



Operating Model Transformation Business Case
Human Resources, Information Technology, and
Procurement & Contracting

October 4, 2019

Operating Model Transformation Business Case

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Executive Summary

Operating Model Transformation
Business Case

UT System Operating Model Business Case | **HR, IT, Procurement Overview**

Executive Summary | Methodology



Overview

- For each of the three functional areas, a high level business case was developed to serve as the rationale for moving toward more strategic, standardized, and centralized operating models for HR, IT, and Procurement and Contracting.
- For each business case, a variety of data sources and information were leveraged to create a hypothesis in support of the operating model transformation. In addition, the business case considered organizational staffing capacity and/or potential savings opportunities.
- The business case output should be socialized with UT stakeholders and supplemented with additional analysis to confirm high-level hypotheses.



Business Case Inputs

- Functional Area Benchmarking Surveys
- Individual Peer Benchmarking
- Analysis of University of Tennessee Provided Data
- Subject Matter Expert Input
- Interviews with University of Tennessee System, Campus, and Institute Stakeholders (Spring 2019, Summer 2019)
- *Note: UT System functional spending data (the cost to operate the functional areas) was not available for Human Resources, Information Technology, and Procurement & Contracting for this analysis.*

UT System Operating Model Business Case | **HR, IT, Procurement Overview**

Executive Summary | Overall Findings



Human Resources

High level benchmarking places the UT System below cross-industry medians and selected Higher Education peers for HR staffing metrics. In addition, estimated UT HR spending lags behind all-industry benchmark.

Recent trends show organizations investing in the HR organization by creating Communities of Expertise and transactional teams to optimize processing/administrative activities and enable local HR Business Partners to focus on more strategic work.

Hypothesis: the University of Tennessee system has **underinvested in the HR organization**. Targeted investment in a more centralized operating model could improve quality and consistency of employee experience, avoid compliance risk, attract/retain talent needed for the future, and prioritize strategic initiatives.



Information Technology

Compared to peers and industry benchmarks, the UT system staffing levels fall below the average for Information Technology organizations. Levels of staffing across domains vary widely from campus to campus.

Underinvestment in IT is commonly observed at major public institutions in higher education and could diminish the competitiveness of institutions in attracting and retaining high quality faculty and students.

Hypothesis: The UT system **has underinvested in IT**. Strategic investments and a transformation of the operating model could result in improved service levels and quality, innovation, enhanced data quality and business intelligence, and risk mitigation. Operating model shifts and innovation could yield long-term gains in efficiency, effectiveness, and enterprise security.



Procurement & Contracting

UT system staffing levels appear adequate for the existing operation. However, as systems mature, they can handle greater spend volume as staffing mix evolves to be weighted toward strategic procurement rather than transactional activity.

Underinvestment in Procurement qualifications and talent is commonly observed in higher education which places a challenge on coordinating system level strategy.

Hypothesis: Opportunities to **better manage spend exist in focused and addressable categories accounting for \$138M of UT spend**. In higher education, center-led procurement operating models with an emphasis on strategic sourcing and category management have yielded **savings in a conservative range of 3 to 5% in key categories**.

Human Resources

Operating Model Transformation
Business Case

UT System Operating Model Business Case | **Human Resources**

Executive Summary

Compared to peers and industry benchmarks, the UT System staffing levels are not standardized and fall below what is traditionally seen for Human Resource organizations.

Assumptions were made for HR spending as it was not available to supplement this analysis. Data showed UT System to be on the lower end of the spectrum for HR investments.

Internal benchmarking across the campuses demonstrates variable staffing levels within certain HR domains, suggesting pockets of expertise on some campuses and potential underinvestment in others.

Underinvestment in HR is commonly observed at major public institutions in higher education and could diminish the competitiveness of institutions in attracting and retaining high quality faculty and students.

Hypothesis: The UT System has underinvested in HR which could result in inadequate service levels and quality, inhibit employee satisfaction, and potentially fail to mitigate risk.

The UT System should implement a more centralized and standardized HR model to maximize organization performance, enhance communication, better talent recruitment, optimize employee engagement, enhance data management, and manage resource allocation.

Investment in HR today could potentially lead to long-term efficiency gains and opportunities to redeploy resources in the future.

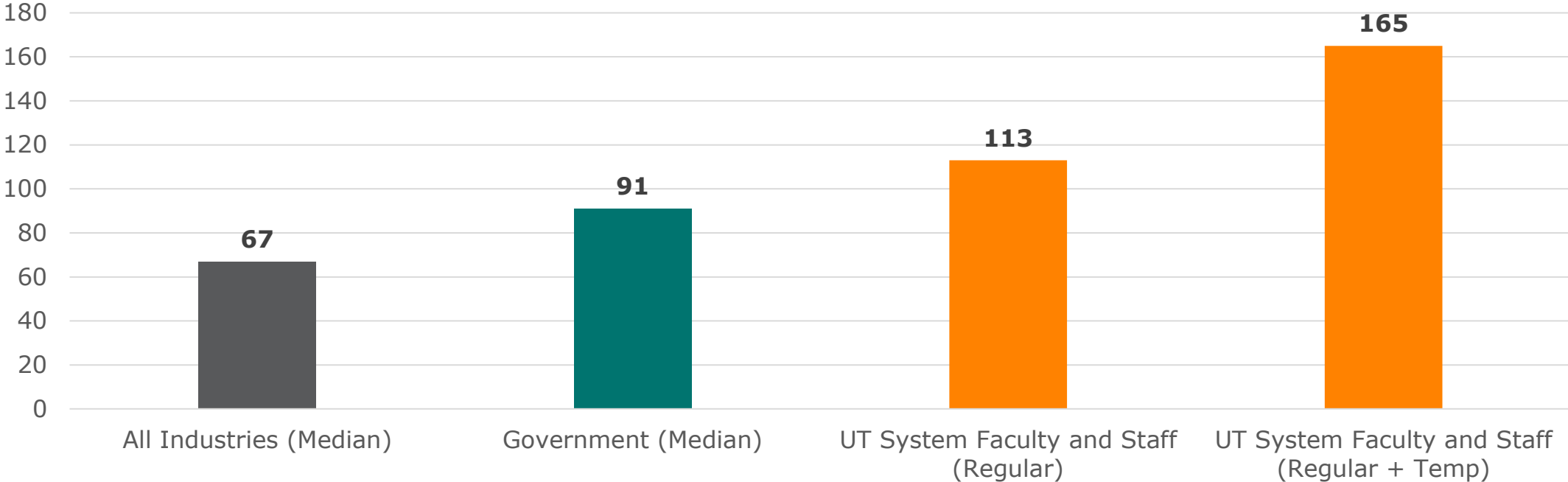
Invest in HR to ..

- ✓ Maximize Organization Performance
- ✓ Enhance Communication
- ✓ Enhance Talent Recruitment
- ✓ Optimize Employee Engagement
- ✓ Improve Data Management
- ✓ Manage Resource Allocation

UT System Operating Model Business Case | **Human Resources**

Employee Headcount/FTE per HR FTE

Total Headcount (Faculty & Staff) per HR FTE



When compared to benchmarks, HR staff across the UT System support a larger number of faculty and staff than industry medians.

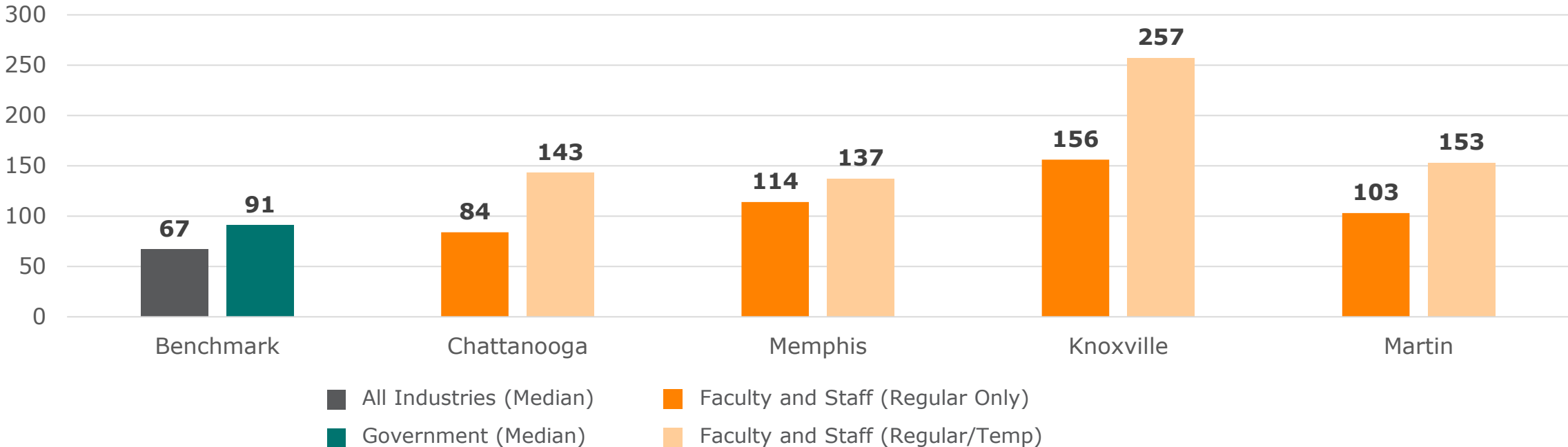
Note: UT System includes of Chattanooga, Memphis, IPS, Institute of Agriculture, Knoxville, Martin, Space Institute, and UTSA. The data does not include headcount for Students and Friends.

Sources: Bersin, Deloitte Consulting LLP, 2019 ; UT System Provided Data

UT System Operating Model Business Case | **Human Resources**

Employee Headcount/FTE per HR FTE – Campus Comparison vs. Industry

Total Headcount (Faculty & Staff) per HR FTEs



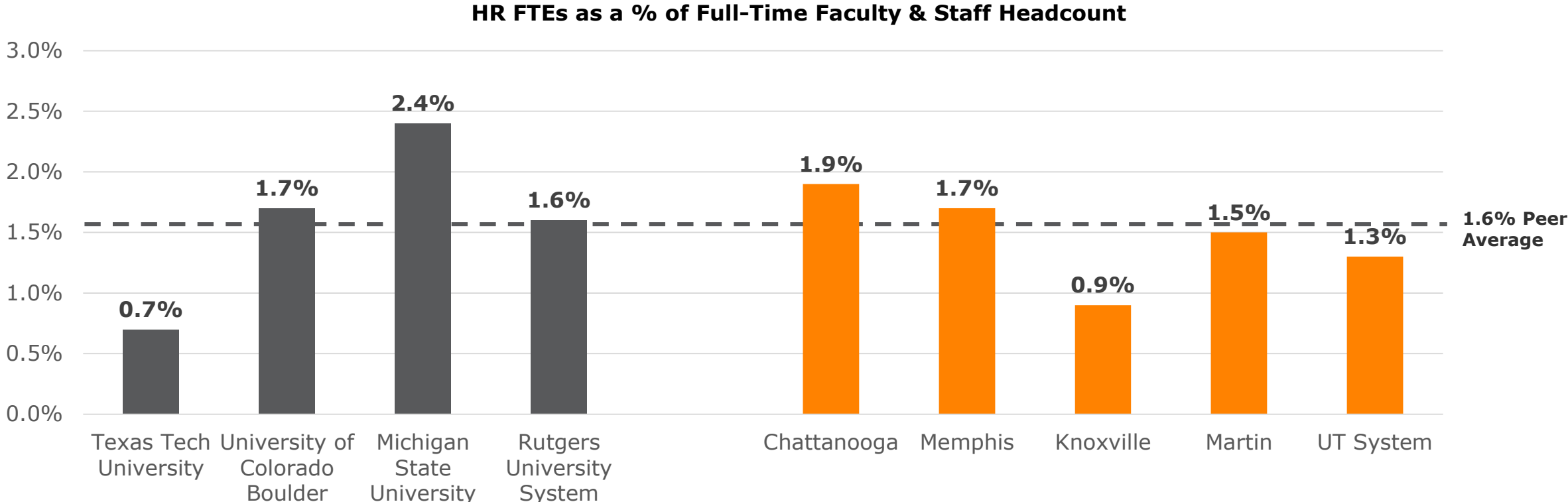
When compared to benchmarks, some UT campuses appear to support more headcount industry medians. In addition, the campuses have a non-uniform allocation of faculty and staff headcount per HR FTEs.

Note: Analysis only includes four UT campuses. The data does not include headcount for Students and Friends.

Sources: Bersin, Deloitte Consulting LLP, 2019 ; UT System Provided Data

UT System Operating Model Business Case | **Human Resources**

HR FTE per Institutional Full-Time Staff Headcount



Total UT System lags slightly below peer group average, however, a lot of variation exists. Flagship campus, Knoxville, appears to lag the most when compared to other large peer campuses.

Note: The UT data does not include headcount for Temporary Faculty and Staff, Students, and Friends. Peer data is reported as FTEs. FTE data was not available for UT System.

Sources: UT System Provided Data; University Websites (Peer Data)

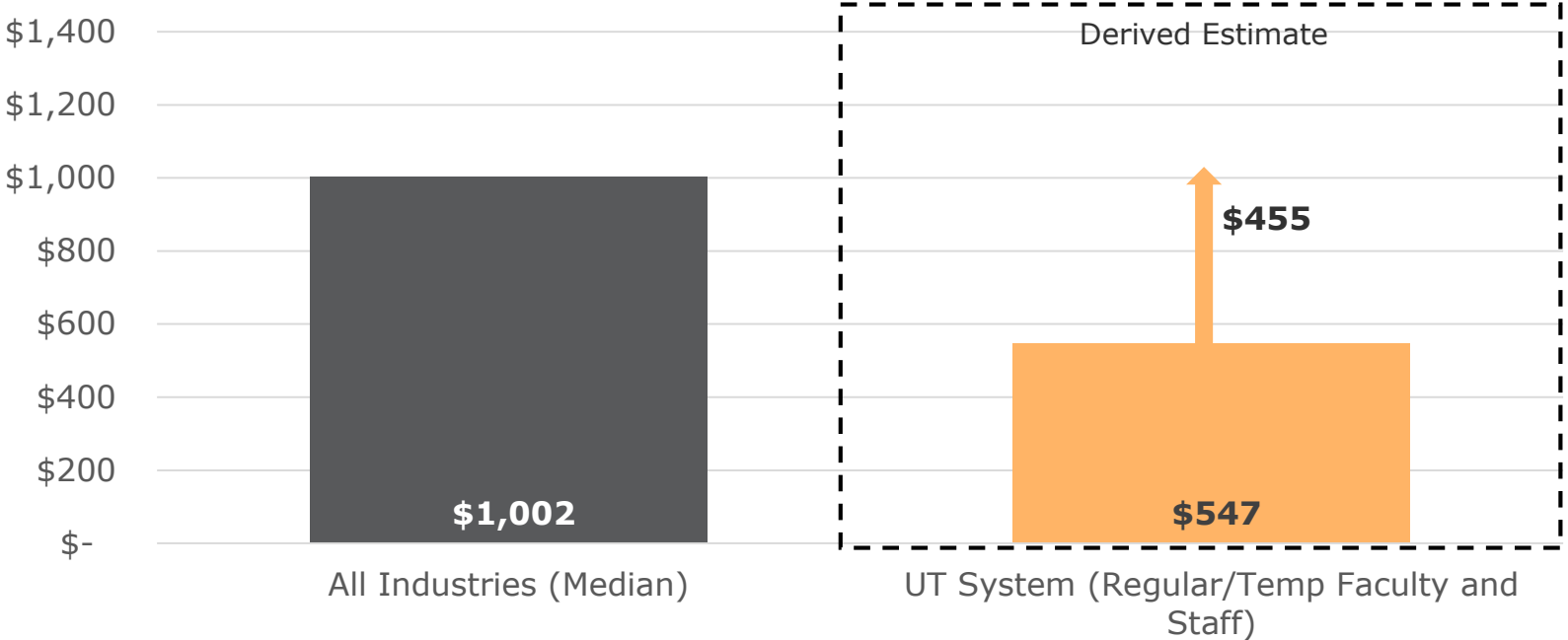
UT System Operating Model Business Case | **Human Resources**

Resource Allocation by HR Domain – UT System (Derived Estimate) vs. Industry

HR Spend per Employee

About This Graph:

- Total UT System HR labor costs were used to derive total HR spend.
- The derived spending estimate was based upon the following assumptions:
 1. Total HR Labor Cost: **\$6,685,718**
 2. Labor Costs typically represent 67% of total functional area spending in the UT system (all other costs represent 33% of total HR spend) – Total HR Spend Estimate: **\$9,978,684**



The UT System is estimated to spend \$455 less on average per HR employee when compared to the benchmark.

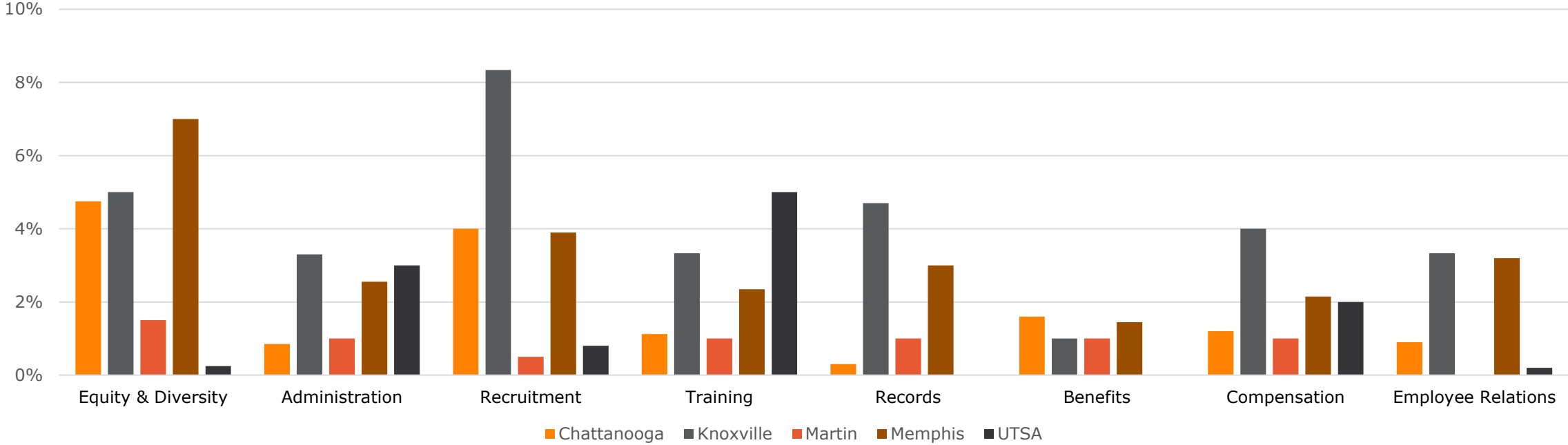
Note: Assumptions are only for the UT system. The All Industries Median represents reported organizational HR spending per Employee. The data does not include headcount for UT System Students and Friends.

Sources: Bersin, Deloitte Consulting LLP, 2019; UT System Provided Data

UT System Operating Model Business Case | **Human Resources**

Staff Distribution by HR Domain – UT Campus Comparison

Staff Distribution by HR Domain (Percentage of Total HR FTE)



Across the four main campuses, there is substantial variance in the distribution of HR FTE across functional areas. This suggests that there are pockets of expertise across the campuses that could be better leveraged across the system.

Source: UT System Provided Data

UT System Operating Model Business Case | **Human Resources**

Conclusion

The UT System should implement a more centralized and standardized HR model to maximize organization performance, enhance communication, enhance talent recruitment, optimize employee engagement, improve data management, and manage resource allocation.

In order to implement a mature operating model, the UT System may require additional resource investments.

Next Steps:

- **Socialize and refine the Operating Model and Timeline**
- **Validate adequacy and quality of services through customer satisfaction surveys**
- **Conduct staff activity analysis to better understand effort and transaction volume and prepare for sizing discussions**
- **Analyze HR spending data to identify priority areas**

Invest in HR to ..

- ✓ Maximize Organization Performance
- ✓ Enhance Communication
- ✓ Enhance Talent Recruitment
- ✓ Optimize Employee Engagement
- ✓ Improve Data Management
- ✓ Manage Resource Allocation

Information Technology

Operating Model Transformation
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UT System Operating Model Business Case | **Information Technology**

Executive Summary

Compared to peers and industry benchmarks, the UT system staffing levels fall below the average for Information Technology organizations. *Data on IT spending and customer satisfaction was not available to supplement this analysis.*

Internal benchmarking across the campuses demonstrates variable staffing levels within certain IT domains, suggesting pockets of expertise on some campuses and potential underinvestment in others.

Underinvestment in IT is commonly observed at major public institutions in higher education and could diminish the competitiveness of institutions in attracting and retaining high quality faculty and students.

Hypothesis: The UT system has underinvested in IT which could result in inadequate service levels and quality, inhibit innovation, and potentially fail to mitigate risk.

The UT system should implement a more coordinated and standardized IT organization to optimize service, foster innovation, enhance data quality and integrity, better manage resources and assets, and prepare for future technology investments and implementations.

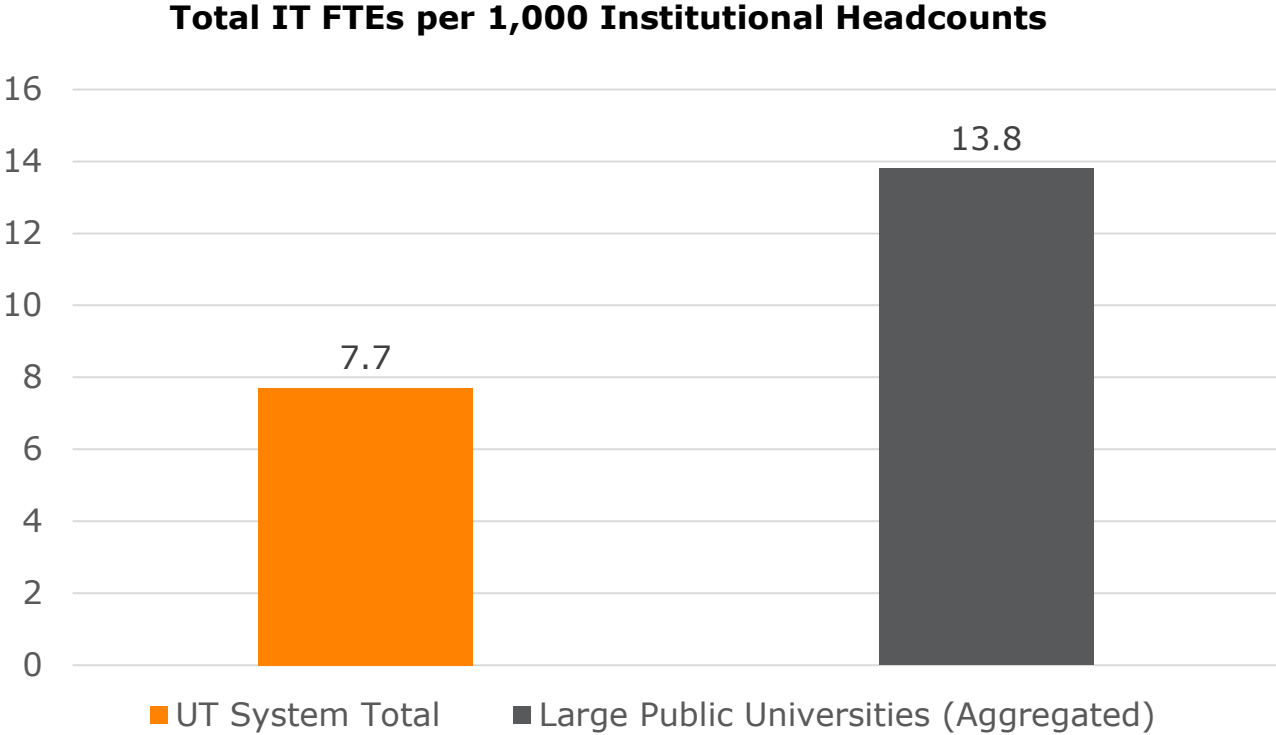
Investment in IT today could potentially lead to long-term efficiency gains and opportunities to redeploy resources in the future.

Invest in IT to ..

- ✓ Optimize Service
- ✓ Foster Innovation
- ✓ Enhance Data
- ✓ Manage Resources
- ✓ Prepare for Future Investments
- ✓ Yield Long Term Efficiency Gains

UT System Operating Model Business Case | **Information Technology**

IT FTE per Institutional Headcount



When compared to an aggregated group of peers, UT has nearly half the number of IT employees (measured in FTE) relative to population size of faculty, staff, and students (institutional headcount).

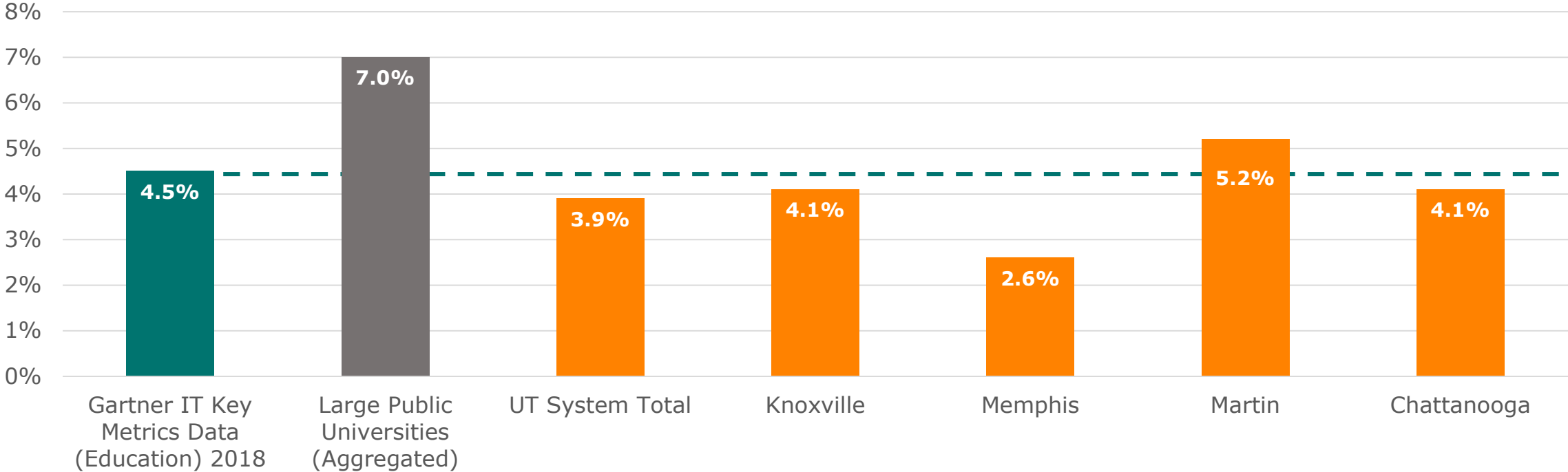
Note: Institutional Headcount includes Regular (full-time) Faculty and Staff and Student Enrollment

Sources: UT System Provided Data; Deloitte Survey of Institutions

UT System Operating Model Business Case | **Information Technology**

IT FTE per Institutional Headcount – UT System vs. Industry (Gartner, Peers)

IT FTEs as a % of Total Employees (Full-Time Faculty and Staff)



The system average, as well as nearly all UT campuses individually, fall below the Gartner benchmark of IT FTEs as a percent of total full-time employees.

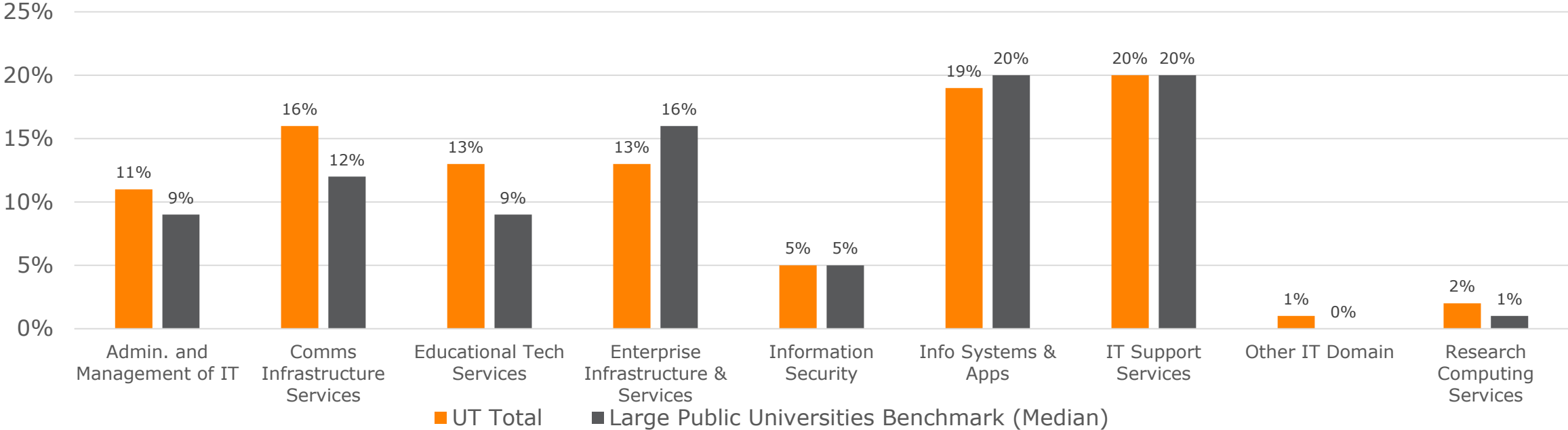
Note: Total Employees includes full-time (regular) Faculty and Staff only. Temporary and Student employees are excluded from the UT metrics.

Sources: Gartner Education Benchmark Report; Deloitte Survey of Institutions; UT System Provided Data

UT System Operating Model Business Case | **Information Technology**

Staff Distribution by IT Domain – UT System vs. Industry (EDUCAUSE)

Staff Distribution by IT Domain (Percentage of Total IT FTE)



EDUCAUSE benchmark distributions show that UT’s distribution of staff by IT domain is comparable to industry-wide distribution. This indicates that UT’s overall IT staffing levels by functional area are in line with industry practice. Individual campus staffing distribution is reported on the next slide.

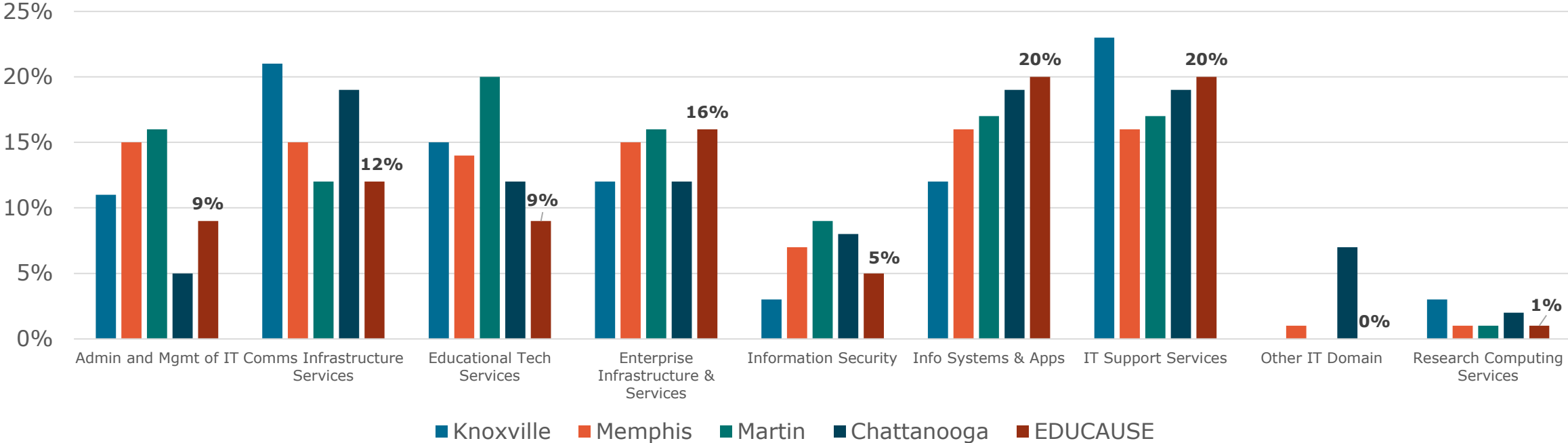
Note: Benchmark percentages add up to 92% as only median data is reported by EDUCAUSE.

Sources: UT System Provided Data; EDUCAUSE Core Data Service 2018

UT System Operating Model Business Case | **Information Technology**

Staff Distribution by IT Domain – UT Campus Comparison

Staff Distribution by IT Domain (Percentage of Total IT FTE)



Across the four main campuses, there is substantial variance in the distribution of IT staff across functional areas. This suggests that there are pockets of expertise across the campuses that could be better leveraged across the system.

*Note: Total Employees includes full-time (regular) Faculty and Staff only. Temporary and Student employees are excluded.
 Note: EDUCAUSE percentages add up to 92% as only median data is reported by EDUCAUSE.*

Sources: UT System Provided Data; EDUCAUSE Core Data Service 2018

UT System Operating Model Business Case | **Information Technology**

Conclusion

The UT system should invest in IT to secure its place among competitive public institutions. UT should pursue core service excellence and make advances in Data Science and Visualization, Security, Systems, and Learning Resources to become an industry leader for IT in higher education. These benefits can be realized through pursuing a more standardized and coordinated enterprise IT operating model.

Next Steps:

- **Socialize and refine the Operating Model and Timeline**
- **Validate adequacy and quality of services**
- **Analyze IT spending and investment data to identify priorities**
- **Plan for innovation in technology for students and faculty**
- **Identify 3-4 service areas to consolidate and potentially be automated in the future. Potential service area consolidation options include:**
 - Telephones
 - Network
 - System Administration (explore innovative uses of cloud to facilitate greater centralization)

Invest in IT to ..

- ✓ Optimize Service
- ✓ Foster Innovation
- ✓ Enhance Data
- ✓ Manage Resources
- ✓ Prepare for Future Investments
- ✓ Yield Long Term Efficiency Gains

Procurement & Contracting

Operating Model Transformation
Business Case

UT System Operating Model Business Case | **Procurement & Contracting**

Executive Summary

UT system staffing levels are similar to those observed at peer institutions. However, as systems mature, they can handle greater spend volume and staffing mix evolves to be weighted toward strategic procurement rather than transactional activity.

Underinvestment in Procurement qualifications and talent is commonly observed in higher education, which places a challenge on coordinating system level activity. Return on investment is primarily driven by talent as the ability to facilitate dialog and decisions across multiple constituencies can be difficult.

Hypothesis: Opportunities to better manage spend exist in focused and addressable categories that account for \$138M of UT spend. In higher education, center-led procurement operating models, with an emphasis on strategic sourcing and category management, have yielded savings in a conservative range of 3 to 5% in key categories. There is considerable upside to these estimates depending on the effectiveness and scope of the Procurement Operating Model.

The UT system should implement a center-led operation that will standardize practice, become more data driven, have greater involvement with key stakeholders and customers, optimize service levels, and develop best practice spend management processes.

Investment in Procurement & Contracting today will lead to lifecycle cost and value enhancement as well as improvements in process and customer service. Efficiency gains can be redeployed for greater ROI in strategic areas.

Invest in Talent and Build Capacity to ..

- ✓ Improve Service
- ✓ Foster Data Driven Spend Decisions
- ✓ Reduce Non-Value Added Work Processes
- ✓ Move Toward Proactive Spend Management
- ✓ Redeploy Resources Toward UT Strategic Priorities

UT System Operating Model Business Case | Procurement & Contracting

Spend Review: Level 1 Category and Location

Facilities and IT account for 44% of total spend, yet the majority of this is managed outside of the procurement team. The following analysis assumes limited involvement in facilities, but notes opportunity for an increasing role in support of IT spend management.

UT's Pcard spend of \$53M is in the expected range for a large public research university. While Pcards were a valuable tool when electronic marketplaces and commerce were not common, several universities have initiated projects to reduce this spend. We note that Pcard spend is especially prevalent in IT and Research & Life Sciences, potentially warranting further analysis.

AP by Location

Category (L1)	Knoxville	Memphis	Chattanooga	Martin	UT Sys	All Other	Total	%	PCard	Grand Total	%
Facilities	\$91,284,491	\$31,893,455	\$30,488,601	\$9,534,123	\$6,005,767	\$17,787,027	\$177,459,341	42%	\$1,432,741	\$178,892,082	37%
Business & Administrative Services	\$23,285,371	\$2,942,017	\$4,126,010	\$1,002,405	\$6,031,805	\$2,573,659	\$38,958,862	9%	\$4,271,514	\$43,230,376	9%
Medical & Dental	\$1,436,135	\$27,565,330	\$60,186	\$35,448		\$373,108	\$29,434,759	7%	\$1,754,332	\$31,189,091	7%
Information Technology	\$12,647,361	\$4,015,735	\$5,129,049	\$603,069	\$3,252,802	\$1,628,170	\$26,673,117	6%	\$7,606,333	\$34,279,450	7%
Pass-through*	\$6,326,131	\$3,386,105	\$2,619,319	\$450,779	\$1,939,183	\$1,162,490	\$15,433,228	4%	\$922,046	\$16,355,274	3%
Library	\$10,004,244	\$2,390,281	\$1,486,593	\$840,900		\$972,730	\$14,853,848	3%	\$241,507	\$15,095,355	3%
Research & Life Sciences	\$5,954,699	\$5,883,433	\$407,819	\$73,135	\$47,738	\$1,692,168	\$13,985,857	3%	\$7,632,676	\$21,618,533	5%
All Other L1 Categories	\$14,617,191	\$1,375,531	\$2,779,343	\$2,387,337	\$328,572	\$5,158,226	\$24,258,863	6%	\$6,268,646	\$30,527,509	6%
Total 80% L1 Categories	\$165,555,623	\$79,451,887	\$47,096,920	\$14,927,199	\$17,605,867	\$31,347,578	\$341,057,875	80%	\$30,129,795	\$371,187,670	77%
Tail Spend	\$38,718,034	\$19,150,814	\$8,942,658	\$6,255,622	\$1,782,083	\$16,502,356	\$85,095,944	20%	\$22,724,800	\$107,820,744	23%
Grand Total	\$204,273,657	\$98,602,701	\$56,039,578	\$21,182,821	\$19,387,950	\$47,849,934	\$426,153,819	100%	\$52,854,595	\$479,008,414	100%

*Non-addressable spend - e.g. payments to universities, professional associations, government agencies & other

Source: UT System Provided Data

UT System Operating Model Business Case | Procurement & Contracting

Spend Review: Purchasing Cards

- Normalization of Merchant names in Pcard files helps to establish total supplier spend profiles
- We categorized \$22.6M or 30 suppliers into 6 spend categories
- In other similar universities we have observed the following opportunities:
 - ✓ Spend with contracted suppliers does not receive negotiated pricing
 - ✓ Spend with catalog suppliers does not flow through the established marketplace
 - ✓ New contracts are established for suppliers with substantial spend profiles
 - ✓ High Retail & Catering spend yields price & process improvement

Categorized Pcard Spend (\$ in Thousands)

Information Technology	
APL*APPLE ONLINE STORE	\$4,280
DMI* DELL HIGHER EDUC	\$1,301
B&H PHOTO	\$905
CDW	\$175
PERSONAL COMPUTER SYST	\$170
TOP 5 TOTAL	\$6,830

Research & Life Sciences	
FISHER SCIENTIFIC	\$3,128
VWR INTERNATIONAL INC	\$554
LIFETECH	\$511
SIGMA ALDRICH US	\$421
QIAGEN INC	\$270
TOP 5 TOTAL	\$4,885

General Retail	
AMAZON	\$3,259
WALMART	\$584
LOWES	\$387
HOME DEPOT	\$239
B&N BOOKST U TN CHAT#4	\$207
TOP 5 TOTAL	\$4,676

Business & Administrative Services	
STAPLES	\$3,303
FEDEX	\$450
USPS	\$113
ULINE *SHIP SUPPLIES	\$112
OFFICE DEPOT	\$72
TOP 5 TOTAL	\$4,050

Medical & Dental	
MWI*VETERINARYSUPPLY	\$640
MEDLINE INDUSTRIES INC	\$342
PCI*PATTERSON VETERINA	\$171
CONCORDANCE HEALTHCARE	\$121
SYNTHES USA #1	\$92
TOP 5 TOTAL	\$1,366

Facilities	
AMERICAN PAPER & TWINE	\$313
MCMaster-CARR	\$187
GRAINGER	\$141
GRAYBAR ELECTRIC COMPA	\$91
KELSAN	\$88
TOP 5 TOTAL	\$820

Source: UT System Provided Data

UT System Operating Model Business Case | Procurement & Contracting

Spend Review: Stratification Analysis

Given that the top 100 suppliers account for 61% of total spend, a focus on supplier relationships from high to low should be explored to assess best practice contracts and strategic supplier relationships.

In addition, other universities have found substantial opportunities to increase contracts and catalogs in the segment between \$142K and \$595K. At UT, this segment is comprised of 272 suppliers with a total spend of \$79M.

Finally, all universities struggle with a large number of small suppliers. For UT, 96% of the suppliers account for 20% of the spend. Significant procurement workload is devoted to this group and crowds out the ability to work strategically.

Supplier Range	\$ Range	# of Suppliers	Knoxville	Memphis	Chattanooga	Martin	UT System	All Other	Total	%
Top 25	\$3.0 - \$32.1M	25	\$84,814,771	\$50,437,702	\$15,466,657	\$7,559,746	\$10,484,449	\$13,591,063	\$174,794,642	41%
26 to 50	\$1.26 - \$2.82M	25	\$18,813,063	\$3,623,675	\$15,000,630	\$1,060,109	\$1,952,376	\$3,153,979	\$42,543,723	10%
51 to 100	\$598K - \$1.25M	50	\$21,621,545	\$5,898,101	\$9,480,001	\$2,242,125	\$2,220,261	\$5,014,686	\$44,234,594	10%
101 to 372	\$142K - \$595K	272	\$40,306,242	\$19,492,408	\$7,149,632	\$4,065,219	\$2,948,781	\$9,587,853	\$79,484,916	19%
Sub-Total	\$142K - \$32.1M	372	\$165,555,621	\$79,451,886	\$47,096,920	\$14,927,199	\$17,605,867	\$31,347,581	\$341,057,875	80%
All Other Suppliers		8,198	\$38,718,035	\$19,150,814	\$8,942,658	\$6,255,621	\$1,782,082	\$16,502,353	\$85,095,943	20%
Total		8,570	\$204,273,656	\$98,602,700	\$56,039,578	\$21,182,820	\$19,387,949	\$47,849,934	\$426,153,818	100%

Source: UT System Provided Data

UT System Operating Model Business Case | **Procurement & Contracting**

Five Procurement Activities that Yield Strong ROI

#	Procurement Activity	Best Practices	Cost / Value Experience	Objective / Return on Investment
1	Leverage Electronic Commerce <ul style="list-style-type: none"> Maximize Use of Enabled Catalogs Study Key Workload Drivers 	<ul style="list-style-type: none"> Buy / Pay Help Desk Superior Front-Line Employee Training Policy Support Superior technology support and workflow processes 	<ul style="list-style-type: none"> % of Requisitions Managed Through Catalogs Increases Avg. Cycle Time to Process Requisitions Goes Down 	Workload Reduction: 10% - 30%
2	Contract Management <ul style="list-style-type: none"> % of Spend Managed Under Contracts Increases Pcard Spend Where Contracts Exist Goes Down 	<ul style="list-style-type: none"> Contract Management System More than Procurement Contracts Supplier Performance & Price Compliance Processes Contract Segmentation to Tiers w/ Resource Alignment 	<ul style="list-style-type: none"> Increase the Number of Master Agreements Supplier Performance Reviews Price Audits Review Pcard Spend for Contract Opportunities 	Expand Value of Contracts Under Management: 5% - 10% Price Improvement Retain the Negotiated Value of Existing Contracts: 10% - 20%
3	Strategic Sourcing & Supplier Relationship Management (SRM) <ul style="list-style-type: none"> Year over Year Cost Savings / Benefits Increase Market Share % of Preferred Suppliers Increases 	<ul style="list-style-type: none"> Business Case Analytical Capabilities Goal Oriented Business Relationships Business Review Processes Driving Value Beyond Price 	<ul style="list-style-type: none"> Sourcing Initiatives Where Spend Can Be Consolidated Across Campuses and/or Within a Category Quarterly Business Reviews 	Improve Existing Supplier Contracts and Relationships: 8% - 15% Price Improvement

UT System Operating Model Business Case | **Procurement & Contracting**

Five Procurement Activities that Yield Strong ROI

#	Procurement Activity	Best Practices	Cost / Value Experience	Objective / Return on Investment
4	Category Management <ul style="list-style-type: none"> Improvement In All KPIs Significant Reduction in Procurement Workload 	<ul style="list-style-type: none"> Spend Analytics to Support 3 to 4 Levels of Categorization Cross Functional Teams Set Strategy and Sponsor Execution Advanced Involvement From Campus Based Stakeholders & SMEs 	<ul style="list-style-type: none"> Category Strategy Defined for Top 4 to 6 Areas Initiative Roadmap Defined for 2-3 Years in Priority Order 	Partner with Internal Customers to Work on All Value Levers: 10% - 20% Improvement in Cost, Quality, Service & Innovation
5	Complex Spend Participation <ul style="list-style-type: none"> Addressable Costs as a % of the Operating Budget Addressable Costs as a % of the Capital Budget 	<ul style="list-style-type: none"> Collaborative Abilities & Processes to Support at the VP, Department Head Level Superior Business Intelligence & Communication Processes Spend Councils Operating Effectively 	<ul style="list-style-type: none"> Strategic Bundling of Facilities Projects (Conditions Assessment) Asset Management (IT, Facilities, Science & Medical Equipment, Other) Capital Procurement Support & Involvement 	Greater Support for Mission Critical Priorities: LifeCycle Cost Improvement – Strategic Impact

UT System Operating Model Business Case | Procurement & Contracting

Return on Investment: Summary

- UT spend was categorized into 4 levels of detail using the North American Industry Classification System (NAICS). We focused on classifying suppliers who account for 80% of UT’s AP spend.
- Estimates are based on review of 6-digit NAICS coding (4th level of detail).
- Facility spend management is assumed to be out-of-scope, although experience suggests there are significant ROI opportunities.
- Estimates are conservative based on the experience of mature public university systems.
- Estimates assume the Operating Model is fully operational and cross-functional category teams are executing on their plans at full capacity
- When full capacity is reached, we expect these benefits to annually recur within a 5-year time horizon

Category (L1)	AP Total	Opportunity Range (%)		Opportunity Range (\$)	
		Low	High	Low	High
Facilities	\$177,459,341	N /A	N/A	N/A	N/A
Business & Administrative Services	\$38,958,862	3%	6%	\$1,200,000	\$2,400,000
Medical & Dental*	\$29,434,759	0.5%	1.5%	\$150,000	\$440,000
Information Technology	\$26,673,117	3%	8%	800,000	\$2,100,000
Research & Life Sciences	\$13,985,857	4%	7%	\$560,000	\$980,000
Pass-through**	\$15,433,228	N/A	N/A	N/A	N/A
Library	\$14,853,848	N/A	N/A	TBD	TBD
All Other L1 Categories	\$24,258,863			TBD	TBD
Total 80% L1 Categories	\$341,057,875			\$2,710,000	\$5,920,000
Tail Spend	\$85,095,944	TBD	TBD	TBD	TBD
Total: AP Spend	\$426,153,819			\$2,710,000	\$5,920,000
Pcard Spend	\$52,854,595	2%	3%	\$1,000,000	\$1,500,000
Total: AP & Pcard Spend	\$479,008,414			\$3,710,000	\$7,420,000

*79% of this category includes payments to hospitals and other health providers

**Non-addressable spend - e.g. payments to universities, professional associations, government agencies & other

UT System Operating Model Business Case | Procurement & Contracting

Spend Review: Fragmentation Example 1

There are many UT examples where spend is distributed across locations and suppliers. For example, five suppliers of Audio-Visual Equipment and Services rank in the top 260 suppliers. Experience suggests there will be many others in 8,000+ suppliers that make up UT’s tail spend. Other university systems are mining this type of data and chartering teams to explore alternative solutions.

Level 3 Description = Hardware: Audio-Visual		Accounts Payable Spend							
Supplier Rank	Supplier Name	UTK	UTHSC	UTC	UTM	UTSA	All Other Locations	Total	% of Spend
79	INTERACTIVE SOLUTIONS INC	\$0	\$817,015	\$0	\$6,431	\$0	\$6,431	\$823,445	34.3%
127	AUDIO VISUAL INNOVATIONS	0	505,887	0	0	0	0	\$505,887	21.1%
149	COACH COMM LLC	174,179	0	145,698	\$108,390	0	108,390	\$428,267	17.9%
156	SIGNAL PERFECTION LTD	0	412,059	0	0	0	0	\$412,059	17.2%
259	TROXELL COMMUNICATIONS INC	229,148	0	0	0	0	0	\$229,148	9.6%
Total Spend		\$403,327	\$1,734,961	\$145,698	\$114,821	\$0	\$114,820	\$2,398,806	100.0%
% By Location		16.8%	72.3%	6.1%	4.8%	0.0%	4.8%	100.0%	

Source: UT System Provided Data

UT System Operating Model Business Case | Procurement & Contracting

Spend Review: Fragmentation Example 2

In another example of spend distributed across locations and suppliers, eight suppliers of Promotional Items rank in the top 365 suppliers. Again, experience suggests there will be many others in 8,000+ suppliers that make up UT’s tail spend. Other university systems are mining this type of data and chartering teams to explore alternative solutions.

Level 3 Description = Promotional Items		Accounts Payable Spend							
Supplier Rank	Supplier Name	UTK	UTHSC	UTC	UTM	UTSA	All Other Locations	Total	% of Spend
120	BACON & COMPANY INC	\$448,143	\$2,464	\$127	0	\$2,515	\$59,932	\$513,180	19.4%
161	4IMPRINT	70,571	0	21,217	4,138	0	303,806	\$395,595	15.0%
172	WELDON WILLIAMS & LICK INC	334,784	7,008	25,904	5,611	0	5,611	\$373,308	14.1%
180	THREDS INC	349,373	846	0	0	2,613	7,351	\$360,182	13.6%
205	DIGITAL RIO INC	299,865	0	0	0	0	0	\$299,865	11.3%
220	JIM PROMOTIONS AND UNIFORMS	0	282,843	0	0	0	0	\$282,843	10.7%
223	INCOR DESIGN & PROMOTIONS	0	0	272,166	0	0	0	\$272,166	10.3%
364	WATKINS PRINTING COMPANY	0	0	0	0	120,737	26,455	\$147,192	5.6%
Total Spend		\$1,502,737	\$293,160	\$319,415	\$9,749	\$125,865	\$403,154	\$2,644,330	100.0%
% By Location		56.8%	11.1%	12.1%	0.3%	4.8%	15.2%	100.0%	

Source: UT System Provided Data

UT System Operating Model Business Case | Procurement & Contracting

Complex Spend: Facilities

This analysis does not include any ROI related to Facilities spend management but, in our experience, there is significant potential when Facilities and Procurement collaborate to a greater degree.

Typical initiatives include:

- 1 Establish preferred & qualified contractors system-wide
- 2 Bundle similar projects together for bid – contractors highly value
- 3 Perform detailed analysis of architectural spend to establish common fee approaches
- 4 Analyze Pcard spend for improvement
- 5 Develop a consistent building conditions assessment and proactive spend projections

Other Complex Spend Opportunities: Chemical Management, Asset Management, Capital Procurement

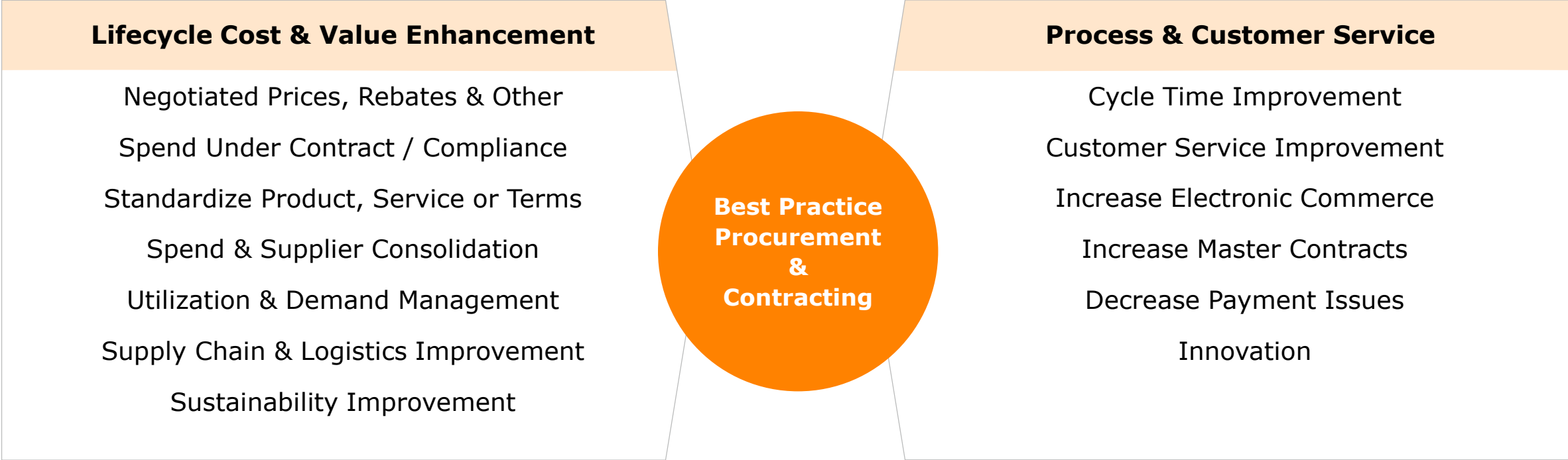
Facilities	Knoxville	Memphis	Chattanooga	Martin	UT System	All Other	Total
General Contractors: Major Building Construction	\$57,610,066		\$12,884,153	\$3,215,028	\$4,173,998	\$9,680,717	\$84,348,933
General Contractors: Other	\$4,039,598	\$12,174,998	\$122,290	\$0	\$652,875	\$14,691	\$17,004,451
Architectural Services	\$8,328,854	\$1,928,214	\$1,859,727	\$1,485,253	\$15,785	\$2,766,848	\$14,899,429
Plumbing, Heating, and Air-Conditioning Contractors	\$2,151,881	\$2,010,579	\$1,098,060	\$3,775,523	\$231,294	\$3,904,513	\$9,396,326
Engineering Services	\$666,718	\$7,622,728	\$262,902	\$0	\$405,162	\$0	\$8,957,511
Sub Total	\$72,797,117	\$23,736,519	\$16,227,133	\$8,475,804	\$5,479,114	\$16,366,768	\$134,606,651
All Other L4	\$18,487,375	\$8,156,936	\$14,261,468	\$1,058,319	\$526,653	\$1,420,258	\$42,852,690
Pcard Spend							\$1,432,741
Total	\$91,284,491	\$31,893,455	\$30,488,601	\$9,534,123	\$6,005,767	\$17,787,027	\$177,459,341

Source: UT System Provided Data

UT System Operating Model Business Case | **Procurement & Contracting**

Cost / Value Defined

Many higher education procurement departments focus primarily on price savings, a primary driver of the ROI highlighted the following analysis. But a best practice system-level Procurement & Contracting team will further pursue a full complement of improvements to lifecycle cost, process, and customer service value, as outlined below.



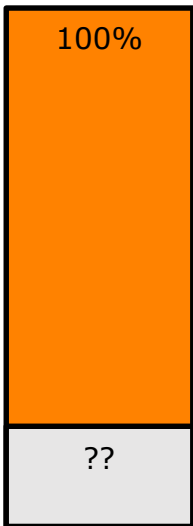
UT System Operating Model Business Case | **Procurement & Contracting**

Goals & Key Performance Indicators (KPIs)

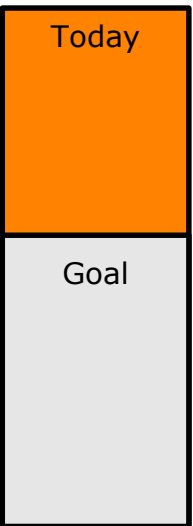
Key Next Step: An important first step to launch the Governance Model for Procurement is to establish a set of goals that are driven from the executive level. The goals listed below are examples from other universities and are offered to initiate discussion. The purpose of Key Performance Indicators (KPIs) is to monitor whether strategy is on-track.

Potential Procurement & Contracting KPIs

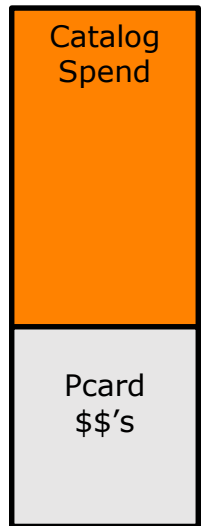
% Spend on Standing Purchase Orders



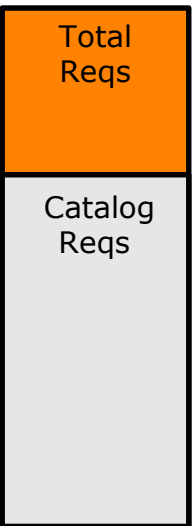
Process Cycle Times



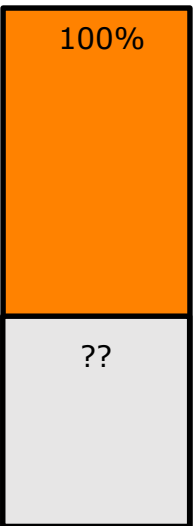
Pcard Spend with Catalog Suppliers



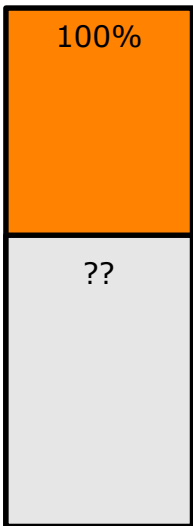
% of Requisitions Through Catalogs



% Spend on Contracts



% of Invoices Submitted Electronically



Customer Service



UT System Operating Model Business Case | **Procurement and Contracting**

Conclusion

The UT system should implement a center-led operating model to prioritize strategic sourcing activities and standardize all transactional activity. To this end, investments in procurement and contracting talent and capacity building will be required to fully realize the benefits of the new operating model.

Next Steps:

- **Socialize and refine the Operating Model and Timeline**
- **Establish the Governance Structure and begin working on goals & key performance indicators**
- **Develop/refine a spend analytics approach for UT**
- **Develop a Category Strategy in parallel to the Operating Model implementation to prioritize spend management initiatives that will realize the ROI range established in the Business Case**

Build Talent & Capacity in Procurement to ..

- ✓ Improve Service
- ✓ Foster Data Driven Spend Decisions
- ✓ Reduce Non-Value Added Work Processes
- ✓ Move Toward Proactive Spend Management
- ✓ Redeploy Resources Toward UT Strategic Priorities

Procurement & Contracting

Appendix

UT System Operating Model Business Case | **Procurement & Contracting**

Category Management: Information Technology

Typical Initiatives: 1) Strategic supplier agreements and Supplier Relationship Management processes, 2) Supplier consolidation, 3) Enterprise-wide software agreements, 4) AV standardization, 5) Pcard analysis & education, 6) Asset Management

Information Technology	Knoxville	Memphis	Chattanooga	University System	All Other	Total
Computers, Peripheral Equip. & Software Merchant Wholesalers	\$4,344,093	\$1,470,622	\$2,065,318	\$1,184,896	\$460,767	\$9,525,696
Computer Systems Design Services	\$3,734,580	\$405,689	\$451,721	\$1,089,007	\$819,967	\$6,500,964
Software Publishers	\$235,890	\$2,250	\$2,229,544	\$906,756	\$1,725	\$3,376,165
Audio and Video Equipment Manufacturing	\$229,148	\$1,734,961			\$6,431	\$1,970,539
Data Processing, Hosting, and Related Services	\$989,675		\$210,815		\$81,873	\$1,282,363
Sub Total	\$9,533,386	\$3,613,521	\$4,957,398	\$3,180,660	\$1,370,763	\$22,655,727
All Other L4	\$3,113,975	\$402,214	\$171,652	\$72,142	\$257,407	\$4,017,390
Pcard Spend						\$7,606,333
Total	\$12,647,361	\$4,015,735	\$5,129,049	\$3,252,802	\$1,628,170	\$34,279,451

Source: UT System Provided Data; UT Martin is included in All Other Category

UT System Operating Model Business Case | **Procurement & Contracting**

Category Management: Business & Administrative Services

Business & Administrative Services	Knoxville	Memphis	Chattanooga	University System	All Other	Total
Furniture Merchant Wholesalers	\$9,554,190	\$1,423,488	\$2,826,400	\$19,761	\$413,470	\$14,237,309
Printing and Writing Paper Merchant Wholesalers	\$5,874,387	\$15,773	\$20,010	\$22,204	\$169,644	\$6,102,018
Commercial Banking	-\$8,998	\$44	-\$1,215	\$5,980,159	\$214	\$5,970,203
New Car Dealers	\$1,340,046	\$144,920	\$153,540		\$564,273	\$2,202,778
Industrial and Personal Service Paper Merchant Wholesalers	\$1,173,647	\$398,756	\$41,776	\$542	\$36,673	\$1,651,394
Sub Total	\$17,933,272	\$1,982,981	\$3,040,511	\$6,022,666	\$1,184,273	\$30,163,702
All Other L4	\$5,352,100	\$959,036	\$1,085,499	\$9,139	\$1,389,386	\$8,795,160
Pcard Spend						\$4,271,514
Total	\$23,285,371	\$2,942,017	\$4,126,010	\$6,031,805	\$2,573,659	\$43,230,376

Typical Initiatives: 1) One primary furniture supplier for office / systems furniture, 2) Consolidate vehicle purchases and maintenance costs with preferred suppliers, 3) Strategic supplier relationships with office supplies and print management, 5) Pcard analysis & education, 6) Asset Management

UT System Operating Model Business Case | Procurement & Contracting

Category Management: Research / Life Sciences / Medical / Dental

Research & Life Sciences	Knoxville	Memphis	Chattanooga	University System	All Other	Total
Surgical and Medical Instrument Manufacturing	\$1,030,385	\$3,227,710	\$327,192		\$444,503	\$5,029,790
Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers	\$550,118	\$505,559	\$2,369		\$255,091	\$1,313,137
Other Measuring and Controlling Device Manufacturing	\$1,138,453				\$0	\$1,138,453
Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)	\$697,356	\$202,727	\$4,724		\$196,740	\$1,101,547
Turbine and Turbine Generator Set Units Manufacturing					\$650,000	\$650,000
Sub Total	\$3,416,312	\$3,935,995	\$334,285	\$0	\$1,546,334	\$9,232,926
All Other L4	\$2,538,387	\$1,947,437	\$73,534	\$47,738	\$145,834	\$4,752,930
Pcard Spend						\$7,632,676
Total	\$5,954,699	\$5,883,433	\$407,819	\$47,738	\$1,692,168	\$21,618,532

Medical & Dental	Knoxville	Memphis	Chattanooga	University System	All Other	Total
General Medical and Surgical Hospitals	\$89,946	\$23,125,135			\$6,200	\$23,221,281
Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers	\$275,297	\$833,836	\$53,986		\$48,254	\$1,211,372
Dental Equipment and Supplies Manufacturing		\$1,131,155			\$0	\$1,131,155
Surgical and Medical Instrument Manufacturing	\$462,520	\$511,968			\$9,651	\$984,139
Drugs and Druggists Sundries Merchant Wholesalers	\$28,197	\$435,104			\$286,181	\$749,482
Sub Total	\$855,960	\$26,037,198	\$53,986	\$0	\$350,286	\$27,297,430
All Other L4	\$580,175	\$1,528,132	\$6,200	\$0	\$22,823	\$2,137,330
Pcard Spend						\$1,754,332
Total	\$1,436,135	\$27,565,330	\$60,186	\$0	\$373,108	\$31,189,091

Typical Initiatives

- Category overlap – manage as one
- One primary supplier for laboratory distribution
- Move spend & market share to primary lab distribution partner
- Maximum catalog enablement
- Price agreements to support catalogs
- Research / Science Capital Asset Management
- Chemical Management
- Pcard Analysis and Education

Source: UT System Provided Data; UT Martin is included in All Other Category

UT System Operating Model Business Case | Procurement & Contracting

Sample Category Strategy Initiative Timeline

CATEGORY STRATEGY: PRIORITY A								Implementation Review										
Value Initiative				Goal Range				2020				2021				2022		
Priority	#	Description	Category	Area Size	Low	High	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
A	S 1	Improve the Primary Lab Supply Agreement	Science	TBD	3%	8%					EXAMPLE							
A	S 2	Increase # of Contracts in Top 25 Suppliers		TBD	5%	10%												
A	S 3	Chemical Management		TBD	3%	7%												
A	S 4	Reduce Science Spend on Pcards		TBD	10%	15%												
A	IT 1	Increase # of Contracts in Top 25 Suppliers	Information Technology	TBD	5%	10%												
A	IT 2	Improve Agreement with Peripherals Supplier		TBD	5%	10%												
A	IT 3	Improve Contract with Network Equipment Reseller		TBD	3%	8%												
A	IT 4	Cloud Software Spend Management		TBD	10%	15%												
A	IT 5	Microsoft Enterprise Agreement		TBD	5%	10%												
A	OA 1	Furniture Optimization	Office Admin	TBD	5%	8%												
A	OA 2	Promotional Products		TBD	5%	10%												
A	OA 3	Catering		TBD	10%	15%												
A	FA 1	Consolidate MRO Purchases	Facilities	TBD	8%	12%												
A	FA 2	Top 25 Supplier Review		TBD	10%	15%												
A	FA 3	Architectural Services Review		TBD	10%	10%												
A	CO 1	Bundling Similar Projects		TBD	15%	15%												

Observations

- Focus on a few broad categories
- Approaching categories with a One Tennessee mindset returns significant ROI
- Category Managers require solid leadership and facilitation skills
- Executive Sponsorship is critical for success
- There is value beyond cost – e.g. workload reduction which builds capacity for more strategic activity



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