**Information Technology Committee Annual Reports for 2014-2015 and 2015-2016**

**I.      Statement of the Committee Functions and Charge**

Faculty Policies and Procedures 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.

**II.     Activities in 2014-15 and 2015-16**

A. Teaching and Learning:
In line with national initiatives and research, the ITC discussed UW-Madison's vision for our Student Digital Ecosystem and other teaching and learning issues. Tools in these domains, as well as in curriculum management and assessment, were evaluated holistically by the ITC with the student as the primary focus. The interoperability of these tools will provide students with a seamless experience as they design their curriculum, pursue academic success, and evaluate their courses. In addition to the ITC, these discussions were a collaborative process involving the Office of the Provost, the Vice Provost for Teaching and Learning, and other partners such as DoIT Academic Technology. Major teaching and learning topics discussed are listed below.

A.1.     The Unizin Consortium:
Unizin is a consortium of higher education institutions that have joined together to create a standards-based ecosystem in support of teaching and learning. Unizin collaborators will develop flexible digital infrastructures that share common standards and support experimentation. It will offer an evolving set of digital tools that allow faculty to design effective learning experiences and improve how course content is created and delivered to students. It has been created in response to needs identified by the Provosts of the institutions belonging to the Committee on Institutional Cooperation (CIC). It puts higher education in control of its own future with regard to infrastructure in support of our teaching and learning mission. Unizin includes three major components: Canvas as a platform for LMS at its center; Learning Analytics; and Digital Course Content Relay.

The ITC passed a resolution in September 2014 in support of the UW-Madison joining Unizin and endorsing moving forward with Unizin as a framework for digital infrastructure in education, with active UW educator involvement in developing tools for learning outcomes and analytics.

Periodic updates about Unizin were provided to the Committee by Bruce Maas, CIO, and Steve Cramer, Vice Provost for Teaching and Learning, who represented the UW-Madison on the Unizin Board. The Committee also met to discuss Unizin with its CEO, Amin Qazi.

A.2.    Teaching and Learning Governance Structure:
The Vice Provost for Teaching and Learning updated the ITC on the Teaching and Learning Governance Committees for Unizin, including: Learning Analytics Group; LMS and Digital Tools Group; The Content, Sharing, and OER (Open Educational Resources) Group; and The Students' Needs Group.

A.3    Canvas LMS Pilot and LENA:
The results of the Canvas Learning Management System (LMS) Pilot on campus in 2015 and 2016 were presented and discussed, including feedback from faculty and from students. The goal was to begin to define the campus needs for LMS. The ITC was also informed about the UW-System's Learning Environment Needs Assessment (LENA), designed to study the needs for the next generation digital learning environment. Updates about the Canvas pilot and LENA were presented to the Committee periodically.

A.4.    Canvas LMS:
The ITC considered the resolution to adopt the Canvas LMS for several months, and had input from faculty, students, instructional technologists, the Vice Provost for Learning and Teaching, and others. The feedback from faculty, instructional staff, and students who used Canvas in several pilot studies was favorable. The Committee noted that Canvas has clear advantages in key areas, and that it holds particular promise for learning analytics and for the sharing, discovery, and integration of digital content from disparate systems.

The ITC voted in favor of adopting Canvas as the only fully integrated and centrally supported LMS at UW-Madison. The resolution emphasized the need to provide full support for the transition to the new LMS in a way that ensures the continued quality of all courses. It also recognized the existence of gaps and other deficiencies in the current functionality of Canvas, and stated that existing and future gaps, deficiencies, and functionality enhancement needs should be addressed effectively and in a timely manner before, during and after the implementation.

The LMS resolution was presented to the UC on April 2016 and was accepted. It was then presented to the Faculty Senate on October 2016. Colleges and Schools have started planning for the migration to Canvas in late spring 2016.

A.5.    Other Teaching and Learning Updates:
Moodle. The Moodle Council provided updates to the ITC on various issues relating the use of Moodle as a learning technology platform.

MOOC. The ITC was presented with a report on the UW-Madison's experience with MOOCs (Massive Open Online Courses) and what was learned from it. Unizin is exploring capabilities to handle MOOC content in the future. It has not been determined where MOOC-like content will reside in the future.

ComETS. The Community of Educational Technology Support (ComETS) provided updates to the ITC on the Canvas pilot project and on distance learning.

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B. Research Computing and Administration:

B.1.    Research Computing – CHTC and the Advanced Computing Initiative:
The ITC had several discussions on research computing. Topics and the ensuing discussions generally centered on updates about current research computing activities across campus. The services provided by the Center for High Throughput Computing (CHTC) and the Advanced Computing Initiative (ACI) group were among the topics discussed.

The CHTC in the Computer Sciences Department is the campus's large-scale computing center, serving all campus researchers and collaborators, free-of-charge. The ACI and the CHTC have partnered together to provide multiple campus-shared, large-scale computing systems and the staff to support them.

The ACI supports a combination of shared computing resources and shared human resources to enable a broad range of researchers to improve the use of computers in their scholarly work. The successful outcome provides expertise, hardware, and software in the right ratio to empower the research mission of UW-Madison by leveraging contributions from a number of campus partners. The goal of the ACI is to create a Research Computing Portal that provides services in five key areas: computing resources (implementing a shared high performance computing capability); support and training; community building; data management; and campus infrastructure.

B.2.    Research Administration - The PI Portal:
The ITC was updated on the PI Portal that went live in August 2015. It is a dashboard for a PI's personalized research administration, compliance and training information, providing access to electronic tools and direct links to the PI's records, and a quick reference guide with essential information about key topics for PIs.

C. Cybersecurity and Infrastructure:

C.1.    Cybersecurity Strategy:
The ITC engaged in numerous discussions on the Cybersecurity Strategy Plan, a roadmap to establish risk management framework for the campus and extend opportunities to the UW System. The Office of Cybersecurity, led by Bob Turner, Chief Information Security Officer (CISO), created a vision for cybersecurity that includes a governance structure, risk management framework, compliance with regulation, and communications with campus. A proposed Risk Management Framework was presented to the ITC in April 2015 and work on that framework by the committee continues this year.

As a result of the risk assessment, the campus made a $6.9 million investment with Palo Alto Networks and Cisco in May 2016 to upgrade the campus firewall and end point security. The potential investment and eventually funding of the effort was discussed with the ITC during the spring 2016 meetings. The factors contributing to the purchase decision were considered by the security team and discussed with ITC. They include data management and the processes and procedures to manage the UW-Madison's intellectual property and other sensitive information.

Additional discussions included risk reduction strategies that involved various campus advisory groups and governance bodies and that focused on the identification of risk and the appropriate handling of data to prevent inappropriate access to or loss of sensitive or restricted data. Committee members also noted the need to consider "human factors" in crafting a cybersecurity solution. Members also emphasized the need to consider digital privacy when crafting cybersecurity risk management policy.

C.2.    Network Infrastructure:
Jeanne Skül, DoIT Director of Network Operations, and Scott Buckingham, DoIT Network Services, provided a summary of the 21st Century network Fiber Infrastructure, and 'NextGen' - the future of network services focusing on creating better redundancy, consolidation of equipment, higher speed core, and faster failovers.

C.3.    Data Center Infrastructure:
Early in the fall of 2105, the campus data center went offline twice resulting in network service interruptions across campus. The review of the causes and potential solutions to minimize the risk of future failure resulted in a study commissioned by the Chancellor to assess options for data center capacity and reliability, especially to meet the rqeuirements of new federal research grants. A Council of ITC-MTAG Chairs, composed of current and former chairs of ITC and MTAG (Madison Advisory Technical Group), was formed to review options developed by DoIT and to recommend solutions. The Council met several times with the IT Leadership and submitted a document with analysis and certain concerns about the data center options as identified by DoIT, including the need for a clear statement of the business case for these options. This document was forwarded to the Provost and the Interim VCFA in early May 2016. The IT Leadership continued the conversations on the data center options with the FCVA.

## D. Administrative and Operational Excellence:

D.1    Microsoft Office 365:
The ITC received updates from the DoIT COO regarding the rollout of Office 365 for email and calendaring services to the campus. The effort, began in 2012, was a cross-campus Administrative Excellence (AE) team that identified opportunities to move email and calendaring services to the cloud, and realize overall campus cost savings. Through a process that extensively engaged campus stakeholders including the ITC governance group, the decision was made to consolidate email and calendaring. The committee was consulted on features of the new service including remote wipe, migration of old email and privacy protection of the new service. Migration was completed by the end of 2015.

D.2.    IT Spending Study:
Interim VCFA Michael Lehman commissioned a report in early spring 2016 to examine the level of IT spending across campus. The ITC discussed the original charge of the IT Spend Committee and received updates on its progress. The study intended to develop a tabulation of what the campus spends on central IT within DoIT and AIMS, as well as the spending on IT services and operations across schools, colleges and administration units. The study looked at spending in general, including associated personnel costs. In July 2016, the committee reported that approximately $175 million was spent on IT in FY 2014-15 across the campus.

D.3.    Cloud Computing:
An overview on the current state of cloud computing on campus was presented to the ITC by the CIO and DoIT COO. Current cloud services include Adobe Connect, Google, Box, Kaltura, Canvas, Office 365, and Qualtrics. The ITC identified the need to create a comprehensive cloud infrastructure services strategy for the UW-Madison as a major strategic initiative. Cloud services and technologies offer opportunities for value-adding features such as scalability, flexibility, reliability, and uptime that are hard to provide on premises. Also, progress toward a service-centric focus requires the development of a cloud services strategy.

D.4.    Enterprise IT Decision Making (EITDM):
The ITC was presented with the Enterprise IT Decision Making (EITDM) plan that was a product

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of UW-Madison's Academic Excellence Initiative designed to increase the efficiency of administrative IT efforts on campus. The ITC discussed the proposed analysis and decision processes for evaluating IT project proposals, and the proposed three-tier governance structure intended to maximize transparency and participation, resource prioritization and efficiency, and to align IT projects with campus needs. The discussion centered on faculty participation in the governance structure. The Committee was updated periodically about the status of projects that were in the EITDM process. Work on determining the relevant data attributes necessary for evaluating IT projects and the related organizational and governance structure will continue this year.

## E. Data Governance and Management:

### E.1. Privacy Protection Policies and Procedures:

A proposed "Privacy Protection Policies and Procedures" was presented and discussed in the last ITC meeting of the 2015-16 academic year. It focuses on protecting the privacy of "individually identifiable data and information" while allowing for the effective and efficient conduct of normal University operations and abiding by applicable Federal and State laws, by other statutory or regulatory requirements, by court orders, and by applicable University Policies and Procedures. It requires every "authorized user" to sign a Privacy Protection Agreement, and calls on the UW-Madison to develop and implement written Privacy Protection Policies and Procedures that are consistent with the rules as stated in the ITC's proposed "Privacy Protection Policies and Procedures."

The ITC passed a resolution to work with the Data Stewardship Committee (see E.2. below) to help create one policy. The proposed policy and procedures will be discussed in the DTAG (Divisional Technology Advisory Group) meeting in November, and subsequently in the ITC. We will then run them by Legal Affairs and present them to the UC and the University Senate.

### E.2. Data Governance:

A Chief Data Officer (CDO) was hired in the CIO Office in response to recommendations by a task force created by Provost DeLuca to determine the need for data governance on campus. The CDO presented the ITC with a proposed Data Governance Structure to handle the different types of data the UW produces, including central and divisional administrative data and research data. This structure includes The Data Governance Steering Committee - an executive decision board composed of leading campus leaders and that engages shared governance (the ITC and UC) on data governance policies - and the Data Stewardship Committee responsible for managing critical data elements, policy setting, data definitions, documentation, and communications. The Data Stewardship Committee is currently working on The Restricted Administrative Data Authorization Policy and Procedures that govern the authorization to view or use UW-Madison Restricted Administrative Data. The policy and procedures will be considered by the ITC.

## F. Campus Computing Initiative (CCI):

CCI focuses on creating a structure for the aggregation of campus server systems, the creation of shared drives, balancing shared drives, creating the infrastructure of shared storage, and leveraging visualization infrastructure. These services are designed to meet the needs of our campus partners by identifying business and technical requirements first, and then matching potential solutions based on those needs.

The ITC discussed how campus groups have the option to augment their current services, adopt shared services, and/or align their IT strategic vision in partnership with CCI. Augmenting the current services enables units to continue running their IT services as is while utilizing shared services to enhance the

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services. Adopting shared services allows departments to identify key areas where it makes sense to use CCI services rather than running their own. The initial portfolio of CCI services includes virtual and physical server hosting, storage, and backup.

G. Libraries IT:

Ed Van Gemert, Vice provost for Libraries and University Librarian, updated the ITC on the usage rates of libraries across campus, and the key activities undertaken by The UW Library System. Including visual library services to integrate content from disparate sites for ease of access via Unizin, and collaborating across other institutions technologically to share resources.

H. IT Response to Budget Cuts:

The CIO updated the ITC on the Governor's recommended budget cuts to the UW-System and their implications for DoIT central funding. He stated that the approach will not be cutting costs across the board, as this could weaken or harm our competitive position; rather, the approach will be more surgical. He stated that DoIT will not raise rates as a response. Committee members noted how little the public understands the economic impact of the UW-Madison on the Wisconsin economy, and emphasized the importance of educating the public on this. Updates about the budget impact on IT were provided to the Committee periodically by the CIO and DoIT's COO.

### III. IT at UW-Madison

A. Provost:

Provost Sarah Mangelsdorf attended the ITC November 2015 meeting. The ITC Chair outlines the major initiatives considered by the ITC in 2015-16. While recognizing that change is difficult, the Provost noted that it was not feasible to provide support to all 59 email systems we had on campus, and that the move to Office 365 was the most valuable choice for the campus. She also emphasized the need to establish organizational and operational priorities, including determining the effective balance between IT services that are best done centrally and those that are best provided locally. She stated the importance for governance committees to give feedback and recommendations to campus leadership on IT initiatives and projects, that we need data governance policies to better clarify who owns the data and who makes the decisions, and that we need to provide IT services at a consistent level across campus.

B. The University Committee (UC):

The ITC Chair and CIO met with the UC several times during the academic year 2015-16 and provided updates on various IT issues, including the governance structures of EITDM and Data Governance. They also updated the UC about strategic IT initiatives and projects, both on-going and planned. Together with the Vice Provost for Teaching and Learning, they presented the Canvas LMS resolution to the UC in late spring 2016. The ITC Chair also discussed ways to increase the participation of faculty in the work of ITC with the UC and the CoC (Committee on Committees). The Interim VCFA and the ITC Chair met with the UC several times during the summer of 2016 to discuss restructuring of IT Governance and Management in UW-Madison. These discussions are ongoing.

### IV. Opportunities and Challenges

A major re-structuring of IT Governance and Management in UW-Madison is currently underway. This process includes creating a cohesive IT governance, management, decision-making, investment, prioritization, assessment, and funding structure. The goal is to create an integrative, holistic view of central and distributed IT services and their delivery across the campus. The new IT governance and

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decision-making structure is intended to be inclusive, collaborative, and transparent. It is committed to innovation and continuous improvement. Faculty has a strong representation in the new structure. The ITC will play a major role and will actively engage with several new governance groups. This is likely to require changes in the working and operation of the ITC. Campus leadership provides strong support for the new governance structure. Campus leadership and shared governance groups including the UC and Faculty Senate will continue to be engaged and consulted as this process proceeds.

## V.    2015-16 ITC Membership
*Faculty*
- Murray Clayton, Plant Pathology/Biological Sciences
- Christina Kendziorski Newton, Biostatistics & Medical Info/Biological Studies
- Rafael Lazimy (Chair), Operations & Information Management, Business/Social Studies
- Meghan Mitchell, Art/Arts and Humanities
- Greg Moses, Engineering Physics/Physical Sciences
- Robert Nowak, Electrical and Computer Engineering/Physical Studies
- Joe Salmons, German/Arts and Humanities
- Linsey Steege, Nursing/Social Sciences
- Constance Steinkuehler, Curriculum & Instruction/Social Sciences
- Ellen Zweibel, Astronomy/Physical Sciences

*Academic Staff*
- Jennifer Bonifas, Medicine
- Michael Pflieger, L&S Student Affairs
- Mike Pitterle, Pharmacy
- Classified Staff
- Michaela Aust, University Administration
- Tara Cordes, Environmental Occupational Health
- Thomas O'Brien, State Lab of Hygiene
- Janel Oster, Facilities Planning & Management

*Students*
- Chris Yue
- Jason Postweiler
- Srinidhi Emkay
- Edward Leonard

*Non-Voting Members, Ex Officio*
- John Krogman, Deputy CIO and Chief Operating Officer of DoIT
- Bruce Maas, CIO and Vice Provost for Information Technology

*Provost Appointments*
- Bobby Burrow, General Services, Representative of the VC for Finance and Administration
- Steve Cramer, Vice Provost for Teaching and Learning, Representative of the Provost
- Ed Van Gemert, General Library System
- Clare Huhn, Representative of the Provost
- Mark Sweet, Representative of the VC for Finance and Administration
- Nicholas Tincher, Office of the Vice Chancellor for Research & Graduate Education

*Campus Liaison Group*
- Antonella Caloro, School of Business, ComETS
- Rick Konopacki (School of Medicine and Public Health), CTIG
- Lee Konrad, (Libraries), MTAG
- Mike Pitterle (School of Pharmacy), Moodle Council
- Alan Silver, (Chemistry), Network Advisory Group