

Standard 1 – Mission, Goals, and Objectives

Introduction and Overview –

The current mission statement of Rensselaer Polytechnic Institute was approved by the Board of Trustees in 1995 and states:

"Rensselaer educates the leaders of tomorrow for technologically based careers. We celebrate discovery and the responsible application of technology to create knowledge and global prosperity."

This mission statement affirms our commitment to both research and education in the spirit of Stephen Van Rensselaer, who founded the Institute in 1824 "for the purpose of instructing persons, who may choose to apply themselves, in the application of science to the common purposes of life."

The most recent interpretation of this mission statement into a set of goals, objectives, actions, and processes is *The Rensselaer Plan*. Development of *The Rensselaer Plan* has involved significant effort and input from many constituencies. The purpose of this section is to review the nature of *The Rensselaer Plan*, the process by which this document was developed, and the ways in which it is interpreted to produce actions. It will also address the ways in which mission, goals, and objectives are communicated throughout the community and how they are modified to reflect changes in the Institute and the world. Finally, it will address how goals and objectives are incorporated into the process for making resource allocation decisions at all levels within the Institute.

Methodology –

The sub-committee that prepared this section had broad representation of faculty and staff from the Schools as well as the Finance Division. Faculty representatives have extensive experience in Faculty Senate. In the preparation of this report we used public information (such as the President's speeches), information that is openly available to the campus community (such as Performance Planning documents), the charter and minutes of the Faculty Senate, and discussions with faculty and staff who are involved in planning.

Discussion/Implications –

Introduction to *The Rensselaer Plan*

Planning and review of our goals and objectives is an ongoing process at Rensselaer. *The Rensselaer Plan* is the most recent interpretation of the mission of Rensselaer. It is also one of our most ambitious and far-reaching recent plans, with the overarching goal:

"To achieve greater prominence in the 21st century as a top-tier world-class technological research university with global reach and global impact."

[Appendix 1 - *The Rensselaer Plan*]

As we succeed in achieving this goal, we will fulfill our mission to educate leaders and create knowledge. Toward this end, *The Rensselaer Plan* states three core tenets:

- Education and research are inextricably linked in world-class universities.
- A research university is a community of learners.
- Research and education drive reputation.

These core beliefs lead us to set a strategic focus in six key areas that build on our distinctive strengths in interdisciplinary inquiry, interactive learning, and technological entrepreneurship. To quote from *The Rensselaer Plan* itself, we will "build on our strengths in interdisciplinary inquiry, interactive learning, and technological entrepreneurship to:

- Enhance national leadership in innovative learning and teaching by providing outstanding and distinctive EDUCATION for resident undergraduates and graduate students, and for working professionals. Educational programs will incorporate interactive pedagogies, provide an engaging student experience, and create lifetime connections with Rensselaer.
- Dramatically expand the RESEARCH ENTERPRISE, including associated graduate education, by (i) creating new Institute-wide initiatives in two research arenas closely aligned with societal and global priorities: *information technology* and *biotechnology*; (ii) building on and enhancing existing core research strengths; and (iii) supporting additional critical priorities in areas that offer opportunities for research leadership.
- Increase SCIENTIFIC AND TECHNOLOGICAL ENTREPRENEURSHIP across education, research, technology commercialization, new venture creation, and regional economic development.
- Achieve true intellectual, geographic, gender, and ethnic DIVERSITY in our students, faculty, and staff in order to draw upon the best talent available, and to prepare our students to work and lead in a global economy.
- Draw vitality from, and add vitality to our diverse COMMUNITIES on campus, among alumni and friends, and in the city, region, state, nation, and around the globe.
- Redesign and invigorate ENABLING ACTIVITIES to focus Rensselaer's people, administrative processes, information infrastructure, physical facilities, and financial resources on the realization of strategic goals."

The Rensselaer Plan thus directly addresses several of the fundamental elements related to mission, goals, and objectives. The first three strategic areas relate to the core academic values of Rensselaer: Excellence in education for undergraduate and graduate students; excellence in core research with development of research in strategic fields; and recognition of the importance of entrepreneurship to the internal and external development of the Institute. The fourth and fifth strategic goals, achieving multifaceted diversity and integrating the academic community into a greatly extended community, enhance and support the first three goals by attracting talent and improving the Rensselaer experience for all community members. The sixth goal helps to provide the means to achieve our fundamental mission. *The Rensselaer Plan* document is widely available to the community and includes detailed discussion of each of the brief

highlights quoted above as well as discussion of the mechanisms for steering the Institute through change.

Development of *The Rensselaer Plan*

The Rensselaer Plan was developed by a broad representation of faculty, staff, and administrators in a process that was initiated by President Shirley Ann Jackson upon her arrival at Rensselaer in July 1999. The development of the Rensselaer Plan is outlined in Chart 1. President Jackson formally announced the development of *the Rensselaer Plan* at her inauguration in September 1999. In October, campus-wide strategic planning began, guided by an initiating document called "Building the Rensselaer Plan" [Appendix 2]. The development process was described to the community by President Jackson in several speeches, and it was summarized by the President for the Rensselaer community in *Rensselaer Magazine* in December 1999 [Appendix 3 - Rensselaer Magazine 1999].

"While The Rensselaer Plan was announced formally at inauguration, you will recall that it was previewed briefly in the September issue of Rensselaer magazine, and campus leadership began initial conversations on the concept in July.

Participation reached a new order of magnitude in October, when we held 22 meetings and workshops, one or more sessions for each academic and administrative unit. These workshops, open to the entire campus community, were designed to elicit answers to a set of "directive questions" that asked each constituent to define core activities, honestly assess leadership status, identify "must do" areas for the future, and make recommendations for change, both by increasing resources to certain programs and by decreasing them to others. A broad group of campus representatives-the Rensselaer Assessment Leadership Committee, or RealCom-was assigned the responsibility of coordinating these campus workshops and synthesizing their results.

Simultaneously, the provost, the vice presidents, and the academic deans each prepared a written assessment of their "portfolios," or areas of responsibility, again guided by the directive questions. "

President Jackson closed her December letter to the community with an invitation to all of Rensselaer's communities to contribute to the refinement of the draft with the phrase "I invite you to 'Have at it.'" This invitation was repeated in several presentations and town meetings over the following months.

The first draft of the Plan was based on the meetings and workshops discussed above by the President, and on assessments from within each of the schools and administrative divisions. Objective external input was solicited through the Washington Advisory Group and the senior vice president for administration at MIT.

The Rensselaer Assessment Leadership Committee (RealCom) coordinated meetings, distilled comments, and led the revision process. The composition, charter, and activities of the Rensselaer Assessment Leadership Committee (RealCom) are described in detail in Appendix 3 [Appendix 4 - RealCom Packet]. In brief, "RealCom" was charged with organizing a series of workshops and town meetings to help define the markers of excellence for the Institute and how each university component (or Portfolio) could

address these markers. The "RealCom" committee was directed by the Provost and included six faculty members; two students; a staff member from each major support portfolio (Student Life, Advancement, Administration, Finance, and Human Resources); and the President's Chief of Staff. "RealCom" produced a summary report [Appendix 4] that reflected information gathered from communication with a large number of faculty, staff, students, alumni, and retirees. The "RealCom" report was made available to the community in February. The revised draft of the Rensselaer Plan was distributed for a month-long structured review to the Faculty Senate, Student Senate, Dean's Council, Rensselaer Alumni Association Board, Key Executives, and the Board of Trustees. As a result of campus feedback, the final document was revised in significant ways and the final draft of *The Rensselaer Plan* was approved by the Board of Trustees in May 2000.

The means for fulfilling and revising *The Rensselaer Plan*: Annual Performance Planning

The Rensselaer Plan also contains a description of the means by which it is to be carried out and revised. President Jackson described the Plan in February 2001 as "an evergreen plan" that would be reviewed and revised on a regular basis. [Appendix 5 - ITSMF Feb 2001]. Functional segments of the Institute, identified as *portfolios*, include: every academic school; academic functions (such as Undergraduate Education, Graduate Education, and Education for Working Professionals; and Vice Presidential Divisions (such as Human Resources, Information Technology Infrastructure and Services, Research, Student Life, Administration, and Finance).

The Performance Planning process is now well established at Rensselaer. Each year, the President's Cabinet develops a broad set of strategic priorities based on consideration of the Plan, progress towards previous goals, and new considerations. Each School develops a set of guidelines for academic departments that reflects the ways in which that School can best contribute to the mission and goals of the Institute [Appendix 6 - Performance Plans for each academic unit]. Performance Plans developed by each portfolio must define the proposed means, schedule, and metrics by which actions will be funded, carried out, and evaluated. Each Institute portfolio spells out in its annual performance plan how that academic school or administrative division will support the accomplishment of the Institute's highest priorities and the full array of goals set forth in *The Rensselaer Plan*. Academic performance plans look three years into the future while support division plans may have a shorter time-line. All Performance Plans are revised annually and reviewed by the President and the President's Cabinet. Performance Plans developed by each portfolio must define the proposed means, schedule, and metrics by which actions will be funded, carried out, and evaluated. The guidelines in Appendix 6 refer to a set of "Institute-wide highest priorities", which derive from the Rensselaer Plan and from previous Performance Planning processes. Therefore, the yearly performance plans are always related to the long-term mission and goals of the Institute. The details of the financial proposal and review processes are discussed in Standard 2 of this report.

Based on Cabinet acceptance of its performance plan and a general set of budgetary guidelines, each portfolio prepares a budget showing how that portfolio will deploy available and requested resources to achieve its performance plan objectives.

In order to accomplish the Performance Planning process a yearly schedule is developed. This process starts in June at the Leadership Retreat and culminates in a new annual budget which is proposed to the Board of Trustees for approval at its meeting in February. During October and November academic portfolio feedback is gathered through crosscutting reviews and from a group of elected representative faculty (Faculty Senate Planning and Resources Committee.) In similar manner, student government input is sought on the Student Life Performance Plan. This process is also designed to involve a series of feedback steps so that proposals are checked against outcomes and resources; congruency of resources and goals within a portfolio and between portfolios leads to effective distribution of resources towards overarching goals. It must be emphasized that this process is also designed to incorporate assessment of progress as well as new considerations.

Inclusion of input from the Rensselaer community and external organizations

The Performance Planning process is the most direct mechanism for evaluating directions and evaluating progress, but there are other important mechanisms for assessing strategic direction and evaluating progress. The Rensselaer Faculty Senate is a representative body that discusses academic issues and makes recommendations to the Provost and the President on key matters of academic governance. Information on activities of the Faculty Senate is included in Appendices 8 and 9 [Appendix 8 - FS Constitution and Appendix 9 - Minutes of the Faculty Senate]. The Faculty Senate also oversees standing and ad-hoc committees that make important recommendations to the administration and that have access to the President and relevant committees of the Board of Trustees. Standing committees include: the Faculty Senate Curriculum Committee, which reviews proposed academic changes; the Faculty Committee on Promotion and Tenure, which reviews relevant faculty appointments; the Planning and Resources Committee, which reviews the resource needs of proposed academic programs; the Elections Committee; and the Faculty Committee on Honors, which makes recommendations to the President on specific Institute honors.

In recent years, members of the Faculty Senate Executive Committee (six elected representatives) have met approximately monthly with the Provost and the President, and at least twice per year with the Chairman of the Board of Trustees. The Faculty Senate is also represented in twice-yearly meetings with the Academic Affairs Committee and with the Finance Committee of the Board of Trustees. Finally, the Faculty Senate hosts at least two general faculty meetings per year. The President is invited to address the Faculty and answers questions from the floor at the Fall meeting. The Provost is invited to address the Faculty and answers questions from the floor at the Spring meeting. Finally, members of the administrative team (Vice-President for Finance, Vice-President for Human Resources, Vice-President for Administration) make regular, typically yearly, presentations to the Faculty Senate. Most bi-weekly Faculty Senate meetings are open to all faculty; occasionally a meeting will be closed due to the sensitive nature of a topic. The minutes of open Faculty Senate meetings are typically posted for the entire community on the Faculty Senate web site within one month of the meeting. Summaries of closed meetings are also made available. [Appendix 9]

Proposals for curricular changes come from departments and schools as well as from the Faculty Senate Curriculum Committee. In recent years, in addition to regularly reviewing proposed course offerings and academic programs, the Faculty Senate Curriculum Committee has developed proposals for a change to plus/minus grading and changes to the common core curriculum. The entire faculty votes on changes that affect the entire campus [Appendix 9 - Minutes of Faculty Senate Meetings 2000-2004] and did so last year on the issues of grading and core curriculum. Both of these issues sparked debate across the campus which in many cases addressed the university mission. Faculty voting is administered by the Faculty Senate Elections Committee.

The students also have several mechanisms by which their voice is heard. The Student Senate is empowered by the Constitution of the Rensselaer Union [Appendix 10 - CRU] to act as a representative body on behalf of the students. The Student Senate meets twice monthly during the academic year. Its mission statement states that the Student Senate will act as a body of change, identify student concerns, address significant student issues, and work together with the Institute and the surrounding community to enhance the Rensselaer experience. As an example, in 2004 the Student Senate ran a number of opinion-gathering sessions with respect to +/- grading that caused modification of the Faculty Senate proposal and informed the faculty vote. The Student Senate organizes a number of standing committees to pursue its mission. Members of the Student Senate make annual presentations to the Academic Affairs Committee of the Board of Trustees.

The Institute has several administrative and support offices whose function is to interact with, and to guide us in our response to, external forces and organizations. Faculty and administration have responsibility for academic and technical interaction with external organizations, but the various administrative offices serve to both enable and mediate such interactions. The Office of the Vice President for Research provides infrastructure and resource support for the development of research programs and projects. The Office serves as a communication pathway between Rensselaer's researchers and industrial, local, state, and national organizations and agencies. It also coordinates major research themes and programs through interdisciplinary research centers. The Vice President for Institute Advancement oversees the offices of Communications, Development and Alumni Relations, and Advancement Strategy, Services, and Infrastructure. The Vice President for Government and Community Relations is the primary liaison between the Institute and the local, state, and federal governments. The Office of Government and Community Relations works with campus constituents to set goals and strategies, and advance the Institute's agenda with elected officials, government agencies, and national, state and regional associations. In addition to the offices above, which report to the President, the Rensselaer Alumni Association serves and represents alumni and the Institute, by engaging and empowering alumni as active and effective partners in the Rensselaer community. The Rensselaer Alumni Association sponsors a wide variety of programs, events, and services designed to meet the needs of the 85,000+ alumni that it represents.

The most recent example of extensive community awareness of Rensselaer's mission and goals is a four-page group of articles in the student newspaper, "the Rensselaer Polytechnic", with the headline "Five years later...The Plan: Evaluating the Rensselaer Plan from then to now." [Appendix 11 - Rensselaer Polytechnic May 4, 2005. These articles address many aspects of *the Rensselaer Plan* from a student's perspective and include interviews with faculty, staff, and administration.

Progress under *The Rensselaer Plan*

The Rensselaer Plan addresses the six key areas described above, in brief: resident undergraduate education, research and graduate education, education for working professionals, scientific and technological entrepreneurship, Rensselaer's communities, and enabling change. Recent evidence that the Institute is fulfilling many of the goals set out in *The Rensselaer Plan* can be found in the President's Annual Report. The 2004 President's Report [Appendix 12 - 2004 President's Report] highlights achievements in diverse research areas, educational community outreach, improvements in support services for students and student life, the addition of 73 new faculty positions, and improvements in the quality of students that Rensselaer attracts. One of the consequences of the new focus on research and the addition of faculty is the increase in external funding for research from \$37 million in 1998 to nearly \$90 million in FY2004.

Rensselaer has achieved significant progress in the renovation and creation of many facilities on campus and in Troy. *The Rensselaer Plan* calls for the improvement of research infrastructure. Significant improvements have been made. The ribbon cutting for the Center for Biotechnology and Interdisciplinary Studies took place in 2004 and construction on the Experimental Media and Performing Arts Center (EMPAC) became the most visible of ongoing major projects to improve academic infrastructure. The College Avenue Parking Garage is an important addition to campus infrastructure that enables faculty, staff, visitors, and students to access the campus more easily. In addition, it will support public access to EMPAC. Student services were relocated under one roof after the renovation of Academy Hall. Other less visible additions to the campus infrastructure include a new electrical sub-station, chiller plant, and boiler plant.

In order to improve graduate education and develop more support for graduate students, the Institute has made significant changes to the rules for graduate students, the *Graduate Tuition and Student Support Policy* [Appendix 12]. New rules involve minimum stipends, tuition support from contracts, cost-sharing, and maximum time for which a student can be a teaching assistant. The new policy was implemented in Spring 2002. In Fall 2002, the Faculty Senate collected information from faculty on the impact of the new policy and made several specific proposals for revision in a letter to the Provost in Spring 2003 [Appendix 13]. Although the graduate policy has evolved, the Administration and the Faculty Senate continue to differ on some issues and discussion is ongoing.

Improvements to resident undergraduate education include growth of the faculty and educational offerings. *The Rensselaer Plan* extends the definition of resident education to include quality of life and community for the students. *The Plan* has thus led to safety improvements, student life projects, and renovations of housing. Sprinkler systems have been installed in all residence halls. Fire alarm systems have been upgraded. Card access systems have been implemented in many dorms and some academic buildings. The shuttle service has been substantially increased. Emergency call boxes and better campus lighting have been installed. Renovation of several residence halls is complete and all residence halls will be renovated. Athletic facilities have been upgraded and significant plans are in place for renovation of older facilities. Construction of new athletic facilities is planned for the East campus.

Improving the quality of life for Rensselaer's resident students also involves supporting the community around Rensselaer. Neighborhood Renewal projects include development of rehab buildings bought through city auction. Forty homebuyer grants have been made to improve and upgrade the area around the Troy campus. "Communiversality" events and support for student and staff community service help connect the university to the residents of Troy. Rensselaer at Hartford is primarily a non-resident graduate campus, but it has addressed the challenges of improving faculty, staff, and student life and effecting "Comuniversality" in the greater Hartford area. Community involvement at Hartford has included fundraising and participation in local charity efforts as well as volunteering for community educational support programs.

In order to accomplish the goals propounded by *The Rensselaer Plan* the Institute recently initiated an historic capital campaign. The public launch of "Renaissance at Rensselaer: The Campaign for Rensselaer" was held in September 2004 with the announcement of a \$1 billion goal. As of March 28, 2005, the campaign has raised \$640 million and includes personal support from 100% of the Rensselaer Board of Trustees and all of the members of the Rensselaer Alumni Association Board. The campaign is scheduled to run through 2008. [Appendix 13]

Strengths-

Rensselaer has actively addressed the definition and focus of our mission and goals, and we have been reinvigorated in the process. Significant reorganization has been undertaken to accomplish these goals and to better use and direct our resources. We have also undertaken to raise new financial resources to fulfill our goals.

Review of the processes by which the Rensselaer Plan was developed and is maintained illuminates our organizational strength. Development of *the Plan* was well-organized and constituency-based. Furthermore, the means by which progress is measured and by which *the Plan* is revised are included in a well-organized yearly process.

Concerns and Recommendations-

The Institute is aggressively moving forward on many fronts, including: undergraduate academic core program changes; resource allocation consistent with *the Rensselaer Plan*; staff and faculty compensation policy; privacy policy; graduate student support and rules; and Intellectual Property policy. Because it takes time to assess and respond to the impact of change, the Faculty Senate has expressed concern with the speed and breadth

of major changes. In addition, there has been a lessening of autonomy at the department and individual faculty level that has led to anxiety and reluctance to accept change. It is therefore extremely important to maintain clear and respectful channels of communication between the Board of Trustees, administration, faculty, staff, students, and alumni. We recommend that special attention be given to opening and improving vertical communication between the deans, department chairs, and individual faculty so that faculty better understand how resources are allocated between and within departments to address priorities.

References

- [Appendix 1] The Rensselaer Plan
- [Appendix 2] Building the Rensselaer Plan
- [Appendix 3] Rensselaer Magazine, December 1999.
- [Appendix 4] RealCom Packet
- [Appendix 5] "Organizational Transformation: Positioning Rensselaer Polytechnic Institute for the 21st Century", Information Technology Senior Management Forum, Dallas, Feb 2001.
- [Appendix 6] Performance Planning Guidelines, Virginia Greeg, 10/4/2004.
- [Appendix 7] 2004 Performance Plans for academic departments
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https://www.rpi.edu/AFS/campus/rpi/rpinfo/public_html/CampusInfo/Plan/performance/science.pdf
- *[Appendix 8] - Faculty Senate Constitution
- [Appendix 9] - Minutes of the Faculty Senate 2000-2004
- *[Appendix 10] - Constitution of the Rensselaer Union
- [Appendix 11] Rensselaer Polytechnic, May 4, 2005
- *[Appendix 12] Graduate Tuition and Student Support Policy
- *[Appendix 13] Faculty Senate Minutes - 22 January 2003
- [Appendix 14] 2004 President's Report
- [Appendix 15] Rensselaer Magazine, Spring 2005