

## **Strengths, Weaknesses and Values For Information Technology at Sacramento State**

The Information Resources and Technology Steering Committee recently conducted a survey of campus opinion regarding strengths, weaknesses, and values of information technology on campus. The information gathered will serve as a framework for the Committee as it develops a strategic plan for Sacramento State's use of information technology.

### **Methodology**

The IRT Steering Committee developed a list of potential strengths and weaknesses of campus information technology, based on committee members' own evaluation of IT on campus. Twenty-one items were listed as potential strengths of IT at Sacramento State and twenty-four items (24) were listed as potential weaknesses. Finally, sixteen items were listed as potential values to guide the use of information technology on campus. A survey was set up that asked respondents to use a five level Likert scale to identify the strength of agreement or disagreement with the items as strengths/weaknesses of IT. For the values section, respondents used a Likert scale to indicate their assessment of the level of importance/unimportance of the value statements shown.

A preliminary version of the survey was sent to both IRT advisory committee members and to the Administrative Council. Several comments were received indicating confusion with both the draft survey format and the formulation of some of the items. Based on this input, revisions were made to the survey for clarification. The survey was then distributed to all faculty and staff across campus. As of April 15, 2008, over three hundred and eight (308) valid responses to the survey had been received. This comprised N=89 faculty, N=140 staff, and N=35 administrators. The survey was not distributed to students, but did elicit five responses from students. The student responses are reported, but the N is not sufficient to be representative of student opinion campus-wide. A separate survey was done of IRT staff to avoid confounding the campus-wide data; there were thirty-nine (39) responses from IRT. All survey responses were anonymous, but respondents did have to identify their constituent group (i.e. faculty, staff, administrator, student). Survey results were tabulated by constituency and then aggregated for the campus at large.

## **Overall Results for Strengths**

Twelve of the twenty-one items listed in the survey as potential strengths of campus IT received enough agreement to be forwarded for use in strategic planning. The complete list of those items in ranked order can be seen in Attachment A. The strongest agreement by far was that Sacramento State has a study body that has a strong desire for improvements in IT support for student learning (#1). Also in the area of teaching and learning, there was agreement that many Sac State faculty members are open to using technology in their teaching (#8). The fact that the campus is working to make technology accessible for all is also recognized as a strength (#7).

Survey respondents gave recognition to the quality of information technology staffing (#2) and the availability of localized support for information technology (#4) as strengths of IT at Sac State. A related strength was the fact that the campus recognizes the need for use of IT to support unique needs across campus (#6).

A key strength supported by all constituent groups was that the campus has recognized the pivotal role played by information technology across campus (#5). There is also support for the general statement that "the campus has lots of good technology available and it works well most of the time" (#12).

Finally, the following specific areas of the application of information technology on campus were noted as strengths:

- Use of technology to communicate a campus identity (#3)
- Use of technology for program assessment and measurement of outcomes (#9)
- Enhancing the privacy of information, (#10) and
- The use of technology to improve business processes and to make more efficient use of scarce campus resources (#11).

## **Overall Results for Weaknesses**

There was broad agreement on the list of weaknesses associated with Sacramento State's use of information technology, in that only one of the twenty-four listed items was not supported by the data. The complete list of weaknesses supported can also be found in Attachment A.

None of the twenty-three weaknesses received as high a level of campus-wide agreement as the top-three ranked items on the strength list (i.e. 3.8 to 4.1 level of agreement). The top three weaknesses supported were a lack of planning for replacement of IT equipment (#1), lack of alignment of IT resources with constituent needs (#2), and insufficient attention to diverse local IT needs (#3). The latter item is an interesting contrast to the perceived strengths that “the campus recognizes unique and diverse needs for IT” and that “many areas of campus have localized IT support.” This seeming discrepancy may be partially explained by the related weakness that “...the availability of localized IT support is spotty and inequitable across campus (#19).”

Several weaknesses clustered around the theme of inadequate previous planning and collaboration for IT on campus. These included weak “coordination and collaboration in previous planning” (#5), “little campus planning for IT in the past (#9), “lack of alignment of IT resources with campus goals (#8)” and “no clear focus on outcomes for IT projects” (#13A). A related cluster dealt with lack of planning for specific IT functions, including lack of inclusion of auxiliary units in planning (#4), and weak processes for acquisition of IT equipment and software (#15A).

As also noted in our pre-accreditation review, a perception of weak communication was a weakness supported by two items. These weaknesses included the general problem of “lack of communication about IT issues” (#6) and the more specific communications problems of “lack of student awareness” about IT (#14), and “many people don’t know where to go for help” (#21).

A final cluster of weaknesses was the lack of alignment of technology with teaching and learning, including inconsistent integration of technology with pedagogy (#10), undersized student technology facilities (#7), and inadequate support and technology in classrooms (#12).

Weaknesses were also cited in several specific areas, including:

- Data use for decision-making ((#11)
- Web services (#18)
- Automation of business processes (#22)
- Use of charge-backs for IT services (#13), and
- Vulnerabilities affecting information privacy (#20)

## **Results for IT Values**

The IRT Steering Committee agreed that the value relating to strategic planning should be shown as a general principle of IT planning, rather than listed as a separate value. Therefore, the sense of this item will be cited as a premise underlying the entire IT strategic planning process, rather than as a separate value.

Campus-wide agreement on IT values was much stronger than agreement for strengths or weaknesses, with four items exceeding the 4.1 rating given to the highest-rated item on the IT strength/weakness lists. In addition, all fourteen of the listed values for information technology were supported by survey respondents. Those items receiving the strongest agreement were those related to respecting information security (#1), using technology to solve educational problems (#2), supporting excellence in teaching/learning/research (#3), and promoting customer service (#4).

Several other issues were rating just behind the above, including:

- Considering both campus-wide and unique local needs (#5)
- Enhancing communications about IT (#6), and
- Fostering inclusiveness of all in IT planning (#7)

Associated values that were closely ranked were those related to building trust and respect through a team approach (#8), valuing careful listening and self-assessment (#9), and working together to meet shared institutional goals (#12).

Several values related to the allocation of resources for technology, including increasing efficiency and avoiding unnecessary duplication and cost (#11), being responsible stewards of scarce IT resources for both infrastructure and innovation (#12), and being supportive of minimum IT standards for all (#10B). The final two values supported were the promotion of accessibility of IT services (#10B) and innovative uses of technology that seamlessly integrate across university functions.

## **Differences By Constituent Group**

What was most striking about the comparisons across groups (i.e. faculty, staff, administrators, IRT) was the similarity of the ratings across those groups. The responses from campus administrators exhibited the most differences among the groups. For IT strengths, those respondents gave noticeably higher ratings to the items indicating students' desire for improved IT, recognition of the pivotal role played by IT across campus, campus commitment to accessibility, and use of technology to improve business processes. Administrators also gave significantly higher ratings to the weaknesses related to planning for equipment replacement, lack of alignment of IT resources with constituent needs, lack of involvement of auxiliary units, and lack of support for web services. As might be expected from those involved in campus-wide planning, administrators also gave higher ratings to values related to being supportive of institutional strategic goals, taking a coordinated team approach to IT, and working together to achieve shared goals.

Faculty respondents differed little from other constituent groups on the supported IT strengths, except for giving a somewhat higher rating to the item related to faculty members' openness to adopting technology. However, differences were sharper for those strengths not supported by the data. Faculty ratings were lower for all nine of these perceived strengths, with the differences often seeming to explain why those items were not supported as strengths campus-wide. It's of particular interest to note the stark differences in the ratings of faculty and administrators on the strengths related to strategic planning (2.8 faculty v. 3.6 administrators), the shift to academic support (2.8 v. 3.4), being part of a strong CSU system (2.6 v. 3.2), and serving as a model for IT best practices (2.5 v. 3.3).

Faculty responses on IT weaknesses differed little, however. Faculty members may simply be less aware of weaknesses involving participation by auxiliary units (3.5 faculty v. 4.0 administrators) and web services (3.1 v. 3.7). On the other hand, faculty members seemed more aware of weaknesses in classroom technology (3.7 v. 3.3) and planning for instructional software (3.6 v. 3.3). There was a marked difference in the perception of the spottiness of localized IT support, with faculty giving a rating of 3.2 and administrators a rating of 3.7. Despite these differences, the only item on which faculty members disagreed with a specific weakness and administrators agreed was the item suggesting that "...there is duplication and waste in campus support for email, web, and other IT services." Administrators agreed with this statement with a 3.4 rating,

while faculty disagreed with a rating of 2.9. Overall responses from faculty members on IT values differed little from campus-wide averages.

Although responses from non-IRT staff members differed little from campus-wide averages across the entirety of the survey, responses from IRT staff members did show some differences when compared to campus-wide averages. In order to allow separate analysis of IRT responses (and also to prevent skewing of campus-wide data) IRT staff were surveyed separately, with IRT staff responses not included in the campus-wide averages. As might be expected, IRT staff members showed stronger agreement with the IT strengths of having “a skilled and patient IT staff” and “the campus has lots of good technology ..and it works well.” Probably due to greater involvement in implementation of both initiatives, IRT staff also seemed to be more aware that the campus has made a commitment to both accessible technology and information security.

IRT staff members differed from the campus at large on only four of the weaknesses listed. IRT staff did not agree that lack of planning for equipment replacement was a weakness, likely because so many of those staff members are regularly involved in planning for such replacement. IRT staff members show considerably stronger agreement with the premises that the campus has weaknesses in the areas of information vulnerability, knowing how to get help for IT problems, and automation of business processes.

As previously reported, there was strong consistency and agreement across all constituent groups for all of the listed IT values. However, IRT staff indicated even stronger support for the values related to:

- Being supportive of institutional strategic goals
- Enhancing campus-wide communications
- Increasing efficiency and avoiding duplication, and
- Being responsible stewards of scarce campus resources