CHAPTER V
RESOURCES FOR EXCELLENCE

Realizing our vision of educating for competence, conscience, and compassion and building a community of scholars dedicated to integrated education requires that we develop the necessary resources and focus them sharply on our strategic priorities. While the first two strategic initiatives—"Building a Community of Scholars" and "Providing an Integrated Education"—set forth the strategic educational practices we are using to realize our vision, the third initiative—"Focusing Resources for Excellence"—provides the means for doing so. This third initiative calls for us to "develop the resources necessary for educational excellence and focus them more sharply on advancing the University's vision, mission, and values."

We must develop and focus all of our resources: accomplished faculty and staff who further the University's educational mission by educating talented and inquisitive students; a physical environment conducive to effective learning and productive work; technology and information resources necessary to enhance learning and productivity; and sufficient financial resources that are managed well. We must promote the discriminating use of resources throughout the University, ensuring that they are allocated to support our greatest strategic needs.

The University's resources and the strategic management of those resources are important because of the role they play in enabling the University to accomplish its educational objectives. It is within this context that we evaluate progress toward meeting our strategic resource goals.

The *Strategic Plan* spells out six strategic challenges under the "Focusing Resources for Excellence" initiative:

- *How can Santa Clara enhance the quality of its human resources and their effectiveness in enabling it to carry out its mission?*
- *How can Santa Clara create a physical environment that fosters academic excellence, promotes integrated education and a community of scholars, and exhibits sensitivity to the ecology and historical heritage on campus?*
- *How can Santa Clara excel in the use of technology and information resources to enhance teaching and learning, support scholarship, and improve service and productivity?*

- *How can Santa Clara excel in generating, managing, and conserving its financial resources to advance its mission and strategic initiatives?*
- *How can Santa Clara align its programs, services, performance, and resources more closely with its vision, mission and values?*
- *How can Santa Clara develop and implement a market positioning strategy that will strengthen its competitive position and increase its national recognition?*

A separate section of this chapter is devoted to each of the first four strategic challenges: the management of human resources, physical environment, technology and information resources, and financial resources. For each of these strategic resource areas, the significance of the resource and the strategic goals identified for it are discussed; historical background and context since the last accreditation report are provided; evidence of performance is presented; and progress toward the goals is evaluated. The fifth strategic challenge dealing with alignment of resources is not addressed in a separate section of this chapter, but rather throughout the report. The last strategic challenge pertaining to a market positioning strategy for Santa Clara was excluded from this self-study on the advice of WASC staff. The chapter concludes with recommendations for more effective resource management based on findings of the self-study.

HUMAN RESOURCES

All of the University's strategic initiatives are interdependent, but none more so than focusing human resources for excellence and creating a community of scholars. The faculty and staff who make up the bedrock of that community must be aligned with the University's vision to educate men and women for competence, conscience, and compassion; its mission to make student learning its central focus; and the fundamental values that we must live out as a community if we are to be successful. The *Strategic Plan* calls for us to bring to bear an accomplished faculty and staff on furthering the University's educational mission, to do that in a way that promotes the discriminating use of our investment in faculty and staff, and to ensure that faculty and staff are deployed to support our greatest strategic needs. In the *Strategic Plan*, we have challenged ourselves with the following question:

> *How can Santa Clara enhance the quality of its human resources and their effectiveness in enabling it to carry out its mission?*

The *Strategic Plan* identifies four broad goals to advance the quality and productivity of human resources:

- Offer incentives that reward departments, teams, or individuals who take a leadership role in fostering the intellectual collaboration necessary for building a community of scholars and providing an integrated education.
- Offer incentives that reward departments, teams, or individuals who improve performance, increase productivity, and improve service quality to advance the mission and vision of the University.
- Provide faculty and staff development programs that will increase productivity, improve service quality, and enhance understanding of the University's vision, mission, and values.
- Provide faculty and staff compensation that is competitive with appropriate benchmark groups so that the University is able to attract and retain excellent faculty and staff.

In this section of the self-study, we will analyze the University's progress toward these four goals, examining the alignment of human resources with the University's vision, mission, and values, with a particular focus on the deployment, development, and compensation of faculty and staff. Chapter III has already discussed human resource issues as they relate specifically to the theme of "Building a Community of Scholars."

DEPLOYMENT OF HUMAN RESOURCES

The deployment of human resources at Santa Clara is guided by position management systems for both faculty and staff which have been put in place since the last accreditation visit in 1987.

For faculty, position management is governed by a policy statement drafted by the Provost's Office and approved by the Faculty Personnel Committee in 1994. This statement, "Recruitment and Appointment to Faculty" (Exhibit V.1.3), outlines three components of position management: (a) an approval process for creating new full-time positions, (b) an approval process for filling vacant positions, and (c) guidelines for conducting faculty searches.[1] These processes and guidelines address issues such as departmental, school, and University needs; the "teaching scholar" model; and the Jesuit character of the University.

Partly as a result of this policy statement, decisions about faculty positions and candidate

selection have increasingly been made in the context of the University's *Strategic Plan*. For example, as noted in Chapter III, 12 new faculty members have been hired specifically to support the Undergraduate Core Curriculum. Several of these slots are cross-disciplinary, fostering the community of scholars and integrated education initiatives of the *Strategic Plan*. In total, since 1994, the Provost has approved the creation of 18 new full-time tenure-track positions and authorized the transfer of four tenure-track positions from one department to another, following the priorities established by the *Strategic Plan* and the guidelines set forth in the statement on "Recruitment and Appointment to Faculty." While this statement has proved useful, more attention needs to be given to consistency of application and documentation across schools. This will require closer monitoring by the academic deans and the Provost's Office.

Another aspect of faculty deployment is the assignment of teaching responsibilities. Section 3.8.2.2 of the *Faculty Handbook* states that the normal teaching assignment is "seven courses per year, or the equivalent" and that this may be adjusted for "intensive research" or a "heavy burden" of administrative or committee work. (The Law School has a normal teaching assignment of four semester courses.) Since the last accreditation visit in 1987, average teaching assignments have dropped from slightly over six courses to slightly more than five. Most department chairs receive a reduction of at least two courses, and almost all faculty who are seriously engaged in research or creative work receive a reduction of one course. Because lecturers and senior lecturers are responsible primarily for teaching, however, they are generally expected to teach seven, eight, or nine courses, with salary supplements for teaching more than seven.

The reduction in the average teaching assignment since 1987 has allowed the University to provide better support for the "teaching scholar" ideal, but it has also exacerbated the challenge of limiting the use of part-time faculty. These issues are discussed at greater length in Chapter III.

As with faculty, staff appointments are also governed by a position management system. Managers of work units, departments, or divisions identify a need and develop a job description to define a staff position. The prescribed process for obtaining funding to create a staff position has been to submit a proposal through the appropriate vice president to the University Budget Council for consideration during its macro budget deliberations. Prior to 1998, supervisors who could create new revenue or reassign existing salary dollars from base salary savings had

discretion to create new positions as long as the divisional vice president approved. Various position management programs were adopted during the 1990s that required supervisors to justify requests for hiring into new or vacant positions. Typically, the vice president asked for demonstrated linkage between the position and a mission-critical responsibility. For the most part, these systems were judged to be bureaucratic exercises that created paperwork for supervisors but had little demonstrable effect in improving strategic deployment of staff resources. Most requests were routinely approved.

In fall 1996, the President asked the Budget Advisory Committee (BAC) for advice on containing costs and achieving greater flexibility in the allocation of resources.[2] Because personnel expenses comprise the largest budget category (74 percent of 1998–99 current unrestricted budget net of financial aid), the committee determined that it was "imperative to control the growth in the University's total labor force and total labor cost," given Santa Clara's relatively static revenue base. Furthermore, its analysis showed that over a two-year period, the full-time equivalent of 36 positions had been added to the staff base, despite a concurrent moratorium on the creation of new staff positions. The committee's report to the President in March 1998 recommended "curtailing the growth in our labor force, efficiency and productivity gains, redesigning work and organizational restructuring, and better administrative controls." The committee proposed three specific programs: a headcount freeze, position management, and budget reallocation. [3] The headcount freeze was intended to limit total continuing staffing levels, so "that the size of the labor force will not grow." Additional positions were to be created for fixed terms only when agreed upon by the President and vice presidents and then only when certain conditions were met.[4] Position management called for the University to be proactive in searching for ways to redesign work and effect labor savings. Budget reallocation was encouraged by asking each vice president to set aside 2 percent of his budget for potential redistribution to respond to changing needs.

Some progress has been made in implementing the cost containment recommendations of the BAC. In the last two years, the additional positions created have met the suggested criteria. Work redesign efforts in a number of departments (including Human Resources, University Relations, Administrative Services, and Cowell Health Center) resulted in reassignment of existing positions, outsourcing for greater service efficiencies, and reductions in staffing. For the most part, successful efforts to deploy staff in ways responsive to the *Strategic Plan* have been

concentrated at the local level, conceived and implemented within a specific department or division.

The major reorganization of former divisions and departments under a provost between 1997 and 1999 represents a macro level initiative to reallocate staff positions to support the strategic initiatives of "Building a Community of Scholars" and "Providing an Integrated Education." In the course of this restructuring, more than 30 positions and $2 million in staff salaries and benefit costs were reallocated, two existing departments were eliminated, academic advising and support services were consolidated in the Drahmann Center, a new Center for Multicultural Learning was created, and four high-level administrative positions were eliminated (Assistant to the Provost, an Associate Vice Provost, one Associate Provost and an Assistant Vice President).

Despite progress in redeploying staff based on the cost containment guidelines recommended by the Budget Advisory Committee, there is not yet a comprehensive methodology for the deployment of staff resources across the entire University to support and accelerate the *Strategic Plan*. A continuing challenge is to balance our commitment to limiting incremental staff growth with our vision of enhancing our quality, competitive position, and national recognition.

DEVELOPMENT OF HUMAN RESOURCES

Developing the effectiveness of human resources in advancing the mission and goals of the University is a critical challenge. In this section, we will consider orientation programs, performance evaluation, professional training, recognition and rewards, and personnel policies.

ORIENTATION PROGRAMS

All new faculty are strongly encouraged to attend a full-day orientation the week before the beginning of the academic year. This program includes a discussion of Santa Clara's mission and Jesuit education; perspectives on Santa Clara from second-year and senior faculty; a historical tour of the campus; a discussion of support services for teaching and research; and a reception and dinner with the Jesuit Community. This program is followed by an afternoon program in winter quarter (1999 topics included "Jesuit Perspectives on Being a Teaching Scholar" and "Rank and Tenure: Guidelines for New Faculty") and an overnight retreat in spring quarter (1999 topics included "Shared Vision: Jesuit Spirit in Education," a panel of experienced

faculty on "What are Your Best and Worst Moments as a Teacher and What Have You Learned from Them," and a discussion of issues the new faculty wanted to raise).

No formal orientation program is available for new staff, although planning for one is well underway.

PERFORMANCE EVALUATION

Faculty performance evaluation is conducted in accordance with Section 3.5 of the *Faculty Handbook,* which mandates that department chairs annually provide written evaluations to all full-time members of their department. The evaluation of tenure-track and tenured faculty is based on their performance in the areas of teaching, scholarly or creative work, and service. For non-tenure-track faculty, the evaluation is based on the responsibilities for which they are hired. Sources of information for the evaluation include the Faculty Activities Report, student evaluations, publications, and other pertinent information (see Exhibit V.1.6 for 1998–99 Faculty Activities Reports and Exhibit V.1.7 for 1998–99 student evaluations).

Although the *Faculty Handbook* has not been amended formally, the provisions described above have been liberalized for tenured faculty and senior lecturers. All probationary faculty on the tenure track continue to be evaluated annually, with a comprehensive mid-probationary review in the third or fourth year.

In a series of protocols beginning in fall 1993 (Exhibit V.1.8), the College of Arts and Sciences took the lead in formalizing new procedures for evaluations that take place less frequently than every year. Under the College protocols, all tenured faculty and senior lecturers are evaluated on a three-year cycle, with full professors having the option of a five-year cycle. A professional development plan is adopted during the first quarter of each cycle, and an evaluation is conducted during the final quarter of the cycle. Tenured faculty and senior lecturers are also permitted to adjust the standard 40-40-20 weighting system for teaching, scholarship, and service respectively. Tenured faculty, for example, are allowed to negotiate weights of 35 to 45 percent for teaching, 35 to 45 percent for scholarship, and 20 to 30 percent for service. This flexibility recognizes that, while all tenure-track and tenured faculty are expected to be teaching scholars, their interests and talents vary widely and may evolve over the course of a career.

The other schools have variations on the College of Arts and Sciences model, though none

have documented them so thoroughly. Despite these procedures (or perhaps arguably because of them), only 5.5 percent of respondents to the 1998 Faculty Survey rated the performance evaluation system as excellent, with another 39 percent rating it as good.

Staff performance evaluation is conducted in accordance with a new performance management system instituted in 1998. Prior to this time, there was no organized performance process except for an annual performance appraisal. Less than 40 percent of staff received performance appraisals and of those who did, most judged them cursory and not very helpful. There was also no campus-wide organized goal setting for staff. In 1997, with significant input from staff, the University developed a comprehensive performance management system which included goal setting, performance expectations and measures, on-going feedback, mid-year assessments, end-of-year reviews, and professional development planning. The new system launched in 1998 followed successful completion of a pilot program in 1997 and was accompanied by training workshops for all supervisors as well as all staff without supervisory responsibility. Since then the system has been improved based on the experiences of staff and their supervisors.

The result of the new performance management system is that 90 percent of staff received performance reviews in 1998, and 95 percent received reviews in 1999. Questions assessing the performance review process were included in the 1998 Staff Survey:

- 77.1 percent of staff either strongly agreed or agreed with the statement, "I understand the performance expectations upon which I will be evaluated this year."
- 70.4 percent of staff either strongly agreed or agreed with the statement, "My performance reviews are helpful in improving my performance."
- 81.5 percent of staff either strongly agreed or agreed with the statement, "I receive encouragement and support from my supervisor to participate in job-related training and development opportunities." [5]

While these responses are very positive, several suggestions have surfaced from staff and supervisor feedback. Areas of potential attention include strengthening senior officer support for the performance management system, strengthening the connection between performance planning and University strategic priorities, and creating more flexibility for organizational units to tailor performance planning to natural planning cycles for their specific unit.

RECOGNITION AND REWARDS

The University has developed a number of programs to reward faculty and staff whose work furthers the University's mission and strategic vision. These include awards, bonuses, and recognition programs.

A majority of faculty have indicated that they believe the University's reward system is generally effective. In the 1998 Faculty Survey, 68 percent of respondents agreed or strongly agreed with the statement, "Faculty rewards at Santa Clara support the University's mission." More specifically, in relation to the University's efforts to encourage faculty to be "teaching scholars" who demonstrate a commitment to excellence in both areas, 72.4 percent agreed or strongly agreed with the statement, "The greatest rewards at Santa Clara go to faculty who excel at both teaching and scholarship."

Special recognition awards for faculty are offered at both the University level and the school level. At the University level, the most significant recognition is appointment to an endowed chair. Since 1987, the University has increased the number of appointments to endowed chairs from 18 to 39. Appointments in recent years have typically been for five-year renewable terms. Several, such as the Presidential Professor of Ethics and the JCPenney Research Professorship, carry specific programmatic or research responsibilities. With the exception of the Clare Boothe Luce Professorships, which are restricted to women faculty in the sciences or engineering during their tenure probationary period, all the endowed professorships are assigned to tenured faculty. In addition to endowed chairs, a number of annual awards are given at both the University and the school level.[6]

Apart from the intrinsic satisfactions of advancing knowledge through scholarship and teaching, the most powerful part of the faculty reward system is the promotion and tenure system. As reported in Appendix A, a majority of respondents to the 1998 Faculty Survey said they agreed or strongly agreed that the criteria used to judge the quality of teaching and scholarship are "clear and explicit"—52.5 percent for teaching and 57.7 percent for scholarship. Positive responses to these questions more than doubled from the 1989 to the 1998 survey, an increase that may be attributed—at least in part—to the efforts described in Appendix A to clarify standards for promotion and tenure.

Other elements of the reward system discussed earlier in this self-study include teaching

assignments, performance evaluations, and grants for project support. Programmatic financial incentives are also occasionally used.[7]

Although Santa Clara's reward system for faculty is fairly well structured and layered, congruent with its mission and values, and open to some experimentation around financial incentives, a common observation made by faculty is that it does not support involvement in one or another activity of interest to them. Examples most often given include development of technology applications in teaching and participation in cross-departmental programs such as the University's emerging centers of distinction.

In providing incentives, recognition, or rewards to staff, the University was not very systematic or consistent across organizational units of the campus prior to the mid-1990s. The annual merit increase program was not able to accomplish this task because of its infrequency and lack of meaningful differentiation among individuals. There were a few opportunities for individual or team bonuses, but they were narrowly applied, often after the fact, and were not widely publicized.

Following adoption of the *Strategic Plan* in 1996, the University implemented a staff recognition bonus program to provide two types of bonuses for staff whose work had significantly furthered the strategic initiatives. In its first iteration, an outstanding service award of $1,500 was established for a maximum of 10 staff to recognize their work in support of the continuous improvement theme of the *Strategic Plan*. The second type, the strategic enhancement award of $1,500, was available for up to 25 staff who effectively advanced other University strategic initiatives. The program later evolved into a single type of award based on a "staff member or team being a model of service excellence and demonstrably advancing one or more of the University's strategic initiatives." The bonus amount is still $1,500, with funding for as many as 35 staff to receive the award.

The other major University-wide recognition for staff is the annual staff recognition dinner to which all staff are invited. At that dinner, the bonus awards described above are announced. Awards for length of service and an award by the Staff Assembly Council are also given. Other forms of staff recognition take place only if a department or individual staff members take the initiative to do so. These types of recognition are mostly informal and non-monetary.

While the bonus award program, the staff recognition dinner, and local department events are

useful, they are not sufficient to provide, or even meaningfully support, a powerful alignment of staff to advance and accelerate the strategic initiatives. Nor are they sufficient to impress the majority of the staff. Responses to the 1998 staff survey provided especially informative feedback to gauge our progress on staff reward systems.

- 84.9 percent of staff responded that the statement, "Staff are recognized for providing good service to students and others," was very descriptive (27.4 percent) or somewhat descriptive (57.5 percent).
- 67.6 percent of staff responded that the statement, "Staff are recognized for being efficient and increasing productivity," was very descriptive (13.5 percent) or somewhat descriptive (54.6 percent).
- 63.7 percent of staff strongly agreed (10.1 percent) or agreed (53.6 percent) with the statement, "Staff rewards at Santa Clara support the University's mission."
- 81.2 percent of staff responded that the statement, "Only a few faculty really recognize and value the contributions of staff," was either very descriptive (34.4 percent) or somewhat descriptive (46.8 percent).
- 69.3 percent of staff strongly agreed (28.9 percent) or agreed (40.4 percent) with the statement, "Staff members who just get by receive the same rewards as those who excel."

These figures indicate somewhat weak positive support for the conclusion that the staff reward system is effective. Although the opinions of Santa Clara's staff on these issues are echoed by the external workforce at large,[8] our commitment to building a strong sense of community suggests a high standard of staff reward systems for us as an organization. Our challenge is to reinforce staff effectiveness and commitment to the community with additional forms of incentives, recognition, and rewards.

One indirect measure of alignment may be the degree of employee turnover. While a certain level of turnover is predictable and healthy, excessive turnover is a possible indication of misalignment between employee and employer.

Faculty turnover has been relatively stable at an average of 5.02 percent over the past eight years, with a sharp one-year increase in 1995–96 which appears to have been idiosyncratic. In recent years, Santa Clara has become a recruiting ground for other institutions seeking to hire

experienced faculty. Since the last accreditation visit in 1987, Santa Clara has lost faculty (most of them tenured) to such institutions as Columbia, Cornell, Wisconsin, Chicago, Notre Dame, Georgetown, Virginia Tech, the Air Force Academy, and the University of New Orleans.

In contrast to the relatively low rate of faculty turnover, staff turnover has been increasing at an average of 12.79 percent over roughly the same time period.

Faculty and Staff Turnover

	1991–92	1992–93	1993–94	1994–95	1995–96	1996–97	1997–98*	1998–99
Faculty	4.59%	3.00%	2.93%	4.07%	9.07%	4.12%	7.34%	5.04%
Staff	10.39%	10.96%	11.03%	15.45%	9.66%	11.06%	N/A	23.34%

* Because of a transition to new administrative system software, staff figures are not available for 1997–98.

The sharp increase in staff turnover for calendar year 1998 is alarming. While 23 percent is at the high end of normal turnover for high tech industries in Silicon Valley, it is almost double Santa Clara's historical norms. One explanation is that Santa Clara's strengths in other areas may no longer be sufficient to overcome weaknesses in compensation. Other possible explanations for the increasing turnover rate are that departing staff are responding to the dynamic nature of the Silicon Valley job market, to specific features of Santa Clara that do not satisfy them, or to recent outsourcing initiatives.

Further study of faculty and staff turnover is necessary to understand why people are leaving and how the University should respond.

PROFESSIONAL DEVELOPMENT PROGRAMS

Accomplished faculty and staff who are recruited and retained need encouragement, resources, and direction to continue to grow in their professional capacities and personal abilities. Santa Clara has created several programs to support a sustained level of high quality work, morale, commitment, and effectiveness among its employees. Programs that encourage faculty in their role as teaching scholars are discussed in Chapter III. Staff professional training and faculty and staff personal development are reviewed below.

Before the adoption of the *Strategic Plan* in 1996, the University placed responsibility for the training and development of staff with an individual manager or department. This decentralized

approach, while allowing flexibility and customization based on a department's or individual's needs, did not allow the University to ensure that broader organizational training needs were addressed. There was also wide variance among managers and supervisors in the level of commitment and funding available for ongoing development of staff. Since 1996, the University has increased its commitment to the continued training and development of staff. Specifically, Human Resources has reallocated two positions within the department and dedicated them solely to providing training and development programs. This increased commitment of Human Resources staff and related resources has resulted in a broad offering of professional training offerings for staff. More than 100 managers and supervisors have completed a six-day leadership development program, and more than 600 employees have participated in six-hour workshops on the new performance management system.[9]

All of the professional development workshops and training programs are evaluated at the time of their offering. Participants have consistently rated these events highly, with the average rating being between 3.5 and 4.0 on a 5-point scale. In addition to the quantitative rating, the evaluation solicits qualitative comments and suggestions to guide continuous improvement.

In addition to professional development programs, a wide variety of personal development programs are offered to both faculty and staff to enhance their morale and productivity.[10]

The results of the 1998 Staff Survey speak to the level of commitment that the University has shown to training and development. They also point out an obstacle.

- 69.3 percent of staff reported that they participate in staff development programs.
- 81.5 percent of staff reported that their manager was supportive of staff development programs.
- 64.3 percent of staff reported that it was difficult for them to make time to actually attend.

Evidently, the commitment of some staff and their supervisors to training and development is readily verbalized but may too easily succumb to the pressures of "real work" in the hierarchy of priorities.

PERSONNEL POLICIES

One way in which alignment of human resources with the University's goals is fostered is

through the development of policies regarding the rights and responsibilities of faculty and staff.

The *Faculty Handbook* (Exhibit V.1.1) is the repository of all policies related to faculty employment. Since its last publication in 1987, a number of amendments have been approved by the Faculty Senate and the Board of Trustees, as required by Section 3.12 of the handbook. In Spring 1998, the University Coordinating Committee appointed a committee composed of six faculty and one administrator to review the existing *Faculty Handbook*, incorporate changes already approved, and make other changes as needed. The Faculty Handbook Revision Committee is focusing on revision of the contractual part of the handbook, and will most likely recommend that non-contractual sections be made available in other ways. The committee expects to complete its work by spring 2000.

The last accreditation visiting team expressed concern that there was no current staff handbook and that "reissuance of an approved staff handbook should be a high institutional priority." A new *Staff Policy Manual* (Exhibit V.1.2) was issued in Fall 1998 after more than a year of work by the Staff Affairs Committee and the Human Resources Department. The Board of Trustees gave final approval to the manual in October 1998 after it was unanimously endorsed by both the Staff Affairs Committee and the President's Cabinet. The most controversial issues during the development of the manual were a proposed policy on "at will" employment and one mandating binding arbitration. While the proposed "at will" policy was dropped from the final document after extensive discussion, a version of the mandated arbitration policy was retained. One part of the staff manual, a proposed University policy for all employees on "Prevention of Unlawful Harassment and Discrimination," is currently in effect only for staff pending review by the Faculty Senate; the procedures outlined in the current *Faculty Handbook* still apply to faculty until the Faculty Senate agrees to the proposed changes.

COMPENSATION

Providing competitive compensation is critical to the ability of Santa Clara to attract and retain excellent faculty and staff capable of sustaining the strategic path the University has chosen. The issue of compensation is not simply a matter of salaries, or even of salaries and benefits. The adequacy of a compensation package must be judged in the context of the cost of living of the surrounding community. In the San Francisco Bay Area where Santa Clara is

located, the adequacy of compensation offered by an employer must take into account the cost of housing. Recent surveys continue to confirm the San Francisco Bay Area as one of the most expensive and least affordable housing markets in the nation. As a consequence, Santa Clara faculty and staff salaries, while seemingly generous by national standards, are not always sufficient to outweigh the steep cost of shelter in the community. In addition, the high cost of living in the area has tended to raise average salaries being offered by our competitors for staff, especially those with highly marketable skills such as technology. As a non-profit institution, the University has often been unable to compete with Silicon Valley companies for high quality employees.

In this section, we examine our compensation packages as well as the question of housing for faculty and staff.

FACULTY SALARIES

Soon after the last accreditation visit in 1987, faculty salaries became a major issue at Santa Clara. The 1989 Faculty Survey found that only 29 percent of respondents rated their salary as good or excellent—the lowest rating of any of the measures of job satisfaction in the survey.

This discontent existed despite Santa Clara's long record—unbroken to the present day—of placing in the 95th percentile of comprehensive universities nationally for faculty salaries in each tenure-track and tenured rank, as reported by the American Association of University Professors in its annual report on the status of the profession. The discontent was due partly to the high cost of living, and in particular of housing, in the San Francisco Bay Area. It was also due to a growing sense that the AAUP figures did not capture the full reality of Santa Clara's situation. A Faculty Senate Committee on Salaries noted in October 1990 that when faculty salaries were averaged *across* ranks a different picture emerged: Santa Clara's average faculty salary (excluding law schools) was lower than all nine University of California institutions, all 19 California State institutions, and nine other private institutions in California. The major reason posited for this discrepancy was that Santa Clara promoted faculty through the ranks at a slower pace than most institutions, with the result that average salaries within ranks tended to be artificially inflated.

A faculty salary plan adopted in 1991 upon the recommendation of the Faculty Personnel

Committee did not quell the discontent.[11] In 1995–96, the Faculty Affairs Committee decided to develop a new faculty salary plan based on a fresh review of all assumptions, including the degree to which salaries should be driven by external market considerations, the appropriate benchmark group, and the level at which data should be aggregated. At the request of the Faculty Affairs Committee, the University selected Coopers & Lybrand L.L.P. to collect comparative salary data and advise the committee in developing a new policy. Coopers & Lybrand completed its engagement in June 1996, but the Faculty Affairs Committee continued for the next three years to wrestle with faculty salary policy implementation guidelines.

This project stands as a testament to the flexibility and endurance of the committee, the patience of the Faculty Senate, and the unforeseen pitfalls of salary comparisons in particular and of benchmarking in general. The Faculty Affairs Committee went through 18 drafts of a "Faculty Salary Policy" and "Implementation Guidelines" between Fall 1995 and Fall 1999. These drafts were consistent in calling for a salary program based on merit, reflective of the marketplace in which Santa Clara competes for faculty, and informed by the use of comparative data displayed by rank and academic area. Between the first and the eighteenth draft, however, there were numerous changes in the composition of the benchmark group, the definition of academic areas compared, and the methodology for identifying market discrepancies.

The evolving drafts necessitated a series of salary studies that then led to further changes. With each new salary study, the committee uncovered new problems. These problems arose from discrepancies in the way institutions report data, Santa Clara's need to provide meaningful information to faculty without disclosing confidential information, differences in the representation of specific disciplines among the benchmark institutions, and the unanticipated consequences of the committee's own assumptions about how the data would work. From one iteration of the policy draft to the next, the committee gradually eschewed formulas and simplified its approach, leaving more room for interpretation and judgment.

The committee completed the eighteenth draft of the "Faculty Salary Policy" and "Implementation Guidelines" in Summer 1999 (Exhibit V.1.10) and expects the Faculty Senate to endorse these statements in fall 1999 for use in fiscal years 1999–00 through 2001–02. The policy states that:

> Santa Clara University is committed to recruiting, retaining, and rewarding

> faculty who advance its mission by excelling as teaching scholars. To fulfill this commitment, the University strives to assure that faculty salaries are competitive with those of faculty at the same ranks in related disciplines at institutions with which it competes. It also strives to eliminate any internal salary disparities that cannot be reasonably explained by market comparisons, years in rank, and performance over time.

The Implementation Guidelines define the benchmark group as the 20 colleges and universities in California that admit the highest number of undergraduate students in common with Santa Clara and that also provide salary data to the College and University Personnel Association (CUPA).[12]

Comparisons by rank are made for six discipline groups: Humanities and Arts, Social Sciences, Mathematics and Natural Sciences, Business, Engineering, and Law. Within each rank and discipline group, average salaries for each institution are arrayed from highest to lowest. The guidelines state that "No formulas will be used in analyzing market competitiveness. Relevant considerations will include Santa Clara's ordinal positions, variations in these positions across faculty ranks and discipline groups, and changes from year to year. The Faculty Affairs Committee, with appropriate consultation, will exercise its best judgment in identifying issues that need attention."

Comparative data for 1998–99 have been collected in accordance with the latest Implementation Guidelines and appear in Exhibit V.1.11. As summarized in the table below, it is clear that Santa Clara falls somewhere in the middle of the benchmark group in most categories—a fact that is not surprising, given the diversity of the benchmark group. It seems

Faculty Salaries: 1998–99 Academic Year

	Professor		Associate Professor		Assistant Professor	
	Salary	**Rank**	**Salary**	**Rank**	**Salary**	**Rank**
Humanities and Arts	$77,936	13 of 21	$58,845	11 of 21	$47,704	13 of 21
Social Sciences	$79,528	13 of 21	$58,923	13 of 21	$49,377	11 of 21
Math & Natural Sciences	$83,641	9 of 21	$61,777	10of 21	$49,860	12 of 21
Business	$98,681	7 of 17	$79,150	6 of 16	$77,636	6 of 17
Engineering	$95,967	9 of 15	$75,136	6 of 15	$62,875	11 of 15
Law	$108,794	5 of 8	$91,057	1 of 4	$78,500	1 of 4
All Disciplines	$92,884	7 of 21	$66,258	6 of 21	$58,535	5 of 21
All Disciplines Excluding Law	$87,581	10 of 21	$64,762	7 of 21	$57,939	5 of 21

appropriate that Santa Clara's average salaries should, for example, be lower than those of Stanford, Berkeley, and UCLA and higher than those of Saint Mary's, University of the Pacific, and San Jose State. Exactly where in the spectrum Santa Clara's salaries should fall, however, is a topic that will be reviewed by the Faculty Affairs Committee in fall 1999.

In addition to considering specific benchmark data, the Faculty Affairs Committee will also take into account the increasing difficulty Santa Clara is experiencing in recruiting and retaining faculty. In many of its junior faculty searches in 1998–99, the University lost its top candidate (and in several cases its top two or three candidates) to other institutions. Although teaching loads and support for research were factors in some cases, the primary reason in most appeared to be the disproportion between salary and housing costs. The need to make attractive offers to junior faculty has created some problems of salary compression among productive tenured faculty.

On the positive side, it is worth noting that satisfaction with salaries has risen over the past ten years, with 55.5 percent of respondents to the 1998 Faculty Survey rating their salary as good to excellent, compared with 29 percent in the 1989 survey.

STAFF SALARIES

In 1991 Santa Clara set a goal for staff pay at the middle of the market, defined as plus or minus 5 percent of the average salaries of comparable positions in organizations with which it competes for staff. The most relevant market comparisons for most of our non-exempt staff and many of our exempt staff positions are in the San Francisco Bay Area, more specifically the Silicon Valley. In the early 1990s, Santa Clara's salaries were between 10 and 15 percent below the target. To address this concern, the University adopted a total compensation objective in 1993 to "provide salary and benefit programs which enable Santa Clara University to attract and retain the highest quality, diverse faculty and staff that prudent use of University resources will permit."

Despite this objective, over the past decade, staff salaries have consistently lagged those of comparable positions in our competitive markets. For the 1994–95 and 1995–96 fiscal years, there was some targeted improvement in closing the market gap for certain non-exempt positions, as well as stabilizing some exempt mid-level managerial and technical positions. Also

in 1994–95, a study of over 150 office support positions was completed. An infusion of almost $85,000 into the salary base of the affected positions briefly improved their market position, but by the next year there was already a slight deterioration in our competitive position.

Since the mid-1990s ongoing analysis has revealed that Santa Clara's lagging position in the competitive market has accelerated and compounded at a rate approaching 2 percent per year. As shown in the table below, average Santa Clara staff salaries have increased over the past decade at a rate greater than the CPI-U but less than the competitive market.

Comparison of SCU Pay Increase Budgets with Market

	Market Increases			SCU Increases		
Budget Year	**Exempt**	**Non-Exempt**	**Bay Area CPI-U (2)**	**Faculty Increases**	**Staff Increases**	**Union Increases**
1998–99	5.20%	5.10%	3.40%	5.00%	5.00%	4.73%
1997–98	5.30%	5.10%	3.80%	4.00%	4.00%	4.00%
1996–97	4.07%	4.00%	2.70%	4.50%	4.00%	3.55%
1995–96	3.79%	3.87%	1.70%	5.00%	5.00%	4.07%
1994–95	3.68%	4.17%	2.20%	3.25%	3.25%	3.77%
1993–94	4.04%	4.37%	2.50%	3.00%	3.00%	3.20%
1992–93	4.70%	4.70%	2.60%	3.50%	3.50%	3.20%
1991–92	5.10%	5.30%	4.50%	8.60%	6.20%	6.20%
1990–91	5.40%	5.50%	3.90%	7.50%	8.00%	7.20%

By 1996–97 salaries had fallen behind in technical, mid-level management, numerous non-exempt, and trades and crafts categories. Salary compression became a significant issue as the local unemployment rate declined. By 1997–98, the combined effects of market lag and salary compression had become serious and pervasive. As a palliative tactic, the President and vice presidents, beginning in 1998–99, agreed to centralize the administration of market and equity adjustments in order to address the issue strategically. In late 1998, recognizing the strategic importance of so-called "hot skills" technological positions, the University commissioned a special study to define the market and target University salaries to be competitive in recruiting and retaining such positions. The results of this study will inform base pay adjustments in 1999–00. The next area of focus will be office support positions, which will be studied in 2000–01.

The 1998 Staff Survey indicates a majority of staff is dissatisfied with salaries and wages.

Fifty-five percent rate them as poor to fair, with 45 percent rating them as good to excellent. While 19.3 percent judge pay to be poor, only 7.2 rate it to be excellent. At the same time, nearly 85 percent of staff rate the "caliber of colleagues" to be good to excellent, with less than 15 percent rating other staff as poor to fair.

BENEFITS

Consistent with the total compensation goal set in 1991, the University systematically sought to enhance the quality of its benefits while controlling costs and expanding choices for its faculty and staff. Since the early 1990s, the strategic directions that have guided benefits planning and budgeting have been to improve the adequacy and competitiveness of the plans, provide increased flexibility of choice while controlling costs, lower the barriers to normal retirement, and improve the perceived value of the benefits plans. Following the adoption of the *Strategic Plan* in 1996, a fifth criterion was added: identify market competitiveness compared to appropriate benchmarks.

During the 1990's, the University has taken a number of steps to improve benefits and increase options available to faculty and staff.[13] A benefits comparison survey conducted by Towers-Perrin for Villanova University in 1998 included Santa Clara as a benchmark institution for Villanova. The results of the survey validate anecdotal evidence that Santa Clara's benefits are highly competitive with comparable academic institutions across the nation. Santa Clara's contribution to the retirement program—about 9 percent—is the only noticeably non-competitive aspect of Santa Clara's benefits package.

In contrast to some of their opinions regarding salaries and wages, faculty and staff responding to the 1998 Faculty and Staff Surveys valued the benefits portion of their compensation quite highly. Nine out of 10 staff and eight out of 10 faculty rated their benefits as good to excellent. While 48.8 percent of staff considered their benefits to be excellent, only 0.5 percent judged them poor. Among the faculty, 26 percent described their benefits as excellent, while only 1.2 percent judged them as poor.

A comprehensive survey of faculty and staff opinions and preferences regarding work-life benefits is currently being analyzed (Exhibit V.1.16). Comparisons to date with external organizations show Santa Clara to be a family-friendly employer. Interestingly, a recent national

study found that management's recognition of the importance of an employee's personal and family life is "the most significant driver of employee commitment."[14]

The improvements and enhancements to benefits in recent years have been accomplished without significantly increasing the overall cost of benefits. Annual increases to the budget have been reasonable and consistent with increases to pay. The relationship of benefits cost to salaries has remained relatively stable during the last five years: 25.5 percent of salaries in 1995–96, 24.7 percent in 1997–98, and 25.4 percent in 1999–00 (projected).

HOUSING

One of the most important unresolved issues in the human resources area is the lack of an adequate faculty and staff housing program. Located in an area with the highest housing costs in the nation, the University must deal with this problem if it is to recruit and retain the kind of faculty and staff it wants.[15] While the housing problem affects faculty in the College of Arts and Sciences and the Division of Counseling Psychology and Education most acutely, it is an issue for faculty and staff in all areas of the University. The University currently offers two faculty housing programs.

The first is a rental assistance program, which is open only to assistant professors in the College of Arts and Sciences and the Division of Counseling Psychology and Education. Participants in the program live in one of 35 University-owned apartments, duplex units, or single-family houses. Rental subventions are based on the faculty member's stage in progressing toward tenure, with larger subventions going to those furthest from the tenure decision year. Seventy faculty have participated in the rental assistance program since its inception in 1990. The University spent $877,408 in the first eight years of this program. At today's starting rate of $558 per month, the total six-year value to a faculty member is $23,436. It is estimated that approximately half of the current Santa Clara faculty members who have participated in this program and who no longer live in University housing now own their own homes.

The second is a shared appreciation mortgage program. Open only to tenured faculty in the College and the Division, this sparsely funded and infrequently used program assists faculty in purchasing homes priced approximately $100,000 higher than the persons would otherwise be able to afford. The program includes specifications with regard to the number of years by which

the individual's debt to the University must be repaid and the share of the change in home equity that will accrue to the institution. Since its inception in 1990, seven faculty have benefited from the shared appreciation mortgage program. Five of those seven had received no prior rental support.

The University is currently exploring a range of options to improve housing support, including expanding the two existing programs, construction and sale or rental of new faculty housing by the University, participation in publicly-funded housing programs, and a forgivable second mortgage assistance program. It is also considering whether or not support should be extended to some categories of staff.

PERCEPTIONS OF ALIGNMENT

In general, faculty and staff perceive that there is good alignment between Santa Clara and their work or values, and there is some evidence that morale is higher than it was a decade ago.

Indicators of faculty perceptions of alignment from the 1998 Faculty Survey include responses to the following statements:

- "I am committed to the education of the whole person in my teaching here": 74 percent said this was very descriptive and another 22.1 percent said it was somewhat descriptive. (Total positive = 96.1 percent.)
- "I am familiar with the University's *Strategic Plan*": 33.2 percent strongly agreed and another 59 percent agreed. (Total positive = 92.2 percent.)
- "I support the goals articulated in the University's *Strategic Plan*": 29.5 percent strongly agreed and another 59.3 percent agreed. (Total positive = 88.8 percent.)
- "Teaching scholar accurately describes how I see my role at Santa Clara": 37.8 percent strongly agreed and another 50 percent agreed. (Total positive = 87.8 percent.)
- "If I had it to do over again, I would still become a university professor": 63.2 percent strongly agreed and 31.4 percent agreed. (Total positive = 94.6 percent. By comparison, 92.5 percent of respondents in 1989 gave positive responses. In the 1995 survey conducted by the Higher Education Research Institute at UCLA, 87.9 percent of Santa Clara faculty

gave positive responses to this question, in comparison with 83 percent from private universities and 80 percent from all four-year institutions in the national sample.)

- "Santa Clara is a very good place for me" or "Santa Clara is a fairly good place for me": 61.2 percent and 24.4 percent respectively. (Total positive = 85.6 percent. By comparison, 72 percent of respondents in 1989 gave positive responses.)

Indicators of staff perceptions of alignment from the 1998 survey include responses to these statements or descriptions:

- "I am familiar with the University's *Strategic Plan*": 32.2 percent strongly agreed and another 59.7 percent agreed. (Total positive = 91.9 percent.)
- "I support the goals articulated in the University's *Strategic Plan*": 32 percent strongly agreed and 63.7 percent agreed. (Total positive = 95.6 percent.)
- "Quality of work environment": 29.8 percent rated it as excellent and 42.5 percent as good. (Total positive = 72.3 percent.)
- "Sense of community": 24.1 percent rated it as excellent and 47.2 percent as good. (Total positive = 71.3 percent.)
- "SCU is a very good place for me" or "SCU is a fairly good place for me": 52.7 percent and 30.9 percent respectively. (Total positive = 83.6 percent.)

CONCLUSIONS

Santa Clara has made substantial progress in aligning its human resources with its mission and goals through tighter position controls, clearer faculty hiring guidelines, major administrative reorganization, a more flexible faculty evaluation system, a new staff performance management system, new recognition programs for both faculty and staff, completion of a new *Staff Policy Manual* and work toward a new *Faculty Handbook*, and an expanded employee development program. It is heartening that faculty and staff overwhelmingly state that they are familiar with the University's *Strategic Plan*, support its goals, and find Santa Clara a good place for them. This self-study, however, has also uncovered some significant vulnerabilities: the reward system should be strengthened, staff turnover has increased dramatically, the competitiveness of salaries is a pressing issue, and housing costs pose a significant problem for

faculty and staff—and hence threaten the University's ability to recruit its top candidates.

PHYSICAL ENVIRONMENT

The *Strategic Plan* calls for Santa Clara to develop a physical environment that will be conducive to effective learning and productive work. In the *Strategic Plan*, we have identified the strategic challenge facing us as we attempt to create and sustain that setting:

> *How can Santa Clara create a physical environment that fosters academic excellence, promotes integrated education and a community of scholars, and exhibits sensitivity to the ecology and historical heritage of the campus?*

As a core value of the University, the pursuit of academic excellence must inform all decision making about campus development. The environment we create must foster collaboration in learning and scholarship to create the community of scholars we envision, just as it must support integrated education by providing a physical reflection of the connections between different forms of knowledge, understanding, and experience. Finally, because of the historical and ecological importance of our site, the University has a special trust to exemplify sensitivity to these distinguishing features of the campus.

The University *Strategic Plan* identifies four goals for creating an appropriate physical environment:

- Update the Campus Master Plan as needed.
- Complete the major facilities projects identified in the current five-year campus improvement program of the Campus Master Plan.
- Plan for additional major facilities projects beyond the current five-year campus improvement program needed to support academic excellence.
- Develop and implement a comprehensive capital renewal program for repair and replacement of existing facilities and infrastructure.

In this section of the self-study, we will examine the University's progress toward these four goals in the context of the strategic challenge we identified.

UPDATE CAMPUS MASTER PLAN

In 1985 the University prepared and approved a comprehensive Campus Master Plan (Exhibit V.2.3). From 1985 to the mid-1990s, the plan served its purpose well. Though there was relatively little development of new or expanded facilities in that period, some important changes in the campus environment occurred within the framework of the plan. Most notable was the closing of The Alameda, which was rerouted in 1989 as an extension of El Camino Real, creating a natural campus boundary to the east. Previously, the great rift of The Alameda slashing through the University had essentially produced two separate campuses, both physically and perceptually. The older "center" of campus, previously west of The Alameda, was a delightfully cohesive academic environment with great character, serenity, and identity. The newer parts of campus on the east, on the whole, lacked the characteristic Mission-style features of the rest of the University. The closure of The Alameda represented an important symbolic step in the physical integration of the University. Central outdoor common green space, featuring a garden of native plantings, and the introduction of more traditional features in the east sector unified the campus. In addition to The Alameda reroute, several other streets traversing the campus were closed, a new ceremonial entrance from the newly aligned El Camino Real was created, and perimeter landscaping was completed along the south and east edges of the campus boundary.

In spring 1994, the University Facilities Committee completed a report (Exhibit V.2.2) addressing major facilities issues facing the University and processes related to capital budgeting and planning. The impetus for the report was a growing concern that the lack of clarity about priorities, costs, funding sources, and work progress could result in unrealistic expectations, unsound financial commitments, uncoordinated plans, and confusion of donors. The report made recommendations to the President's Staff on eight general facilities-related issues, several of which formed the basis for changes to policies and practices associated with campus master planning and capital budgeting.[16]

In addition, the report made recommendations on specific facilities projects that required action in the near future. Recommendations on these projects shaped much of the content of the five-year campus improvement program for 1997 to 2001 adopted in conjunction with the updating of the Campus Master Plan.

While the Campus Master Plan was always seen as a "living" document undergoing continual adjustment and modification, the President asked the University Facilities Committee in 1995 to work with the consulting master plan architect to undertake a full reassessment and update of the 1985 plan. In part, this was simply seen as prudent given the 10-year passage of time. However, it also reflected the need to connect intentionally the Campus Master Plan with the emerging University *Strategic Plan*.

A two-year process of campus consultation and discussion yielded a revised Campus Master Plan that was approved by the Board of Trustees in May 1997 (Exhibit V.2.4). The key planning premise was that the Campus Master Plan would be responsive to and reflect the *Strategic Plan* with particular consideration given to the declaration that "Santa Clara University is a Catholic and Jesuit institution that makes student learning its central focus." It was intended that the Campus Master Plan be rational and realistic but essentially conceptual, with no more specificity than was necessary to set out clearly its fundamental premises and principles. The plan was to be not only a recording of physical planning elements, but also a "vision" of what the environmental character of the campus could and should be. It was viewed as a "working document" presented in a manner suited for guiding the ongoing development of that environmental character. In this context, certain guiding principles were at the plan's heart. Barring unforeseen major policy changes within the University, these principles were intended to be sustained and consistently followed as the bedrock for future planning and the guide for decisions about individual projects.[17]

In addition to the guiding principles, the 1997 Campus Master Plan laid out a set of planning premises that articulated assumptions about the planning process, enrollment, academic programs, student life, campus boundaries, and other physical limitations and concerns. Using the planning premises as a context, the plan identified facilities needs both for the long-range and for the five-year term. In setting out the facilities needs, no distinction was made between the five-year term and the long range needs. That determination was to be made through prescribed University decision-making processes based on the judgment of priorities and assessment of funding realities and was to be reflected in the five-year campus improvement program emerging from the master planning process. Using this approach, the five-year plan becomes an implementation plan backed by a University commitment and documented strategy. The five-year campus improvement program for 1997 to 2001 that emerged from the process is discussed

in detail in the next section.

Planning for future development of the campus was also addressed directly in the 1997 Campus Master Plan. It declares the strategic intent of the University to acquire as soon as possible properties north to Benton Street and south to Bellomy Street. In the past five years, the University has pursued land acquisition opportunities between Franklin and Benton to the north and Market and Bellomy to the south as opportunities arose. This is gradually creating a border of University real estate between the current University boundaries and the commercial and residential developments to the north and south.

The 1997 Campus Master Plan also noted that the University has a fundamental responsibility to protect and preserve the historically significant site of the campus. The impressive visual experience of the University's Mission heritage is maintained by a design philosophy of providing updated facilities that fit into the context of the original Mission design. This includes expanding on the feeling one gets in the Mission Gardens of connections between special outdoor spaces. To protect the distinctive historical heritage of the campus, the University has adopted detailed excavation procedures to preclude unintentional damage to artifacts, structures, and burials from the past. To augment this program, an additional archaeologist is under contract to monitor any excavation effort. The University established an Environmental Coordinating Committee to maintain emphasis on and visibility of environmental issues, such as the protection of species of interest (particularly the burrowing owl), an emphasis on recycling, and increased use of native plants on campus. Finally, the University has developed protocols for coordinating archaeological issues with the city of Santa Clara and concerned Native Americans.

Between the last accreditation visit in 1987 and the adoption of the Campus Master Plan in 1997, Santa Clara has also taken several important steps to improve the facility planning processes. Several of those changes resulted from the 1994 report of the University Facilities Committee discussed above. A task force on capital budgeting of the Budget Advisory Committee also recommended changes to the processes used to develop and monitor budgeting for capital projects (Exhibit V.2.7). To upgrade planning decision authority, the Facilities Committee was reformed into the Facilities Planning Council, chaired by the Vice President for Administration and Finance. The process used for the identification and approval of capital renewal and capital improvement projects was also more clearly defined.[18]

The key features of the project planning process that reflect the University's *Strategic Plan* are the routinized and sustained input from the academic users in the planning of academic buildings, the representation of different constituencies (academic, support services, financial) on the Facilities Planning Council, and the participation of the campus archaeologist and the Environmental Coordinating Committee. There is a concerted effort to link the facility planning process to the University's *Strategic Plan* and the associated college, school, administrative area, and department planning documents that support the *Strategic Plan*. The planning process uses the *Strategic Plan* priorities to provide the road map for changing the physical environment.

COMPLETE FACILITIES PROGRAM FOR 1997 TO 2001

The five-year campus improvement program of the 1997 Campus Master Plan is the first comprehensive building and renovation program at Santa Clara since the 1960s. Projects already completed include a new Music and Dance building; a gateway building provisionally called the Communication, Public Policy and Applied Ethics Building (CPPAE); and the expansion and renovation of Alumni Science to alleviate overcrowding in the departments of Biology, Psychology, and Chemistry. Each of these projects was designed not only to meet specific departmental needs but also to reflect Campus Master Plan principles, foster a community of scholars, and support an integrated approach to teaching and learning.[19]

In the design stage is a new student residential complex for juniors and seniors, slated for completion in summer 2000. These apartment-style facilities will be designed to attract upper-division students back onto campus and to establish the residential learning community concept. In addition to the student apartments and related support space, the complex will include office and program space for the Bannan Institute for Jesuit Education and Christian Values and the Eastside Project as well as seminar rooms, a technology classroom, and a large conference area. This complex represents a symbolic and substantive move by the University to engineer space to support a different style of interchange among students and faculty in a residential setting.

The health, safety, and convenience of students, faculty, and staff will be greatly enhanced with the construction of the fitness and recreation center (opening in fall 1999) and a parking structure for 600 cars with offices for Public Safety which opened in November 1998. Plans for a new support services building, to be completed in May 2000, will enable Purchasing and the

Facilities Department to move from a converted warehouse across the street from campus to a more central location and to continue improvement of their services.

Renovation of St. Joseph's and O'Connor halls was slated to relieve overcrowding in the departments of Mathematics, History, Anthropology and Sociology, and English and in the School of Business. While an elevator and power upgrade were added to St. Joseph's, improvements in the information technology infrastructure in both buildings and an elevator in O'Connor were postponed until the next five-year plan. In 1999 it was determined that the $6 million designated to renovate these two buildings had to be used on other construction projects.

In sum, the University made significant progress on the 10 projects of the 1997 to 2001 campus improvement program of the Campus Master Plan. The status of the 1997 to 2001 campus improvement program as of June 1999 is summarized in Exhibit V.2.5.

PLAN FOR ADDITIONAL MAJOR PROJECTS

Building on the work of the 1997 Campus Master Plan and the 1997 to 2001 campus improvement program of that plan, the University engaged a new campus master plan architectural firm (Sasaki Associates, Inc.) to develop the next five-year campus improvement program (Exhibit V.2.6). The purpose of the new campus improvement plan was twofold. First, the University sought an elaboration of the prescriptive master planning principles outlined in the 1997 Campus Master Plan. Second, with the completion of the campus improvement program for 1997 to 2001 on the horizon, the University needed to assess and define the specific physical improvements for its next five-year plan of development. The plan document outlines five campus planning goals and six campus development guidelines that provide a framework for future expansion, define the historical scale and pattern of development at the University, and describe ways to further enhance the University's unique heritage.[20]

Using the campus planning goals and campus development guidelines as a framework, six specific projects were identified for inclusion in the campus improvement program between 2002 and 2006. These projects range from a new Business School facility to the consolidation of the Law School into Bannan Hall. Specifically, the projects identified for the 2002 to 2006 campus improvement program are:

- A new facility for the Leavey School of Business and Administration
- A new or renovated facility to consolidate Information Services
- A new multi-use facility, adjacent to Bannan Hall, the specific occupants of which are to be determined
- Expanded conference facilities in the Benson Memorial Center and other strategic locations throughout campus
- An expansion of Heafey Law Library
- Consolidation of the School of Law in Bannan Hall

The proposed program provides several alternative studies that explore the accommodation of the projects in their preferred campus locations. Each alternative reflects the campus planning goals and articulates the development guidelines used to inform the siting and massing of the facilities. The basis for each program is also provided in square foot ranges, recognizing that further detailed programming will be undertaken prior to the final siting and design of each facility. These priority projects will free space and create targets of opportunity for other academic and administrative functions. As the new and renovated facilities are completed, several buildings will be vacated (Bergin Hall, Kenna Hall, Ricard Observatory, and parts of St. Joseph's and Varsi Halls) and represent opportunities for solving other space needs of University programs and services.

With respect to academic space, these priorities reflect additional space requirements needed by the Business School (between 29,500 and 44,500 GSF), Information Services (between 72,000 and 120,000 GSF), and the Law School (28,500 GSF). In addition, the growing needs of the University centers of distinction and the school-based centers for conference and meeting facilities will be addressed with the addition to the Benson Memorial Center and the development of other meeting rooms in strategic locations throughout campus.

The facilities needs of the Department of Art and Art History, currently housed in a converted warehouse, have been deferred beyond this five-year plan. With the acquisition of land north of Franklin Street, one option being explored is the siting of this department near the performing arts area of campus.

There are also anticipated facilities needs in the School of Engineering. The preliminary

draft report from that school's accrediting agency, ABET, described the school's facilities as marginal but adequate. In addition to the Bannan Engineering Building and the Mechanical Engineering Building, the school currently occupies two trailers that are likely to be removed in the future. Given the Engineering School's intent to increase scholarly activity and enhance laboratory quality, it needs additional space just to maintain its current status. The school hopes that the space currently occupied by Information Technology will be returned if a new Information Services building is completed in the upcoming five-year plan.

IMPLEMENT RENEWAL PROGRAM FOR EXISTING FACILITIES

In the mid-1990s, the University recognized a shortfall in funding for renewing existing facilities and maintaining the campus infrastructure. Viewing facilities as strategic assets, it determined that strategic initiatives were needed to maintain those assets. In reviewing the approaches of other schools and the recommendations of the Association of Higher Education Facilities Managers, the University concluded that an annual funding allocation of 2 percent of the replacement value was needed to ensure that buildings continued to function as designed. The 1995–96 budget included partial funding for a replacement and renewal account. Each year the allocation was increased until reaching full 2 percent funding in the 1998–99 fiscal year.

As part of its commitment to replacement and renewal funding, the University also committed to create a capital renewal revenue stream for each new construction project. This revenue stream would create an annual amount equal to 2 percent of the replacement value of each new facility. For revenue-generating facilities, such as the Music and Dance Building and the residence halls, income from facility operation will create the revenue stream. For instance, revenue from the Music and Dance Building will provide $100,000 annually for that facility's capital renewal fund. For other facilities, a quasi-endowment will be created to ensure the revenue stream.

The Facilities Department oversees the capital renewal program, which includes a projected schedule of capital renewal, the allocation of capital renewal funds, the identification of special funding needs above the capital renewal allocation, and the annual execution of the program. During the last six years the University has undertaken an aggressive program of campus renewal projects utilizing the increased commitment of funding. Projects totaling $9.4 million

will have been completed between 1994–95 and 1999–00 from the renewal and replacement reserve (Exhibit V.2.8). These projects have reduced the estimated deferred maintenance on campus to $25 million, or slightly less than 15 percent of the current replacement value of Santa Clara's physical plant of $171 million.

Several capital renewal projects beyond the 2 percent annual funding have been scheduled to reduce the current backlog of deferred maintenance. Three projects to be completed in 1999–00 totaling $8 million will correct the mechanical and utility problems of Benson Center, Kenna Hall, Walsh Administration, Bergin Hall, Heafey Law Library, and Leavey Activities Center. Programmed for 1999–00 is a $6 million roof replacement of Leavey Activities Center. Scheduled for 2001 is a $10 million mechanical and electrical systems capital renewal project for Bannan, Bannan Engineering, Mechanical Engineering, Information Technology, and Orradre Library. Debt funding has been obtained to address these deferred maintenance projects. This short-term supplemental funding of $24 million is expected to bring the deferred maintenance program within the scope of the annual 2 percent allocation within two years.

CONCLUSIONS

In line with its commitment to enhance academic excellence, integrated education, and a community of scholars, Santa Clara has implemented many important elements of its current Campus Master Plan and made progress on several other critical aspects of facilities planning and management. The following paragraphs summarize progress made toward each of the four physical environment goals in the *Strategic Plan*:

- *Update the Campus Master Plan:* The campus master planning process has improved through more sustained participation by academic users of facilities, greater coordination among planning participants, enhanced inclusion of ecological concerns, and greater emphasis on the *Strategic Plan* to guide the entire process.
- *Complete the projects identified in the current five-year campus improvement program:* With two exceptions, the academic building projects in the 1997 to 2001 campus improvement program with greatest impact on fostering academic excellence and building a community of scholars have been completed. Delays on St. Joseph's and O'Connor resulted from a funding

shortfall and will be addressed as the next five-year plan is finalized.

- *Plan for additional major facilities beyond the current five-year campus improvement program:* With the possible exception of the Engineering School and Art Department facilities, the University is poised in its next five-year plan to upgrade facilities central to its academic mission. In the next five-year plan, highest priority will be given to the Business School, Information Services, a comprehensive services building, conference facilities, and the Law School.
- *Implement a capital renewal program for repair and replacement of existing facilities and infrastructure:* Budgeting for the replacement value of existing buildings reached full 2 percent funding in 1998. In addition, the University created a capital renewal stream for each new construction project, equal in value to 2 percent of the replacement value of the facility. Of the $28 million needed to fund deferred maintenance projects slated from 1999 to 2001, debt funding has been obtained to address $24 million. This short-term supplemental funding will bring the deferred maintenance program within the scope of the annual 2 percent allocation within two years.

While there is ample evidence that the University has developed its physical environment in accordance with its strategic goals and WASC accreditation standards, there is also some evidence of room for improvement. In response to the 1998 Faculty Survey, conducted before some recent projects were completed, 47 percent of respondents said facilities were either a major obstacle (10 percent) or somewhat of an obstacle (37 percent) to their teaching, while 42 percent said they were either a major obstacle (11 percent) or somewhat of an obstacle (31 percent) to their scholarship. The expectation is that the recent and projected facilities improvements will result in much more positive faculty evaluations in the future.

TECHNOLOGY AND INFORMATION RESOURCES

In the highly technical society of the late 20th century, technology no longer merely offers the potential to improve academic quality; it is an integral part of what determines that quality. Any institution of higher education must remain relatively current in order to attract and retain the best students, faculty, and staff. Nevertheless, the vision outlined in Santa Clara's *Strategic Plan*

demands that technology be addressed in ways that may be unique to Santa Clara.

The University's unique character is derived in large measure from its Jesuit tradition but also from its location in and strong ties to Silicon Valley. Our Jesuit heritage directs us to prepare students to be leaders in fashioning a more humane and just world; our recognition of the prominent role of technology in society requires that we provide students with the technological tools they will use to shape the world in which they will live. Our faculty and staff, in turn, require these same tools in the classroom, in research laboratories, and in administrative offices.

In this context, Santa Clara set forth as one of the challenges in its *Strategic Plan* the question:

> *How can Santa Clara excel in the use of technology and information resources to enhance teaching and learning, support scholarship, and improve service and productivity?*

Associated with the challenge are three goals intended to focus and direct action related to the use of technology and information resources:

- Implement the campus Technology Plan and update it as needed.
- Support training for faculty and staff in the use of technology and information resources to enhance teaching, learning, and scholarship, and to improve productivity and service quality.
- Develop strategic alliances and partnerships to support our efforts to excel in the use of technology and information resources.

THE CHALLENGE OF TECHNOLOGY

The use of technology and information resources at Santa Clara has changed dramatically in recent years in efforts to enhance teaching and learning, support scholarship, and improve service and productivity. Several trends have shaped these changes:

- *Explosion of Information.* It has been estimated that human knowledge doubled from 1750 to 1900, from 1900 to 1950, from 1950 to 1960, and again every five years since 1960. By the year 2020, it has been projected that knowledge will double several times each year. This "knowledge explosion" creates unending challenges for higher education.
- *Changing Technology.* The explosion of information has been fueled by the dizzying pace of

technological change and the increasing convergence of voice, data, video, and presentation technologies. As technology evolves, it can fundamentally alter the academic disciplines and organizational practices into which it is integrated. The rapid growth of the Internet and Web-based resources illustrates how changes in technology create not only new opportunities but also new problems in information management.

- *Escalating Expectations*. In a 1997 listserve, Steven Gilbert, the director of technology projects for the American Association for the American Association for Higher Education, described the "Support Service Crisis" in higher education, citing "the rapidly widening gap between available resources and the expectations of faculty and students; the likelihood that technology support service personnel are over-worked and over-stressed—especially if the institution has been successful in finding funds for a significant investment or upgrading a campus-wide network; the typical frustrations of faculty members who find they cannot get the kind of help they need to move ahead with technology; and how and why faculty and staff need MORE help from librarians and faculty development professionals."

All of these examples apply to Santa Clara. In addition, however, Santa Clara faces higher expectations (and greater opportunities) because of its location in the technology capital of the world. Members of the campus community, as well as friends and donors, expect Santa Clara to be at or near the forefront of higher education in technology. Users increasingly expect technology and information resources of all kinds to be current; conveniently and quickly accessible 24 hours a day, seven days a week; easy and intuitive to use; highly dependable; and buttressed by competent and courteous technical staff who keep everything running smoothly, provide timely support when problems occur, and offer training and assistance in the use of technology.

Technology's relatively short life span, combined with rising expectations, strains both financial and human resources. Even though Santa Clara has developed a sophisticated and sustainable technology program that will serve it well into the future, funds for operating budgets, infrastructure upgrades, staffing, facilities, and renewal and replacement have been limited.

As the overall cost of technical staff continues to rise (often driven by market value rather than by institutional priorities), staff recruitment, development, and retention become critical

issues for technology managers. Staff are thinly spread as they perform an ever-increasing number of functions brought on by the increase in the diversity of services, the sheer magnitude of services, and the level of service expectations. Many units are understaffed in comparison with institutions Santa Clara considers its peers, putting us at a disadvantage when responding to national trends in academia, making us organizationally inflexible, and hindering our ability to take advantage of strategic opportunities.

The major facilities that house technology and information resources at Santa Clara are not well-configured to deal with the dynamic information environment or to allow for integrating staff, services, and resources. Although many of these spaces have been renovated, there are severe limitations in their ability to support current operations and anticipated growth. (See Exhibit V.3.17 for a discussion of facilities needs in this area.)

Requests for capital projects have generally been more successful than those for ongoing maintenance and support. Because operating budgets have not been increased to cover renewal and replacement funds for technology-related endeavors, units primarily rely on capital requests made as part of the annual budgeting process. The first renewal and replacement fund for networking technology was created in 1999, but funds still fall below what is needed for a stable and reliable infrastructure. Discretionary budgets to fund operations have also not kept pace with expectations and costs.

The following sections will describe how Santa Clara is responding to these challenges.

TECHNOLOGY PLANNING AND ASSESSMENT

Technology planning and assessment at Santa Clara is an ongoing effort at many levels, from school-based efforts to a Technology Committee of the Board of Trustees. The primary technology policy development group, however, is the Technology Steering Committee (TSC) formed in December 1993 in large part to respond to the challenges described above. Composed of faculty and staff, the TSC was charged with developing both a short-term and a long-range strategy for technology at Santa Clara. It now reviews and revises these plans periodically.

The long-term plan, “A Strategy for Technology at Santa Clara University,” was developed in 1995 and later revised in January 1996 (Exhibit V.3.10). The technology plan outlined

general principles intended to set the direction for the integration of technology into the University and to guide decision making related to technology.[21]

Besides tying the uses of technology to the University's fundamental values, the technology plan proposed efficient and effective delivery of centralized technology services and standards for centrally supported computer hardware and software. It also envisioned campus-wide renewal and replacement strategies for aging technologies. Tied to these guidelines were specific recommendations including a comprehensive training program, a visible presence on the World Wide Web, electronic and voice mail for all full- and part-time faculty and staff, and provision of the technology required to support faculty and staff when they are working away from the campus.[22] The University has already acted on many of these recommendations. In February 1996, the TSC completed a companion document, "A Short-Term Technology Plan for Santa Clara University," which specified intended outcomes for the University's continued investment in technology (Exhibit V.3.11).[23] It also proposed five high-priority initiatives: (1) support of technology for the enhancement of teaching and learning, (2) technology education and training for faculty and staff, (3) cycled replacement of desktop workstation computers, (4) centralized distribution of software, and (5) regular assessment of the current state of technology.

In addition to developing and overseeing the short-term and long-term technology plans, the Technology Steering Committee also has some implementation responsibilities. It administers the Technology Funds, which are used to support aspects of technology infrastructure and innovative uses of technology by members of the University community. Grants from the Technology Funds are awarded through a peer-review process.

Primary responsibility for advancing the plans, however, rests with three units: Information Technology, the Orradre Library, and Media Services. In fall 1995, the Vice President for Academic Affairs (now Provost) charged the directors of these units to find ways to increase collaboration and the coordination of services. Through the planning process, it became apparent that there was some overlapping and blending of services, clients, and technologies, and that the issues and challenges facing all three units were very similar.

To increase collaboration, coordination, and opportunities for synergy, a division of Information Services was formed in spring 1997. Within this division, Information Technology is responsible for such services as the campus network (voice, data, and video), desktop

computers, and administrative systems. Orradre Library is responsible for acquiring, organizing, providing access to, and facilitating the use of a broad array of information resources which support the University's instructional programs, facilitate faculty research, and promote lifelong learning. Media Services is responsible for supporting and facilitating the application of media technology and non-print media resources to support teaching, learning, scholarship, and administrative services. (See Exhibit I.4.8 for documents relating to the creation of Information Services and its strategic plan.)

The Information Services units routinely gather and maintain evidence of performance related to the *Strategic Plan* goals for technology and information resources.[24] In addition, an Information Services Customer Satisfaction Team was formed in May 1997 and charged with conducting an assessment of client needs and satisfaction. The goal was to gather information that would be useful for: analyzing the effectiveness of primary services, identifying areas of strength and opportunities for improvement, and providing baseline data for future assessment efforts. Two surveys—one for faculty and staff and another for students—were designed to measure the importance of services, familiarity with services, and satisfaction with services (Exhibit V.3.16). The surveys were administered during winter quarter 1998.

While a number of areas of high importance and high satisfaction were identified in the surveys, areas of high importance and low satisfaction deserve special attention. These areas, as identified by the constituencies indicated, included: telephone assistance from IT support staff (faculty and staff), assistance from computer lab staff (students), assistance from Resident Communication Consultants in the residence halls (students), computer lab hours of operation (students), campus network reliability (all groups), GroupWise electronic mail (all groups), availability of University electronic resources from off-campus (all groups), availability of equipment in computer labs (students), and assistance from Orradre course reserve staff (faculty). Steps have been taken to make improvements in each of these areas since the survey was conducted.

Unifying the efforts to implement the Technology Plan is the strategic challenge set forth at the beginning of this chapter: How can Santa Clara excel in the use of technology and information resources (a) to enhance teaching, learning, and scholarship, and (b) to improve service and increase productivity? The next two sections will look at our progress on these two aspects of the strategic challenge.

ENHANCING TEACHING, LEARNING, AND SCHOLARSHIP

The responses to the 1998 Faculty Survey suggest that Santa Clara is doing a reasonably good job of supporting teaching, learning, and scholarship through the use of technology and information resources:

- 67.7 percent said that support for technology was not an obstacle to their teaching, while only 5.4 percent saw it as a major obstacle. Of 11 potential obstacles to teaching, technology support ranked tenth.
- 64.1 percent said that support for technology was not an obstacle to their scholarship, while 10.5 percent saw it as a major obstacle. Of 11 potential obstacles, it again ranked tenth.
- On the other hand, 47.9 percent said the library was an obstacle to teaching, and 61.2 percent saw it as an obstacle to scholarship. Of 11 potential obstacles, the library ranked third for both teaching and scholarship. The results for teaching may, in part, reflect the problem with ground water seepage which made the Orradre Library collections difficult to use for much of the past two years. This problem has now been corrected. The results for scholarship probably reflect the fact that the library of a comprehensive university cannot provide the collection breadth and depth found at a major research university.

To enhance teaching, learning, and scholarship through technology and information resources, the University has increased its investment in science and research technology; developed and implemented a plan for classroom technology; increased support for the use of technology in teaching and learning; increased availability of electronic information systems; increased support for innovation; and developed strategic alliances and partnerships. These performance indicators are discussed below.

INVESTMENT IN SCIENCE AND RESEARCH TECHNOLOGY

Science and research technology includes laboratory equipment in the sciences and high-speed computers and computing facilities. Prior to the implementation of the Technology Steering Committee in 1994, there was no systematic funding for technology to be used in science labs and in research. Since then, a significant portion of the TSC-managed Technology Funds has been used to support either the acquisition or renewal of science research equipment; over 25 percent of the nearly $2 million allocated from this fund has gone to support science and

research technology, in many cases in the form of matching funds.[25]

Science and Research Equipment

	1989–94	1994–99
TSC Technology Fund Grants	0	$500,000
Biology		
Total Projects	N/A	17
Funded by Santa Clara	N/A	12
Total Value	N/A	$250,000
Chemistry		
Total Projects	4	14
Funded by Santa Clara	0	10
Total Value	$140,000	$485,000
Physics		
Total Projects	2	4
Funded by Santa Clara	1	4
Total Value	$250,000	$300,000
Psychology		
Total Projects	5	1
Funded by Santa Clara	N/A	N/A
Total Value	$60,000	$10,000

PLAN FOR CLASSROOM TECHNOLOGY

Demand for instructional technology in classrooms and conference rooms has increased dramatically over the past 12 years. The use of traditional audiovisual and video continues to remain stable or grow at the same time that the use of computer projection expands. In 1986–87, the majority of instructional technology delivery services provided were for video playbacks and recordings, and traditional audiovisual support (16mm film, slide, and overhead projectors). As requests for equipment delivery grew by nearly 40 percent between 1986–87 and 1989–90, permanently placing equipment in the classrooms became a necessity. Over the summers of 1990, 1991, and 1992, overhead projectors were placed in all classrooms, resulting in a brief drop in total requests over the next two years. This strategy improved accessibility and convenience to faculty and students, and freed up staff time for more complex requests. It does, however, require a different level of oversight to maintain the equipment in good working order. By 1993–94, requests reached a new high, based on continued growth in video and traditional

audiovisual support, and the first significant use of computers in the classroom. A growth in demand of 23 percent between 1993–94 and 1995–96 prompted the permanent installation of video monitors, slide projection, and data/video projection systems in a number of classrooms to provide easily accessible and user-friendly systems to provide better support for faculty integrating technology into their classes.

In January 1997, the Technology Steering Committee adopted a "Plan for Classrooms" (Exhibit V.3.12) which provides minimum standards to support the use of technology in all spaces used for instruction. This plan also suggests the specifications and target numbers for both multimedia classrooms and computer classrooms. The TSC defined a multimedia classroom as one in which the instructor can use a computer—either a laptop or a permanently installed desktop—to project displays through a multimedia presentation system. Computer classrooms provide this same capability but also provide each student or group of students with a computer at their desk. The 1997 "Plan for Classrooms" recommended that Santa Clara outfit and maintain at least 12 multimedia classrooms and six computer classrooms; these targets were set based on the trends in requests for portable equipment reported by Media Services and for existing classrooms which offered some or all of these functions.

Since 1997, increased demand for multimedia classrooms has accelerated Santa Clara's investment in this area. There are now 32 classrooms with built-in multimedia equipment (six of them added in summer 1999), and this number has more than tripled in the past two years. Fifty-five classrooms, including these 32, have an ethernet jack which allows the instructor to plug directly into the campus network and, thereby, the Internet. This number has quadrupled in the past two years. There are five computer classrooms, of which two were created since the Plan for Classrooms went into effect. In addition, we have recognized a third category of technology classrooms since the 1997 plan: those that offer network jacks for each student to allow use of

Classroom Technology

	1992–93	1998–99
Classrooms or Labs with Overhead Projectors	68	85
Classrooms with Slide Projection	5	8
Multimedia Classrooms	4	32
Computer Classrooms	2	5
Classrooms with Network Stations	3	11
Number of Networked Classrooms	3	42

personal laptops for note taking and other in-class work. Santa Clara has added six such classrooms over the past two years.

Integration of computer technology in the classroom continues to grow, with dramatic increases in use on the part of both faculty and students. During the last two weeks of each quarter, use rises sharply as students integrate technology into final presentations. Even with 32 permanently installed classroom projection systems and an increase in laptops owned by both faculty and students, requests for data projection services have grown 71 percent over the past three years.

Of those faculty and staff who responded to the Information Services Customer Satisfaction Survey, 90 percent were satisfied with the availability and on-demand setup of classroom technology.

SUPPORT FOR USE OF TECHNOLOGY IN TEACHING AND LEARNING

Growing emphasis on instructional technology to support teaching and learning has led to the creation of several staff positions. An instructional technology resource specialist was hired in July 1996, and an additional position was approved in May 1999. As noted in the section on "Development of a Campus Web Site" below, two Web positions have also been created since 1997. In 1997, all Information Services training and instruction programs were consolidated within the Orradre Library, and a full-time exempt position was transferred from Information Technology to support this change. The Law School and Business School also have instructional technologists on staff.

To make instructional technology accessible, four specialty labs or classrooms have also been created . The Orradre Reference Room Classroom was created in 1991.

The Weigand Learning Center, upgraded in 1993, supports non-print reserve materials, multimedia authoring, and language instruction. The Multimedia Lab, created in 1996, has developed into a combination multimedia development environment and instructional facility, with the primary use being student and faculty project development. The lab is also used for general technology training focused on Web development and office productivity software. The combination of hardware, software, and network access makes this an ideal production facility for Web and CBT multimedia development. Currently the lab serves an average of 175 people on

a weekly basis with an additional 30 to 50 for training and workshops. The Tamaki Classroom, (Bannan 210), also created in 1996, supports students working in a collaborative computing environment. The room is used by courses in many disciplines, including communication, political science, marketing, sociology, and education.

Multimedia needs continue to grow as faculty work to develop courseware to enhance teaching and learning, and students increase the use of new technologies for their coursework. New over the past three years are various digital production services, such as digital cameras, CD-ROM pressing, and more advanced authoring/production software for both Web and multimedia.

Technology Staff Support for Teaching and Learning

	1992–93	1998–99
Instructional Technology Courses	0	20
Faculty Enrolled in Instructional Technology Courses	0	150
Faculty Instructional Technology Consultations per Week	0	7
Training Sessions Offered	N/A	140
Faculty/Staff Enrolled in Training	N/A	150/140

Development workshops for faculty are regularly offered by the instruction technology resource specialist.[26] A number of faculty and student projects have been completed, or are currently under development, with the support of these new staff, equipment, and facilities.[27]

Of those faculty who responded to the customer satisfaction survey, 89 percent were satisfied with the assistance available to help develop instructional media and courseware. The University could do more, however, to generate and support faculty interest in the use of classroom technologies.

AVAILABILITY OF ELECTRONIC INFORMATION SYSTEMS

The term "electronic information systems" covers a wide array of applications including library systems; electronic databases; Internet and campus electronic newsgroups; and a multitude of electronic applications, some of which are Web-based. Through a concerted effort by both Information Services and faculty, and supported in part by the Technology Funds, a significant amount of intellectual property is now available either on the Internet or in other electronic formats. The University has moved to an online catalog and has regularly updated it.

The number of databases that are available to students is regularly increasing, and the number and diversity of electronic resources are continuing to rise.

Significant progress has been made in library automation since 1987, and the Orradre Library now supports the Online Santa Clara Automated Retrieval System, or OSCAR, which not only provides access to information about the library's holdings but also serves as a gateway to other library catalogs, indexes, and data resources.[28] These include the Expanded Academic Index, First Search, and Uncover Gateway, all popular and powerful academic tools. The library also maintains a set of electronic databases, such as Britannica Online, Dow Jones Interactive, ATLA Religion Database, and ABI Inform.

Santa Clara has more than 400 electronic government documents, mostly in CD-ROM format, with about 70 titles added each year. The University offers links from nearly 1,000 government documents records in OSCAR to the full version of the publication on the World Wide Web.

Notable progress has been made in expanding the availability of resources in non-print formats. The library's collections now include video, multimedia CD-ROMs, a few sound recordings, and a wide variety of electronic resources, available either through the CD-ROM network or via the World Wide Web. The library is also beginning to create new Web resources in support of teaching and learning, such as the award-winning Diversity Web site, and to use the Web to increase access to collections such as the University Archives. Additionally, Santa Clara has subscriptions to 25 electronic journals, mostly in the sciences and technology, and is currently negotiating with a commercial electronic journal aggregator to make an additional 1,200 electronic journals available. Two new librarians have been funded for Electronic Services and Serials.

Electronic information systems are readily available to all students via the more than 300 computers in campus computer laboratories and classrooms. The campus LINC (Learning Is Now Connected) project, implemented in 1995, brought the Internet, as well as voice and video, to each residence hall room. The LINC network offers the potential to deliver large amounts of academically related information in a number of formats. The initial LINC project and its continued operational support are a joint effort of Information Technology, Media Services, and Housing and Residence Life. Each room was equipped with one data jack per student, one

telephone jack per room, and one television jack per room. The residence halls account for approximately 800 computers attached to the campus network.

A number of staff positions were created to support the LINC system and its use. For example, a .75 FTE cable TV manager position was created in Housing and Residence Life and resides in Media Services to provide support for CATV services. In May 1997, a plan was adopted to expand Santa Clara's privately owned cable television system, LINC-TV, from the residence halls to the entire campus. The plan is partially complete, with LINC-TV's signal reaching a number of classrooms and faculty offices.

Availability and Use of Electronic Information Systems

	1992–93	1998–99
Percent of Students, Faculty, and Staff with Individual Web Sites	~0	21
Percent of Faculty Using the Web in the Classroom	~0	30
Percent of Faculty with Online Course Content	5	40
Library Systems Modules	5	15
Number of Electronic Databases Available	15	430
Number of OSCAR Transactions, 2-Year Average	173,000	204,000
Number of OSCAR Searches, 2-Year Average	423,000	380,000
Number of Online (Web) Course Material Systems	1 (0)	3 (3)
Percent of Residence Hall Rooms Networked	0	100%
Percent of Residence Hall Students Online in Room	<5	89 %

A campus-wide system that allows faculty to put course material on the Web easily and that facilitates Web-based academic conversations was implemented in 1996. In the early 1990s, anecdotal evidence that faculty saw a teaching opportunity in the electronic medium led to the development of a non-Web, text-only system by a member of the Santa Clara faculty. In response to faculty interest, this system has evolved into the Web-based Electronic Reserve System, ERes. ERes is now used for over 300 courses in 45 departments, and handles over 5,000 student accesses per week. The Law School runs a separate implementation of ERes, and the School of Business has its own system used by several faculty.

SUPPORT FOR INNOVATION

Recognizing that bringing technology more fully into the process of teaching and learning requires experimentation and support for projects that might ultimately prove unsuccessful, the TSC set aside approximately 30 percent of the Technology Fund specifically for innovation. In

particular, during the past year the TSC has invited and given higher priority to proposals for projects that impact classroom teaching directly. Fourteen such proposals have been funded to date, with total funding at approximately $100,000. These projects include the development of a Web site for Biology 115 (Animal Development); the building of an automated ocean vehicle with which to carry out underwater archeology, together with a mission to send one faculty member and two students to the Arctic to deploy it; and a project that now allows students in seven different engineering courses to study digital signal integrity.

TSC-Sponsored Innovation Projects

	1995–96	1997–98
Proposals Submitted (Funded) for Innovation Projects:		
Total	12 (10)	27 (27)
Teaching-Specific	3 (3)	19 (19)
Other Purposes	9 (7)	8 (8)
Dollars Awarded for Innovation Projects:		
Total	$72,000	$380,000
Teaching-Specific	$17,000	$270,000
Other Purposes	$55,000	$110,000

STRATEGIC ALLIANCES

Although Santa Clara has not developed a coherent plan to cultivate strategic alliances, it is currently developing strategic relations with a number of companies, including Lucent Technologies, the vendor for our new campus communication system; 3Com Corporation, the vendor for our campus network; and Applied Materials and Amdahl Corporation, both major supporters of our Center for Science, Technology, and Society. A new Technology Committee of the Board of Trustees, which includes some prominent Silicon Valley executives, will assist the University in developing partnerships around technology and information resources.

Santa Clara has served as a beta test site for two products—the Interlibrary Loan Module and the Graphical User Interface (GUI) cataloguing workstation—developed by Innovative Interfaces, Inc., the vendor for our library system software. As an associate member of the Southern California Electronic Library Consortium (SCELC) and a new member of Link+, the University has been able to improve access to a wealth of electronic information resources and the library collections of other California institutions.

Many alliances also exist between specific academic programs and other external

organizations, ranging from public entities such as the Smithsonian Center for Materials Research and Education, to non-profit organizations such as the Tech Museum of Innovation, to a wide range of Silicon Valley companies which support specific programs in the Business School and Engineering School.

IMPROVING SERVICE AND PRODUCTIVITY

The responses to the 1998 Staff Survey suggest that most staff believe Santa Clara is using technology to improve service and productivity, but there is room for improvement.

- 92.2 percent of staff found the statement, "Technology has helped me improve my job performance," either very descriptive (60.6 percent) or somewhat descriptive (32.2 percent).
- 78.6 percent either strongly agreed (25.8 percent) or agreed (52.8 percent) with the statement, "In the last year my department has changed some administrative processes to take better advantage of the available technology."
- 52.3 percent, however, stated that support for technology was either an "obstacle" (20.1 percent) or "somewhat of an obstacle" (32.2 percent) to service quality. Looked at more positively, technology ranked fifth in a list of eight items as an impediment to service.
- Similarly, 52.8 percent stated that support for technology was either an "obstacle" (21.5 percent) or "somewhat of an obstacle" (31.3 percent) to their productivity. Again, technology support ranked fifth in a list of eight obstacles.

To improve service and increase productivity, the University has developed a cycled replacement program for all campus desktop computers; committed itself to renewal of public computers and computer laboratories, network, servers, and telephone switch; replaced administrative computer systems; developed a campus Web site; and increased hardware and software technical support. These performance indicators are discussed below.

CYCLED REPLACEMENT OF DESKTOP COMPUTERS

In 1995, the TSC recommended that every member of the University faculty and appropriate members of the staff have a personal computer at their work space able to run current academic and administrative software. As personal computers became more numerous, the age of desktop

workstations became an issue. In 1993, the University had more than 400 original personal computers and almost 400 second-generation personal computers. In 1996, the TSC examined the then-current inventory of personal computers and determined that these assets were aging. The cost of replacing the 1,600 desktop computers in use at that time represented a capital outlay of $2.9 million, which would have to have been repeated every three to five years when each successive round of desktop computers became obsolete. After considerable analysis, the University decided to replace PCs within a fairly short life span. In 1995, 503 HP Vectra computers were purchased to replace the first-generation computers.

In 1996, based on a TSC recommendation, the University began a process of leasing personal computers for all faculty and staff desktops, and for labs and classrooms, on a four-year rotating cycle. The four-year cycle was set in order to balance the cost of the lease and usable lifetime of the computers. The first round of replacing all desktop assets is scheduled to be complete by the year 2000. Every new computer installed through the PC Replacement Program is loaded with an array of standard software packages, such as for word processing and spreadsheet manipulation. Each new machine is also configured with a "standard desktop," designed by a team from Information Services to give a common look and feel to all campus computers. This standardization is intended to increase operational efficiency.

The net financial effect for the University, to date, has been a substantial decrease in the cost of ownership, mainly attributable to lower repair and maintenance charges. More than 1,800 personal computers are now covered in the PC replacement process, with a projected growth of approximately 40 new personal computers per year.

Desktop Computers

	1992–93	**1998–99**
Number	1,200	1,800
Average Age	4.5 years	2.6 years
Percent Pentium Class	0%	90%

RENEWAL OF PUBLIC COMPUTERS AND COMPUTER LABORATORIES

Public-access student computers have long played an important role within the University. This role has not declined with the wiring of the residence halls; indeed, the number of student visits to the two campus computer labs has substantially increased since that time. Input from

students shows a growing level of dissatisfaction with the age of desktop computers in the general student labs. In response to these inputs, all computers and all networking in the public computer laboratories were replaced in 1997, and the replacement period for these computers was decreased from every four to every two years.

Public Computers

	1992–93	1998–99
Number	200	340
Average Age	3 years	1.3 years
Percent Pentium Class	0%	100%

RENEWAL OF CAMPUS NETWORK, SERVERS, AND TELEPHONE SWITCH

Campus data networking has been a source of pride to the University, which is rated by *Yahoo* magazine as one of the 50 most wired campuses in the United States (Exhibit V.3.15). The campus network, which had been in place for eight years, was in critical need of an upgrade. Over the past two years, the total amount of demand on the network caused it to operate both slowly and unreliably. The University, in cooperation with 3Com Corporation, replaced the entire network with faster, more robust equipment in the spring and summer of 1999. Of equal importance, more than $400,000 per year has been set aside for the regular repair and replacement of various network components. This fund will ensure that the campus network will continue to meet the University's increasing demands.

A campus telephone switch, a so-called “Private Branch Exchange” or PBX, through which every phone line on campus is routed, was purchased in 1984. Over the past two years, the University looked at replacement options for what had become an obsolete system that was no longer fully supported by the vendor (Mitel) and was running at capacity. In spring 1999 the University signed a contract with Lucent Technologies for a totally new communications system.

Network and Related Services

	1992–93	1998–99
Network Servers	0	50
Network Ports	270	3,400
E-Mail Accounts	3,500	15,000
Voicemail Accounts	700	3,400

REPLACEMENT OF ADMINISTRATIVE COMPUTING SYSTEMS

In 1995, driven by approaching Year 2000 issues and administrative computing systems facing obsolescence, the University embarked on a replacement of the systems that support student administration, finance, and human resources management. Three major problems plagued those systems: they were antiquated, no longer actively supported by the vendors, and not Y2K compliant. Moreover, the existing systems provided no flexibility with which to respond to Santa Clara's changing business needs.

Three approaches were explored to remedy the problem: modify the existing systems, write new systems in-house, or buy off-the-shelf software packages. The first alternative, though less expensive than the others, still represented substantial costs and only satisfied the issue of Y2K compliance, and the second alternative was deemed to be beyond the University's human and time resources. The third alternative, therefore, was pursued. This project is known as Administrative Computing Enterprise Solution, or ACES.

Teams from each of the three functional areas—Student Administration, Finance, and Human Resources—and members of Information Technology explored the marketplace and ranked acceptable options. PeopleSoft systems were the first choice of the finance and human resources teams, and the second choice of the student administration team. In the interest of identifying an integrated solution for all administrative systems needs, the three teams recommended PeopleSoft. This recommendation was accepted by the University administration.

The new client/server environment developed on the PeopleSoft ERP system will provide more distributed, direct access to information in the three functional areas, and therefore more responsiveness to their most pressing needs. It will provide much greater adaptability as user requirements change, and major new capabilities will be provided as the vendor maintains and enhances the system beyond the year 1999.

The finance and human resources systems were brought into production in January 1998. Some problem identification continues, but these systems are operationally stable. Ongoing activities have focused on correcting problems and improving basic functionality. The student administration system is being implemented in phases, correlated with the annual cycle for incoming students. The admissions module, which allows applications to be processed, came online in August 1998. The financial aid module came online in September 1998.

Implementation of the core student administrative systems, which provide processing of student financial and student record information, is well underway and is scheduled to be complete by the end of summer 1999. The student-oriented administrative system is therefore expected to be fully functional in time to support the needs of the 1999–00 academic year. Because of time constraints, however, each system has been implemented with few modifications and basic but limited functionality. System features will be expanded in the future.

Development of a Campus Web Site

The University responded to the growing popularity of the World Wide Web by developing an elementary Web site in 1996. The second generation of the University Web site was developed by a team of students working under the direction of the University's Systems Librarian in 1997. Two new positions have been created—the Webmaster (created in summer 1997) and a Web designer/developer (approved in spring 1999)—to provide Web support, training, design, development, and coordination. The Web now plays a central role in our marketing, recruiting, and community outreach efforts, as well as in the way the University is conducting its own instructional and administrative business. Sixty percent of incoming students made their first contact with the University through the Web.

With advances in technology and an increasing campus-wide interest in using the Web for purposes ranging from instruction to marketing to financial transactions, it has become evident that Santa Clara's site needs to be redesigned again to assure greater ease of navigation, an appealing and consistent "look and feel," and up-to-date information. After issuing a request for proposals in spring 1999, the University decided it could meet the goals of the redesign project in-house without hiring an outside vendor. The redesign is currently in progress is a collaborative project between Media Services, where the Webmaster is located, and University Marketing Communications.

Hardware and Software Technical Support

The increased number of computers, network ports, and e-mail accounts on campus has resulted in a significant increase in the reporting rate for desktop computer-related problems. It is therefore increasingly important for the University to provide the resources to support technology users in an efficient, timely, and knowledgeable way.

Information Technology has added support staff and reorganized in order to handle the service request load. For example, even with the enormous growth in the number of computers on campus, the growth of network usage, and the overall increase in the use of technology applications, the average amount of time required for resolution of a technical support request has been reduced from three days to under one day over the past five years.

Information Technology supports a call-in help desk, the staff of which answer technical questions and triage computer, network, and other technology problems. There is also a team of specialists on staff who can be called upon to investigate and solve computer and related problems. In order to provide better and faster service, the staffing of these two support groups has been increased.

While reliance on student help has been reduced in favor of professional technology experts, the University is still overly dependent on student employees to provide basic technology and information resource services. For example, Information Services as a whole has approximately 35 FTE in student staff, or 32 percent of the total Information Services FTE staff. Student staff do not provide the same level of expertise or consistency of service, and require more continuous training from permanent staff. While all the IS units have developed a cadre of excellent students, relying on students has serious limitations.

The most recent customer survey, administered in winter 1998, indicates that the current level of service does not yet meet the perceived needs of the University. Only about 70 percent of faculty and staff were satisfied with technical support service, compared to an overall 90 percent satisfaction level among respondents regarding most services and resources provided by Information Services.

Comparison of Technical Support

	1992–93	1998–99
Desktop Computers per Repair Staff	275	150
Support Requests per Month	2000	3500
Outstanding Support Requests per Day	N/A	130
Average Time (Days) to Resolve Support Requests	3	1

CONCLUSIONS

Santa Clara has formulated long-range and short-range plans to enable students, faculty, and

staff to use technology and information resources to improve service, increase productivity, and enhance teaching, learning, and scholarship. In carrying out these plans, it has been successful in meeting the new hardware and software infrastructure needs which the rapid pace of technology change requires. In particular, we have:

- Increased support for use of technology in teaching and learning.
- Increased the availability of electronic tools, services, and resources.
- Provided good support for science and research equipment.

We have been less successful in ensuring that the human aspects of technology use keep pace with available resources. These human aspects include faculty and staff development to foster the appropriate and creative use of technology, reward systems aligned with these development efforts, and adequate staffing to provide training and ongoing support for technology use.

Information Services is currently working on improving service in those areas the Customer Satisfaction Survey identified as having high importance and low satisfaction. Progress will be measured in a repetition of the survey in the year 2000. Particular attention will be given to areas in which students (the least satisfied group) expressed dissatisfaction. In addition, the current facilities for each of the three Information Services units are unsatisfactory and impede work both within and across those areas. The University will need to reconcile the facilities needs identified in the program statement for Information Services with the constraints identified in the Campus Master Plan and proceed with the construction of new or renovated Information Services facilities at the earliest possible opportunity.

FINANCIAL RESOURCES

Successful implementation of our strategic initiatives to build a community of scholars and provide an integrated education requires the responsible and creative use of our financial resources. The *Strategic Plan* identifies the strategic challenge facing us as we strive to focus our financial resources for excellence:

> *How can Santa Clara excel in generating, managing, and conserving its financial resources to advance its mission and strategic initiatives?*

Practically every aspect and effort of the University ultimately involves some level of financial support, from instruction to the learning environment. If the University is to use its limited financial resources well, it must develop a financial planning strategy that encompasses the myriad of financial decisions and transactions made daily from the executive to the operating managers level. This must be done in a deliberate and coordinated manner to ensure the most purposeful and efficient stewardship of funds generated from all sources.

The strategic challenge is framed in terms of three broad action categories: generating, managing, and conserving financial resources:

- *Generating Financial Resources:* This category encompasses the methods and strategies we use to generate revenues. As a private institution, Santa Clara is heavily tuition dependent; however, other sources of revenue such as contributions, endowment income, and auxiliary revenues are important sources of support for our overall financial success. One specific *Strategic Plan* goal for generating financial resources relates to improving fundraising—an increasingly important component of our revenues as reliance on tuition comes under pressure in the broader marketplace. Another goal, relating to the development of new revenue streams, looks for ways in which we might enhance our revenues through creative offerings of educational services. The final goal addresses the tuition and financial aid strategy which must be balanced to reflect our market position while being sensitive to the financial burden of students and families. We have examined strategies, policies, and data to measure our effectiveness in generating revenues from all sources.
- *Managing Financial Resources:* The first goal for financial resources is to develop a comprehensive financial plan, an important management perspective to examine all financial aspects in relation to each other in a coordinated and logical manner. The management of financial resources is a broad category that includes operating and capital budgeting, balance sheet management, financial modeling, and accurate revenue projections. Measurements compare expenditures in each functional category as a percentage of total educational and general expenses to give an indication of the emphasis we place on the primary mission of educating students and the necessary supporting activities. The financial aid strategies are examined to determine if we are meeting the goals of attracting the type of students we want in terms of diversity and academic quality. Our goal to manage expenses to support the University's strategic direction includes the streamlining of processes to make them more

efficient, through the use of technology, cost containment, and reallocation of existing resources.

- *Conserving Financial Resources:* The University is entrusted with millions of dollars of endowment and operating funds that must be effectively managed in the investment market. Conserving financial resources also includes the efficient leverage of our funds through debt management. Conservation also means the reduction of potential loss exposure to our physical assets, including buildings and equipment, and financial assets through proper maintenance and risk management. The policies and procedures surrounding these risks will be reviewed.

The *Strategic Plan* sets out five goals under the challenge of generating, managing, and conserving financial resources:

- Develop a comprehensive financial plan which includes the operating budget, a capital budget, accurate fundraising projections, and management of debt and cash flows.
- Improve fundraising performance to a level at which Santa Clara will rank consistently among the top three comprehensive universities in the country as measured by total gifts and, over time, by alumni participation rates.
- Develop revenue streams consistent with the strategic direction of the University.
- Manage expenses to support the strategic direction of the University, making every effort to streamline processes, reduce costs, and reallocate funds where appropriate.
- Refine our tuition and financial aid strategy to reflect our market position and enable us to recruit and retain the students we seek while being sensitive to the financial burdens of students and their families.

BUDGETING AND FINANCIAL PLANNING

During the last accreditation visit, the visiting team recommended that Santa Clara develop better processes for financial planning and budgeting. In 1987, development of the annual budget was a process involving only top level management without much discussion or input from the community in general. In 1994, the process changed to involve a wider constituency. Information about the budget assumptions and challenges is regularly communicated to the general University during the budget process. The community is encouraged to provide

feedback through one of the standing budget committees or at public forums where the budget information is presented. Critical needs and new initiatives are submitted through the deans, vice provosts, and vice presidents for consideration by the budget committees.

Two key policy committees are involved in the budget process, the University Budget Council (UBC) and the Budget Advisory Committee (BAC) (Exhibit III.1.14). The UBC is responsible for the development of the annual operating budget. The UBC is chaired by the Vice President for Administration and Finance and includes the Provost, the Vice President for University Relations, the Associate Vice President for Finance, three other administrators, and the faculty chair of the BAC. It is staffed by the Budget Director. The UBC proposes the budget recommendations to the President for further review and approval by the Board of Trustees.

The BAC, as the representative body of the University community, is a broadly based group of faculty, staff, and students. The BAC is responsible for advising the President on major budget issues, as well as focusing on long-term strategic issues that impact the financial health of the University. The chair of the BAC, a faculty member, reports directly to the President and is a member of the UBC. These policy committees also consult many key individuals and committees throughout the budget process. The BAC hosts an open forum in which the campus community can participate with questions and suggestions.

The current budget process is a more comprehensive plan for all aspects of the operations than before 1994, when it only examined unrestricted and auxiliary operations to develop a balanced budget. The process now reviews all operations, including restricted endowment funds as well as capital expenditures. Through the BAC and UBC, budget assumptions and proposals are thoroughly discussed, including tuition and financial aid strategies, compensation and benefits, cost reallocation, new requests for funding, and capital projects.

The financial planning process, which once did not include projections beyond the following budget year, now includes long-range projections based on current assumptions. Initially, a ten-year model was developed; however, it was concluded that the time horizon was too long to have a clear picture of higher education trends and general economic conditions. Subsequently, in 1994, the projections were reduced to a five-year time frame.

The budget presented to the Board of Trustees in February 1999 (Exhibit V.4.6) represents a broader financial view of the University, incorporating the operating plan, a debt plan for new

financing, and a capital construction plan.

FINANCIAL STATEMENTS AND PERFORMANCE INDICATORS

The audited financial statements for the years ended June 30, 1987 through June 30, 1998 are included as Exhibit V.4.1 to this report. Comparative charts of the Statement of Financial Activities and Statement of Financial Position are presented in Exhibits V.4.3 and V.4.4, respectively, for the fiscal years 1994–95 through 1997–98 and for the 1986–87 fiscal year. Beginning with the fiscal year 1994–95, the statements are presented in the SFAS 116 and 117 formats as required by the Financial Accounting Standards Board (FASB) governing not-for-profit organizations. The statements for fiscal year 1986–87 are presented in the fund accounting standard format that was in effect at the time.[29]

While the statements presented in the exhibits are not absolutely comparative between the old fund accounting format and SFAS 116/117 format, conclusions from the trends in the numbers are valid. It is these trends, not the absolute dollars, which will be the focus of most of the performance indicators used in this analysis.

During the course of the annual financial review, the external auditors issue a "management letter" to the University identifying internal control and operational matters that have come to their attention. Exhibit V.4.2 includes the auditor's letters for the last four years and management's response to each. Over the years, each of the items pointed out by the auditors has been adequately addressed. In most cases, the Controller's Office was already aware of the issue and had made plans to address it.

Key performance indicators have been identified to give evidence of the University's progress on the three broad categories of generating, managing, and conserving resources. Each indicator is described as to its relevance in measuring the financial challenge with supporting documentation or data presented for 1986–87 and 1995–96 to 1998–99 where available and appropriate.[30]

GENERATING FINANCIAL RESOURCES

Examining the sources of revenues generated over time is important to indicate trends in total revenues and the mix of revenue. In order to understand the trends, it is important to understand the changes that have taken place in recording revenues and the impact this may have when looking at the percentages contributed by source.

Overall revenues between 1986–87 and 1997–98 have grown substantially from $77.3 million to $176.0 million.

Total Revenues by Source

	1986–87	1994–95	1995–96	1996–97	1997–98
Tuition and Fees	$40,738	$87,800	$96,428	$105,307	$113,220
Financial Aid	(8,863)	(16,509)	(19,335)	(21,147)	(21,842)
Net Tuition and Fees	31,875	71,291	77,093	84,160	91,378
Contributions	11,820	10,578	31,428	23,577	25,018
Grant Revenues	4,277	2,175	1,661	1,935	2,095
Income on Investments	5,514	7,070	7,980	11,506	13,242
Investment Gains	6,681	14,366	17,862	20,613	21,576
Other	4,764	5,396	6,749	7,033	7,261
Auxiliary Activities	12,396	16,693	14,175	15,182	15,446
Total Revenues	$77,327	$127,569	$156,948	$164,006	$176,016

The mix of revenues has also shifted in that same period when comparing the percentage of the source to total revenues.

Percentage of Revenues by Source

	1986–87	1994–95	1995–96	1996–97	1997–98
Tuition and Fees	52.7%	68.8%	61.4%	64.2%	64.3%
Financial Aid	-11.5%	-12.9%	-12.3%	-12.9%	-12.4%
Net Tuition and Fees	41.2%	55.9%	49.1%	51.3%	51.9%
Contributions	15.3%	8.3%	20.0%	14.4%	14.2%
Grant Revenues	5.5%	1.7%	1.1%	1.2%	1.2%
Income on Investments	7.1%	5.5%	5.1%	7.0%	7.5%
Investment Gains	8.6%	11.3%	11.4%	12.6%	12.3%
Other	6.2%	4.2%	4.3%	4.3%	4.1%
Auxiliary Activities	16.0%	13.1%	9.0%	9.3%	8.8%
Total Revenues	100.0%	100.0%	100.0%	100.0%	100.0%

In the four most recent years, a higher proportion of income has come from tuition and investment gains, while smaller percentages have come from auxiliary activities and grants. This

change in auxiliary income can be explained by the fact that the student population has not grown substantially over the period, resulting in modest auxiliary revenue growth compared to the growth in tuition rates. In addition, the method of recording revenues from the food service operations changed in 1996 when net commissions were recorded rather than gross sales revenues due to the change in the food service provider's contract. Investment gains have grown substantially due to the positive change in investment management and the favorable investment market in recent years. Contributions as a percentage of total revenues have remained about the same, but the amount of contributions has more than doubled to $25.0 million in 1997–98 from $11.8 million in 1987–88. Fundraising efforts since the end of the last campaign in 1996 have sustained the level of annual giving. The recording of pledges or promises to pay rather than only realized gifts contributes to some extent to this increase.

The **return on net assets ratio** measures the University's performance in generating net assets compared to the capital base used to produce those assets. In essence, it is the change in total net assets (the net of revenues and expenses) for a period to the beginning net assets (the "equity" of the organization) of the period. The large increase in 1996 primarily reflects contributions made in the final year of the last capital campaign, when over $31 million in contributions were made. Returns from our investments have been dramatic over the last two years as the investment market has risen. Because investments are recorded at market valuation on the Statement of Financial Position, these increases are a part of the total change in net assets. While this may have enhanced the return on net assets ratio in the last two years, the normal operating returns are within the 10 to 15 percent range.

Return on Net Assets Ratio

1994–95	1995–96	1996–97	1997–98
11.1%	20.1%	17.0%	15.8%

The **cash income ratio** measures the actual net cash generated from operating activities to the total operating revenues. It is one measure of the liquidity of the institution in terms of the cash generated from operations, not including fundraising activity. From a financial management perspective, it indicates our ability to meet cash needs without reliance on borrowing for day-to-day operations. It would be misleading to conclude from the variation in the ratio in the table below that our cash flow is decreasing. The decrease in this ratio results from significant growth in our operating revenue base (the denominator in the equation) as tuition revenues have risen

annually. In this four-year period, cash from operations has increased annually between $20 million and $25 million.

Cash Income Ratio

1994–95	1995–96	1996–97	1997–98
20.3%	16.4%	18.2%	15.7%

One way an institution's financial operating efficiency can be measured is by the **net income ratio**, which reflects the change in unrestricted net assets for a period against the unrestricted revenues. In essence, this is a reflection of the excess of revenues over expenditures, or the "bottom line" results of operations. The actual ratios over the last four years have generally been on the increase, with the upward spike in 1996–97 caused by an unusually high amount of unrestricted contributions. The excess revenues being generated from operations are being reinvested in capital facility projects or long term strategic needs of the University.

Net Income Ratio

1994–95	1995–96	1996–97	1997–98
14.6%	22.7%	28.8%	23.7%

OPERATING REVENUES

Santa Clara's main source of revenues is tuition less the cost of institutional financial aid. The gross tuition grew from $40.7 million to $113.2 million between 1986–87 and 1997–98. The number of students increased 10 percent in that time period to approximately 6,800 FTE in 1997–98 from slightly less than 6,200 FTE in 1986–87. Tuition rates for undergraduate students have increased over the period from $7,260 in 1986–87 to $16,455 in 1997–98, a compounded annual increase of 7.7 percent. Exhibit V.4.11, showing tuition rates from 1981 to date, reflects the relatively high percentage increases in tuition throughout the 1980s and early 1990s with relatively smaller increases in the more recent years. At the same time, the cost of institutional financial aid increased to $21.8 million in 1997–98 from $8.9 million in 1986–87.

The positioning of the University's tuition in relation to comparable institutions reflects to some extent the quality and value of the educational experience. For undergraduate tuition, this was addressed in 1996 when the Board of Trustees approved the "Tuition and Financial Aid Principles and Guidelines" (Exhibit V.4.10), which stated that the University will attempt to

maintain a competitive position with a carefully selected cohort of private colleges and universities viewed as comparable in quality and for which there are at least 60 cross admissions for the last two years. The competitive pricing strategy stated that Santa Clara would raise its tuition to a level that is 5 percent to 10 percent below the mean for the cohort over a five-year period. To accomplish this, Santa Clara would raise its tuition by approximately 1.5 percent over the anticipated annual increase of the cohort median, with this incremental difference to be reserved for one-time strategic initiatives.

Exhibit V.4.12 shows the results of the tuition pricing strategy to date. It indicates that the positioning of our tuition has not achieved the desired results, primarily due to the unpredictable nature of the cohort group's percentage increase. Even though our tuition was incremented by 1.5 percent above the estimated cohort tuition increase, the group has increased its tuition level in excess of the projections. To address our lack of progress toward this target, a differential tuition plan was adopted for 1999–00 whereby freshmen will pay a higher rate (an increase of 9.5 percent above the 1998–99 rate) than upper division students.

The **operating income ratio** measures the impact of current year activities on the overall financing of the institution's operations. It is the operating revenues generated as a percent of educational and general expenses. The results indicate that the operating revenue sources, primarily tuition, contribute over 90 percent to the operations, with the remaining portion being a combination of contributions, investment income, and gains on investment. The upward movement in this ratio reflects the ability of the University to generate revenues from its primary operations while relying to a lesser degree on other sources not necessarily within our control, such as investment returns.

Operating Income Ratio

1994–95	**1995–96**	**1996–97**	**1997–98**
90.8%	92.4%	91.3%	93.0%

ENDOWMENT INCOME

Total Return on Endowment

The Board of Trustees and the administration have a fiduciary responsibility to preserve financial assets of the University through prudent investment management. In 1987, the

University's endowment assets were managed by one investment manager whose primary focus was in the domestic equity market with no particular focus on market capitalization, industry, or sector. This manager performed respectably when the market was on an upward trend, but the market crash of October 1987 resulted in a substantial loss in endowment value.

Based on this experience, an investment consultant was retained in the early 1990s to assist in designing a strategy that would diversify the endowment investments to fixed income, domestic, and international equities. This strategy was to be achieved by allocating the assets to a mixture of several external investment managers who would produce an overall return greater than the respective indices. Beginning in the 1992–93 fiscal year, the University initiated use of these guidelines with periodic review by the Trustees Investment Committee throughout each year. In September 1992, the Board of Trustees Investment Committee adopted a "Statement of Investment Policies" (Exhibit V.4.13) outlining the new management guidelines and objectives for the Endowment Fund.

Exhibit V.4.14 shows Santa Clara's endowment pool investments performance over the last eleven years in comparison to the entire population of institutions participating in the NACUBO Endowment Study. Annual returns in this study were adjusted for inflation. Santa Clara's performance has exceeded the mean of the participants in the study. On a cumulative basis for the three, five, and ten year comparisons, the University's investments have also outperformed the mean.

Exhibit V.4.15 shows the endowment pool performance by category of investment compared to relevant indices. This reflects the performance of our outside financial managers. Returns are shown on a net of investment fee basis and are not adjusted for inflation as the NACUBO study does. The results show that over the one, three, and five year time horizons, domestic equities have come close to the index, foreign equities have lagged, and fixed income managers have outperformed.

The Investment Committee generally meets once per quarter to discuss the current status of the investments and to make any changes it believes are necessary due to market conditions or manager performance. As the total endowment assets have grown, the Investment Committee has decided to allocate a portion for alternative investments such as venture capital and real estate investment trusts.

Spendable Endowment Income

An important aspect of endowment management is not only the amount of income generated by the endowment, but also the amount of the endowment income that is allowed to be spent under existing policy. The University has adopted a policy of spending 5 percent of the trailing 12 quarters market value of each endowment (Exhibit V.4.13). Spendable income supported by the endowment has more than doubled in the last four years from $5.7 million in 1994–95 to $11.9 million in 1997–98.

Endowment Spendable Income
(in thousands of dollars)

1994–95	**1995–96**	**1996–97**	**1997–98**
$5,659	$5,689	$9,679	$11,906

Income allocated for expenditure that remains unspent at the end of a fiscal year is reviewed for reinvestment back into its respective endowment. Permission to carry unspent funds forward is only granted upon the approval of the President or his designee. This practice helps ensure that unneeded funds are not held in reserve, but rather reinvested to maximize earnings.

GIFTS

One of our strategic goals was to improve alumni, corporate, and foundation fundraising performance to support the University priorities. Over the past several years the Development Office has refined and strengthened the Alumni Reunion Gift Giving program and the Annual Fund telemarketing program. We have increased our major gifts (gifts of $25,000 or more) fundraising staff and have implemented significant changes in our gift processing to improve our stewardship. The Development Office has restructured major gift fundraising to build better collaborative relationships with the deans and the centers of distinction.

In analyzing the results of the last Challenge Campaign, it was evident that the areas for improvement in fundraising were individual giving and support from corporations and foundations. Consequently, a more coordinated fundraising approach has been developed that resulted in a closer working relationship between the Development Office and the office of Alumni Relations, the deans and other University leadership. The fundraising program has become more constituency-focused to better serve the interests of the donor, thereby increasing the potential for a greater number of donors as well as increasing the level of their gifts.[31]

A specific action priority for 1998–99 was to develop a plan for and market test a capital campaign associated with the 150th anniversary of the University. A campaign planning committee was formed with 25 volunteer leaders drawn from alumni, trustees, parents and the corporate sector, to develop that plan and initiate market testing with prospective donors.[32]

Sources of Gifts

A significant source of revenue is contributions from donors. The last major capital campaign ended in December 1995 with $134 million raised compared to a goal of $125 million. While exceeding the campaign goal was a significant achievement, the long-term effects of the campaign were just as important. The Challenge Campaign raised annual giving to the University from a range of $7 to $9 million to $14 to $16 million per year (Exhibit V.4.19). Both the Reunion Gift Program and the telemarketing efforts of the annual and special gifts program played a key role in achieving this increase in annual support. Gifts have been realized from a variety of sources (Exhibit V.4.19). The total dollars have not varied significantly, except in 1995–96 when the campaign ended with some extraordinary gifts. The more important statistic in this exhibit is the change in the number of donors and type of donor. The number of annual donors increased from 13,576 in 1995–96 to 17,916 in 1997–98, an overall increase of more than 4,300 donors, or a 32 percent gain. The Development Office has specifically targeted increases in the donor base of alumni and corporations. In that three-year period, alumni donors increased by 14.2 percent and corporations making gifts almost doubled from 897 to 1,750.

Individual Giving Rates

Annually the Development Office works with alumni, parents, and friends of the University to solicit gifts to support operating expenses and the endowment. The greatest opportunity for growth in our giving is from these individuals. For the last three years the percentage of total gifts coming from individuals has hovered in the 42 to 46 percent range.

Percent of Total Dollar Gifts from Individuals		
1995–96	**1996–97**	**1997–98**
42%	46%	43%

Combined alumni (graduate and undergraduate giving) donor participation has remained in the range of 22 to 24 percent. Alumni participation among undergraduates tends to be increasing, rising from 26 percent participation in 1996–97 to 30 percent in 1997–98. Alumni giving rates have been specifically targeted by the Development Office to increase during the next capital

campaign.

The **contributed income ratio** reflects the percent of contributions that support current year operations as opposed to long-term endowment type gifts. Gifts supporting operating activities vary depending on the mix of donor intent in any given year. In 1997–98 the percentage dropped from the prior two years, reflecting a shift away from gift support for operations. Because total gift revenues have increased in the period, it would also imply that more gifts are being directed toward donor specified activities such as endowment. While contributions are a major component of the overall revenue stream, reliance on this source to support operations can be unpredictable in any given year.

Contributed Income Ratio

1994–95	1995–96	1996–97	1997–98
13.8%	20.1%	24.1%	14.4%

MANAGING FINANCIAL RESOURCES

One of the goals in the *Strategic Plan* is to "manage expenses to support the strategic direction of the University, making every effort to streamline processes, reduce costs, and reallocate funds where appropriate." Specifically, this goal calls for us to focus more of our resources on the main mission of education. The expenditure section of the Statement of Financial Activities (Exhibit V.4.4) shows an increasing dollar amount spent on the IPEDS categories for instruction and academic support. Instructional expenses include faculty salaries and associated costs, and academic support includes such expenses as the libraries and dean's offices. Exhibit V.4.20 shows that the percent of expenditures in instruction in the most recent years compared to 1986–87 has risen. However, as mentioned previously, the data are not totally comparable because of the change in presentation format beginning in 1994–95 with SFAS 116/117.

The last column of the exhibit is probably more indicative of the rise in expenditures between 1995 and 1998, showing that instructional costs have risen 25.2 percent during this period. While other functional categories have risen more in percentage terms, it is important also to look at the total dollar amounts dedicated to each category. Annual instruction expenditures have increased by more than $10 million.

Total expenditures per FTE student have risen over the years as evident in Exhibit V.4.21. It is relevant to examine the trend over the last four years, when total expenditures have risen by 15.5 percent while the student count has risen 6.6 percent.

Another way to examine expenditures other than by the IPEDS categories is to look at the line item categories or "natural expenditures" (e.g., salaries, benefits, departmental expenditures, debt service). Presented in Exhibit V.4.22 are the last three fiscal year actual and three-year forward projections by natural expense categories. This presentation is based to some degree on traditional fund accounting because of the inclusion of debt service and capital expenditures spent from operating funds.

As the exhibit shows, more than half of total expenditures are dedicated to personnel-related compensation and benefits. Financial aid is a combination of institutionally funded, endowment income, and expendable gift expenditures. Included in the budget projections over the last several years and into the future is an annual increase of 9 percent for library acquisitions because we recognize the costs of these materials outpace the inflationary increase of other line items.

Departmental expenditures represent operating costs within departments other than personnel costs. For the past two years, the increase to these costs has been held to between 1 and 3 percent annually, most of which was not allocated to the departments directly, but held centrally at the vice president level. Although not quantifiable, anecdotal evidence suggests that this strategy has forced reallocation and cost saving measures within departments. Of note on the exhibit is the drop in University operating expenses beginning in fiscal 1999, which is due to the outsourcing of the bookstore.

The **educational core service ratio** measures resources allocated to the educational mission as a percent of unrestricted revenues. Educational core expenses include those classified as instruction, research, and public service. While the percentage has held within a range of 40 to 45 percent in recent years, the total dollars for instruction have risen from $40 million in 1994–95 to over $50 million in 1997–98.

Educational Core Service Ratio

1994–95	1995–96	1996–97	1997–98
44.3%	41.2%	39.5%	42.3%

Support of educational activities other than direct instructional related costs is reflected in the **educational support ratio**. Educational support services are those which are ancillary, but directly related to the mission of the organization, such as student services and the library. The University's intent is to target more resources to instruction support with some decrease in several areas including the educational support categories. The ratio reflects some progress towards this goal.

Educational Support Ratio

1994–95	1995–96	1996–97	1997–98
25.8%	24.0%	22.5%	23.0%

The **general support ratio** is institutional support costs in relation to unrestricted revenues. Included in this are operations and maintenance of the physical facilities, administration, and finance support functions. Our goal is to decrease this ratio relative to instructional support. There had been a steady decline in this ratio until 1997–98, when interest cost on the new debt for projects not yet constructed is reflected in the ratio's increase. The University is moving toward the goal of containing costs for institutional support; however, we face increasing pressure to support technology and facility needs.

General Support Ratio

1994–95	1995–96	1996–97	1997–98
20.0%	19.2%	17.3%	19.8%

FUNDING FINANCIAL AID AND ADMISSIONS

Sources of Financial Aid

Financial aid to students is provided by a number of sources including institutional funds, expendable gifts, endowment income, government grants, and loans. According to the "Tuition and Financial Aid Principles and Guidelines" (Exhibit V.4.10), the University has committed to provide institutionally funded aid in the range of 18 to 19 percent of gross tuition. As tuition rates increase, there is potential to increase the level of University-sponsored aid in order to attract a particular number or type of student. This guideline was intended to curb the gradual increase by limiting the percentage from gross tuition but not the total dollars.

Exhibit V.4.23 shows that the percentage of each type of financial aid to gross tuition has remained fairly constant. As tuition rates have increased, the University has not had to increase the institutionally funded percentage portion while maintaining or increasing student quality.

Admissions Costs

The cost to recruit students includes admission offices' staffs, printing information, mailing and processing of applications. There is an office for undergraduate admissions, and each graduate or professional school has its own admissions office. The cost per new student is presented in the following table. The cost to enroll a student has remained relatively consistent throughout the last three years; however, cost for a new initiative to market the University will probably increase the per student recruitment cost in the future.

Admissions Cost per New Student

	1995–96	1996–97	1997–98
Undergraduate	$1,217	$1,191	$1,262
Graduate	$494	$471	$512
Law School	$1,147	$1,095	$1,175

OUTSOURCING

The primary mission of the University is to educate students and to do so in an environment that provides facilities and services conducive to learning. As an educational institution, the University cannot be expected to have the expertise to provide the best and most cost effective services in all areas. Over the years since 1987, the University engaged students, faculty, staff, and outside consultants to gather information to decide whether some services should continue to be provided by the University or outsourced to a third party provider.

In 1996, the food service provider was changed to reflect the changing needs of students and their eating habits. This service was already outsourced, but a new provider was chosen who could bring a new creative approach to food service.

Beginning in the 1998–99 fiscal year, the bookstore and copy service were also outsourced after thorough discussion about the service delivery and cost of internal operations. The student health service was also examined in 1998 with the eventual decision to retain that service in-house, but to reorganize the department more efficiently. Other services have been identified for future examination and possible outsourcing opportunities.

DEBT MANAGEMENT

From its earliest days, the University has incurred debt to finance necessary facilities and operations. The University currently has five major bond indentures outstanding as well as some debt incurred from lease financing of equipment (Exhibit V.4.24). The administration periodically reviews the interest rates of these outstanding bonds against the fixed interest markets for opportunities to refinance at more attractive rates. During the period of the 1980s and 1990s, the bond issues of 1981, 1982, 1985, 1986, 1990, 1991 and 1996 were totally or partially defeased by subsequent bond financings.

The most significant issuance of debt occurred in 1996, totaling $81 million, of which $62 million was new debt. The new funds are being used to construct several major facilities and upgrade the campus infrastructure. The strategy employed to repay this debt is to obtain gifts that will be invested and eventually used to service the debt and provide a reserve for future needs. In April 1999 the University offered another bond issue to take advantage of historically low tax-exempt interest rates. The result of this was a $1.2 million present value savings in debt service, net of all expenses.

The University also has a $5 million line of credit that is available for operating needs. This line of credit has never been used, as our operating cash reserves are sufficient to meet these needs.

While the incurrence of additional debt is not always favorably viewed, the strategic use of debt to leverage assets has allowed the University to provide necessary facilities in a timely manner. The amount of debt service has been designed into the operating budget to provide the cash flow necessary to support the repayment stream into the future.

Working with our underwriters, the University has employed creative methods to structure debt and related payments to allow for additional borrowing without unduly burdening operations. For example, using data on our long-term debt service commitments, the recent bond issue was structured to provide additional funds for construction projects without increasing the annual debt service cash requirements in future years above the current level.

The **debt burden ratio** shows the relationship of debt service to cash expenditures. The University incurred a significant increase in debt during 1997 for the construction of several

major facilities. The associated debt service of this issuance causes the percent of debt burden to increase in 1997–98 and subsequent years. Debt has become more professionally managed since 1987 by using methods that are employed in the commercial field, such as leveraging funds for debt service. This has allowed us to use debt more strategically for the acquisition, construction, or renovation of facilities.

Debt Burden Ratio

1994–95	1995–96	1996–97	1997–98
4.7%	4.2%	5.0%	7.3%

USES OF ENDOWMENT AND GIFTS

As the total endowment value has increased through new gifts and market appreciation, it is also important to identify the categories supported by the endowments. The University has targeted additions to endowments to support specific goals consistent with our strategic direction. Exhibit V.4.17 shows the market value and percent of each major category of endowment over the last four years. The percentages have remained relatively consistent throughout the categories with the exception of a new category, Campus Renewal, which specifically supports new facilities debt and maintenance needs. Endowments supporting unrestricted operations show the largest decline, from 15 percent of the total in 1994–95 to 10 percent in 1997–98. This reflects a trend by donors to target their gifts to support a specific purpose.

Gifts to the University provide support for current operations, capital improvements, and endowment. Current operations includes support for infrastructure, budget relieving areas, and expendable scholarships. Capital improvements, including equipment maintenance and renewal, are another primary use of gifts. Gifts to the endowment are of particular benefit to the University and of great interest to donors. Gifts to the endowment tend to be more significant in amount and are often restricted to particular academic programs.

Use of Gifts

	1995–96	1996–97	1997–98
Current Operations	17.3%	34.2%	23.0%
Capital Projects	19.5%	7.1%	12.4%
Endowment	63.2%	58.7%	64.6%

While gifts to operations and capital help relieve the reliance on other revenues sources (especially tuition income), gifts to the endowment will provide for a more long-term stream of income as the endowment continues to grow. The challenge for Santa Clara is to direct giving in a way that will meet the highest priority needs.

CONSERVING FINANCIAL RESOURCES

ASSETS AND LIABILITIES

The **viability ratio** is a balance sheet calculation reflecting the availability of assets to cover debt obligations. Basically, it is the unrestricted and temporarily restricted net assets less net plant assets over long term debt. The University's ratio at June 30, 1998 was 2.91, an increase over the prior year reflecting a substantial amount of debt incurred in 1997.

Viability Ratio

1994–95	1995–96	1996–97	1997–98
3.28	3.84	2.61	2.91

The **primary reserve ratio** is similar to the viability ratio, but measures the available assets coverage of expenses rather than debt. This ratio is an indication of how long the institution could operate using its expendable reserves without relying on additional net assets generated by operations. An increasing positive ratio means a wider margin of protection against adversity and stronger financial condition. As seen in the following chart, Santa Clara's ratio has increased over the years as the balance sheet net assets have strengthened.

Primary Reserve Ratio

1994–95	1995–96	1996–97	1997–98
1.43	1.75	2.45	2.53

An institution's ability to generate net assets to cover debt obligations can be reflected in the **debt coverage ratio** measuring change in unrestricted net assets plus depreciation and interest over debt service obligations for a period. This is a fundamental ratio examined by the

investment community, including bond rating agencies. Up until 1997, when new bonds were issued, the ratio was growing significantly, reflecting stronger operating results in relation to debt service requirements. The University's current debt coverage ratio of over five times coverage continues to reflect its ability to generate sufficient resources to meet debt obligations.

Debt Coverage Ratio

1994–95	1995–96	1996–97	1997–98
5.6	8.9	9.4	5.4

A measure of the ability of an institution to support debt is the **leverage ratio,** which relates unrestricted and temporarily restricted net assets to total long-term debt. Similar to a debt to equity ratio for commercial entities, it measures the amount of leverage on the institution's assets. A ratio in excess of 2.0 is generally accepted as a threshold below which the institution may have difficulty in meeting its debt obligations. The ratio of 3.5 in 1998 shows an increasing asset base to support borrowing from the dip in 1997 due to the incurrence of new debt.

Leverage Ratio

1994–95	1995–96	1996–97	1997–98
5.1	5.6	2.9	3.5

Value of Physical Plant

An important responsibility of an institution is to provide and maintain a physical plant that complements a positive educational experience. The financial measurement of this can be seen in the increasing value of total plant investments in the following chart. Plans and financing are in place to increase the net assets by approximately $50 million within the next two years.

Net Plant Assets in Thousands

1986–87	1994–95	1995–96	1996–97	1997–98
$114,949	$127,667	$132,339	$145,411	$171,031

Throughout the 1970s and 1980s there was a severe deferred maintenance problem at Santa Clara because there was no consistent program that addressed ongoing maintenance of facilities. In 1995 the Capital Budgeting Task Force (Exhibit V.2.7) recommended a process to support deferred maintenance needs. To address the latter recommendation, the annual budget allocated an amount increasing over three years to equal 2 percent of the plant value to use against the

backlog of maintenance projects. This level has been achieved, and the University is committed to maintaining its support for facilities renewal as new buildings are brought on line.

Endowment and Quasi-Endowment

The endowment is an important component of the financial structure and strength of the institution reflecting those assets invested to support programs on a long-term basis. It will continue to increase in importance as the University relies on perpetual assets to support of operations and new initiatives. The market value of the endowment has grown from $79.8 million as of June 30, 1987 to $346.2 million as of June 30, 1998, an increase of $266.4 million or 338.4 percent. This increase reflects both growth in gifts designated for the endowment and improved investment performance. In the last three years the endowment has grown to more than 50 percent of total assets as compared to slightly more than one third on total assets in 1987.

Endowment Market Value as Percent of Total Assets

1986–87	1994–95	1995–96	1996–97	1997–98
34.9%	49.4%	50.5%	50.3%	54.3%

The endowment market value per FTE student is an indication of the investable assets that are used to support the various academic programs, financial aid, and other activities of the University relative to the size of its student population. An upward trend would also indicate growth in the endowment assets as a result of additions from gifts and good investment performance. As the table below indicates, the University has dramatically increased its endowment value per FTE student between 1986–87 and 1997–98. Exhibit V.4.16 summarizes the ranking of the University relative to institutions participating in the annual NACUBO Endowment Study with regard to endowment value per student.

Endowment Value per Student

1986–87	1994–95	1995–96	1996–97	1997–98
13,700	28,338	34,680	42,733	50,677

Quasi-endowments are those established by the Board of Trustees or the administration as opposed to true endowments established by a donor. In the case of the latter, gifts must be invested in perpetuity, whereas quasi-endowments may be spent if needed. A measure of how well the University conserves its financial assets is the proportion of quasi-endowments the total endowment assets. At the end of fiscal year 1997–98, the percentage of quasi-endowment to the

total endowment value was 35 percent. According to the NACUBO Endowment Study for 1998 for private colleges with similarly sized endowments, the average was 39.3 percent.

INVESTMENT MANAGEMENT

Total Investment Growth

Total investments include not only the endowment assets, but also the operating financial assets that must be invested just as efficiently. The University has experienced substantial growth in its investable assets since 1986–87 as reflected in the following chart.

Investable Assets in Thousands

1986–87	1994–95	1995–96	1996–97	1997–98
$73,767	$206,464	$270,722	$329,357	$386,264

Endowment investments are managed according to the endowment policy mentioned previously. Operating cash investments are managed according to the cyclical cash flow nature of the University. In 1986–87 there was no methodology to invest surplus cash, which was left only in bank accounts. Over the last ten years cash flows have been tracked daily as well as analyzed for immediate and long range cash needs. Excess cash has been fully invested, with maturities scheduled according to the periods of greatest cash need. We utilize a combination of internally managed strategies and outside money managers to diversify the portfolio.

Reinvestment of Investment Returns

The investments generate income that is spent for operations to support various programs, financial aid, and operations; however, a substantial portion of the total return including gains is reinvested as shown on the following chart. This percentage is consistently above 50 percent and is dependent on the amount of the total return that is actually realized.

Reinvestment of Investment Returns

1994–95	1995–96	1996–97	1997–98
55%	63%	54%	60%

It is the University's policy to maximize the returns of all available financial resources by being fully invested with our endowment and operating funds. Any unspent income allocated to endowments according to the spending policy is reinvested so that those endowments benefit from investment compounding.

CONCLUSIONS

The analysis above has provided an indication of Santa Clara's status and progress in responding to the challenge of "generating, managing, and conserving its financial resources to advance its mission and strategic initiatives." Conclusions from that analysis are addressed below as they apply to the five financial goals identified in the *Strategic Plan*.

Develop a comprehensive financial plan which includes the operating budget, a capital budget, accurate fundraising projections, and management of debt and cash flows.

Since the last accreditation visit in 1987, Santa Clara has adopted a much more thorough and comprehensive approach to financial planning. Santa Clara has moved beyond a single-year operating budget toward a financial management approach that involves multi-year strategic thinking to optimize the use of financial resources. Our effectiveness in shifting the approach to financial planning is reflected in data trends and changes in policies and practices.

The performance indicators presented in this analysis reveal that Santa Clara has the financial structure in place to generate, manage, and conserve the financial resources to support its primary mission of educating students. The Statement of Financial Position (Exhibit V.4.3) shows a continual strengthening of the net assets over time, indicating that the net results from operations and net returns from investment activities have been reinvested into the University for future use.

Over the last five years the University has adopted a number of policies and practices that address how management deals with financial decisions. These include policies related to tuition, financial aid, budgeting, endowment, expenditures, and investments. This is an indication of taking an analytical and deliberate approach to establish sound financial policies that guide the business side of the operations. Without these, management of financial resources would be a haphazard affair without the structure of guiding policies.

During this period, the University has increased the level of professional financial management experience on its staff. Many staff have experience in the corporate environment, exposing them to new and innovative management techniques which they have instituted here. Changes in investment management, cash projections, and creative debt structuring are indications of a more sophisticated approach in financial management.

The University strategic action priorities for 1998–00 include a specific item to "present a comprehensive financial plan to the Board of Trustees in February 1999, including revenue, compensation, financial aid, cost containment, resource reallocation, and capital budget strategies." The budget presented to and adopted by the Board at its February meeting was a more comprehensive financial plan than had been presented in earlier years. Tuition and financial aid projections were based on the "Tuition and Financial Aid Principles and Guidelines" adopted in May 1996. The approved increase in salaries and benefits was based on general information about competitive tensions in the marketplace. More detailed benchmark comparisons for both faculty and staff salaries awaits further analysis. Cost containment and resource reallocation consideration in the budget were informed by the recommendations of the Budget Advisory Committee. A multi-year analysis of capital projects and sources of funding was incorporated in the presentation to the Board. While many of the pieces of a comprehensive strategy have been developed, there is still need to weave the pieces together into a more fully integrated plan.

In addition, there is a need to educate managers across the University to employ strategic financial thinking in their immediate and long-range planning decisions. Territorial boundaries must give way to a more global perspective. This could be accomplished through a program of incentives or penalties based on performance, thus giving managers a greater sense of financial accountability.

Of particular challenge to financial and facility resources is the need to manage physical space needs and their associated costs more effectively. While we have completed or have planned our most extensive building campaign ever, new facility needs continue to be generated. We must manage not only the funding of new facilities, but also the ongoing maintenance costs to keep the campus in its current good condition.

Improve fundraising performance to a level at which Santa Clara will rank consistently among the top three comprehensive universities in the country as measured by total gifts and, over time, by alumni participation rates.

Over the past decade fundraising efforts have become more constituency-focused to better serve the interests of donors. Several programs have been instituted, including the Alumni Reunion Gift Giving Program and Annual Fund Telemarketing which have been successful in increasing alumni contact and gift receipts. Closer collaboration between deans, centers of

distinction, and the Alumni Association has improved coordination when approaching donors.

In the early 1980s, a campaign was completed to raise $50 million. In the 1990s another campaign set out to raise $125 million and eventually reached $134 million. Since the last campaign, our Development Office has been staffed to raise $14 to $16 million annually. The upcoming campaign tied to the University's sesquicentennial will be a true test of the efforts of the Development Office as well as the entire University community.

The planning and preparation for the campaign is currently underway with the formation of the planning committee. The overall and specific goals for fundraising during the campaign have yet to be established as competing needs are identified and prioritized. Many prospects have also been identified, some of whom have already expressed significant interest in supporting the campaign.

Develop revenue streams consistent with the strategic direction of the University.

As a private institution, Santa Clara is highly dependent on tuition as its primary revenue source. While the University continues to explore and develop other sources (e.g., fundraising, auxiliary operations, investment income), the educational program has been the focus of efforts to develop new revenue streams. Several programs have been started in recent years to address the needs of the community we serve for educational services including off-site education or varying hours for classes. The College of Arts and Sciences Lifelong Learning Program and the School of Business Executive MBA Program are notable examples. The particular challenge most universities are facing will be those posed by alternative learning organizations such as distance and technology-based learning organizations. As a traditional classroom-based institution, Santa Clara must continue to monitor the impact of such alternative organizations on the general student population to see what needs they are meeting and to see if we can somehow also meet those needs.

Manage expenses to support the strategic direction of the University, making every effort to streamline processes, reduce costs, and reallocate funds where appropriate.

Over the past decade more dollars have been directed toward the educational aspects of the University. There has been a conscientious effort to increase the commitment to more full-time faculty while keeping expenditures in check through reallocation of funds and improvements in operating efficiencies; however, the competing needs across the campus make this a continuous

challenge.

While technology can be an efficient tool in almost all areas from teaching to clerical tasks, its cost in terms of the hardware, software, and training of personnel is increasingly challenging to manage. We must learn to analyze the cost and benefit of introducing new technology and learn to apply its capabilities to tasks in order to become more efficient and cost effective. Training will be a key to increased utilization.

Refine our tuition and financial aid strategy to reflect our market position and enable us to recruit and retain the students we seek while being sensitive to the financial burdens of students and their families.

The "Tuition and Financial Aid Principles and Guidelines" adopted by the Board of Trustees in 1996 set out a multi-year strategy to address the challenge of setting tuition and financial aid. The goals included a method to set our tuition levels at a competitive market level while at the same time being sensitive to the market rates and the financial pressures it places on families. For the 1999–00 academic year, the Board set a differential tuition level which clearly addresses both of these goals by setting a higher tuition level for new freshmen students to reflect our relative market price position and a lower tuition level for returning students reflecting the sensitivity of returning students.

The financial aid part of the principles and guidelines outlines a consistency in the percentage of institutionally funded financial aid to gross tuition. By accomplishing this, we will require additional aid from other sources such as the endowment and fundraising.

The University has done a respectable job in identifying the issues of market positioning and a strategy for setting tuition pricing. In the future, there will be more scrutiny by the government or other agencies that may change the way higher education is priced. We must be aware of these changing factors and be ready to adapt and react in a way that will not adversely affect our academic quality or market positioning.

RECOMMENDATIONS

The preceding sections of this chapter contain conclusions from the examination of the four specific resource areas. Based on that examination, several broad conclusions can be drawn.

Santa Clara, in general, has adequate resources to support its core functions. The University has had success in attracting and retaining quality faculty and staff, is actively pursuing improvements to its physical environment, has begun to deploy technology and information resources to enhance learning and productivity, and operates from a position of considerable financial strength. Looking to the future, it is not as clear that we will be able to sustain the quality of our faculty and staff and state-of-the-art technology or that we have adequate facilities and financial resources to accomplish all we envision.

Our resources, while examined somewhat discretely in this self-study, are highly interrelated and interdependent at both the micro and macro levels. At the micro level, funds expended to address one aspect of a resource area are not then available to address another. For example, increases in faculty and staff salaries, once allocated, are not available for increases in benefits. On the macro level, resources expended to address one type of need are not available to deploy for another. For example, expenditures for technology allow us to secure equipment and software that will enable staff and faculty to do their work more efficiently. Nevertheless, funds expended for technology are not available for later deployment for salaries, buildings, or financial aid in spite of the fact that the acquisition of new technology may significantly impact job skill sets, salary structure, physical facilities, and educational costs. Thus, our responses and plans for the utilization of resources must recognize the connectedness of each of the categories described in this chapter of the self-study.

Santa Clara has made substantial progress toward meeting many of the goals outlined in the *Strategic Plan*. In some cases there is evidence that Santa Clara has met the strategic goals it set. This is particularly true with respect to the physical environment. In areas where the goals have not been met, there is evidence of good faith efforts to address the University's most important priorities. Where the University has not shown much progress toward meeting the goals outlined in the *Strategic Plan*, it is most often because no specific action plan or strategy has been put in place to effect that goal.

Outlined below are recommendations based on the findings of the self-study that Santa Clara should take to improve its effectiveness in developing and focusing resources for excellence.

ALIGNMENT AND INTERDEPENDENCE OF RESOURCES

Recommendation 1: Integrate the planning and management of all University resources within a process that recognizes the interrelationships and interdependence of human resources, technology and information resources, the physical environment, and financial resources

The purpose of this recommendation is to assure that Santa Clara pursues all of its *Strategic Plan* goals in a coordinated and systematic fashion. Our success in accomplishing our goals with finite resources requires that we recognize the interrelationship and interdependence of all those resources.

Too frequently Santa Clara, like most institutions, has made decisions about one resource area without acknowledging or fully understanding the implications for other resources. The University Budget Council and the Budget Advisory Committee are responsible for financial planning, the Facilities Planning Council oversees planning of the physical environment, the Technology Steering Committee has primary responsibility for technology planning, and the Faculty Affairs and Staff Affairs committees have some responsibilities for human resource matters. While these University committees have some overlap in membership, there is no formal mechanism or specific committee whose responsibility it is to examine explicitly the interrelationship of the decisions being made about different resources by the various groups. An important next step for Santa Clara in the evolution of its organizational planning and decision making is to develop an ongoing process that systematically weaves together planning and decision making for all resources. The University Planning Council, in cooperation with the President's Staff, should exercise leadership in ensuring that coordination of planning for resource allocation occurs at every level of the University.

Reflection on our progress during this self-study suggests that we have more work to do in identifying performance measures, setting specific targets toward which we are working, and benchmarking those measures over time against relevant comparators. For example, while we have identified schools with which to benchmark our salary and tuition practices, we have not come to consensus on a comparison group to use as a gauge for judging general decision making about the allocation of resources. In spring 1999 the Budget Advisory Committee initiated a process for identifying a group of benchmark institutions to use for comparative analysis. This preliminary effort of the BAC should be expanded, in cooperation with the University Planning Council, to include the identification of a few key institutional performance indicators with

specific targets. The Planning Council should then work with the appropriate University committees to incorporate comparative analysis, progress against performance measure targets, and identification of best practices elsewhere as tools in the ongoing planning and decision making about the allocation and deployment of resources.

HUMAN RESOURCES

Recommendation 2: Assure that those who exercise leadership responsibilities at every level of the University develop and use the knowledge, skills, and sensitivities needed to effect organizational change in advancing our mission as a Jesuit university.

The challenge articulated in the *Strategic Plan* is to enhance the quality and effectiveness of the University's human resources. This self-study recommendation is intended to underscore the importance of developing the competencies needed to lead and manage a mission-driven organization committed to change.

Recent survey results indicate good alignment of staff with University mission, goals and strategies. Logically, the next step is to focus on assuring efficient allocation and effective deployment of these human assets. As reported, most efforts to date have occurred at the operational level in discrete departments. The most ambitious institutional effort at the division level is the recent reorganization under the Provost, which covers a broad range of complex functions. Nonetheless, its success or failure will play out at discrete operational levels. For example, assuming there is division-wide alignment with the Provost's vision and wide-ranging consensus about plans and processes, results will depend largely upon the quality and effectiveness of daily decisions and directions for implementation at the operations level.

To be successful in such endeavors, managers must be schooled and skilled in the use of managerial competencies needed to effect change. Whether leading people, managing resources or accomplishing tasks, excellent performers exhibit certain competencies much more consistently than average or poor performers. Competencies are observable behaviors that encompass the knowledge, skills, and sensitivities that distinguish excellent work performers in a particular work environment.

To the extent that this University identifies an appropriate set of managerial competencies, develops them within its managers and holds them accountable for demonstrating their consistent use in daily operations, it will be able to accomplish the organizational change called for in the

Strategic Plan.

Recommendation 3: Implement a comprehensive compensation strategy that is affordable within the University's resources, addresses the problem of housing costs, and is sufficiently competitive to recruit and retain excellent faculty and staff.

While competitive compensation is addressed in goal 3.A.4. of the *Strategic Plan*, the plan fails to acknowledge the constraints inherent in the University's resources or the challenge imposed by the extraordinary high cost of housing in the San Francisco Bay Area—two significant and related omissions. A comprehensive compensation strategy must address both, successfully, if the University is to continue recruiting and retaining an excellent faculty and staff. Faculty recruiting has never been more difficult and staff turnover has never been so high. Prospective faculty are refusing to consider relocating to this area and staff are resigning from the University to move to areas that are more affordable. The strength of the economy in Silicon Valley contributes both to pushing housing costs higher than anywhere else in the country and to pricing labor costs beyond the limits of Santa Clara's salary structure. While generally competitive with higher education nationally, Santa Clara salaries and benefits do not compare favorably with the local market. Staff salaries significantly trail the midpoint of the local market, and none of our benefits can compare with Silicon Valley's ubiquitous stock options and profit sharing.

Add to these challenges the fact that Santa Clara's tuition pricing strategy sets a target of 90 to 95 percent of the median of a benchmark cohort of comparable schools and it becomes clear that conflicting goals must be reconciled. If sufficient resources are not available to provide a total compensation strategy that rivals that of the leading comprehensive universities in the nation, the University will not attract excellent faculty and staff. If the University cannot provide ways and means to allow faculty and staff to live comfortably close to work, it will be unable to recruit and retain them. Neither of the housing assistance programs that have been helpful in the past to some faculty are adequate to meet the housing needs of faculty and staff today or in the immediately foreseeable future.

PHYSICAL ENVIRONMENT

No specific recommendations relating to the physical environment emerged from the self-study.

TECHNOLOGY AND INFORMATION RESOURCES

Recommendation 4: Engage more faculty and staff in innovative uses of technology, especially the Internet and Web-based resources, to advance the University's educational and organizational goals.

This recommendation is intended to provide more focus for *Strategic Plan* goal 3.C.2 ("Support training for faculty and staff in the use of technology and information resources to enhance teaching, learning, and scholarship, and to improve productivity and service quality"). The focus of this self-study recommendation is twofold: (a) to increase the number of faculty and staff who use technology in innovative ways, and (b) to give special emphasis to faculty and staff use of the Internet and Web-based resources.

While Santa Clara has made significant progress in incorporating the use of technology on campus, a significant number of faculty and staff do not actively use resources—especially the Internet—that might enhance the effectiveness of their work. It will be important for the University to conduct a careful needs assessment, review best practices elsewhere, design a program to support technological innovation, and provide the resources and incentives necessary to make this program successful.

FINANCIAL RESOURCES

No specific recommendations related to financial resources emerged from the self-study.

QUESTIONS FOR FURTHER STUDY

Some of the questions that require further study and discussion, and on which we would appreciate advice from the WASC visiting team, include:

- How can Santa Clara better integrate the planning and management of all its resources?
- How can Santa Clara develop a comprehensive compensation strategy that adequately addresses the problem of housing costs within the scope of its finite resources?
- What changes in its formal and informal system of rewards and incentives should Santa Clara consider to accomplish its educational and organizational priorities?

- How can Santa Clara avoid the frequently deplored “productivity paradox” in which increased investments in technology do not always result in discernible productivity gains or educational improvements?
- How can Santa Clara organize most effectively to manage technological change and become a leader in the use of technology and information resources?
- What sorts of assumptions should Santa Clara make about new technology, the future of traditional media, and the need for centralized resources as it plans for new Information Services facilities?
- What additional performance indicators would be most useful in evaluating the adequacy of Santa Clara’s resources and their use in support of the University’s mission and goals?