Recommendations

IT Funding Structures Review of Infrastructure Services

Background

The proposal to review and align IT Funding Structures was brought to ITPB, CITI and CSG in early 2012. All three boards supported the proposal and agreed to participate in the review. Funding structures is defined as the combination of funding, service, cost, incentive, management and accountability to form a structure that encourages/ensures desired outcomes.

The members of the Funding Structures Recommendations committee are:

ITPB Chair & Vice Chair – Jerry Kang and John Mamer
CITI Co-Chairs – Steve Olsen and Gary Strong/Robin Garrell
CSG Chair & Chair-Elect – Tom Phelan and Julie Austin
Jim Davis – Office of Information Technology
Glyn Davies – Academic Planning & Budget
Jack Powazek – Administration
John Power – CAO School of Law
Marcia Smith – Office of Research Administration
Andrew Wissmiller – Information Technology Services

The committee agreed to examine case studies for establishing recommendations on funding structure principles. The attached prospectus documents the recommendations for the first groups of services:
Case Study #1 and #2: Lower LH and Lower RH Quadrant Infrastructure Service Offerings

Case Study #1 is characterized as lower left-hand quadrant infrastructure services with respect to the IT2020 plan – “IT infrastructure services (lower left quadrant) are based upon institutional or regional instantiations with blended delivery of services - local deployments are by exception. (e.g. data centers/machine rooms)” These services are further characterized as infrastructure services (e.g. data center, server, storage) commonly used throughout the campus but which function is generally independent of facilities deployment (unlike middleware for example). The proposed ITS data center, server and storage services were used as the specific test cases.

Case Study #2 is characterized as lower right hand quadrant services with respect to the IT2020 plan. By definition these services are market driven. There is no a priori expectation of shared services. They are developed only if there is research demand and value. “Specialized research and educational IT infrastructure services (lower right quadrant of earlier graphic) must be deployed locally - sharing occurs when value can be demonstrated.” The proposed OIT archival storage services for researchers were used as the test case.

Case Study #1

- The expectation for campus units to use common infrastructure services provided by ITS or as substantial regional services is generally supported.
  The services offered in the lower left-hand quadrant are campus-wide, common infrastructure services. Benefits of using campus services include:
    - IT infrastructure that is more productive, leaner, greener and cost effective
    - Supports consolidation of data center / server room space and the transformation of legacy IT assets to modern private or public cloud type solutions
    - Other benefits could include improved service levels, lower total cost of ownership, optimized power and cooling usage, higher resource utilization rates, increased operational efficiency and reduced information security risks
  The group agreed that campus units are expected and encouraged to take advantage of these enterprise-level services where possible.

- Because of the extensive installed base of investment in distributed facilities and staff, the opportunities for transition are with inflections in investment, e.g. major upgrades, building moves, etc.
  The committee agreed that because the maturity of systems and investment status within different units varies widely, the opportunity for a local unit to transition its services over to a central or regionally shared infrastructure service is when there is a transition need for hardware/software upgrade, building moves, staffing issues, etc.

IT Services presented two case studies where a local unit transitioned its data center over to IT Services when presented with a major investment decision. One group needed to hire its own group of IT staff in order to run its own data center, while the other was considering an upgrade
to its current data center room. After analysis, both groups determined it would be more cost-effective to make use of IT Services’ offerings.

- **A market-driven, fee-for-service structure ensures value and commitment for client and ensures service-cost alignment.**
  Even though the IT2020 plan states an expectation for shared, consolidated services, a market-driven funding structure allows the cost for services to be kept at market value to attract clients, while the fee-for-service structure provides commitment to the client that they will receive the level of service they pay for. This structure is also beneficial for the provider of the IT services in that it can ensure alignment between the cost to provide the service and the fee to charge clients.

- **Use of the services should not be mandated (market decides).**
  In order to have a market-driven approach, the committee agreed that the use of common infrastructure services should be encouraged, but not mandated. It is up to the client/market to analyze and determine the cost-effectiveness of the service offerings for their units.

- **Procedures need to be established for flagging investment inflections and ensuring an appropriate value analysis.**
  The committee recommended establishing a procedure for flagging major investment decisions, such as when a unit requests quotes from Facilities or a major hardware/software purchase, so that the unit can be provided with more information about the common infrastructure services. The decision to use a campus-service resides with the local unit provided that they have completed a value analysis. The committee further recommended there be a checklist and protocol for the value analysis in determining whether it is worthwhile to move over to the campus service.
  
  At this time, the group agreed to let IT Services deploy their initial communications plan to inform units of their services before discussing the procedure for flagging investments.

**Case Study #2**

- **With Case Study #2, lower right hand quadrant services, by definition market driven, the recommendation that Case Study #1 be market driven causes the funding structure for both to become nearly the same**
  The committee established that the requirements for storage services were sufficiently different to warrant separate researcher oriented archival storage services. There can, however, be overlaps. The market driven approach will require researcher and general campus markets to review feature sets and costs to determine value. OIT will also work with the campus to flag archival storage purchases.
With Case Study #1 and #2 together

- For infrastructure services to be both attractive and cost effective for units there needs to be a full array of services in place upfront. This implies upfront investment potentially involving campus investment or a campus loan while the client base builds. CITI is the designated Governance Committee for resolving recommendations on requests for campus investment vs. loans.

In order to attract clients, IT infrastructure services need to include a full suite of managed services. It is not sufficient to provide piecemeal services and expect to grow toward a full service array. Upfront expenditure is also the way to drive costs down.

IT Services will request investment capital from the campus to build up the infrastructure and services from the beginning of the project and to create incentives for not only cost recovery, but recovery of other benefits such as space. OIT will request a loan to build the upfront services infrastructure which will be aimed at cost and research data preservation benefits. In both cases the client base is expected to grow and the service is expected to become self supporting or it needs to change.

- Pricing will be set through POSSSE.

POSSSE is the responsible organization for approving the rates of the service offerings.