Members in Attendance:
John Charles, Vice President, Information Systems & Technology
Professor Dennis Freeman, Dean for Undergraduate Education
Karen Gleason, Associate Provost (Co-Chair)
Professor M. Frans Kaashoek, Charles Piper Professor, Electrical Engineering & Computer Science
John Letchford, Chief Information Officer, Sloan School of Management
Anthony P. Sharon, Deputy Executive Vice President (Chair)
Glen Shor, Vice President, Finance

Guests:
Christopher Bunn, Director, Business Operations, Information Systems & Technology
Eamon Kearns, Senior Director, Emerging Solutions, Information Systems & Technology
Deborah Fisher, Institute Risk Officer
Diana Hughes, Senior Director, Planning & Administration, Information Systems & Technology
Michael Moody, Institute Auditor
Mark Silis, Associate Vice President for Information Systems & Technology

I. Meeting minutes approved (Approval)

II. Review of Action Items from 5.11.2016 meeting (Update)
Tony Sharon discussed two issues under review.
1. IPv4: MIT plans to sell a specified number of unused IPv4 addresses – a sensitive issue. It has received Executive Committee approval: net proceeds would go to the Provost to further the academic and research mission of MIT. The services of a broker have been secured, and this has been presented to President Reif and Provost Schmidt. Prof. Kaashoek recommended speaking with David Clark. John Charles confirmed that David Clark participated in the broker selection process.
2. Scanning Files in Dropbox: Prof. Redwine’s committee will discuss this at the IT Policy Committee (ITPC) meeting on 9.30.2016. Another action item is to develop a template for evaluating software-as-a-service (SaaS) offerings.

III. FY2016 Project Summary (Update)
Eamon Kearns gave updates on cloud migration, new services, and infrastructure modernization:
1. IS&T has migrated 30% of its managed servers to vCloud Air using a lift-and-shift strategy. MIT’s cloud computing infrastructure now includes SAP/HANA, VMware and Amazon Cloud. IS&T has rolled out many cloud-based applications to the community, including Crowdstrike, DocuSign, Duo, Dropbox, LabArchives, LastPass, LabArchives, Tableau, and Qualtrics.
2. Other software and services have also been deployed:
   - The Undergraduate Admissions Decisions application, with improved scalability, performance and mobile device support
   - The first phase of a pilot to relaunch SANDI (Staff Appointments and Distributions tool)
   - Version 8 of the Atlas administrative portal
• Access My Commute, an online dashboard that lets commuters compare transit modes and analyze their carbon footprint (developed by IS&T and the MIT Transit Lab)
• Analysis, integration and testing for Coupa, a cloud-based Buy-to-Pay procurement solution

3. Infrastructure modernization efforts include the following:
   • An upgrade to the campus wireless network, with 1100 access points added
   • Installation of AT&T neutral-host distributed antenna system (DAS) in six more campus buildings; an agreement to add Verizon equipment to the DAS
   • More uninterruptible power supply (UPS) systems added to Edge equipment racks on campus
   • A 100-gigabit connection provisioned between Bates Research and Engineering Center and the Large Hadron Collider Compact Muon Solenoid experiment

4. FY14-16 IT modernization budget was $31M; actual expenses were $35.7M.
   • Tony Sharon mentioned complaints from student residents. IS&T is looking at how to fund Internet upgrades for all residents. An immediate fix was done at Edgerton House.
   • Many dorms still have Resnet, installed in 1991. Putting in WiFi has provided some buffer. There are both coverage and infrastructure challenges.
   • Prof. Kaashoek suggested it would be good to have visible examples of what has been done for students.
   • Tony Sharon suggested finishing up with a customer report.

IV. Cybersecurity Review and Policy Issues (Update)
Mark Silis gave an update on cybersecurity attacks and responses in 2016:
   • So far in 2016, there have been 58 denial-of-service attacks.
   • IS&T put in protective services through Akamai. Prior to this, any of these attacks could have debilitated MIT.
   • Ten ransomware infections were reported to Service Desk; no ransoms appear to have been paid.
   • In September alone, 460,676 external addresses were blocked due to malicious activity.
   • IS&T uses several software applications and services to protect against attacks:
     o Client/user protection: Crowdstrike Falcon Host, Sophos, Duo Security, LastPass, BitLocker/FileVault. Crowdstrike protected MIT from an event that hit the University of Connecticut and caused ~200,000 passwords to be reset. LastPass lets users manage passwords for all of their sites.
     o Asset/application protection: Prolexic/Akamai, BitSight, Veracode.
     o Network protection: SecurityCenter/Nessus, Stealthwatch, Sourcefire, Splunk. The SecurityCenter tool provides self-service vulnerability assessment. IS&T does not provide penetration-testing services to DLCs; these are available through contracts with third parties.
   • With respect to the report stating that MIT was at the bottom end of deploying security, IS&T worked with the News Office; everyone recognized it as a marketing ploy used by the vendor.

V. Governance Process (Discussion)
Tony Sharon thanked John Charles and his team for establishing the foundation of the transformation. IS&T is in a transition period in terms of governance and funding.
1. Historical Expense FY97-FY17
   - There has been no Consumer Price Index (CPI) adjustment for non-salary costs – and no annual bump-up for licenses.
   - One-time modernization funding was for FY14, FY15, & FY16.
     - Ongoing/recurring licensing costs were not included in the budget. Consequently, IS&T has been requesting annual budget increases to accommodate.
     - Additionally, some of the FY15-16 transformation projects also have ongoing costs.
   - Our goal is to get to a new normal (steady state) budget for IS&T.
   - Karen Gleason asked about benchmarking comparisons with other institutions.
     - John Charles responded that IS&T does have some benchmarking data from other research institutions, and it shows we run lean.
     - Prof. Kaashoek noted that some comparisons can be complicated because of differences in scope of services within central and local budgets at different institutions – further noting that Stanford’s benchmark is most like ours.

2. FY11-FY20 Software Services and Growth
   - The rapid growth in the use of software products and SaaS offerings means that the ITGC will need to rethink its governance processes for how new software product licenses and SaaS offerings are approved and funded.

3. Discussion of Software and Application System Governance Models
   - John Charles reviewed the current governance and funding processes, and outlined how a new model might work. Perhaps a model similar to the one used by the Committee on Renovation & Space Planning (CRSP) – where the project sponsors communicate their priorities via cost-sharing.
     - Committee discussion acknowledged the need for new approaches for managing MIT’s growing portfolio of software and SaaS services.
     - New guidelines will be needed for determining funding sources, making budget allocations, and managing annual expenses against approved budgets.
     - Karen Gleason noted that we’ll also need to align these new processes with the Institute’s annual budget submission cycle.
     - Prof. Kaashoek suggested running Salesforce through the proposed new processes as a test case – helping better understand the challenges.
     - Karen Gleason commented that we might also be able to leverage the ILP when discussing new licensing models with software companies like Salesforce.
   - Next steps: ITGC agreed to convene a subcommittee to propose a new governance model and operating practices. Tony Sharon asked for volunteers.
     - John Letchford volunteered, and Glen Shor volunteered to provide someone from VPF.
     - Prof. Kaashoek suggested starting with the big-ticket items.
     - Action item: Tony Sharon will send out an email with the proposed charge for the subcommittee. [Complete]

VI. **FY17 Projects** (Update)
   Eamon Kearns provided project summaries for the following areas:
   1. Administrative Systems
• Projects include Buy to Pay, Compensation Management, E-Builder, Cosmos, Atlas Service Center systems, Travel Registry, Enriching Diversity application, and I-9 Outsourcing.
• Some facilities for projects are being funded out of the Department of Facilities.

2. Student Systems
• Projects include the Student Dashboard, MIT-to-Harvard Cross Registration, Enrollment Tools – Generic Waitlist, a new UROP system, CourseLeaf’s Curriculum Module to manage subjects, Classroom Reservation Requests, and Department Course Requests (Scheduling)

3. DLCs
• There is an increased focus on meeting the needs of DLCs.
• Projects include the Big Data Hub (analytics for the Living Lab initiative), Cognos reporting, Data Mart, Graduate Appointment Process (Web Grad Aid), “KendallShare” Resource Reservation application and website, Research Forecasting reports, and the Salary Distribution Dashboard (SANDI).

4. IT Modernization Project Breakout
• We will need ITGC assistance to bring down the delta – the gap has been reduced but it’s still over budget.
• Project spend currently includes software licensing costs – which are not one-time costs – and must be budgeted for as recurring costs as we move forward.
• The move to APIs has helped reduce some costs through reuse of APIs. For example, some of the Buy-to-Pay APIs are being reused within Facilities projects.

5. Research Summary
• Kuali Coeus is live and fairly stable.
• VPR’s Research Computing Initiative is another example of one-time funding with an ongoing/recurring costs tail.