



# **CAMPUS ENGAGEMENT REPORT FOR TRANSFORM IT**



**OCTOBER 2018**

**UNIVERSITY OF OREGON**

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# Executive Summary

Transform IT is the University of Oregon's program that will rationalize (make more logical and consistent) the delivery of information technology (IT) services on campus to better support the University of Oregon's strategic academic and research missions. The university currently has 28 unique IT departments on campus supporting administrative and academic units, while many research organizations rely on internal resources to fill the IT gap.

The goal of the Transform IT Campus Engagement Project (CEP) is to gather high-level information needed to prioritize the assessment of the current IT services offered to campus and provide this report to the Chief Information Officer of the University of Oregon.

A four-member project team was established, consisting of two project managers and two business analysts, who paired up to interview 52 departments (28 IT units and 24 research units in Appendix G) across campus starting in February 2018. Interview questions were developed by consulting recent IT reports completed by the Baker Tilly Group, Moran Consulting, and Harvey Blustain, as well as, existing services found in the UO Service Portal service catalog ([service.uoregon.edu](http://service.uoregon.edu)). Special attention was made to not repeat previous work and to be cognizant of the amount of effort required of interviewees.

The effort to gather this information includes identifying the services that are provided and available, reported gaps in service support, and to document the types of offerings supported within each service and which IT units deliver them.

Although the data collected tells one part of the story about the state of IT at the university, another part of the story is the anecdotes heard while speaking with 52 units, which the data does not necessarily represent. The data collected cannot represent the vocal emphasis during conversation, nor can it represent the value that the UO IT community's personnel represent at large. These anecdotal comments were captured to the best of our ability and are documented as a separate effort. Qualitative analysis will be an integral part of each service migration project to ensure that, minimally, service levels and satisfaction are maintained, and improved if possible. We will likely also employ less anecdotal means of gathering satisfaction to complement the individual commentary during that process as well (surveys, etc).

This report outlines this data and additional observations. It will be a guide for how we move forward through the rest of the Transform IT program over the upcoming years.

The following are considered out of scope of the CEP:

- How services should be delivered
- Which departments should or should not deliver services
- Discussing staffing assignments
- Non-IT related services.

## Campus Engagement Report for Transform IT – October 2018

### Previous Consultant Engagements

The table below provides an account of previous consultant engagements, a summary of their stated purpose and how these engagements relate to the Transform IT's Campus Engagement Project (CEP) and the Transform IT Program. We will focus on the previous consultant engagements that have led us to the current state of Transform IT.

Previous consulting engagements:

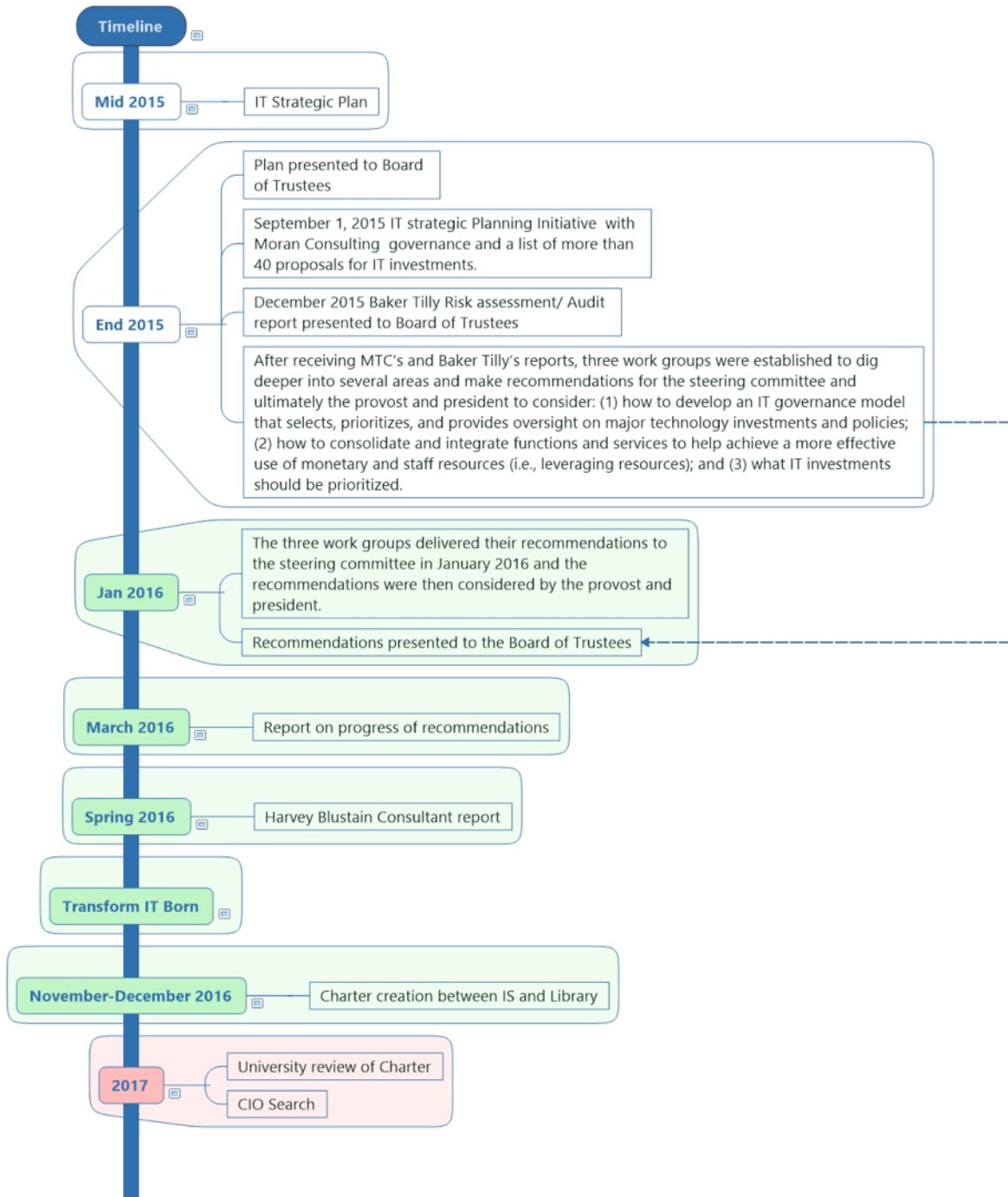
Consultant	Purpose	Date
Baker Tilly	Information Risk assessment	Dec 2015
Moran Technology Consulting	IT Strategic Planning	Nov 2015
Harvey Blustain	Staffing and Utilization	Spring 2016
Transform IT	Rationalize Services	Summer 2016
CEP	Collect Service information	Feb2018

Transform IT was born in the spring of 2016 after the staffing and utilization report. Effort towards staffing and utilization continued while the University started its search for a new CIO. In May of 2017, the University of Oregon hired Jessie Minton as CIO. With new leadership in place, a service-based focus was implemented to rationalize IT services and their delivery to campus in order to better support the university's strategic, academic, and research missions. The Transform IT Program was created, and the CEP was the first project initiated under the Transform IT Program.

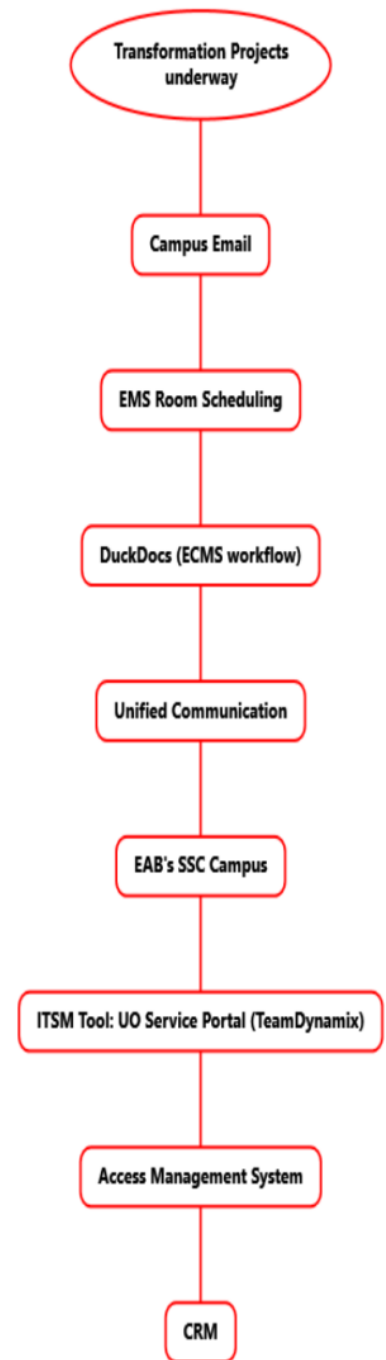
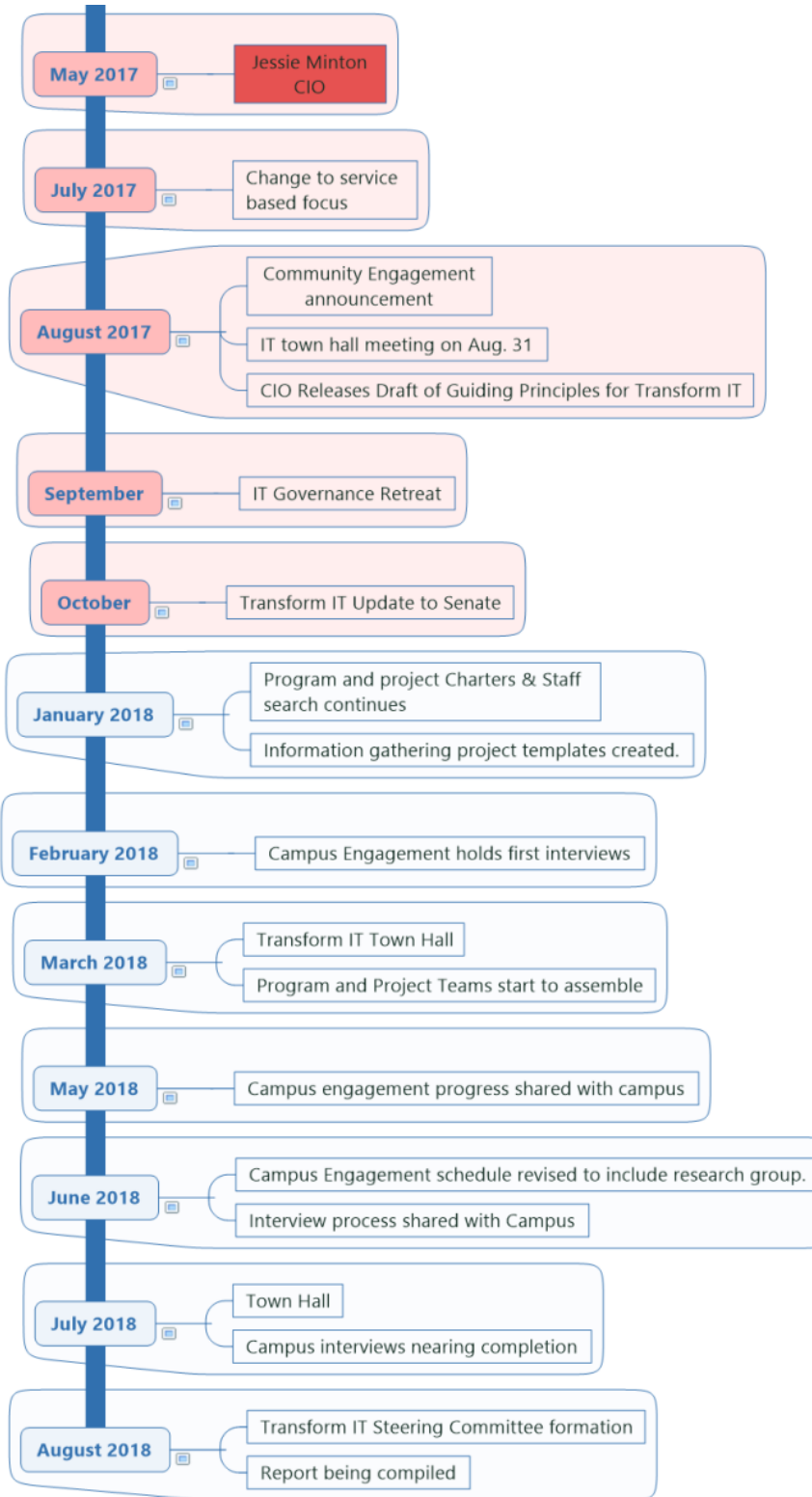
The CEP is the university's first effort conducted without the use of third-party consultants. Utilizing as much data as possible from previous consulting engagements, the project team set out to gather and catalog IT services being provided across campus. This project was expanded to include all of campus including IS, as well as research units, centers, and institutes.

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## Transform IT Timeline



# Campus Engagement Report for Transform IT – October 2018



## Defined Scope

### Defined Report Scope:

Deliverables in the scope of the Campus Engagement Report consist of the following:

- Identifying and documenting all UO departments that deliver IT related services
- Identifying and documenting all IT services that are offered by all departments
- Creation of a "service map" that shows the relationship of services offered by the different departments in the UO
- A description of each service offered by each department
- Identify and document the audience for each IT service offered by each department (Faculty, staff, students, researchers, and other)
- Identify the estimated work hours per week devoted to each service
- Identifying and documenting the total IT budget per unit consisting of:
  - FTE Budget (including OPE)
  - Student Employee Budget
  - Operating Budget
- Gather total FTE for each IT unit

### Out of Report Scope:

- Identifying and documenting existing IT skills on campus by employee
- Making final determination for how services will be delivered as part of Transform IT
- Recommendations for what departments should or shouldn't deliver services
- Recommendations for staffing assignments and/or the reduction of IT staff on campus.
- Collection of IT unit revenue and cost information.
- Collection of financial or service hours data for Research.
- Non-IT related services



## Service Inventory and Data Collection

### Approach

To create an inventory of IT services provided across the university and validate existing information about those services, the CEP used a four-phased approach for gathering information and data about IT services on campus: plan, interview, analysis, and report.

#### Plan

- Consulted the Transform IT program charter for project objectives
- Identified list of CEP report deliverables
- Identified key stakeholders from IT and research units
- Identified previous consultant reports that contained information and data about IT services offered in the individual units
- Identified a consistent framework for categorizing campus IT service categories using the UO Service Portal service model
- Created the IT service [“glossary” \(Appendix F\)](#) and a corresponding IT service inventory spreadsheet (based on UO Service Portal service model) to distribute to IT units as a common reference point.
- Defined “service” for the purpose of this project as, “a means of delivering value to customers by facilitating the outcomes the customer wants to achieve without the ownership of specific costs and risk. In other words, when we do something for our customers that gives them something they want or value, we’re providing a service.”
- Developed interview questions and templates to capture in-scope charter deliverables and aggregate service inventory by IT unit (based on the UO Service Portal categories).
- Created a project plan and process for conducting interviews and gathering data.

#### Interview

- Prior to the scheduled interview, a service inventory spreadsheet was pre-populated with data from previous consultant reports, if applicable, and sent to interviewee(s).
- Interviews consisted of a project manager asking a set of interview questions while a business analyst recorded the data in a Confluence page. Each interview was approximately 60 to 90-minutes.
- After each interview, the business analyst updated the service inventory spreadsheet with data from the interview and then sent it back to the interviewee(s) for validation. Each unit had 10 business days to validate data present in the service inventory spreadsheet.
- Validation of the service inventory spreadsheets by each IT unit was encouraged, but optional. Non-responses were considered “final” (or validated by default) after a second courtesy email validation reminder.

# Campus Engagement Report for Transform IT – October 2018

## Analysis

- Finalized interview notes and service inventory spreadsheet data from the units.
- Validated data for each unit was compiled into one Excel spreadsheet for analysis.
- The Excel spreadsheet was loaded into Tableau Desktop to create graphics of aggregated data results in each service area and requested data deliverable.
- Analysis involved reviewing the following data: department budgets, staff hours per service area, services offered and/or consumed by each unit, and the groups (e.g. faculty, staff, student, etc.) served for the individual services.

## Report

- Documented all IT services to gain insights to common services with the potential for consolidation at an enterprise level (and also unique services that should remain at the unit level).

## Inventory Collection & Validation Process Flow

- [CEP inventory collection and process flow diagram \(Link\)](#)

## Tools Used

- Outlook Exchange Email Communications – Introduction/Interview invitations
- Visio – Project process modeling
- Excel Spreadsheets (provided to IT units to self-report service inventory data).
- Confluence Questionnaire – to record live feedback data during Interviews.
- Voice Recordings (where agreed to by interviewees)
- Master Excel Spreadsheet (to enter, aggregate, and chart reported data).
- Word (Report)
- PDF – Report Sharing
- Tableau Desktop – BI data visualization tool to load Excel data and to chart results.

### Assumptions, Limitations, and Constraints

#### Assumptions:

- **Staff Hours: Data consists of reported “estimates” that varied by unit.** As the CE effort was a high-level exercise to begin engaging IT Units in conversation about IT services provided and where most of their support time is spent during a typical week, the data collected is based on best estimates only – and was aggregated as such. While some respondents provided information based on a 40-hour work week per employee, others provided data for a 60-hour work week or included additional hours for seasonal activities. Calculations of hours per employee from this data will not yield accurate results nor were they intended to.
- **IT Unit Budget estimates.** Similarly, self-reported FY2018 budget information for staff (+OPE), student employees, and operational expenses were also collected to obtain a high-level view of IT unit budget allocation for exploratory purposes only (and should not be used as accurate values for more detailed calculations).
- **Where budget information was not provided,** IT unit budgets were derived by the IS Business Office using Banner and/or IDR data for FY2017.
- **CAS IT support covers CAS Dean’s Office** and the 45 colleges of Arts & Sciences.

#### Constraints and Limitations:

- **Staff Hours** – Of the 28 campus IT units who participated in CEP interviews, 26 were able to provide estimated staff hours spent per service (92%).
- **IT Unit Budgets – were also not used to represent costs/revenues** as no charge-back fees for services were considered in the current exploratory project phase. Detailed cost/revenue calculations and charge backs per IT Unit can be further investigated in project phases.
- **Exclusion of specific IT service areas.** As the UO Service Portal service model was used as the framework for the more traditional IT services inventoried, specific and evolving IT service areas (such as project management, business analysis, and IT cross-consulting), were not addressed in this project phase, but have been noted for future investigation, as time spent by some IT units in these areas was significant (a reported 62 hours per week).
- **Exclusion of faculty and students when collecting “IT gap/improvement” feedback.** In the “Campus Engagement” project, “engagement” was defined for this phase to include directors of IT units on campus who provide IT services (and was then expanded to include directors or heads of research units on campus). Faculty and students were not a part of “engagement” objective for this phase but may be included in the future.

# Administrative & Academic IT Review (28 IT Units)

(For research data see the “Research” section)

## Number of IT Units Providing Similar Services

Category	Service	ADV	AE/CPE	ATH	BAO	BIO	FAS	CAS	CIS	DSGN	COE	SMIT	ECC	ENG	ENROLL	HEALTH	IS	JAQUA	JWJ	LAW	LCB	LIB	PSYCH	SOJC	SOMD	RRI	TLC	HOU	YLC	TOTAL
Collaboration	File Sharing																												28	
	Video Conferencing																													28
	Email & Calendaring																													28
	Websites																													26
	Instant Messaging																													22
	Digital Signage																													19
	Telephone																													16
IT Service Desk	Printing																													27
	Equipment Checkout																													27
	Desktop Support (Including imaging, etc.)																													25
	Help Desk (Walk-Up)																													20
	Software & App Development																													16
IT Professional Services	Training (Device/User/Software)																													25
	Storage (Faculty & Staff)																													24
	Data Back-up																													24
	Servers (VM)																													23
	System Administration																													22
	Servers (Physical)																													19
Security	Network Management (Routers/VPN)																													7
	Accounts & Access Credentialing Agent																													22
	Security Awareness Training																													22
	Data Security																													13
	Vulnerability Scanning																													12
	Logging/Monitoring																													10
Teaching & Learning	Firewall - (Non-IS)																												9	
	AV Support																													25
	Classroom Support (Non-CMET)																													18
	Lab Management																													13
	Educational Technology Consulting																													11
Administrative	Teaching & Learning Systems																												10	
	Business Applications																													23
Other	Contracted Services																													18
	Internal Repository																													23
Knowledge Management	External Repository																													18
	Purchasing Agent																													23

The table of services model (above), whose categories are used within the UO Service Portal, was used as a framework with which to structure the collection of service inventory from the 28 total UO campus IT units. The table structure was used both for self-reported spreadsheet data, as well as interview questions. Binary data (yes=1, no = 0) was recorded for each service inventoried.

Although the number of IT units providing a particular service was aggregated, this total unit number used alone is meaningless, and must be used with other criteria when evaluating potential services to investigate. (For example, printing support is offered by 27 of the 28 units, but would not be a logical candidate for consolidation, as printing is already quite centralized with the wide utilization of the 3<sup>rd</sup> party CTX contract.)

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## Staff Hours Per Service

The below chart shows what the bulk of IT FTE (247 FTEs across campus) is being used for. The data and chart can be seen in three large sections. The top three FTE areas can be considered:

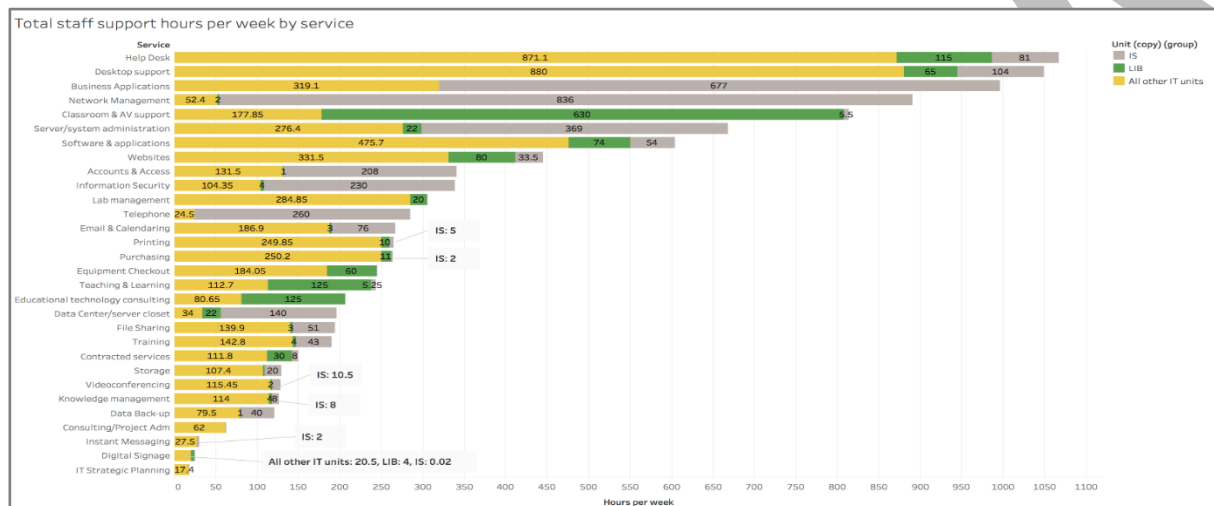
- Help Desk
- Desktop Support
- Business Application Support

The second tier in terms of FTE hours could be considered:

- Networking
- Classroom support
- Servers/Systems administration

The third tier would be everything else represented on the chart.

A large portion of FTE hours are spent on help desk and desktop support related services. Additionally, most of this work is being done outside of IS.



### Other observations:

- The university is spending a reported 10654 hours per week on IT all services
- Business application support, networking, data center related services, and telephony are mostly being done by Information Services.
- When contracted services and business applications are combined to represent on premise and cloud business applications, however, almost 40% support is outside IS.
- Systems and server administration is nearly equally being done by IS and those outside of IS, as are accounts and access and information security (security awareness, vulnerability scanning, fire-walling, data encryption, etc.).
- Most website services are being done outside of IS.
- UO Libraries is providing 77% of all classroom and AV support, and 60% of educational technologies.
- Five-times as many hours are spent outside IS on file storage support.
- The university spends 24% of all IT time servicing user computers
- Roughly one-third of the hours spent on data center and server closets work is being done outside of IS.

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## Dedicated IT Units and Supporting IT Units

The following table represents administrative and academic units on campus that have dedicated IT Units (dark blue) and units that receive IT support from other units (light blue). (In each instance the number of total IT staff for the providing unit has been included in the column to the far right as a basic reference point only).

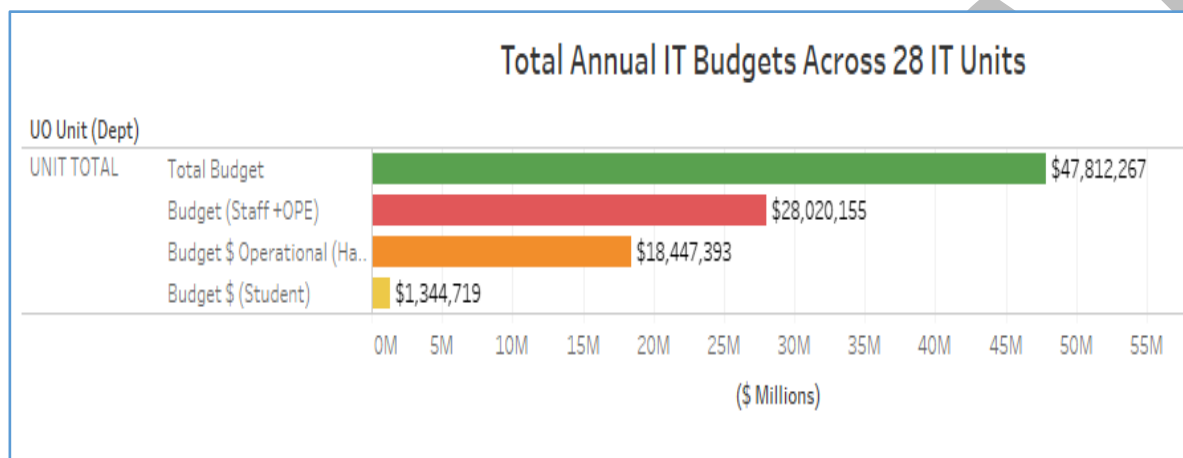
Reporting Unit	Unit	Dedicated IT Unit	Supporting IT Unit(s)	# of Dedicated IT Staff (FTE)
Senior VP & Provost	Information Services	IS		99
	Business, College of	LCB		6
	Office Provost and Academic Affairs	JWJ		4
	Library	LIB		35
	Undergraduate Studies	SAIT/TLC		6
	Honors College		JWJ	4
	Music and Dance, School of	SOMD		2
	College of Design	DGN		4.5
	Law, School of	LAW		4
	International Affairs		JWJ	4
	Journalism & Communicatn, School of	SOJC		5.5
	Arts & Sciences, College of	CAS (23.25)	BIO, ENG, CIS, PSYCH, YLC (9.25)	23.25
	Education, College of	COE (3)	EC Cares (5.5)	3
	Graduate School		JWJ	4
	UO Portland			* Included in other totals
	Senior VP & Provost	JWJ		4
	Institutional Research			JWJ
Academic Affairs			JWJ	4
VP Student Life	VP Student Life Administration	SAIT		5
	Dean of Students & AVP Stdnt Life	SAIT		5
	VPSL Holden Center	SAIT		5
	Student Union, EMU	SAIT		5
	Career Center	SAIT		5
	Physical Education and Recreation	SAIT		5
VP Finance & Administration	Human Resources		JWJ	4
	Police Department	UOPD (1)	FASS (6)	1
	Printing & Mailing Services		CAS	3
	Business Affairs Office	BAO		7
	VP Fin & Admin Operations		JWJ	4
	Budget and Resource Planning		BAO	7
	Campus Planning and Facilities Mgmt		FASS	6
	Safety and Risk Services		JWJ	4
Parking and Transportation		FASS	6	
Student Services & Enrollment	University Housing	HOU (4)	SAIT (5)	4
	Academic Extension	AE/CPE		2
	University Health Center	HEALTH (4)	SAIT (5)	4
	University Counseling Center	HEALTH (4)	SAIT (5)	4
	Enrollment Management	ENROLL		4
VP University Advancement	VP University Advancement	ADV		4
	University Advancement	ADV		4
VP for Equity & Inclusion	VP for Equity & Inclusion		JWJ	4
President of the University	President Administrative Operations		JWJ	4
	Knight Campus		JWJ	4
	Athletics	ATH		3
	Office of Internal Audit		JWJ	4
VP University Communication	University Communications		ADV	4
VP Rsch, Innovation & Gradu	Research	R&I		4
Jaqua Learning Center	Jaqua Learning Center	JAQ		1.5
University Secretary	Office of the University Secretary		ADV	4
General Counsel Operations	Purchasing & Contracting Services		JWJ	5
	General Counsel		JWJ	5

## Annual IT Budget

As part of our data collection for the Campus Engagement Project, 28 IT Units were asked to provide estimates of their annual IT Budgets which included:

- Staff (+ OPE) Budget
- Student Employee Budget
- Operational Budget (Hardware and Software)

The chart below represents the Total IT Budget across 28 IT Units (\$47,812,267) as well as the annual budget aggregates for each of the individual areas.



The objective of collecting information across the various campus IT units was to attempt to calculate a rough estimate for how much the IT units across campus as spending as a whole to support individual IT Services.

Information supplied:

- Total IT Budget across 28 Units – \$47,812,287
- (Took out budget totals for two IT Units who had not provided hours per service = \$47,214,733)
- 26 IT Unit hours per week providing IT services = 10,636 Hours

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IT Service	26 IT Unit Total Hours Per Service (Per Week)	% Service Hours Per Service (Per Week)	Estimated Annual IT Budget Per Service
Help Desk	1067	10.03%	\$4,736,912
Desktop support	1049	9.86%	\$4,656,565
Business Applications (CRM)	996	9.37%	\$4,421,740
Network Management	890	8.37%	\$3,952,532
Classroom & AV support	813	7.65%	\$3,610,503
Server/system administration	667	6.27%	\$2,962,623
Software & applications	604	5.68%	\$2,679,856
Websites	445	4.18%	\$1,975,378
Accounts & Access	341	3.20%	\$1,511,497
Information Security	338	3.18%	\$1,501,953
Lab management	305	2.87%	\$1,353,245
Telephone	285	2.67%	\$1,262,910
Email & Calendaring	266	2.50%	\$1,180,344
Printing	265	2.49%	\$1,175,683
Purchasing	263	2.47%	\$1,168,358
Equipment Checkout	244	2.29%	\$1,083,351
Teaching & Learning	243	2.28%	\$1,078,468
Ed Tech Consulting	206	1.93%	\$912,891
Data Center/server closet	196	1.84%	\$870,054
File Sharing	194	1.82%	\$860,732
Training	190	1.78%	\$842,532
Contracted services	150	1.41%	\$664,970
Storage	129	1.22%	\$574,413
Videoconferencing	128	1.20%	\$567,977
Knowledge management	126	1.18%	\$559,321
Data Back-up	121	1.13%	\$534,906
Consulting/Project Adm	62	0.58%	\$275,221
Instant Messaging	30	0.28%	\$130,952
Digital Signage	25	0.23%	\$108,846
<b>Grand Totals</b>	<b>10,636.22</b>	<b>100.00%</b>	<b>\$47,214,733</b>

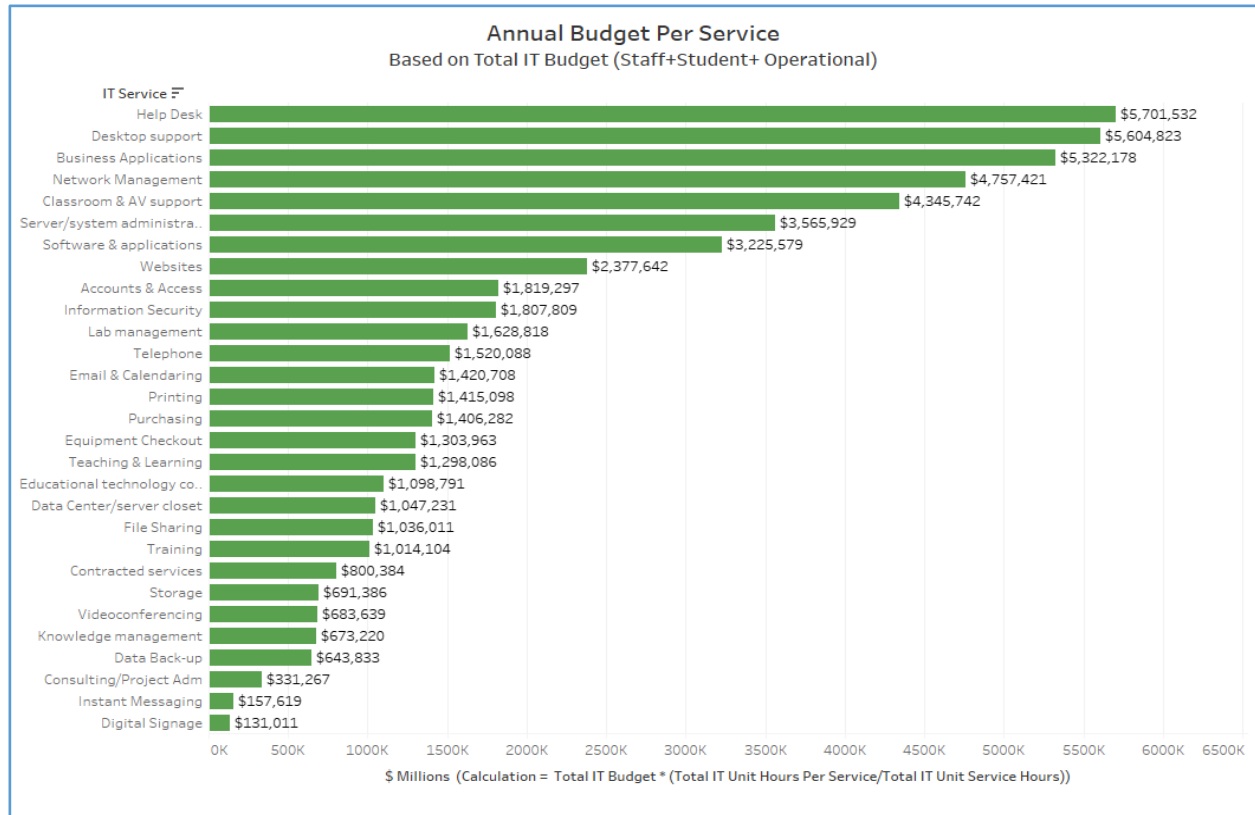
For each IT service, we calculated the % equivalent of each from the total IT support hours per week and then multiplied each % by the total estimated IT Unit budget of the 26 units that provided information on IT support hour per week.

### Annualized Budget per Service Calculation =

(Aggregate IT Unit support hours per IT Service per week / Total IT Service Hours per Week) \* (Total IT Budget) = annualized budget per IT Service.



## Campus Engagement Report for Transform IT – October 2018



What the total budget calculation includes:

- Total Annual IT Budget (Across 26 Units)
- FY2018 or FY2017 information
- (Staff + OPE) + (Student Budget) + (Operations: hardware and software)

What it does not account for:

- Administrative Costs
- Differing staff/student hourly rates.
- Disparity in costs to provide specific IT services (networking vs. help desk vs. IT Project Management consulting, for example).

Caveat:

- With self-supplied budget data (and no additional information detailed such as costs or charge back revenues for particular services in specific IT units) the above “budget per service” calculation is intended to provide only a high-level starting point when considering possible financial resources used for IT services across campus, and *should not* be viewed as a truly representative measure. It is assumed that more precise and representative financial data will be collected in the Transform IT projects to follow.

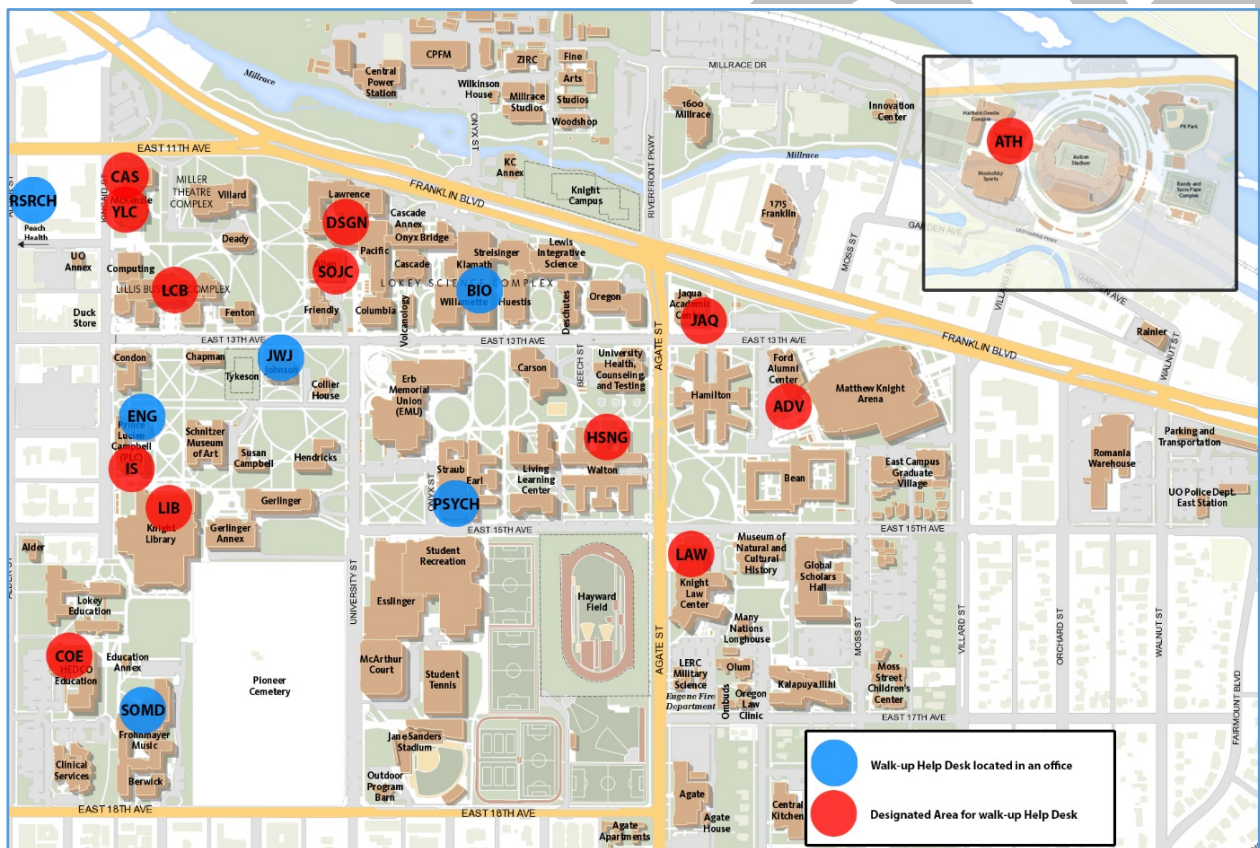
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# Administrative and Academic IT Services Reviewed

## Help Desk

A unit made up of dedicated staff who act as a single point of contact and are responsible for technology support, including but not limited to: desktop and device support, tier 1 troubleshooting, escalating and triaging tickets to appropriate resources, and handling break-fix issues. Support may include visits (in-person or virtual) to an office/workspace or the end-user coming to a dedicated space.)

- Number of units:
  - Walk-up help desk: 20 units
  - Help desk with student employees: 20 units
  - Help desk providing support for student devices and/or applications: 15 units
- Total staff hours delivering service: 1067 hours per week
- Locations: The blue dots on the map below represent help desks and related services that are delivered from the office of an IT staff member. The red dots represent dedicated help desk areas and are typically staffed by IT personnel waiting for users to approach the desk for support, and researching issues to resolve open tickets.



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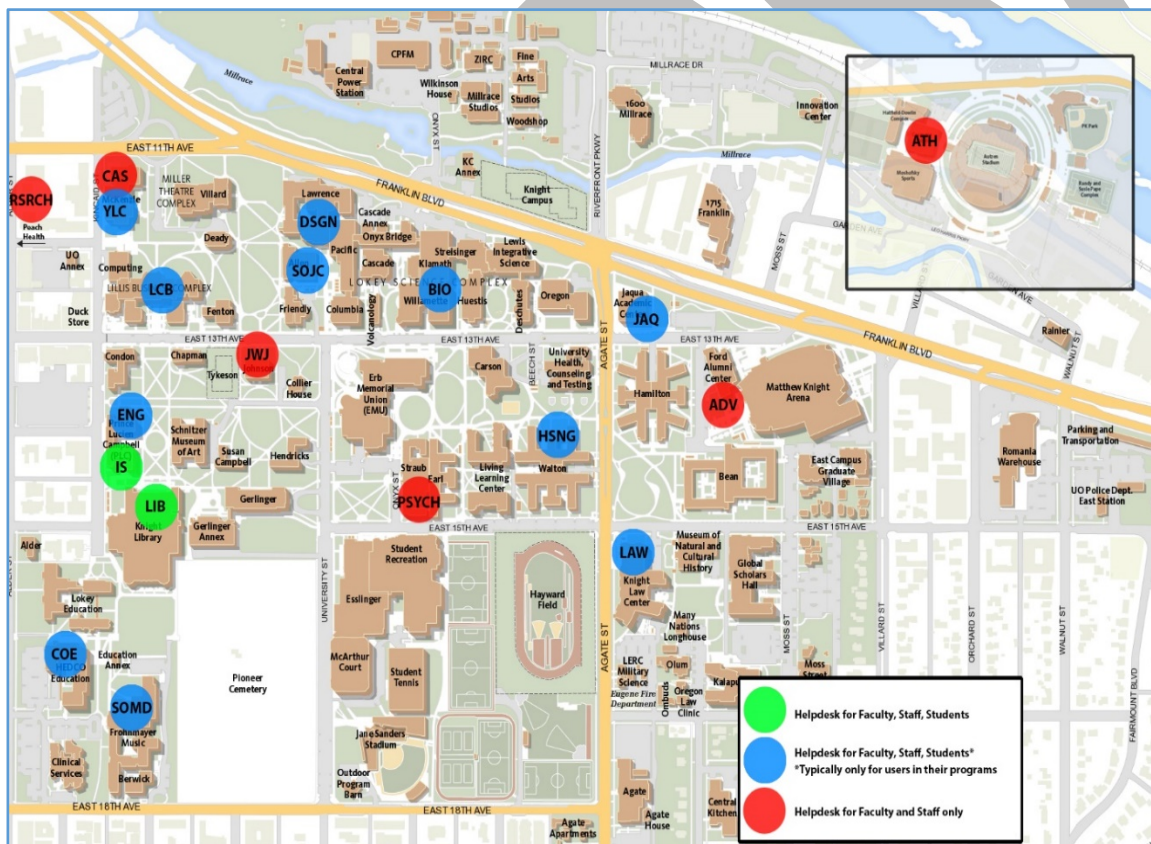
## Observations – Help Desk

Help desk has been identified as the largest consumer of FTE hours in IT on campus. As reported by IT units, the UO spends 1,067 hours a week on help desk services, with 986 of those hours coming from units outside of IS, and 81 hours from within IS.

## Desktop Support Services

Services related to providing support for desktop computers, laptops, and devices, including associated operating system and application software.

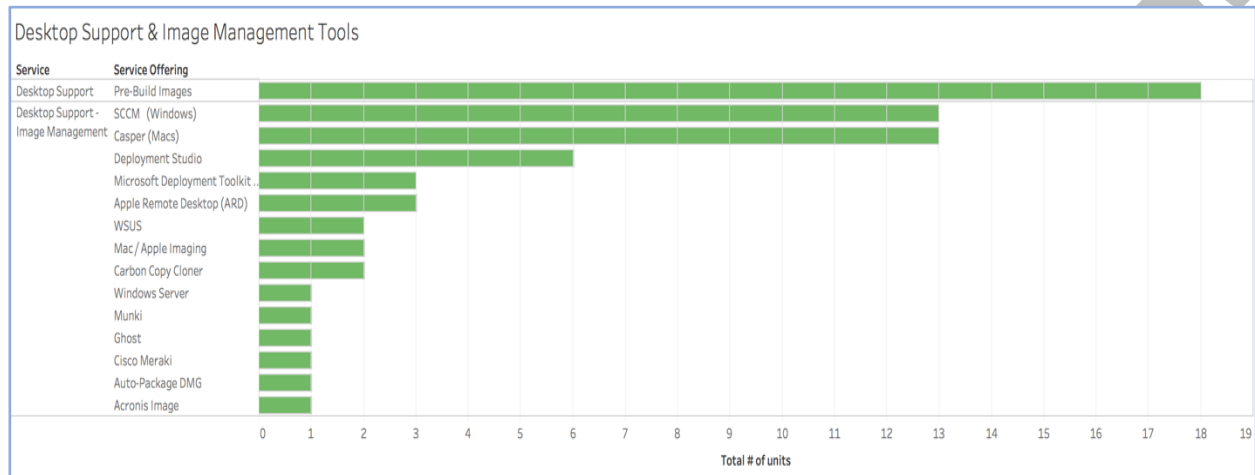
- Number of units:
  - On campus, in-office desktop support – 26 units
  - Remote desktop support – 21 total units
    - Units using Bomgar application for remote desktop support – 17 units
    - Other remote desktop support – 4 units
  - Off-campus desktop support – 17 units
- Total staff hours delivering service: 1049 hours per week
- Locations: The map below demonstrates variation in those supported and the IT help locations across campus. The red dots are locations typically only supporting faculty and staff, while the blue dots also offer IT support services to students. Typically, the units offering services to students only offer those services to students in their programs. The exception to this are the IS and Library help desks who offer IT services and support to all users, represented by green dots.



## Campus Engagement Report for Transform IT – October 2018

### Observations – Desktop Support

Part of desktop support includes the tools used to support campus desktop computers. When IT units purchase new computers often they will copy a pre-built image onto the computer thereby standardizing and pre-configuring the software available to their users. Imaging computers reduces errors, increases software customization and expedites computer deployment, and in the long run saves the university money. Below is a chart illustrating the number of units utilizing imaging computers and the number of tools used to build and deploy computer images.



Desktop services is the second largest source of FTE hours behind help desk services. Across campus, IT units have reported to be spending 1,049 hours per week on desktop support services, with 945 of those hours coming from outside of IS, and 54 from within IS.

Combining help desk services and desktop support (both services are supporting user computers), FTE hours amount to 2,116 hours per week at the UO. The next largest source of FTE for comparison is business application support with 995 hours per week. It is worth pointing out that help desk services and desktop support are lower-cost services relative to other IT services at the university.

### Business Applications - On Premise & Cloud

Enterprise services that support the administrative and business functions of the UO. Includes document management, business intelligence, reporting, finance, human resources, student information systems, advancement, and research administration. These applications are deployed and delivered on premise or cloud based.

#### On Premise

- Number of units: 23 units
- Total staff hours: 996 hours per week
- Unique service offerings: IT units reported a total of 61 different business applications being supported (listed below).

## Campus Engagement Report for Transform IT – October 2018

ERP – Banner	Campus Cash	Localist
Document Imaging	Canto Cumulus	Lutron (Lighting Control)
IDR Cognos	Content Delivery Network	Manitou (alarm monitoring)
AppWorx - Job Scheduling	Coriomaster (Video Wall)	Maxient
CRM	CS Gold	Mobius app for Art Museum
Duck Docs	Dell Open Manage	MSSQL server
File Maker Pro	Directory Services	Oracle collection database
Milestone	Dispatch System	People Counters/Trafsys
Quickbooks	Duck Web	ResourceSpace (DAM)
Time Clocks – Kronos	E-Commerce application	RezStar
UO Spaces	EHS Assistant for Safety	Schnider (electric meter)
3 <sup>rd</sup> Millenium	FIG Database	Siemens building control
Aces2 – Admissions (Law)	FOIAXpress app	Simplicity Career Services
Advisor Trac	Forms.uoregon.edu	Sunapsis
Advocate (conduct system)	Fusion	TicketMaster
AIM	FYP Student Portal	Ticket Trac
AlcoholEdu/Haven	Genbook	Titanium
BecSys (PEREC pool)	GIS Application	Web service/API Gateway
CAAMS app for Affirmative Action	lensp.uoregon.edu	Wonderware
Campus Call (Telefund)	ID Works	Work management tool

### Cloud

Other services not listed above that are contracted with a vendor to provide services to your unit.

- Number of units: 17 units
- Number of staff hours: 150 hours per week
- Number of unique contracted services: 35

IT Unit	Contracted Services					
ATH	Ticketmaster					
AE/CPE	Audio Visual Bend					
BAO	Campus Guard (QSA Form)	QuickPay (With NelNet)				
BIO	Equipment Services & Repair					
CAS	PCS Web Services Contracting Pool					
CIS	Apple	Eaton				
ENROLL	Campus Management Corporation	Apple				
FASS	AssetWorks					
HEALTH	Eaglesoft (dental clinic)	Legacy EHR Practice Partner	Medicat HER (RDP)	Onsite Lab-Harvest (lab Interface)	ProPharm (Pharmacy)	HI (Physical herapy)
HOU	Kronos					

## Campus Engagement Report for Transform IT – October 2018

LIB	Alma & Primo (ExLibris Vendor)	Diversified	Orbis Cascade Alliance			
LCB	Digital Measures	Salesforce				
SAIT	CS Gold	Fusion	Maxient	Titanium		
JAQUA	Delta AV	Pacific Office Automation				
SOJC	Canon	Smartsheet	Ustream	Vimeo		
SOMD	Piano People					
TLC	Ideal Logic					

*Note: As part of the Enterprise Software Committee's campus software audit in 2016-17, additional business applications can be found in Appendix J.*

### Observations Business Applications

As the needs of campus have grown, so have the number of applications to support those needs. Our observation is that there does appear to be multiple business applications being used on campus that support very similar services. There are also many applications that support unique needs identified by multiple groups on campus.

There are applications that are purchased by departments without consulting either their own IT department staff or central IT staff. For example, there were 5 separate CRM applications reported being supported by IT departments on campus, however the Enterprise Software Committee found, in the FY 2016 audit that there are actually 17 CRM applications being used on campus.

### Network Management

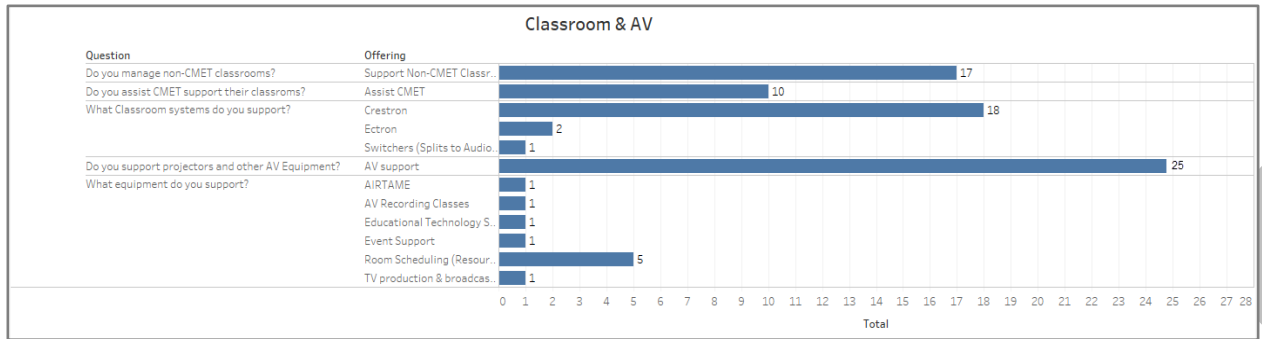
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### Classroom and AV Support

Services to ensure classrooms are suitably equipped and functional to meet the needs of the education experience.

- Number of units: 25 units
- Total staff hours: 813 hours per week
- Unique service offerings: 9

## Campus Engagement Report for Transform IT – October 2018



### Observations Classroom & AV

A reported 77% of campus classroom/AV technology support is provided by the Library (CMET). The remaining 23% support for non-CMET supported classroom/AV technology is provided by the distributed IT units or third parties.

### Server/system Administration

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### Software and Applications

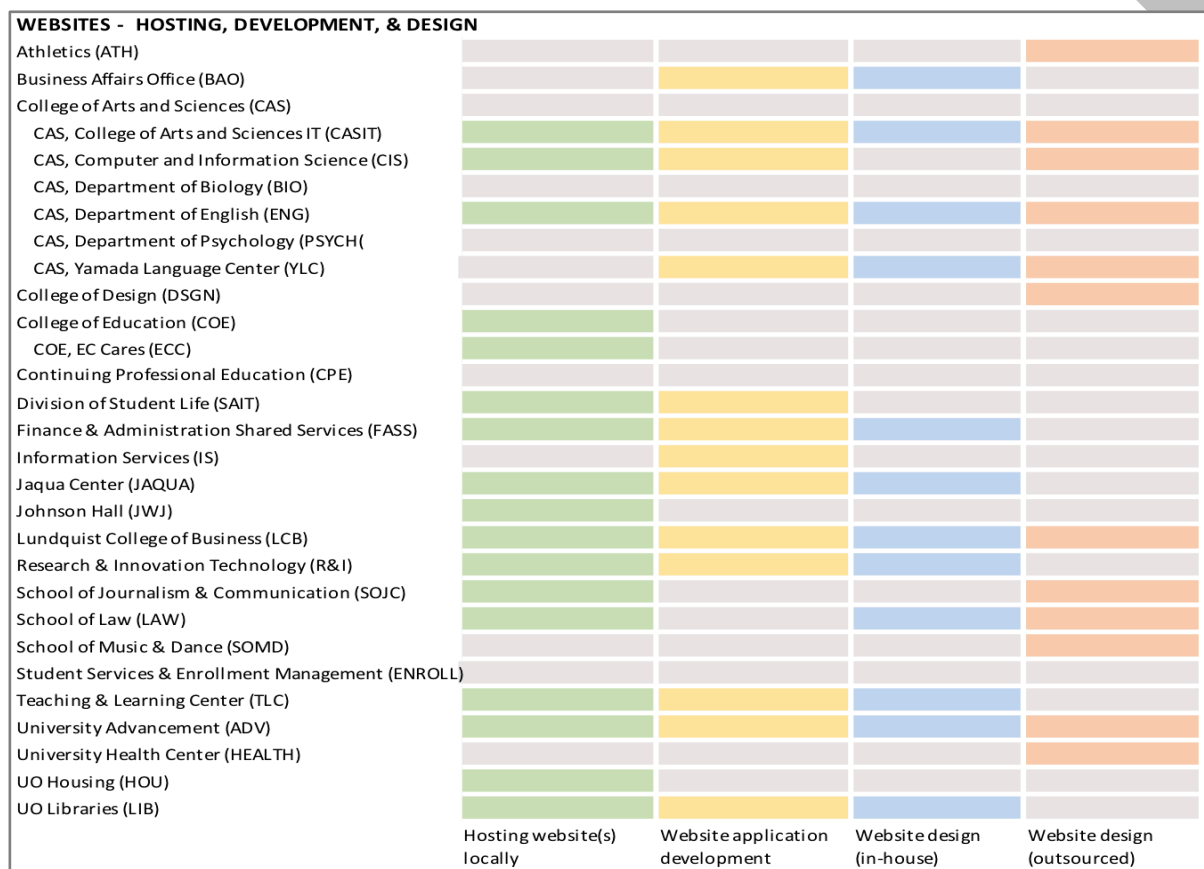
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# Campus Engagement Report for Transform IT – October 2018

## Websites – Hosting, Development, and Design

Tools, services, and products that support website and mobile application development, hosting, media development, etc.

- Number of units:
  - Hosting websites – 17
  - Doing website application development – 15
  - Doing website design in house – 21
  - Outsourcing website design - 12
- Total staff hours: 445 hours per week
- Unique service offerings: 7



The chart above shows what units are involved with different aspects of web hosting, web development and web design.

- Web hosting - providing storage space and access for websites.
- Web development - building, creating, and maintaining a website, computer program, or a set of programs to perform tasks that a unit requires for business operations.
- Web design - creating websites (including web page layout, content production, and graphic design).

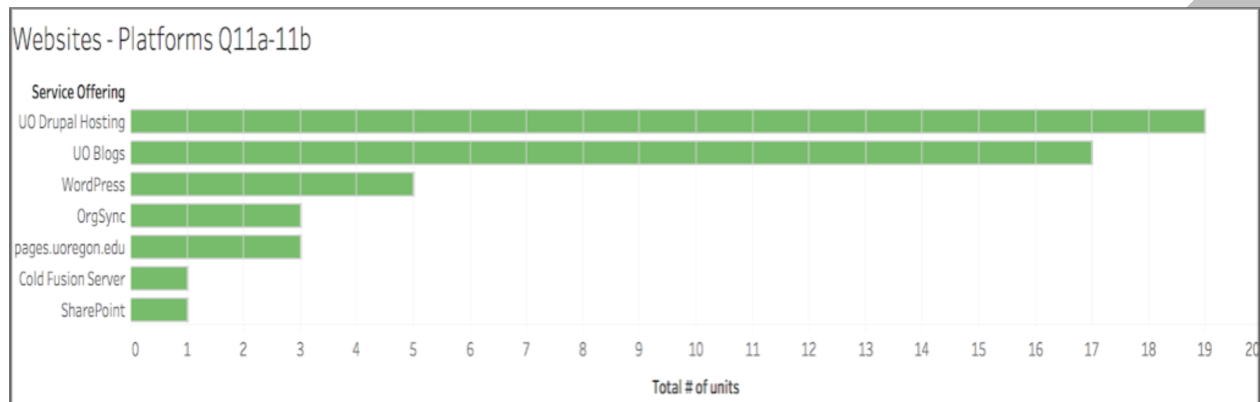
A colored square within a row represents work being done by a unit, related to the service described in the columns.



## Campus Engagement Report for Transform IT – October 2018

### Observations - Websites

During the interviews, it was noted that there is a great need for web development work, which at times necessitates faculty, researchers and other staff to try to assume the role of a developer, even though they believe they should be focusing on their primary work. Units are generally aware of the differences between WordPress and Drupal. (refer to chart below for other website platforms used on campus)



Additionally, application development is recognized differently than course design by units, and a department's needs are different from a faculty's needs as far as development and design is concerned. Because of this difference, it was suggested that a future development talent pool for administrative needs be separate from the talent pool available to faculty's needs.

The United States has laws about accessibility standards and guidelines for web sites. The main goal of accessibility standards and guidelines are to design websites everyone can use. When creating web materials, paying close attention to formats makes it easier to incorporate accessibility features. The UO currently seems to have an FTE shortage to not only keep up with these standards, but to go back and retro-design existing pages that do not meet the standards. The current model and distribution of the FTE could be examined in more detail.

Units reported that:

- Faculty would rather work one-on-one with a single developer for the life a project and that the developer have the skills specific to academics.
- Business offices or units can work with many developers to complete the needs of the department, the department's web presence, or business processes.

## Accounts and Access

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## Information Security

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## Lab Management

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## Telephone

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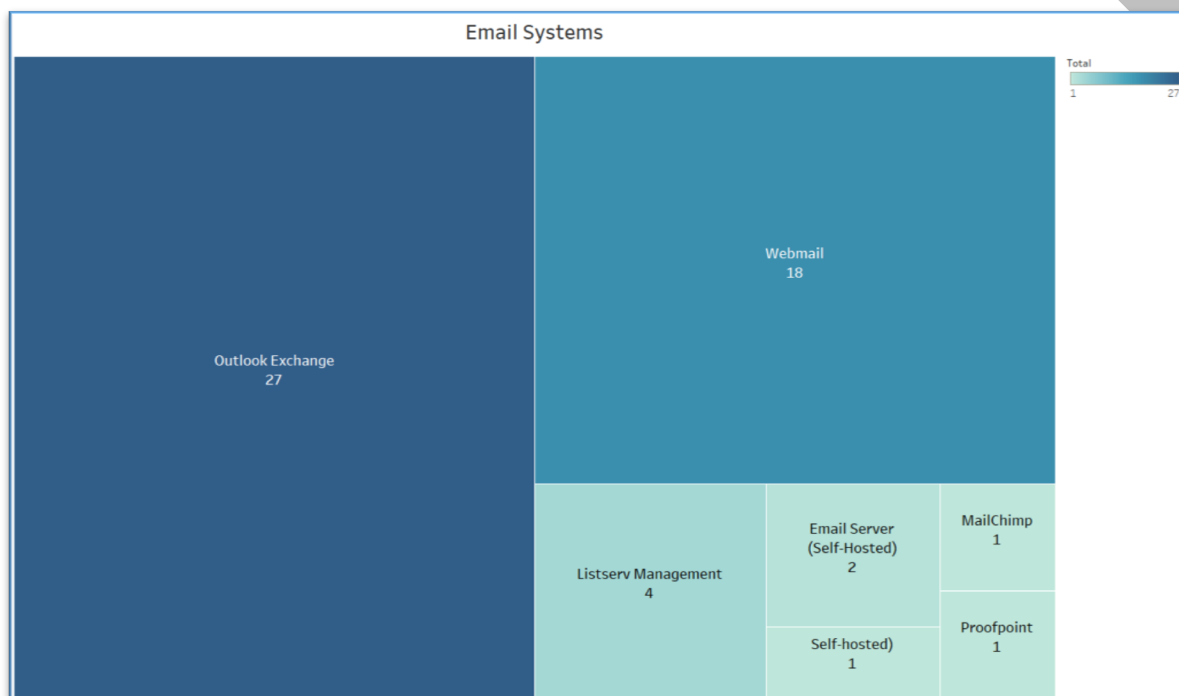
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## Campus Engagement Report for Transform IT – October 2018

### Email & Calendaring

Services associated with email, calendaring, contacts, broadcast mail, enterprise-wide mailing list management, and spam.

- Number of units: 28 units
  - Exchange: 27
  - Webmail: 18
  - Other mail services – 9
- Total staff hours: 266 hours per week
- Unique service offerings: 7



#### Observations - Email

The two predominant email systems in use on campus are:

- Exchange - offered to all faculty and staff
- Webmail - offered to all students

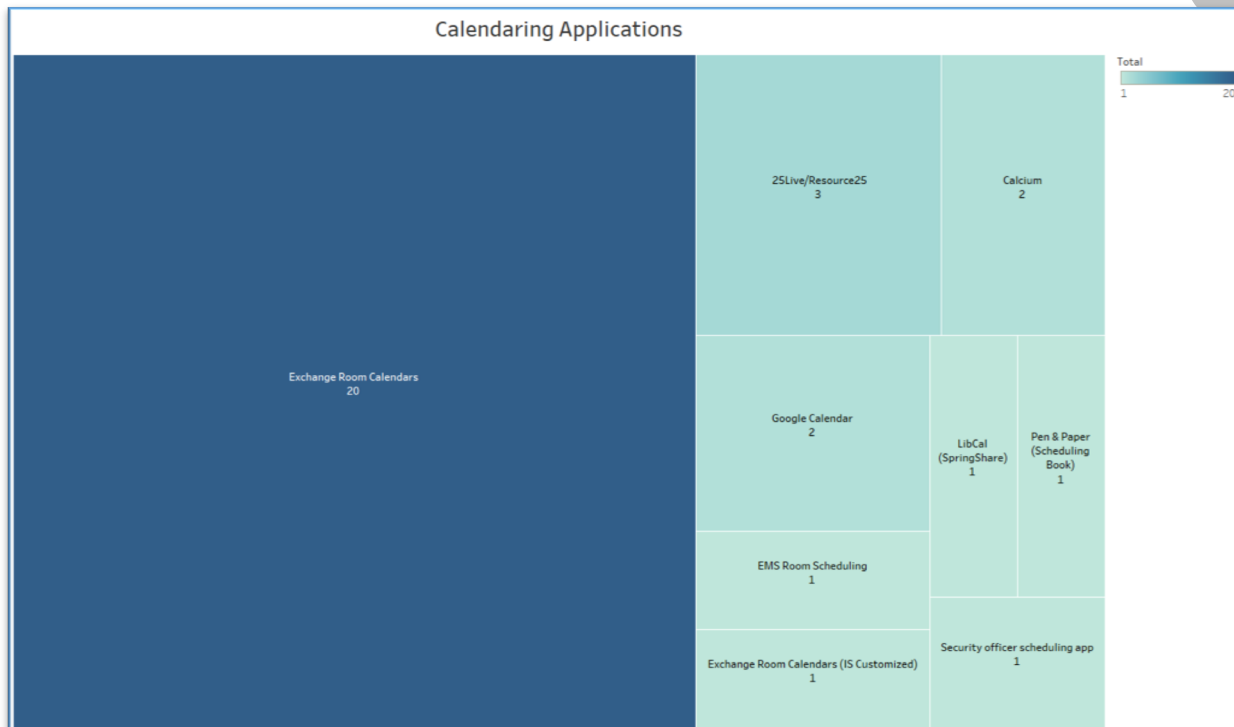
In addition, UOPD hosts a separate Exchange server for security purposes and there are a few departments who have chosen to host separate email systems.

It was also noted in the interviews that Exchange administrators said they receive most of their support from other unit Exchange administrators rather than from central IS Exchange administrators.

# Campus Engagement Report for Transform IT – October 2018

## Calendaring Applications

- Number of units: 28 units (classified with Email)
  - Exchange: 20
  - Unique service offerings: 8
- Total staff hours: 266 hours per week (classified with Email)



### Observations - Calendaring

It is evident that Exchange room calendars are adopted and in use by most IT departments on campus. There were 8 other applications being used for room calendaring, with 3 of those applications being used by two departments each.

In August 2018 the UO purchased EMS, an enterprise room scheduling and events calendaring system, which is scheduled to go-live sometime in mid-December 2018. The application will be available at no charge to all campus units. EMS will be used for managing and coordinating space and resource assignments for academic classes and university events and will provide a single source of information about campus activities.

### Printing

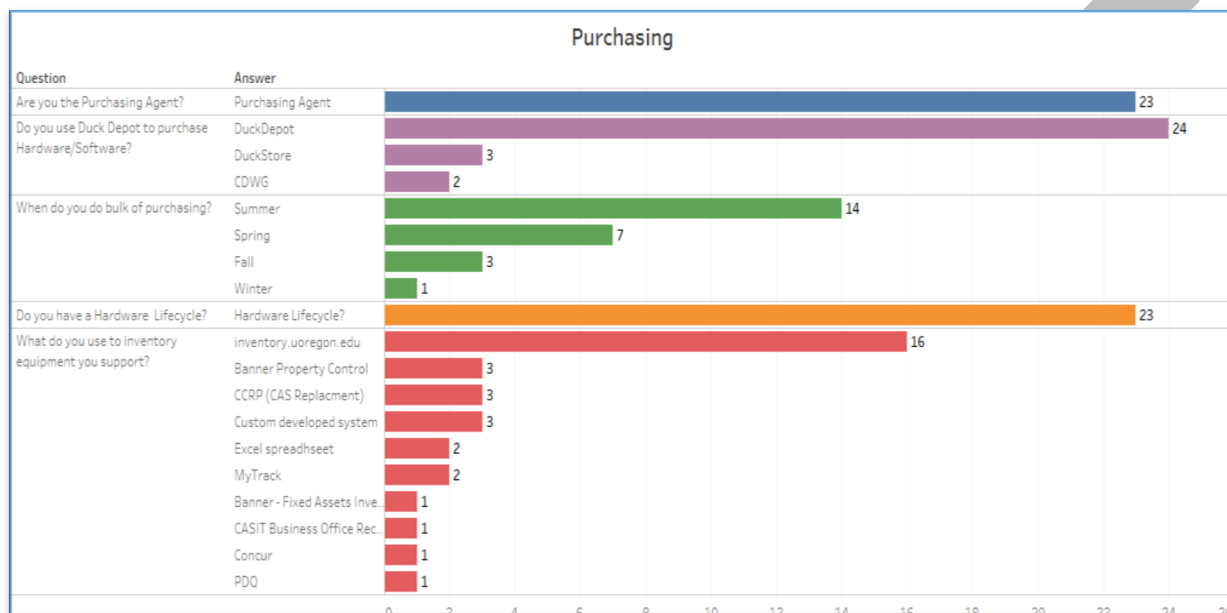
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## Campus Engagement Report for Transform IT – October 2018

### Purchasing & Asset Management

The process used to purchase departmental equipment, includes the hardware lifecycle, time of year equipment purchased, where asset information is stored, etc.

- Number of units: 25 units
- Number of staff hours: 263 hours per week
- Unique asset tracking offerings: 10



#### Observations – Purchasing

Generally speaking, the IT directors in each IT unit on campus are acting as the purchasing agent for IT related purchases for their departments.

Most IT units are using Duck Depot for purchasing IT related items. Others have mostly “home grown” systems or online purchasing systems (CDWG – Dell) that they use. This is mostly due to familiarity.

Approximately 16 IT unit are also using inventory.uoregon.edu to catalog their IT related hardware.

Twenty-three IT units have adopted a hardware lifecycle replacement policy although the length of those lifecycles vary across departments from 3 years to 5 years. There are also differing lifecycles for server-based equipment. Not all departments are able to have a lifecycle for their servers because of unit funding models. It was noted that there are many servers that are beyond expected life cycle replacement age and they are still in use. Again this is due to inconsistent funding models for replacing server hardware. Often these are purchased with “one-time money” so replacing them is not planned for.

## Equipment Checkout

<data to be added in subsequent draft>

## Teaching and Learning

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## Educational Technology Consulting

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## Data Center/Server Closet

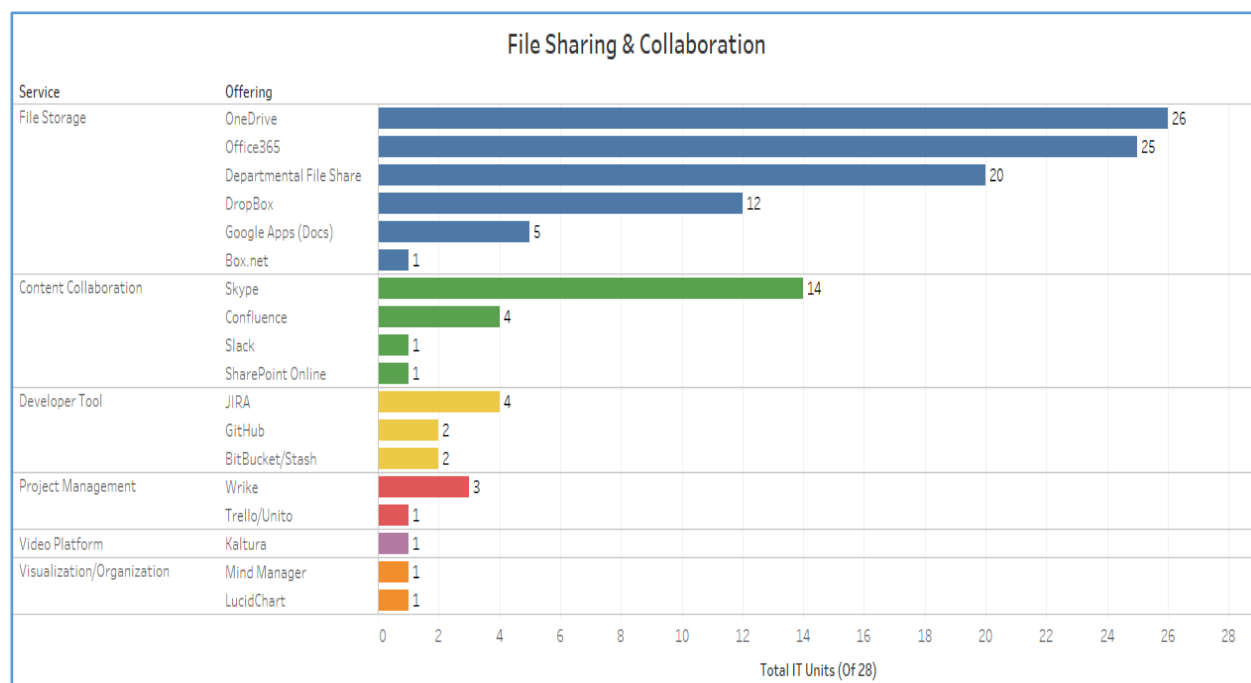
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## File Sharing

Services used to collaboratively share files with other users, both internal to the UO and external to constituents outside of the University of Oregon. This includes the ability to view, edit, and display electronic files.

- Number of units: 28 units
- Total staff hours: 194 hours per week
- Unique service offerings: 18
  - File storage: 6
  - Content collaboration: 4
  - Developer tool: 3
  - Project management: 2
  - Video: 1
  - Visualization: 2

## Campus Engagement Report for Transform IT – October 2018



### Observations – File Sharing

As seen with other IT services and solutions on campus, many options are available to campus users to accomplish many file sharing tasks. Bundled inside the file sharing heading are applications that do many different things. The chart representing file sharing and collaboration applications needs careful scrutiny before making a decision based on the data represented. For example, Kaltura is a video platform and video streaming service, and Skype is used to talk, chat, and collaborate. Many tools try to provide many services and very few limit themselves to providing only one service.

Though Office365 and OneDrive are the most widely used in this subject heading, many of the respondents expressed some level of frustration with the current deployment. We were told that this frustration has prompted groups to use or purchase other solutions such as Dropbox or Google Drive. Sharing and permissions difficulties were a commonly expressed reason for not using OneDrive, as are collaborative access, synchronization problems, lack of administrative control over the service, and missing features. OneDrive is the single campus solution currently in use that is actually compliant with FERPA, HIPPA, and PCI. The UO does not have a business associate agreement (BAA) in place with any other solution to date. This subject is another area offering a rich environment for further exploration.

### Training

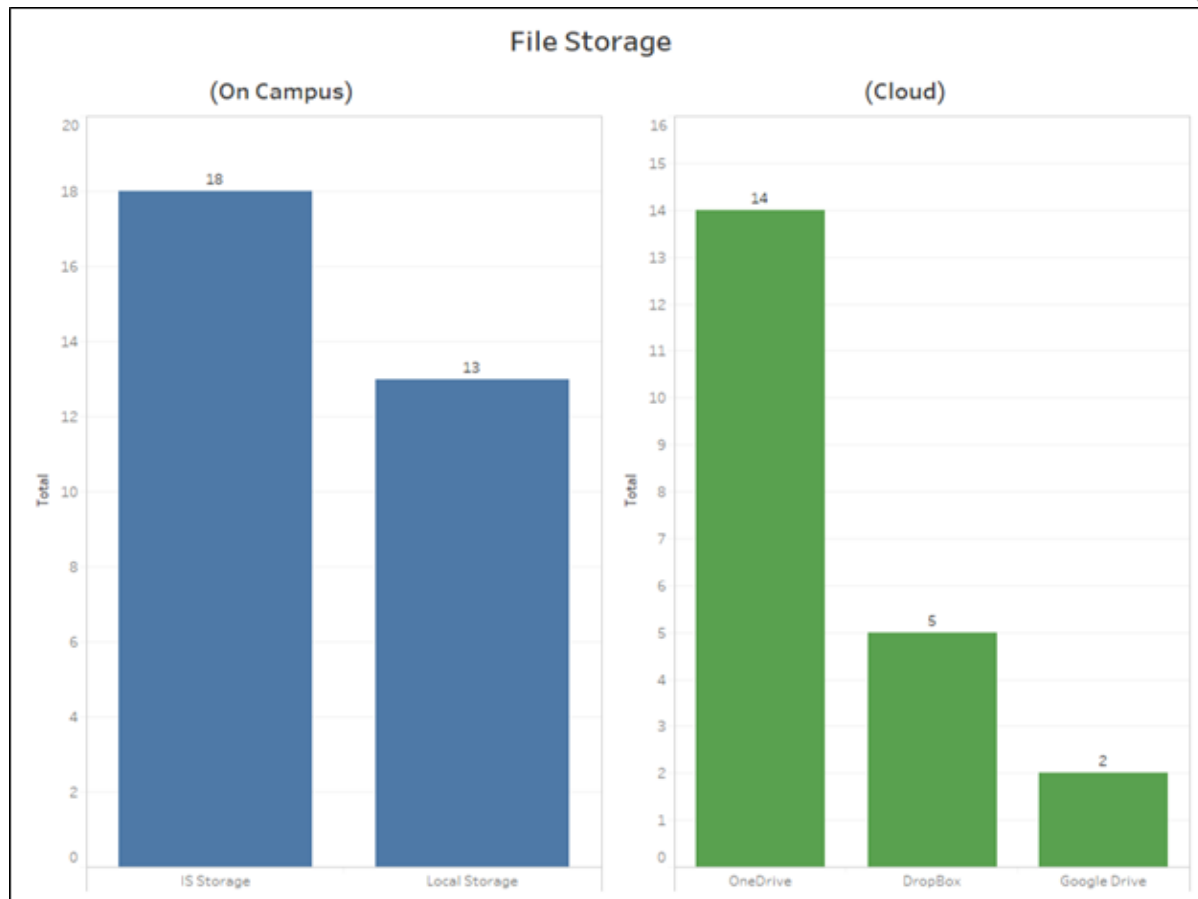
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## Campus Engagement Report for Transform IT – October 2018

### File Storage

Back-end technology and services required to maintain storage capabilities, including server storage, data back-ups, etc.

- Number of units: 24 units
- Total staff hours: 129 hours per week
- Unique service offerings: 5



#### Observations – File Storage

Saving files to a file server on campus can be broken into two distinct categories: files stored locally (on premises), and files stored off-campus in the cloud. IS storage and local storage both represent files stored on campus on UO hardware, while OneDrive, Google, and Dropbox are cloud storage services. Some units have started storing their files in the cloud due to the high cost of buying more local commodity hardware. The trend of moving file storage to the cloud continues to be seen on campus as more users and units move workflow to the cloud.

Data storage, and in particular, a cloud-based storage system, was the most frequently mentioned “wish-list” service discussed.

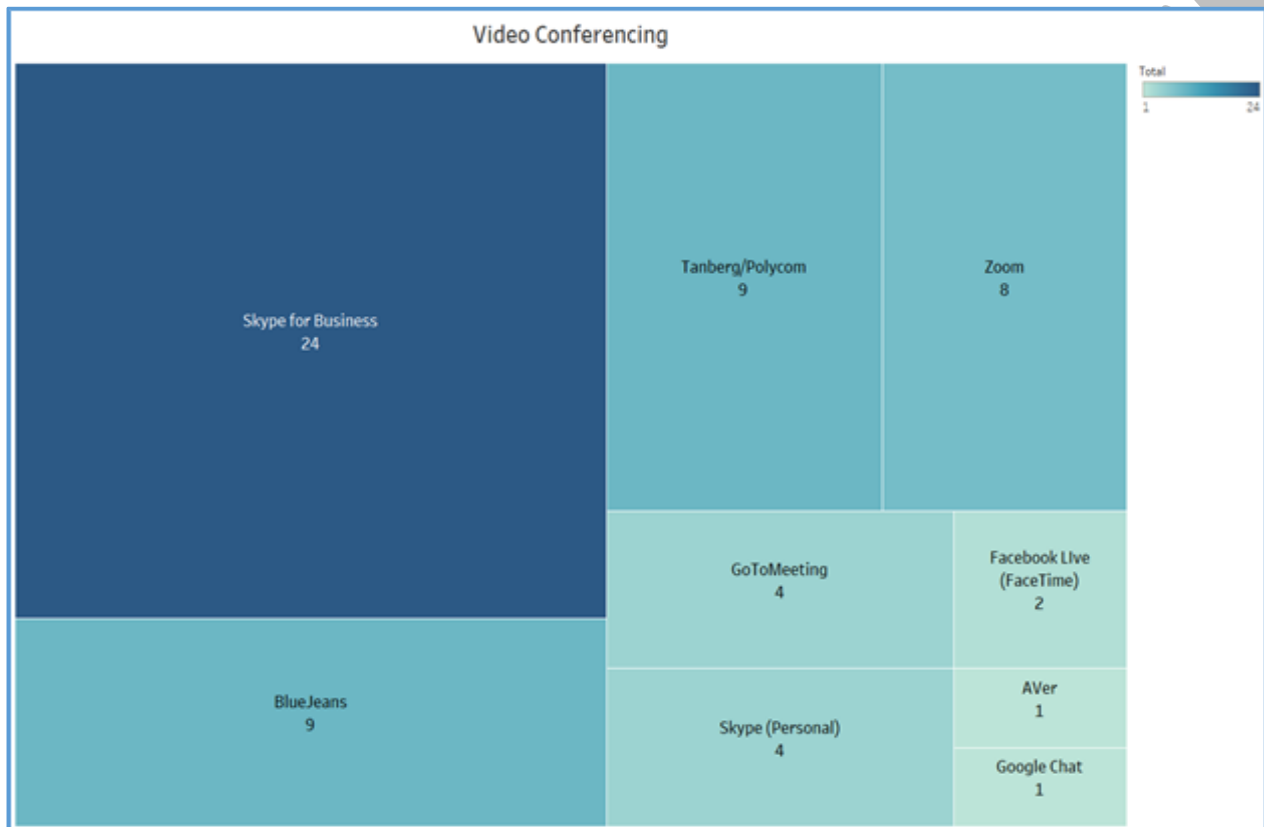


## Campus Engagement Report for Transform IT – October 2018

### Video Conferencing

Services that use sound and video from each participant in real time with other participants in other physical locations, enabling those participants to have a real-time exchange.

- Number of units: 28 units
- Total staff hours: 128 hours per week
- Unique service offerings: 9



### Observations – Video Conferencing

There are 9 different web/application based video conferencing systems in use on campus and there are 2 hardware based video conference systems in use.

Several people expressed frustration with Skype for Business around its quality of service and problems connecting. Others expressed frustration with the costs of BlueJeans. Zoom has gained some popularity on campus.

## Campus Engagement Report for Transform IT – October 2018

It was also noted that many people, especially research faculty, are using personal Skype accounts for video conferences though they note that it is better for one-on-one meetings rather than one-to-many or many-to-many.

Video conferencing is another area where people expressed a desire for campus to unite on a single platform, as long as that platform performs well in our environment and with users from other locations.

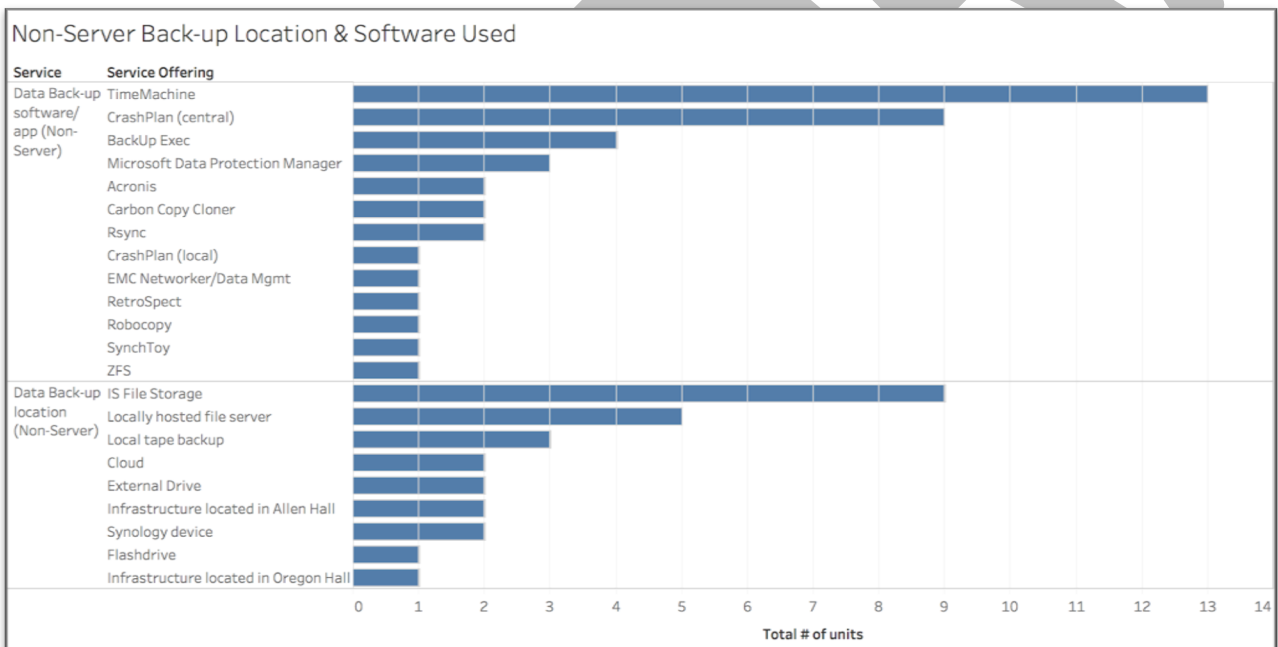
## Knowledge Management

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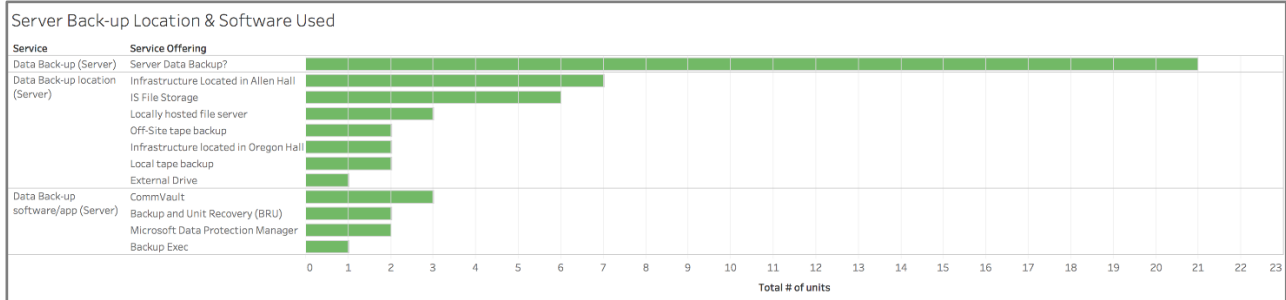
## Data Backup

Technology and services required to back-up data.

- Number of units: 24 units
- Total staff hours: 121 hours per week
- Unique service offerings: 13 non-server / 4 server
- Locations: 9 non-server / 7 server



# Campus Engagement Report for Transform IT – October 2018



## Observations – Data Backup

There are many kinds of data backup services on campus that help the UO ensure that data is secure and critical information is not lost in a natural disaster, accidentally, or other kind of emergency. Data backup has been separated into server back up and non-server or desktop backup.

### Non-server backup

It should be noted the leading Time Machine service offering noted in the chart above is a Macintosh-only desktop-only solution where a user connects an external hard drive (typically ~\$85.00) to their desktop computer as a backup solution. This practice should not be considered an enterprise solution for Mac-users. Several other non-server service offerings listed should also be considered non-enterprise solutions. The most prevalent enterprise solution is CrashPlan offered by IS, available to Windows and Macintosh computers, and the cost per license is \$82.50 annually.

Most desktop data being backed-up outside of a locally connected hard drive is being done by backing up data to a networked IS file share, or a local departmental server offering file shares to their users.

The number of non-standard methods and tools used to backup non-server data offers an opportunity for further exploration of the services offered.

### Server Backup

Server data is being backed up, and mostly in appropriate data centers. We learned several local servers were targeted for retirement or relocation to a data center within a year, which will increase the servers in appropriate data centers numbers. Server-side data backup software solutions are diverse and offer an opportunity to dive deeper into discovering whether a unified method and license would be in the university’s best interest.

## Consulting/Project Administration

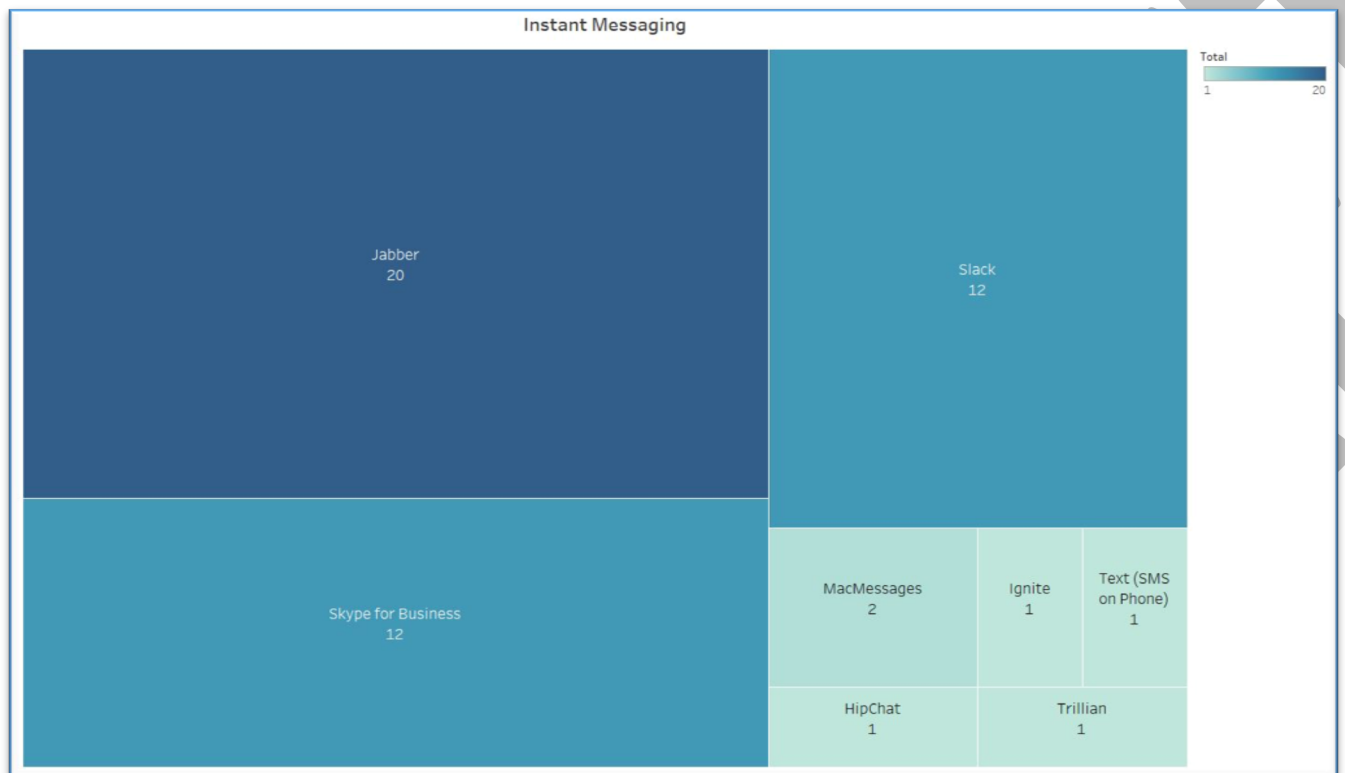
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## Campus Engagement Report for Transform IT – October 2018

### Instant Messaging

Services used to transmit electronic messages instantly from one user to another.

- Number of units: 22 units
- Total staff hours: 30 hours per week
- Unique service offerings: 8



#### Observations – Instant Messaging

Most IT units are using some form of instant messaging (IM) within their departments and some use IM to communicate with other departments. Most reported that their need was within their department.

Although Jabber was the more prevalent IM platform, Slack continues to be very popular. More groups are beginning to use Skype for Business Instant Messaging as well. There are opportunities to look into ways to offer a common IM platform. It was noted during the interviews that the people using Slack like the feature set it includes.

# Campus Engagement Report for Transform IT – October 2018

## Digital Signage

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## IT Strategic Planning

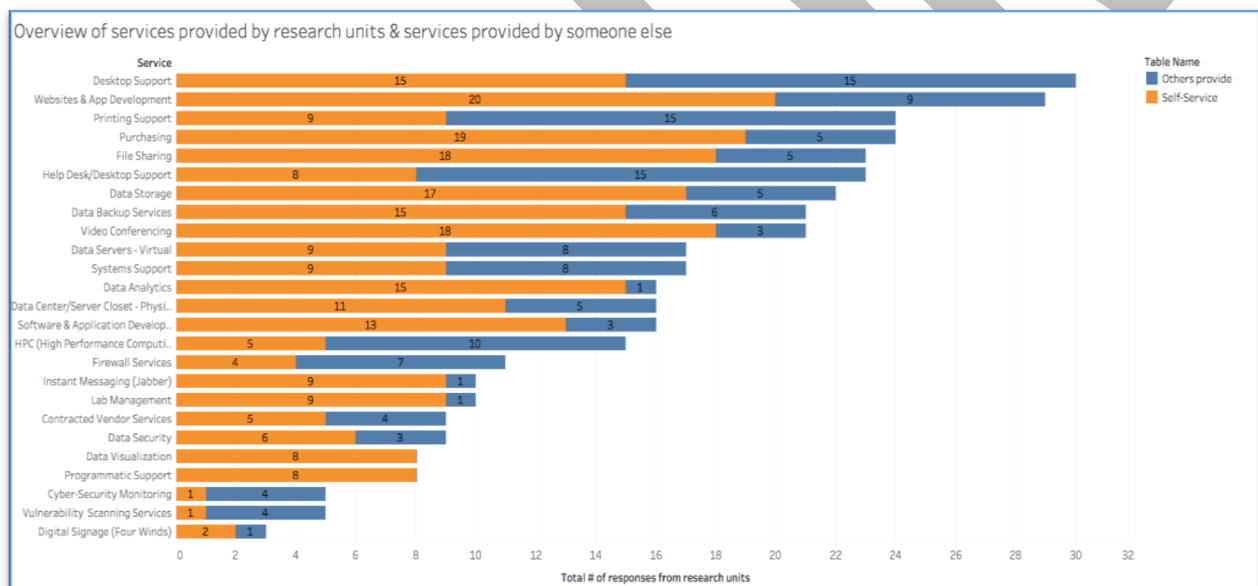
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## Research

### Research Observations

Research groups on campus have not been a part of previous IT reports and individuals with whom we met were pleased to be considered part of the Transform IT process. The CEP team was able to meet with all of the identified research groups (24 of 24).

The question set used for research units was different than those used for academic and administrative IT units since the scope and nature of IT is different between these groups. The chart below combines services research provides for themselves and, services others provide for research.



The greatest area of desired interest for the research community:

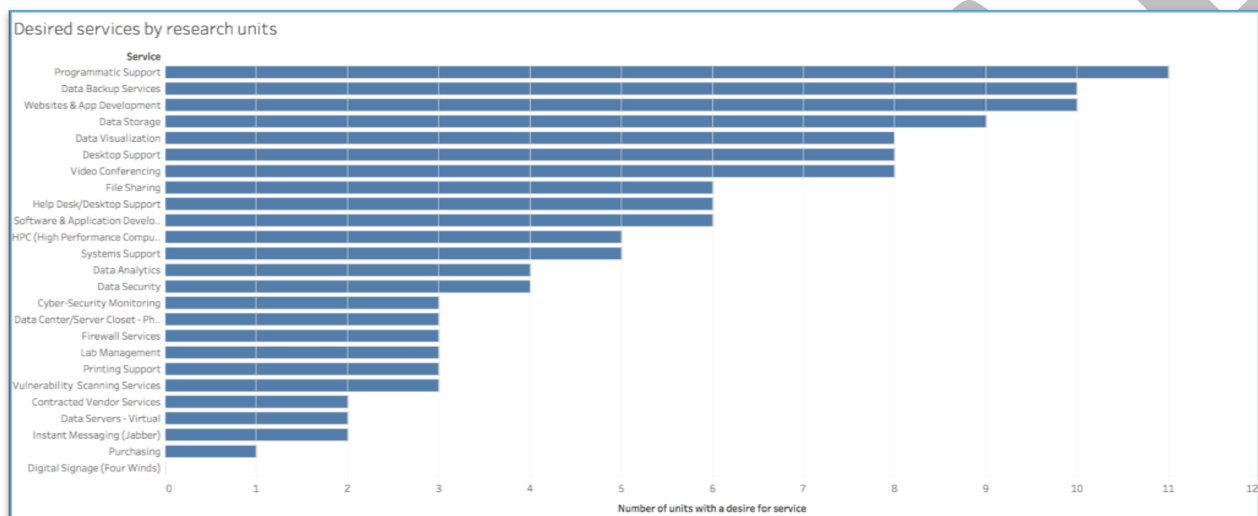
- Programmatic support or consultation.

## Campus Engagement Report for Transform IT – October 2018

The next most needed services were:

- Data backup
- Storage solutions
- Website development
- Application development
- Desktop support

These needed service areas come with conditions, such as working with a single IT professional rather than by a ticket that then gets routed to several IT staff. Time is one of the greatest commodities to research and any time spent managing IT support will not be a beneficial service to research.



### Observations

#### ***Cultural Challenges***

A historical distrust by research units of enterprise services and solutions persists on campus. Those interviewed recalled times when services were provided one day and then withdrawn without warning the next, or a “campus-solution” being initiated without secure funding for the long term leading to a discontinuation of the service some time later. Researchers mentioned a long-standing distrust of central services, preferring to provide these services themselves. Data storage and systems administration are two examples of areas where research groups prefer to provide for themselves. Doing so offered a way of guaranteeing uninterrupted continuation of their research and fulfilling obligations to their granting agencies. In a few cases, a graduate student's role is to guarantee the continuation of IT service for a research unit. Many groups expressed that they can provide service better and for less money than a centralized solution can offer.

#### ***Downtime***

One example of interrupted workflow for a research group is when IS has scheduled service downtime, though some of our research units collaborate and offer services globally 24 hours a

## Campus Engagement Report for Transform IT – October 2018

day. UO's scheduled systems downtime in the middle of our night disrupts the services and collaboration a researcher offers to those on the other side of the world, during their business hours. A suggested solution would be for the UO to offer cloud-based services which typically do not have scheduled downtimes, such as Amazon's S3 services. Research groups believe the data centers on campus cannot compare to the security, the number of personnel, the infrastructure, the cost to our research groups, nor the uptime of a platform like Amazon's services. Given the choice, many research groups would rather use Amazon's services, which also do not have the speed restrictions found on campus for high speed data transfer and collaboration. Downtime, speed bottleneck, permissions request processing, inflexibility, high cost, and lack of complete control over their data, are also seen as negatives to using centralized UO resources.

### ***IT Support***

The rules surrounding who receives support is inconsistent for research groups across campus. Research support is often seen as having been established unfairly. In some instances, a graduate student is not allowed hardware support, but the sponsoring faculty member is allowed hardware support. To avoid this situation, the faculty researcher will ask for support for "their own" hardware when it is fact the grad student's hardware.

### ***Infrastructure Management***

Research groups expressed a desire to manage their own IT infrastructure stating they are responsible for their grants, for their research, for the relationship with granting agencies such as the NIH, NSF, etc. Researchers do not want to risk those relationships nor funding opportunities by introducing what they view as unstable centralized service into their workflow.

### ***Computing Needs***

Researchers also want to compute in-line with their research rather than having their computing habits dictated or altered to suit UO IT infrastructure. Research groups believe OU IT should conform and support their workflows, rather than research conforming to OU IT workflow. As such, many groups have their own hardware infrastructure in place as well as administration duties, which are provided by either the researcher or a graduate employee.

### ***Analytic Support***

Lastly, research groups do not want analytic support, nor student assistance with their IT issues and would prefer to work with professional IT support staff when assistance is needed. They would prefer to have a professional a la carte menu of services to call upon when needed.

## General Campus-wide Observations

The project charter does not include making recommendations. However, the following are observations gathered and noticed when speaking with groups and units. The sentiment was often expressed that IT staff on campus are offering a broad range of IT services with limited resources (staff and money).

### ***Uniqueness***

Units want to cooperate and share resources, yet they want to provide their own solutions due to the unique nature of their department and constituency. Many units described how they, their customers, and their services were unique and should be considered so.

### ***Cost of creativity***

Universally across IT on campus, there is a sense of pride in the work being done and the inventiveness in which it is delivered. Oftentimes budget or personnel shortfalls will not deter our IT personnel from successfully delivering services to their customers mostly through resourcefulness and determination. While the efforts our units have had to go through to deliver service should be applauded, it has also led to further decentralization by units having to come up with their own solutions rather than buying into a centralized service that may cost more to buy into than the self-provided solution.

### ***Previous reports***

As noted in the Baker Tilly report “IT services are delivered to faculty, staff, students, and other University community members by all IT units. While not all IT units provide the same types or levels of services, many of the services are duplicated across IT units (e.g., end user support, application development).” Baker Tilly’s findings are described as a risk assessment. Most risks were presented as a lack of cooperation between units and having a negative financial impact to the university. These findings align with our observations and data collected during the Campus Engagement Project. However, units generally prefer to provide IT services by themselves for their customers.

### ***Haves and Have Nots***

In terms of IT support and services provided across campus there is a culture of the “haves and have nots.” Units with adequate resources can provide for themselves, while those without adequate resources cannot provide nor afford to contract for adequate IT support. This disparity plays a part in increased security risks, and the continuation of Wi-Fi “dead-spots” across campus, as units are expected to provide funding for their own Wi-Fi base stations for area coverage. Some units operate by receiving handed-down older computers already past their lifecycle donated by larger units, free software solutions, and very long Ethernet cables rather than Wi-Fi. On the other side of the spectrum, larger units typically create their own solutions when needed rather than opting for a standard yet non-enterprise system already on campus. The funding disparity leads to systems that are difficult to support, have associated security issues because of their age, an inconsistent Wi-Fi footprint visible to students, faculty and visitors, and an increase to the decentralized IT model the UO is attempting to turn away from.



## Campus Engagement Report for Transform IT – October 2018

### ***Faster Service***

One common reason for units wanting to provide their own service was timeliness. Units do not want to wait a great deal of time for a response or a solution, nor do they want their submitted service request ticket repeatedly passed to different solution providers. Many units mentioned that they can provide IT service faster than a centralized service would be able to offer. Units also repeatedly suggested the relationships and trust they have formed with their customers is important and should be considered when formulating Transform IT solutions. A frequently heard concern was that common mediocrity would be the new normal (rather than the existing exceptional service now enjoyed by units) if the UO moves to a centralized service solution.

### ***Necessity of Collaboration***

There are many cases where IT units have collaborated to provide services to other functional areas of the University because of a lack of an available enterprise solution. An example would be for Time and Attendance software in the form of a Kronos license, which several units have bought into. While some IT units offer support for Kronos, others do not. As the Baker Tilly report notes, this practice introduces risks because the non-enterprise hosting IT unit offering an enterprise solution can affect many of the other IT units due to the level and complexity of the collaboration between IT units. Another example of collaboration is Exchange administrators within units supporting each other rather than relying on enterprise support from IS.

Many units would like to offer their services to other units on a formal basis, while other units want more collaboration and sharing of common services. This contrasts to some units that would be considered "IT silos" that would rather remain isolated stating they know they can offer better services on their own.

### ***Collaboration***

There was a good deal of frustration expressed around collaboration tools available to the UO Community. This includes both file-sharing applications as well as video conference solutions. This has led to a proliferation of tools being used. Sharing and permissions difficulties are a common frustration, as are collaborative access with non-campus users, synchronization problems, lack of administrative control, missing features, and downtime. Another concern in this area is FERPA, HIPPA, and PCI compliance and many tools do not provide assurances for compliance. It appears that there is opportunity for the University to improve and unify campus in the area of collaboration tools.

### ***Transform IT***

Units want to proceed with Transform IT sooner than later. Many expressed frustrations with the length of time this project is taking, yet they agreed with the steps being taken and the manner the UO is proceeding.

### ***Changes through time***

Contrary to the previous reports, we have noticed a reduction in the number of data centers and distributed systems across campus. Hardware racks have been consolidated and physical servers have been virtualized into a centralized VM solution. Very few physical servers remain deployed in units and many have been targeted for retirement or virtualization within a year or less. Another difference between the reports is most units are now using Exchange for email and calendaring.

## Campus Engagement Report for Transform IT – October 2018

### ***Autonomy***

While there are many that want someone to provide core services for them, there remain those that want to retain their IT autonomy. For instance, several units can still move their own jacks from within switch closets, a few more wish they could do the same. Other units were glad to not have the responsibility for core services like moving jacks. The reason units want to retain the ability to provide their own services is again due to their desire for faster service at a lower cost as mentioned above.

Several smaller units have on staff IT personnel we might call the "jack of all trades," which made it difficult to identify exactly what services they offered.

Some personnel in the form of "solitary IT islands" would like to have backup so when they are away from campus, the services they offer can continue in their absence.

### ***Common Suite of Services***

Many units expressed a desire for a common suite of services for all UO community members regardless of reporting structure. In addition to existing services, many suggested this suite of "free" services should include common training and documentation, desktop support, a formal campus-wide cloud-based data storage and backup service (other than OneDrive), and Wi-Fi without dead spots covering all of campus without fee to units. Several units expressed an interest in a consultation service where a consultant could meet with a unit and listen to their challenges, offer solutions based on existing enterprise services and offer a road map or plan forward for the unit.

### ***Development***

Tangential to the have and have not observation, it was noted during the interviews there is a great need for development work, which currently necessitates faculty, researchers and other staff trying to assume the role of a developer when they believe they should be focusing on their primary work.



## Next Steps

- Review results with Jessie Minton, Vice Provost for Information Services and Chief Information Officer.
- Hold Transform IT Workshop for IT Directors and Staff
  - October 1-2, 2018
- Present results to Transform IT Steering Committee and service transition committees to review and determine service areas to investigate in greater detail.
  - November 2018
- Begin Service Migrations
  - January 2019

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# Campus Engagement Report for Transform IT – October 2018

## Appendices

**Appendix A** - [IT Unit – Interview Questions \(Link\)](#)

**Appendix B** – [IT Unit – Service Inventory Spreadsheet \(Link\)](#)

**Appendix C** - [Research Interview Questions Matrix \(Link\)](#)

**Appendix D** – [IT Unit - Excel Response Raw Data \(Link\)](#)

**Appendix E** – [Research Department - Excel Response Raw Data \(Link\)](#)

**Appendix F** – **Glossary**

Term	Definition
General Terms	
Service	A means of delivering value to customers by facilitating the outcomes the customers want to achieve without the ownership of specific costs and risks. In other words, when we do something for our customers that gives them something they want or value, we're providing a service.
Service Offering	The specific technology-focused activity or product used to deliver a service. These can be software bundles, custom application solutions, or other technology that enables a service offering.
Service Type	A logical grouping of services that benefit from being managed together. These are high-level groupings and are not visible to customers. Service types should reflect the strategic goals of the institution and align with the overall governance model for IT services.
Collaboration Service Types	
Collaboration	Services that facilitate the creation, sharing, and exchange of information and ideas with communities of interest.
Email & Calendaring	Services associated with email, calendaring, contacts, broadcast mail, enterprise-wide mailing list management, and spam.
Telephone	Services related to telephony, including voice services, teleconferencing, voicemail, etc.
Video Conferencing	Services that use sound and video from each participant in real time with other participants in other physical locations, enabling those participants to have a real-time exchange.
Websites	Tools, services, and products that support website and mobile application development, hosting, media development, etc.

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End-Point Computing Service Types	
Desktop Support	Services related to providing support for desktop computers, laptops, and devices, including associated operating system and application software.
Equipment Checkout	Tools and products related to checking out equipment.
Printing	Services related to providing support for printing.
Software & Applications	Services and applications that are related to software licensing and distribution and SaaS applications.
IT Professional Services Service Types	
Data Back-up	Technology and services required to back-up data.
Data Center/Server Closer	Management of physical data centers and/or server closets.
Network Management	Includes maintenance of items required to offer network connectivity.
Server/Systems Administration	Provisioning, hosting, and administration of servers - physical and virtual.
Storage	Back-end technology and services required to maintain storage capabilities, including server storage, data back-ups, etc.
Training	Training services for end users on IT applications and systems
Security Service Types	
Accounts & Access	Services in support of authentication, access, and role-based provisioning to ensure secure and appropriate authentication to UO services.
Information Security	Services that support security, data integrity, and compliance for institutional activities. Includes services that provide a secure computing environment for end users.
Teaching & Learning Service Types	
Classroom & AV Support	Services to ensure classrooms are suitably equipped and functional to meet the needs of the education experience.
Educational Technology Consulting	Services to ensure that faculty and other course creators have the knowledge and assistance needed to optimize their effectiveness in using teaching and learning technologies.

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Lab Management	Services and tools related to supporting and managing instructional labs.
Teaching & Learning	Services associated with instructional technology and tools that support teaching and learning. Includes LMS, course evaluations, lecture capture, and other academic tools for faculty and students.
Administrative Service Types	
Business Applications	Enterprise services that support the administrative and business functions of the UO. Includes document management, business intelligence, reporting, finance, human resources, student information systems, advancement, and research administration.
Other Service Types	
Contracted Services	Other services not listed above that are contracted with a vendor to provide services to your unit.
Functions	
Help Desk	A unit made up of dedicated staff who act as a single point of contact and are responsible for technology support, including but not limited to: desktop and device support, tier 1 troubleshooting, escalating and triaging tickets to appropriate resources, and handling break-fix issues. Support may include visits (in-person or virtual) to an office/workspace or the end-user coming to a dedicated space
Processes	
Knowledge Management	Internal and external wiki/documentation repository, includes self-help documentation for end users.
Purchasing & Asset Management	The process used to purchase departmental equipment, includes the hardware lifecycle, time of year equipment purchased, where asset information is stored, etc.

## Appendix G - List of IT and Research Units Interviewed

### IT Units

- Athletics (ATH)
- Business Affairs Office (BAO)
- Continuing Professional Education (CPE, formally known as Academic Extension (AE))
- College of Arts and Sciences (CAS)
- College of Design (DSGN)
- College of Education (COE)
- Computer and Information Science (CIS)
- Department of Biology (BIO)
- Department of English (ENG)
- Department of Psychology (PSYCH)
- Division of Student Life (SAIT)
- EC Cares (ECC)
- Finance and Administration Shared Services (FASS, formally known as Campus Operations)
- Information Services (IS)
- Jaqua Learning Center (JAQUA)
- Johnson Hall (JWJ)
- Lundquist College of Business (LCB)
- Research and Innovation Technology (R&I)
- School of Journalism and Communication (SOJC)
- School of Law (LAW)
- School of Music and Dance (SOMD)
- Student Services and Enrollment Management (ENROLL)
- Teaching and Learning Center (TLC)
- University Advancement (ADV)
- University Health Center (HEALTH)
- UO Housing (HOU)
- UO Libraries (LIB)
- Yamada Language Center (YLC)

### Research Units

- Center for Brain Injury Research and Training (CBIRT)
- Center for Cyber Security and Privacy (CCSP)
- Center for High Energy Physics (CHEP)
- Center for the Study of Women in Society (CSWS)
- Center on Teaching and Learning (CTL)
- Committee on the Advancement of Women in Chemistry (COACH)
- Earth Sciences (ES)
- Education and Community Supports (ECS)
- Institute for a Sustainable Environment (ISE)
- Institute of Ecology and Evolution (IEE)
- Institute of Molecular Biology (IMB)
- Institute of Neuroscience (ION)

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- Institute of Theoretical Science (ITS)
- Lewis Center for Neuroimaging (LCNI)
- Material Science Institute (MSI)
- Northwest Indian Language Institute (NILI)
- Oregon Advanced Computing Institute for Science and Society (OACISS)
- Oregon Center for Optical Molecular & Quantum Science (OMQ)
- Oregon Humanities Center (OHC)
- Oregon Institute of Marine Biology (OIMB)
- Prevention Science Institute (PSI)
- Research Advanced Computing Services (HPCF, formally known as the HPCRCF)
- Sponsored Project Services (SPS)

### Appendix H - Previous Consultant Reports Links

- [Baker Tilly Report \(Link\)](#)
- [Harvey Blustain Report \(Link\)](#)
- [Moran Consulting Report \(Link\)](#)

### Appendix I – FTE By Unit Change since Baker Tilly Report:

In addition to the timeline detailing Transform IT changes through time, the following chart illustrates the changes in FTE that have occurred since the Baker Tilly Report in 2015. Specifically, 10 units have seen a decrease in the number of FTE, while 7 units have seen no changes, and 5 units have seen an increase in FTE. Overall, however, the campus has experienced a 2.3% decrease in the number of IT staff on campus (i.e. a loss of approximately 5.5 FTE). (Appendix)

Unit	BAKER TILLY (2015)	CAMPUS ENG. (2018)	Net gain/loss	% Change
RSRCH	2	4	2	100%
EC CARES	4	5.5	1.5	38%
HEALTH	3	4	1	33%
LIB	27.5	35	7.5	27%
IS	94	99	5	5%
ADV	4	4	0	0%
ATH	3	3	0	0%
BAO	7	7	0	0%
HOU	4	4	0	0%
LAW	4	4	0	0%
SAIT	5	5	0	0%
SOMD	2	2	0	0%
SOJC	6	5.5	-0.5	-8%
DSGN	5	4.5	-0.5	-10%
ENROLL	5	4	-1	-20%
JWJ	5	4	-1	-20%
COE	4	3	-1	-25%
FASS	8	6	-2	-25%
LCB	8	6	-2	-25%
PSYCH	3	2.25	-0.75	-25%
AE	3	2.04	-0.96	-32%
CAS	37	24.25	-12.75	-34%
Total	243.5	238.04	-5.46	-2.3%



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### Appendix J - Report Charts

- [IT support hours per week by service \(Link\)](#)
- [IT support hours per week by unit \(Link\)](#)

### Appendix K – Enterprise Software Committee Business Applications Audit List

Title or Company	Type
GSD Associates Inc	Asset management
Sassafras Software Inc	Asset management
Trapeze Software Group Inc/dba AssetWorks LLC	Asset management
Canto Software Inc	Asset management
onShore Development Inc	Asset management
Managing Editor Inc	Asset management
BAR*BARCODE GIANT	Asset management
CEL*EXTENSIS	Asset management
Industrial Software Solutions/dba Wonderware PacWest	Building management
Chown Inc	Building management
Operation Technology Inc	Building management
Insperty Employment Screening	Building management
CareerLeader LLP	Building management
Franklin Estimating Systems	Building management
Tech Tammina LLC	Building management
Kuali Foundation Inc	Building management
PG Calc Inc	CRM
SofterWare Inc	CRM
Data Source of Loudoun Inc/dba HEP Development Services	CRM
Symplicity Corporation	CRM
Targetx.com LLC	CRM
Inteum Company LLC	CRM
Eugene Software Solutions Inc	CRM
Campus Management Corp	CRM
AGILECRM-8009800729	CRM
CAMPUS MANAGEMENT	CRM
E3 SOFTWARE	CRM
KICKSERV	CRM
LITTLE GREEN LIGHT	CRM
VTIGER.COM	CRM
CBI*ATLAS.TI	Data / Analysis / Statistics
DEDOOSE	Data / Analysis / Statistics

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ESTIMA	Data / Analysis / Statistics
GRAPHPAD SOFTWARE	Data / Analysis / Statistics
ICONOSQUARE	Data / Analysis / Statistics
IMPLAN GROUP LLC	Data / Analysis / Statistics
KISSMETRICS	Data / Analysis / Statistics
MINDWARE TECHNOLOGIES	Data / Analysis / Statistics
MUTHEN & MUTHEN	Data / Analysis / Statistics
PAYPAL *GRAPHPAD	Data / Analysis / Statistics
QSR INTERNATIONAL AMERIC	Data / Analysis / Statistics
QUALTRICS	Data / Analysis / Statistics
TEX*OVERWATCH SYSTEMS	Data / Analysis / Statistics
<a href="http://WWW.WAVEMETRICS.COM">WWW.WAVEMETRICS.COM</a>	Data / Analysis / Statistics
Westat	Data / Analysis / Statistics
Ride Systems Inc	Data / Analysis / Statistics
Dorian Business Systems Inc	Data / Analysis / Statistics
Idera	Data / Analysis / Statistics
Systat Software Inc	Data / Analysis / Statistics
QLC Inc/dba TABS Inc	Data / Analysis / Statistics
Paciolan Inc	Data / Analysis / Statistics
Reed Elsevier Inc	Data / Analysis / Statistics
Biomatters Inc	Data / Analysis / Statistics
Synergy Sports Technology LLC	Data / Analysis / Statistics
GradLeaders Inc	Data / Analysis / Statistics
International Business Machines Corp/IBM	Data / Analysis / Statistics
Qualtrics LLC	Data / Analysis / Statistics
ATLAS SYSTEMS	Data / Analysis / Statistics
VERNIER SOFTWARE & TEC	Data / Analysis / Statistics
FileMaker Inc	Databases
DELICIOUS MONSTER SOFTWA	Databases
FILEMAKER,INC.	Databases
IN *SQL SENTRY INC	Databases
ORACLE USA INC.	Databases
Lexmark	ECMS
ShiftPlanning Inc	Employee / Business management
WHENTOWORK INC	Employee / Business management
CBI*CLEVERBRIDGE INC	Employee / Business management
Automic Software Inc	ERP
Runner Technologies Inc	ERP
Ellucian Support Inc	ERP
Oracle America Inc	ERP
College Scheduler LLC	Events / Calendar management
ATTENDEASE EVENT REG	Events / Calendar management
BROWNBEARSW.COM	Events / Calendar management

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CALENDAR WIZ LLC	Events / Calendar management
SCHEDULEONCE LLC	Events / Calendar management
Dharanet LLC/dba Grupio	Events / Calendar management
Seattle Technology Group Inc	Events / Calendar management
CollegeNET Inc	Events / Calendar management
Localist Corporation	Events / Calendar management
Profit Systems Inc/dba EventPro Software	Events / Calendar management
Guidebook Inc	Events / Calendar management
AVTECH SOFTWARE INC	Facilities / Building management
BUILDING SYSTEMS DESIGN	Facilities / Building management
SpecTech Inc/dba MPulse Maintenance Software	Facilities / Building management
Software Toolbox Inc	Facilities / Building management
eMaint Enterprises LLC	Facilities / Building management
FASTSPRINGSOFTWARE.COM	Finance and Business Processing
FRESHBOOKS	Finance and Business Processing
INTUIT *QUICKBASE	Finance and Business Processing
INTUIT *QUICKBOOKS	Finance and Business Processing
PAYPAL *CLEVERBRIDG	Finance and Business Processing
SAGE SOFTWARE INC	Finance and Business Processing
<u>WWW.CLEVERBRIDGE.NET</u>	Finance and Business Processing
Piracle Inc	Finance and Business Processing
CalcXML LLC	Finance and Business Processing
1099 Pro Inc	Finance and Business Processing
Higher One Inc	Finance and Business Processing
Fitch Enterprises Inc/dba Emerald Business Systems	Finance and Business Processing
cleverbridge Inc	Finance and Business Processing
Zuora Inc	Finance and Business Processing
OQ Measures LLC	Healthcare management
Ahlers & Associates	Healthcare management
Optuminsight Inc/dba Optum	Healthcare management
Zebu Compliance Solutions	Healthcare management
McKesson Corporation/dba McKesson Pharmacy Systems LLC	Healthcare management
Titanium Software Inc	Healthcare management
Navicure Inc	Healthcare management
Kalos Inc	Healthcare management
Orchard Software Corporation	Healthcare management
Medicat LLC	Healthcare management
UpToDate Inc	Healthcare management
Kronos Inc	HR management
PageUp People Pty Ltd	HR management

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uWork com Inc/dba Covendis Technologies	HR management
CSO RESEARCH INC	HR management
CYFE INC	HR management
WILD APRICOT	HR management
Four Winds Interactive LLC	Information distribution
Coyote Creek Consulting Inc	Intranet / IT communications
Atlassian Pty Ltd	Intranet / IT communications
ATLASSIAN	Intranet / IT communications
Silke Communications Inc	Intranet / IT communications
SHI International Corp; TeamDynamics	ITSM
AINS Inc	Legal
PACER Service Center/dba US Courts AO-PACER Service Center	Legal
West Publishing Corporation	Legal
Indiana University	Legal
Blackboard Inc	LMS
University Corp for Advanced Internet Development/Internet2	LMS
HTL*HIGHTAIL	Marketing / Sales management
Clarix Technologies Inc	Office and productivity
Marquam Group Ltd	Office and productivity
NetCentric Technologies Inc	Office and productivity
Authorea Inc	Office and productivity
Webgroup Media LLC	Office and productivity
Tableau Software Inc	Office and productivity
Bluebeam Software Inc	Office and productivity
Versatile Information Products Inc	Office and productivity
Open Text Inc	Office and productivity
Smartsheet.com Inc	Office and productivity
CDW LLC/dba CDW Government LLC	Office and productivity
Nuance Communications Inc	Office and productivity
Microsoft Corporation	Office and productivity
Adobe Systems Inc	Office and productivity
Organization for Educational Technology & Curriculum/OETC	Office and productivity
TABLEAU SOFTWARE INC.	Office and productivity
ADOBE *ACROPRO SUBS	Office and productivity
ADOBE *CREATIVE CLOUD	Office and productivity
AVANGATE*ABBYY.COM	Office and productivity
BLUEBEAM SOFTWARE, INC	Office and productivity
CBI*PARALLELS	Office and productivity
ISSUU	Office and productivity
MONOTYPE GMBH	Office and productivity

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OMNI DEVELOPMENT INC	Office and productivity
ORBIT ENTERPRISES INC	Office and productivity
PAYPAL *WIGGLYAMPSL	Office and productivity
PEERNET INC	Office and productivity
PIKTOCHART	Office and productivity
SLACK	Office and productivity
SMARTSHEET	Office and productivity
TRANSCRIBE	Office and productivity
AVANGATE*AXES4.COM	Office and productivity
Pharos Systems International Inc	Printing services
PaperCut Software International Pty Ltd	Printing services
Office Imaging Inc	Printing services
Whittier Mailing Products Inc	Printing services
Alder Technology Inc	Printing services
Ricoh USA Inc	Printing services
Xerox Corp	Printing services
PRINTRONIX	Printing services
Wrike Inc	Project management
AEC SOFTWARE	Project management
FOG CREEK SOFTWARE, INC	Project management
TEAMWORK.COM PROJECTS	Project management
TRELLO	Project management
UXPIN.COM, +48694939957	Project management
WORKFLOWY	Project management
WRIKE.COM	Project management
L E A DATA TECHNOLOGIES	Safety / Risk aversion
TLO TRANSUNION	Safety / Risk aversion
MicroNiche Inc	Safety / Risk aversion
Motorola Solutions Inc	Safety / Risk aversion
Kevin R Potter/dba KRP Data Systems	Safety / Risk aversion
Firstline Business Systems Inc	Safety / Risk aversion
Bold Technologies Ltd	Safety / Risk aversion
End2End Public Safety	Safety / Risk aversion
Social Sentinel Inc	Safety / Risk aversion
On Site Systems Inc	Safety / Risk aversion
Aegis Identity Software Inc	Safety / Risk aversion
Aronson Security Group	Safety / Risk aversion
CBORD Group Inc	Safety / Risk aversion
SVC Corporation/dba DGM Systems	Safety / Risk aversion
POSGlobal.COM	Sales and marketing
SQUARESPACE INC.	Sales and marketing
Stacy L Rollins/dba SLR Associates	Sales and marketing
REACH Sports Marketing Group Inc.	Sales and marketing

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CAM Commerce Solutions Inc	Sales and marketing
Bartizan Connects LLC	Sales and marketing
Blu Sky Web Solutions LLC/dba Blu Sky Creative Services	Sales and marketing
COLLEGE SOURCE	Student management
IN *FRONT RUSH LLC	Student management
LEEPFROG TECHNOLOGIES INC	Student management
GLO-BUS Software Inc	Student success
BrainPOP LLC	Student success
Redrock Software Corp	Student success
Springshare LLC	Student success
Terra Dotta LLC	Student success
Parchment Inc	Student success
CollegeSource Inc	Student success
National Education Loan Net/Peterson's Nelnet LLC/CUnet LLC	Student success
ARTICULATE GLOBAL INC	Student success
KIVUTO SOLUTIONS LLC	Student success
LIVESCRIBE INC	Student success
SOLIDPROFESSOR	Student success
TOP HAT STUDENT	Student success
InterviewStream Inc	Video conferencing / Streaming
Blue Jeans Network Inc	Video conferencing / Streaming
Panopto Inc	Video conferencing / Streaming
WOWZA MEDIA SYSTEMS LLC	Video conferencing / Streaming
<u>WWW.GETMOVI.COM</u>	Video conferencing / Streaming
APPLIAN TECH.	Video conferencing / Streaming