

University California Santa Cruz IT Review

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Executive Summary

The University of California Santa Cruz (UCSC) Information Technology Services (ITS) organization is uniformly considered to have improved over the past six years since the campus-wide IT consolidation moved into implementation. Surveys and other feedback also show that ITS services continue to be rated positively, even in light of significant budget cuts. Yet, there is considerable reprising of pre-consolidation history and lingering resistance to the consolidation among ITS staff, campus staff, and faculty. Turnover in campus leadership has exacerbated the problem. Excessive churn, energy, and resources are spent in rehashing the virtues or negatives of consolidation. The external review committee (ERC) recommends the campus re-commit to the work done on the reorganization, acknowledge what has been accomplished, and celebrate what have been positive outcomes while recognizing there is still work to do.

In the context of the campus re-committing to continue work on the consolidated IT model, the ERC identified three substantive areas that deserve attention:

- 1) Central and distributed resources—There was a comparatively stronger than typical tension with respect to central and distributed staff and the accompanying expectations for services. Given ITS’s centralized organization model with Client Relationship Managers (CRMs) and unit support services, the ERC recommends that ITS:
 - a. Re-examine the mechanisms, processes, and communications by which the distributed units are involved in setting expectations and priorities for CRMs
 - b. Critically review the roles and expectations of CRM staff as well as roles that have now been centralized
 - c. Further consider how to more visibly assimilate the fact that the Client Services and Security (CSS), Learning Technologies (LT) and Applications and Project Management (APM) services for individuals and units are providing services that no longer need to be done by local staff.
- 2) Information User (IU) Assessment—There was a widespread lack of understanding of the services provided by the IU assessment, and there was skepticism about its value. Acknowledging this broad concern but recognizing that “an IU assessment” is a funding model being applied by other universities to provide common IT services, the ERC recommends that UCSC review and make

a clear commitment to the underlying principles of the model, re-establish the specific services and costs to be funded, and engage stakeholders in establishing the particular services.

- 3) IT governance—A theme that came up repeatedly during this review in a number of forms was a lack of participation, commitment and/or understanding of the governance processes that lead to IT strategy, specific goals and projects, and IT policies. Governance is distinguished from the management and project execution that drives a project or initiative. Though governance is always important, the sensitivity and need for clear governance processes and associated commitments are heightened during times of difficult decisions. To address concerns and ensure preparedness for decisions to come, the external review committee recommends the explication of campus-wide goals, a campus-wide visible review of the existing IT/ITS governance structure and the commitments to it, and as necessary, modification and creation of a new set of IT/ITS governance mechanisms.

Review Process

The external review process comprised five steps:

1. The UCSC ITS self review provided the necessary background and status information with which to conduct on-campus interviews.
2. The charge letter from Provost and Executive Vice Chancellor Alison Galloway and an individual meeting with Provost Galloway and Vice Chancellor Doyle on March 27, 2011, clarified the scope and objectives of the review.
3. On March 28 and 29, 2011, discussions with key campus stakeholder committees, constituencies and the ITS management team as well as open sessions with the ITS staff, campus faculty/staff and students provided a wide spectrum of direct comment and feedback.
4. An exit interview with Provost Galloway and Vice Chancellor Doyle provided initial feedback on direction of the findings.
5. The review team met multiple times after the on-campus interviews to reach the conclusions expressed in this report.

General Characterization

Overall the UCSC ITS organization provides good, well-run services for the university community. We heard significantly more positive comments across the full range of services than negative. However, we also observed an organization that is under pressure on multiple fronts. The budget situation is by far the most significant and immediate pressure in that it is already impossible for the ITS organization or the campus for that matter to deliver on all that had been expected. While a detailed resource service comparison was not possible at the level of this review, it is quite clear that resources are not sufficient to maintain existing services at a quality level, adequately maintain institutional infrastructure and applications, address new initiatives that will further generate IT and campus efficiencies and address departmental-specific

needs. As is already happening, UCSC and the ITS organization must look carefully at priorities and make highly selective investments with limited resources. This, in turn, is placing significant and increasing tension on prioritizing local versus core campus needs as well as academic versus core administrative needs.

The budget situation, not surprisingly, has driven significant discussion about how to address these IT priorities in the context of the ITS organization and has intensified the positions of campus versus individual units vying for resources. While the budget situation is difficult in its own right and requires dedicated campus leadership, there appears to be a confluence of additional factors that are adding to the pressures. In general, we observed that ITS goes to great lengths to address every need, request, and requirement but with decreasing capacity to do so, causing a growing expectation gap. The UCSC and ITS executive leadership have changed and now have the job of taking a still nascent ITS organization forward. Given the massive nature of the IT reorganization, ITS is, in all likelihood, still in some of the long-tail aspects of reorganization. While we observed more than sufficient evidence of success to recommend staying the course, we did want to note that the highly centralized nature of the ITS reorganization, while not without precedent, is also not particularly common among research universities. Given this fact combined with the highly decentralized origins of UCSC IT and the decentralized nature of the UG colleges, there was a sense that the campus and ITS are still evolving even after five years.

Central and Distributed Resources: Perceptions, Expectations and Communications

Perhaps the most pervasive as well as sensitized theme that threaded through virtually all discussions was a comparatively stronger than typical tension with respect to central and distributed staff and the accompanying expectations for services. Not only was the intensity around these issues pervasive in the sessions in which there were school, unit and department representation, but the tension was apparent within the ITS staff itself. We were struck by an unusually high number of email messages from individuals in the general staff and faculty sessions that spoke to this point as follow up to the review.

There is invariably some level of tension in research universities across the user base and the staff addressing distributed and central IT needs. In the case of ITS, we identified several patterns of perception, reality, and expectation that we believe contributed to some stronger than typical areas of tension that can be readily addressed:

1. The reorganization itself that produced the current ITS organization surfaced in multiple discussions. Even though the reorganization dates back to 2003 and was considered completed in 2007, the success of consolidating central and distributed staff services into the ITS organization and effectiveness of integrating and providing central and distributed service was brought into question in terms of aggregate points about services and funding. Comments about CRM staff services took several forms but generally speaking could be grouped as (1)

services are worse or less than what they used to be, (2) we no longer have control over the priorities of the staff resources and/or (3) they are not as responsive. Comments about CRM staff from a financial standpoint encompassed (1) we gave up our money to ITS and we expect that amount of service resource in return, and (2) we would like to be part of the process of retaining valued staff.

2. Comments about Client Services and Security (CSS), Learning Technologies (LT) and Research and Faculty Partnership (RFP) services - central staff and services that address individual and distributed service needs - were generally positive to very positive about the services. Interestingly these services were by and large excluded from recognition within the distributed services portfolio.
3. One pattern of comment was aimed primarily at core ITS services, arguing that at least some infrastructure and application services could be done better, at lower cost and in a more responsive manner if addressed and managed by local staff.
4. There was significant awareness of the severe budget pressure that the campus and all of its units are facing. Not surprisingly, there was little acknowledgement that ITS may have to take steps that could affect distributed services but we were also left with the impression that there was not a good understanding of what and how resource decisions that affect central and distributed resources are being made.
5. The IT Transformation Fees that were established as a funding mechanism for the new ITS organization seemed to be lumped together with the Information User Assessment, even though their origins and purpose are very different. For those who appreciated the differences, the IT Transformation Fee was an aggravation. For those that did not, the fact that the two fees were combined is a significant frustration.

These patterns suggest several recommendations to address or alleviate problematic perceptions and to bring about a greater and more unified focus on the current realities facing IT at UCSC.

Addressing the Consolidation

For UCSC “consolidation/reorganization” might have become a red herring. We therefore wanted to state the obvious and in so doing emphasize that there are no right and wrong answers to IT organizations, IT organizations tend to look better from the outside, and most IT organizations, regardless of structure, experience similar issues and conflicts. UCSC IT is no different in this regard.

A general recommendation of this review is to look beyond consolidation or undoing the consolidation (which was alluded to a number of times). It is hard to consider what reprising the consolidation would consist of, how it would be done or whether it would, by itself, improve anything. Time and effort are better placed in supporting faculty, students, and staff in assessing what UCSC requires from IT/ITS, letting those who lead IT iteratively propose how IT staff and resources might be scoped, prioritized, and organized, and working with senior leadership to establish financial approaches to take action on the priority investments. The more these processes can be carried out openly

with a forward looking view and sufficient communication, the better IT/ITS is likely to perform, and the more the various areas served will be able to understand what services are provided.

Moreover, there were a significant number of comments, across-the-board, that the current ITS organization is serving UCSC well. We observed that a number of review discussions started off with a negative view of the organization (as a result of the reorganization) but, when speaking specifically, the negative gave way to a positive description of the services and the support. Our recommendation is therefore not only to look beyond, but re-commit as a campus to the work that has been done on the reorganization, acknowledge what has been accomplished, and celebrate what have been positive outcomes while recognizing there is still work to do.

Given ITS's centralized model, we recommend that ITS re-examine and prioritize the mechanisms, processes, and communications by which the distributed units are involved in setting expectations and priorities. This includes reviewing and retaining the CRM staff and assimilating the roles and values of the CSS, LT and APM services for individuals and units where these services no longer need to be performed by local staff. We also encourage stronger and more regular involvement and communication with the Academic Senate and the Executive Committee. In making these recommendations, we want to note that involvement and communication are two-way exchanges. Effectiveness also requires commitment on the part of the Senate, the Executive Committee and the Units.

As a general statement of principle, distributed IT organizations are optimized for local support functions and have to work especially hard to intersect, coordinate and collaborate appropriately with decisions about central functions. UCSC ITS is optimized oppositely and needs to work especially hard on local unit interactions, involvement and communication.

Budget and Investment

It is most important to acknowledge that in the existing budget environment, the campus and campus IT are facing difficult strategic and tactical IT decisions. Staff energy needs to go into the roles and investments in IT that will support the new campus reality, the necessary planning, investment decisions, program restructuring, and implementation processes that the campus is embarking upon and not into expressing ongoing dissatisfaction regarding organizational changes. The campus vision and planning processes that are now in progress through the Provost and Executive Vice Chancellor need to drive the IT priorities and are very important to ITS in focusing and aligning efforts to evolve the IT model and address the budget realities.

We wanted to take particular note of the ITS budget/service shared service strategies that depend on the other campuses and/or the University of California such as a faculty/staff email, the UC payroll system, etc. We applaud UCSC's aggressive shared service delivery strategy but would encourage careful examination of the risks associated with dependencies especially those that impact timeliness for UCSC or risks associated with being an early adopter.

We did attempt to compare the ITS staff distribution against typically central versus typically distributed staff profiles at other research universities; UCSC appeared to come well under the typically 60 – 70% of distributed staff. While a difficult comparison at best, we came away with a sense that UCSC has been particularly effective in centralizing services that have remained distributed at other universities, is still transitioning and upgrading core services and applications, and has central staff providing some typically distributed services. While these effects trade-off positively in explaining the ratio difference, we believe that UCSC will still need to find a way to invest in more staff to support the significant research base at the university. Even though this is recognized and ITS has been taking steps to maintain distributed support staff, we want to emphasize that not only maintaining but also building the university's research base will probably mean additional staff to support local research needs directly and to support groups of researchers. An easy to cite specific example of the latter is research computing – an area that depends on IT-savvy staff who work in a specific research area, but who, depending on core IT infrastructure and economies of scale, are necessary to make research computing resources available to individual groups that could not procure such resources on their own. UCSC's efforts with large parallel clusters, massive amounts of storage, and certain aspects of networking are certainly important examples. We applaud the decision to upgrade the core network services because this is foundational to research and instruction.

Information User Assessment

The ERC would like to call significant attention to the Information User (IU) funding model. The IU assessment was mentioned as a concern by at least one participant in seven of the nine groups the External Review Committee met during its on-site visit. Some of the concerns expressed were:

- Lack of clarity or awareness of the services covered by the assessment
- The weighting of the headcounts in the assessment formula
- Interest in whether similar institutions have such an assessment
- The amount of the assessment

There was a great deal of passion around the Information User assessment and the model. This is understandable, especially in a time of severe budget reductions when expenditures are being closely examined.

The IU funding model allocates the cost of central information technology infrastructure to campus units based on a full-time equivalent (FTE) assessment of defined information user populations with associated weightings. The development, in 2008, of the IU funding model was part of the overall IT consolidation effort. One goal was to move away from the outdated port/jack and line-based charging metric for network and telecommunications services to a headcount-based charging metric. This funding model was intended to create predictability for ITS in resource planning and for customers to know their cost for IT services. Additionally, the model was intended to create a services-based framework in which campus decisions regarding increased investments in IT services could be rationally made.

The IU funding mechanism provides funding for IT services that meet established criteria and are periodically reviewed by a campus committee. Recognizing that the cost of services is, in part, driven by the number of people served, IU funding is intended to scale with growth and contraction in FTE. In the current fiscal year FY10- 11, Information User funds generate 24% of the permanent ITS budget, state and general funds account for 60%, and the division estimates that recharge operations account for 13%.

Given the widespread concern over the IU assessment, the ERC recommends that UCSC review what services the assessment model addresses, consider modifications to the model as a proxy for the use of these services, and make a clear commitment to the original or revised model.

Considerations for a review the effectiveness of the model

Given that funding IT is a challenge for most if not all institutions of higher education and there is no perfect model, the objective is for UCSC to decide on and commit to the model that works best for its mission and environment. The IT funding model created by UCSC in 2008 is similar to models at other universities. Three years in production is an appropriate time to review its effectiveness in terms of services, service quality and fixed and variable costs, recognizing that headcount is an acceptable proxy for general community use of the services. The ERC recommends a review be conducted against the goals listed on the UCSC ITS Information User web page (<http://its.ucsc.edu/iu/>). For each of the goals listed on the IU web page, reproduced immediately below, answer the questions: Has the goal been reached? If not, then why not?

- “Institutionalize the principle that all units benefit to some extent from the central IT infrastructure and must share in its cost
- Provide a rational basis for funding increases for the campus investment in shared IT services
- Reduce security risk of new network devices (hubs, routers, unsecured wireless networks)
- Move from the current port/line/jack charge model to a FTE-based metric (IU model)
- Increase the number of services provided in a single unit (user) charge
- Prepare for cost recovery in an increasingly wireless communication environment”

In addition, based on concerns generated during the external review process, the ERC recommends addressing the following additional questions visibly and with broad campus participation:

- Why is there a lack of understanding of the services provided through the IU assessment? What can be done about it?
- Do other campuses have similar funding models? What are their costs?
- Is the weighting of the FTE’s “fair” today?

- Should the IU assessment be taken at the campus level instead of at the division or unit level?

Actively engage the IU oversight committee

The ERC suggests that the committee recommended by the Funding Model Advisory Group (FMAG) in 2008 for ongoing management of the IU cost recovery model carry out the review. Since it is the understanding of the ERC that this committee has not been active recently, the first step would be to consider the composition of the committee and to update its charge. It would be wise to include individuals from the FMAG for continuity.

As part of the review, the recommendations in the Information User Funding Mechanism Proposal to the UCSC Executive Vice Chancellor dated April 4, 2008, should be revisited and reconsidered. Some were quite specific, for example:

Ongoing Management of the IU Cost Recovery Model: Recommended changes to the IU Cost Recovery Model for subsequent fiscal years will be provided to the EVC by the proposed subcommittee of ITC or the similarly charged body by January 31 of each year for the next fiscal year. Following this review, ITS and P&B will carry out the necessary operational changes to effect these and any EVC approved IU service changes by the first day of the next fiscal year.

Communicate

There has been a good deal of turnover in key personnel since the original work on the IT consolidation and the new funding model was enacted. Perhaps more important than any change in the model is a need for clear, targeted and periodic communication about the IT services covered by the IU funding and a transparent and inclusive process for frequent review of the model and for revisions to it. IT services are complex, and it will remain a challenge to address users' concerns. Communication can go a long way toward satisfying users of the services.

Governance

IT Governance here refers to participatory control in setting common-good and area-specific goals and priorities and not project execution and management. A theme expressed during this review was a lack of participation in the oversight of and goals for IT and ITS. At the same time those providing IT services seemed to express that they are misunderstood and underappreciated. Although a great deal of attention has been paid to governance, communications, and project execution, there was a sense of loss of focus, and so the following actions are suggested to re-emphasize the governance function:

- 1) A visible, campus-wide review of the existing IT/ITS governance structure producing much greater awareness of the governance structure and processes.

- 2) Affirmation, modification and/or creation of a new set of IT/ITS governance mechanisms. These are not just meetings in which “governance” can take place, but in the context in which the delineation of processes and tools that will embrace the principles of transparency, simplicity, and a clarifying rationale of how UCSC, as a community, views and agrees to provide itself with IT services.
- 3) The explication of campus-wide goals. What are the campus priorities? IT/ITS serves the faculty, students, and staff in achieving campus goals. A first consideration in IT governance is the identification of what campus goals are IT/ITS services resourced and prioritized to support?

Observations from the perspective of Governance:

If UCSC/ITS does in fact choose to review, delineate and build awareness of its IT governance, the ERC specifically recommends that UCSC determine if:

- 1) Department leadership is committed and available to those mechanisms,
- 2) The mechanisms are organized to assess IT service requirements and work with the IT leadership and staff to match requirements to services,
- 3) The overall IT governance structure has access to UCSC’s senior leadership and that the senior leadership is committed to involvement, i.e., the senior governance of UCSC that is able to allocate funding and resources.

During the site visit, existing IT/ITS committees like ACIT and the IUF commented that they did not see their committee as salient or effective in altering the behaviors of ITS. Some saw themselves as focused too much on minutia, others as being too general. It appears that the IUF has not met in a year (or perhaps more?). Other committees seemed to feel ignored or discounted. The senate in particular seemed strident about this. However, it was not clear whether there was full agreement or understanding on the mechanisms for ITS to interact with the Senate or the Senate with ITS. Additionally, leadership groups also seemed to feel disconnected from the operation and management of ITS. One senior officer expressed that ITS was doing a good job, because “they stay out of the way.” Overall, the ERC became aware of a number of committees and stakeholder groups, but did not discern that they were particularly aware of each other or working in concert toward overall IT/ITS goals, at least around the issue of IT. Without the benefit of a more detailed analysis, there was a sense of too many committees in UCSC’s efforts toward transparency and involvement. The ERC believes that a focused delineation and perhaps streamlining of the IT governance structure with visible and open processes and re-establishing commitments to it will go a long way in creating renewed awareness and involvement. The processes and communications around building IT governance are more important than the structure itself – i.e., with strong buy-in, many structures will work, with weak buy-in, few if any structures will work.

Specific IT Governance Ideas:

The ERC knows from the visit that UCSC has paid a great deal of attention to governance, both as a direct result of the consolidation and for the purposes sustaining

governance with the new organization. Of the array of possible actions around governance, the following stood out as the most useful to re-emphasize in the UCSC context:

- Align IT priorities with campus priorities. At a high level, this is a non-trivial task that does not pertain specifically to IT. The campus planning that is underway will go a long way in focusing IT priorities. However, these campus and IT governance and planning processes need to be in sync.
- Given the budget situation, a CIO campus-wide listening tour could form the basis of a “what I heard and what I think we need to do” plan - re-establishing governance and process as the tour goes (from faculty, students, staff, up to Chancellor of UCSC).
- Pay particular attention to ITS staff. The advent of more lay offs will be adding to anxiety. A useful tack might be for the CIO to hold IT staff breakfast meetings (bagels and coffee, for example, or lunch meetings, etc.). Such conversations will support governance.
- Given the combination of changes and new initiatives, publish an achievable roadmap that places ITS’s commitments in a phased timeline (if this has not already been done). The main point is to make explicit and visible use of the governance structure to collaboratively prioritize, sequence, and support funding (where needed and if possible) for some number of the recommendations. Follow up within Governance with a visible review of the ITS annual report, summarizing accomplishments and articulating the next year’s goals.