Council of Principal Investigators IT Update
May 9, 2018

M. Dee Childs, Vice President for Information Technology & Chief Information Officer

Agenda

1. Transforming IT at Texas A&M
2. Update on IT Governance
   • Research & Innovative Technologies Research Faculty Survey
3. Cybersecurity as threat & competitive advantage
   • System Regulation 29.01.03 – advisory committee to revise
4. Other items of interest / Q&A
Transforming IT at Texas A&M University

1. Increase Research Competitiveness
2. Enhance Transformational Education & Accelerate Student Success
3. Position Texas A&M as a premiere technology University

Update on IT Governance
IT Governance Program – CPI Members

Strategic IT Committee
- Dr. Othmane Bouhali
- Dr. Darren DePoy*

Information Risk, Policy, and Security Committee
- Dr. Jane Bolin
- Dr. Bruce Herbert

Research & Innovative Technologies Committee
- Dr. Susan Bloomfield
- Dr. Michael Hall
- Dr. Ramalingam Saravanan

*CPI designated representative on highest committee
The New IT Governance Program

- Established Sept 22, 2017
- 6 Committees and 1 Executive Council (President, Provost, CFO, CIO, VP-Academic Services)
- 88 Appointees composed of faculty, staff, and students
- 4 meetings per committee since kick-off
- At least 7 CPI Members throughout the Program with one designated CPI representative at the highest committee (SITC)

Research & Innovative Technologies Committee (RITC) Members

<table>
<thead>
<tr>
<th>PERMANENT VOTING MEMBERS (VOTING)</th>
<th>EX-OFFICIO MEMBERS (NON-VOTING)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Susan Bloomfield</td>
<td>Associate Dean Representative (Chairperson)</td>
</tr>
<tr>
<td>Aaron Brender</td>
<td>Research IT Professional (Parliamentarian)</td>
</tr>
<tr>
<td>Dr. Ramalingam Saravanan</td>
<td>Council of Principal Investigators Representative</td>
</tr>
<tr>
<td>Paula Sullenger</td>
<td>University Research Council Member</td>
</tr>
<tr>
<td>Dr. Honggao Liu</td>
<td>High-Performance Computing Representative</td>
</tr>
<tr>
<td>Sean Michaelson</td>
<td>Division of IT Representative</td>
</tr>
<tr>
<td>Dr. Narasimha Annapareddy</td>
<td>Executive Advisory Council on Core Facilities Representative</td>
</tr>
<tr>
<td>Dr. Michael Bishop</td>
<td>Center and Institute Directors Council Representative</td>
</tr>
<tr>
<td>Dr. Venky Shankar</td>
<td>Faculty Researcher Representative</td>
</tr>
<tr>
<td>Dr. Pierce Cantrell</td>
<td>Faculty Researcher Representative</td>
</tr>
<tr>
<td>Dr. Hye-Chung Kum</td>
<td>Faculty Researcher Representative</td>
</tr>
<tr>
<td>Dr. Michael Hall</td>
<td>Faculty Researcher Representative</td>
</tr>
<tr>
<td>Dr. Chris Seabury</td>
<td>Faculty Researcher Representative</td>
</tr>
<tr>
<td>Cheryl Cato</td>
<td>Division of IT - Associate Vice President &amp; Chief Technology Officer</td>
</tr>
<tr>
<td>Dr. Mark A. Barteau</td>
<td>Vice President for Research</td>
</tr>
<tr>
<td>M. Dee Childs</td>
<td>Vice President for IT &amp; Chief Information Officer</td>
</tr>
</tbody>
</table>
Research & Innovative Technologies Committee (RITC)

Overall Charge
The Research & Innovative Technologies Committee (RITC) provides input for the research mission of Texas A&M University by reviewing, evaluating and recommending strategies, plans and policies regarding IT projects and services that support research by faculty and students. The committee solicits input from key stakeholders and constituencies across the campus to ensure that institutional needs are being met in regards to technologies needed to support campus research activities.

First Year Committee Objectives
• Conduct survey of TAMU researchers to understand research IT needs.
• Create plans to position Texas A&M University as a premier research institution.
• Defining and exploring funding models for computing based on peer benchmarking.

Cybersecurity
A look at Security in 2017/2018

Every 24 Hours

- Secured Over 4 Million Wi-Fi sessions
- 5.8 Million emails inspected for malicious content
- Over 4.9 Million malicious emails detected and blocked
- 142 Thousand virus downloads detected and blocked
- 7.4 Million connections to malicious sites detected and blocked
- A Petabyte of data inspected

Highlights

- Transitioned services containing “confidential information” to DUO
- Expanded Network Monitoring Footprint
- Innovative Cybersecurity Awareness Month Activities
- Increased Insight into Malicious Attacks
- Implemented Data Center Firewalls
- Launched IT Policy Web Site
- Developed new Risk Assessment Process and Survey Methodology
Looking Ahead

Framework

NIST CSF

- Proactive Approach
  - Identify
    - Gaining the institutional understanding to identify what systems need to be protected, assess priority of protection requirements, and manage improvement plan.
  - Protect
    - Implement strategic measures to ensure security awareness, critical business systems that support clinical environment components.
  - Detect
    - Implement secure behaviors for detection of security events, and appropriate mechanisms to support the need for immediate response.
  - Respond & Recover
    - Ensure that services are aligned to ensure that services are rapidly available following a security event.

Strategy

2018

- Evaluate Current State
- Business Continuity Plan
- HIPAA Security Program
- Minimum / Sustained Security Visibility & Coverage

2019

- >70% Security Coverage
- >80% Security Visibility

2020

- >90% Security Coverage
- >90% Security Visibility

2018/2019 Focus Areas

- Cybersecurity Advancements in Healthcare
- Data Security
- Creating A World Class Security and IT Risk Management
- Innovation, Research, and Talent Pipeline
- Excellence in Healthcare Security and Privacy

West Campus Data Center

- Reliability of a Tier 4 data center – redundant power & network
- Operationally AND security staffed 24x7x365
- 7 layers of Physical Security
- Pre-positioned, co-lo, build-to-suit & Aggie cloud options available late 2017-early 2018
- LEED certified & supplies power back to the grid
- Working with President, Provost & CFO on additional investments for excellence
Increase Research Competitiveness

- Position capacity ahead of demand. Leapfrog investments. Augment internal investment (HPC & storage for example with infrastructure grants (NSF/NIH).
- Prioritize decreased costs for using the West Campus Data Center resources (for example on Sept. 1 raw storage costs will drop by 400% to .25/GB (was $1.00/GB)
- Increase research computing staff member engagement with faculty to help plan their technology needs during the development of research proposals.
- Address security risks appropriately for the sensitivity of research data.
- Understand impact/unintentional consequences of current incentives (e.g., startup packages, RDF). Optimize our own environment for success.
- Optimize use of Free national compute resources (XSEDE, Jetstream, DOE funded, etc.)
- Explore national trends such as the Pacific Research Platform
- Optimize end-to-end data transfer so we can use other resources & secure fast data transfers

TAMUS Regulation 29.01.03 - 5.1

The security of information that is classified as Confidential under the Data Classification Standard, referenced under this regulation, is an important information asset to information owners, custodians, and to the system overall. As such, each member shall provide an additional cybersecurity protocol and service to protect this kind of information through the use of Multi-Factor Authentication (MFA). This will ensure that only appropriate individuals have access to confidential information. Requests for 29.01.03 Information Security Page 5 of 6 exceptions to inclusion in the use of MFA must be approved in advance by and reported annually to the TAMUS Chief Information Security Officer.
TAMUS Regulation 29.01.03 - 5.2

Each member shall consolidate all of its significant IT equipment into a centralized member data center(s) or approved commercial data center as soon as practically possible but no later than September 1, 2019. “Significant IT equipment” includes, but is not limited to, mass storage, large/complex computational environments, most virtualized or physical-based servers, and any other internet exposed services. A member may request exceptions for certain equipment, such as specialized lab or research equipment. Each centralized member data center shall provide colocation services and fully managed services for member departments and units. At a minimum, each data center must have: redundant power delivery, redundant networks, redundant cooling, and physical and cybersecurity, and may also provide operating system setup and administration (including virtualized), backup and recovery, storage management, configuration and patch management, and other managed services. All requests for exceptions to the requirements of this section, including requests to extend the deadline, must be approved in advance by the chancellor and reported on an annual basis to the SCISO.

Advisory Committee Members Sought to…

• Provide clarification of “significant IT equipment” for presentation to the TAMUS Chief Information Officer.
• Provide criteria for, and a description of, an exception process.

Send email to mdeechilds@tamu.edu
Thank you!
Two “Typical” Aggie Days in One

Want to meet with us? Let us know what you think! Talk to us!

Tim Lomax, t-lomax@tamu.edu
Madison Metsker-Galarza, m-metsker-galarza@tti.tamu.edu
Texas A&M Transportation Institute

How Do WE Accomplish This?

• We WANT professors to teach class – it’s why we’re here.
• We WANT students to go to class – it’s why they’re here.
• We WANT fans to come to the game.
• Our approach: Help us, Help you
  • Plan ahead, Know your options
  • Don’t try to find a “hole” in the system – be part of the solution.
• We need to communicate early and often – one united message.
  • How do you want us to engage your community?
• Flexibility will be key – this will not be a normal day.
What Do “Two Typical Days in One” Look Like?

Typical Thursday Class Enrollment with Gameday Timeline

What Does a Typical Thursday Look Like After 3:35?

Class Sections

Class Meetings After 3:30 PM

Campus Location
- East
- West & Vet
- Bush Library

After 3:30 PM
- After 5:00 PM
- After 6:00 PM
- After 7:00 PM
What Does a Typical Thursday Look Like After 3:35?

Know Your Options

- Transit
- ofo – Bike Share
- Walking
- Biking
- Uber/Lyft
- Carpool
- Gameday Locker “Just an Idea”

Park Once for the Whole Day
What Does Tailgating Look Like?

• Can load-in 7:00 pm Wednesday.
• Can tailgate at 6:00 am on gameday BUT
• Can’t park near tailgates until 4:30 pm.

What Does GameTime Parking Look Like?

<table>
<thead>
<tr>
<th>Color</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellow</td>
<td>12th Man</td>
<td>10,000</td>
</tr>
<tr>
<td>Red</td>
<td>Dorm &amp; Small</td>
<td>Not Used</td>
</tr>
<tr>
<td>Green</td>
<td>Pay</td>
<td>5,000</td>
</tr>
<tr>
<td>Maroon</td>
<td>A&amp;M Permit</td>
<td>5,000</td>
</tr>
</tbody>
</table>
GameThursday Parking - Capture

- Beginning in early morning - Staff will greet parkers to remind them about departure times.
- At ‘capture time’ staff will prohibit new vehicles except those with placards.
- Most of campus will follow usual rules during business day.

GameThursday Parking - Clear

- Parking lots will ‘breathe’ – can park but may see additional vehicles.
- Vehicles in yellow lots (after 2:30) may be moved to accommodate reserved space needs.
How Do We Engage Your Community?

- Email
- Twitter
- Instagram
- Facebook
- Snapchat? “Just an Idea”
- TAMU Mobile app
- Destination Aggieland app
- Transportation Services, 12th Man, and Athletics website

Let’s Talk!

- Parking
- Travel Options
- Trip Planning
- Engagement
- What did we miss?

Tim Lomax
t-lomax@tamu.edu
Madison Metsker-Galarza
m-metsker-galarza@tti.tamu.edu
Texas A&M Transportation Institute