

CONFIDENTIAL

OFFICER PLANNING MARCH 11, 12, 1987

ORGANIZATION TO ACHIEVE COEDUCATION

1. Review planning materials prepared following January Planning (attached).
 - a. Evaluation of progress to date on January to June list. Do we need to make mid-course corrections?
 - b. Review/revise Phase I-II outline of planning goals and activities. Is there anything which is already outdated and in need of revision? What about omissions? Are there significant tasks which are not included here?
2. Organizing for the future.
 - a. We need to identify the major areas in which we wish to undertake specific planning for coeducation and to create an effective administrative organization to lead in achieving these planning goals. As a starting point for discussion I propose the following general organizational structure knowing that this is probably too macro and too simplistic.

UMBRELLA

VISION

ASSIGNING PARTICULAR TASKS
COORDINATION OF PLANNING ACTIVITY
RESOURCE ALLOCATION
OVERALL LEADERSHIP

EDUCATIONAL GOALS AND PROGRAMS

Curriculum
Student Life
CWL
Advising
Athletics
Academic support
Other

COMMUNICATIONS

New national image/visibility
Alumnae
Parents
Prospective students
General public
On Campus
New self-image

Defining and Developing a
coeducational student
experience

Marketing/recruitment

INSTITUTIONAL SUPPORT

FINANCING FACILITIES OTHER RESOURCES
ADVISORY GROUPS/CONSULTANTS

3. Issues in Planning

- a. What are the major goals and issues to be addressed? Order, priorities, time frame?
- b. How shall these best be addressed? What strategies will be most helpful in achieving or implementing?
- c. Who should be involved in particular planning tasks? How and with what specific charge? What other groups that might be affected should be consulted?
- d. What resources are needed?
- e. How will results be monitored/measured?

These may or may or may not be appropriate questions for all aspects of planning. They are suggested here only to provide a starting point. What is clearly needed now is for us to decentralize responsibility for working out both issues and processes by which to move ahead in planning. I hope we can make progress in this during our planning sessions.

Strategic Excellence at WPI

By Jon C. Strauss
President

As I mentioned in the foreword to this report, WPI has never been an organization to rest on its past performance. This characteristic will serve the Institute well in the coming decade of external uncertainties.

I'd like to use this opportunity to expand upon an agenda for moving WPI toward the 21st century, a topic to which I spoke in my inaugural address on May 10, 1986. [For the complete text of Dr. Strauss' address, see the *WPI Journal*, August 1986, page 4.]

This plan is well characterized by the phrase *strategic excellence*. Rather than a set of initiatives developed solely in the office of the president, the elements of strategic excellence have been developed in close collaboration with the faculty, department heads, Institute officers and the trustees.

Briefly stated, the implementation of strategic excellence for the further enhancement of WPI involves an agenda of four integrated actions:

- Identify existing or potential areas of academic strength—particularly faculty *scholarship*—where WPI has a strategic advantage.
- Invest resources selectively in these areas of strength to maximize the overall academic excellence of the Institute.

- Further develop the public's recognition of WPI's excellence.
- Exploit—or *leverage* in the common parlance—this recognition to our best advantage in developing new resources for further enrichment of WPI.

Pursuit of this agenda is subject to three constraints:

1. The college must maintain satisfactory financial performance with appropriate consideration for balanced financial operations and prudent capital budgeting and investment management.
2. The Institute must follow good human resource practices with all members of the WPI community. Faculty and staff, of course, but also students, trustees, alumni, parents and friends of the college must be treated with the dignity which their association with the Institute commands.
3. WPI must give appropriate attention to the traditions and prior obligations of the college—not only to sponsors, donors and alumni, but also to students to whom commitments are made regarding programs of study.

In sum, this agenda constitutes a comprehensive strategy for furthering the strengths of WPI, a strategy that is true to the Institute's tradition of excellence and responsive to the challenges of U.S. society and an international milieu rapidly approaching the 21st century.

In higher education, as in all free enterprise, *excellence* is a fundamental goal of every organization. One unavoidable hurdle on WPI's road to achieving greater distinction is better *recognition* of the Institute's quality. WPI is well known in New England—especially as an undergraduate institution and for the quality of its graduate and applied research programs. Yet enriching the depth and breadth of that recognition—as well as extending it in several graduate and applied research areas—is a key objective for the next decade.

We are convinced that developing and better presenting existing and potential areas of academic and applied strength will lead to the recognition we seek. In turn, an enhanced public response to WPI will increase the value and success of WPI graduates in the multitude of careers they pursue.

Recognition also results in greater willingness by potential sponsors and benefactors to be counted as supporters of the Institute. And, to extend the spiraling effect of this scenario, increased resources will facilitate higher quality in our academic offerings, leading to even greater recognition, resources and scholarly integrity of the college.

Other institutions, certainly, have built themselves on this model—Carnegie-Mellon and Stanford come to mind. These and other quality institutions have capitalized on fundamental strengths central to each school's heritage. Today, with the WPI Plan reaching healthy maturity, the Institute stands poised to enter perhaps its most fruitful era of growth and service to society.

Strategic excellence begins with the recognition that WPI has never and will not now attempt to be all things to all people. Rather, as a private institution, we enjoy the flexibility—together with the fundamental strengths—to identify and build upon selected areas for greatest strategic advantage.

Management Principles Underlying Strategic Excellence

Three management principles guide the practice of strategic excellence at WPI: openness, localness and merit.

Openness. One of the fundamental tenets of academic freedom that forms the foundation of the entire collegiate experience is free and open exchange of ideas and information. Moreover, an institution's faculty is not bound to the college solely through the formal employee-employer relationship.

Professors *are* employees, of course, but to their great credit and for the benefit of the college, it is not uncommon to find also a strong *emotional* attachment between faculty members and the institution and the disciplines they serve. It is an attachment that cannot easily be explained by tenure.

Yet tenure and academic tradition do serve to encourage faculty members to act as academic entrepreneurs. Professors define and teach their own courses measured typically against their own standards. They generate their own support, set their own schedules, recruit their colleagues, and govern their institutions.



Dr. Jon C. Strauss

As a rule, colleges that are dedicated to a management structure that builds upon this foundation are best able to recruit and retain productive and satisfied faculty members—professors who contribute enthusiastically to the attainment of plans they have helped formulate and for which, as a result, they take ownership.

There is a strong correlation between the colleges and universities generally recognized to be of superior quality and those at which the primacy of the faculty is recognized both philosophically and organizationally.

Just as it is a requisite for academic freedom, so is openness a requirement for faculty involvement in the planning and management of the college. If all information, with the possible exception of individual compensations, is open to everyone, can there be conspiracy—or even concern over conspiracy?

Localness. Just as the academic community is open, so is it local. While faculty members are independent entrepreneurs loyal to their disciplines and their institution, in general they tend to steer clear of those who they may consider to flaunt authority.

If decentralized management can work in the for-profit environment, where hierarchical control enjoys a much deeper tradition of respect, then local governance should be a natural in the academic community.

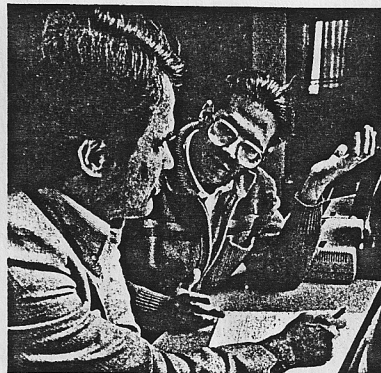
In the most radical view, collegiate governance suggests giving departmental faculties the responsibility for their entire academic operations—planning, developing opportunities, generating resources, and achieving excellence, all in addition to their prescribed obligations for instruction, research and service. Contingent upon their acceptance of these responsibilities, of course, are the authority and the rewards that accompany such a system.

An important benefit of local governance is its simplicity. Because decisions are made by individuals who are in a position to best understand the issues involved (who, incidentally, are often *not* on the top rungs of the hierarchical ladder), problems can be viewed without complicated models or explanations.

In addition, the decision makers know at the outset of responding to a challenge that they will be involved in implementing solutions and will be held accountable for outcomes. As a result, decisions tend to emerge more quickly and prudently, and the faculty can adapt their solutions to ever-changing conditions both on campus and off.



The fermentation laboratory of Dr. Judith E. Miller, standing at left, associate professor of biology and biotechnology.



Dr. Lee A. Becker, at right, assistant professor of computer science, and undergraduate Luke Immes.

priorities and the performance/risk assessments of "competing" local plans. In the final analysis, academia can hardly ignore the principles of financial costs and benefits any more than the most aggressive *Fortune* 500 corporations.

For resource allocation to be effective in an environment of open information and local planning, relative merit must be the guiding principle of the institution's every decision.

Yet there are limits to how much academic decision making can be measured quantitatively. Quality is often subjective, and in the college environment, non-quantitative assessments—of teaching, of research, of the institution's effects on students and society—are often more indicative of merit than such numbers as how many scholarly papers the faculty publishes in a given year.

It is particularly important that we remain open to educational innovation. For by assessing quality based on age-old standards alone, we may tend to overlook or, worse yet, fail to conceive new, innovative standards of academic evaluation, to the detriment of the college and the society we serve.

Merit. Finally, merit enters into the agenda of strategic excellence. Not only must decisions be made and implemented openly and at the most local level of the organization, but also *only* those decisions of greatest merit must be undertaken.

Merit, like openness, plays a time-honored role in the academic community. On merit alone are grades awarded, papers published, research support won, salaries earned, promotions made and tenure granted.

What is more, the faculty is not only comfortable with, but also insists upon, using merit as the only means of determining alternate courses of action.

While the principle of merit certainly applies to local decisions, it is particularly applicable to weighing several possible local alternatives. For even in the most effective decentralized organizations, there must be a core of managers who are responsible for allocating overall resources in accordance with institutional

Implementing Strategic Excellence at WPI

WPI has undertaken a two-staged effort to put into place the concept of strategic excellence: first, bottom-up, strategic planning involving department heads and their faculties; and second, top-down, tactical budget development under the direction of the trustees, executive staff members, and a faculty and student advisory committee.

Strategic Planning. Stage one, strategic planning, encompasses a 10-year time frame. In late-1985, we asked each academic department and each administrative unit to identify and set priorities for five-year goals. Further, each group specified their plans for achieving their objectives.

Of particular importance, however, is the 10-year analysis of both history and plans which we required as part of the effort. It is not enough to say, for example, "We plan to achieve excellence in discipline X." Rather, each unit must measure what becoming excellent means. For academic departments, this would be expressed in terms of academic outcomes including teaching and scholarship. For administrative departments, this would be expressed in terms of services provided.

In addition, we expect that each department will gauge the resources—people and dollars, and from what sources—necessary to achieve its specific goals. Each quantity is specified for the current five-year planning period in the context

of its five-year history. In turn, the resources projected for the first year of the planning period become the budget request for the next academic year. Finally, resource needs for subsequent years help frame plans for institutional fund raising, recruiting and capital budget development.

This planning process includes review of departmental plans by WPI officers to examine their feasibility, consistency and contribution toward Institute goals. In the iterative steps that follow, we will be working with department heads and faculty members to refine their plans and establish priorities in terms of the inevitable competition for available resources.

Tactical Budget Development. Once we have examined what resources are required to implement the first year of the approved five-year plans, then tactical budget development can begin. As part of this activity, additional resource requirements are entered as volume changes into the Institute's three-model budgeting process.

These models include one for proposed changes that are considered so important as to be committed for the approaching year, one for those that are committed and necessary, and one for changes that are committed, necessary and desirable. Alternative assumptions concerning tuition, salary and other income and expense changes are then tested with each of these models to determine a feasible overall solution.



Professor of History John Zeugner

It is important to point out that examining both the relative priorities of the proposed changes and their associated costs is performed in conjunction with the Institute's Budget Committee with representation from faculty, staff and students. We review the budgeting model periodically with the Trustee Committee on Budget and Finance, and the final, approved model serves as the explanation of the budget for the full Board of Trustees and our various constituencies.

At WPI, strategic planning is a direct outcome of the principles of openness and localness, while tactical budgeting derives its strength and flexibility from openness and merit.

Together, the two activities—generating budgetary options and implementing the most cost-effective of these alternatives—gives real-life meaning to strategic excellence.

Results to Date

Initial outcomes of our efforts to link strategy and tactics have been most gratifying. The budget for the fiscal year beginning July 1, 1986, is balanced and accommodates the highest priority initiatives of our academic and administrative units' five-year plans.

In addition, the dedication and enthusiasm of the faculty appears to have brightened considerably this year, due partly, we believe, to its involvement in the planning process.

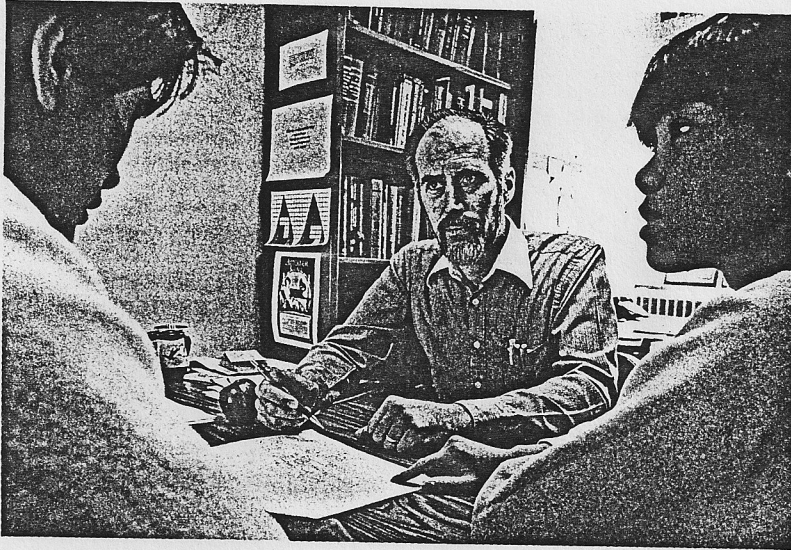
The Future

WPI's five-year planning process is by no means a twice-per-decade endeavor. Every department will repeat the planning effort each year.

In 1986-87, several changes will occur. On the procedural side, each department will submit its quantified plans and histories in a standard machine-readable format to help make analysis and comparison more efficient. In addition, each department will comment on—and justify—discrepancies between its planned outcomes for the year and its results of 1985-86, as well as demonstrate that its plans reflect this track record.

Philosophically, each unit will be called upon to explain and quantify its aspirations—continuing as well as new—in terms of the strategic advantage, or return, which these goals would generate for the required investment and risk.

Then, with the advice of faculty and student representatives, WPI officers and trustees will weigh those alternative plans with due consideration for projected return—their benefits—together with predicted risk and required resources—their costs.



Dr. Dan H. Wolaver, associate professor of electrical engineering and the Board of Trustees Outstanding Teacher for 1986.

Resources to underwrite the plans selected will be allocated from WPI's normal and special income and fund-raising activities. These sources include reallocation of funds from current activities of lower strategic merit.

To facilitate this reallocation, the college is developing a detailed model of income and expense flows. Tuition, gifts, research, scholarships and other income sources will be attributed to the departments that generate these funds.

Expenses will be accounted for similarly and will include not only direct expenses—e.g., salaries, benefits and supplies—but also an allocation of utility and other space-related costs as well as indirect expenses for administration, financial aid, fund raising, student services, and academic support such as library and computing services.

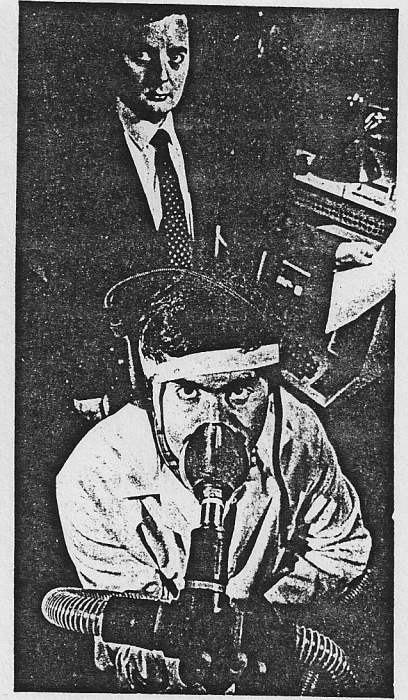
In the aggregate, the financial activities and the Institute's budget will consist of the income-expense "performance" of all revenue-generating departments and programs.

From the model outlined here will emerge a projection of the net costs of the myriad initiatives of the college. We can then normalize these costs on a per-faculty or per-student basis.

Implicitly, the net costs of all activities should be neither zero nor equal. WPI, as do most colleges, charges the same unit price—tuition—for all programs, this is in spite of the simple fact that unit cost for equivalent quality can differ dramatically from discipline to discipline. Fields of study requiring sophisticated laboratories with expensive equipment and lots of one-on-one tutoring will inevitably cost more to operate than the less technological disciplines.

Once net costs are identified and their associated activities are validated as consistent with their strategic importance and performance, WPI officers, in consultation with the faculty, can develop plans to assure that program costs align with program merit. Vital to this "fit" is an appropriate match between strategy and the basic time constraints of the academic environment.

Too often, colleges attempt to reallocate resources during their one-year budgeting framework. Most fail miserably. It's not that the department heads and their faculties can't agree that initiatives should be taken. Rather, they typically argue over whether action can be taken effectively within an assigned time horizon. Commitments to tenure, space, staffing and enrollments generally far exceed the 12-month budget time frame.



Dr. Yitzhak Mendelson, standing, and graduate student Bert Ochs demonstrate a new noninvasive transcutaneous oximeter which they developed.

At WPI, however, the process I've explained here—strategic excellence—is well matched to academic time constraints and opportunities. Once a reallocation objective is determined, its implementation can be phased in over the five-year planning period, making possible progress toward the objectives in each ensuing annual operating budget.

One final, important feature of our strategic-tactical planning and management process: it offers ample opportunity for departments to enhance outcomes, not by disputing the rules of the game, but rather by improving the performance that will lead to greater resources for their own disciplinary interests.

We firmly believe that this framework will provide incentives for individual faculty members and their departments to vastly improve merit so as to justify costs. It is this dynamic system that truly embraces *strategic excellence* at WPI.

CONFIDENTIAL

PLANNING FOR COEDUCATION

JANUARY TO JUNE 1987

General Communication

Mailing
Hot line
Telethons
Press
Campus Dissemination Meetings
Forums
Correspondence (including response to and collating content of letters to PEG/AFE; also, school reps. and perspectives)
Overall Summary of Comment
Activities/views
Communication of final decision

Consultation Groups

Faculty Advisory Committee (HG)
Student Special Coordinating Committee (TRB)
Alumnae Association Board (AWC)
Parents' Council (AWC)

Short-term Study Projects

Athletics (AFE)
Residential Living (AFE)
Creating an early male presence
Visiting Student Academic Programs (HG)
Organizing Special Events (SG-TRB)
Conferences and audience for campus programs
General Facility Review: Phase I needs (HDS)
Legal Review (D.Ashton-AFE)

Planning Projects

Admissions Marketing/Recruitment (GBW)
National visibility and promotion (AWC)
Peer group identification and creation of target quality goals (AFE/HG)
Exploitation of relationships with 12 ex, Brown, Babson
Foundation proposals for exploring "partnership" model (HG)
Development of costs/financing needs and options (HDS)

Other

Great Woods (AWC)
Norton Town Development (AWC)
External Advisory Groups - as needed.

Trustee Activity

April - Special Committee?

Plans

Costs

Admissions/marketing

Responses

Status report

AFE/vnw
January 1987

CONFIDENTIAL

MEMORANDUM

TO: Officers

FROM: Alice F. Emerson

DATE: March 6, 1987

As we come together next week to continue planning for the future, one of our major areas of attention needs to be the goals, strategies, process, and plans for organizing for coeducation. This is something we ought to be addressing this spring and is a task which soon needs to be decentralized. It is my sense that we should come at this by first reviewing again our plans to date and trying to make as full a list as possible of those items we can now imagine we will want to address. Our next step will be to consider how we will develop the appropriate principles, assumptions, and overall strategy for addressing our planning needs. This will surely include both the creation of an appropriate mechanism to undertake planning and implementation activities and to consider how best we ought to be organized or reorganized as an institution to best match our resources with our strategic priorities.

Some of the work which needs to be done in order to accomplish this set of tasks is best done by all of us in a group; other aspects are more expeditiously handled by intensive work in pairs or small sub-groups. With the hope that everyone will remain flexible throughout our two days of planning, I propose the following schedule for our meetings.

Wednesday, March 11, 1987

9:00 a.m. to 12:00 noon	Discussion of attached outline, "Organizing to to Achieve Coeducation".
Lunch	General discussion of topics of mutual interest (not restricted to coeducation).
Afternoon	Special topic meeting: HG/AFE re organization: others??

Thursday, March 12, 1987

10:00 a.m. Discussion of organization/reorganization possibilities.

Strategies and future assignments.

I do not believe we will need nor should we give the whole of Thursday to a discussion of these topics. If possible, I hope we can finish by lunchtime allowing us the afternoon for other activities. Please hold that time open, however, as there are a number of issues pending to which it might be important for us to be able to devote this time.

The location of our meetings on Wednesday will be Don Scott's house including lunch. Thursday we will convene at the Presidents' house. We look forward to having Catherine Conover with us representing Ann Caldwell who will be in Florida during our sessions.

Attached to this memorandum is an outline with a possible plan for our discussion and a few pages from the report of the President of Worcester Polytechnic Institute. I enclose the latter because I think they represent at least one institution's approach to issues of long-range and strategic planning. I also have a very high regard for Jon Strauss who was an outstanding planning officer at both the University of Pennsylvania and Stanford before coming to WPI. If any of you have other examples of institutional planning processes, you wish to circulate to stimulate our thinking, I hope you will do so.

I look forward very much to our being together and to the work we will accomplish.

AFE/vnw

Enclosures