Meeting Minutes
Technology Advisory Council
March 30, 2018
9:00 A.M. – Rich 242

Attendees
Cas D’Angelo   Nelson Baker (via BlueJeans)   Pam Buffington
Eric Buckhalt   Rich DeMillo   Christopher Craig
Katie Crawford   Justin Filoseta   Jim Fortner
John Gilleland   Mark Hoeting   Paul Kohn (via BlueJeans)
Lew Lefton   David Leonard   Matt Lisle
Jimmy Lummis   Dwayne Palmer   Greg Phillips
Paul Strouts   Raj Vuchatu   Jake Williams
John Wilson

Inform & Discuss Items
CyberRange
  - See attached slides
  - Current approach to student Cyber Security labs is problematic from a security standpoint.
  - Questions:
    o What would a budget for the CyberRange look like?
      ▪ Budget is unknown at this point, will depend partly on configuration
    o Would the CyberRange integrate with our LMS?
      ▪ There are several ways to integrate with an LMS, for example LTI within Canvas could launch course content within Canvas limited to students in the CyberRange enabled classes.
      ▪ Many faculty supply tools for courses they lead. As text books and content for cyber security courses are still be developed we don’t want to created stranded costs.
      ▪ As faculty develop content, it can be updated within the CyberRange without causing underlying course changes.
    o Do you anticipate full cost recovery via lab fees?
      ▪ Currently do not anticipate full recovery, would need a course billable approach for cost recovery.
    o Have you considered ADA accessibility?
      ▪ Yes, as part of working with course designers we will need to include consideration for accessibility requirements.
    o Would this create an ongoing permanent team, or would a startup team be formed then dis-banded afterwards?
      ▪ The current sense is it would require an ongoing team to support CyberRange, particularly if it is extended to other degrees and course offerings.
Budget Briefing
- The current Institute budget timeline indicates “final” budget information should begin to become clearer in late April.

CTO Search Update
- See attached slides

Digital Plan Discussion
- See attached slides

USG Managed Service Follow-up
- The focus of a cost-benefit analysis by an outside firm will focus on student information systems as we believe that is where the USG will focus.

ERP Update
- See attached slides
- New ERP website: transformation.gatech.edu
- Approximately 10 systems have been identified that are expected to be eliminated, additional systems are yet to be reviewed for possible elimination
- Questions:
  o Could optimizing “pain points” eliminate some systems with integration with Workday?
    ▪ Yes
  o Are resources available to assist with identifying and integrating systems?
    ▪ We are utilizing Accenture, GTSC (Ga Tech Strategic Consulting) and industry best practices to identify systems/processes/users and required integrations

USG Data Governance Procedures Change Update
- USG has proposed a change to data governance procedures
- Comments were gathered from TAC members, and a reply was submitted to the USG last night
- We concurred with the USG’s approach with comment
- The response document will be posted on the TSP Teams site for visibility

Governance Website Preview
- New governance website was previewed for the TAC
- Expect it to go live in mid-April

Unified Communications Update
- See attached slides
- Working on specifics of longer term budget implications but no impact for FY2019
- We expect the 5 year plan will be flat or down per user
T-Square Project Sites Replacement
- An issue paper is being written to describe advantages/disadvantages of options
- Developing a survey to help determine what sites are actually in use
  o Some sites are to support annual processes, need to consider how to capture those that are dormant during the time of year the survey is administered
- Expect to have a high level plan by end of Summer

Inform & Decide Items
None

Items brought up during the meeting (not included on the meeting agenda)
Announcements
- Digital Chats are scheduled the first Friday of each month for OIT staff, with the first chat of each calendar quarter being open to all campus IT staff
- First annual OneIT Symposium is scheduled for April 24 at the Global Learning Center
  o Being sponsored and coordinated by the OneIT committee (Marissa Jules & Steve Hodges leading)

Items requested to be included on a future TSP meeting agenda
None

Action Items
- Schedule digital chats for remainder of calendar year to allow people to plan accordingly
- Post USG data governance policy change response to TSP Teams site
- Send new governance site link to TSP

Meeting adjourned at 10:30
Agenda

CyberRange Research Report
Budget Development Status
CTO Search Update
Digital Plan Update
USG Managed Service Project Update
ERP Update
USG Data Governance Policy
Governance Website Preview
Unified Communications
T-Square Site Abatement
Issue: Opportunities including the upcoming OMS in Cyber Security and engagement with Augusta and Fort Gordon provide need for a CyberRange offering.

Digital Learning Team has partnered with C21U, GTPE, and program faculty to conduct requirements gathering, fact finding, and market analysis.

Update: Victor Bolet will present up-to-date findings from the team.
ACADEMIC CLOUD TEAM OFFERING STUDENT CLOUD LABS

PROPOSED OMS CYBERSECURITY CYBER RANGE / CYBER LABS
What are Student Cloud Labs?

• Enterprise run framework faculty can use to deploy lab resources which would run in a cloud environment and accessible to students based on their enrollment in a course.

Example (Virginia Cyber Range):

LESSONS IN THIS COLLECTION

1. Reconnaissance and Scanning
2. Hands-on with Password Audits
3. Web Application Vulnerabilities

FACULTY INSTRUCTIONS

There are four Virginia Cyber Range exercises that can be used with this module.

• Cyber Basics - Reconnaissance and Network Scanning Lab
• Cyber Basics - Introduction to Password Auditing Lab
• Cyber Basics - Web App Penetration Security: Command Injection Lab
• Cyber Basics - Web Application Security: SQL Injection Lab

Each of these exercises are available in the courseware repository and in the Virginia Cyber Range exercise area. If instructors add the Cyber Basics – Reconnaissance and Network Scanning Lab to their exercise list, students can complete all of the labs using that environment. [NOTE: Students can complete these lab exercises using a standalone environment such as the individual Kali Linux workstation they may have set up during the introductory module.]
WHAT IS A CYBER RANGE?

Cyber Range

A cyber range is a virtual environment that is used for cyberwarfare training and cybertechnology development.

- Controlled Virtualized Environment
- Simulate the Enterprise
- “Mini Net”

Traditional “Ranges”
- Physical Environment for:
  - Weapon Testing
  - Live Training
  - TTP Development, ...
  - Range Assets Change slowly

Cyber Range
- Place to Evaluate:
  - Effectiveness of Cyber Defenses
  - Effectiveness of Cyber Weapons
  - Train Cyber Warfighters
- Rehearse Mission
- TTP Development
- Range Assets Change Rapidly

NCR provides a range solution that can span the entire spectrum of cyber test, evaluation & training needs.
## WHAT OTHERS ARE DOING? (BUY VS BUILD)

### Vendor Based (Sample Offerings)

- **Merit**
  - Michigan Cyber Range
  - Augusta State/GA Cyber Range

- **SANS**
  - ~$3,000/semester / ~40 students

- **Cyberbit**
  - Regent University
  - Baltimore Cyber Range

  **"Range in a Box" / Hardware + Setup**

- **Vocareum (proposed offering)**
  - Network Security Lab

  **$70/student + AWS costs**

### Exemplar In-House

- **Virginia Cyber Range**
  - AWS hosted
  - Creative Commons Licensed Content

  ~$10,000/semester / ~800 students

- **UC Berkeley CLTC – Center for Long-Term Cybersecurity est 2015**
  - Funding center and research hub

  **Hewlett Foundation Grant**
Current Course Offering (CS6265)

- Assignments
  - Students download 3-5GB per project
  - Run on Student Computer
  - (multiple times per semester)
- 30-80 Student Class Sizes – Proposed 300-800

Readiness for MOOC Assessment:

- Little to no Automation
- Not Sustainable/Scalable
Faculty Feedback:

• Custom Environment for coursework
• Any solution provided MUST be able to accept faculty’s tools
• Scalable, dynamic solution
• Ephemeral student resources on-demand
• Spring 2019

Georgia Tech Edge:

Develop cutting edge tools
## CURRENT SERVICE OFFERINGS

### 300–800 Student Lab

<table>
<thead>
<tr>
<th>Offering</th>
<th>Scalable / Cost at Scale</th>
<th>Secure / Isolated</th>
<th>Sustainable</th>
</tr>
</thead>
<tbody>
<tr>
<td>VLab</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>On-Premise</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>Student Computer</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>Student Cloud Lab</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
</tbody>
</table>
STUDENT CLOUD LAB NEEDS

Cloud Offering for Student Labs

• Enable faculty to create coursework using their preferred tools
• Enterprise automated deployment of faculty created coursework
• Academic Cloud Expertise Support
HOW DO WE MOVE FORWARD?

Campus Cloud Team
- Academic Cloud Tiger Team
- Cloud-Savvy Academic Support Professionals

Student Cloud Labs / Cyber Range
- Enterprise Managed Resources
- Academic Focused Tools

Proposed OMS CyberSecurity
Spring 2019
ACADEMIC CLOUD TEAM PARTNERS

OMSA, OMSCS, Proposed OMSCyber
Instructional Design

GROW: New Methods for Innovative Educational Programs

Enterprise Implementation & Support
RUN: Technology Infrastructure and Services Support

Faculty Innovation
TRANSFORM: Cutting Edge Research, Development and Testing

C21U

Instructional Design
TRANSFORM: Evidence-Based Teaching and Learning Methodologies

GTPE

OIT

CTL

Education Innovation Council
**Issue:** TSP led the Institute technology budget development process to provide a comprehensive view of IT investment priorities.
CTO Search Update

**Issue:** The Institute CTO role is currently vacant. The position has been reconfigured to lead the research technology, digital learning, and enterprise innovation functions and will report to the CIO.

**Status:** Responses to search firm RFI’s are due March 30. Anticipated hire date is June 2018 with start-date thereafter.

Lew Lefton will chair the search.
Digital Plan Update

**Issue:** The Institute does not currently have a technology strategic plan. Components of a plan exist in various capacities. However, a unifying digital strategy to build alignment between the components, technology priorities, and Institute strategy does not exist.

**Status:** Draft RFP is 75% complete.
- TSP to serve as Steering Committee
- TAC to serve as foundation of campus work-groups.
**Issue:** The USG has proposed a model of centrally-hosted, managed services for all ERP systems at all institutions.

TSP agrees that the centralized model, along with legacy products would severely limit the strategic capacity and effectiveness of the Institute.

TSP supports the engagement of a 3rd party firm to conduct a cost-benefits analysis of the USG proposal as related to the Student Information System (Banner).

**Status:** RFI to be issued April 6, 2018 responses due April 27, 2018.
ERP Update

**Issue:** Georgia Tech is currently implementing WorkDay Financials to replace PeopleSoft Financials.

**Status:** Greg Phillips will provide an update for TAC on the current state of the project.
IT Strategy Partner’s Update
Financial Transformation Goals

#1 Collaborate between academic, research, and administrative areas to address system, process, and data deficiencies

#2 Streamline and standardize processes to enable faculty and researchers to work more efficiently, promote platform unification and to reduce customized applications

#3 Expand the core financial system to eliminate redundancies and enable outcomes currently provided by some extended systems

#4 Improve reporting capabilities to enhance the financial decision making
Project Phases

August 2017
- Plan
  - Visioning
  - Foundation Data Model & Tenant
  - Functional Solution Planning
  - Business Process Discovery
  - Technical Solution Planning
  - Organizational Readiness
  - Implementation Plan

March 2018
- Architect
  - Business Process Design & Prototype
  - Customer Review Sessions
  - Data Clean Up
  - Integration Design
  - Conversion Design
  - Reporting Design
  - Test Planning

July 2018
- Configure & Prototype
  - Iterative Prototyping (End-to-End)
  - Configuration, Integration, and Reporting Development & Unit Testing
  - Conversion Testing
  - Test Preparation
  - Customer Confirmation Sessions

December 2018
- Test
  - End-to-End Testing
  - User Acceptance Testing
  - Deployment Preparation
  - Training Development

May 2019
- Deploy
  - Training and Rollout
  - Gold Tenant
  - Production Configuration and Data Conversion
  - Transaction Catch Up

July 2019
- Support
  - Functional Support
  - Integration Support
  - Project Close

In partnership with the University System of Georgia
Planning Phase Accomplishments

- **PeopleSoft Chartfields** transformed into FDM Dimensions
- **216 Integrations Identified**
- **170,000+ Hours committed to the Transformation across the Institute**
- **218 Current Systems Inventoried**
- **150+ Stakeholders Engaged for Input and Discovery**
- **500+ Current Pain-Points Identified**
- **40+ Hours of Discovery Sessions Conducted**
# High-Level Schedule

## March
- 3/5: FDM Design
- 3/12: FDM Mapping, Crosswalk, & Posting Rules

## April
- 4/2: FDM Design
- 4/9: Business Process Workshops & Follow-up Meetings
- 4/16: Security Overview
- 4/23: Define Security Requirements & Roles
- 4/30: Gather Data Specifications
- 5/7: Determine layout

## May
- 5/14: Finalize Design and Values
- 5/21: FDM Mapping, Crosswalk, & Posting Rules
- 5/28: Define Security Requirements & Roles
- 6/4: Configure Security Roles
- 6/11: Finalize Integration Design
- 6/18: Assist in Extended System Design
- 6/25: Build Conversion Programs

## June
- 6/1: Report Requirement Identification
- 6/8: Report Prioritization & Design
- 6/15: Perform Data Cleanup & Monitor Progress
- 6/22: Design Conversion
Architect Phase

Objective: Design Financial Solution Components

- Business Process Design
- FDM Design
- Data Cleanup
- Integration Design
- Conversion Design
- Report Design
- Security Design
- Test Planning
- Change Impacts
Business Process Design Approach

- **ARCHITECT**
  - Business Process Workshop Prep
  - Business Process Discovery
  - Business Process Design Workshops
  - Business Process Review Sessions
  - Business Process Development Prototype 1
  - Feedback & Insights

- **CONFIGURE AND PROTOTYPE**
  - Business Process Confirmation Sessions Round 1
  - Business Process Development Prototype 2
  - Customer Confirmation Sessions Round 2
  - Prototype 1
  - Prototype 2

- **TEST**
  - Ready for Testing
  - Test
There are multiple components used to define a business process, which when combined form…

A “fully baked” Workday Business Process, including related object configurations, approval routing, integrations, etc.
**WHAT** “Backbone” of Workday Financials, the Foundation Data Model will replace the current PeopleSoft Chart of Accounts

**WHO** Led by the FDM Leads, with input from Process Area Leads working with Area Owners, Analysts, and Advisors

**WHEN** Finalization of the FDM structure (i.e. dimensions), initial COA to FDM mapping, and design of the Account Posting Rules, Worktags, and crosswalk tool occurs throughout the Architect phase
FDM Design
Approach

Key Participants:
- FDM Leads
- Process Area Leads
- Area Owners
- Analysers
- Organizational Readiness Team
- Enablement Team

Inputs:
- PeopleSoft COA / SpeedTypes
- Reporting Requirements
- Workday Methodology
- FDM Workbook
- Existing FDM Cross-Walk Examples
- Campus “Roadshow” Presentation

Outputs:
- FDM Structure
- FDM Workbook
- Campus “Roadshow” Presentation
- Updated FDM Workbook
- FDM Cross-Walk Design
- Initial Related Worktags
- Initial Account Posting Rules
Enablement Build Items Design

Approach

**Confirm Requirements**
- Enablement Area & Track Leads
- Process Area & Track Leads
- Owners

**Understand Detailed Data Requirements**
- Enablement Analysts
- Process Analysts

**Build Design**
- Enablement Analysts
- Process Analysts

**Confirm Design**
- Enablement Area & Track Leads
- Process Area & Track Leads

**Key Participants:**
- Enablement Area & Track Leads
- Process Area & Track Leads
- Owners
- Enablement Analysts
- Process Analysts

**Inputs:**
- Identified Requirements
- Workday tools and processes information
- Requirement Specifics
- Knowledge of GT legacy data and Workday data
- Completed Design

**Outputs:**
- Understanding of Workday tools and processes
- Mapped data fields
- Confirmed Design
- Completed Design
Campus Engagement

Champions
Formal and informal campus leaders and users who actively advocate for initiative by cultivating enthusiasm and setting expectations

Change Agents
Group of users who can serve as primary contact to provide feedback and communication between academic, research, administrative units & OR team

Guru Network
Community of users who can serve as subject matter experts and provide business process support as a part of their current role

Before Go-Live
- Create excitement
- Demonstrate support
- Evangelize for the change
- Provide high-level information

Learn assigned areas of system
Test the system
Serve as SMEs during user training

After Go-Live
- Serve as a liaison
- Direct users to help resources

Serve as a liaison
Direct users to help resources

Provide user support
Serve as a liaison
Campus Engagement

• The Organizational Readiness team is recruiting for the change network during the architect phase

• Are you interested in becoming a change analyst?
  • Email erp.readiness@gatech.edu
Thank You
Issue: The University System of Georgia requested comment and review on updated the IT Handbook, Section 12, Data Governance and Management.

Status: Policy was circulated through TAC for review and comment. Primary concerns were noted in shifting responsibility for data stewardship to include staff and faculty, beyond currently-identified data custodian roles; and, designation of data classification particularly as related to research data, which is classified separately under Institute policy and federal statute.

Institute Response: Concur with comment.
Issue: IT Governance has unsuccessfully used an internal SharePoint site for review, communication, and dissemination of material. A new, public-facing has been requested.

Status: Phase 1 of draft site is ready for review. John Gilleland will provide a brief overview.
Unified Communications Update

Phase 1: Migration complete by June 30, 2018
✓ approx. 3,300 phones lines migrated, to date (remaining balance 7,700)
✓ developed project site, includes migration schedule and other user reference material
  www.oit.gatech.edu/ucc

Phase 2: Spark Roll-Out and Number Port starts July 1, 2018
- Cisco Spark is cloud solution designed to enhance the mobile workforce
- Port of 11,000 phone numbers from the old technology to new IPFlex technology offering costs savings to the institute
- Estimate port migration is 60 days (ATT vendor recommendation)

Rate Study
- No increase in FY19
- Rate Study has been forwarded to Budget and Finance for review
- Strategy being developed to determine 5-year budget impact projections.
**T-square Project Site Replacement**

**Issue:** The T-Square service hosts 2,225 Unofficial Course sites, 9,140 Project Sites, and 2,929 "My Workspaces," totaling more than 14,000 sites that must be evaluated and potentially transitioned in order to decommission the T-square (Sakai) product.

**Current Status:** The Digital Learning Team within the Office of Information Technology (OIT) is collaborating with Center for Teaching and Learning, The Architecture and Infrastructure Team in OIT, Professional Education, and C21U to examine the various options for project sites along with advantages, disadvantages, and costs of each one. A survey is being developed to determine the usage and requirements for those currently utilizing T-Square for projects.

**Roadmap:**
- Complete Issue Paper, Develop and Circulate Survey: April/May 2018
- Assess usage and requirements, present recommendations for replacement: June 2018
- Present proposed solutions and implementation timeline to GT community: August 2018
Technology Advisory Council

March 30, 2018