



THE UNIVERSITY  
*of* NORTH CAROLINA  
*at* CHAPEL HILL

# **University of North Carolina at Chapel Hill**

**Cost Diagnostic: Final Report  
July 2009**

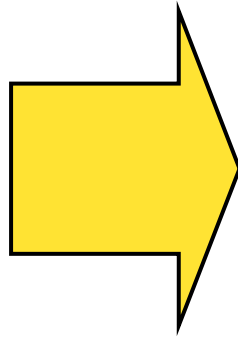
# Discussion topics

- Project context
- Report overview
- Option summaries
- Next steps
- Appendix

# Project objective and guiding principles

## Objective

*Identify options to **improve UNC-Chapel Hill's operating cost structure** through more efficient and effective operations to **facilitate long-term growth**, within boundaries of guiding principles*



## Guiding principles

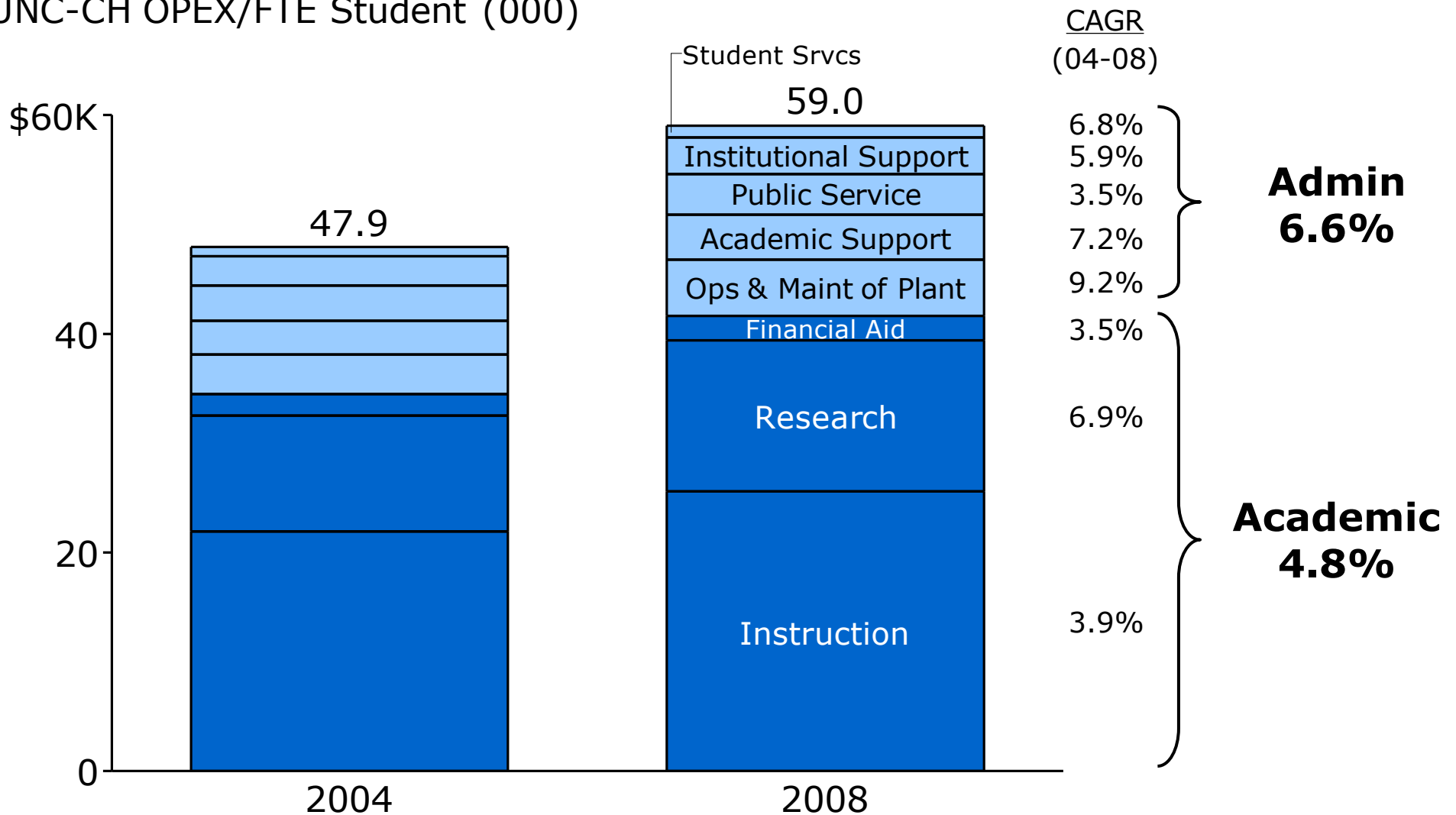
- Options must comply with **regulatory, statutory, and policy environments** under which the university operates
- **Academic quality** must be maintained
- **Carolina's reputation** as a leading public institution must be preserved
- Must sustain sound **internal control and compliance** environment
- Costs must be evaluated against **relative value** they generate in return

# Project scope

- Diagnostic **includes University Administration** and **all 14 Schools**
- Increased focus on expenses paid for by **General Institutional Support Funds (GISF)**
  - GISF includes State Funds and F&A (i.e., overhead)
- **Auxiliary Enterprises** that impact the use of GISF will be analyzed more closely
  - Energy Services, Facilities Services, Printing, Tar Heel Temps
- **Some areas were out of scope** for the 5-month diagnostic:
  - UNC Health Care System and UNC Physicians & Associates
  - New sources of revenue
  - Capital projects

# Administrative expenses per student have grown faster than academic expenses

UNC-CH OPEX/FTE Student (000)



Note: Opex for Auxiliary Enterprises, Depreciation, and Other is excluded; Figures based solely on CAFR/IPEDS definitions. Public Service (~\$96M in FY08) is comprised primarily of AHEC (~\$50M) and WUNC (~\$7M), remaining ~\$39M includes contributions from 100+ other depts; Majority of Centers & Institutes expenses are included in Research & Instruction (including Carolina Center for Public Service)

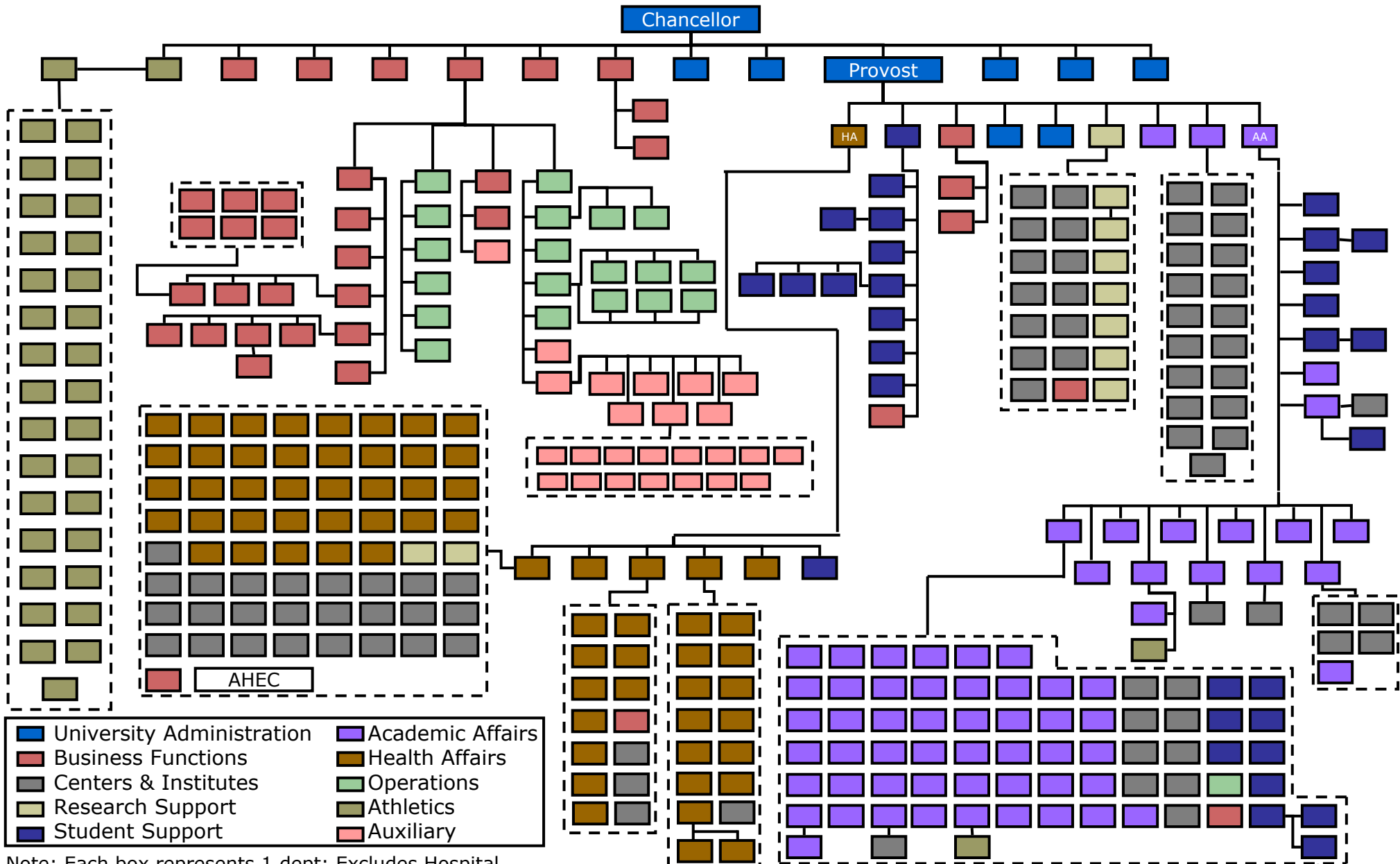
Source: UNC-CH OIRA, CAFR 2007 & 2008

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UNC Chapel Hill UPDATE - April 2009\_FINAL 5

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# UNC-CH has a complex org structure



Note: Each box represents 1 dept; Excludes Hospital  
 Source: UNC Org File

ies only.  
 North Carolina at Chapel Hill; it is not to be relied on by any 3rd party

# Multiple layers of management can exacerbate complexity

## Observations

- 9 layers of management
- Over 50% of supervisors are managing 1-3 people

## Potential consequences

- Frontline workers too disconnected from strategy and decisions
- Leadership too filtered from what is really happening
- Substantial bureaucracy
- Employees not empowered

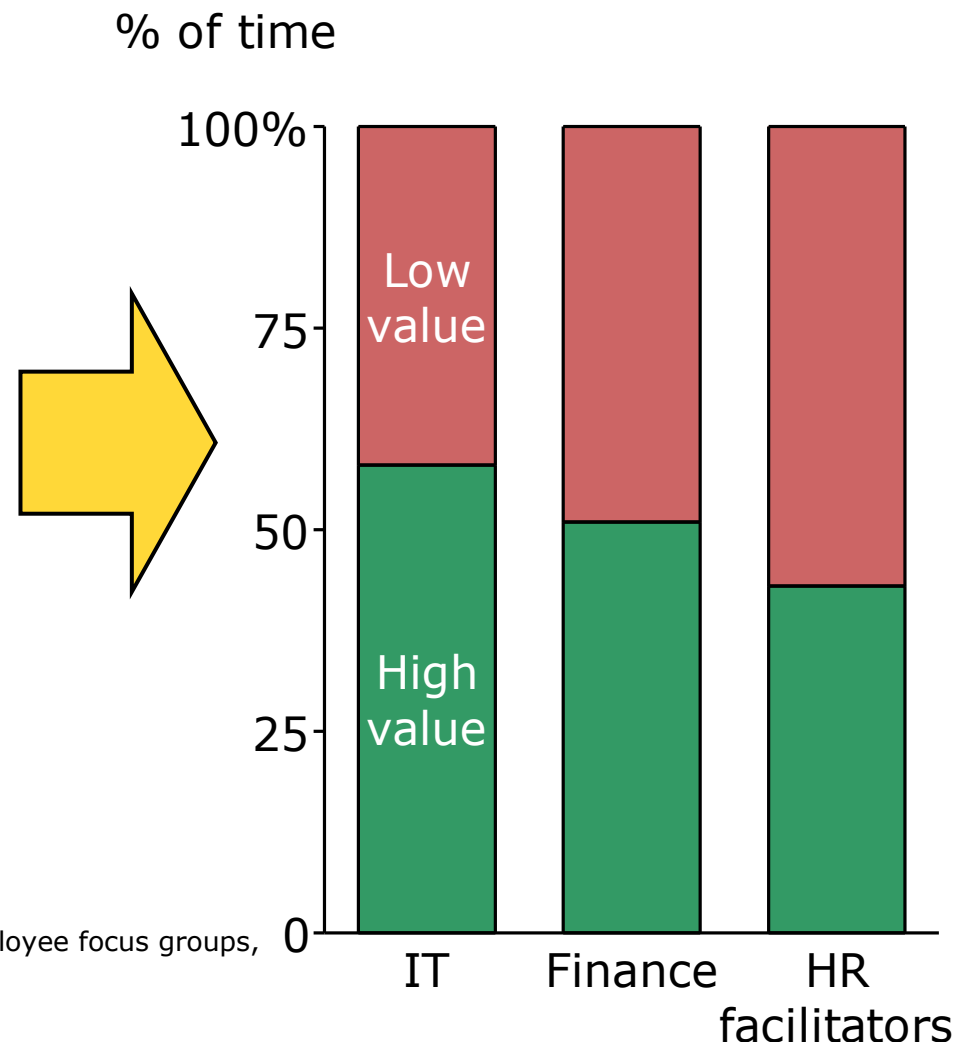
Note: Managers and personnel limited to permanent and part-time administrative and operations labor, does not include executive assistants, faculty, or research. Source: University organizational charts, UNC-CH interviews

# Complexity and related operating issues lead to inefficiency

## Operating Issues

- Insufficient Finance and HR systems
- Significant redundancy and shadow systems
- Processes built on exceptions and workarounds
- Many manual, paper-based processes
- Fragmentation and lack of scale in many operations

## Inefficient Time



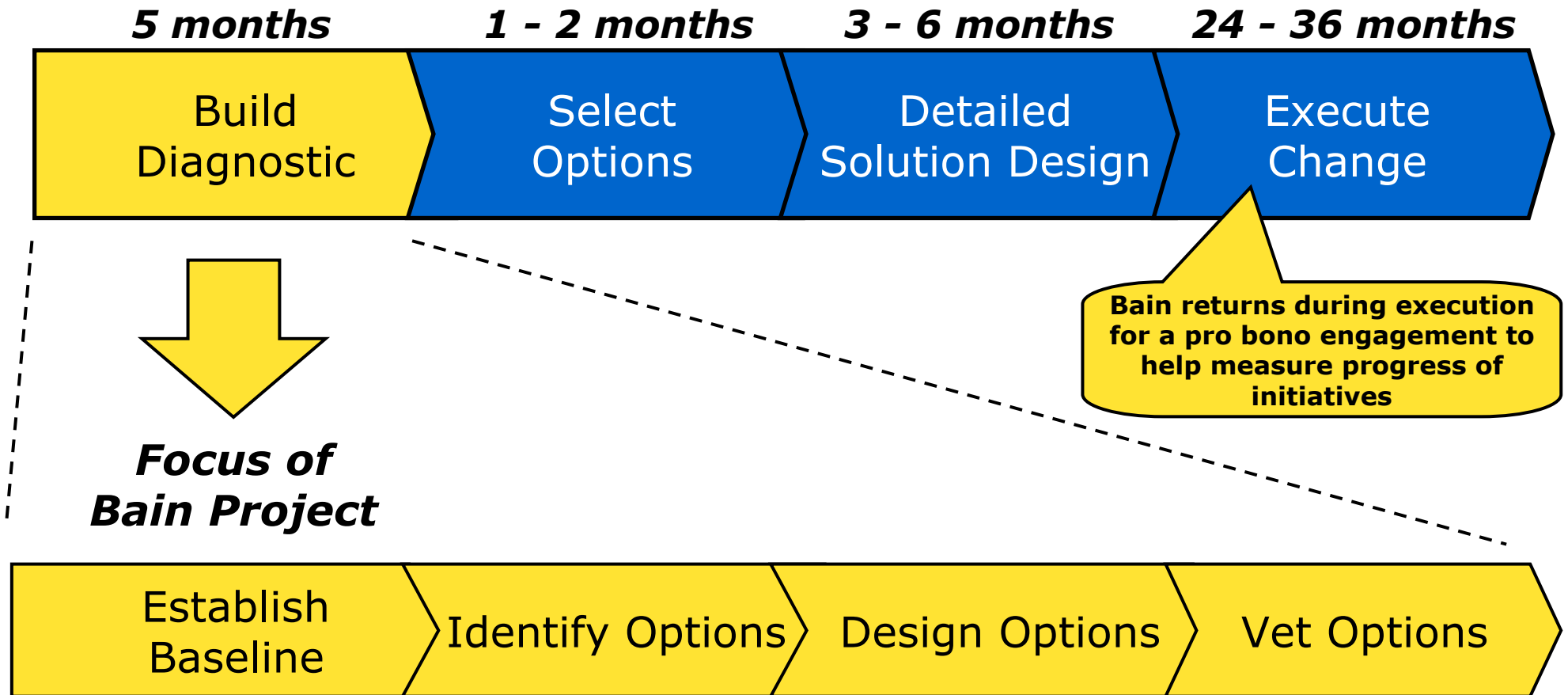
Note: IT n=36, Finance n=14, HR facilitators=20. Source: UNC-CH employee focus groups, interviews



# Discussion topics

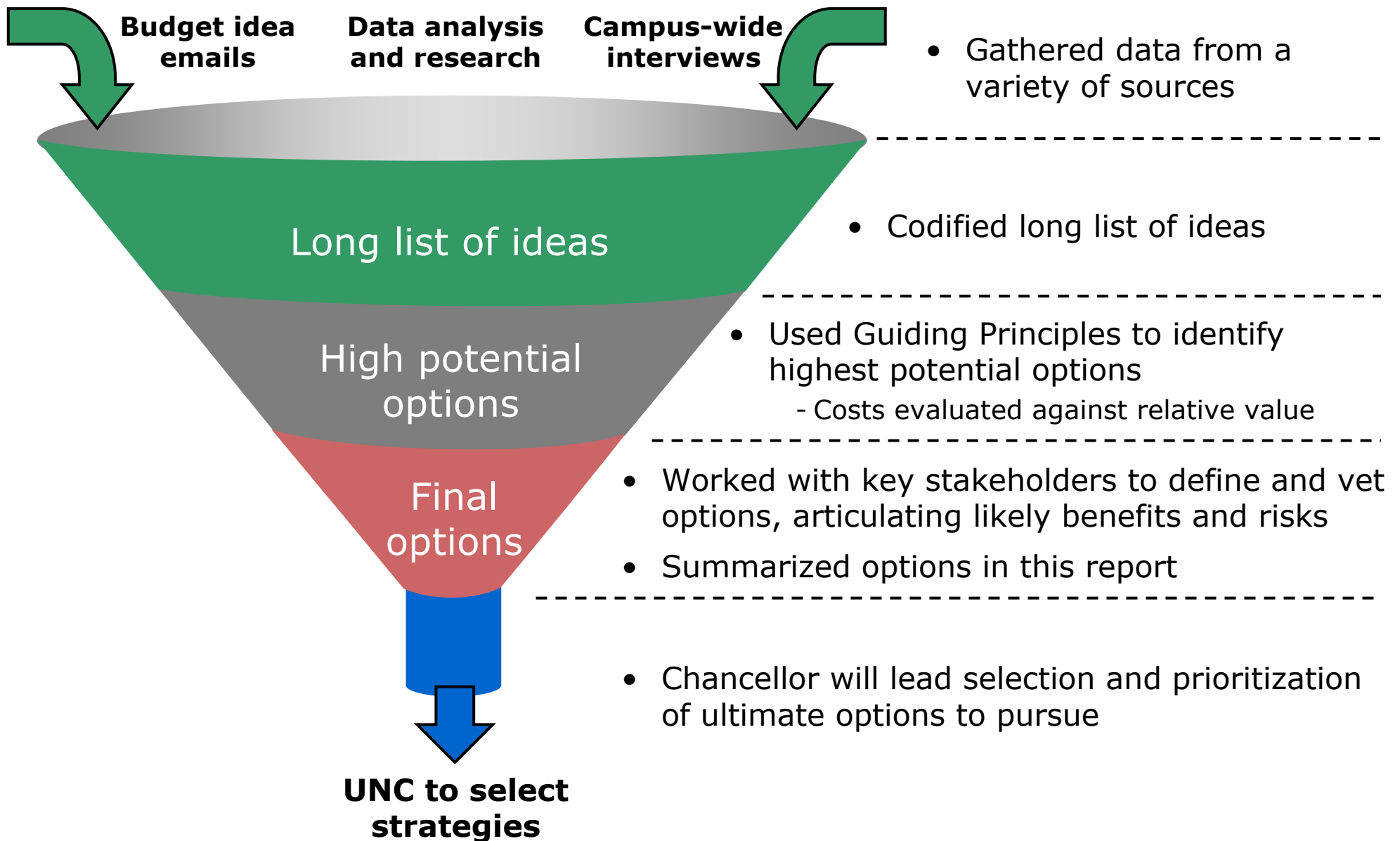
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# This reports represents a summary of the findings from the Bain-led diagnostic



Note: Diagnostic ran from January 2009 – May 2009

# We used a rigorous and collaborative process to identify options to improve efficiency and effectiveness



# Report is focused on 10 potential options

## 1 Overall University Structure and Strategy

- Organization re-design
- Spans and layers optimization

### Area Deep Dives

#### Admin Support

#### Teaching, Research, and Public Service

#### University Operations

2 Procurement

6 Centers & Institutes

8 Utilities

3 IT

7 Research &  
Compliance

9 Facilities services

4 Finance

10 Space utilization

5 HR

# Report description and disclaimer

- This document is a compilation **of potential options** to improve efficiency and effectiveness, but should **not be viewed as final recommendations** for initiatives
- All options were designed and authored with **input and consultation** from the **UNC leadership** team
- Potential **financial values and timelines are estimates**
  - Value and timelines are dependent on option selection, leadership approach, and implementation
  - Savings could be **reallocated to support Carolina's core mission** (i.e., teaching, research, and public service) or address budget concerns
- In general, **organizations rarely achieve 100% of identified savings** options
  - 60-80% is more common based on a variety of factors
  - 40-60% more likely at UNC given regulatory constraints
- Many options are **difficult to implement** and will require significant time and investment

# Discussion topics

- Project context
- Report overview
- Option summaries
- Next steps
- Appendix

# How to read the options

Slide type	Description	Illustration								
<ul style="list-style-type: none"> <li><b>Overview</b></li> </ul>	<ul style="list-style-type: none"> <li>Summary of the challenges UNC is facing and resulting key questions, with respect to a specific option</li> <li>Some supporting evidence and analysis (i.e., data, quotes)</li> </ul>	<p><b>Overview: Organization structure</b></p> <p><b>Situation</b></p> <ul style="list-style-type: none"> <li>~11,700 employees spread across ~400 departments</li> <li>~6,700 subject to State Personnel Act (SPA)</li> <li>~1,800 exempt from SPA (EPA-NF)</li> <li>~3,200 faculty</li> </ul> <p><b>Supporting evidence</b></p> <p># of supervisors</p> <p><b>Challenges</b></p> <ul style="list-style-type: none"> <li>Extends to 10 layers in some areas</li> <li>Over 50% of supervisors have 3 or fewer reports</li> <li>Distributed nature creates very small departments in some areas</li> </ul> <p><b>Key questions</b></p> <ul style="list-style-type: none"> <li>How can UNC-CH reduce the number of layers and increase spans of control?</li> <li>How can UNC-CH prevent bureaucracy from creeping back into the organization over time?</li> </ul> <p><i>"I find that bureaucracy and our systems prevent us from being a workplace of choice. It really prevents us from doing what we should do..."</i> UNC-CH employee</p> <p><i>"Given our current structure and performance assessments, it's unclear what my career path is..."</i> UNC-CH employee</p> <p><small>Note: Analysis for slide includes ~110 permanent and part-time employees including executive assistants. Excludes faculty with the exception of some department chairs and others who serve in administrative roles. HR Facilitator focus group n=25. Source: University organizational charts, HR Facilitator focus group, HR personnel data. The information is confidential and was prepared solely for the use of the University of North Carolina at Chapel Hill; it is not to be relied on by any 3rd party without prior written consent.</small></p>								
<ul style="list-style-type: none"> <li><b>Potential options</b></li> </ul>	<ul style="list-style-type: none"> <li>Summary of options available for UNC</li> <li>Estimated financial value and timeline for realizing benefits</li> <li>Certain options are "key enablers" or "catalysts" (i.e., necessary to realize full benefits of other options)</li> </ul>	<p><b>Potential options: Organization structure</b></p> <p><b>1 Policy changes</b> → <b>2 Organizational changes</b></p> <p><b>Description:</b></p> <ul style="list-style-type: none"> <li>Create guidelines and policies to govern the number of layers and increase prevent new administrative layers</li> <li>Change managers with driving improvements in their individual areas</li> <li>Restructure where necessary</li> <li>Continue long-term flattening of the University through attrition</li> </ul> <p><b>Time to realize savings:</b></p> <ul style="list-style-type: none"> <li>1-2 months</li> <li>1-2 years</li> <li>3-5+ years</li> </ul> <p><b>Estimated value (savings):</b> ~\$3M-\$12.1M (\$1.5-\$8M GISP)</p> <p><b>Key enabler (would improve viability of Option 2):</b></p> <p><small>Note: Excludes Centers &amp; Institutes, researchers, and faculty. Source: HR salary data, University organizational charts, Beta analysis. The information is confidential and was prepared solely for the use of the University of North Carolina at Chapel Hill; it is not to be relied on by any 3rd party without prior written consent.</small></p>								
<ul style="list-style-type: none"> <li><b>Individual option descriptions</b></li> </ul>	<ul style="list-style-type: none"> <li>Detailed description for each option and key enabler, including quantitative and qualitative benefits and risks</li> </ul>	<p><b>Option 1: Policy changes</b></p> <table border="1"> <thead> <tr> <th>Description</th> <th>Benefits</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> <li>Adopt effective policies and procedures to prevent growth of additional supervisory layers across the University                             <ul style="list-style-type: none"> <li>Establish layer and/or span guidelines</li> <li>Define decision rights and approval process for introduction of new positions that would create additional layers in an organization</li> <li>Rewrite job descriptions to reinforce structural changes</li> </ul> </li> </ul> </td> <td> <ul style="list-style-type: none"> <li>Helps prevent potential return of additional layers and loss of control</li> <li>Enables preservation of changes</li> <li>Helps with monitoring of overall organizational structure changes</li> <li>Helps ensure process requires that new positions are identified and tracked</li> </ul> </td> </tr> <tr> <th>Potential savings</th> <th>Risks/Hurdles</th> </tr> <tr> <td> <ul style="list-style-type: none"> <li>Estimated upfront investment: Management time to design and implement policy changes</li> <li>Total potential savings: ~\$3M</li> <li>Time to realize: ~3-6 months</li> </ul> </td> <td> <ul style="list-style-type: none"> <li>Difficult to monitor/enforce implementation</li> <li>Potential to lose momentum for change</li> <li>Additional approval requirements may slow HR processes</li> <li>May need to create new reward/recognition mechanisms in place of promotion into supervisor roles</li> </ul> </td> </tr> </tbody> </table> <p><small>Note: Excludes Centers &amp; Institutes, researchers, and faculty. Source: HR salary data, University organizational charts, Beta analysis. The information is confidential and was prepared solely for the use of the University of North Carolina at Chapel Hill; it is not to be relied on by any 3rd party without prior written consent.</small></p>	Description	Benefits	<ul style="list-style-type: none"> <li>Adopt effective policies and procedures to prevent growth of additional supervisory layers across the University                             <ul style="list-style-type: none"> <li>Establish layer and/or span guidelines</li> <li>Define decision rights and approval process for introduction of new positions that would create additional layers in an organization</li> <li>Rewrite job descriptions to reinforce structural changes</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Helps prevent potential return of additional layers and loss of control</li> <li>Enables preservation of changes</li> <li>Helps with monitoring of overall organizational structure changes</li> <li>Helps ensure process requires that new positions are identified and tracked</li> </ul>	Potential savings	Risks/Hurdles	<ul style="list-style-type: none"> <li>Estimated upfront investment: Management time to design and implement policy changes</li> <li>Total potential savings: ~\$3M</li> <li>Time to realize: ~3-6 months</li> </ul>	<ul style="list-style-type: none"> <li>Difficult to monitor/enforce implementation</li> <li>Potential to lose momentum for change</li> <li>Additional approval requirements may slow HR processes</li> <li>May need to create new reward/recognition mechanisms in place of promotion into supervisor roles</li> </ul>
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# Agenda: Option summaries

1. Organization structure

2. Procurement

3. Information Technology

4. Finance

5. Human Resources

6. Centers & Institutes

7. Research Support & Compliance

8. Energy Services

9. Facilities Services

10. Space Utilization

11. Other Options



# Overview: Organization structure

## Situation

- ~11,700 permanent employees spread across ~400 departments
  - ~6,700 subject to State Personnel Act (SPA)
  - ~1,800 exempt from SPA (EPA-Non Faculty)
  - ~3,200 faculty

## Challenges

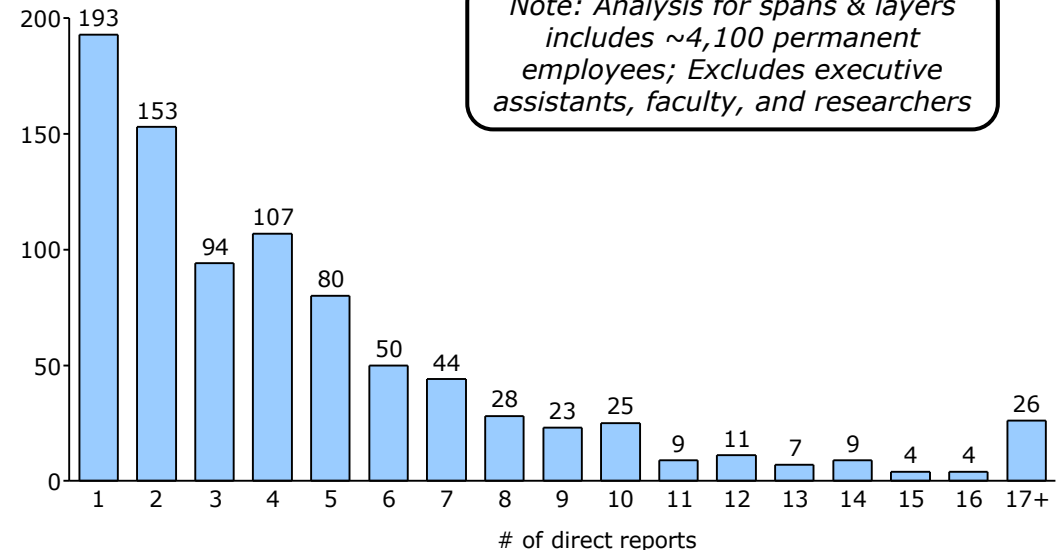
- Organization is 10 layers deep in some areas
- Over 50% of supervisors have 3 or fewer reports
- Distributed nature creates very small departments in some areas

## Key questions

- How can UNC reduce layers and increase spans of control?
- How can UNC prevent bureaucracy from creeping back into the organization over time?

## Supporting evidence

Number of supervisors



*"I find that **bureaucracy** and our systems prevent us from being a workplace of choice. It really **prevents us from doing what we should do.**"*


UNC employee

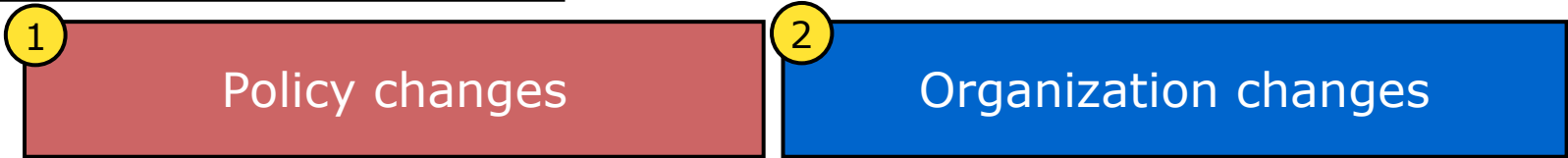
*"Given our **current structure** and performance assessments, it's **unclear what my career path** is."*

UNC employee

Source: University organizational charts; HR personnel data

# Potential options: Organization structure

 Key enabler would likely improve viability of other options



Description:

- Create guidelines and policies to prevent new administrative layers
- 2a Decrease layers and increase spans of control across all areas of UNC in the near-term
  - Charge managers with driving improvements in their individual areas
  - Restructure where necessary
- 2b Continue long-term flattening of the University through attrition

Time to realize savings:

3-6 months

2a 1-2 years

2b 3-5+ years

Estimated annual value:

N/A

~\$3-12M  
(\$1.5-6M GISF)

Note: Excludes Centers & Institutes, researchers, and faculty  
Source: HR salary data, University organizational charts, Bain analysis

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# 1 Organization structure option 1: Policy changes

## Description

- Adopt effective policies and procedures to prevent growth of additional supervisory layers across the University
  - Establish layer and/or span guidelines
  - Define decision rights and approval process for introduction of new positions that would create additional layers in an organization
  - Rewrite job descriptions to reinforce structural changes

## Potential value

- Estimated upfront investment: Management time to design and implement policy changes
- Time to realize: 3-6 months

## Benefits

- Helps prevent gradual return of additional layers and low spans of control
- Ensures long-term preservation of changes
- Enables accurate monitoring of overall organizational structure changes
  - Approval process requires that new positions are evaluated and tracked

## Risks/Hurdles

- Difficult to monitor/enforce implementation
- Additional approval requirements may slow HR processes
- May need to create new reward/recognition mechanisms in place of promotion into supervisor roles

Note: Excludes Centers & Institutes, researchers, and faculty  
Source: HR salary data, University organization charts, Bain analysis

# 2 Organization structure option 2: Organization changes

## Description

- 2a Set near-term goals for reducing layers and increasing spans of control across the University
  - Goals should take into account the operations and mission for each area
- Eliminate excess supervisory layers and increase spans of control
  - Individual managers identify and drive change in their own areas
  - Reassign some supervisors to individual contributor roles
  - Restructure organization where necessary
- 2b Decrease number of layers and increase spans of control through several years of attrition

## Potential value

- Estimated upfront investment: Management time to identify options, HR time to implement job changes, and restructuring costs of up to \$5.5M
- Estimated annual value: ~\$3-12M
- Time to realize: (a) 1-2 years; (b) 3-5+ years

## Benefits

- Greater proximity to senior management (through decreased layers) should increase frontline morale
  - Less 'over the shoulder' supervision
  - Unfiltered communication from top-level management should increase employee connectedness to overall university goals
- Fewer management layers will eliminate unnecessary work (i.e., fewer meetings, less duplication, etc.) and drive quicker approvals and decision cycles

## Risks/Hurdles

- Spans and layers issues could creep back in over time
- Likely resistance to potential restructuring and reductions
- Required job changes may tax HR and other support functions
- Fewer management positions require changes in how success is defined
  - More difficult to use promotion to supervisor role as reward for top performers

Notes: Excludes Centers & Institutes, researchers, and faculty; severance cost based on UNC severance calculator using average statistics of permanent EPA Non-Faculty and SPA personnel; does not include leave payout, career transitioning counseling, health insurance continuation, etc.

Sources: HR salary data, University organizational charts, Bain analysis

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# Agenda: Option summaries

1. Organization structure

2. Procurement

3. Information Technology

4. Finance

5. Human Resources

6. Centers & Institutes

7. Research Support & Compliance

8. Energy Services

9. Facilities Services

10. Space Utilization

11. Other Options

# Overview: Procurement

## Situation

- UNC spent \$431M\* on goods and services in FY2008, of which \$127M is GISF

## Challenges

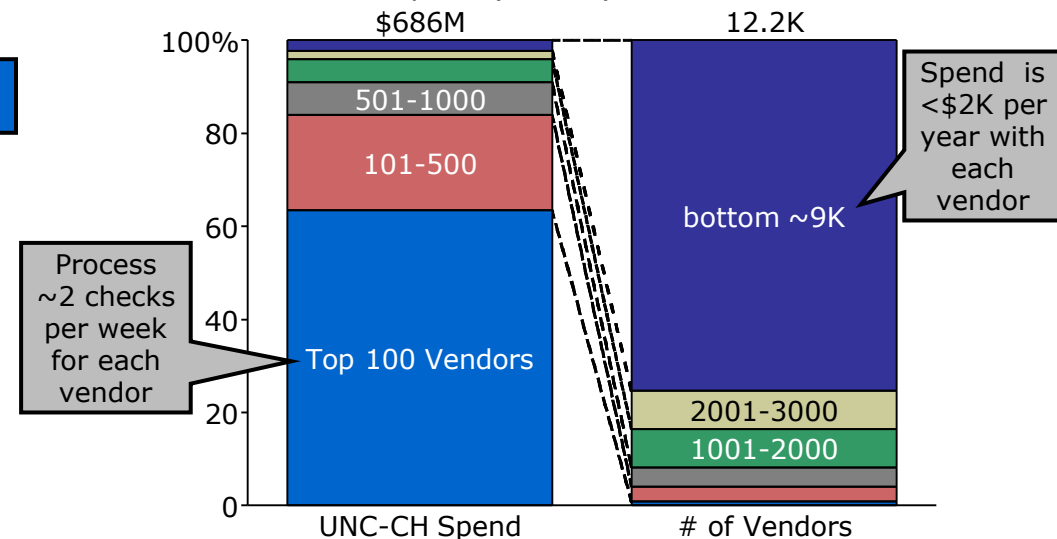
- De-centralized purchase decision rights have led to vendor fragmentation, and disparate pricing
- IT systems are not fully automated
  - Material & Disbursement Services (M&DS) must perform some processes manually
  - Data capture is insufficient, limiting the analysis necessary to realize savings
- Limited collaboration between M&DS and internal customers hinders spend optimization and the setting/enforcement of policies
- Few resources dedicated to actively managing and reducing spend

## Key questions

- How can UNC save money with efficient and collaborative processes and systems improvements?
- Are there options to realize savings before ERP comes online?

## Supporting evidence

UNC-CH Accounts Payable (FY2008) \*



*"The State-imposed RFP process is confusing and complicated, and **what I really need is support from procurement to help me solve problems.**"*

Faculty Member

***"I have never been able to rely on anyone else to provide itemized spend data. I have to track everything myself in Excel to produce the quarterly reports our Dean wants to see."***





Senior School Staff Member

\* AP data includes capital expenses not considered in the \$431M of Goods and Services spend

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# Potential options: Procurement

	Internal solution			Third-party provider	
	Wait for ERP	1 Interim internal solutions	2 Share resources	3a Indirect spend categories	3b All spend categories
Description:	<ul style="list-style-type: none"> <li>Leave M&amp;DS unchanged until ERP implementation complete</li> <li>Then focus group on strategic analysis</li> </ul>	<ul style="list-style-type: none"> <li>Re-focus M&amp;DS on strategic analysis</li> <li>Develop short-term solutions to data/process issues</li> <li>Integrate with ERP</li> </ul>	<ul style="list-style-type: none"> <li>Leverage existing State and UNC General Administration resources</li> <li>Integrate with ERP</li> </ul>	<ul style="list-style-type: none"> <li>Select third party to provide procurement functions for indirect categories</li> <li>Integrate with ERP</li> </ul>	<ul style="list-style-type: none"> <li>Select third party to provide procurement functions for all categories</li> <li>Integrate with ERP</li> </ul>
Financial	← Estimated annual value* →			~ \$40-45M (~\$10-15 GISF)	
	Time to implement requisite systems:	24-36 months	12-18 months	9-15 months	6-12 months
Control	UNC ownership:				

\* Realized gradually over 1-3 years, once requisite systems are in place

 High UNC control  
 Low UNC control

# 1 Procurement option 1: Interim internal solutions

## Description

- Increase M&DS focus on strategic analysis
  - Reduce number of vendors and consolidate volume to generate leverage in negotiations
  - Analyze spend to identify options for reduction and make appropriate policy recommendations
- Develop short-term solutions while waiting for ERP and related procurement applications to come online
  - Process efficiencies
  - Data-capture improvements
- Look to shed non-core logistical capabilities (where feasible/beneficial)
  - Ex: Receiving/Delivery, Storerooms

## Benefits

- UNC retains capabilities in-house
  - Internal knowledge should help with ultimate ERP implementation
- Procurement group will build on current expertise and become an enabler, helping internal customers meet their needs
- Build-up of strategic focus could be partially self-funded
  - Automation allows for shift away from process workarounds and towards value-adding analysis

## Risks/Hurdles

- Effectiveness of strategic analysis is limited until system and data capture issues are resolved
- UNC departments may be resistant to increased assistance from Procurement in managing spend on goods and services
- Redundant efforts might be required to improve processes in short-term and then again at ERP installation
  - Although, can leverage learnings for ERP implementation



## 2 Procurement option 2: Share resources

### Description

- Utilize existing systems to reduce the level of manual processing by M&DS, and improve data-capture
  - State of NC's Accenture-run Ariba platform
  - UNC General Administration's SciQuest eProcurement application
- M&DS to focus on strategic analyses & policy recommendations
  - Analyzing and reducing spend

### Benefits

- Improved data capture will facilitate more robust spend analysis
- Combined scale of buying group may allow UNC to realize better pricing on select items
- May accelerate time to realize savings
  - No need to invest in developing eCatalogs

### Risks/Hurdles

- Risk of being "locked-in" to unfavorable rates
  - All purchases through State of NC may include a 1.75% fee
  - State/GA may consider interests of the group in its entirety (not necessarily those of UNC) when negotiating prices
- Leveraging scale at State/GA level may only reduce costs in certain categories
  - UNC procurement will still need to serve internal customers for remaining categories
- Redundant efforts might be required to integrate with new systems in short-term and then again at ERP installation
  - Although, can leverage learnings for ERP implementation
  - State/GA systems could make the forthcoming ERP procurement applications unnecessary

# 3 Procurement option 3: Third-party provider

## Description

- Hire a third party to provide procurement functions
  - Purchase processing
  - Data capture and spend analysis
  - Vendor relationships and negotiations
- **3a** Indirect spend categories
  - M&DS to focus on policy recommendations regarding indirect categories (e.g. office supplies)
  - M&DS to perform all procurement functions for University-specific categories (e.g. scientific/research equipment)
    - Processing purchases
    - Analyzing and reducing spend
- **3b** All spend categories
  - M&DS to focus on policy recommendation and enforcement

## Benefits

- Leveraging an external provider's technology, experience and scale may enable UNC to achieve better pricing and focus resources on better serving the needs of internal customers
- Will accelerate time to realize savings
- Easier to stand up organization if only focusing on University-specific categories

## Risks/Hurdles

- Potentially the most expensive option
  - Provider will likely keep some portion of the savings
  - May be costly to repatriate if market dynamics change
- State of NC's involvement in RFP process could limit UNC's ability to select a provider
- UNC departments may be resistant to an outside provider managing spend
- May only reduce costs in certain categories
- Redundant efforts might be required to integrate with new systems in short-term and then again at ERP installation
  - Although, can leverage learnings for ERP implementation
  - Outsourcing could make the forthcoming ERP procurement applications unnecessary

# Agenda: Option summaries

1. Organization structure
2. Procurement
3. Information Technology
4. Finance
5. Human Resources
6. Centers & Institutes
7. Research Support & Compliance
8. Energy Services
9. Facilities Services
10. Space Utilization
11. Other Options

# Overview: Information Technology

## Situation

- Central ITS provides core IT services and support in select areas across the university
- IT functions are distributed across schools/divisions
- Within schools and divisions, IT infrastructure and support are often distributed across departments

## Challenges

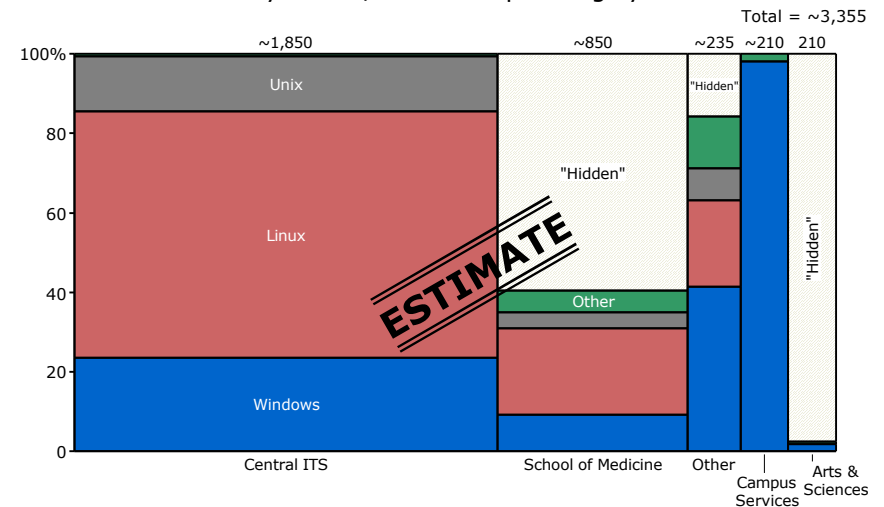
- Distributed functions often drive redundant infrastructure (hardware & software) and support capabilities
  - Nearly 50% of servers are outside of central ITS
  - Many areas run their own web servers, databases, email, etc.
- Current IT decision-making process is fragmented and unclear
  - Central ITS and distributed IT leadership are often unsure who holds key decision rights
- Distributed units lack trust and confidence in ITS' ability to provide comprehensive support
  - Similar mistrust sometimes exists between distributed departments and school or division central IT office

## Key questions

- How can culture/capability gaps within ITS be resolved to rebuild trust among distributed IT units?
- To what degree can IT infrastructure and support be consolidated?

## Supporting evidence

UNC-CH server count by school/area and operating system



*"I'm **duplicating some of what everyone else is doing.** We're doing some of the software or some of the desktop imaging...it changes from place to place."*

UNC IT personnel

*"The organization is so **spread out**, and we don't know where everyone is...I **don't always really know who my customer is.**"*

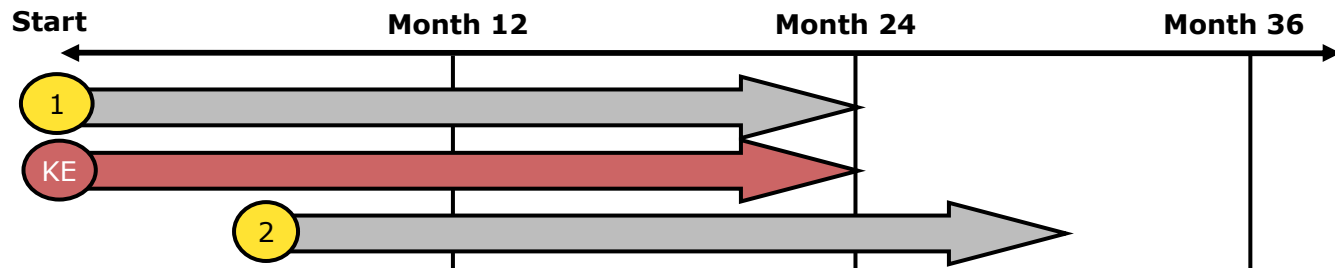
UNC IT personnel

# Potential options: Information Technology

Key enabler would likely improve viability of other options

	1 Unit consolidation	2 ITS consolidation
Description:	<p style="text-align: center; background-color: #cccccc;">Option set</p> <p><b>1a</b> Bring distributed IT infrastructure and support up from departments, consolidate within schools</p> <ul style="list-style-type: none"> <li>- Build strong perception of trust and clear decision rights between school IT &amp; distributed stakeholders</li> </ul> <p><b>1b</b> Potentially cluster some schools and divisions together, utilizing shared service centers to achieve scale</p>	<p style="text-align: center; background-color: #c00000; color: white;">Key enablers</p> <ul style="list-style-type: none"> <li>• Provide comprehensive IT support capabilities with clear &amp; flexible service level options</li> <li>• Build strong perception and trust of internal capabilities, customer service delivery</li> <li>• Define roles and decision rights between ITS, distributed organization for strategic IT decisions</li> </ul> <p style="text-align: center; background-color: #cccccc;">Option set</p> <p><b>2a</b> Provide space, hosting, and support for 'commodity' IT systems within central ITS</p> <ul style="list-style-type: none"> <li>- Email, web hosting, network management, databases, server management, etc.</li> </ul> <p><b>2b</b> Provides space, hosting, and support for select 'value-add' IT systems within central ITS</p>
Estimated annual value*:	~\$7-10M (\$3.5-5M GISF)	N/A

UNC may pursue a phased approach:



\* Option savings are additive

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# 1 Information Technology option 1: Unit consolidation

## Description

- 1a Remove "hidden" IT infrastructure and support that exists within distributed departments and sub-units
  - Catalogued and/or consolidated into school/division IT organizations
  - Larger schools and divisions achieve stand-alone scale
- 1b Potentially cluster some schools/divisions together
  - Supported by shared service centers and/or 'anchor' IT organization within larger schools/divisions

## Potential value

- Estimated upfront investment: Resources required to migrate infrastructure, support
- Estimated annual value: ~\$7-10M
- Time to realize: ~1-2 years

## Benefits

- Cost savings achieved as benefits from scale are realized
- Tighter security for potentially sensitive data facilitated by server and other infrastructure consolidation
- Consistent platforms and systems make future IT developments, interdisciplinary integration easier

## Risks/Hurdles

- Diverse, specific service levels may be difficult to achieve with consolidation
- Pushback from distributed organization as control is *perceived to be* taken from distributed departments
- Hurdles for clustering schools/divisions:
  - Clear 'payment' or fund allocations for svcs
  - Appropriate 'home', governance for clustered IT org
  - Clusters may create additional 'central IT' organizations with the attendant confusion over roles and responsibilities, and resultant duplication of services

# Information Technology key enabler: ITS consolidation

## Description

- Build comprehensive support capabilities for diversity of IT solutions in ITS
  - Flexible service level options to accommodate diverse needs
  - Improved pricing/financial model with advantageous rates to encourage service migration (vs. current cost recovery)
- Restore trust and repair perception of ITS through exceptional customer service, strong service delivery
- Define clear decision rights so that distributed organizations & ITS can work together to make strategic IT decisions
  - Include clear guidelines to prevent further IT proliferation over time

## Potential value

- Likely necessary to facilitate service migration
- Estimated upfront investment: Resources required to build key areas for future support
- Time to realize: ~1-2 years

## Benefits

- Encouraging heavier future collaboration between distributed IT and ITS prevents further proliferation of IT costs
  - Will be further facilitated by clear decision rights among all key stakeholders

## Risks/Hurdles

- Past perceptions of ITS could be difficult to overcome in some areas
- Past culture within ITS has been a barrier to collaboration with campus units
- Cost recovery model is embedded in UNC organization (not just IT) and may be difficult to change

# 2 Information Technology option 2: ITS consolidation

## Description

- 2a Provide space, hosting and support for 'commodity' IT systems (database, email, etc.) in ITS
  - Degree of centralization may vary by school, and likely will increase over time as ITS demonstrates ability to deliver
    - Enterprise solutions are designated 'first option' for all areas
- 2b Provide space, hosting and support for diversity of value-add IT systems in ITS
  - Service provision will likely vary by school and by application type
  - Research and instruction applications, 'homegrown' systems, and some support may remain in distributed organization

## Potential value

- Estimated upfront investment: Continued resource investment in ITS to support infrastructure and support personnel shifts
- Estimated annual value: ~\$5-9M
- Time to realize: ~1-2+ years

## Benefits

- Cost savings achieved as benefits from scale are realized
- Tighter security for potentially sensitive data facilitated by server, infrastructure consolidation
- Consistent platforms and systems make future IT developments, interdisciplinary integration easier

## Risks/Hurdles

- Funding and charge-back options for units must be defined (specifically what's provided for free vs. what must be separately paid for)
- Diverse and specific service levels may be more difficult to achieve with heavier service consolidation
- Pushback from distributed organization as control is *perceived to be* taken from distributed departments
  - Mitigated with clearer decision rights



# Agenda: Option summaries

1. Organization structure
2. Procurement
3. Information Technology
4. Finance
5. Human Resources
6. Centers & Institutes
7. Research Support & Compliance
8. Energy Services
9. Facilities Services
10. Space Utilization
11. Other Options

# Overview: Finance

## Situation

- UNC is a \$2B+ organization with 6 key funding sources
  - Each fund source has unique rules and regulations
- Portions of finance function are decentralized, and some finance activities are executed at multiple levels

## Challenges

- Finance personnel are largely transaction-oriented, with limited bandwidth to execute analysis or define strategy
  - Task completion requires significant experiential knowledge and is not intuitive for new hires
  - Finance personnel are only able to spend ~50% of their time on core finance activities
- Distributed organization often views task execution as a necessary component of decision-making

## Key questions

- How can financial system and process hurdles be resolved and along what timeline?
- To what degree can core finance activities be consolidated?

Note: Salary spend functional allocations based on class and working titles  
 Source: 2008 HR payroll database

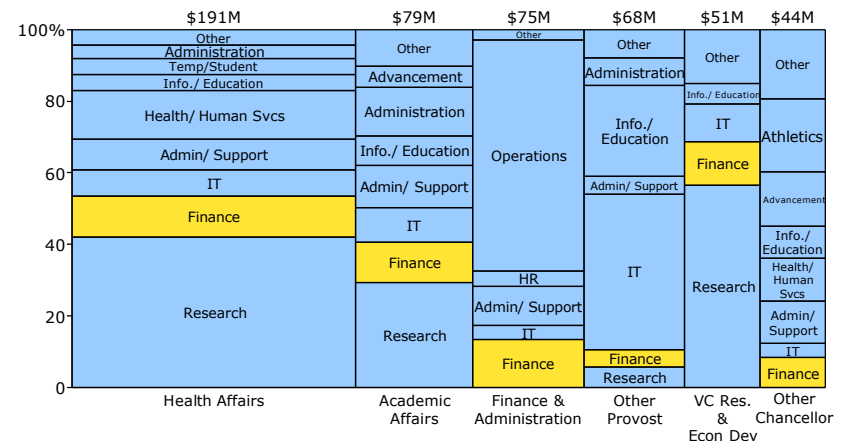
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## Supporting evidence

2008 Non-faculty salary spend by function

Total = \$508M




*"A lot of **non-core, administrative tasks** have been **pushed down** to us in the departments from central finance offices..."*

UNC Business Manager

*"There are so **many different kinds of accounts** and so many different budgets...if **my chair wants to know how much is in his research account, it takes me a couple hours...**"*

UNC Business manager

# Potential options: Finance

 Key enabler would likely improve viability of other options



Description:

- 1 **Efficiency improvements**
  - Determine and disseminate exhaustive set of current policies and processes
    - Streamline where possible to improve efficiency
  - In advance of ERP, consolidate diverse set of systems into a single, consistent, user-friendly platform (e.g., InfoPorte)
- 2 **Unit consolidation**
  - 2a Elevate distributed finance from depts. and consolidate within schools and divisions
    - Realize stand-alone scale in select schools and divisions
  - 2b Potentially cluster some schools and divisions together, utilizing shared service centers to achieve scale
- 3 **Central finance consolidation**
  - Establish central finance capability to enable core finance task execution and strategic support for distributed units

Time to realize:

1-2 years

1-2 years

2+ years

Estimated annual value\*:

\$3-6M  
(\$1.5-3M GISF)

\$1-2M

\$500K-1M  
(\$250-500K GISF)

\* Option savings estimates are additive

# 1 Finance option 1: Efficiency improvements

## Description

- Identify all core policies and processes, and determine ultimate source or enforcing body (Federal, State, Donor/grant institution, GA, UNC, etc.)
  - Work with other key functional areas (OSR, OHR) where necessary
  - Remove 'self-imposed' policy & process hurdles
  - Identify most complicated processes from state, GA, etc. and target for petition
- Consolidate existing financial systems into single, consistent, user-friendly platform
  - System should be flexible and easily utilized by all departments and sub-units as a bridge or ultimate accessory to ERP implementation
  - Integrate financial with other systems (e.g., OSR, OHR, etc.)
  - Embed state & donor policies into system to automate compliance checks

## Potential value

- Estimated upfront investment: Significant time investment to catalog policies and processes; system upgrades likely a \$1-2M investment\*
- Estimated annual value: \$3-6M and key enabler for other options
- Time to realize: 1-2 years

## Benefits

- All personnel spend less time on low-value, administrative tasks
  - Benefits are heightened for finance personnel, where fewer FTEs may be required to do work
- New systems require less expertise in outdated technology, system idiosyncrasies
  - Finance, administrative personnel will require a less-specific capability set related to systems
- Improved effectiveness as reduction in errors eliminates duplicate work for central and distributed finance
- Easier and more consistent compliance with policies and guidelines

## Risks/Hurdles

- Realizing cost savings may prove difficult, as existing inefficiency is only a portion of time for a large number of FTEs
- Likely will be difficult to develop a single, comprehensive, and flexible departmental accounting system that meets diverse needs of all departments and sub-units

\*System upgrades includes development of single core solution for HR, Finance systems; assumes solution is primarily a front-end user interface rather than full replacement of core technology

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## 2 Finance option 2: Unit consolidation

### Description

- 2a Elevate distributed finance function from departments and consolidate within schools and divisions
  - Disaggregate traditional finance tasks and elevate core finance activities to dedicated school/division resources
  - Realize stand-alone scale in select schools and divisions
- 2b Potentially cluster some smaller schools and divisions together to achieve scale
  - Support with shared service centers and/or 'anchor' finance organization within larger schools/divisions

### Potential value

- Estimated upfront investment: Resources required to sufficiently build out consolidated finance functions
- Estimated annual value: \$1-2M
- Time to realize: 1-2 years

### Benefits

- Shared service centers allow UNC to realize scale benefits with distributed finance operations
- Dedicated finance professionals may be able to provide services with less central support
  - Clearer lines of communication and reduced interaction will free central finance for more strategic work

### Risks/Hurdles

- Pushback from distributed organization as decision rights are *perceived to be* taken from distributed departments
- May require position changes for distributed personnel as finance tasks are elevated and/or executed by end users (i.e., self-service)
  - Cost-savings may be difficult to realize given distributed nature of responsibilities (finance tasks account for only a portion of many FTEs)

# 3 Finance option 3: Central finance consolidation

## Description

- Transition dedicated finance personnel to central finance organization to elevate execution of core finance tasks
  - Establish dotted-line relationships to specific schools and divisions to ensure dedicated area expertise
    - Provide more *strategic* finance support for distributed units
  - Automate previously distributed finance tasks through self-service departmental finance systems

## Potential value

- Estimated upfront investment: Significant resources required to sufficiently build out central finance capabilities
- Estimated annual value: \$500K-1M
- Time to realize: 2+ years

## Benefits

- Cost savings from benefits of scale
- Dedicated finance professionals are better-suited for strategic financial analysis and planning

## Risks/Hurdles

- Central finance capabilities may need to expand to provide additional support of distributed units
  - Including renewed focus on distributed perception of finance entities
- Pushback from distributed organization as decision rights are *perceived to be* taken from distributed departments
- May require position changes for distributed personnel as finance tasks can be elevated and/or executed by end users (i.e., self-service)
  - Cost-savings may be difficult to realize given distributed nature of responsibilities (finance tasks account for only a portion of many FTEs)

\*Estimated value is incremental over unit consolidation

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# Agenda: Option summaries

1. Organization structure
2. Procurement
3. Information Technology
4. Finance
5. Human Resources
6. Centers & Institutes
7. Research Support & Compliance
8. Energy Services
9. Facilities Services
10. Space Utilization
11. Other Options

# Overview: Human Resources

## Situation

- UNC has 375+ HR facilitators distributed throughout the organization
- Several distinct offices are involved in key HR processes (Equal Opportunity Office, Office of Human Resources, etc.)

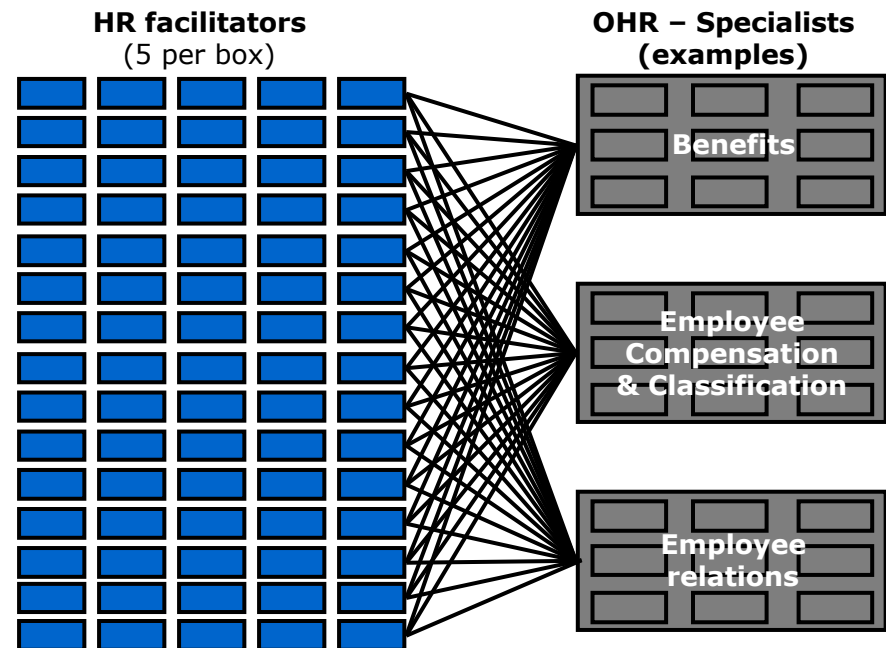
## Challenges

- Central HR interacts with HR personnel with a wide range of HR experience and capabilities
  - <1/3 of all facilitators have an HR class title
  - HR facilitators spend anywhere from 5% to 100% of their time focused on HR activities
  - Heavy training and customer service burden for OHR due to high HR facilitator count
- Existing HR systems and processes are often a hurdle instead of an enabler
- Handling requirements of state personnel system add complexity to HR processes
- Lack of clarity between roles & responsibilities of various 'HR' entities (Facilitators, EOO, OHR, etc.) drives inconsistent customer service

## Key questions

- How can system inadequacies and policy hurdles be dealt with effectively and expediently?
- How can core HR activities and personnel be better structured?

## Supporting evidence



*"My job is **not really all that hard**...but it is **incredibly complicated.**"*

UNC HR Facilitator

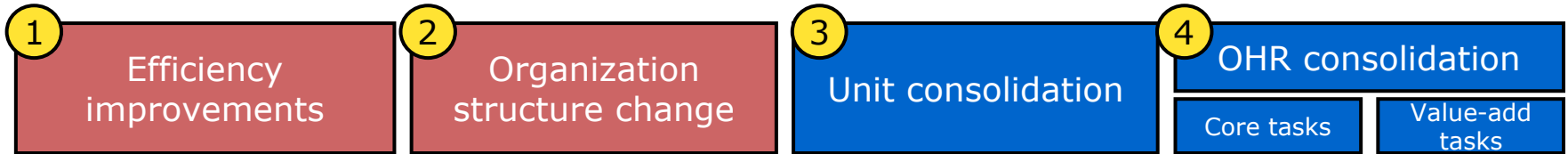
*"I find that bureaucracy and our systems prevent us from being a workplace of choice. It really **prevents us from doing what we should do**..."*

UNC HR Facilitator



# Potential options: Human Resources

  Key enabler would likely improve viability of other options



Description:

- 1 **Efficiency improvements**
  - Consolidate inadequate systems into a single, consistent, user-friendly platform (like EPAWeb)
  - Clearly lay out existing policy challenges and inefficient processes
    - Eliminate self-imposed process hurdles
  - Adjust funding model to support expansion of OHR responsibilities (e.g., training and talent management support, etc.)
- 2 **Organization structure change**
  - Consolidate communication channels by routing distributed HR personnel through school and division HR Directors
- 3 **Unit consolidation**
  - 3a Elevate HR task execution out of departments and consolidate within schools and divisions
    - Stand-alone scale achieved in select schools, divisions
  - 3b Potentially cluster some schools and divisions together, utilizing shared service centers to achieve scale
- 4 **OHR consolidation**

<span style="background-color: #c00000; border-radius: 50%; padding: 2px 6px; color: white; font-weight: bold;">4a</span> Elevate execution of certain scalable HR tasks to OHR	<span style="background-color: #c00000; border-radius: 50%; padding: 2px 6px; color: white; font-weight: bold;">4b</span> Provide some value-add HR services centrally from OHR
---	---

Time to realize:                      1-2 years                      1-2 years                      2-3 years                      3+ years

Estimated annual value\*:                      \$1-2M (\$500K-1M GISF)                      N/A                      \$1-2M (\$500K-1M GISF)                      \$1-1.5M (\$500-750K GISF)

\* Option savings estimates are additive

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# 1 Human Resources option 1: Efficiency improvements

## Description

- Establish a single, consistent, comprehensive, and user-friendly HR system (like EPAWeb)
  - System should be flexible and easily utilized by all departments as a bridge (or ultimate accessory) to ERP implementation
  - Integrate with other systems (within OSR, Finance, etc.)
  - Embed state personnel policies into system to automate compliance checks
- Eliminate self-imposed, University-wide process hurdles for core HR tasks
  - Clearly identify state personnel policies and streamline or automate where possible
- Determine funding model to support expansion of OHR responsibilities and continued investment into efficiency/ effectiveness improvements

## Potential value

- Estimated upfront investment: Significant time investment to completely catalog policies and processes; system upgrades likely a \$1-2M investment\*
- Estimated annual value: \$1-2M and key enabler for other options
- Time to realize: 1-2 years

## Benefits

- HR facilitators spend significantly less time on low-value, administrative tasks
- New systems should require less expertise in outdated technology, system idiosyncrasies
- Greater system automation could reduce errors and oversight requirements from central OHR, allowing central unit to focus on more strategic support

## Risks/Hurdles

- Simplified systems and processes may require position description changes for distributed HR facilitators as responsibilities shift
- Realizing cost savings may prove difficult, as existing inefficiency is found in a small portion of time for a large number of FTEs

\*System upgrades include development of single core solution for HR and Finance systems; assumes solution is primarily a front-end user interface rather than full replacement of core technology

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# 2 Human Resources option 2: Organization structure changes

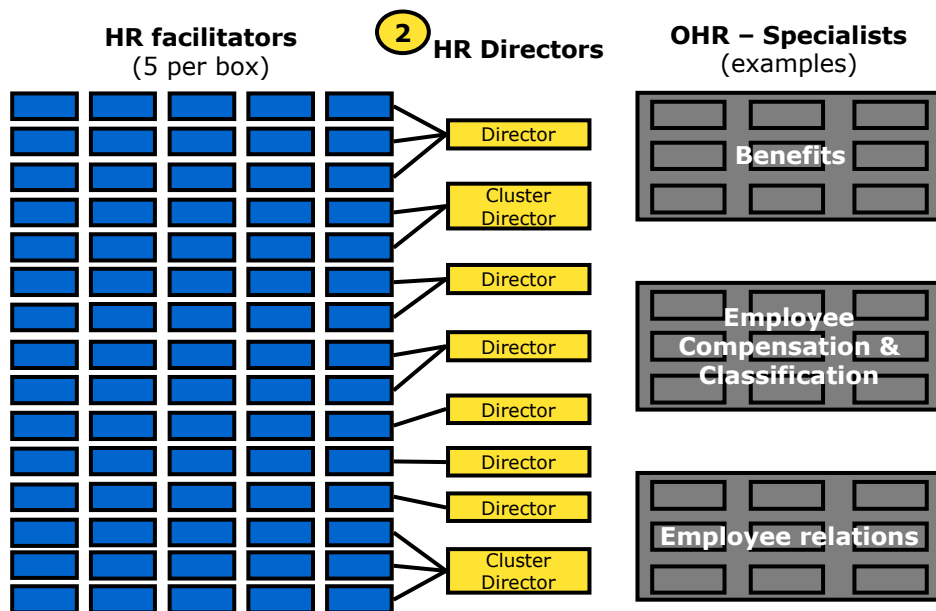
## Description

- Consolidate communication channels by routing distributed HR personnel through school and division HR Directors
  - 2a** Potentially establish dotted-line reporting relationship into OHR to ensure collaboration in key areas of compliance and procedure
  - 2b** Potentially establish hard-line reporting into OHR, with dotted-line into schools to ensure responsiveness to specific needs

## Benefits

- Consolidating HR facilitator communication through HR directors frees central organization to focus more heavily on value-add services (vs. policy clarifications, error-checking, etc.)
- HR directors encourage policy compliance and strong customer service for distributed organization, especially with a dotted-line structure
- Better training and talent management touches all aspects of University, improving quality of service across multiple functions and areas

## Illustration



## Risks/Hurdles

- Matrix reporting structures have been difficult to implement at the University in the past
- HR Directors would need to be highly skilled

## Potential value

- Estimated upfront investment: Personnel investments required to change organizational structure
- Time to realize: 1-2 years

Note: Illustration is meant to demonstrate a concept only, and is not a recommendation for actual structure

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# 3 Human Resources option 3: Unit consolidation

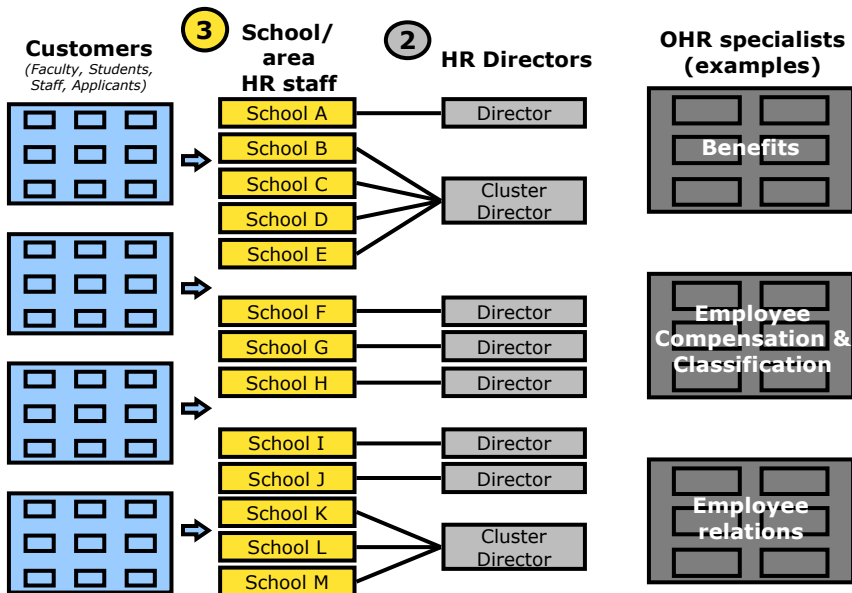
## Description

- 3a Elevate distributed HR task execution from departments and consolidate within schools and divisions
  - Replace partially-focused HR facilitators with dedicated HR resources in shared service center
  - Realize stand-alone scale in select schools/divisions
- 3b Potentially cluster some schools and divisions together to achieve scale
  - Support with shared service centers and/or 'anchor' HR organization within larger schools/divisions

## Benefits

- Shared service centers allow UNC to realize scale benefits with distributed HR operations
- Dedicated HR professionals should be able to provide services with less central support
  - Clearer lines of communication and reduced interaction will free central HR for more strategic work
- More effective HR support should drive better results and smoother transition for all employees

## Illustration



Note: Illustration is meant to demonstrate a concept only, and is not a recommendation for actual structure

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## Risks/Hurdles

- Pushback from distributed organization as decision rights are perceived to be taken from distributed departments
- Cost-savings may be difficult to realize given distributed nature of responsibilities (HR tasks account for only a portion of many HR facilitators' time)

## Potential value

- Estimated upfront investment: Some resources (primarily personnel) required to sufficiently build out consolidated finance functions
- Estimated annual value: \$1-2M
- Time to realize: 2-3 years

# 4 Human Resources option 4: OHR consolidation

## Description

- 4a Disaggregate HR activities and elevate select scalable tasks to OHR
  - Target tasks that have little variation across diverse departments and divisions (e.g., I-9 forms, EEV, credentials verification)
  
- 4b Elevate some value-added HR services to central shared service center
  - Consolidate large portion of HR tasks, including those with more department or division sensitivity (e.g., Personnel actions, new position creation, etc.)
- Determine funding model to support expansion of OHR responsibilities and continued investment into efficiency/effectiveness improvements

## Potential value

- Estimated upfront investment: Significant resources required to sufficiently build out central HR capabilities
- Estimated annual value: \$1-1.5M
- Time to realize: 3+ years

## Benefits

- Cost savings from benefits of scale (many fewer FTEs needed to execute same HR tasks)
- Dedicated HR professionals would allow OHR to improve key areas, including training and talent management

## Risks/Hurdles

- OHR culture and capability gaps may need to be addressed to meet needs of distributed units
- Pushback from distributed organization as decision rights are perceived to be taken from distributed departments
- Cost-savings may be difficult to realize given distributed nature of responsibilities (core HR tasks account for only a portion of many HR facilitators)

# Agenda: Option summaries

1. Organization structure
2. Procurement
3. Information Technology
4. Finance
5. Human Resources
6. Centers & Institutes
7. Research Support & Compliance
8. Energy Services
9. Facilities Services
10. Space Utilization
11. Other Options

# Overview: Centers & Institutes

## Situation

- Over 100 Centers & Institutes (C&Is) conduct activities in research, instruction, and public service
- Many C&Is are part of the continuation budget and receive state funds every year

## Challenges

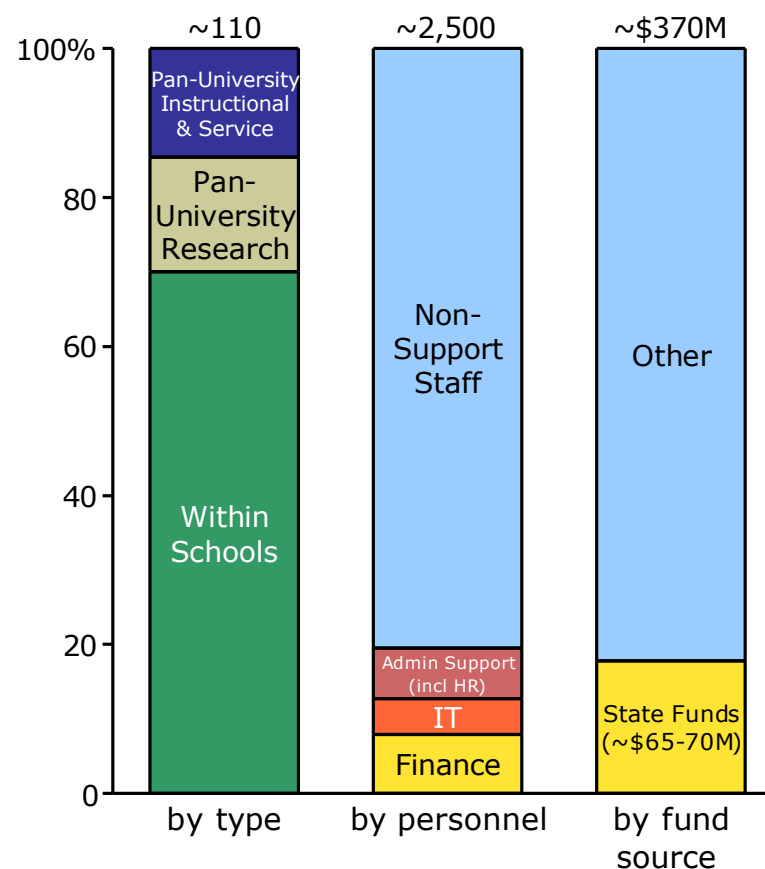
- Centers & Institutes exist throughout the university and have no standard reporting structure
- Each Center & Institute often has its own support functions, including Finance, IT, and HR
- Limited consistency in policies & processes for managing C&Is, including:
  - Adjusting funding structure
  - Approving new C&I
  - Reviewing performance

## Key questions

- Where should C&Is be positioned in UNC?
- Are there options for C&Is to share resources with each other?
- What processes and policies should UNC implement to better manage C&Is?

## Supporting evidence

UNC-CH Centers & Institutes



Note: Classification of C&I as Research, Instructional, or Service reflects primary activity of C/I. Most C&I perform more than one activity. "by personnel" bar in chart data taken from payroll database (for 55 C&I), C&I websites (for 43 C&I), and extrapolated for the remaining 12; "fund source" bar in chart represents 74 C&I. Budget data was unavailable centrally for the remaining 36, but they are believed to be relatively small.

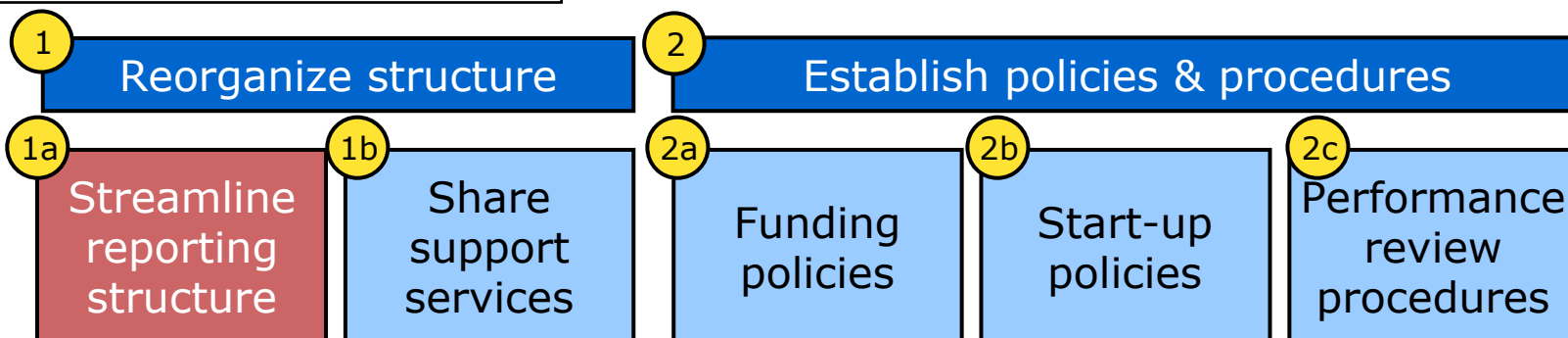
Source: UNC Payroll database, C&I websites, UNC Ledger, C&I 2009 report to GA

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# Potential options: Centers & Institutes

  Key enabler would likely improve viability of other options



**Description:**

- Define C&I reporting relationships
- Expand charge of existing committee to oversee all C&Is and craft policies
- Create Unified Business Clusters (UBCs) with HR, IT\*, and Finance expertise for use by smaller C&I
- Set guidelines for state fund consumption
- Encourage C&Is to be more self-sufficient
  - Ensure C&Is receive sufficient F&A to cover operating costs
- Develop criteria and approval process for starting new Centers & Institutes
- Develop review criteria
- Establish schedule and process for performance reviews

**Estimated annual value\*\*:**

N/A                      \$4-6M (\$4-6M GISF)                      \$14-53M (\$14-53M GISF)                      N/A                      N/A

**Time to realize:**

3-6 months                      1-2 years                      1-5 years                      3-6 months                      3-6 months

\*ITS likely to provide IT support for pan-university Centers & Institutes

\*\*\$4-6M GISF from sharing support services would be included as part of \$14-53M GISF from funding policies




1a

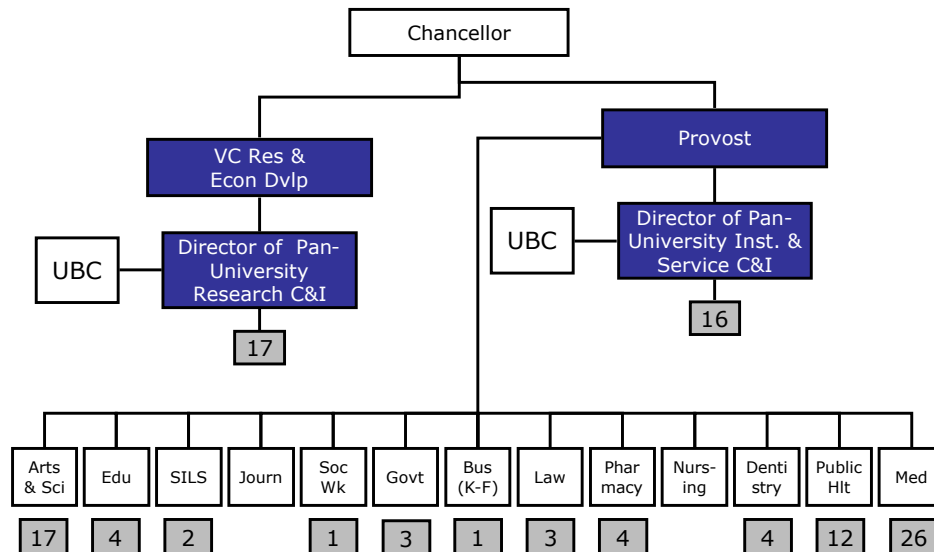
# Centers & Institutes option 1a: Streamline reporting structure

## Description

- Authority of central C&I Oversight Committee (CIOOC) is expanded to develop and enforce C&I policies
- CIOOC determines for each C/I if it is pan-university or should reside within a school
- Pan-university C&Is report to staff dedicated to overseeing performance
- C&I within schools report directly to Deans or Department Chairs

 Centers & Institutes Oversight Committee (CIOOC)  
UBC = Unified Business Cluster

**ILLUSTRATIVE**



Note: Numbers in boxes are approximate and as of March 2009

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## Benefits

- Addresses complexity concerns by simplifying reporting structure and standardizing oversight
- More focused management of C&Is:
  - Ensure C&Is receive necessary support
  - Review performance of C/I in addition to reviewing C/I Director
- Single committee (CIOOC) responsible for C&Is and developing policies ensures all C&I are held to similar standards

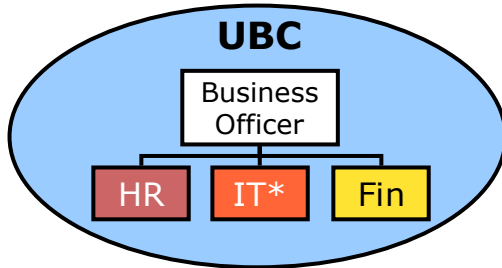
## Risks/Hurdles

- Changing reporting structure of some C&Is may be difficult due to historical, cultural, or political reasons

# 1b Centers & Institutes option 1b: Share support services

## Description

- Create Unified Business Clusters (UBCs) consisting of a business officer and support staff (HR, Finance, IT\*)
  - UBCs will be primarily used by smaller C&I to achieve scale; Larger C&I may be able to support their own support staff
  - UBCs will exist at Pan-University level
- C&I within schools encouraged to utilize school support staff
  - Schools can create their own UBC if they so choose
- C&Is budget may be adjusted to cover UBC costs



## Potential value

- Estimate annual value: \$4-6M
- Time to realize: 1-2 years

\*Note: ITS likely to provide IT support to pan-university Centers & Institutes. UBC Savings assume every Center & Institute reaches a rate of 17 support staff/100 FTE or lower

Source: UNC Payroll Database

## Benefits

- Allows Centers & Institutes to achieve cost savings and reduce state funds, as UBC service fee will cost less than maintaining own FTEs
- Provides cost effective option for smaller C&Is that cannot currently afford full time staff to receive administrative support

## Risks/Hurdles

- C&I may be resistant to give responsibility for support functions to UBC over concerns of decreased service levels
- UBC employees may not feel a strong connection to a particular C&I since they will service more than one C&I

# 2 Centers & Institutes option 2a: Funding policies

## Description

- Modify continuation budgets and decrease amount of ongoing state funds C&Is receive
- In some cases, may need to adjust F&A allocations to ensure C&I receives sufficient funds for operations
- Rate of dependence on state funds will be directly related to mission
  - For example, public service focused likely to receive greater state funding support than research focused
- Two options exist for implementation of reduced state funds:
  - i. Give each C&I (new or existing) one-time state "seed" funding; C/I can spend at their discretion over as many years as they choose
  - ii. Set a target for max % of budget (or max \$ amount) that can be funded by state funds; Target may be defined on graduated scale over ~3-5 year timeframe

## Benefits

- Direct state fund budget savings of \$14-53M
  - If these state funds are replaced by contracts & grants, this could mean up to ~\$20M in additional F&A revenue for the C/I and the entire university
- Ensures sufficient value and relevance of C&I missions to attract external funding
- Pushes C&I to become self-sufficient

## Risks/Hurdles

- Not providing sufficient F&A to cover operating costs of C&I could hurt ability to find future funding
- May be unable to reclaim funds from valuable C&Is with little access to non-state funding
- Resistance from C&Is dependent on a large % or amount of state funds for operations

## EXAMPLE: Potential value

*(Assuming implementation Option ii: Set targets for max % of budget funded by state funds)*

	Current average % of budget funded by state funds	Example: Future max % of budget funded by state funds	State fund savings
Pan-Univ. Inst. & Service	~39%	25-30%	\$2-4M
Pan-Univ Research	~23%	5-10%	\$8-24M*
Within Schools	~12%	0-10%	\$4-25M

### Potential Savings

**\$14-53M\***

\*Note: Savings calculations based on 74 C&I where financial data was available; Low side of "Pan-Univ Research" calculated by assuming no funds will be cut from Nutrition Research Institute (Kannapolis). Source: UNC Ledger, C&I 2009 report to GA

# 2 Centers & Institutes option 2b & 2c: Establish start-up and review policies

## Description

**2b Start-up:** Define start-up policies for new Centers & Institutes, including:

- Criteria for approval
- Location within University (pan-univ. vs. within school) and reporting structure
- Usage of UBCs & funding model

**2c Review:** Establish process and criteria for reviewing C&Is and Directors\* of C&Is

- Develop review criteria
- Decide who performs review
  - CIOC? Deans? Faculty & staff committee?
- Determine frequency of review
  - Annual? Every 3 years? Every 5?
- Identify consequences of poor performance
  - Reclaim funds? Combine with existing C/I? Sunset C/I?

\*Note: A process is already in place to review pan-university C&I directors

## Benefits

- Allows UNC administration to hold each C&I accountable to same standards

**2b Start-up**

- Ensures no duplicate C&I
- Limits excessive proliferation of C&Is

**2c Review**

- Ensures C&I are high performing and adhering to policies
- Increases accountability of Centers & Institutes

## Risks/Hurdles

- May be difficult to find standard start-up and review policies across all Centers & Institutes (i.e., uniqueness of each entity may lend itself to exceptions)
- Existing C&Is may be resistant to new policies for historical, cultural, or political reasons

# Agenda: Option summaries

1. Organization structure
2. Procurement
3. Information Technology
4. Finance
5. Human Resources
6. Centers & Institutes

## 7. Research Support & Compliance

8. Energy Services
9. Facilities Services
10. Space Utilization
11. Other Options

# Overview: Research Support & Compliance

## Situation

- Greater than 25% of UNC's revenue comes from sponsored research (\$678M in FY 2008)
- Growth of sponsored research is expected to continue at historical rate of 3-5% per year
  - Potentially faster growth in short-term due to stimulus funding

## Challenges

- Manual processes and non-standardization make it difficult for research support offices to scale quickly and meet demand of increased volumes
- In addition, many support offices are already resource constrained
- Overlapping responsibilities at some research support offices result in confusion and redundancies
- Support offices are housed in different locations across and off campus, driving additional inefficiency

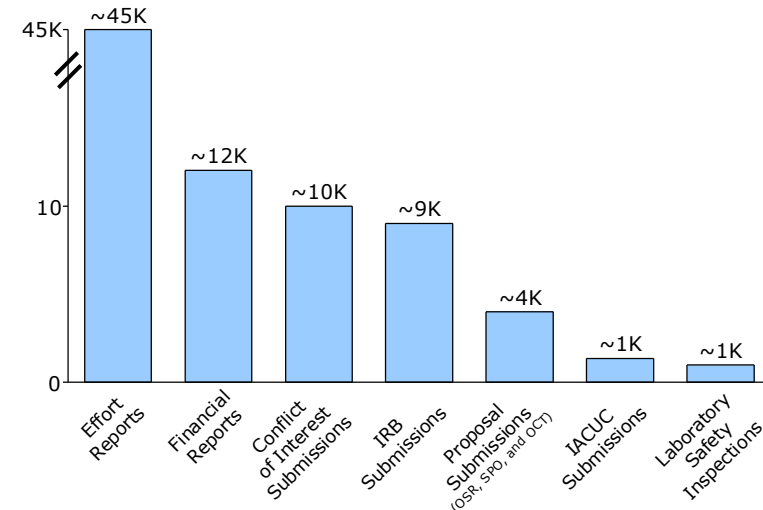
## Key questions

- Can automation be enhanced to increase capacity of key research support areas?
- What additional resources are needed to support expected increase in sponsored research awards?
- Can research support offices be restructured to better serve the campus?
- What are costs and options to co-locate research support offices in one building?

Note: Growth rate of 3-5% represents year over year growth from FY '04-'08  
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## Supporting evidence

Volume of Research Support Activities per Year



"Our [OSR financial reporting] employees spend their time printing out reports from FRS and then **data entering** numbers into Excel. I would **rather they spend more time analyzing the financial reports** we send to sponsors."

UNC OSR Employee

"**Stimulus funding requires increased reporting.** Typically govt. funding only requires annual reports. Stimulus funding requires quarterly reports"

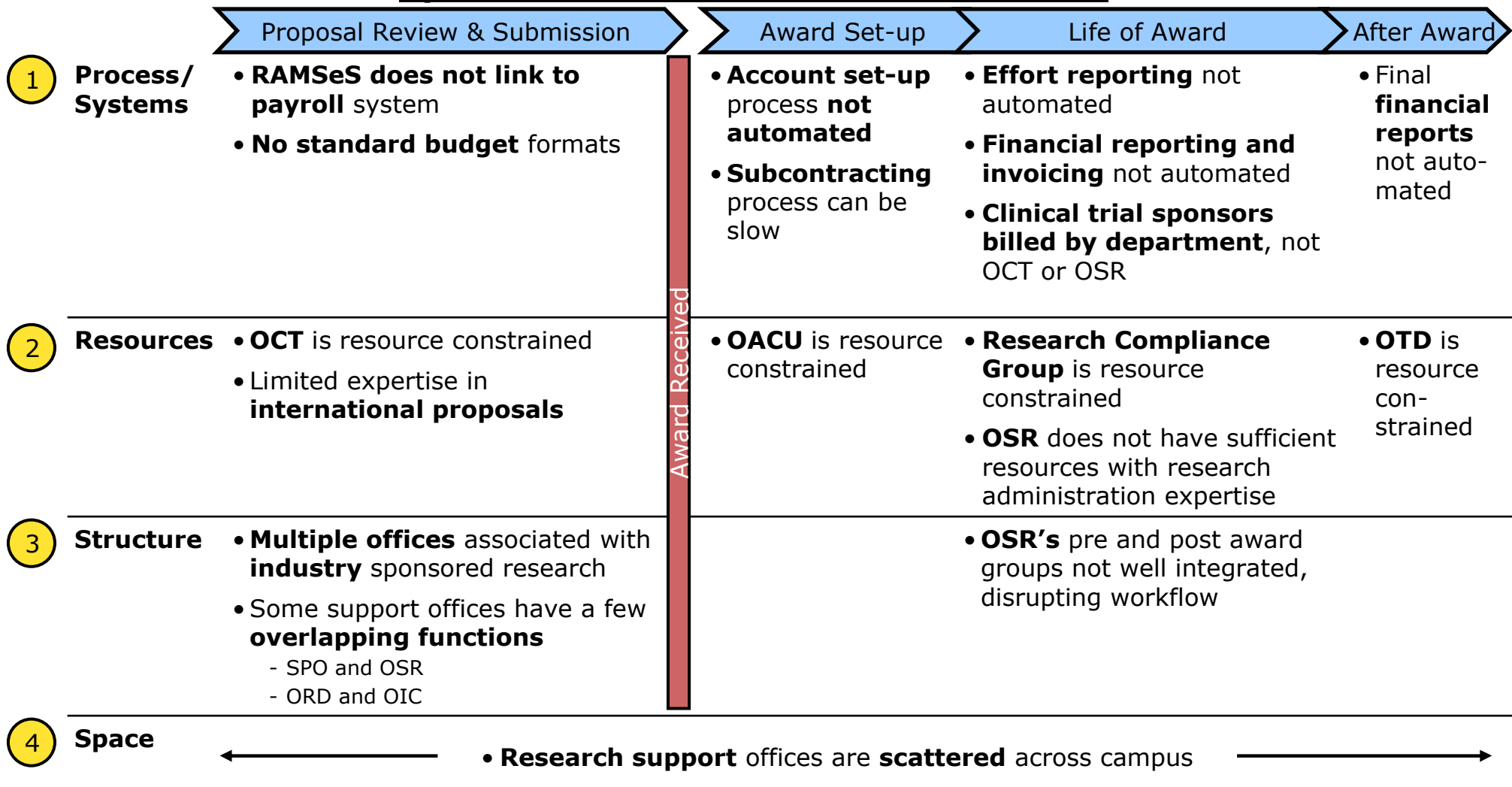
UNC OSR Employee

"I have to bake in an **extra 20 minutes** of travel each time I have to attend a meeting. It wastes a lot of my time."

UNC OCT Employee

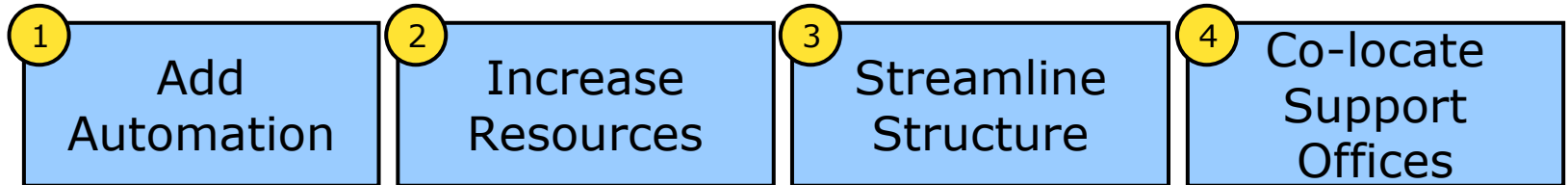
# Challenges detail: Research Support & Compliance

## Sponsored Research Process: Concerns



Note: This is the "typical" process. Actual process varies for each award; SPO = Sponsored Program Office; OSR = Office of Sponsored Research; OCT = Office of Clinical Trials; OIC = Office of Information & Communications; ORD = Office of Research Development; OACU = Office of Animal Care & Use; OTD = Office of Technology Development

# Potential options: Research Support & Compliance



**Description:**

- Add automation to key processes

- Increase resources within research support and compliance areas

- Consolidate offices that conduct similar research support activities

- Co-locate VCRED offices to one building

---

**Investment Required:**

\$500K-1.5M

\$750K-1M

Minimal investment

Moving costs



# 1 Research Support & Compliance option 1: Add automation

## Description

- Hire contractors into Office of Research Information Systems (ORIS) to automate key processes that support research
  - Pre Award:
    - Link RAMSeS to payroll system
    - Standardize and automate budgets
  - Post Award
    - Account set-up\*
    - Financial reporting
    - Effort reporting
    - Clinical Trial billing
- In addition to (or instead of), consider purchasing “off the shelf” software for some of these systems

## Investment required

- Contractors: One-time cost of ~\$500K
- Software: One-time cost of \$500K-1.5M plus annual fees of ~\$500K

\*Note: Resources are already in place to automate account set-up

## Benefits

- Systems enable faster throughput times and therefore an ability to handle higher volumes
  - Decreases number of additional resources needed in research support areas
- Standardization will improve accuracy and efficiency of processes
- Allows resources to spend less time on data entry activities and more time on higher-value activities (e.g. data analysis, customer service)
- Contractors can be hired more quickly and are temporary resources

## Risks/Hurdles

- Will need to do a second round of system integration with ERP
  - However, learnings can be applied to help ease ERP transition
- Temporary decline in productivity as employees are trained on new systems
- Potential decrease in checking accuracy of data as processes are automated
  - False assumption that data in system is always right

# 2 Research Support & Compliance option 2: Increase resources

## Description

- Hire additional 7-12 FTEs in select research support areas
  - Research Compliance Program (3-8 FTE)
  - Office of Animal Care and Use (~1 FTE)
  - Office of Technology Development (~1 FTE)
  - Office of Clinical Trials (~1 FTE)
  - Office of Information and Communications (~1 FTE)
- Shift OSR personnel focus in conjunction with OSR reorganization
  - Address current capability gaps in OSR (i.e. more strategy oriented roles instead of task oriented)
  - Position roles to directly interact with faculty and department administrators
- If Option 1 is selected, assess automation impact before adding resources in other research support areas

## Investment required

- ~\$750K-1M in recurring costs

## Benefits

- Ensures research support offices are properly resourced in order to:
  - Provide adequate support to researchers on campus
  - Meet increasing and changing compliance requirements
  - Promote programmatic and financial compliance

## Risks/Hurdles

- Potential for over-hiring if significant resources are added before automation and process improvements in place

Note: ~1 FTE means part-time or shared resources could be used in some cases

# 3 Research Support & Compliance option 3: Streamline structure

## Description

Selectively restructure key research support areas. Options include:

- 3a Streamline OSR
  - Integrate OSR pre and post award groups
  - Incorporate SPO activities into OSR
- 3b Consolidate ORD and OIC
  - Combine similar grant search and interdisciplinary research support activities
- 3c Build explicit capabilities and focus on industry research
  - Provide one point of contact for corporations to UNC
  - Focus on attracting more industry research contracts & grants
  - Work with Development, OCT, OTD, and OSR to determine distinct roles and responsibilities of each office

## Benefits

- 3a Allows OSR employees to more effectively manage awards and provide higher service levels to campus
- 3b Eliminates redundancies and inefficiencies
- 3c Provides better customer service to industry/commercial research sponsors

## Risks/Hurdles

- Altering structure may be difficult due to historical, cultural, or political reasons
- Temporary confusion as campus is educated about new structure

Note: OSR = Office of Sponsored Research; SPO = Sponsored Program Office; ORD = Office of Research Development; OIC = Office of Information Communications; OCT = Office of Clinical Trials; OTD = Office of Technology Development

# 4 Research Support & Compliance option 4: Co-locate research support offices

## Description

- Co-locate all research support offices into one campus building
- May require dislocating current occupants of building

## Investment required

- Space renovation
- Moving costs

## Benefits

- Eliminates time wasted by staff traveling to meetings across and off campus
- Decreases support staff needed, as all offices can share resources
- Increases collaboration across research support offices including dissemination of best practices

## Risks/Hurdles

- Moving may cause a slight, temporary disruption to normal operations

Note: Investment required to renovate existing space in Taylor Hall includes significant upgrades to HVAC, lavatories, drinking fountains, windows, and floors; Assumes may cost less to move to other space that has already been renovated

Source: VCRED Memos, UNC Facilities Planning & Construction

# Agenda: Option summaries

1. Organization structure
2. Procurement
3. Information Technology
4. Finance
5. Human Resources
6. Centers & Institutes
7. Research Support & Compliance
8. Energy Services
9. Facilities Services
10. Space Utilization
11. Other Options

# Overview: Energy Services

## Situation

- Energy Services centrally provides utilities to the campus through a district energy system
- District energy efficiencies reduce campus utility expenses
- In 2002, Energy Services began an expansion phase and has since added capacity to support campus growth

## Challenges

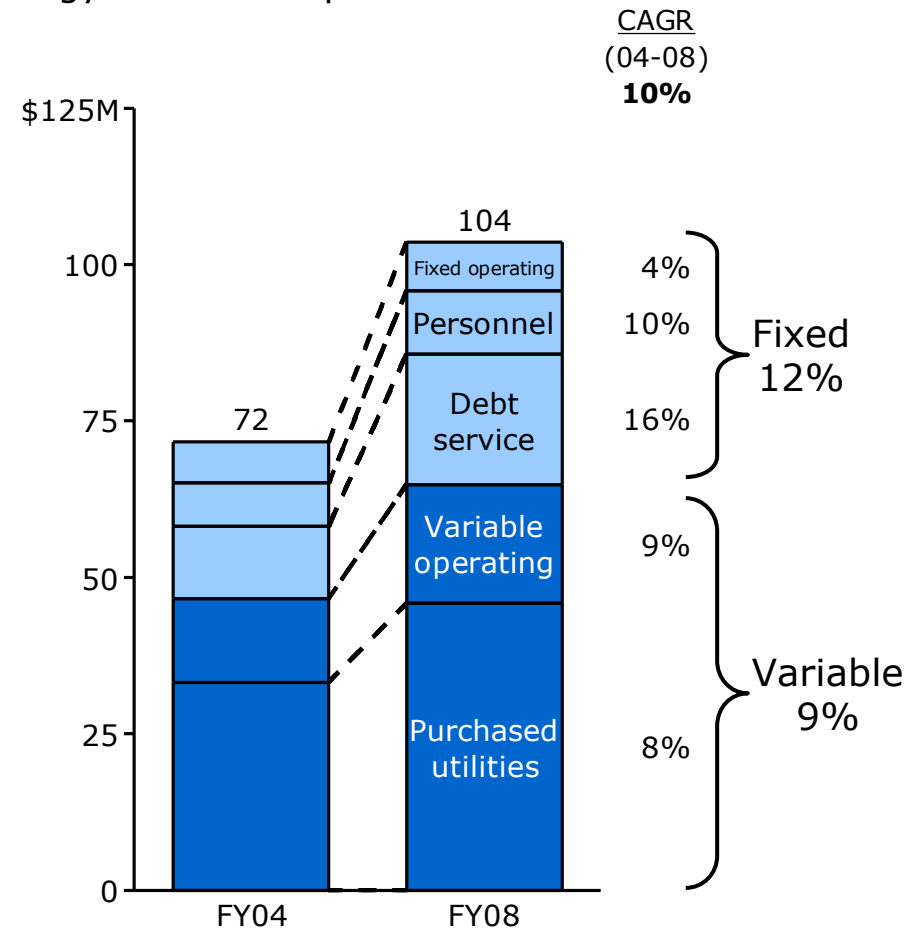
- Savings are absorbed by annual utility budget adjustments (i.e., no lasting impact on UNC's GISF)
- Expansion, in anticipation of new capacity needs, limits financial flexibility
  - High fixed costs
  - High debt service costs

## Key questions

- How can Energy Services best utilize current investments and minimize the need for further expansion?

## Supporting evidence

Energy Services expenses



Note: Utilities include electricity, steam, chilled water, potable water, sewage, and natural gas

Source: Energy Services financial reports

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# Potential options: Energy Services

	1 Decrease operating expenses	2 Reduce consumption	3 Change business model
Description:	<ul style="list-style-type: none"> <li>Delivered coal costs are largest variable operating expense*</li> <li>Expand rail capacity near cogeneration plant to enable larger coal deliveries</li> <li>Negotiate lower rail rates for larger deliveries</li> </ul>	<ul style="list-style-type: none"> <li>Achieve NC goal by reducing consumption 18% by 2015</li> <li>Use performance contracts to modernize campus buildings with a focus on laboratories and control systems</li> </ul>	<ul style="list-style-type: none"> <li>Spin-off current Energy Services division as a 501(c)(3) that is separate from the university</li> <li>Retain current management and staff</li> </ul>
Time to realize:	2-4 years	7-10 years per project	2-4 years
Upfront investment:	\$3-4M	\$100-150M over 7-10 years	Legal and logistical costs
Estimated annual value**:	\$700K-1M	\$10-15M	\$500K-1M

Note: \*Coal is UNC's most cost effective fuel source; the cost to produce energy with Natural Gas is approximately twice that of coal (based on 2006 EIA data); \*\*Option savings estimates are additive, no GISF savings because savings will roll back to the state in utility budget adjustments

# 1 Energy Services option 1: Decrease operating expenses

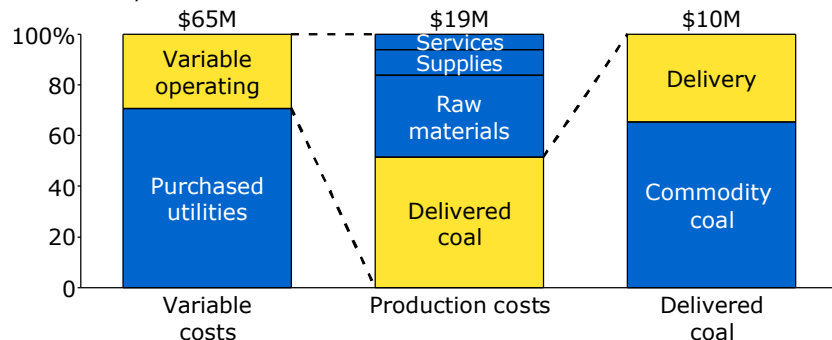
## Description

- Delivered coal, used to generate steam and electricity, is the largest variable OPEX
  - Coal prices are market driven
  - Transportation rates have grown 11% p.a. since FY04 and are above industry average
- Small 11-car deliveries, below industry average, are driving up delivery expenses
  - Expanding rail siding near the cogen plant will allow UNC to receive larger deliveries

## Potential value

- Estimated upfront investment: \$3M to \$4M
- Estimated annual value: \$0.7M to \$1M
- Time to realize: 2 to 4 years

Variable costs, FY08



Source: Energy Services Consolidated Financial Statements; UNC subsidiary ledger data; NCDOT Rail Division; BNSF, CSX, NS, and UP annual reports

## Benefits

- Larger coal deliveries will not go through a switching station, which will expedite delivery, improve reliability, and reduce costs
- Larger deliveries will be easier to coordinate, reducing the amount of time UNC spends coordinating logistics
- Larger deliveries, and the necessary investment in rail siding, will be required if UNC switches from coal to biomass

## Risks/Hurdles

- UNC's location and relatively small coal needs limit delivery options
- Rate savings may be phased in over the course of several years in the form of limited rate increases instead of a near-term rate reduction
- May be hidden costs associated with the construction of new siding capacity
  - Actual potential size of siding is currently being determined



# 2 Energy Services option 2: Reduce consumption

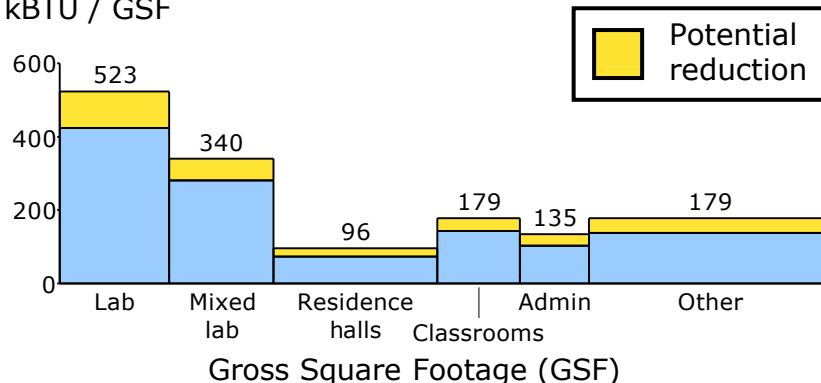
## Description

- Energy Management to aim for North Carolina goal and reduce energy consumption 18% by 2015
- Use vendor performance contracts to secure funding and guarantee results
- Focus on retrofitting labs and improving control systems

## Potential value

- Estimated upfront investment: \$100-150M over 7-10 yrs (underwritten by vendor)
- Estimated annual value: \$10-15M
- Time to realize: 7-10 years per project

Avg kBTU / GSF



Note: Potential reduction based on lowering consumption in outlying buildings to type average

Source: Energy Management building statistics; EnergyStar.gov

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## Benefits

- Energy conservation projects are self-liquidating and will help modernize the university campus
- Energy consultants estimate savings and underwrite loans, allowing UNC to complete projects with risk-free returns
- Performance contracts will not create a liability on UNC's balance sheet
  - Will not contribute to UNC's debt load
- Reduced consumption will limit the need to further expand the utility system, reducing Energy Services' long-term debt load

## Risks/Hurdles

- In the short-term, fixed costs may be spread over a smaller base of consumption, which could lead to higher utility rates despite lower total costs
- After the performance contracts are paid off, operating savings may be recouped by NC in the form of a lower utility budget

### 3 Energy Services options 3: Change business model

#### Description

- UNC may be able to spin-off the current Energy Services division as a 501(c)(3) to increase operational flexibility

#### Potential value

- There will be upfront legal and logistical cost to transition current operations
- Estimated annual value: \$500K-1M
- Time to realize: 2-4 years

#### Benefits

- UNC debt load may be reduced
- May help Energy Services improve their purchasing of goods and services

#### Risks/Hurdles

- Transition from current operation to a 501(c)(3) will require extensive senior administration time and effort
- Appear to be limited financial benefits in the short-term
- Will create unease and tension within the workforce until specific plans are determined and communicated

# Agenda: Option summaries

1. Organization structure
2. Procurement
3. Information Technology
4. Finance
5. Human Resources
6. Centers & Institutes
7. Research Support & Compliance
8. Energy Services
9. Facilities Services
10. Space Utilization
11. Other Options

# Overview: Facilities Services

## Situation

- Facilities Services has ~1,000 FTEs
- Expenditures have grown 8% p.a. since FY04, less than baseline growth of 9% p.a.\*

## Challenges

- Facilities Services has cut expenses and improved operations to serve a larger, growing campus
- Housekeeping has funding to provide less than APPA service level 3, "casual inattention," and requires 40% more staff to provide historical standard of level 2, "ordinary tidiness"

## Key questions

- How can Facilities Services maintain acceptable service to the university and further reduce spending?

Note: \*Baseline growth consists of 4.8% p.a. growth of gross square footage and 4.2% p.a. LSI raises; APPA service levels depict a general state of cleanliness from spotless (1) to neglectful (5)

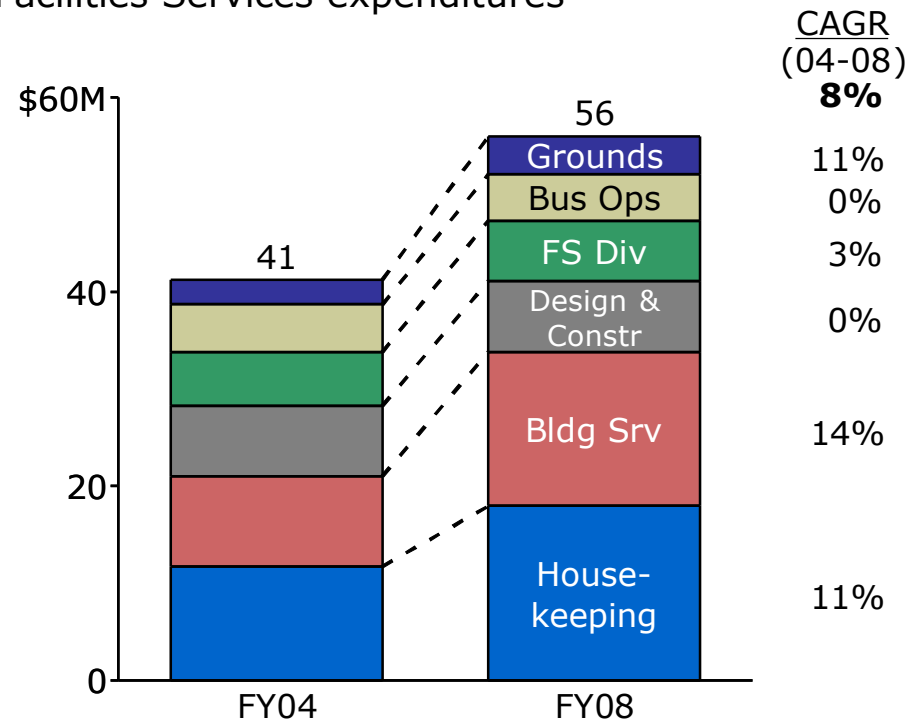
Source: APPA guidelines; Facilities Services org chart; UNC subsidiary ledger data

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## Supporting evidence

Facilities Services expenditures



"Facilities Services has always been one of the first areas to make budget cuts."

UNC Administrator

# Potential options: Facilities Services

Grounds	Building Services	Design & Construction
<b>1</b> <b>Reduce installation staff</b>	<b>2</b> <b>Improve material purchasing and delivery</b>	

Description:

- As the major capital campaign slows, Grounds Services eliminates positions created to install landscapes for new buildings
- Some installation staff will be maintained and others can be shifted to maintenance work
- Grounds Services uses annual attrition to reduce installation staff
- Hire 4-6 FTE material runners to purchase and deliver materials to job sites, saving ~8-12 FTE of skilled job time
- Reduce vendor fragmentation to drive price savings and reduce complexity

Time to realize:

2-4 years

1-2 years

Estimated annual value:

\$150-250K

\$1-1.5M

\* Option savings estimates are additive

# 1 Facilities Services option 1: Reduce installation staff

## Description

- As the need for new landscapes in support of capital projects declines over the next several years, Grounds Services can reduce installation staff from 12 FTEs to 7 FTEs, retaining only non-capital project funded positions
- Remaining installation staff focus on recurring work, unrelated to capital projects
- Reduce staffing levels through attrition
  - Based on FY08 15% attrition rate
- Timeframe depends on the capital project schedule

## Potential value

- Estimate annual value: \$150K to \$250K
- Time to realize: 2 -4 years\*

## Benefits

- Avoid spending general institutional support funds on capital projects without lowering service levels
- Can be fully implemented through attrition

## Risks/Hurdles

- Personnel that installed a landscape are often well suited and motivated to maintain the landscape
  - Can mitigate by shifting personnel from the installation crew to a maintenance crew

Note: \*With current rate of attrition (~15%), Grounds Services could realize change within the year; Time to realize is limited by the continuing needs of capital projects

Source: Facilities Services interviews

# 2 Facilities Services option 2: Improve materials purchasing and delivery

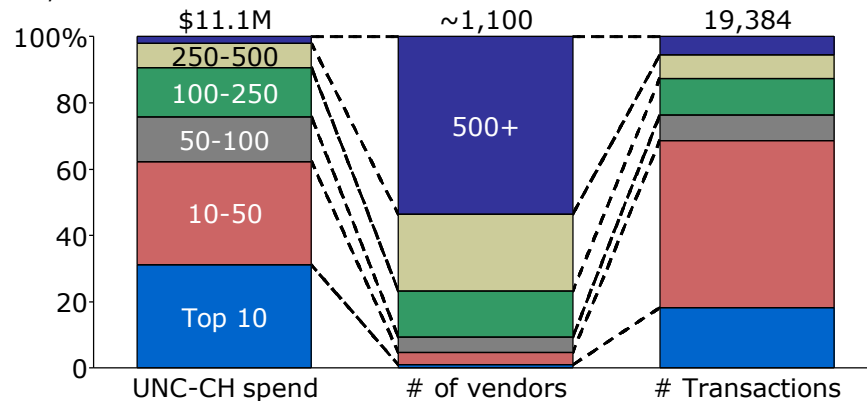
## Description

- Hire 4-6 material runners to purchase goods for multiple jobs and deliver directly to the skilled tradesmen
  - Replaces ~8-12 FTEs of skilled job time
- Material runners reduce the number of purchasers, which helps procurement consolidate spend with fewer vendors

## Potential value

- Estimated annual value: \$1-1.5M
- Time to realize: 1-2 years

Facilities Services material spend, FY08



Note: Reducing vendor fragmentation by centralizing more purchases should produce similar 10% cost savings as the university-wide procurement initiative

Source: Facilities Services purchase data

## Benefits

- Improve morale of the skilled tradesmen by allowing them to focus on their core tasks instead of picking up materials
- Drive more reliable service from a smaller pool of vendors
- Gain additional insights into spend when more purchases and data are centrally administered

## Risks

- Lead time for material purchases is often less than a day for maintenance work and waiting for material runners may create idle job time
- May be resistance from skilled tradesmen that like selecting specific vendors and choosing particular brands
- In select instances, skilled tradesmen may spend significant time communicating specific material needs to runners

# Agenda: Option summaries

1. Organization structure
2. Procurement
3. Information Technology
4. Finance
5. Human Resources
6. Centers & Institutes
7. Research Support & Compliance
8. Energy Services
9. Facilities Services
10. Space Utilization
11. Other Options



# Overview: Space Utilization

Note: Analysis is limited to classroom space only, and does not include additional need for faculty, support resources, and corresponding office space

## Problem statement

- Student FTEs increased 20% from 1997 to 2007
- Research expenditures increased by more than 270% from 1997 to 2007
- UNC has spent more than \$1B in the past six years on capital projects to support university growth

## Challenges

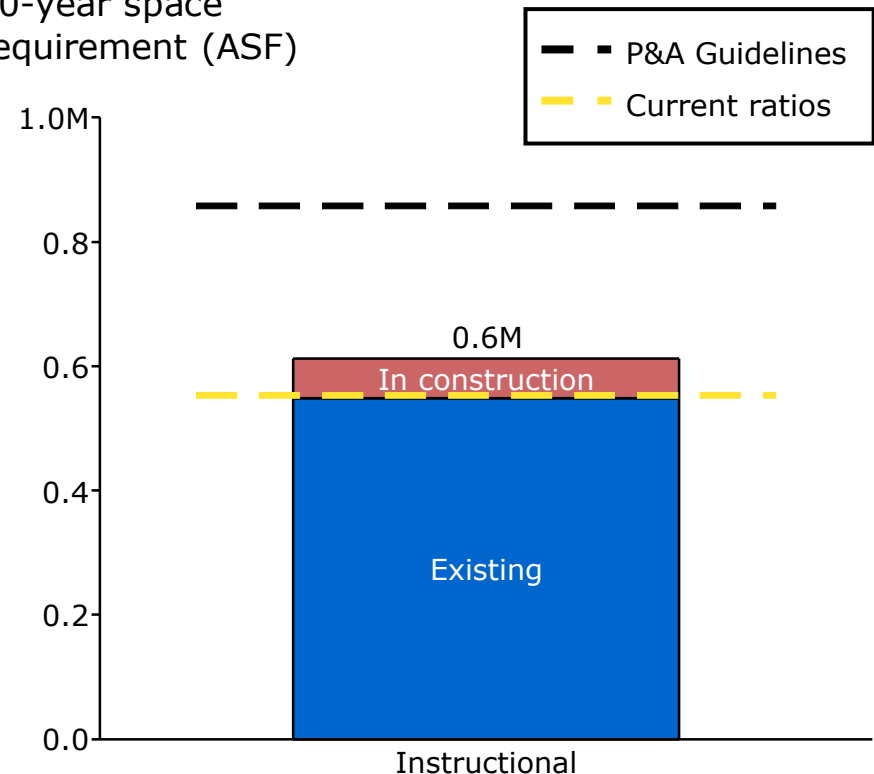
- The number of students and classes are expected to grow
- Sense of ownership and lack of central scheduling limits UNC's ability to efficiently schedule classes

## Key questions

- How can UNC support expected university growth with the existing classroom space?

## Supporting evidence

10-year space requirement (ASF)



*"The goal is not to have a zero space deficit based on the Paulien & Associates report, but just to address some of the compression issues around campus."*

UNC Administrator

Note: ASF stands for Assignable Square Footage; 10-year growth assumes 5,000 additional students, constant graduate to undergraduate ratio

Source: UNC, Space Planning for the Master Plan, November 2008, Paulien & Associates, Inc.

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# Potential options: Space Utilization

<b>1</b>	<b>Standardize class times</b>	<b>2</b>	<b>Increase peak utilization</b>	<b>3</b>	<b>Increase off-peak utilization</b>	<b>4</b>	<b>Utilize resident hall seminar space</b>
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Description:

- |   |  |   |  |
|---|--|---|--|
| <ul style="list-style-type: none"> <li>• Schedule classes on standard start times to eliminate unusable gaps</li> <li>• Schedule 1 hour classes on MWF and 1.5 hour classes on TR (where possible)</li> </ul> | <ul style="list-style-type: none"> <li>• Increase classroom utilization to 75%-80% during peak hours (9am - 5pm)</li> <li>• Reassign departmental classrooms to general purpose for central scheduling by Registrar</li> </ul> | <ul style="list-style-type: none"> <li>• Increase classroom utilization to 35%-40% during off-peak hours (M-R, 8am &amp; 5pm - 9pm)</li> <li>• Encourage professors and students to be more flexible after normal work hours</li> </ul> | <ul style="list-style-type: none"> <li>• Schedule classes in ~16 resident hall seminar classrooms that are currently under utilized</li> <li>• Encourage departments to take advantage of space outside of normal department "boundaries"</li> </ul> |
|---|--|---|--|

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Add'l students supported (FTE):	840 – 1,680	1,400 – 2,800	740 – 1,480	180 – 360
---------------------------------	-------------	---------------	-------------	-----------

Note: Class length includes time for students to transfer between classes. Only includes central campus schools (General College, Arts & Sciences, Education, SILS, Journalism, and Social Work). Operating savings include the cost of utilities, housekeeping, and maintenance. Capital savings is based on current classroom space requirements and an average of UNC construction costs

# 1 Space Utilization option 1: Standardize class times

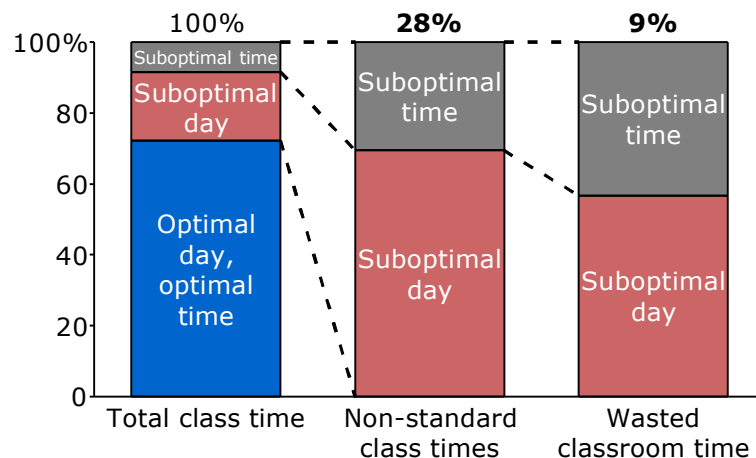
## Description

- Standardize the start time and optimize the day of the week to avoid creating gaps in classroom schedules
- Registrar coordinates classroom schedules to ensure standardization

## Potential value

- Potential additional students supported with current classrooms: 840 to 1,680
- Time to realize: 6-12 months

Classroom usage (hr)



Note: Wasted classroom time only includes savings from those classes that could be moved (e.g., a class that meets 5 times a week cannot be rescheduled to only TR); analysis accounts for time required to switch classes; Only includes central campus schools (General College, Arts & Sciences, Education, SILS, Journalism, and Social Work)

Source: Student Academic Information Datamart, Office of the University Registrar

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## Benefits

- Avoid additional annual operating expenses
- Avoid additional short-term capital expansion costs
- Increase student course options by reducing the number of overlapping classes
- Reduce scheduling complexity

## Risks/Hurdles

- Requires central coordination of schedules, which goes against the culture of departmental classroom control
- Certain scheduling requirements (e.g., lab prep time) may limit realization of option

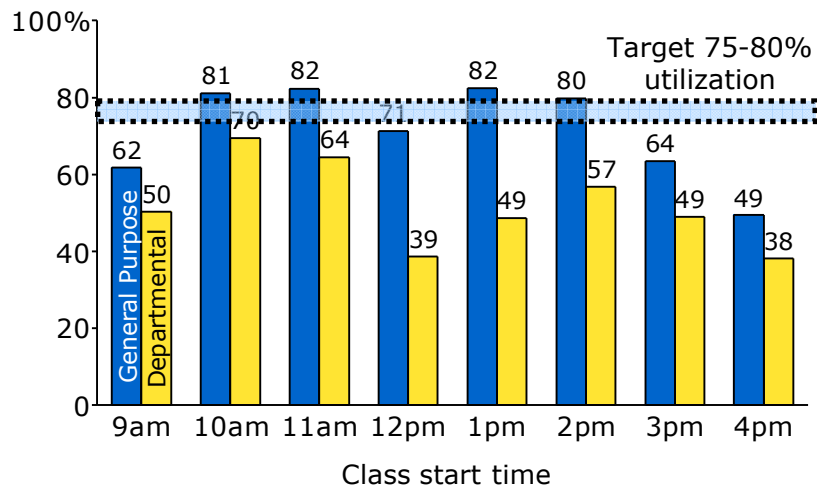
## 2 Space Utilization option 2: Increase peak utilization

### Description

- Push more classrooms to be “general purpose” to facilitate higher utilization during peak hours
- Increase peak utilization 15%

### Potential value

- Potential additional students supported with current classrooms: 1,400 to 2,800
  - Time to realize: On-going
- Peak classroom utilization by classroom type



### Benefits

- Avoid additional annual operating expenses
- Avoid additional short-term capital expansion costs
- Increase number of classes during the peak daytime hours
- With more general purpose classrooms, the registrar will be able to better match class size to room occupancy

### Risks/Hurdles

- Requires central coordination of schedules, which goes against the culture of departmental classroom control
- May require departments to use classrooms outside of their traditionally defined space

Note: Only includes central campus schools (General College, Arts & Sciences, Education, SILS, Journalism, and Social Work)

Source: UNC, Space Planning for the Master Plan, November 2008, Paulien & Associates, Inc.

# 3 Space Utilization option 3: Increase off-peak utilization

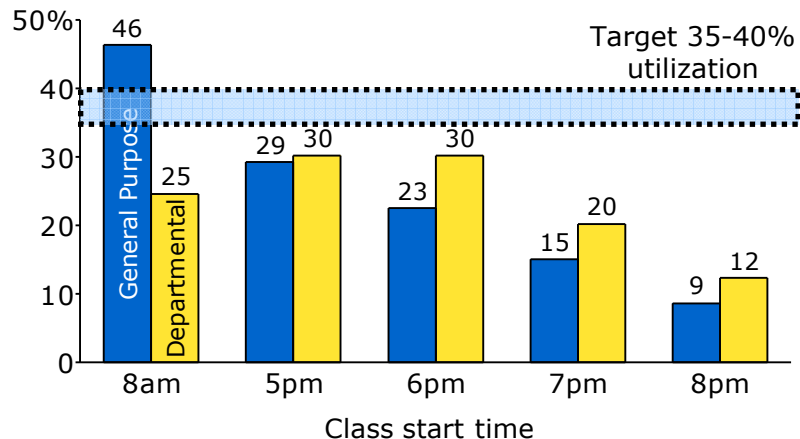
## Description

- Push more classrooms to be “general purpose” to facilitate higher utilization during certain off-peak hours
- Increase off-peak utilization 8%

## Potential value

- Potential additional students supported with current classrooms: 740 to 1,480
- Time to realize: On-going

Off-peak Mon-Thu classroom utilization by classroom type



Note: Off-peak does not include Friday (evening classes less likely); only includes central campus schools (General College, Arts & Sciences, Education, SILS, Journalism, and Social Work)

Source: UNC, Space Planning for the Master Plan, November 2008, Paulien & Associates, Inc.

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## Benefits

- Avoid additional annual operating expenses
- Avoid additional short-term capital expansion costs
- Wider timeframe decreases the number of schedule overlaps that force students to choose between courses
- With more general purpose classrooms, the registrar will be able to better match class size to room occupancy

## Risks/Hurdles

- Requires central coordination of schedules, which goes against the culture of departmental classroom control
- May require departments to use classrooms outside of their traditionally defined space
- Requires professors and students to be more flexible with their schedules

# 4 Space Utilization option 4: Utilize resident hall seminar space

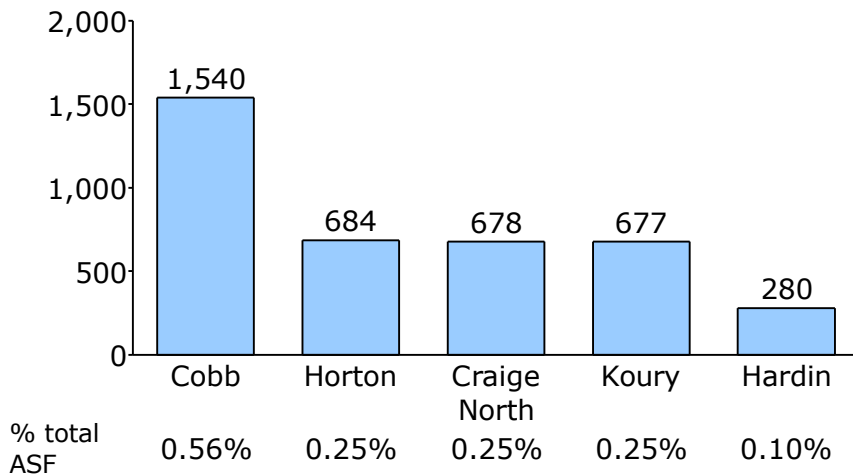
## Description

- ~16 classrooms attached to residence halls are currently underutilized and not included in the Paulien & Associates report
- Increase available classroom space 1.4% by increasing utilization of this space

## Potential value

- Potential additional students supported with current classrooms: 180 to 360
- Time to realize: 6-12 months

Unused resident hall seminar space (ASF)



Note: Resident hall seminar space shown here is not included in the Paulien & Associates report

Source: UNC plan room; Housing Department

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## Benefits

- Avoid additional annual operating expenses
- Avoid additional short-term capital expansion costs
- Classrooms are convenient for students living on-campus in or near those residence halls
- Resident hall classrooms are generally smaller and provide a good learning environment for seminar style classes

## Risks/Hurdles

- May take students more than 10 minutes to move between resident hall seminar space and main campus classrooms
- South grounds location may require professors to leave their traditionally defined space

# Agenda: Option summaries

1. Organization structure
2. Procurement
3. Information Technology
4. Finance
5. Human Resources
6. Centers & Institutes
7. Research Support & Compliance
8. Energy Services
9. Facilities Services
10. Space Utilization
11. Other Options

# Overview: Other options

	Description	Options	Potential benefits
<b>Document Imaging</b>	<ul style="list-style-type: none"> <li>There are many large scanning projects                             <ul style="list-style-type: none"> <li>One-time (e.g. fund authorities)</li> <li>Recurring (e.g. admissions transcripts, HR records)</li> </ul> </li> <li>Scanning projects use slow machines and consume significant time of employees</li> </ul>	<ol style="list-style-type: none"> <li>Create a centralized document imaging group within ITS, equipped with higher quality equipment</li> <li>Outsource large scanning jobs</li> </ol>	<ul style="list-style-type: none"> <li>Likely &gt;50% cost savings across all large scanning jobs</li> <li>Allows employees to focus on higher value-add aspects of job</li> </ul>
<b>Development</b>	<ul style="list-style-type: none"> <li>Redundant prospect/alumni databases exist within schools as a workaround to outdated central system</li> <li>Distributed nature of prospect management leads to multiple points of contact</li> <li>Gift processing is not automated and highly decentralized</li> </ul>	<ol style="list-style-type: none"> <li>Invest in modern donor management system</li> <li>Better define roles and responsibilities of distributed and central Development</li> <li>Centralize and automate gift processing functions</li> </ol>	<ul style="list-style-type: none"> <li>Increases efficiency by improving systems and processes</li> <li>Enhances donor experience and therefore potentially increases gift receipts</li> </ul>
<b>Library</b>	<ul style="list-style-type: none"> <li>Some small branch libraries perform duplicate functions of central libraries</li> </ul>	<ol style="list-style-type: none"> <li>Absorb smaller branch libraries into central libraries (as space for additional books becomes available)</li> </ol>	<ul style="list-style-type: none"> <li>Frees branch library space for other university use</li> <li>Provides economies of scale for library support functions</li> </ul>
<b>Compliance</b> <i>(Excluding Research Support)</i>	<ul style="list-style-type: none"> <li>Govt. regulations are increasing/changing for a number of areas:                             <ul style="list-style-type: none"> <li>Personal information/data security</li> <li>Health information privacy (HIPPA)</li> <li>Environmental, Health, &amp; Safety</li> <li>Export Control</li> </ul> </li> </ul>	<ol style="list-style-type: none"> <li>Increase investment in internal controls and systems</li> </ol>	<ul style="list-style-type: none"> <li>Ensures continued compliance with regulations</li> <li>Minimizes UNC risk for legal consequences</li> </ul>
<b>Printing</b>	<ul style="list-style-type: none"> <li>UNC departments source from external printing providers, but fail to account for full cost-to-serve                             <ul style="list-style-type: none"> <li>Labor, shipping, etc.</li> </ul> </li> <li>UNC Printing Services offset presses are under-utilized</li> </ul>	<ol style="list-style-type: none"> <li>Transfer vendor knowledge and relationships into M&amp;DS</li> <li>Sunset current Printing Services group</li> </ol>	<ul style="list-style-type: none"> <li>Cost savings of ~10% by better routing small print jobs to lowest cost vendors</li> <li>Allows UNC to shed printing assets</li> </ul>



# Discussion topics

- Project context
- Report overview
- Option summaries
- Next steps
- Appendix

# Where do we go from here?

- Chancellor to lead selection of options
  - Align key stakeholders and university around which options to pursue and relative priority
- Establish program management, process and tools to lead and track change initiatives
- Identify and assign sponsors and owners for initiatives to drive change
- Bain has committed to return for a pro bono engagement to help measure progress of initiatives

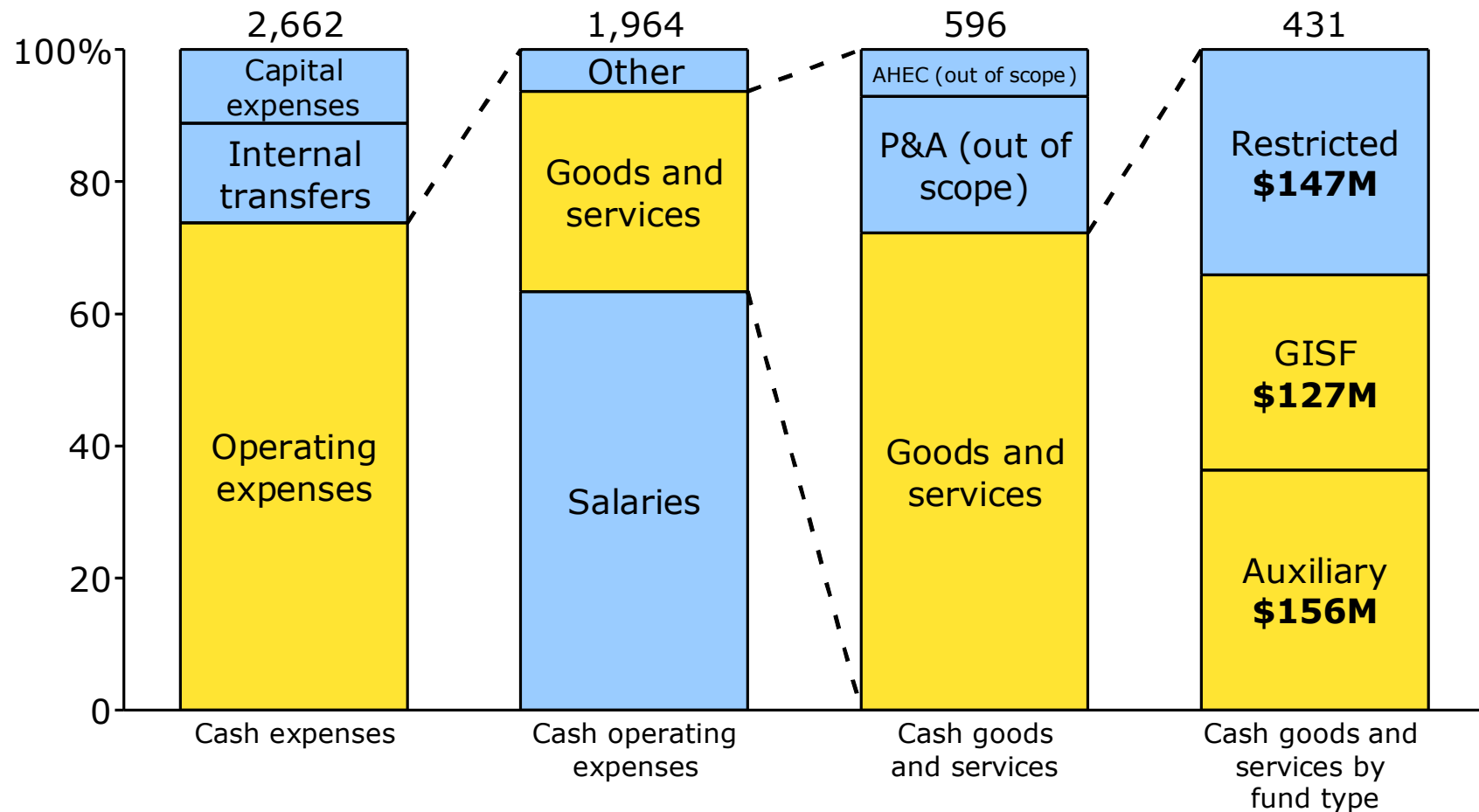
# Discussion topics

- Project context
  - Report overview
  - Option summaries
  - Next steps
- 
- Appendix

# Procurement: After adjustments, opex totals \$1.96B; \$431M of Goods & Services in scope for diagnostic

## APPENDIX

UNC-CH FY08 cash expenses (\$M)



Source: UNC subsidiary ledger data; Director, Financial Reporting & Management Services; Bain analysis

All observations contained in this document are for discussion purposes only.

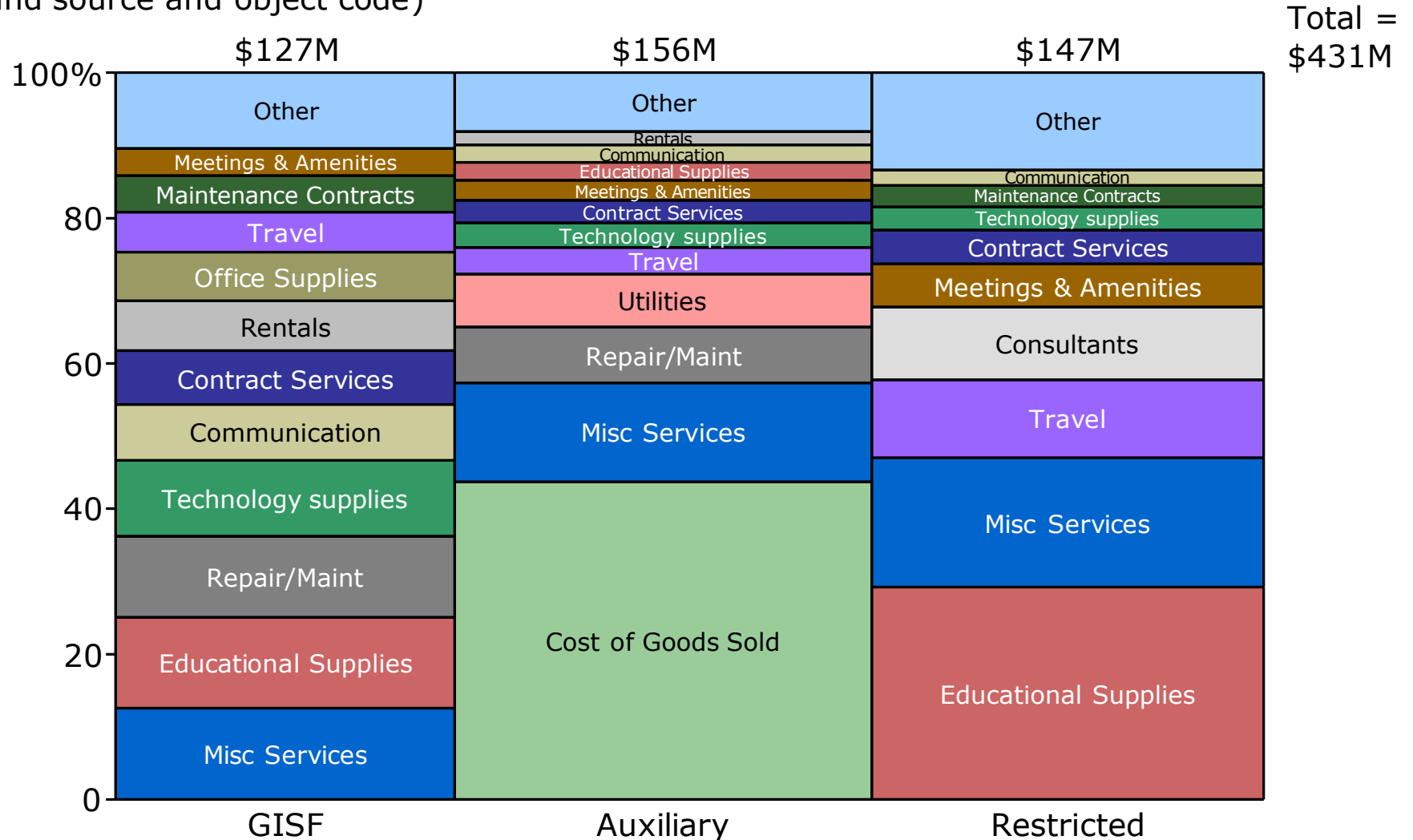
UNC Efficiency and Effectiveness Options\_FINAL 84

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# Procurement: UNC spent \$431M on Goods and Services in FY2008

## APPENDIX

UNC-CH Goods and Services spend  
(by fund source and object code)



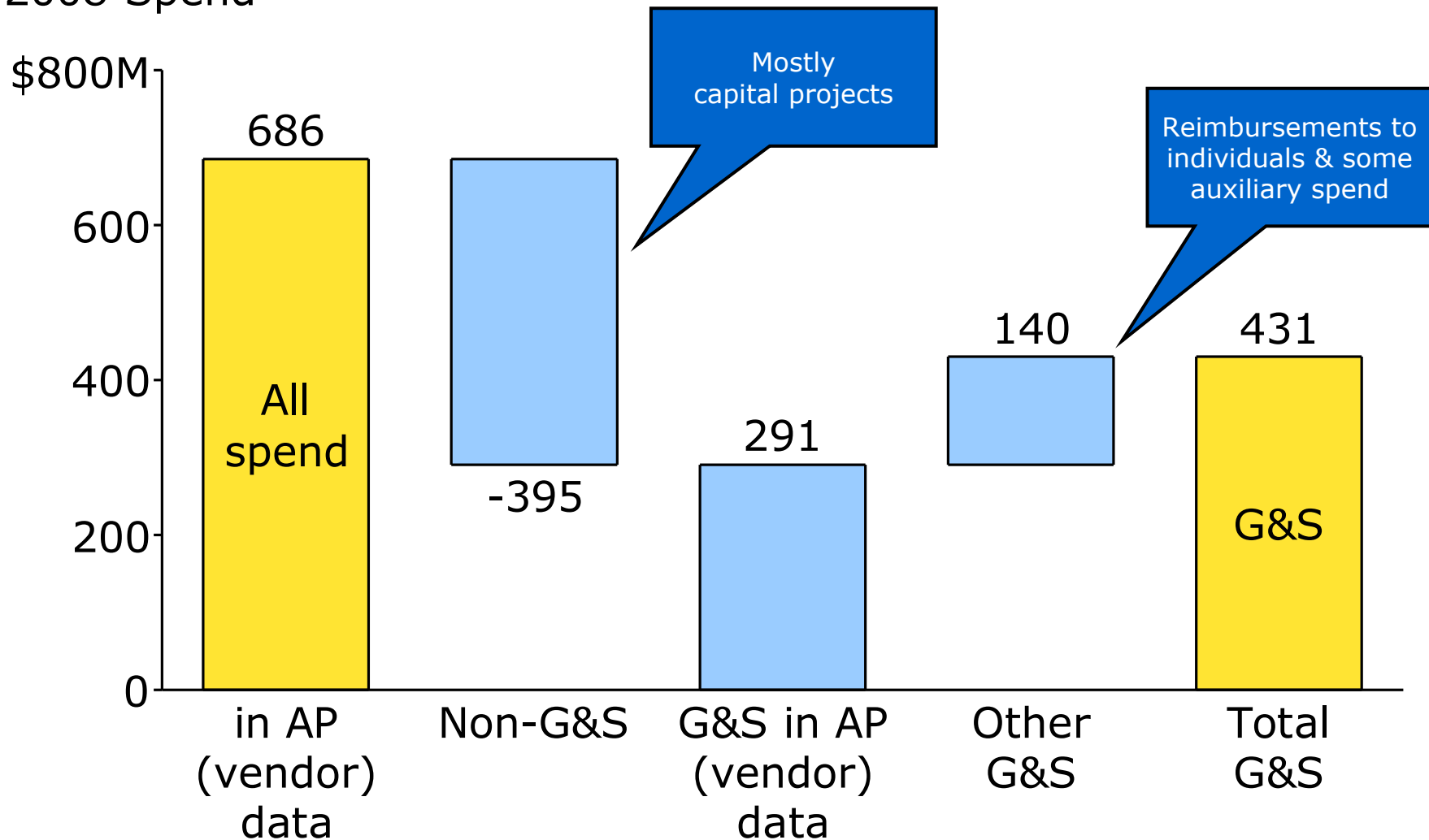
Source: UNC subsidiary ledger

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# Procurement: Accounts Payable database includes capital expenditures not considered Goods and Services

## APPENDIX

FY2008 Spend



Source: UNC Accounts Payable and General Ledger data

Note: first bar only includes "V" vendors

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# Procurement: Analysis indicates there are opportunities both in process improvements and optimizing spend

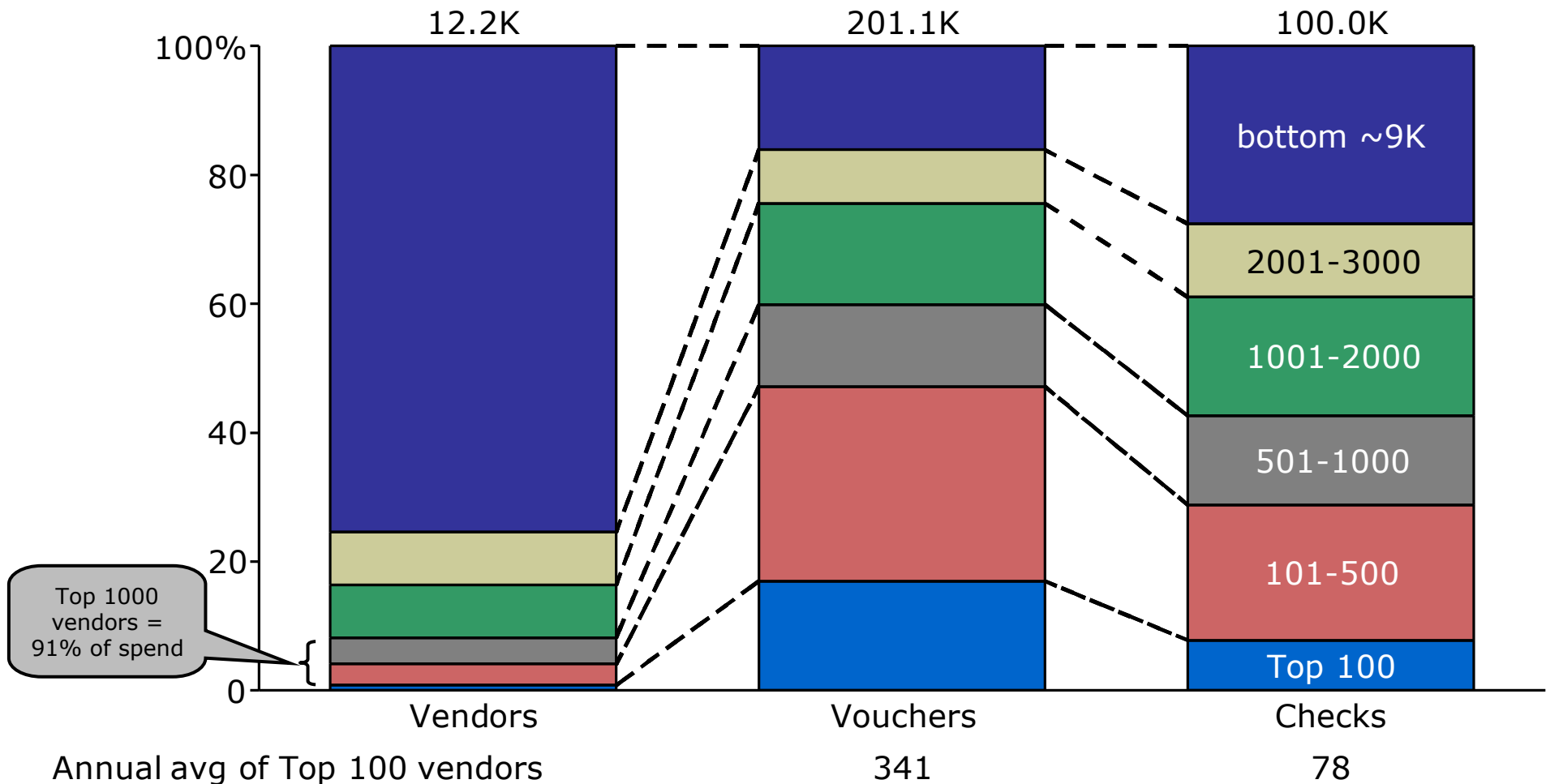
## APPENDIX

*In AP data alone, UNC made purchases from over 12K vendors in 2008*

*In addition, disbursement manually processed over 200K vouchers*

*And, cut checks for some vendors as frequently as 2-3 times per week*

UNC-CH Accounts Payable (FY2008)



Source: UNC Accounts Payable; figures only include "V" vendors

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# Procurement: Similar products are sourced from multiple vendors

## EX: SCIENTIFIC EQUIPMENT

## APPENDIX

Vendor	Enzymes PCR & Real Time PCR	PCR Plastics	Thermal Cyclers	Real Time PCR Instrument	DNA Analyzer	LC-MS	siRNA	miRNA	Microarray Instrument	Microarray Labeling	Sample Prep	Oligos
Applied Biosystems	X	X	X	X	X	X	X	X	X	X	X	X
Affymetrix									X	X		
Agilent									X	X		
BD	X	X									X	
Beckman					X							
Bio-Rad	X	X	X	X			X				X	
Ciphergen						X						
Dharmacon							X					
Enzo										X		
Epicentre	X											
Eppendorf		X	X	X								
Eurogentec	X	X										
Fisher	X	X	X				X	X			X	X
GE Amersham	X								X	X		
IDT							X	X				X
Illumina												X
Invitrogen	X	X					X	X		X	X	X
LiCor					X							
Molecular Devices									X		X	
NEB/PerkinElmer	X											
Nugen										X		
Promega	X										X	
Qiagen	X						X	X			X	X
Roche	X			X			X				X	
Sigma	X						X				X	
Stratagence	X		X	X							X	
SuperArray							X	X				X
Takara	X										X	
Thermo			X			X						
USB Corporation	X											
Varian						X						
VWR	X	X	X				X				X	X
Waters/Micromass						X						

X = Item purchased from vendor in FY08

Source: UNC Materials & Disbursement Services

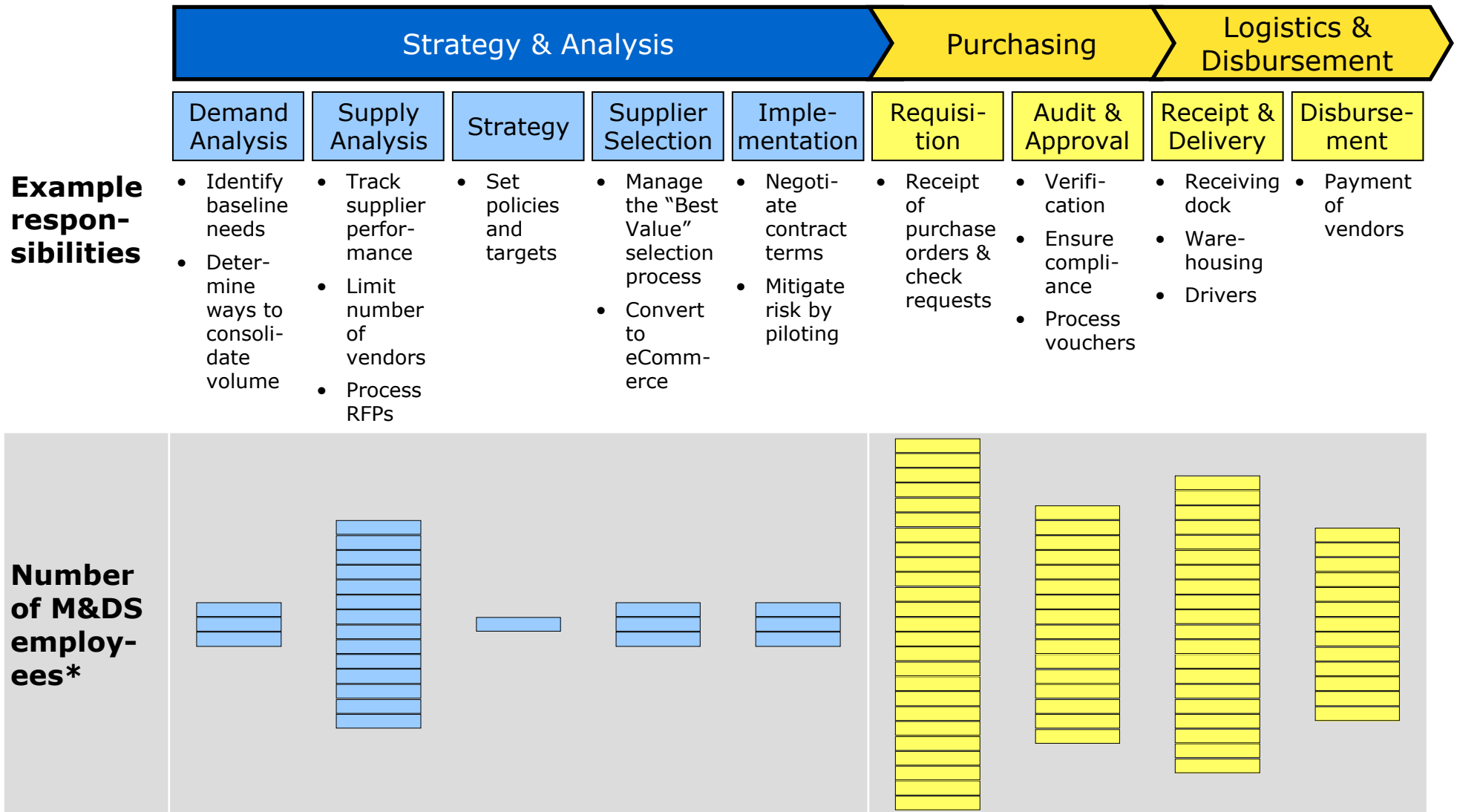
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# Procurement: M&DS is focused on processing purchases

## APPENDIX



Source: M&DS interviews

\* employees included in all applicable categories, so sum of figures exceeds total M&DS FTEs

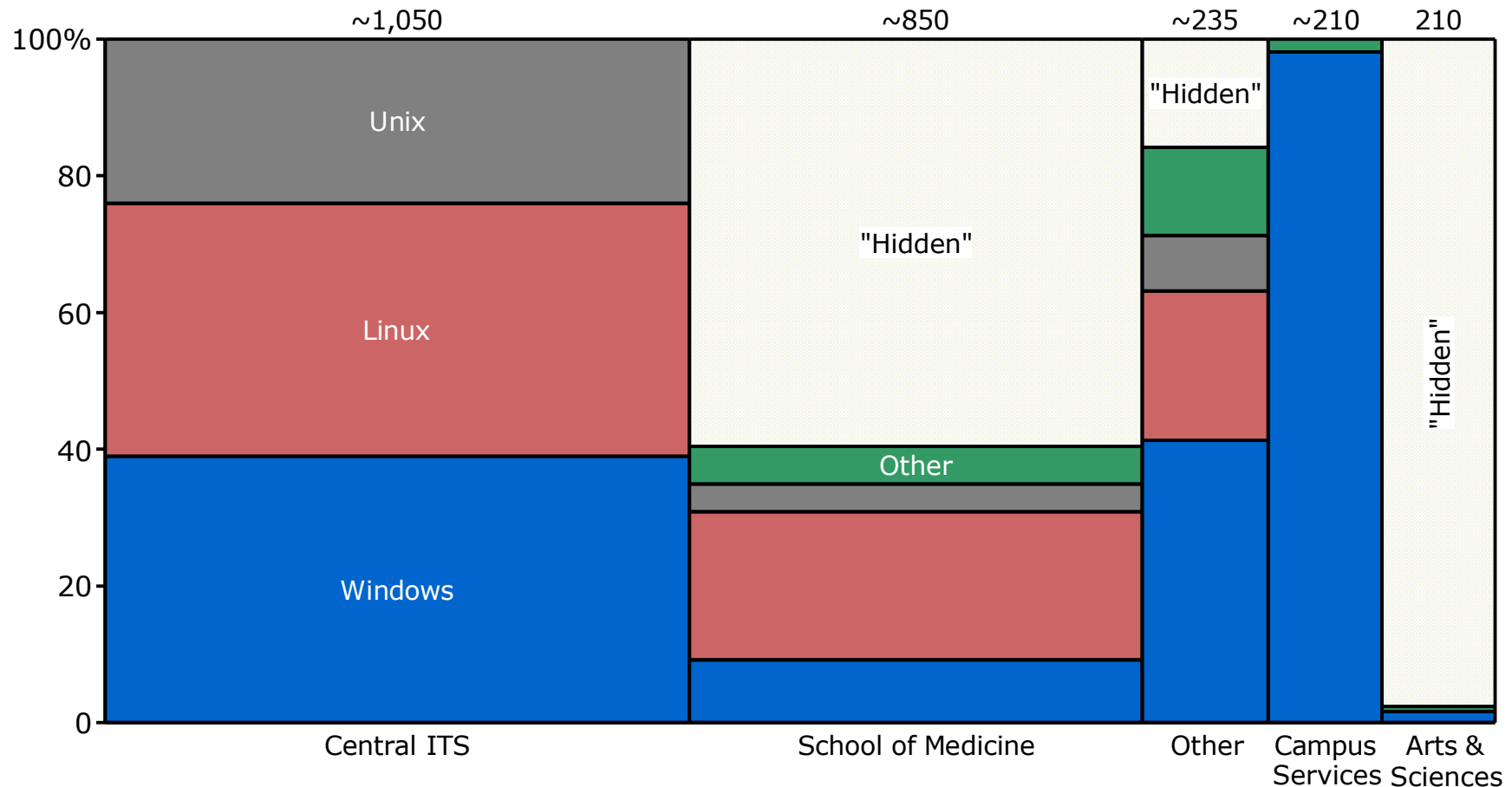
# IT: IT infrastructure is fragmented both across and within schools

## APPENDIX

### ESTIMATE

Total = ~2,555

UNC-CH Servers



Notes: Approximations shown here are intended to be an estimate only, and may not reflect total server counts in each area; "Other" includes Nursing, Dentistry, Pharmacy, Gov't, SILS, Journalism, Education, Social Work, Law, Business, student affairs, libraries

Source: UNC IT Infrastructure Survey; UNC interviews

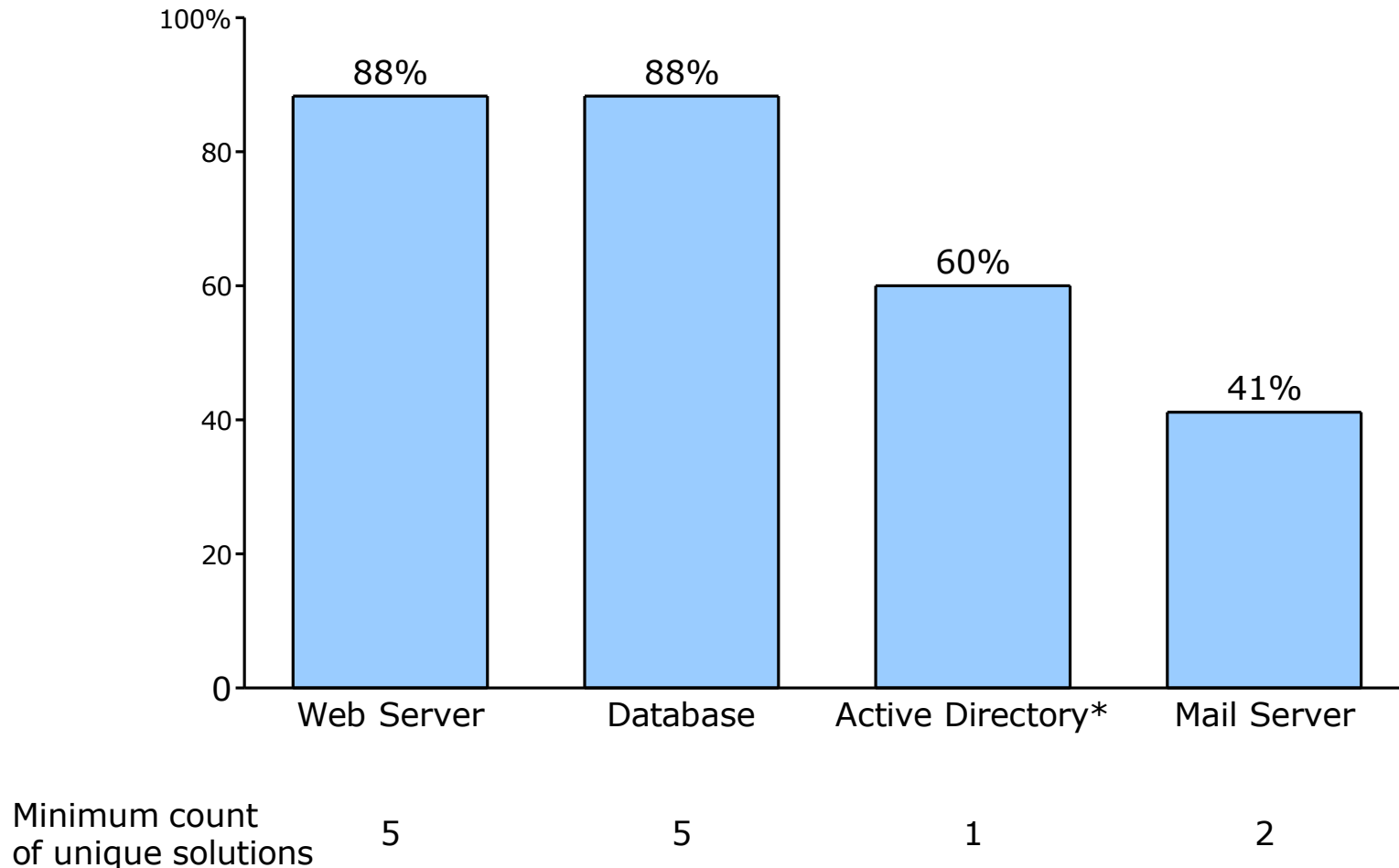
All observations contained in this document are for discussion purposes only.

# IT: Many schools support their own solutions for core IT services

## APPENDIX

% of respondents running own solution

### EXAMPLES



Note: Active Directory share refers to schools/areas that manage their own domain, not an actual 'forest'; in some instances (e.g. School of Gov't mail server) these services are in the process of being transferred to ITS

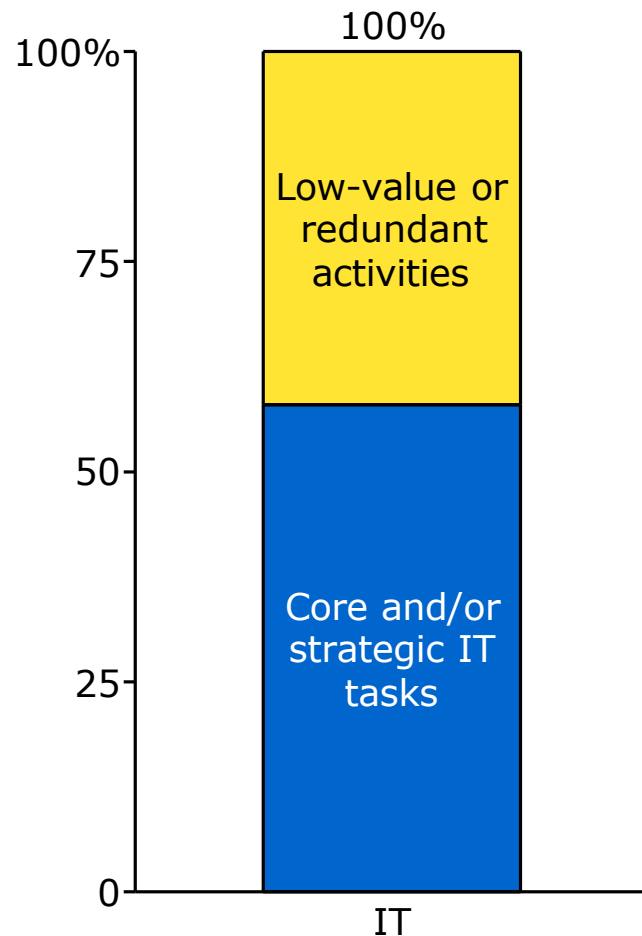
Source: UNC IT Infrastructure Survey, n=17

All observations contained in this document are for discussion purposes only.

# IT: Distributed support personnel often are not able to spend enough time on core activities

## APPENDIX

% of time spent on core activities



*"I'm **duplicating some of what everyone else is doing**. We're doing some of the software or some of the desktop imaging...it changes from place to place."*

UNC IT personnel

*"There are plenty of things I do, like maintain email and web server, that I would love for ITS to do for me ... then I can **spend more time focused on value-added services** for my department..."*

UNC IT personnel

*"The organization is so **spread out**, and we don't know where everyone is...I **don't always really know who my customer is**."*

UNC IT personnel

Note: IT n=36,

Source: UNC employee focus groups

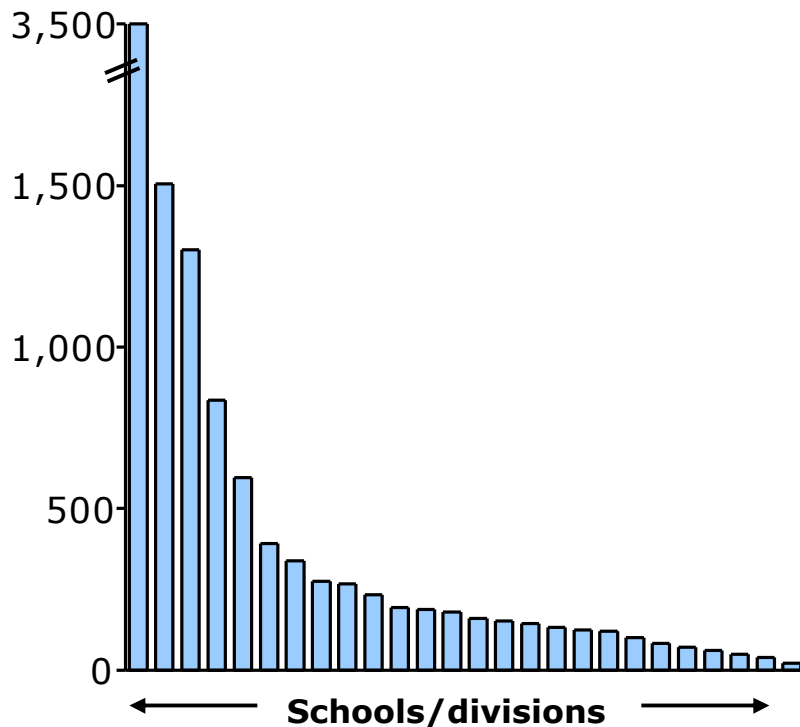
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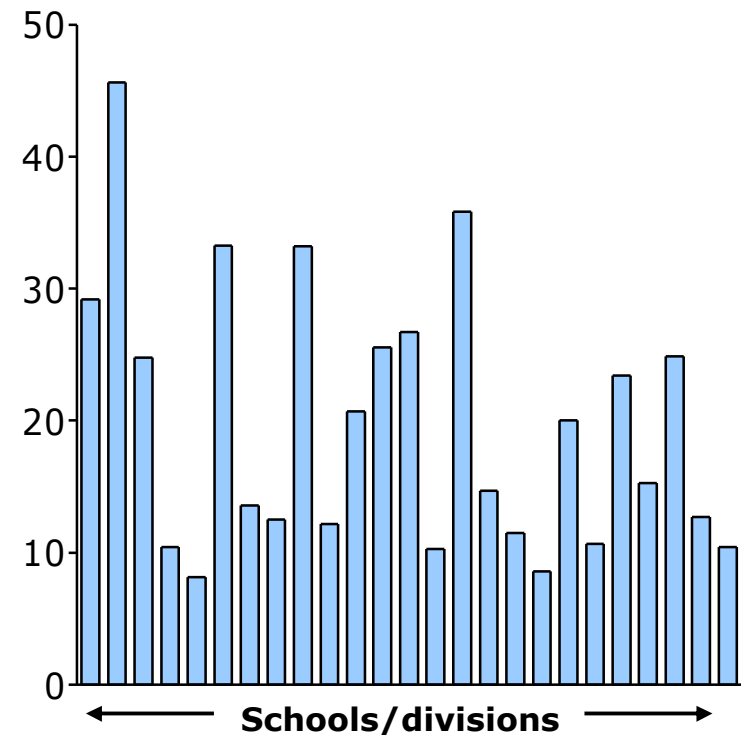
# IT: Schools and divisions have not shown a consistent ability to realize scale benefits

## APPENDIX

2008 permanent FTEs



2008 FTEs per IT FTE



Notes: Excludes CIO, VC R&ED

Source: HR payroll database; Bain analysis

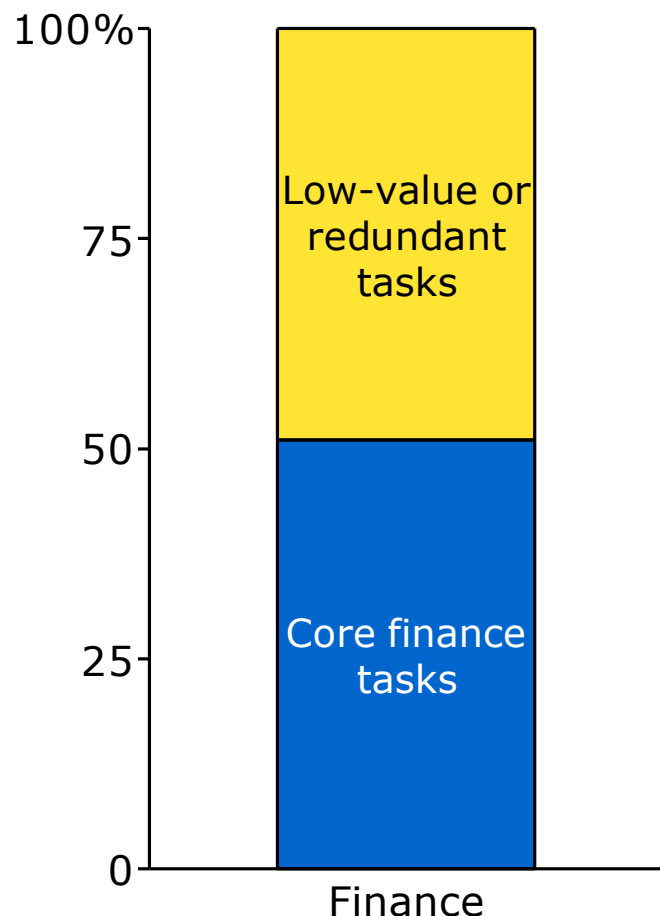
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# Finance: Distributed support personnel often are not able to spend enough time on core activities

## APPENDIX

% of time spent on core Finance activities



"A lot of **non-core, administrative tasks** have been **pushed down** to us in the departments from central finance offices..."

UNC Business Manager

"There are so **many different kinds of accounts** and so many different budgets set up on an account...if **my chair wants to know how much is in his personal research account, it's going to take me a couple hours to tell him...**"

UNC Business manager

"Gathering reports from multiple systems requires a **huge amount of time...a lot of time is spent checking and re-checking** to gain a mild sense of confidence in the reporting."

UNC Business manager

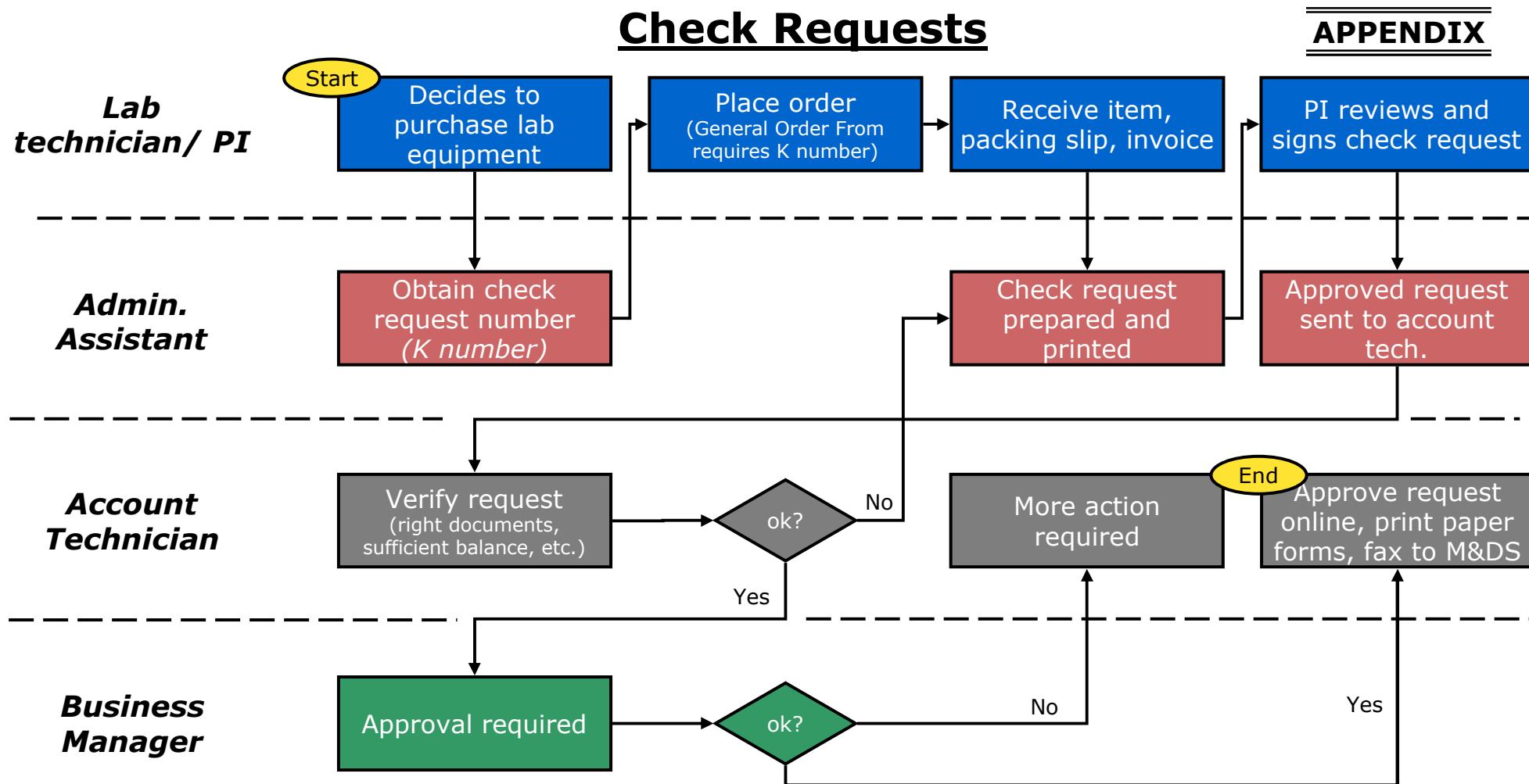
Note: n=14

Source: UNC employee focus groups

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# Finance: Process inefficiencies result in paper forms, redundant feedback loops, and wasted time

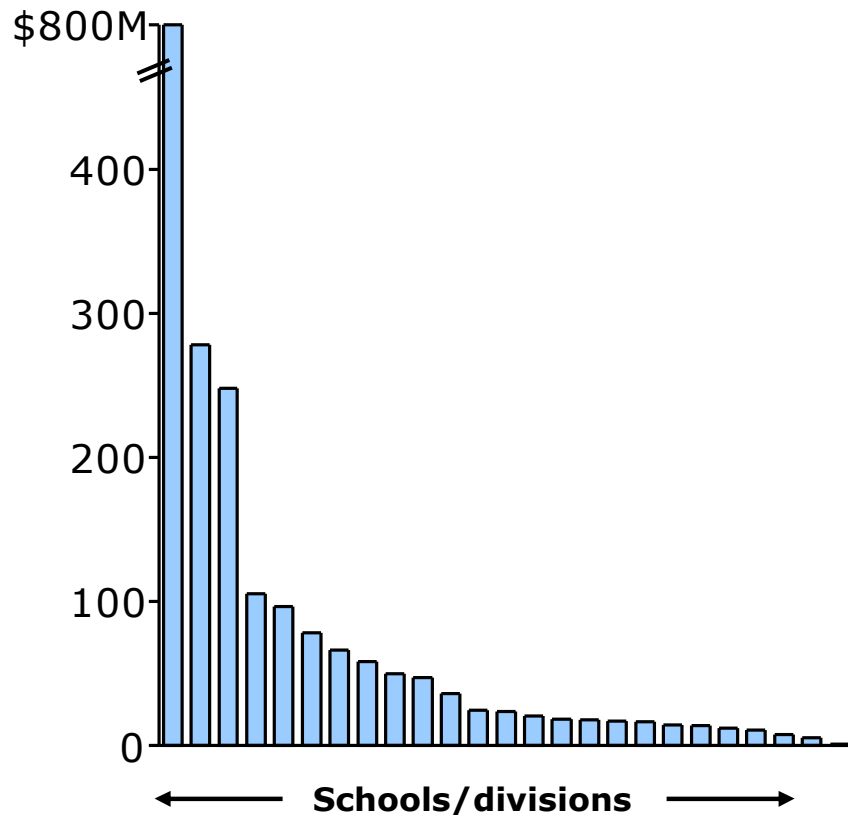


**Approval loops, excessive communication drive inefficiency, even *within* departments/schools**

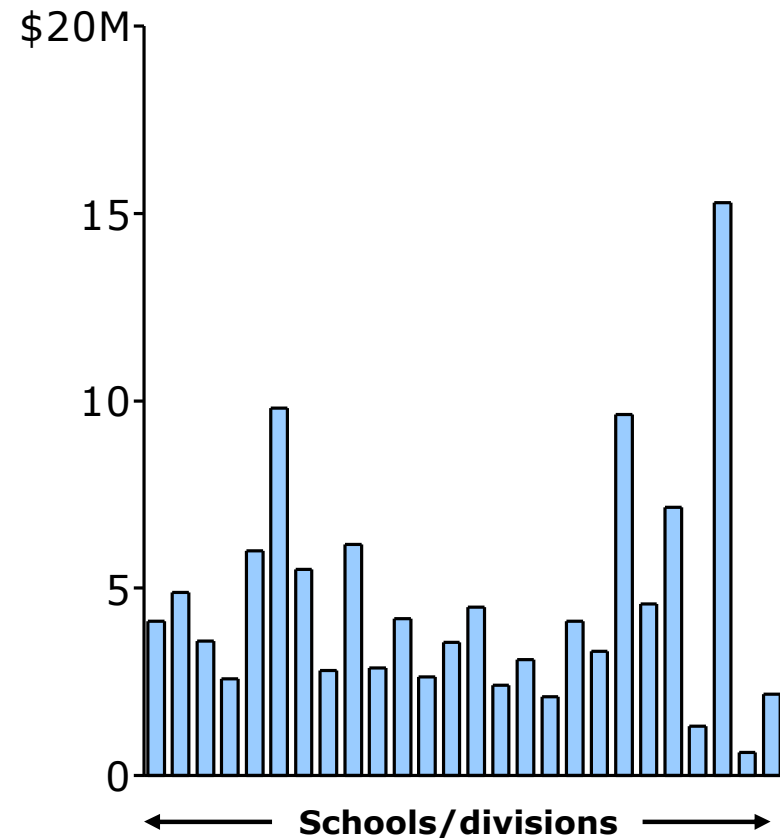
# Finance: Schools and divisions have not shown a consistent ability to realize scale benefits

## APPENDIX

2008 total expenses (\$M)

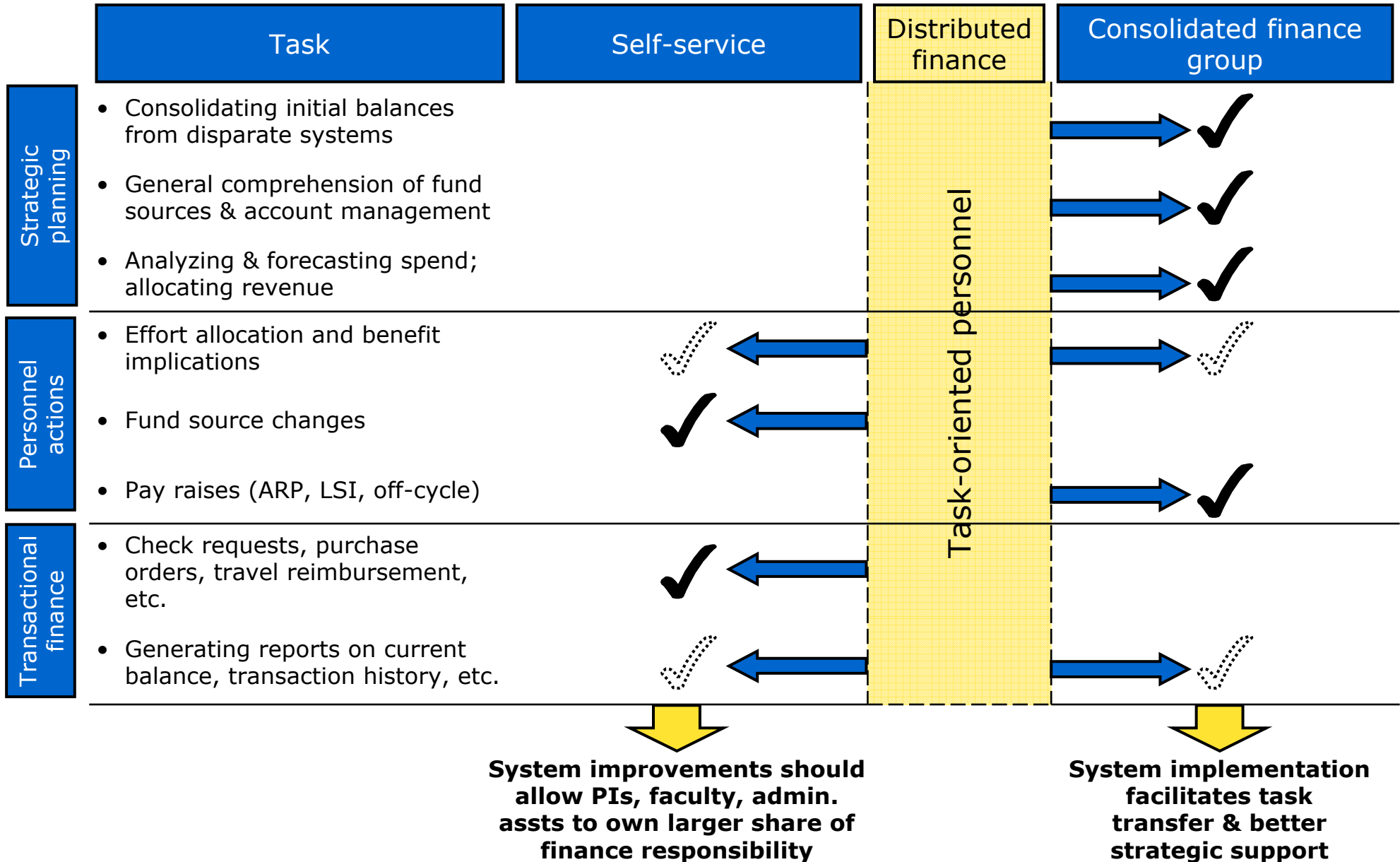


\$M per Finance FTE





# Finance: System upgrades may help facilitate shift from task-oriented to strategy-oriented personnel



Source: UNC interviews

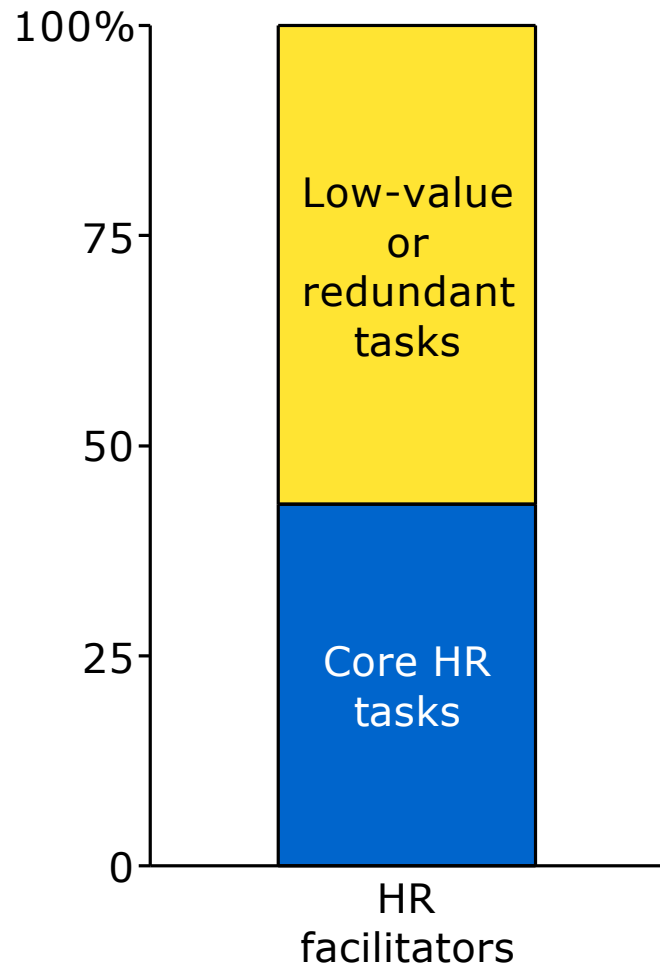
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# HR: Distributed support personnel often are not able to spend enough time on core activities

## APPENDIX

% of time spent on core activities



*"It seems that **70% of my actions are work-arounds** from the way the system was originally designed to work...**if the system was actually designed to work we wouldn't have to spend so much time...**"*

UNC HR Facilitator

*"My job is **not really all that hard...but it is incredibly complicated.**"*

UNC HR Facilitator

*"I find that bureaucracy and our systems prevent us from being a workplace of choice. It really **prevents us from doing what we should do...**"*

UNC HR Facilitator

Note: N=20

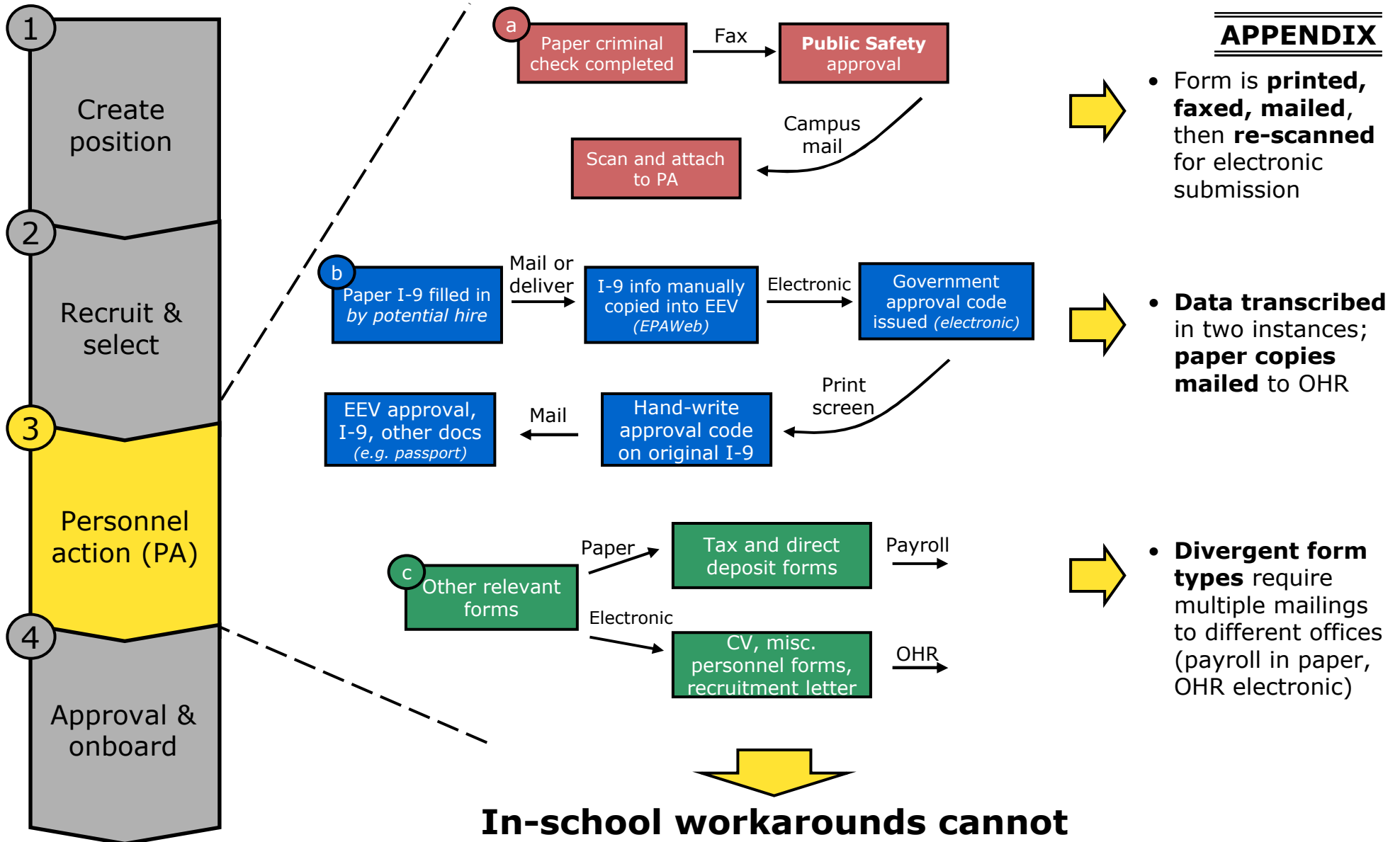
Source: UNC employee focus groups

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# HR: Processes often drive excess work for distributed personnel

**EPA-NF PROCESS**



**In-school workarounds cannot address *root* process inefficiency**

Source: UNC interviews

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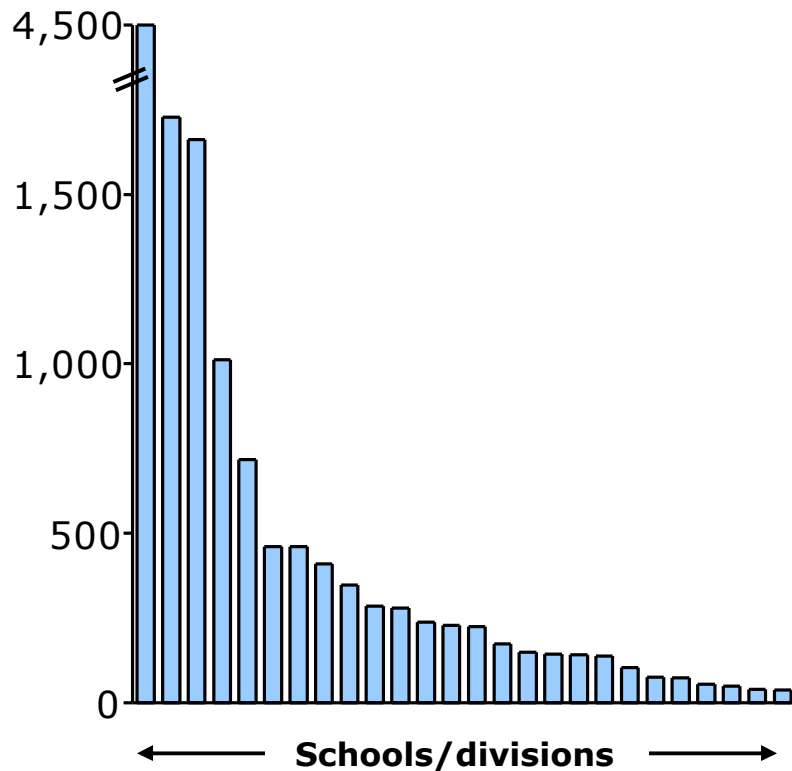
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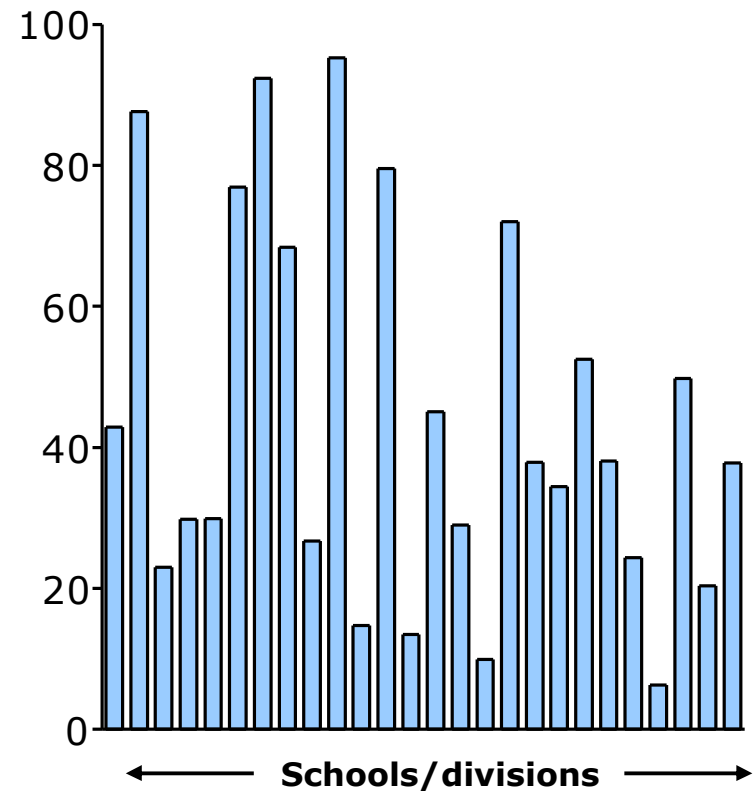
# HR: Schools and divisions have not shown a consistent ability to realize scale benefits

## APPENDIX

2008 total FTEs (incl. temporary)



Total FTEs per HR FTE



Notes: Excludes OHR

Source: HR payroll database; Bain analysis

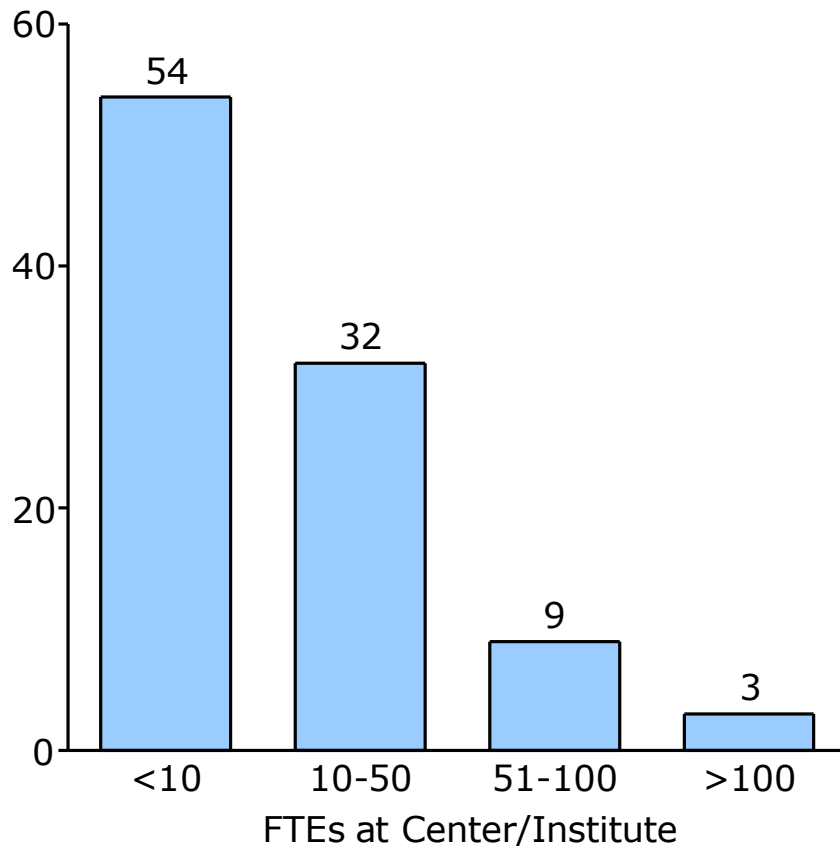
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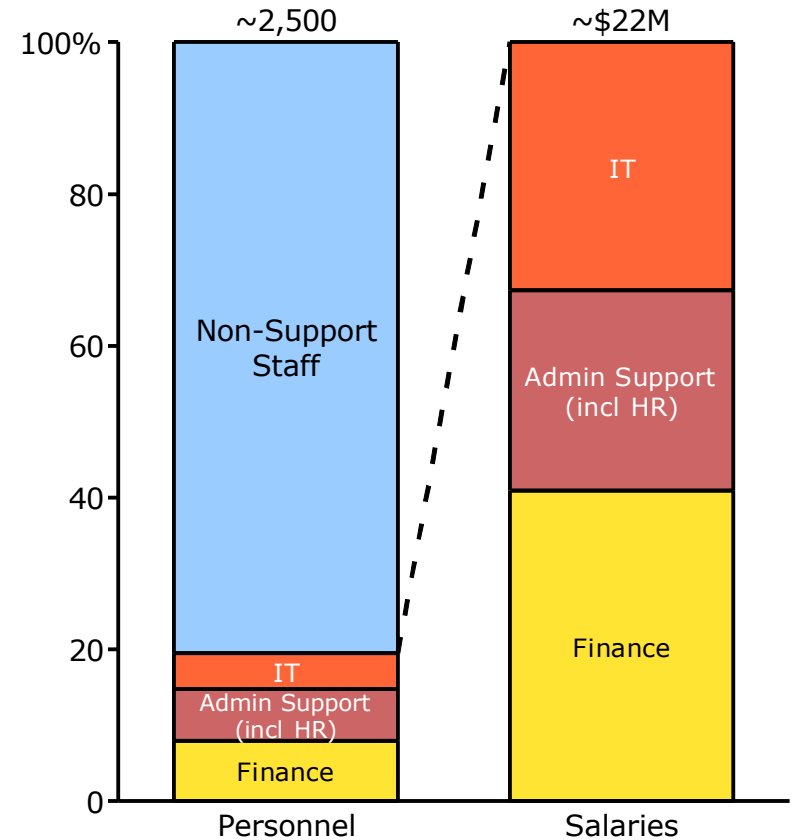
# C&I: There are a large number of small C&Is - many have their own support staff

## APPENDIX

Number of Centers & Institutes



UNC-CH Centers & Institutes



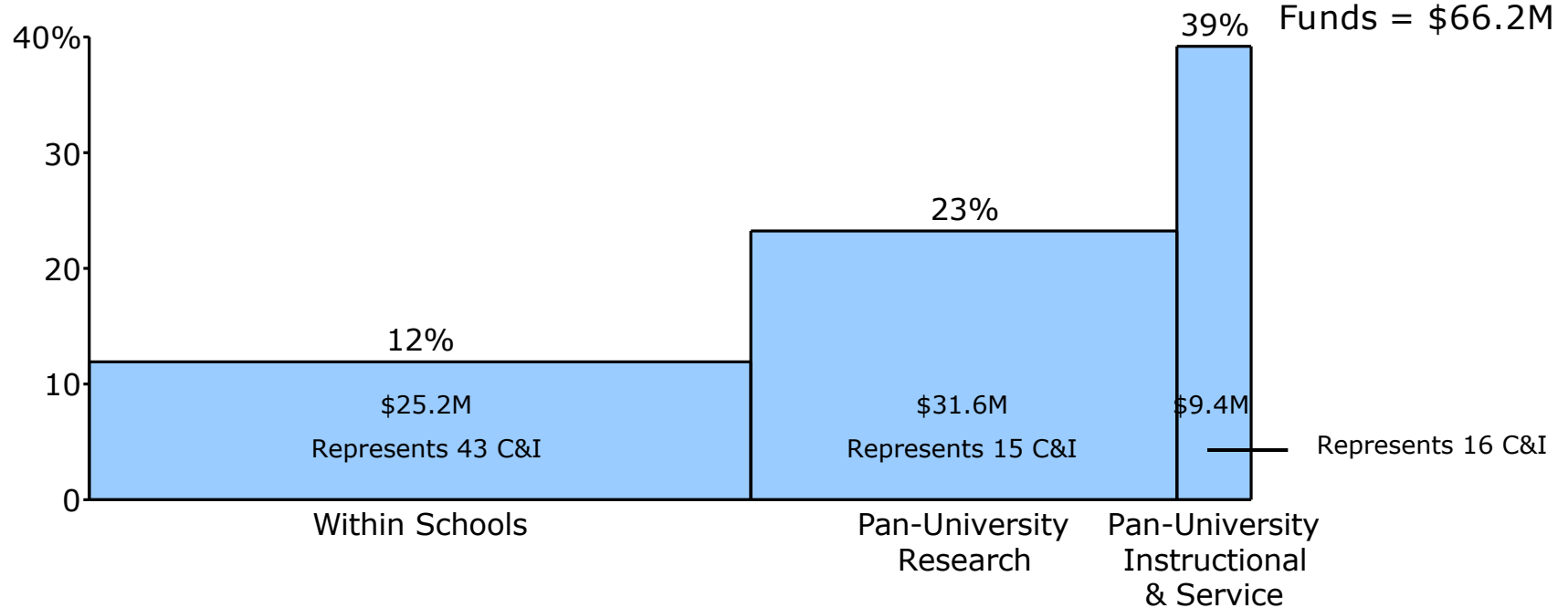
Note: Represents 98 C&I; Left chart values extrapolated to the full 110 C&I. Assumed the remaining 12 C&I had on average 15 FTE, with a distribution of roles similar to the 98 with data. Assumes average salary for Finance is ~\$45K; IT is ~\$60K; Admin is ~\$34K; Excludes temporary and student employees. Excludes faculty with a non-center/institute "home department" listed in payroll database.

Source: UNC Payroll Database, C&I Websites

# C&I: Creating state fund targets could drive as much as \$14-53M of savings

## APPENDIX

UNC Centers & Institutes, % State Funds



Sample Target (% State Funds)	0-10%	5-10%	25-30%	} <b>Total Savings = \$14-53M</b>
Savings for reaching Sample Target	\$4-25M	\$8-24M	\$2-4M	



**Exchanging State Funds for Contract & Grants could also provide up to ~\$20M in F&A for entire university**

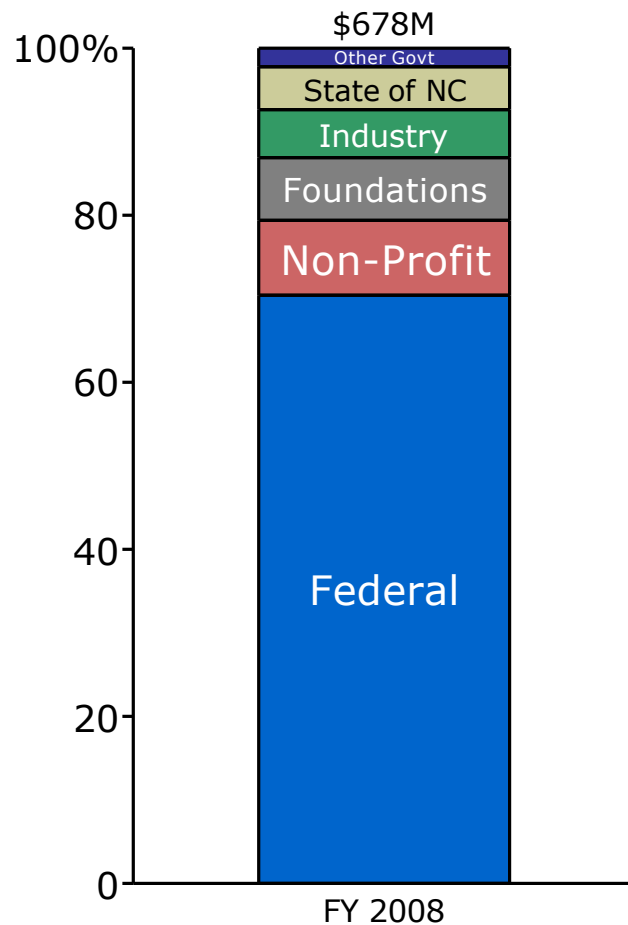
Note: Represents 74 C&I; F&A estimates assume C&I backfill all state \$ with Contracts & Grants that have a 48% F&A Rate; Excludes Friday Center for Continuing Education  
Source: UNC Center & Institute Data; Ledger Data

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# Research Support & Compliance: Research is one of three core components of UNC's mission

## APPENDIX

### UNC-CH Sponsored Research Awards



### Sponsored Research

- ~4,000 sponsored research projects
- Average award size: \$180K

### Compliance

- 44,500 effort reports
- 12,000 financial reports
- 9,000 IRB submissions
- 1,350 IACUC submissions
- 1,000 laboratory safety inspections

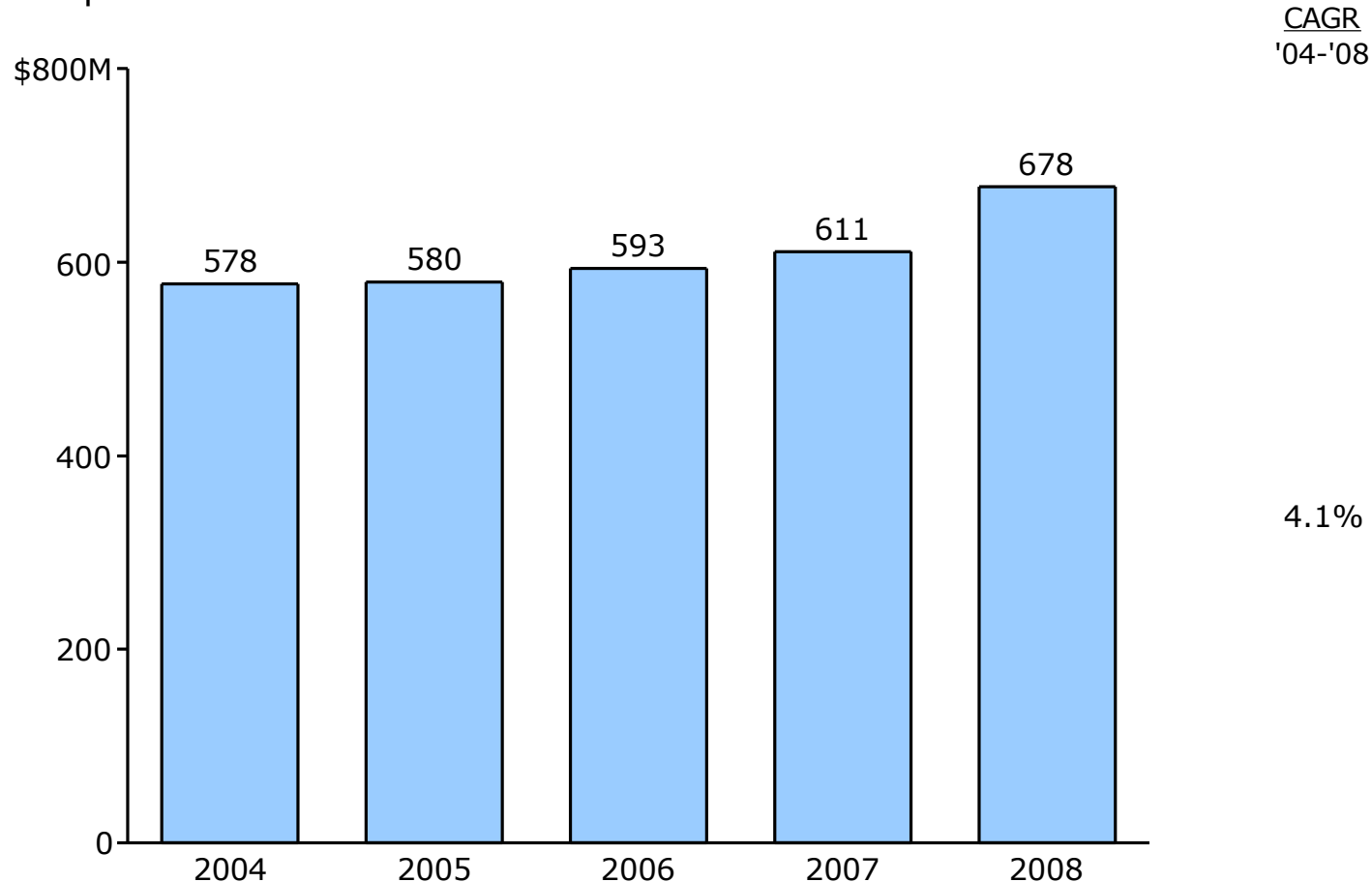
Note: IRB = Institutional Review Board (review research protocols involving human subjects), not all IRB applications are for sponsored research; IACUC = Institutional Animal Care & Use Committee (review research protocols involving animal subjects); Compliance values are approximate

Source: OSR Annual Report; RAMSeS; UNC Departments

# Research Support & Compliance: Sponsored funding has increased 4% year-over-year for the past 5 years

## APPENDIX

UNC-CH Sponsored Research Awards



Note: CAGR = Compound Annual Growth Rate

Source: OSR Annual Report



# Research Support & Compliance: UNC is receiving less funding from industry sources than peers

■ = UNC Ranks Above Peer  
■ = UNC Ranks Below Peer

	National Rankings			
	Overall Funding	Federal Funding	NIH Funding	Industry Funding
<b>UNC</b>	<b>27</b>	<b>19</b>	<b>11</b>	<b>84</b>
Peer Schools				
Johns Hopkins	1	1	1	24
U of WI, Madison	3	17	17	28
UCLA	4	5	10	14
U of Michigan	5	3	4	16
Ohio State U	9	33	38	2
U. of Florida	17	44	49	19
UC Berkeley	20	34	47	27
U of IL – Urbana-Champaign	28	36	69	58
U of TX – Austin	32	54	75	17
Emory	37	28	18	99
Triangle Area Schools				
Duke	7	6	9	1
NC State	53	88	142	13

Note: Overall, Federal and Industry based on R&D expenditures; NIH based on grants awarded

Source: NSF Science Research Statistics (Overall, Federal, Industry); NIH

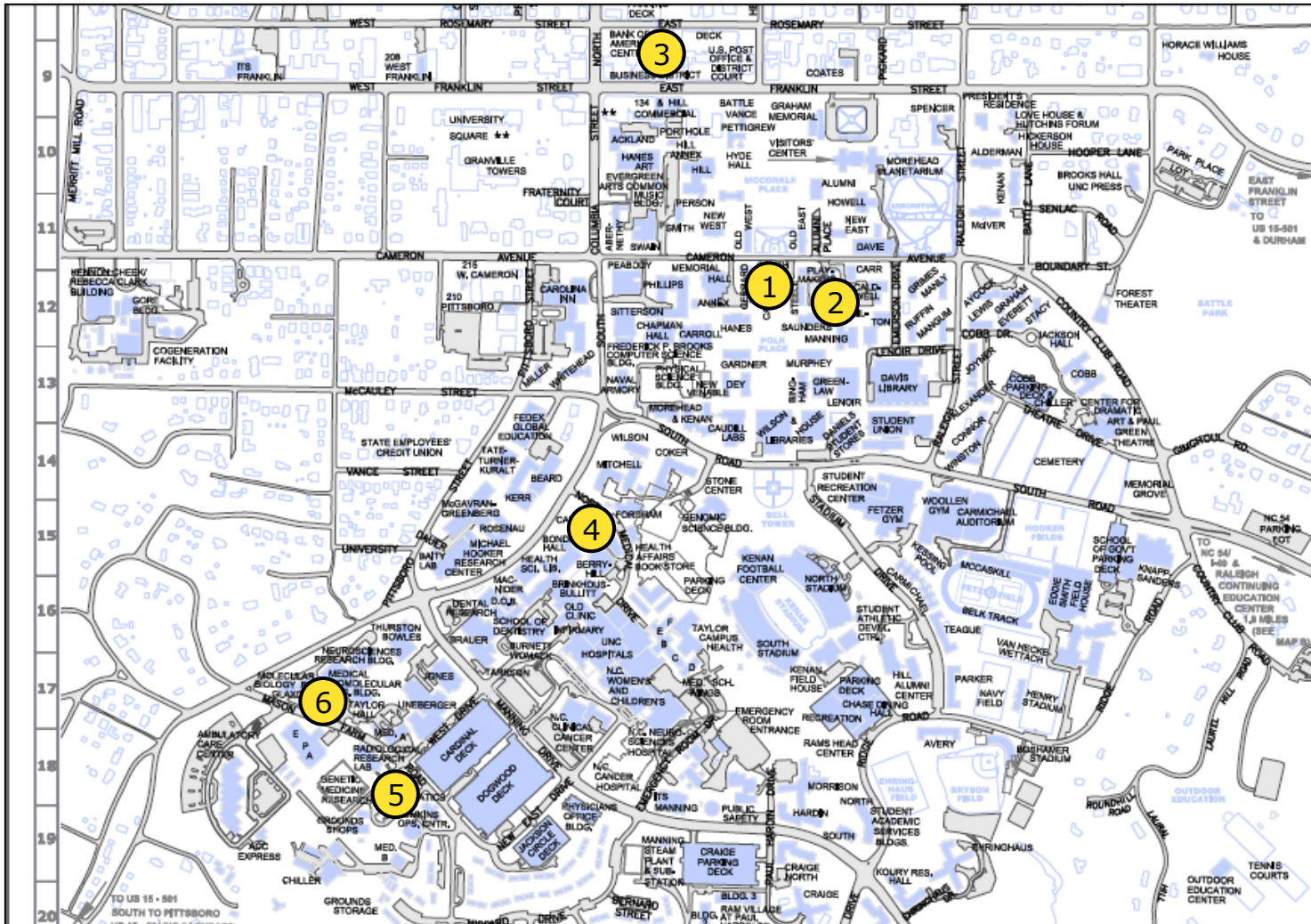
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# Research Support & Compliance: Location of research support offices

**APPENDIX**

## Central Campus



## Office Locations

### Central Campus

- 1 South Building  
- VCRED Office
- 2 Bynum Hall  
- OTD  
- Federal Affairs  
- OIC
- 3 Bank of America Building  
- ORIS  
- ORD  
- Research Compliance Program
- 4 Carrington  
- OHRE
- 5 Bioinformatics  
- SPO  
- OACU
- 6 Medical School Building #52  
- OHRE

### Off Campus

- Administrative Office Building (~2 mi. away)  
- OSR

Note: Excludes animal care facilities and Office of Postdoctoral Research and Office of Economic and Business Development; VCRED = Vice Chancellor Research & Economic Development; OTD = Office of Technology Development; OIC = Office of Information Communications; ORIS = Office of Research Information Systems; ORD = Office of Research Development; OHRE = Office of Human Research Ethics; SPO = Sponsored Program

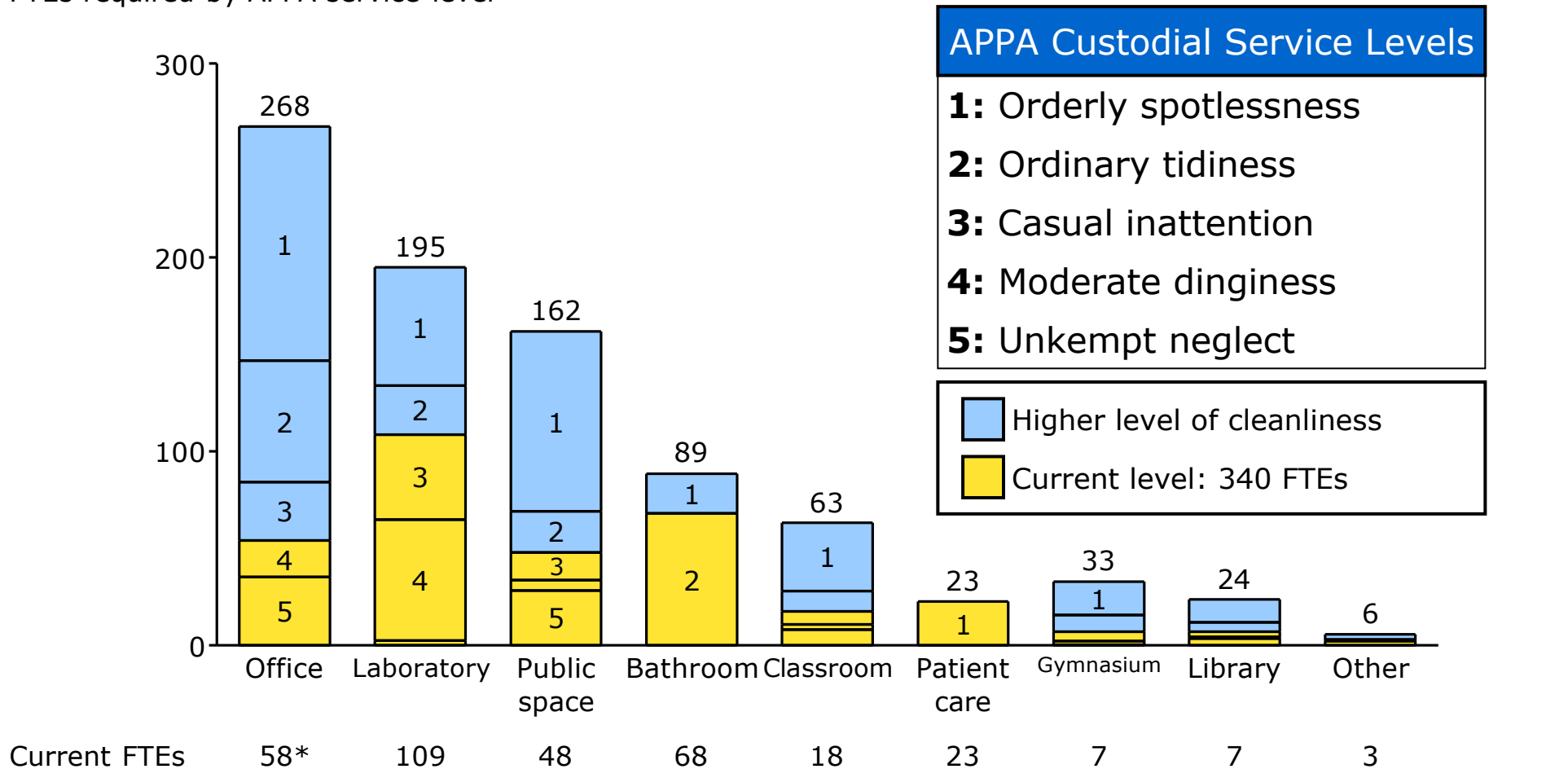
Office; OACU = Office of Animal Care & Use; OSR = Office of Sponsored Research

All observations contained in this document are for discussion purposes only.

# Facilities Services: Limited opportunity to further reduce Housekeeping service levels

## APPENDIX

FTEs required by APPA service level



Note: \*Offices are maintained at a standard slightly above level 4, which requires 54 FTEs. FTE numbers includes recent FY09 reductions; APPA service levels depict a general state of cleanliness from spotless (1) to neglectful (5); does not include 87 FTEs supporting Housing  
 Source: APPA Custodial Staffing Guidelines for Educational Facilities; Facilities Services org chart; Facilities Services space data

Total = 340