THE UNIVERSITY OF TEXAS AT DALLAS

TASSCUBO 2018

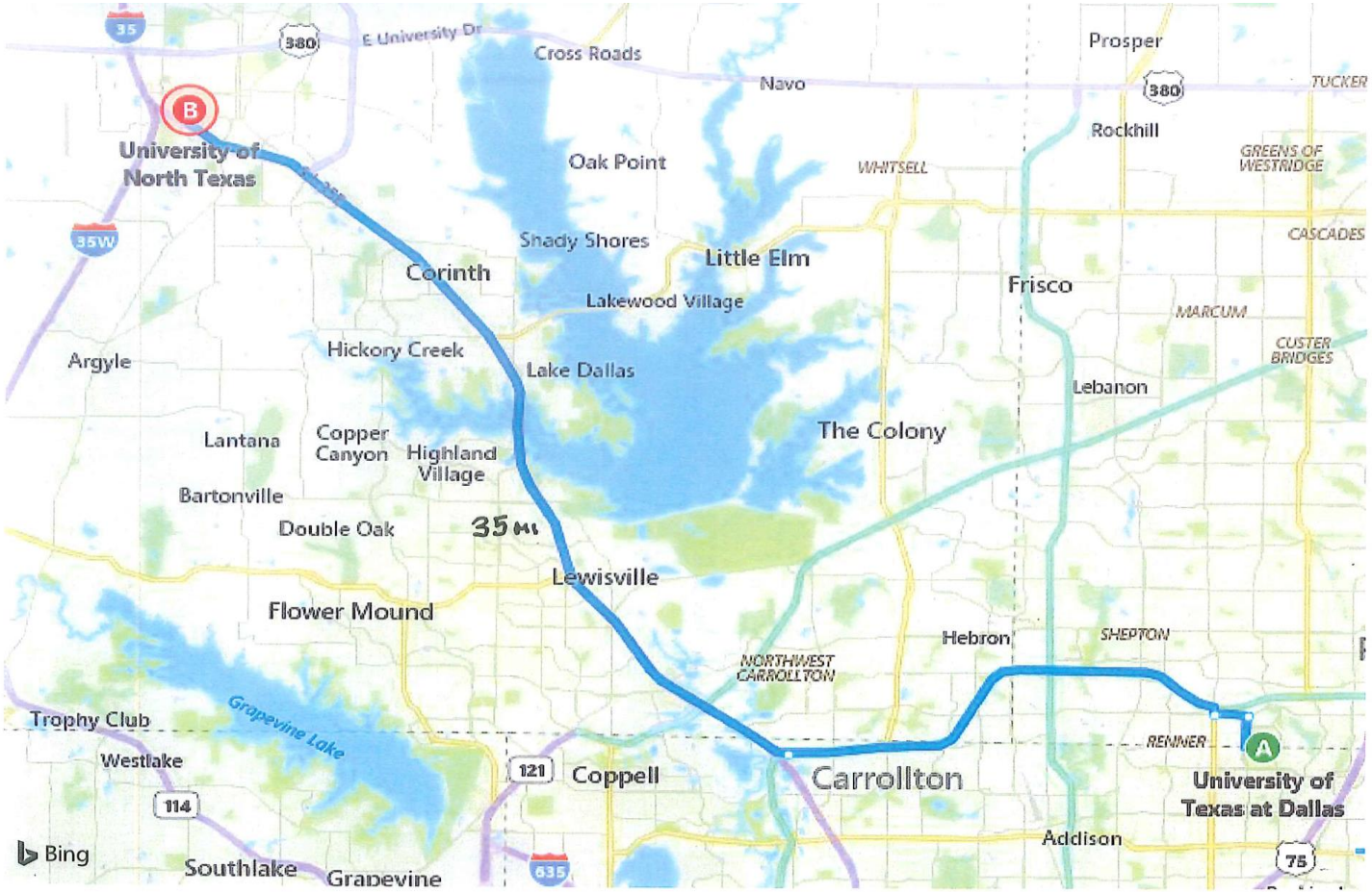
"Facilities – Developing Best in Class"

BEST PRACTICES OF UNT & UTD

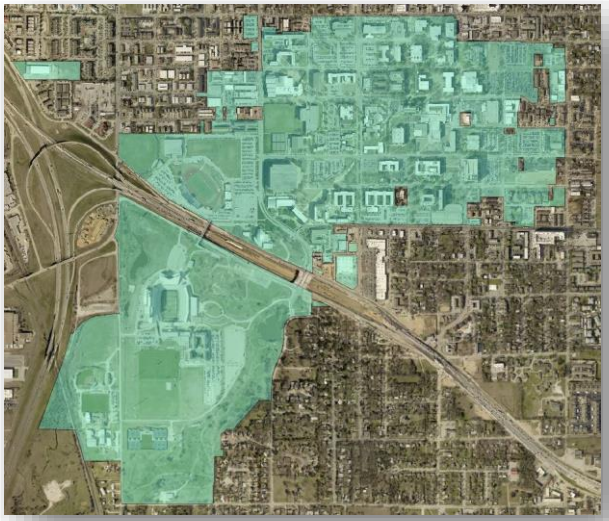
Agenda

- University Compare and Contrasts
- Infrastructure Compare and Contrasts
- Best in Class Practices
- Questions

Map of Texas Focusing into North Texas Showing Distance between UT Dallas and UNT



UNT
EST. 1890



- Established > 125 years
- University Town
- Full Service
- NCAA Division I FBS

- Young < 50 years
- Urban / Metropolitan
- Focused Programs
- NCAA Division III

UTD

University Information

UNT Campus Facts

7 Million+ Gross Square Feet (gsf)

- **38,000 Students**
- **2,400 Staff – 3,000 Faculty**
- **E&G ~ 3.3M gross square feet (gsf)**
- **Auxiliary ~ 3.7M gsf**
- **900 Acres**
- **174+ Facilities**

25% increase in gross square feet since 2007

UT Dallas

“Informative Facts – I”

“Location 20 miles north of downtown Dallas – mostly in City of Richardson”

“Core Campus ~450 acres”

“Adjacent property ~160 acres”

“Dallas Medical District Satellite Campus ~11 acres”

“Informative Facts II”

“2017 more than 27,600 students”

“~18,380 undergraduates (66%), ~9,250 Graduates (34%)”

“78% Full-Time / 22% Part-Time”

“57% Male / 43% Female”

“560 Tenure / Tenure Track Faculty, 780 Non-Tenured Faculty”

“~2,600 Staff Employees”

“Informative Facts – III”

“158 Facilities”

“83 E&G Buildings”

“67 Student Housing Buildings ~ 5,500 Beds”

“1700 Beds and Retail P-3 on University Land”

“3 Parking Structures ~2,670 Spaces”

“ ~ 11,500 Surface Parking Spaces”

“Academic Programs”

- 8 Schools -

“Top Undergraduate Majors”

- Computer Science
- Biology
- Arts & Technology
- Mechanical Engineering
- Accounting

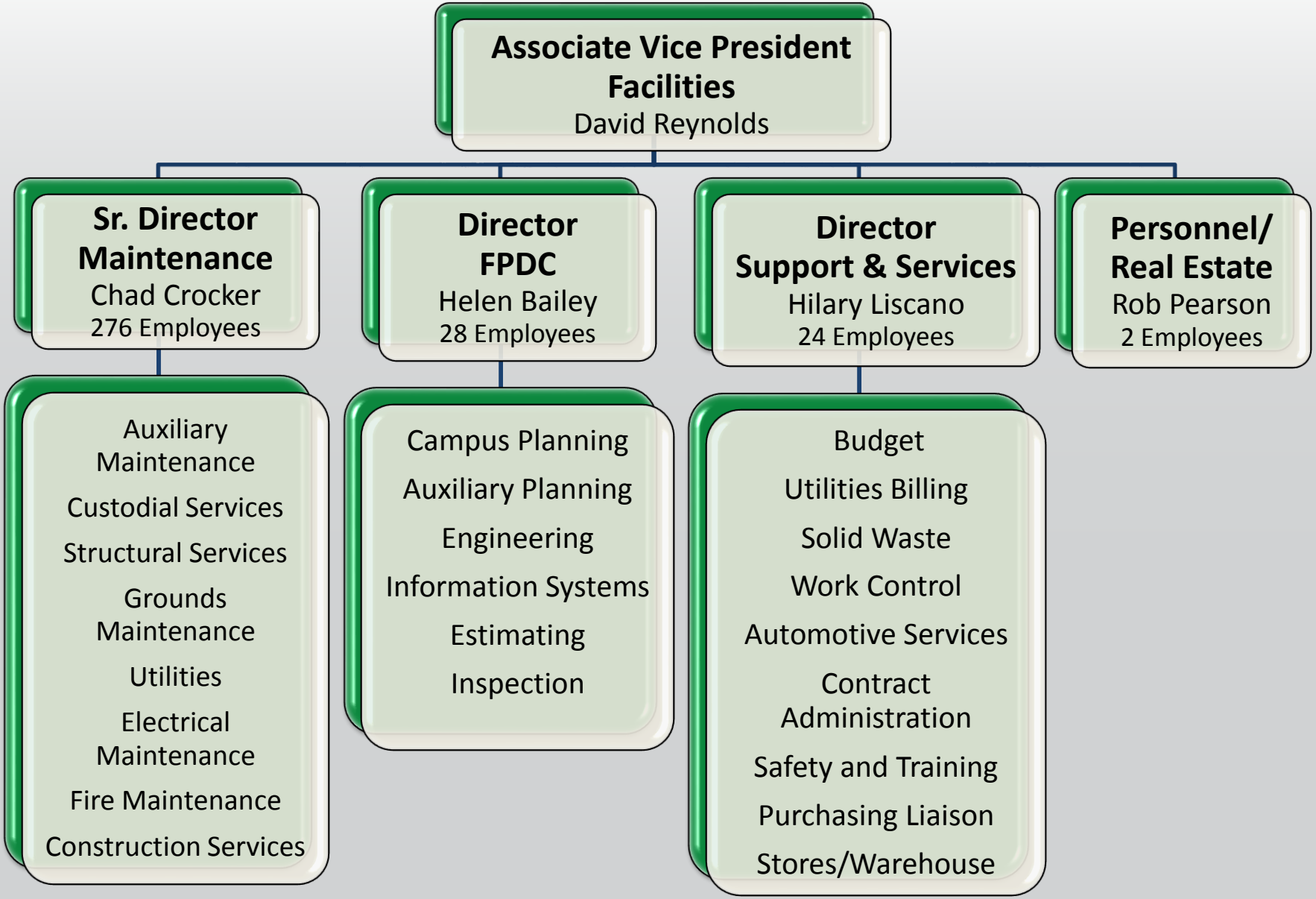
“Top Graduate Programs”

- Computer Science
- Information Technology & Management
- Business Administration
- Accounting
- Electrical Engineering

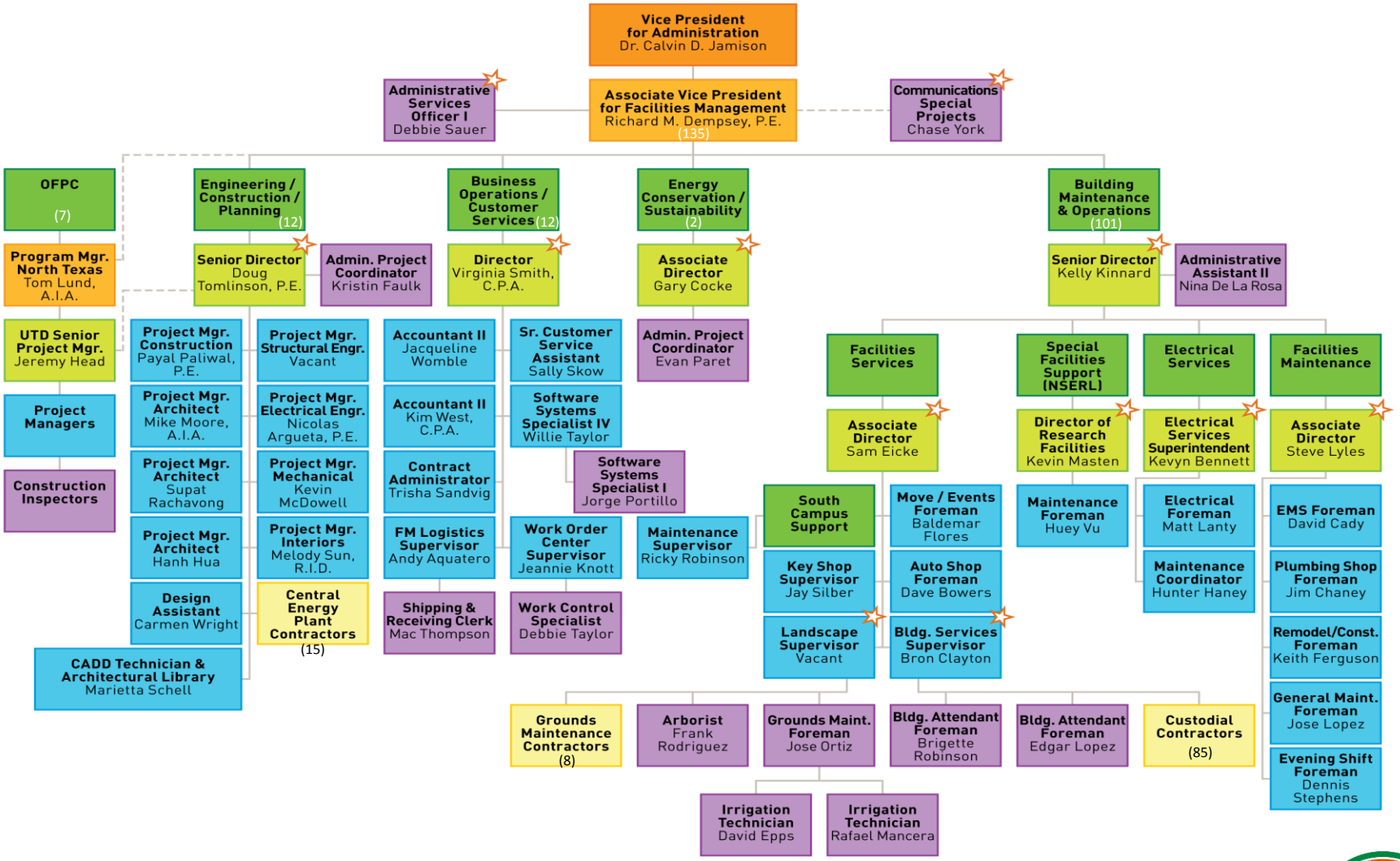
Recognition

- Carnegie Commission on Higher Education R. (Tier I) Designation
- NRUF Certified
- 2017 – Ranked 1st in US and 21st in World on Times Higher Education List of Universities under 50 years of age
- Kiplinger's Personal Finance and Money Magazine – Ranked UT Dallas among the Top 100 'Best Value' Public Colleges in USA

Facilities Organizations


Associate Vice President
Facilities
David Reynolds
Sr. Director
Maintenance
Chad Crocker
276 Employees
Director
FPDC
Helen Bailey
28 Employees
Director
Support & Services
Hilary Liscano
24 Employees
Personnel/
Real Estate
Rob Pearson
2 Employees
Auxiliary Maintenance
Custodial Services
Structural Services
Grounds Maintenance
Utilities
Electrical Maintenance
Fire Maintenance
Construction Services
Campus Planning
Auxiliary Planning
Engineering
Information Systems
Estimating
Inspection
Budget
Utilities Billing
Solid Waste
Work Control
Automotive Services
Contract Administration
Safety and Training
Purchasing Liaison
Stores/Warehouse

“UT Dallas Facilities Organization Chart”



Best In Class Practices

UNT Best Practices

- Training – Especially APPA Training
- Engagement of Workforce
- Communications
- Metrics

Training

- APPA Training
  - Supervisor's Toolkit
- UNT HR Supervisor's Building Blocks
- UNT Customer Service & xxxxxxxx
- Technical Courses

Engagement of Workforce

- Mission, Vision, Goals
- Commander's Call (All Call)
- Recognition opportunities
- Employee Spotlights

Communications

- ❑ Across Campus
  - Dean's and Chairs
  - VP's
  - Building Representatives
- ❑ Across Facilities – See Engagement
- ❑ Social Media
- ❑ APPA/TAPPA/CAPPA

Metrics

- *Sightlines* for Benchmarking
- Manager's Meeting Metrics
- Quarterly Update to VP Metrics
- Directors' Metrics

“Issues of Focus”

- “Safety”
- “Staffing / Technological Skills”
- “Customer Service”
- “Quality / Professionalism”
- “Planning”
- “Fair Allocation of Resources”
- “Sustainability”

“Safety”

- Training - 10 hours OSHA
- Pre-work Planning
- Minimize Risk

“Staffing / Technological Skills”

“Cast a Broad Net / Network with Service Providers Employees”

“Selective Hiring”

“Supervisory & Technical Training”

“Customer Service”

“Building Liaison / Departmental Advocates”

“Transparency though use of Work Order System”

“Communications / Social Media”

“Accountability / Ownership”

“Quality / Professionalism”

“No short cuts / do it right the first time.”

“Assign the appropriate level of skill to the job at hand.”

“Proud to show off the results of our workmanship.”

“Planning”

“Be involved with all elements of the University.”

“Provide accurate cost estimates with degree of certainty.”

“Work to have a ‘seat at the table’ and participate.”

“Fair Allocation of Resources”

“Benefit from shared savings”

“Funding algorithm for added space / enrollment”

“Reward - don’t punish for doing a good job.”

“Sustainability”

“Focus on accomplishable and realistic goals.”

“Opportunity for Facilities to interact with the broader campus community, particularly the students.”

“Search for ‘Win/Win’ - Save money / save the planet”

“Development of Culture”

Customer Service Attitude / Training

Expectation of ‘Doing things right’ – Pride in workmanship

Champion of the ‘little guys’ (or proletariat)

“Measure of Performance”

- Use of tracked metrics
- Survey Data
- Management by walking around & periodic meetings with key colleagues.
- Outside Evaluation – Sightlines

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UT DALLAS

The University of Texas - Dallas

FY17 ROPA+ Final Presentation

Adam Bjornberg and Chipp Schwab

May 30, 2018

- University of Toledo
- University of Vermont
- University of Washington
- University of West Florida
- University of Wisconsin - Madison
- Vanderbilt University
- Virginia Commonwealth University
- Wake Forest University
- Washburn University
- Washington State University
- Wayne State University
- Wellesley College
- Wesleyan

University of the Sciences in Philadelphia

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The UT-Dallas Story:

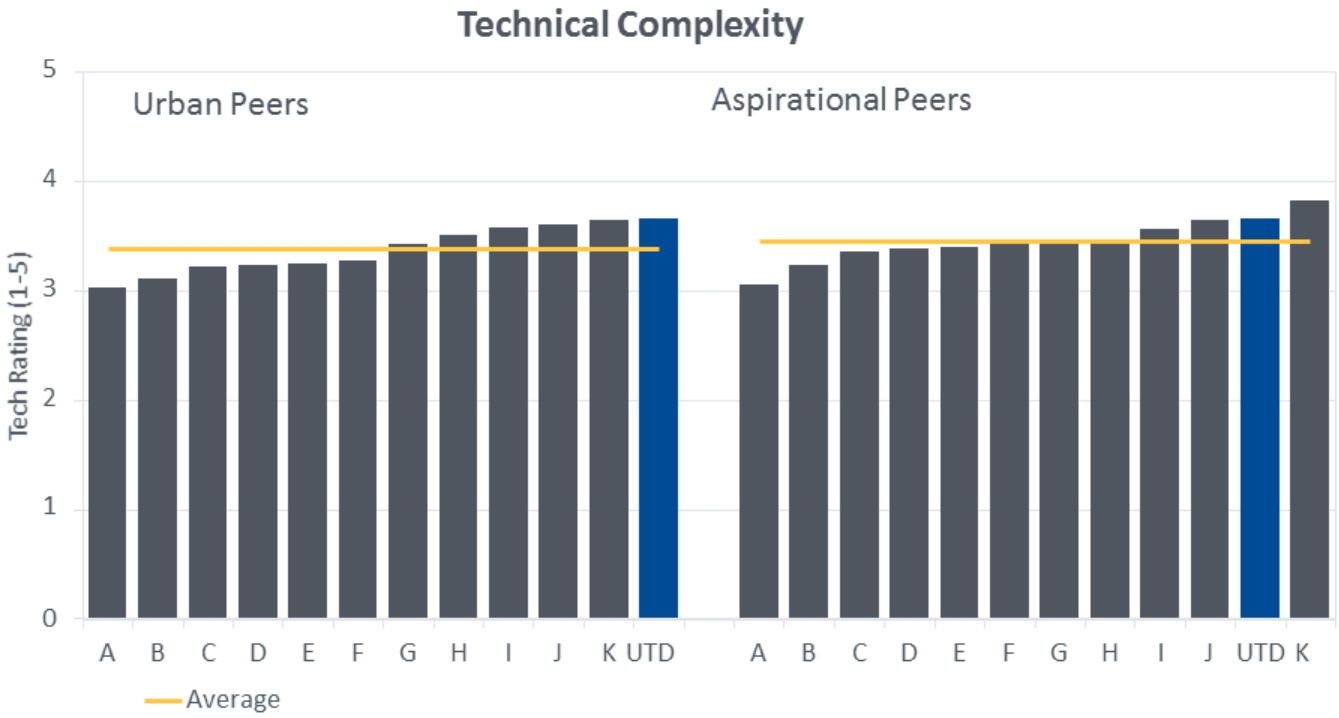
- Over the past 10 years UT-Dallas has seen a doubling of growth in new construction and students across campus. This growth is additionally complicated by the increasing complexity of new space.

- Over 2/3 of capital investment has been allocated towards new construction to respond to the dynamic growth of student enrollment.

- Despite increased growth, operating resources have not followed suit.
- The importance of preserving new space through planned maintenance becomes increasingly important.
- Technical complexity of space effecting total energy management

Physical Drivers on Campus: *Building Tech Rating*

UTD is one of the most technical complex campuses compared to both peers

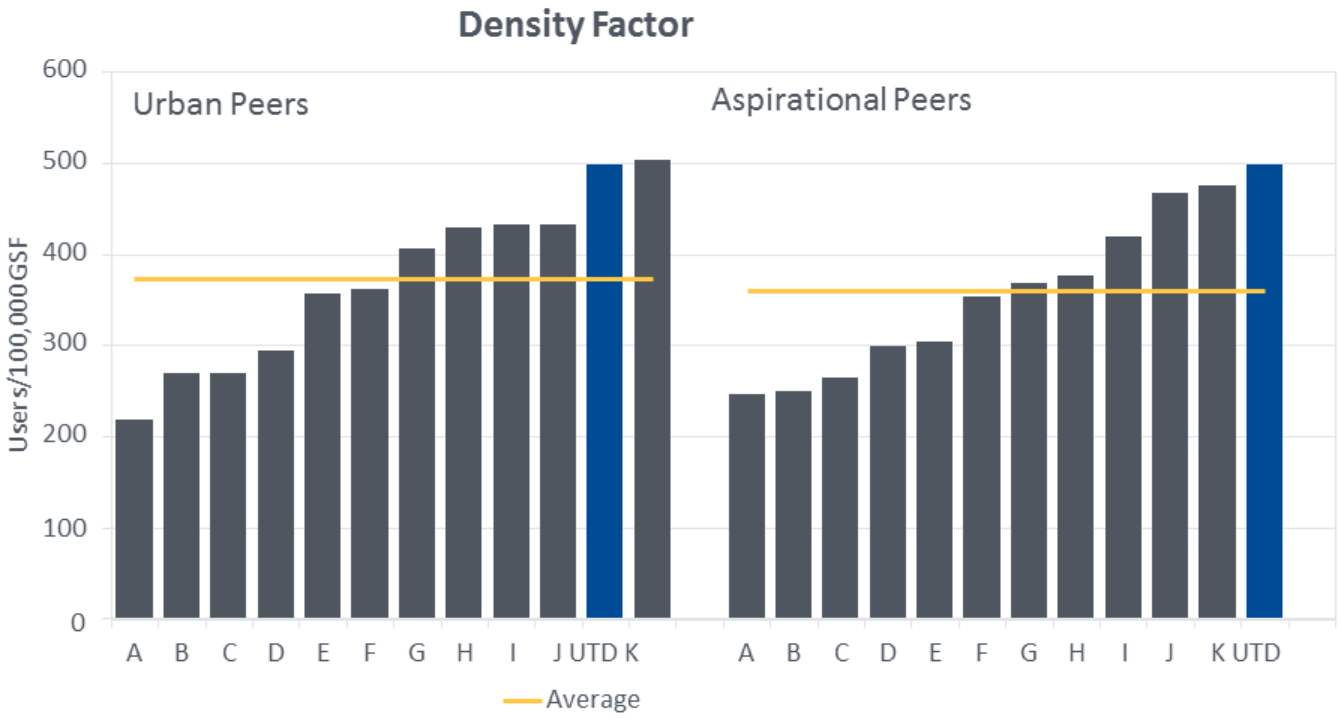


Technical Complexity Impacts:

- *Daily Operating Costs*
- *Maintenance Trade Mix*
- *Energy Consumption*
- *Capital Replacement Costs*

Physical Drivers on Campus: *Density Factor*

UTD is operating with one of the highest density factors compared to peers



Density Factor Impacts:

- *Daily Operating Costs*
- *Maintenance & Custodial Operations*
- *"Wear and Tear" on Space*
- *Capital Replacement Timelines*

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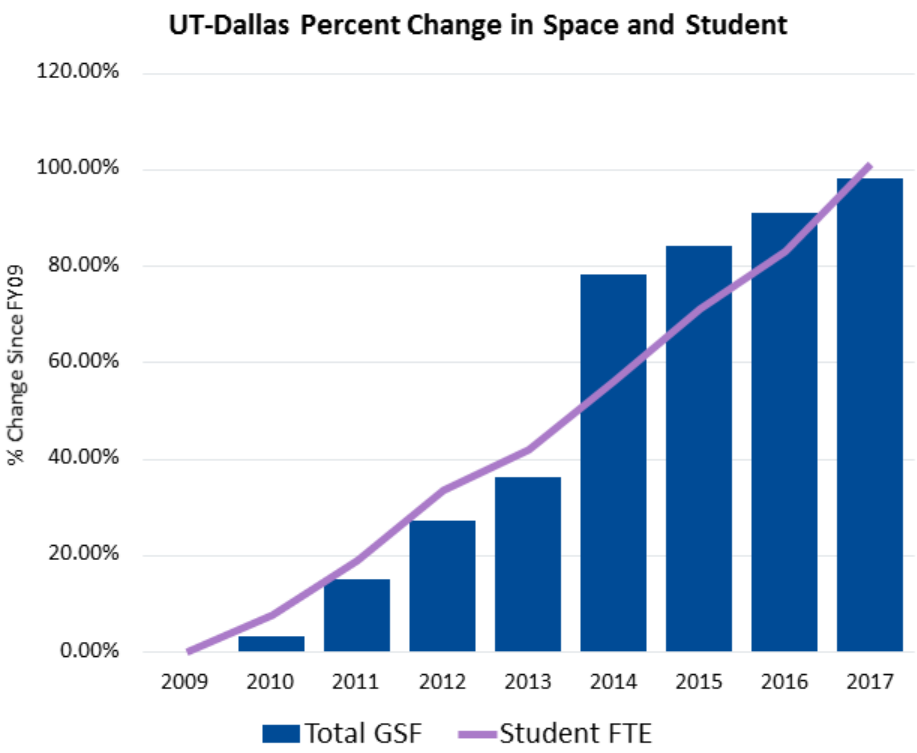
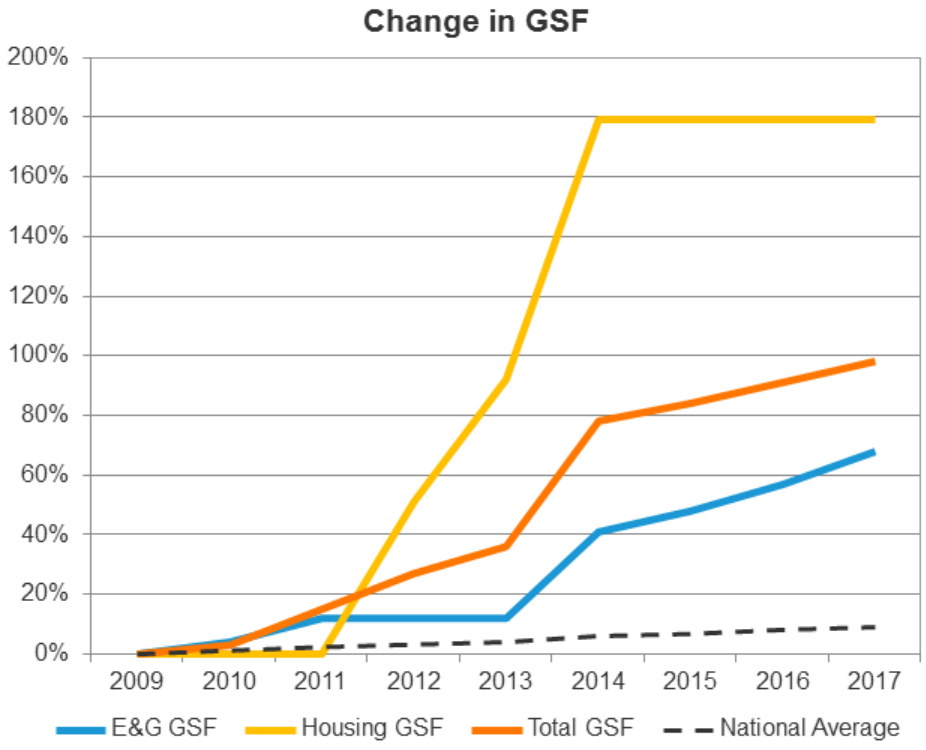
UTD Continues to Outpace National Average

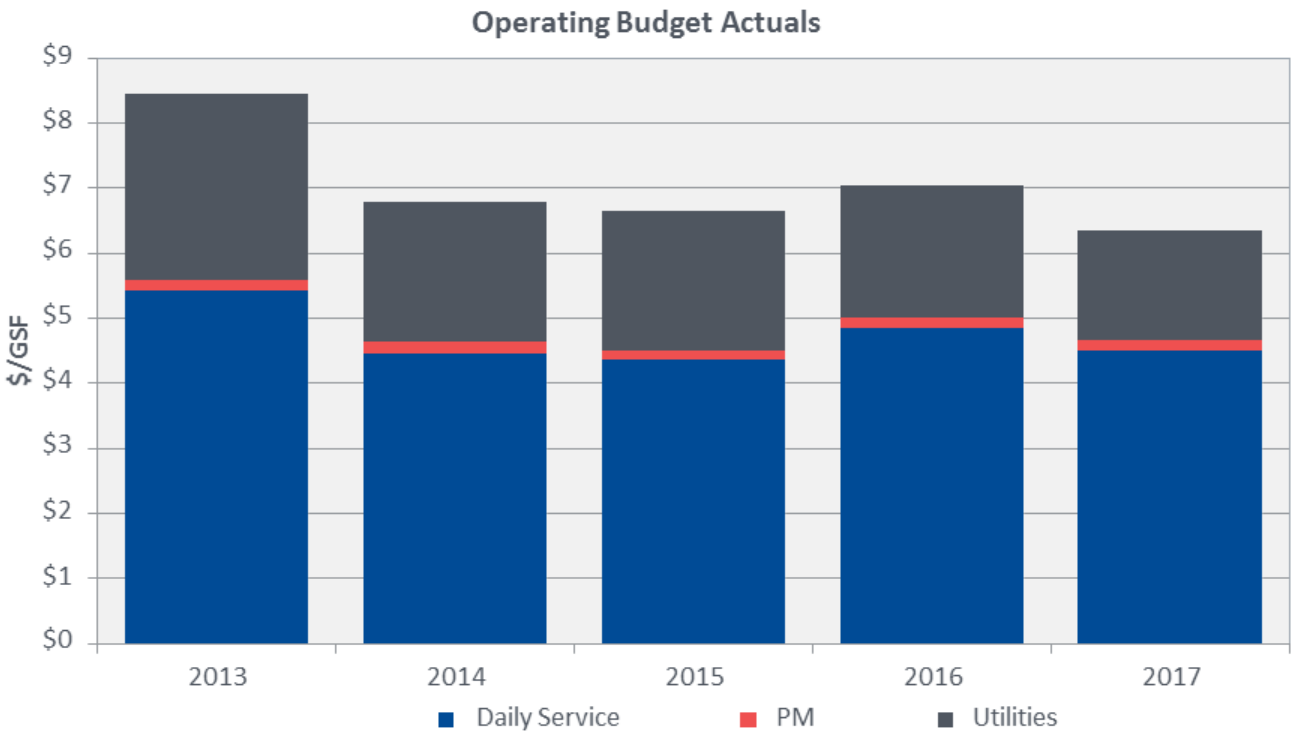
Continued growth year over year, from FY16-FY17 we see a 6% increase in GSF across campus

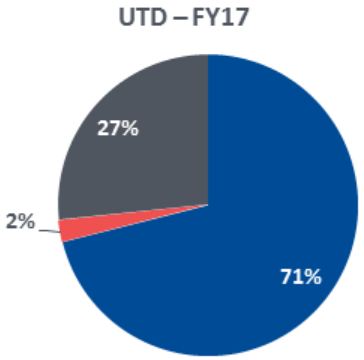


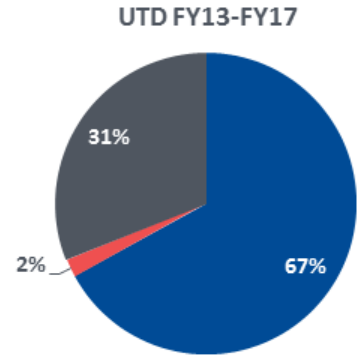


Decreasing Operational Cost When Normalized – E&G

Decrease in utilities specifically seen through the E&G space







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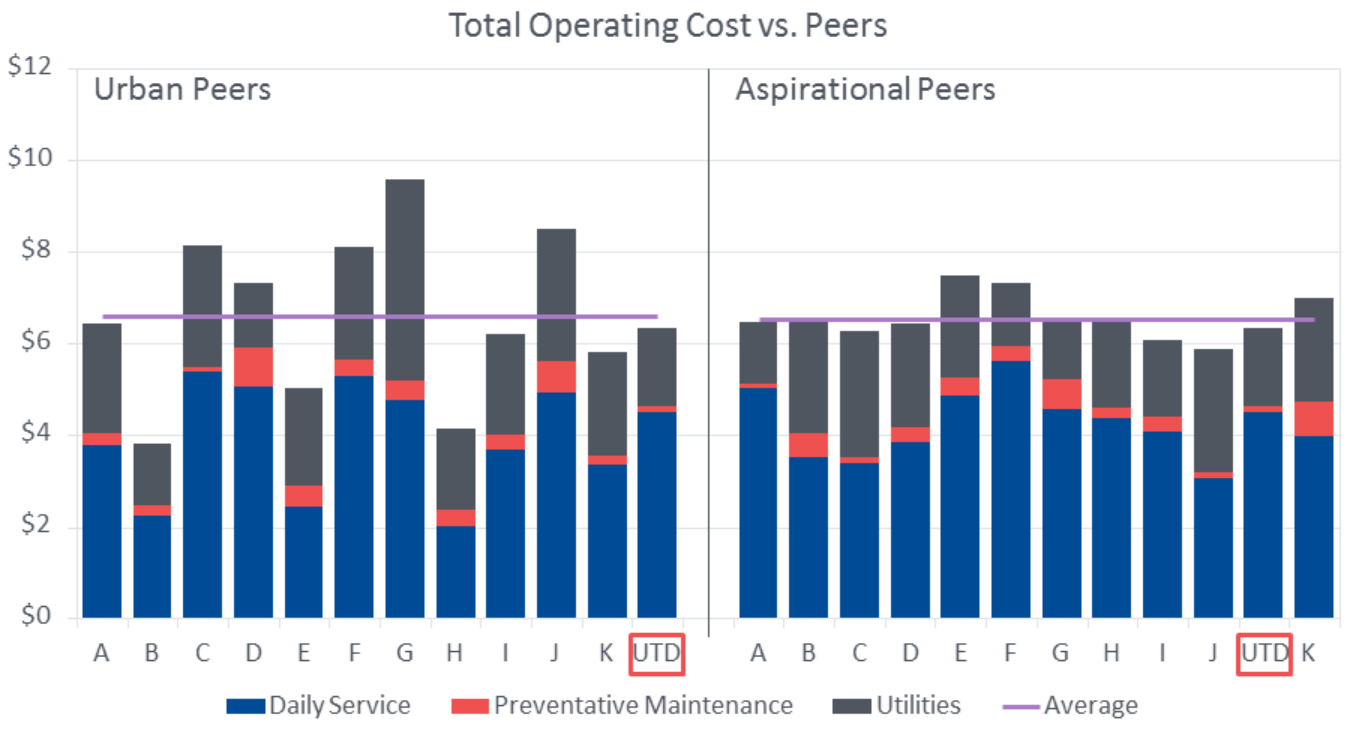
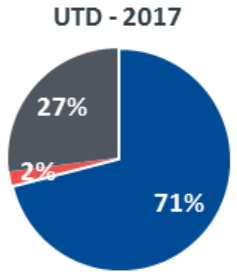
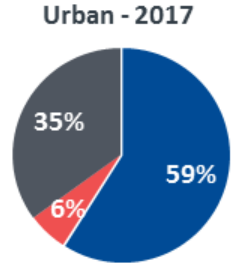
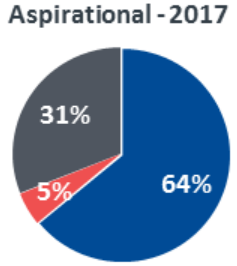
Total operating costs compared to peers—COLI adjusted

Peers allocating more towards PM activity









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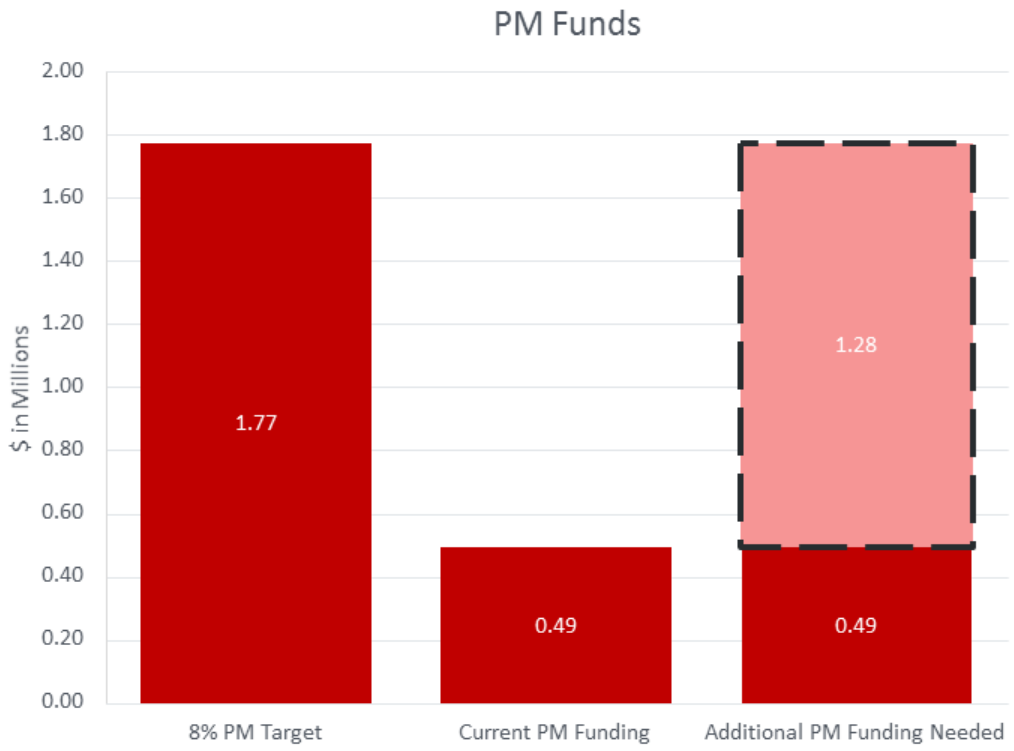
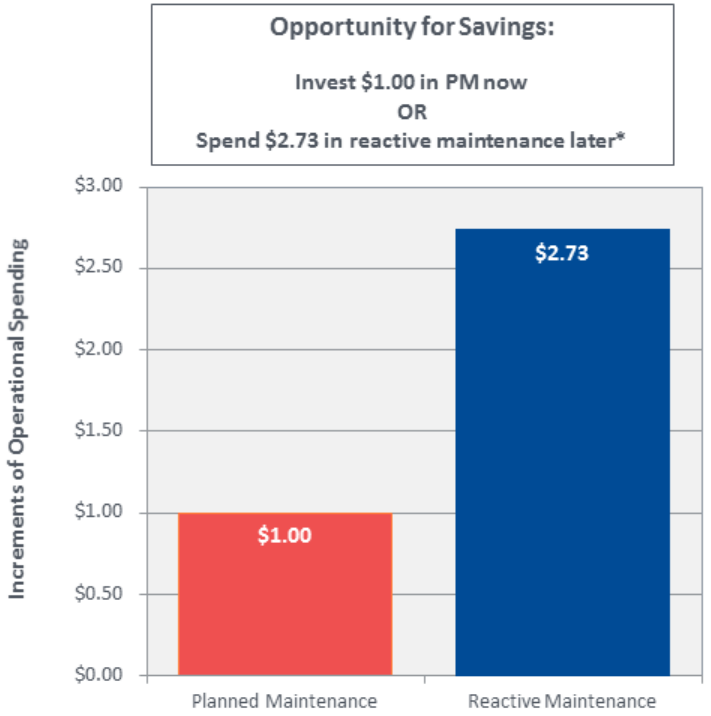
The COLI Index: COLI compares cost of living differences between urban areas in the United States weighted by different types of consumer expenditures in mid-management households. The index is used by economists, corporations and researchers to assess relative living costs

Goal setting to increase PM funding

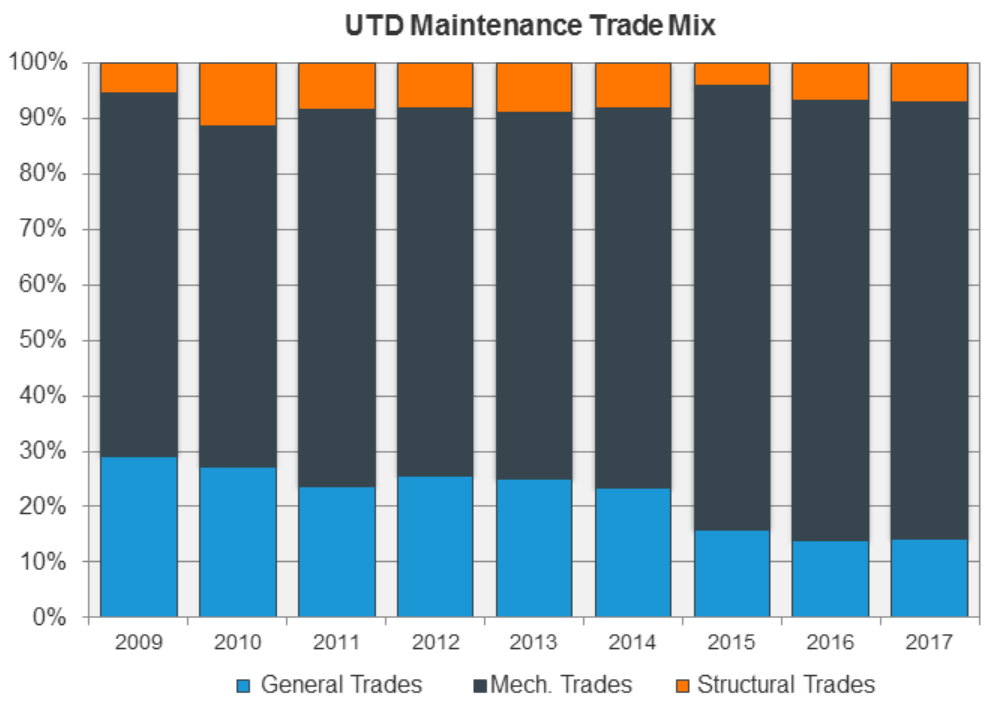


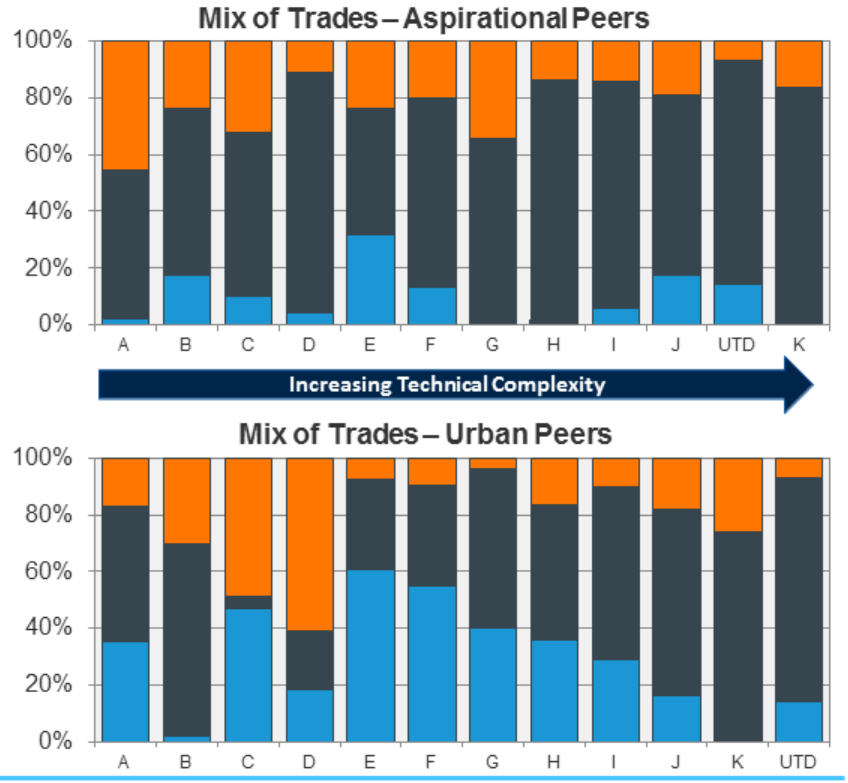


**Data from Ozanne Analytics – research of Sightlines database of work orders comparing costs of corrective and emergency work orders to planned and preventative work orders*

E&G Maintenance Department Mix

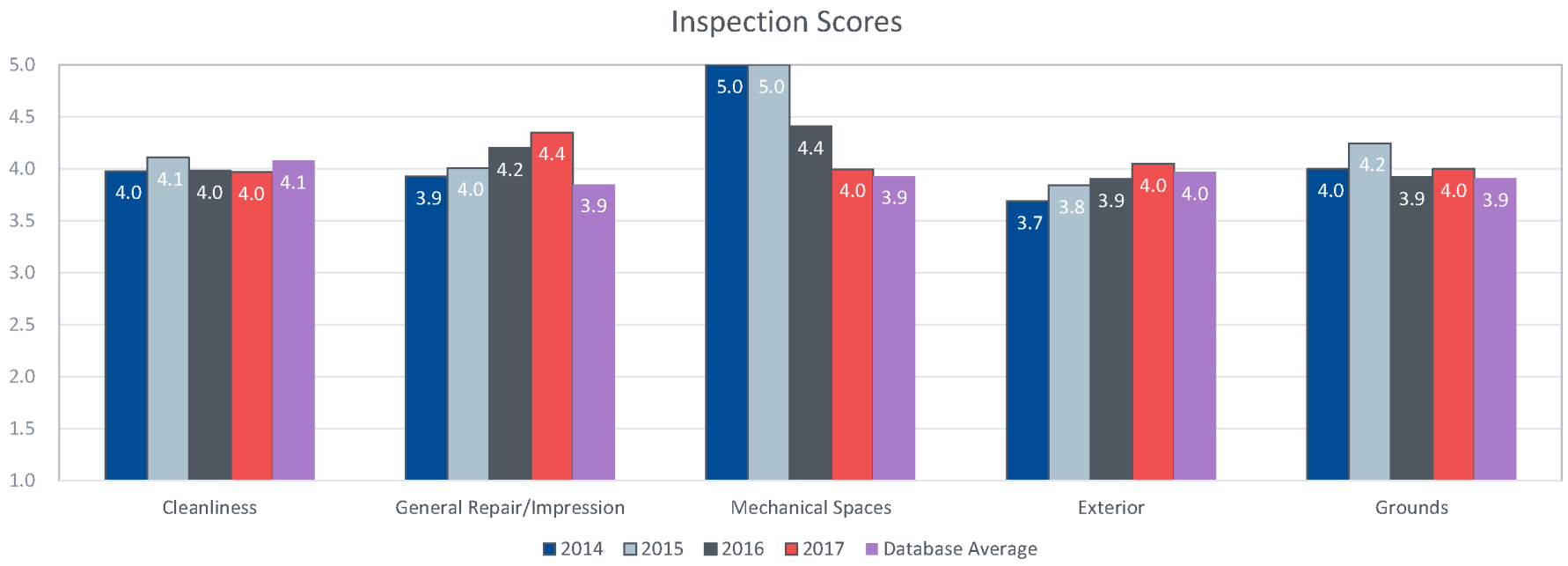
UT-Dallas staff has become more specialized as campus has grown





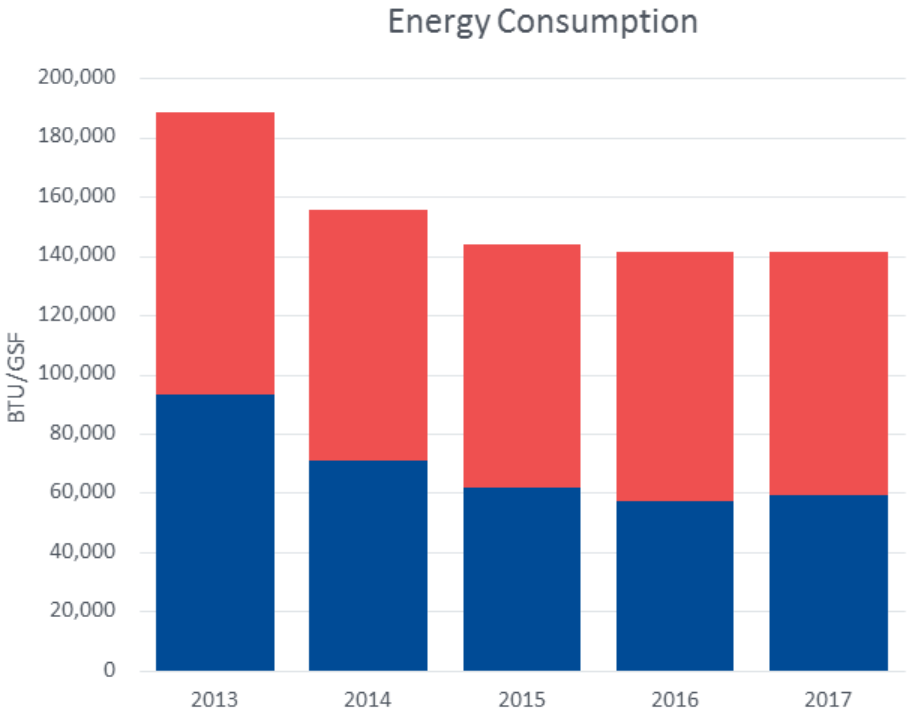
Campus Inspection Scores (E&G only)

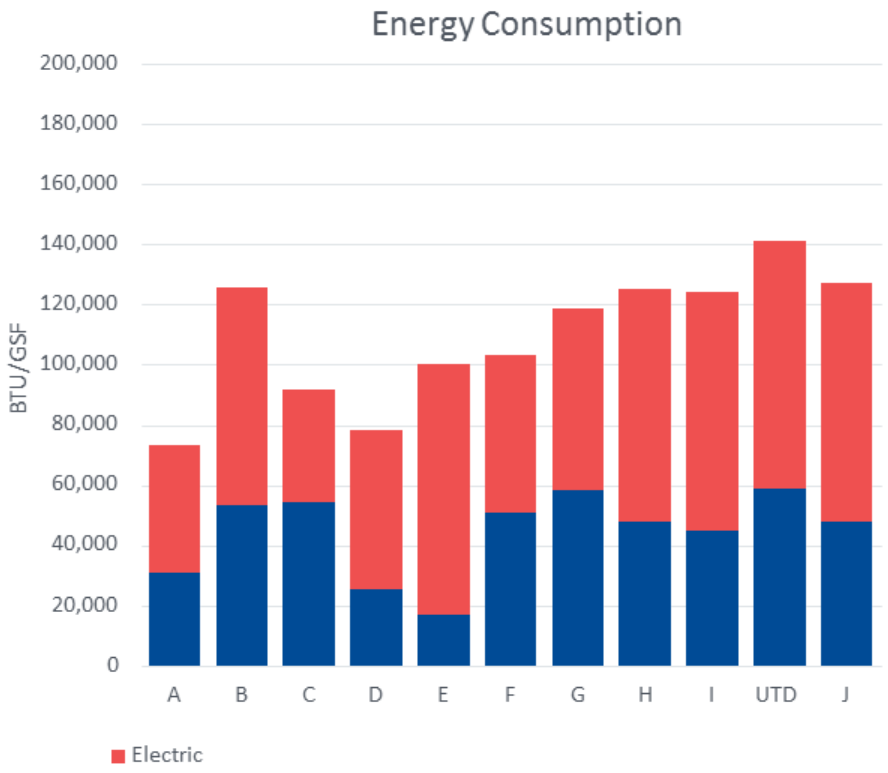
Housing spaces were not evaluated in FY17



***Buildings Toured**: Callier Richardson (and Addition), Bioengineering and Sciences, Green Hall, University Theatre, Arts and Technology Building, Activities Building, Student Services, and the North Lab.*

Energy Consumption Over Time and Compared to Peers





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Energy Peers: Abilene Christian University, New Mexico State University, Rice University, Texas A&M University, Texas Christian University, Texas State University, University of Arkansas, University of Mississippi, University of North Texas, University of Texas – Rio Grande Valley

UNT ROPA+ Preliminary Presentation Agenda

Connecting space, capital, and operations to make the case for change on campus

- Growing enrollment and aging space drive campus operational needs
- ROPA+ Prediction and Work Order data reveal areas of need on campus
- Energy consumption a success story on campus

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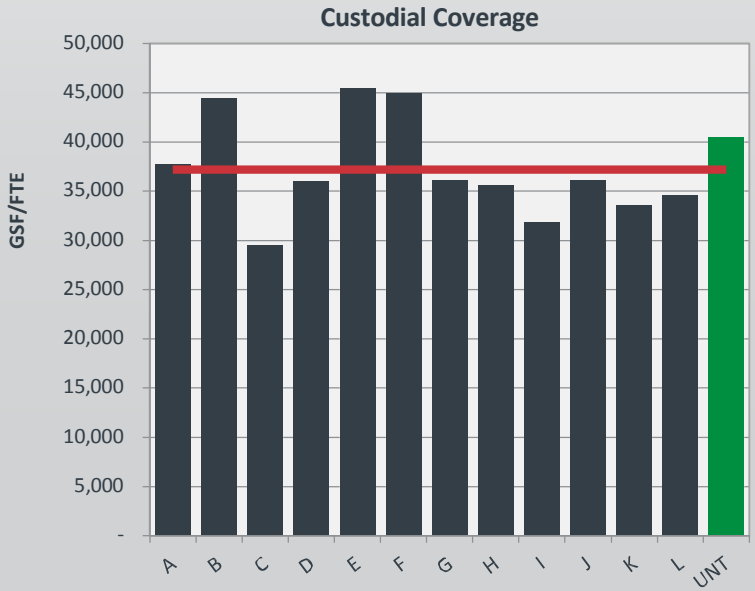
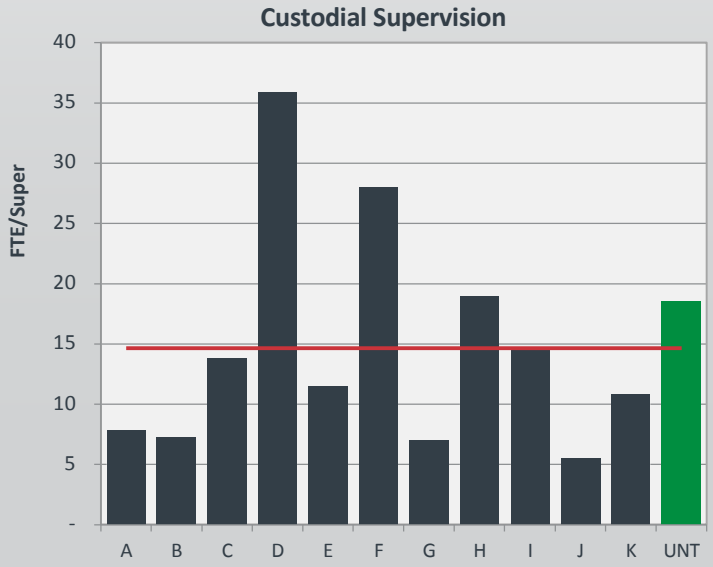
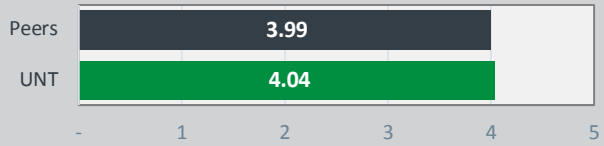
Custodians Cover More Space on a Busier Campus



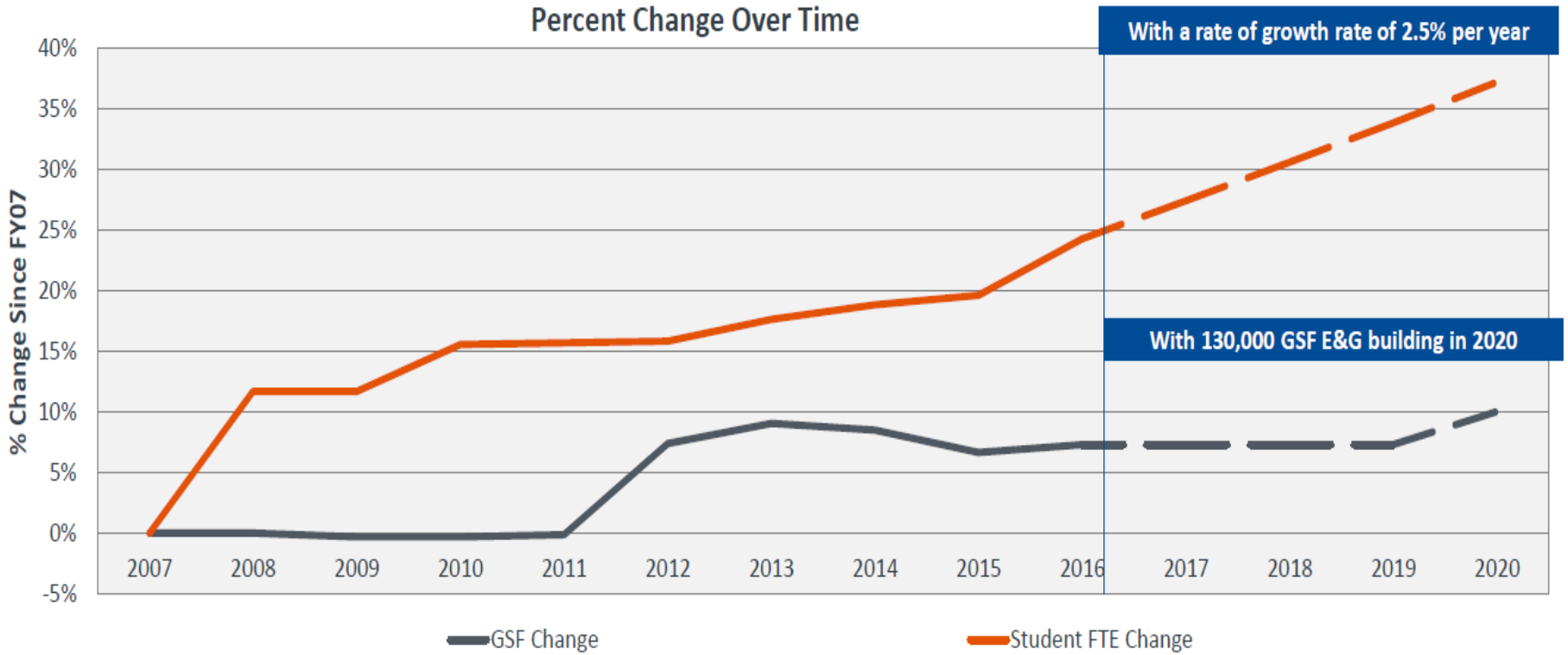


Campus Inspection



Enrollment Growth Outpaces GSF Growth

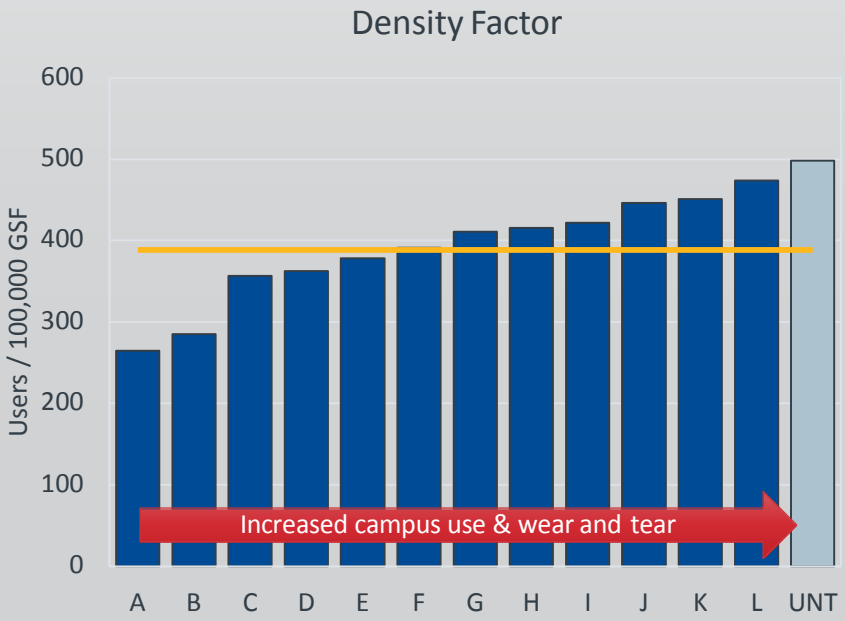
Enrollment has increased by 25% since FY07, while E&G space has grown about 7%



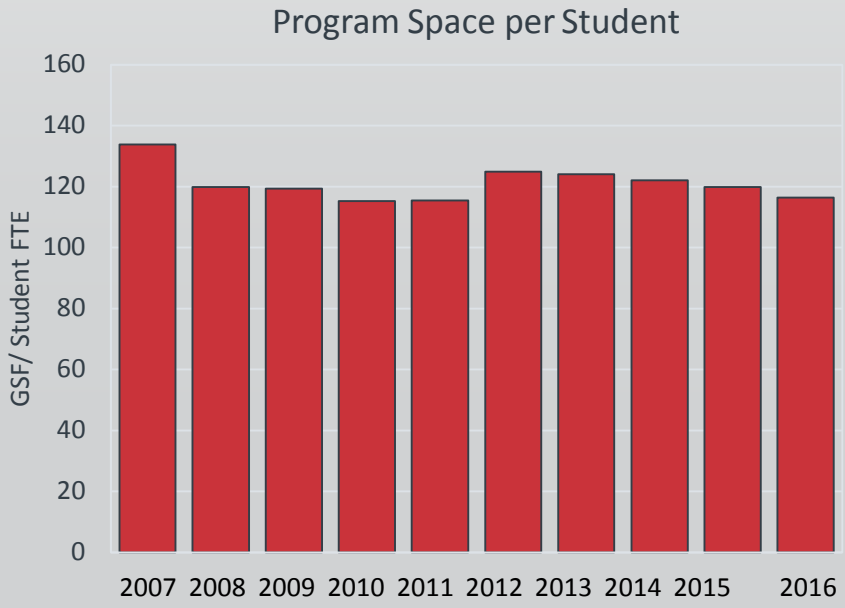
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Student Enrollment (FTE's)	24,040	26,849	26,846	27,778	27,816	27,844	28,280	28,574	28,756	29,882
E&G GSF	3,625,436	3,626,683	3,613,588	3,613,890	3,620,359	3,894,312	3,953,853	3,932,987	3,866,504	3,890,561

Campus is Busier Than Peers

With added enrollment, program space per student has decreased by 7% since FY12



Density Factor Definition: Total users (faculty, staff, and student FTEs) per 100,000 GSF



Program Space/ Student Definition: Academic, administrative, and research space per student

O&M of Plant Spending per FTSE

School	2013 $/FTSE	2014 $/FTSE	2015 $/FTSE	2016/FTSE	2017/FTSE
UT Austin	3,265	3,144	3,516	3,584	3,983
A & M	2,591	3,061	2,352	2,853	2,503
UTSA	1,826	1,667	1,839	1,726	1,797
UT Dallas	**1,873**	**1,924**	**1,663**	**1,687**	**1,574**
A & M Commerce	1,350	1,341	1,389	1,495	1,525
Texas State	1,292	1,283	1,339	1,382	1,276
Texas Tech	1,337	1,317	1,291	1,410	1,416
UNT	**948**	**1,064**	**1,176**	**1,251**	**1,249**
UT Arlington	1,229	1,255	1,154	1,090	1,040

Source: Annual THECB Sources and Uses Report

O&M of Plant Spending per FTSE

School	2013 Plant O & M ($M)	2014 Plant O & M ($M)	2015 Plant O & M ($M)	2016 Plant O & M ($M)	2017 Plant O & M ($M)
UT Austin	150.8	150.8	164.9	167.2	186.9
A & M	115.7	145.4	118.5	149.2	136.2
UTSA	44.1	38.07	42.2	41.2	43.4
UT Dallas	**31**	**34.02**	**32**	**34.8**	**35.2**
A&M Commerce	12.1	11.6	12.8	14.6	14.9
Texas State	37.4	38.47	41	43.9	41.2
Texas Tech	39.1	39.12	40.1	45.1	45.6
UNT	**27.9**	**31.65**	**32.6**	**39.2**	**39.6**
UT Arlington	32.6	33.58	32.5	32.2	33.3

Source: Annual THECB Sources and Uses Report

QUESTIONS

Facilities Jeopardy

Topic 1	Topic 2	Topic 3	Topic 4
TRAINING	CUSTODIAL	TECHNOLOGY	LANDSCAPE
WORKFORCE ENGAGEMENT	METRICS	COMMUNICATIONS	CUSTOMER SERVICE
VEHICLE MGMT	MAJOR CONSTUCTION	MINOR CONSTRUCTION	UTILITIES

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Metrics

“UTD Facilities Management Metrics”

Utilities Report CY 2018		Month											
Category	(units)	January	February	March	April	May	June	July	August	September	October	November	December
Chilled Water Used	TON-HR	1,310,975	1,450,731	2,020,475	1,953,417	3,742,345							
Peak Demand - CHW	TON	3,201	4,624	5,464	6,195	7,898							
Steam Used	LB	22,527,095	22,238,800	16,498,065	16,071,691	11,071,023							
Peak Demand - Steam	LB/HR	50,364	45,605	33,466	37,686	16,754							
Total Electricity Used (All Buildings)	kWh	7,067,159	8,346,051	8,351,641	9,295,677	9,274,350							
Electricity used M1+M2	kWh	5,067,528	4,791,134	5,008,280	5,794,050	5,427,460							
Peak demand M1+M2	kW	10,613	10,613	10,613	10,729	11,506							
Electricity used M3	kWh	838,716	760,164	929,907	1,012,364	1,060,389							
Peak demand M3 (5.0 cap)	kW	3,594	3,594	3,594	3,594	4,522							
Electricity used M4	kWh	648,687	670,219	660,533	707,102	756,732							
Peak demand M4 (6.7 cap)	kW	2,007	2,143	1,970	2,090	2,114							
Water	kgal	9,600	8,386	13,311	15,015	18,984							
Natural Gas Used	MMBTU	49,459	43,299	47,215	53,088	24,149							

Project Metrics CY 2018		Month											
		January	February	March	April	May	June	July	August	September	October	November	December
Category	(units)												
Num of Project POs issued	#	25	31	22	13	22							
Value of Project POs issued	$	281134.68	518473.78	154315.68	621873.26	3210661.96							
Number of new projects started	#	6	7	7	5	8							
WIP (work in place)	$	1928048.93	3251647.07	1022282.1	505672.5	1255349.45							

“Work Order Management”

FY 2015	Opened	Closed	Cancelled	Net Change
Sep-14	846	813	60	-27
Oct-14	746	673	19	54
Nov-14	601	479	23	99
Dec-14	667	395	14	258
Jan-15	728	903	22	-197
Feb-15	625	479	12	134
Mar-15	755	992	33	-270
Apr-15	619	578	25	16
May-15	682	551	24	107
Jun-15	778	1035	14	-271
Jul-15	750	621	12	117
Aug-15	988	1539	27	-578
Total	8,785	9,058	285	(558)
Monthly Average	732	755	24	

FY 2016	Opened	Closed	Cancelled	Net Change
Sep-15	1033	666	50	317
Oct-15	742	920	28	-206
Nov-15	764	396	30	338
Dec-15	662	683	23	-44
Jan-16	726	612	40	74
Feb-16	931	952	38	-59
Mar-16	921	963	41	-83
Apr-16	631	682	21	-72
May-16	938	508	14	416
Jun-16	706	878	27	-199
Jul-16	704	677	14	13
Aug-16	967	1115	41	-189
Total	9,725	9,052	367	306
Monthly Average	810	754	31	

FY 2017	Opened	Closed	Cancelled	Net Change
Sep-16	1009	830	28	151
Oct-16	1126	805	19	302
Nov-16	735	866	16	-147
Dec-16	721	569	14	138
Jan-17	998	990	39	-31
Feb-17	920	480	15	425
Mar-17	918	1006	19	-107
Apr-17	792	1024	35	-267
May-17	840	1003	26	-189
Jun-17	906	759	85	62
Jul-17	805	847	20	-62
Aug-17	1160	1134	41	-15
Total	10,930	10,313	357	260
Monthly Average	911	859	30	

FY 2018	Opened	Closed	Cancelled	Net Change
Sep-17	1037	978	20	39
Oct-17	997	818	25	154
Nov-17	890	748	33	109
Dec-17	633	486	12	135
Jan-18	989	1309	17	-337
Feb-18	944	707	34	203
Mar-18	907	822	18	67
Apr-18	834	1041	28	-235
May-18	775	835	17	-77
Jun-18				0
Jul-18				0
Aug-18				0
Total	8,006	7,744	204	58
Monthly Average	890	860	23	

“Purchase Orders Issued”

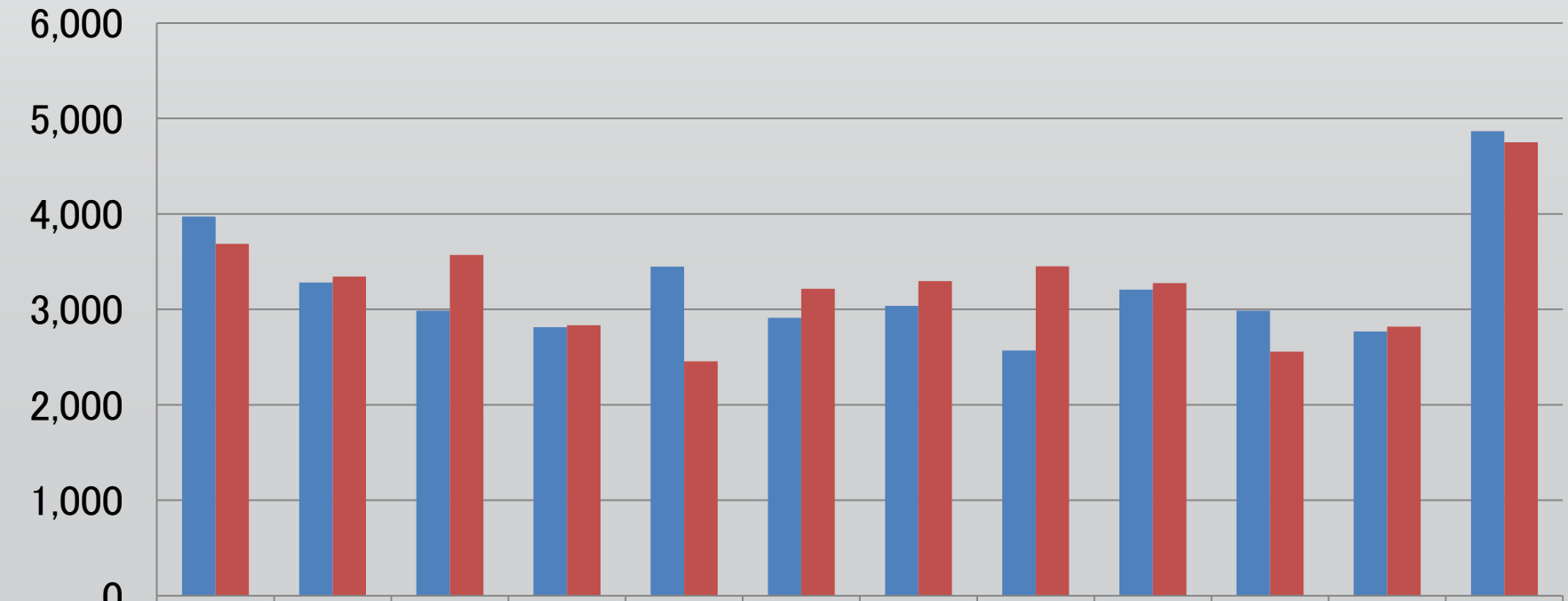
FY 2015	PO Count	Amount
Sept	46	$923,746.81
Oct	56	$3,447,098.03
Nov	51	$1,451,187.65
Dec	42	$2,190,384.74
Jan	44	$3,539,270.06
Feb	57	$7,854,990.76
Mar	53	$1,340,925.36
Apr	53	$1,035,250.84
May	38	$704,006.93
Jun	74	$1,953,326.02
Jul	60	$759,558.39
Aug	36	$609,390.47
Total	610	$25,809,136.06
Monthly Average	51	$2,150,761.34

FY 2016	PO Count	Amount
Sept	49	$1,304,823.26
Oct	72	$2,701,156.24
Nov	99	$3,720,021.74
Dec	51	$1,176,663.23
Jan	75	$1,065,803.45
Feb	75	$1,126,219.79
Mar	107	$2,051,846.43
Apr	84	$1,034,898.39
May	148	$5,639,540.16
Jun	120	$14,128,680.45
Jul	145	$3,440,949.20
Aug	196	$17,895,435.25
Total	1,221	$55,286,037.59
Monthly Average	102	$4,607,169.80

FY 2017	PO Count	Amount
Sept	147	$10,368,337.68
Oct	150	$8,038,887.12
Nov	206	$16,796,553.49
Dec	126	$14,504,781.54
Jan	187	$14,129,986.11
Feb	150	$12,348,306.54
Mar	190	$28,839,309.82
Apr	142	$8,021,986.16
May	124	$6,924,333.78
Jun	135	$12,381,903.60
Jul	154	$15,848,537.43
Aug	233	$8,663,452.77
Total	1,944	$156,866,376.04
Monthly Average	162	$13,072,198.00

FY 2018	PO Count	Amount
Sept	171	$15,217,403.46
Oct	159	$18,635,662.79
Nov	120	$6,511,021.71
Dec	93	$8,588,756.99
Jan	114	$613,816.29
Feb	140	$10,835,922.52
Mar	134	$1,873,358.07
Apr	130	$6,414,178.84
May	139	$12,040,973.47
Jun		
Jul		
Aug		
Total	1,200	$80,731,094.14
Monthly Average	133	$8,970,121.57

Work Orders – Open/Closed by Month FY17



	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
Opened	3973	3280	2987	2814	3447	2912	3037	2570	3207	2987	2767	4868
Closed	3686	3345	3569	2833	2454	3215	3297	3452	3276	2556	2818	4751

Purchase Orders