



# **IT @ UW-Madison: Current State, Challenges, Vision ITC Report to the UC and Faculty Senate**

August, 2018

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# I. Introduction: ITC Charge (FP&P 6.42)

The Information Technology Committee is the faculty advisory body for policy and planning for information technology throughout the university. In performing its functions, it shall consult with such groups and individuals as it feels may be able to provide valuable advice. It may request such reports on budgets, personnel policies, and other topics as are necessary for it to make informed judgments and recommendations. It shall establish such subcommittees as are necessary to carry out its functions.

1. Reviews and makes recommendations on strategic planning for the university's information technology resources.
2. Reviews the performance of information technology facilities and services in supporting and assisting scholarly activities.
3. Receives reports from and provides general direction to committees formed to address specific information technology issues.
4. Monitors technical developments.
5. Consults with and advises appropriate administrative officers on budget and resource allocation matters including charges and funding sources for information technology services.
6. Receives recommendations from departments, deans, and the Division of Information Technology regarding the establishment, abolition or merger of information technology services and facilities supported by university funds, and makes recommendations regarding these actions to the appropriate administrative officers.



# I. Introduction

- In accordance with its charge, the ITC has focused its work during the last two years on strategic issues facing campus IT:
  1. Identifying major challenges.
  2. Creating a vision for campus IT for the next five years.
  3. Analyzing the campus current IT funding model and the need to change it in order to advance IT on campus.
- The challenges facing campus IT are many. At the same time, they represent great opportunities for advancing IT on campus.
- The ITC shared its vision for campus IT with campus leadership (Provost, VCFA), IT leadership, and IT Governance groups.



# I. Introduction

- **The objective of this report is to inform the UC and the Faculty Senate about campus IT issues.**
- **The ITC also plans to collaborate with the new campus CIO and others on shaping and implementing a shared vision for campus IT, in accordance with the following ITC resolution of its May 2018 meeting:  
“The campus CIO and leadership from central and distributed IT will engage in regular collaboration with the ITC on shaping and implementing a shared vision for campus IT” consistent with the ITC Vision for Campus IT – 2018-2023.**
- **The ITC is looking forward to further discussion of these issues with the UC and the Faculty Senate.**



## **II. Strategic Initiatives in the Last 2 Years**

**We have undertaken several strategic initiatives to assess the current state of campus IT and its challenges, and build the foundation for a desired state:**

- 1. IT Governance & Management Structure.**
- 2. IT Service Inventory Study; Service Categorization Study.**
- 3. IT Spend Studies FY15-FY17.**
- 4. Analysis of the Campus IT Funding Model.**
- 5. Project Intake , Evaluation, Prioritization and Decision-Making.**
- 6. IT Policy Planning, Analysis, Evaluation and Approval.**
- 7. IT Vision and Strategy:**
  - ITC Vision for Campus IT – 2018-2023.**
  - ITC “Statement of Principles: IT Funding Model.”**



# III. Current State: Major Findings – Challenges: Service Portfolio

## IT Service Inventory and Service Categorization Studies:

- **First complete mapping of campus IT services. Provided a comprehensive view of customer-facing IT services across our complex IT landscape.**
- **About 190 campus units reported information about 1,513 IT services.**
- **Services were categorized into 90 generic service categories.**
- **The objective: Clarify, categorize, organize the IT Service Inventory data to enable meaningful analysis of the campus IT service portfolio.**

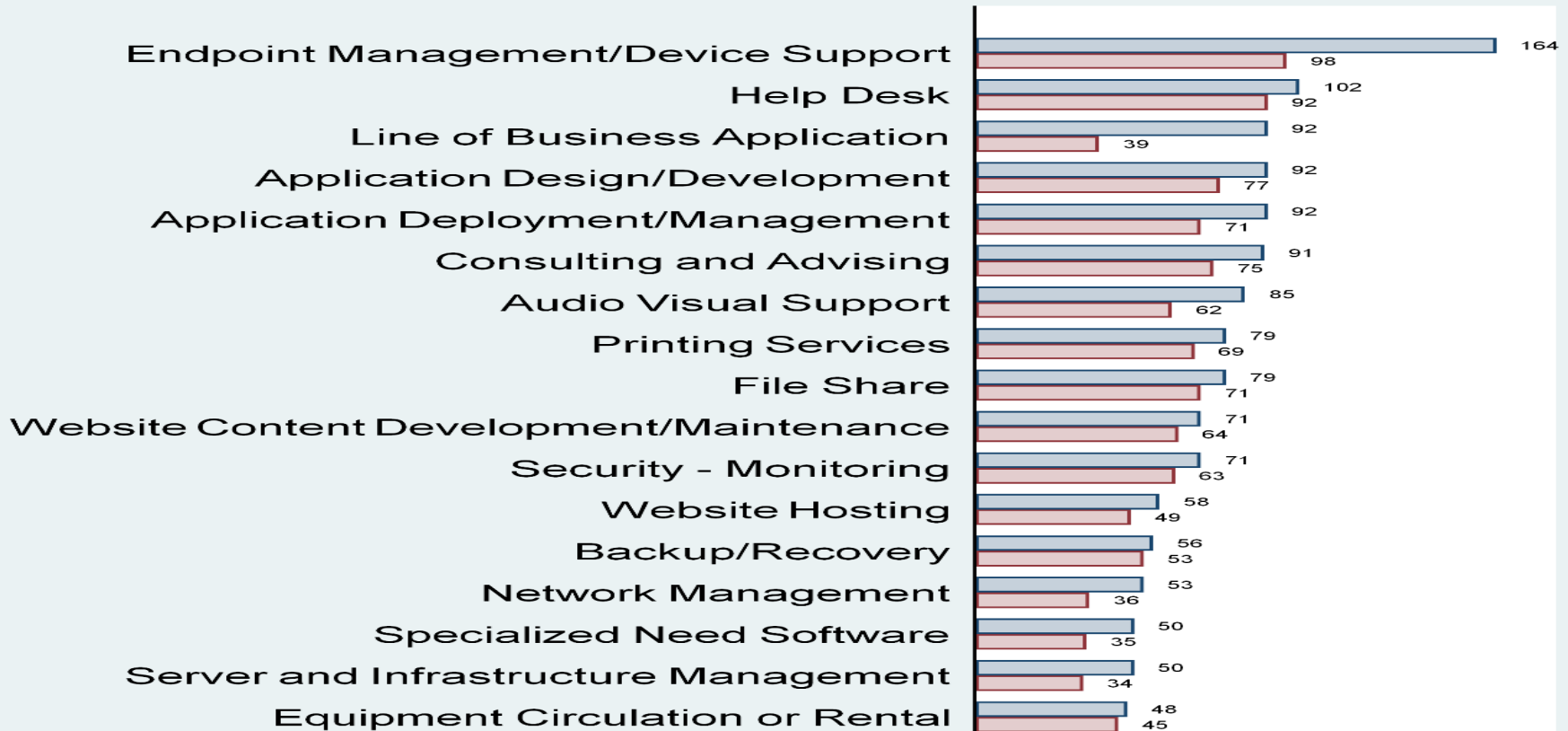


# III. Current State: Major Findings – Challenges: Service Portfolio

## IT Service Inventory and Service Categorization Studies:

- **Main finding: Significant duplication of services across campus: many service categories having over 60 service instances; some having 100 or more instances:**

Number of Service Offerings and Units Providing  
20 Most Common Generic Services

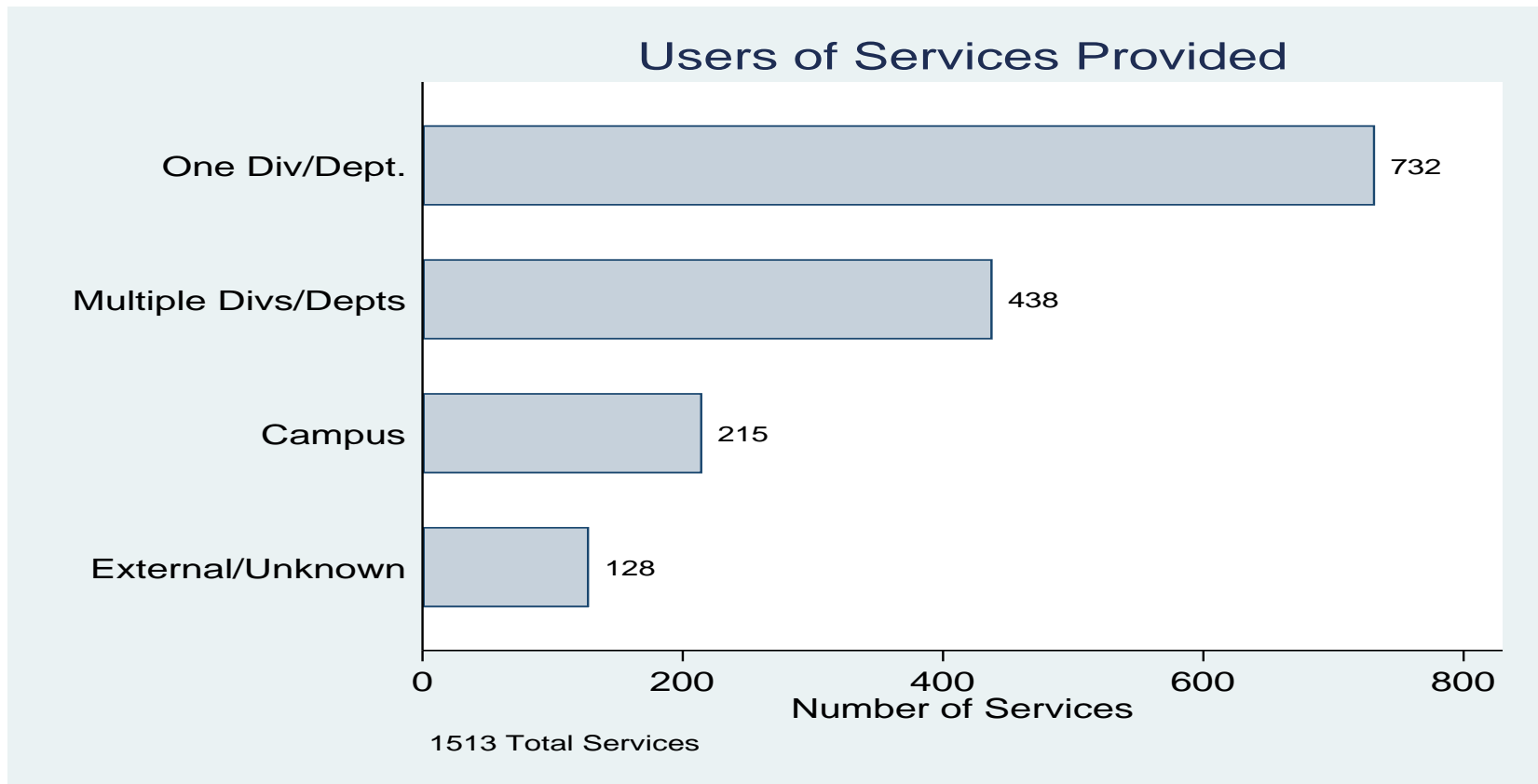




# III. Current State: Major Findings – Challenges: Service Portfolio

## The IT Service Inventory and Service Categorization:

- **About 50% of services are provided to a SINGLE division/department only; only 14% of services are shared (campus wide):**



# III. Current State: Major Findings – Challenges: Service Portfolio

## IT Service Inventory and Service Categorization Studies:

- **Distribution of IT FTEs by function:**

Function	% IT FTE Count	Number of FTEs
Teaching and Learning	24.5%	331.2
Research	26.7%	360.1
Administration	36.5%	491.9
Outreach	12.3%	166.2
<b>TOTAL</b>	<b>100%</b>	<b>1349.4</b>



- **Is the campus investment in IT aligned with the core mission of the University – excellence in Teaching, Learning, and Research?**

### III. Current State: Major Findings - IT Spend (FY17)

FY17 Overview	
IT Salary & Fringe Expense	\$129.3 million
IT Non-Salary Expense	\$ 53.0 million
IT Capital Expense	\$ 10.2 million
IT Assessments	\$ 22.5 million
DoIT & AIMS Chargebacks	\$ 17.1 million
IT Expense	\$232.1 million
<i>Removal of chargebacks for UW-Madison and Non-UW Madison Departments</i>	<b>\$ 31.6 million</b>
<i>Removal of chargebacks related to services performed for UW System Administration and UW System Campuses</i>	<b>\$ 21.5 million</b>
<b>TOTAL FY17 UW-MADISON IT EXPENSES</b>	<b>\$179 million</b>
<i>Removal of capital expenses</i>	<b>\$ 10.2 million</b>
<b>TOTAL FY17 UW-MADISON IT OPERATING EXPENSES</b>	<b>\$168.8 million</b>
<b>Total UW Expenses</b>	<b>\$2.840.7 billion *</b>
<b>IT Operating Expense Percentage of Total UW Expenses</b>	<b>5.94%</b>
<b>IT Expense Percentage of Total UW Expenses (including capital expenses)</b>	<b>6.30%</b>

\* Source: 2017-2018 Data Digest



### III. Current State: Major Findings - IT Spend (FY17)

**DoIT vs. all other Divisions:  
(DoIT expenses include chargebacks to UW-Divisions,  
Non-UW)**

Division	Salary & Fringe	Supply & Equip	Capital	Comm Sys & Network	DoIT & AIMS Chargeback	Grand Total
DoIT	\$56,885,561	\$36,826,184	\$4,076,751	\$480,025	\$4,643	\$98,273,165
All Other Divisions	\$72,446,512	\$16,187,420	\$6,093,770	\$22,055,156	\$17,095,255	\$80,746,705
Total	\$129,332,073	\$53,013,604	\$10,170,521	\$22,535,181	\$17,099,898	\$179,019,870



### III. Current State: Major Findings - IT Spend (FY17)

#### FY17 IT Employee Counts

Head Count	2,237 (includes 601 Students)
FTE Count	1,393 (includes 94 Students)

#### DoIT Employee Count

FTE	~ 600
Students	~ 200

#### FY17 Campus Assessments

Common Systems Chargeback	\$16.8 million *
Campus Network Fee	\$ 5.7 million

\* UW-Madison pays 40% (\$12.8M of the \$16.8M CS Chargeback) of the CSRG portion of the Common Systems bill and the remainder of the UW System shares the remaining 60%.



### III. Current State: Major Findings - IT Spend (FY17)

#### Fund Breakdown

Gifts (Funds 233, 533)	\$15,898,894
GPR (Funds 101, 402)	\$102,276,774
Grants (Funds 133, 142, 143, 144)	\$18,822,032
Overhead (Fund 150)	\$5,369,922
Other (All Other Funds)	\$36,652,248
<b>Total</b>	<b>\$179,019,870</b>



# III. Current State: Major Findings - IT Funding Model

- **Critical examination of the campus IT funding model and its consequences, including DoIT's full cost recovery policy.**
- **The study shows a number of negative consequences of the current IT funding model, including:**
  - **Encourages duplicated services; Disincentives for shared services.**
  - **Discourages effective service management.**
  - **May not support:**
    - **Strategic prioritization of resources.**
    - **Effective campus-wide IT strategy.**
  - **Inequities in the availability of IT services across campus units due to units' budget disparity.**
  - **Transparency, trust, collaboration, and partnership issues.**



# III. Current State: Project Intake , Evaluation, Prioritization and Decision-Making Process

- **Review, evaluate IT proposals through IT Governance; Decision-making process.**
- **Objectives:**
  - **Rationalization: Minimize duplications and redundancies.**
  - **Prioritization.**
  - **Assess impact on IT infrastructure and resources capacities.**
  - **Encourage innovation.**





# III. Current State: IT Policy Planning, Analysis, Evaluation and Approval Process

- **The IT Policy Analysis Team (PAT) was created as a sub-committee of the ITC, chaired by the ITC Co-Chair. This:**
  - **Elevated IT policy to a level which provides significant benefit to the Faculty with a direct impact on campus wide IT policy. The PAT is able to expand the community of concerned UW-Madison staff who can help shape IT policy for the benefit of all.**
  - **Formalized the committee for better integration with IT governance.**
- **This included re-chartering, establishing formal principles and procedures for IT Policy work, formal membership, executive sponsors, etc.**



# III. Current State: IT Policy Planning, Analysis, Evaluation and Approval

## PAT Objectives:

- **Manage and support the activities of IT Governance as they relate to creating, reviewing and approving new IT policies; revising/terminating existing policies.**
- **Ensure that policies are necessary and appropriate, and that their development is collaborative and transparent.**
- **Work with other UW-Madison partners to ensure that their policies are consistent with and support IT policies and vice versa.**

## Activities and Initiatives:

- **PAT worked on many IT policies.**
- **Established several sub-committees to improve policy work.**



# IV. Current State: Summary of Challenges

1. Optimize and rationalize IT tools and services across the entire campus.
2. Create effective, optimized campus IT service portfolio, service management function, and service catalog:
  - Minimal service duplication and redundancies.
  - Doing things in a more common, institutionally consistent way; greater integration; freeing-up resources to do things better, do things we were unable to do before.
3. Shift to service-centric focus and culture aligned with core institutional missions:
  - Focus on the value that IT services provide and on improving the effectiveness of services based on measurable mission-driven outcomes and performance metrics; end-user/customer-centric focus.
  - Shift key performance metrics from a focus on IT activity to service and value-oriented outcomes.



# IV. Current State: Summary of Challenges (contin.)

4. **Adapt centralized and distributed campus IT organizations to become brokers of services.**
  - **Hybrid deployment/platform model, including on-premises and cloud services.**
  - **Better management of cybersecurity risk and vulnerabilities: Reduction in the risk of massive security breach.**
5. **Strategic prioritization: Align IT investment with core missions of the University:**
  - **Increase relative investment in differentiating core areas: Teaching and Learning; Research.**
  - **Standardize tools and services in non-differentiating administrative areas.**
6. **Engage with campus and IT leadership to consider new IT funding models that eliminate some of the undesirable consequences of the current campus IT funding model and facilitate a shift from the current state to the desired state.**
7. **Cultural and organizational structure challenges.**



## IV. Other Specific Challenges

- **Teaching and Learning:**  
Funding and developing the necessary services to promote the teaching and learning objectives of the Student Digital Ecosystem (SDE).
- **Research:**  
Developing a cohesive, campus-wide research computing and research data shared infrastructure and support.
- **ERP Systems - Shared Administrative Services:**
  - a. A future state procurement system.
  - b. An integrated, cloud-based solutions for our shared financial and human resources systems.
  - c. A cloud-based Student Information System (SIS).
  - d. A database of software licenses; pooling license agreements to achieve economies of scale.



## IV. Other Specific Challenges (contin.)

- **Digital Integration: System interoperability, scalability, and extensibility across multiple applications and platforms; Shift to a data-oriented institutional culture:**
  - **Enhanced integration, information sharing, analytics and data to allow campus executives to make more data-driven decisions.**
  - **Institutional view of IT across campus: IT community – central and distributed – working together to support the mission of the University in the most effective way.**
  - **Effective institutional data management and governance.**



## V. The ITC Vision for Campus IT

- **The Service Inventory and Categorization Studies, IT Spend Studies, and the analysis of the campus IT funding model provided us with clear information about major challenges that campus IT is facing, as well as evidence about significant opportunities for improvements and for realizing strategic goals.**
- **The ITC - in its role as the campus shared governance body with broad oversight over IT issues across campus - passed critical resolutions to address existing problems and realize strategic goals for campus IT:**
  - **“ITC Vision for Campus IT – 2018-2023.”**
  - **“Statement of Principles: IT Funding Model.”**
  - **Engaging with campus and IT leadership on shaping and implementing a shared vision for campus IT.**



## V. The ITC Vision for Campus IT – 2018-2023

### VISION:

- **Position the University of Wisconsin-Madison to realize strategic mission goals through a coordinated and innovative set of campus IT services.**
- **Design and operate an efficient data-oriented and interoperable IT infrastructure focused on delivering service-oriented outcomes.**





## V. The ITC Vision for Campus IT – 2018-2023

- 1. Create an Effective, Optimized Campus Service Portfolio; An Effective Service Management Function.**
- 2. Shift to Service-Centric Culture and Organization, Aligned with Core Institutional Missions and Strategic Objectives.**
- 3. Adapt Campus IT Organizations to Become Brokers of Services.**
- 4. Create Comprehensive Cloud Services Strategy; Develop a Hybrid Deployment/Platform Model.**
- 5. Enhance Information Sharing, Analytics and Data to Allow Campus IT Stakeholders to Make More Data-Driven Decisions.**
- 6. Manage Cybersecurity Risk to Ensure Minimal Impact of Threats.**
- 7. Consider New Campus IT Funding Models to Support the IT Mission and Strategies.**



## V. The ITC Statement of Principles: IT Funding Model

- **A set of principles to help campus and IT leadership to consider new IT funding models that eliminate some of the undesirable consequences of the current campus IT funding model and facilitate a shift from the current state to the desired state.**
- **Calling for the ITC to engage with campus and IT leadership to consider new IT funding models to advance IT on campus.**



## VI. Engaging with Campus and IT Leadership

- **The “ITC Vision for Campus IT” and the ITC “Statement of Principles: IT Funding Model” were shared with the Interim CIO, campus leadership, and with IT Governance.**
- **In its March 2018 meeting, the ITC discussed the Vision and the IT funding model with Provost Mangelsdorf and VCFA Heller. We had a thoughtful discussion of these issues.**



## VI. Engaging with Campus and IT Leadership

- In May 2018, the ITC passed a resolution regarding the implementation of its vision:

**“The campus CIO and leadership from central and distributed IT will engage in regular collaboration with the ITC on shaping and implementing a shared vision for campus IT” consistent with the ITC Vision for Campus IT – 2018-2023.**



# VII. The Role of IT Governance

## Challenges Facing IT Governance:

- **IT Governance structure and work should evolve in a manner that addresses the major challenges that campus IT is facing; IT Governance should support our strategic goals.**
- **Be pro-active, creative, innovative and – when necessary – aggressive.**
- **Be results oriented.**
- **In particular: Engage with campus and IT leadership to consider new IT funding models that eliminate some of the undesirable consequences of the current campus IT funding model and facilitate a shift from the current state to the desired state.**

