramural Support,  
RADAR, NC State University

# NSF Expenditures of Selected Peers (\$1000)

University	2005	2006	2007	2008	2009
Texas A&M	479,735	492,955	543,888	582,365	630,655
University of Florida	530,734	565,491	592,835	584,170	592,082
University of Illinois	499,711	476,198	473,890	501,279	563,710
Georgia Tech	425,386	440,898	472,591	522,136	561,631
Purdue University	364,986	372,958	415,172	429,988	453,799
University of Maryland	338,648	354,244	359,760	395,037	409,190
VA Tech	289,994	321,722	366,960	373,281	396,681
NC State University	302,596	330,936	331,662	366,137	380,571
Michigan State University	333,735	358,097	360,852	356,767	373,184

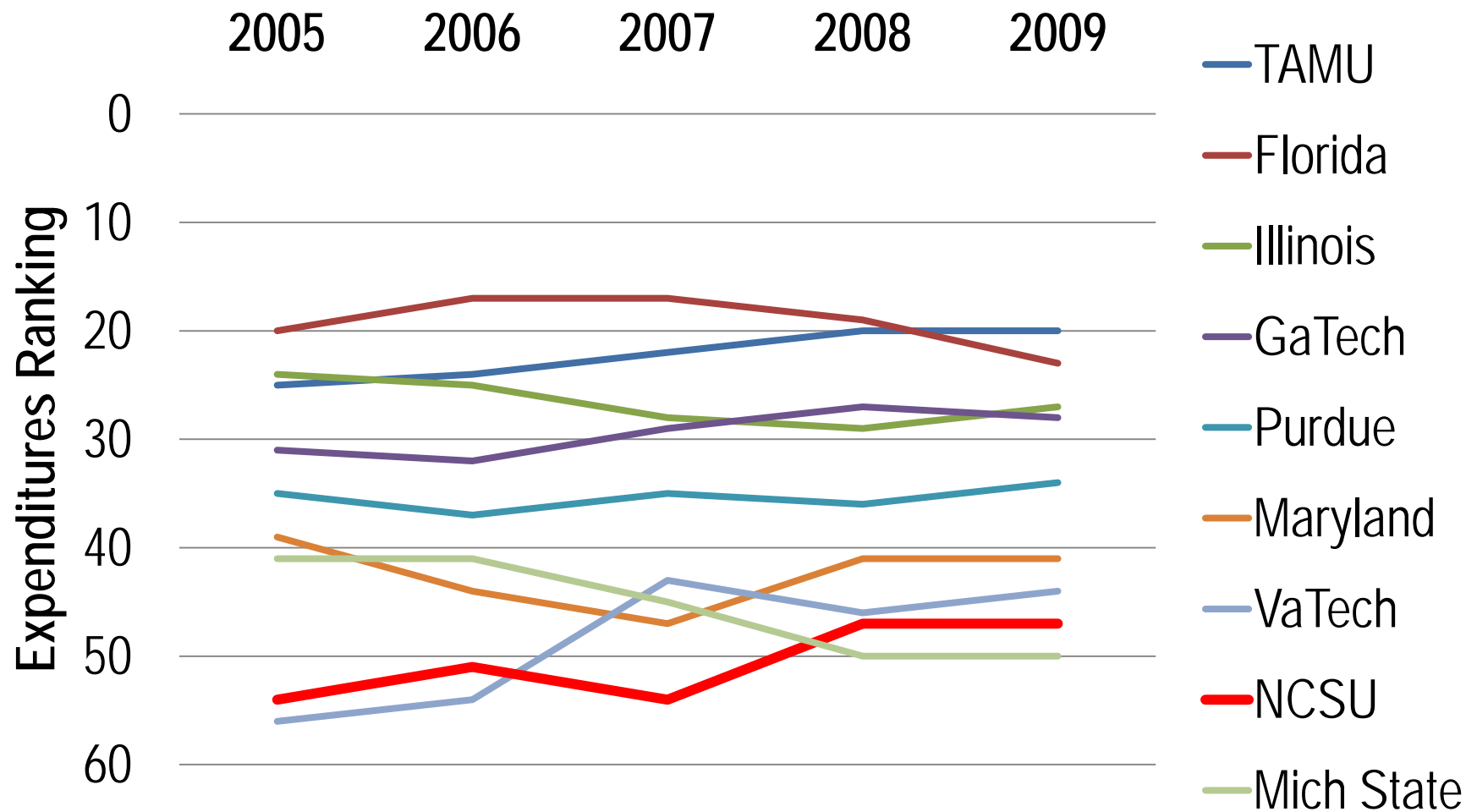
**Source: NSF Expenditures Report 2009**

# Rankings Amongst Selected Peers

	2005	2006	2007	2008	2009
Total Research Expenditures (\$1000)	302,596	330,936	331,662	366,137	380,571
Peer (17 peers)	15	14	16	14	14
Peers w/o medical schools (9)	5	5	8	7	7
Land-grant Peer (15)	15	14	16	14	14
Land-grant peer w/o medical schools (9)	5	5	7	7	7

**Source: NSF Expenditures Report 2009**

# Rankings Amongst Selected Peers



Source: NSF Expenditures Report 2009



# Characteristics of NSF Top 50 Research Institutions

25 U of Texas MD-Anderson

28 GA Tech\*

32 UT-Austin

46 Scripps RI

1 Johns Hopkins

2 U of Mich\*

8 U WA

18 U of CO\*

19 UNC-CH

22 Pitt\*

7 Duke

14 Stanford

21 Wash U-StL

24 Columbia

29 USC

30 Northwestern

31 Yale

33 Harvard

35 Emory

36 Baylor

39 Vanderbilt

40 Case Western

37 IN U\*

38 UA-Birm

42 UT MC-Dallas

45 U Rochester

48 U Chicago

**Med School**

**Vet School**

12 U Penn

3 UWisc-M

10 U Minn\*

13 Ohio State\*

15 UCD

16 Cornell\*

23 UF

43 LA State\*

50 Mich State

4 UCSF

5 UCLA

6 UCSD

26 U AZ

49 U of KY\*

**Land Grant**

20 Texas A&M

27 U of Ill U-C

34 Purdue\*

47 NCSU

9 Penn State\*

11 MIT

17 UCB

41 U of MD-CP

44 VA Tech

NC State  
ranks 47<sup>th</sup> in  
total  
research  
expenditures  
among all  
institutions

**Legend**

Private

Public

Peer group

All campuses\*

2009

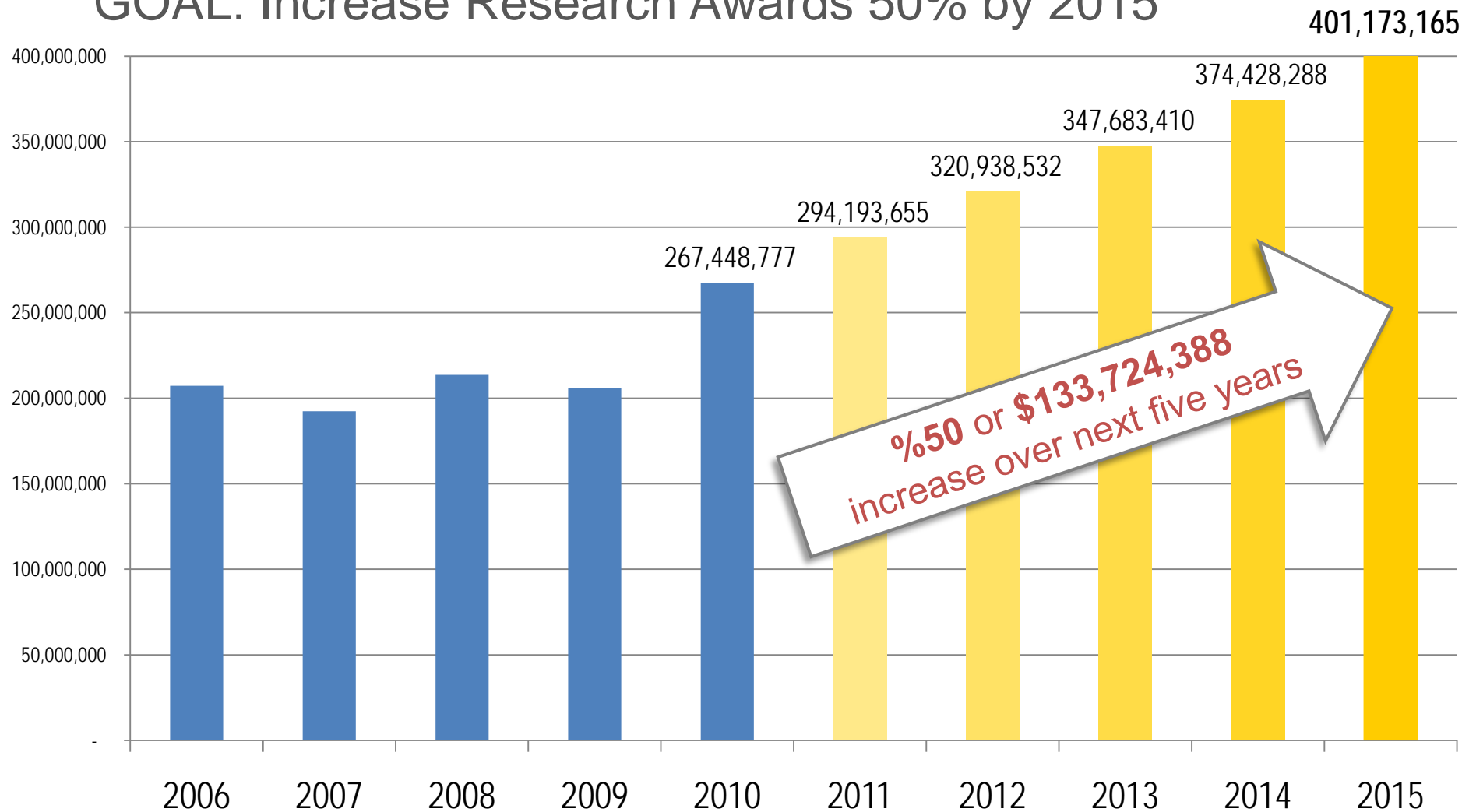
# Research Per FTE (2008): NC State & Peers

	TT Faculty <sup>1</sup>	Total Research (\$1000) <sup>2</sup>	Total Research Per FTE	Federal Research (\$1000) <sup>2</sup>	Federal Research Per FTE	National Academy Members <sup>3</sup>	% National Academy Members	Postdocs (2007) <sup>3</sup>	Postdocs per FTE
<u>Texas A&amp;M</u>	<b>1,878</b>	582,365	<b>310,099</b>	245,607	<b>130,781</b>	22	<b>1.17</b>	255	<b>0.14</b>
University of Florida	<b>2,658</b>	584,170	<b>219,778</b>	230,999	<b>86,907</b>	21	<b>0.79</b>	612	<b>0.23</b>
<u>University of Illinois UC</u>	<b>1,846</b>	501,279	<b>271,549</b>	266,912	<b>144,589</b>	57	<b>3.09</b>	403	<b>0.22</b>
Georgia Tech	<b>863</b>	522,136	<b>605,024</b>	281,184	<b>325,822</b>	28	<b>3.24</b>	187	<b>0.22</b>
<u>Purdue University</u>	<b>1,746</b>	429,988	<b>246,270</b>	176,592	<b>101,141</b>	22	<b>1.26</b>	342	<b>0.20</b>
University of Maryland - CP	<b>1,451</b>	395,037	<b>272,252</b>	236,417	<b>162,934</b>	27	<b>1.86</b>	247	<b>0.17</b>
VA Tech	<b>1,377</b>	373,281	<b>271,083</b>	135,578	<b>98,459</b>	14	<b>1.02</b>	180	<b>0.13</b>
<u>NC State University</u>	<b>1,388</b>	366,137	<b>263,787</b>	131,412	<b>94,677</b>	17	<b>1.22</b>	274	<b>0.20</b>
Michigan State University	<b>1,906</b>	356,767	<b>187,181</b>	152,907	<b>80,224</b>	8	<b>0.42</b>	399	<b>0.21</b>

**Sources:** 1. IPEDS Data Center, Fall 2008; 2. NSF 2008 Expenditures; 3. The Top American Research Universities 2009 Annual Report, Center for Measuring University Performance

# The Path Forward

GOAL: Increase Research Awards 50% by 2015



# How We'll Get There

## GOAL 1:

- Build and maintain a research **culture & environment** that enables, inspires and rewards world-class discovery, scholarship, and innovation.
- Recruit and support world-class faculty, staff and students
- Improve infrastructure & equipment
- Create and sustain a collaborative, innovative, multidisciplinary research culture at NC State to complement and leverage our traditional areas of research excellence.

## GOAL 2:

- Increase research **funding and partnerships**.

## GOAL 3:

- Increase **awareness** of NC State's research enterprise on a state, national and global level.

# Specific Activities and Programs

## Culture & Environment

- Graduate Professional Development
- Postdoctoral Affairs Office
- **Integrated Support Service Center**
- Expertise Profiling
- Strategic Research Initiatives Program
- Shared Facilities Task Forces
- Equipment Needs Master List

## Funding & Partnerships

- Federal Research Priorities Webinar Series
- **Proposal Development Unit**
- RTI, UNC-CH, Duke, ORNL
- **Springboard Partnership Portal**

## Awareness

- Faculty Recognition – increasing internal & external awards
- Research Gateway
- Results: NC State's Research Magazine

# Integrated Support Service Center

## University-Level Services

- Facilities & Administration budget management
- Testing and Services Agreement (TSA) administration management

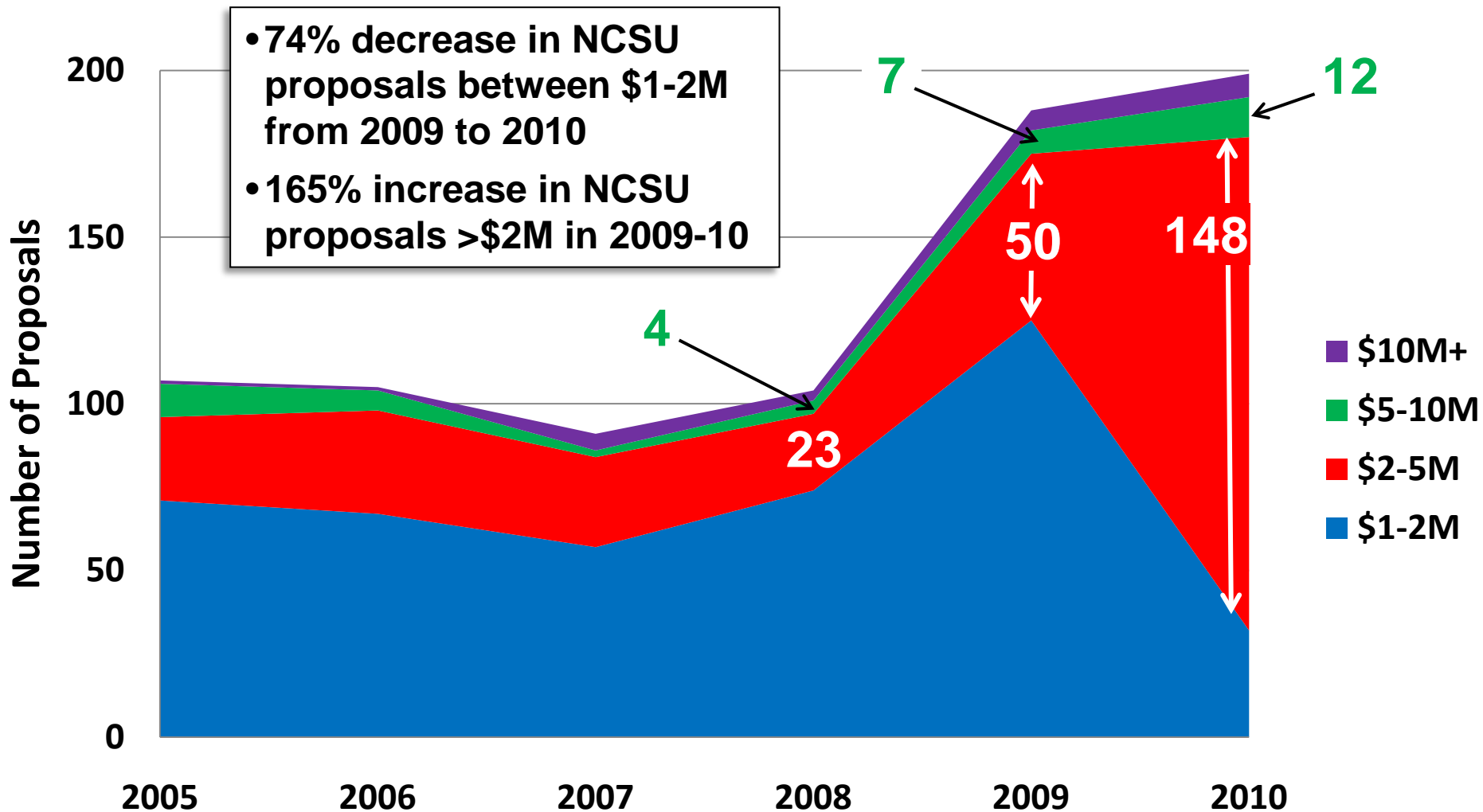
## College-Level Services (Opt-in Only)

- Sponsored project proposal submission assistance (pre-award)
- Research project management and accounting services (post-award)

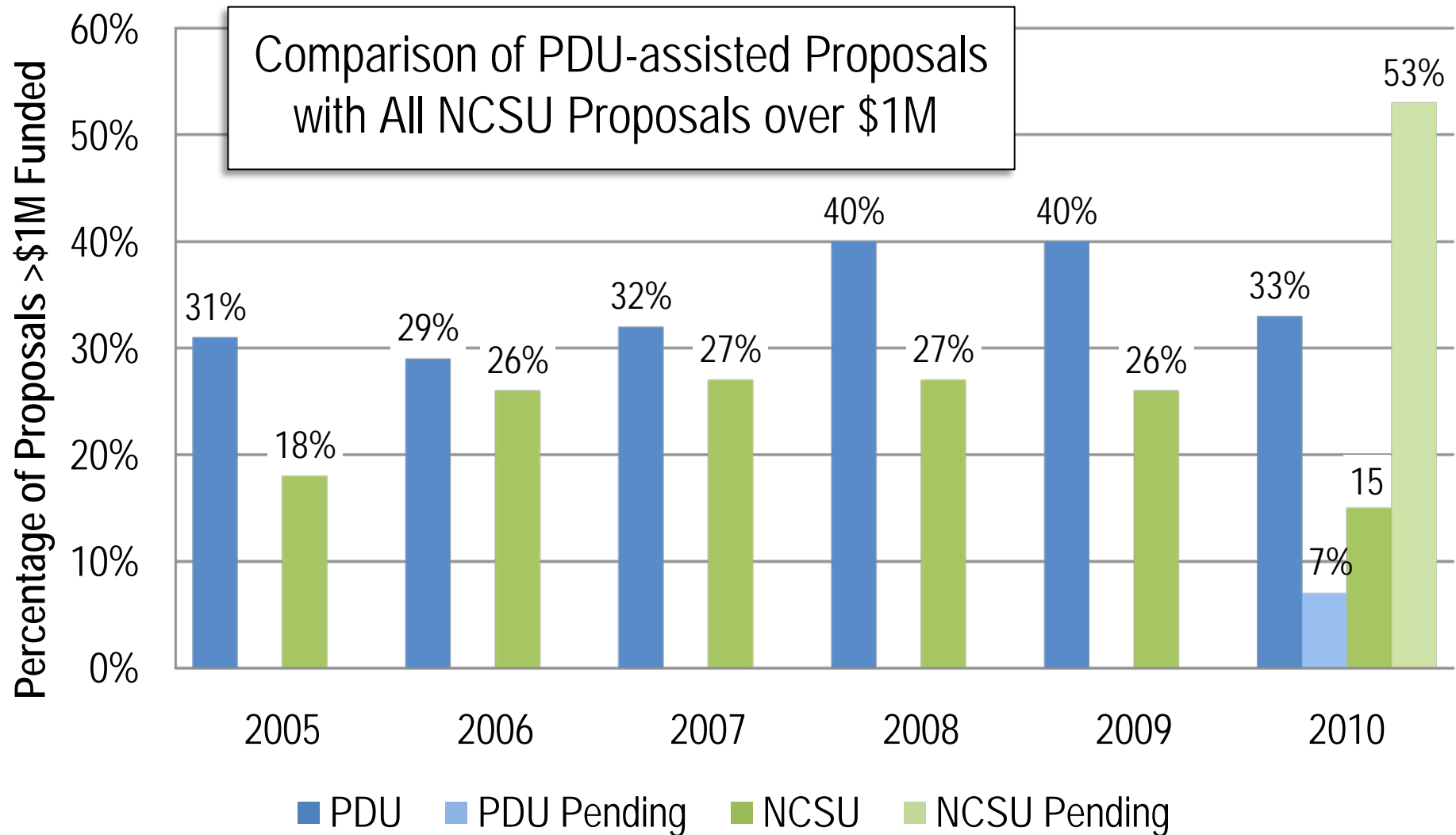
## Division-Level (All ORI units and C&I reporting to ORI)

- IT services and business software application development
- Human resource support services
- Accounting, budgeting, billing, and financial services

# Trend: Increase in Larger Proposals



# Proposal Development Unit (PDU) Success Rate





# Springboard

**SERVICES OVERVIEW:** ways to participate and advance your innovative spirit:

## Partnership Concierge

1

**Meet innovation partners.  
Build a research team.  
Find business services.**

Our Partnership Concierge Office will help you identify and assemble the right team for your innovation needs across NC State and beyond. We work with external partners and the NC State community to make important introductions that lead to innovation dream teams. From access to NC State's IP portfolio, to finding potential research collaborators, we can help.

## Commercialization

2

**Start a company.  
Create a prototype.  
Identify funding.**

Springboard can serve as your network into the vast inventory of commercialization services available on and off campus. From working with the US patent office, to helping you identify prototyping facilities and design labs, we can help. We also partner with on-campus and off-campus organizations to give you full exposure to acceleration, seed, and start-up funding opportunities in our region.

## Training & Development

3

**Increase proposal success rate.  
Expand innovation IQ.  
Become an executive mentor.**

Can innovation be taught? Absolutely. In partnership with NC State's College of Management, campus-wide initiatives, and regional partners like the Council for Entrepreneurial Development, Springboard can point you to innovation training, seminars and certifications. In partnership with SBTDC, we can also help with successful SBIR writing and proposal development.

INNOVATION  
accelerated

919.513.4289

[www.springboard.ncsu.edu](http://www.springboard.ncsu.edu) or [www.innovation.ncsu.edu](http://www.innovation.ncsu.edu)

# Tech Transfer and Innovation Activity

Activity	FY06	FY07	FY08	FY09	FY10	Total 5-Yr Activity
Disclosures	198	178	129	149	124	<b>778</b>
Patent Activity	73	83	80	72	44	<b>352</b>
Commercialization Agreements	71	103	79	98	74	<b>425</b>
Miscellaneous Agreements	X	606	630	654	726	<b>2616</b>
Revenue (Royalties \$M)	3.8	3.5	3.5	4.9	5.1	<b>20.8</b>
New Venture Development	6	5	4	4	4	<b>23</b>

[www.springboard.ncsu.edu](http://www.springboard.ncsu.edu) or [www.innovation.ncsu.edu](http://www.innovation.ncsu.edu)

# Strategic Use of Facilities and Administration (F&A)

- F&A is a **federally negotiated rate** to cover the cost to the University of research that **cannot** be directly attributed to a specific research grant
- Current rates (**on-campus/off-campus**):
  - » research = **49%/27%**
  - » instructional = **47%/26%**
  - » public service = **35%/20%**
- F&A is reimbursed **after** the direct costs are expended.

# 2008-2009 Funding Summary

Total research expenditures were **\$380 M**

Sponsored program activity was **\$206 M**

Federally sponsored research was **\$135 M**

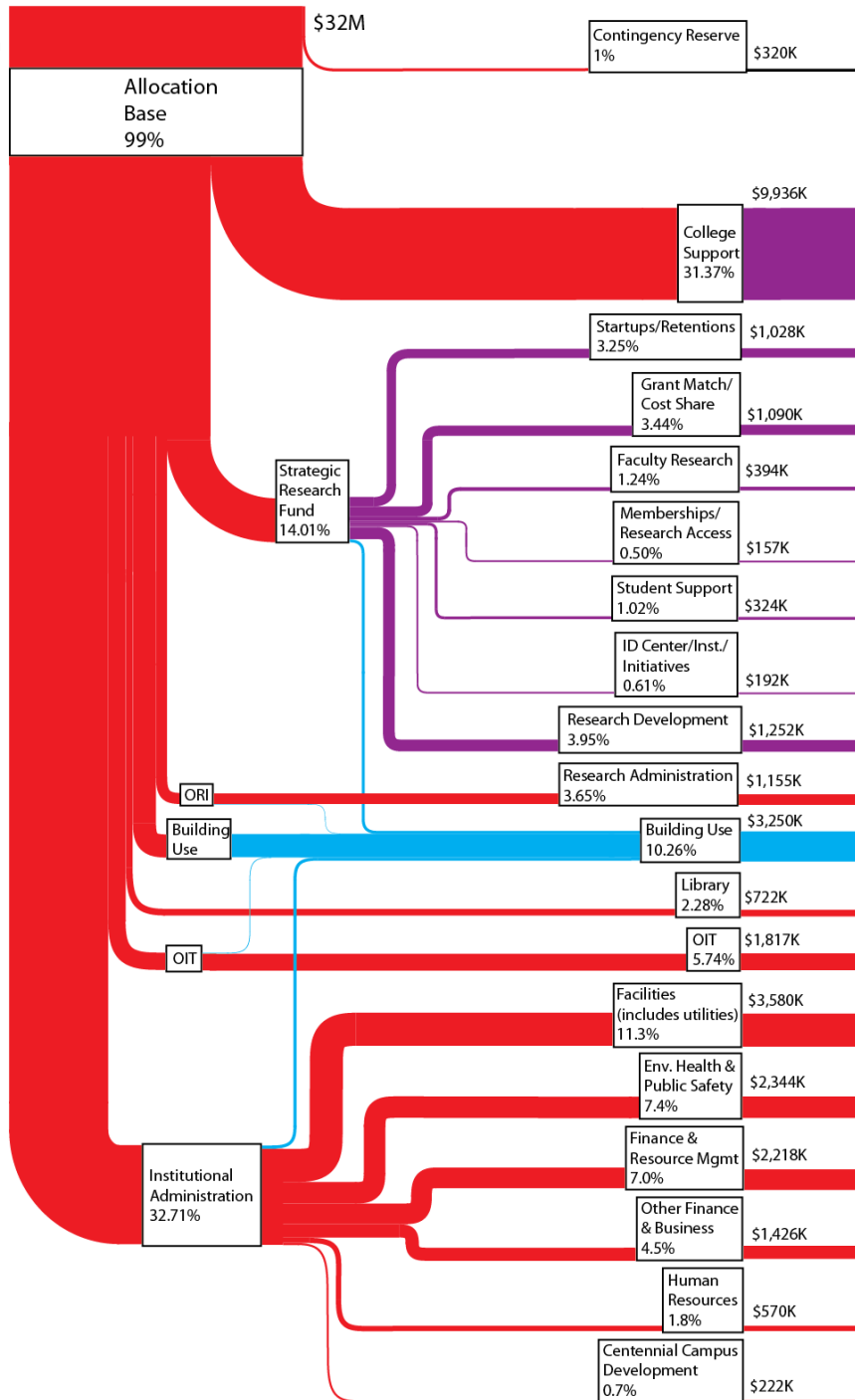
Total F&A collected was **\$30M**

Useful factors to estimate F&A:

- F&A is **~8%** of total research expenditures
- F&A is **~15%** of sponsored programs
- F&A is **~22%** of federally sponsored research

# F&A Distribution (2010-2011)

F&A Budgeted  
for Distribution  
(2010-2011)



## 2009-10 College F&A Allocations

[illegible]

# F&A Distribution by Colleges

- Colleges vary greatly in how they distribute F&A based on the types of research they conduct.
- 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.

# Next Steps

- Facilitate the recommendations of the Research and Strategic Planning Taskforce.
- Address limited time and support for faculty to engage in research and innovation activities
  - Identifying bureaucratic roadblocks, finding solutions
- Address start-up/retention, instrumentation, and equipment needs -- no targeted funds available
  - Prioritized list, shared facilities
- Proactively enhance partnerships both inside and outside of NC State



# Questions?

