



## Planning our Strategy for a New Century

### Achieving Excellence 1995-2002

In the fall of 1995, the University of Pennsylvania articulated its commitment to become one of the premier research and teaching universities in the nation and the world. With this goal in mind, the University initiated a planning process of which the strategic plan, *Agenda for Excellence*, was the first step, followed by the publication of *Six Academic Priorities*, the diversity priorities and the school strategic plans the following year. Our success in achieving the goals and priorities laid out in these documents was reported in *Almanac* last May:

- Penn's academic rankings have risen;
- Student selectivity has improved;
- Faculty accomplishments and recognition have increased;
- Research funding has dramatically expanded;
- Administrative restructuring has yielded greater efficiency and effectiveness;
- Revitalization of the West Philadelphia community has accelerated; and
- Our fundraising efforts have strengthened considerably.

Yet, with all of this success, we cannot afford to be complacent. We face new challenges and new opportunities—the most important of which are detailed in this plan. We bear an obligation to maintain and renew our existing academic programs and facilities in order to remain attractive and appropriate for the next generation of scholars, students, and professionals. We also, as always, seek to explore those frontiers of knowledge where this institution's faculty and resources can make a tangible difference for generations to come. Fulfillment of these responsibilities requires a continuous and thoughtful dialogue throughout the University, both about our academic and educational agendas and the operational and financial capacities required to achieve them.

### The Process of Planning

In November 2000, the University Trustees met to discuss the development of Penn's next strategic plan. By spring 2001, the Council of Deans, the Academic Planning and Budget Committee, the President's Advisory Group, and the Executive Vice President's senior management team were engaged in a series of discussions to determine the goals and priorities that should be included in the new Strategic Plan. These discussions resulted in a tentative outline for the plan that provided the framework for the next step: the establishment of 14 committees, consisting of over 200 faculty, staff, undergraduate and graduate students from across the University, to focus more substantively on the major areas of the plan. The committees have been hard at work since early in the fall semester. In February, we held an Open Forum to solicit additional suggestions and encourage more input from the University community.

### Refining the Plan

The following draft plan is the result of this extensive and inclusive effort. As you will note, this new plan builds on the *Agenda for Excellence*, but updates it to reflect Penn's current context. As with the *Agenda*, it will also provide a blueprint for preparing revised school plans, a basis for estimating and relating projected costs to the University's financial capabilities and constraints, and a roadmap for the University's future fundraising efforts.

This proposed plan is now presented for comment. We welcome your suggestions and encourage a full review by faculty, students, and staff. We would appreciate receiving your responses by *April 23*. Please send your comments to Linda Koons, Executive Assistant to the Provost, [koons@pobox.upenn.edu](mailto:koons@pobox.upenn.edu).

Judith Rodin, President

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# Building on Excellence: The Next Agenda

## A Strategic Plan for the University of Pennsylvania

April 2002

### Penn's Special Strengths and Future Challenges

#### Introduction

While the term “strategic planning” may sound abstract, in fact the planning process embodies our collective effort to answer a set of fundamental questions: given our historic mission and purposes, what specific goals do we set for ourselves in the years ahead? Penn and the nation’s other great universities play a singular and distinctive role in shaping the future of society, in this country and around the world. Universities are institutions with long histories, whose shared mission entails a complex and continuing act of negotiation between the old and the new, conserving, interpreting, and transmitting mankind’s legacy of intellectual and cultural achievement while at the same time adding to that store by producing and transmitting new knowledge.

Strategic planning is the organized effort we make to examine our aspirations, articulate our goals, identify our strengths and weaknesses, and set our priorities. It does not necessarily involve re-invention, radical change, or right-angle turns: Penn is already a place of immense achievement across a broad horizon. Rather, the planning process offers a periodic opportunity for all of the university’s stakeholders—faculty, students, trustees, administration—to take stock, to challenge and inspire each other, to develop a strategy, and ultimately to choose among diverse objectives. In approaching this task, we are guided and energized not only by the concrete achievements of the past seven years, but also by the rich legacy of our predecessors and the enormous institutional strengths they have bequeathed to us.

From its founding, Penn has chosen a distinct path in higher education, its character in large part shaped by the practical genius of Benjamin Franklin. Franklin called for an institution that would link the theoretical and the applied—or, as he put it, the “ornamental and the useful”—while promoting service to “mankind, country, friends and family.” With its emphasis on the liberal arts and sciences, the curriculum of the early College of Philadelphia differed substantially from that of the other colonial colleges of the time, offering students new fields of study such as modern literature, political science, applied mathematics, history, and physics.

The contemporary University of Pennsylvania is a direct descendant of its colonial forebear. The central role of the liberal arts and sciences is matched by Penn’s many excellent professional and graduate schools, which have helped to shape our modern-day character and global reputation.

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## Building on Our Strength

Penn's historically unique combination of the "ornamental" and the "useful" has helped us achieve our position at the forefront of American and international scholarship, education, and professional life; it also has endowed us with some important assets as we face the challenges ahead. These assets include:

- **Our World-Class Faculty**

In the face of kaleidoscopic change, the core mission of the University of Pennsylvania remains unaltered: to pursue new knowledge through acts of invention, research, and scholarship, and to transmit knowledge through teaching. That mission is embodied in the university's faculty. Penn is especially fortunate to have on its faculty many extraordinary women and men whose talent, achievement, diversity, and dedication constitute the university's chief strength. In virtually every field of study, from chemistry to criminology, from life science to law, Penn's faculty are making fundamental contributions to knowledge. By every available measure, the quality of both our research and teaching has grown in distinction in the recent past.

- **The Diversity of Our People and Ideas**

Penn rejoices in the rich diversity of persons, groups, points of view, academic disciplines, and programs that grace the campus of the nation's first university. Tapping our diversity to strengthen ties across all these boundaries enriches the intellectual climate and creates a more vibrant community. Fostering and nourishing this diversity, especially among students, faculty, staff, and trustees must remain central to the core mission of the University.

- **Our Interdisciplinary Environment**

Having all twelve schools situated on a single compact campus facilitates opportunities to nurture new relationships among faculty and to bring advances in one discipline to bear on problems in many others. Our environment rewards those who can reach between and among departments, schools, and the central university, in order to create new programs and to develop new approaches to important problems. This spirit of entrepreneurship and risk-taking is acknowledged as one of our most distinctive features.

- **Our Urban Context**

Penn is an urban institution, located in the heart of the nation's fifth largest city. Our location is valuable not merely for the cultural riches that Philadelphia offers, but also for the wonderful laboratory it provides for learning, teaching, research, and service. Civic engagement in all its multifaceted forms has become the norm and hallmark of Penn's faculty and students, as it has of the university itself.

- **Our International Scope**

We are also an increasingly international institution. Many of Penn's schools now have active and growing international components—Wharton, Nursing, Medicine, GSFA, and Education among them. Sixteen percent of our student body comes from abroad. More and more Penn students are spending time abroad during the course of their studies.

- **Our Entrepreneurial and Engaged Spirit**

Penn is an especially dynamic place; an institution that has been described as "a bustling collection of entrepreneurs of the mind, finding ingenious ways to stretch slender resources to further ambitiously conceived academic ideas." A singular energy and vibrancy defines our campus. Our students are described as "feisty, intellectually self-confident, risk-takers, independent thinkers, and intellectually engaged," a description that also fits our faculty.

## The Challenges

Franklin's vision of melding intellectual and practical connections with a strong commitment to service provides the framework of what we are today: a great research university, noted for the excellence of our undergraduate experience, our strengths across a wide array of schools and fields, and our ability to foster innovative connections among disciplines, faculty, students, and the larger communities we serve. As we move ahead, preparing to make bold, but careful, long-term investments in the university's future, we need to measure our strengths and resources against a number of significant challenges.

The twenty-first century represents a new world for Penn, and for American higher education generally. Some of the challenges we face reflect long-term trends in technology, communications, transportation, Philadelphia's evolution as a city, and the internal dynamics of various disciplines. Others reflect the realities of a financial and political environment that will be far more challenging than that of the mid-nineties. These are some of the factors that must be considered in charting Penn's course into the next half-decade:

- **Faculty Recruitment and Retention**

Our single greatest challenge will lie in faculty recruitment and retention. Hiring and retaining teacher-scholars of uniform excellence is the prerequisite to all our institutional ambitions.

- **Globalization**

We are a global competitor in the higher education market. This exposes us to risks and opportunities that arise much faster than the slower, more predictable, pace of domestic change.

- **Technology**

Nothing drives the pace of change faster or more unpredictably than the evolution of technology. The next few years will test our capacity to adapt, change, contribute to, and even direct, this technological revolution.

- **Defining Higher Education in the Twenty-First Century**

While the university's mission will remain constant, the methods and practices that guide research and teaching will almost certainly undergo unprecedented change in the decades ahead. Along with technology and globalization, Penn will find itself challenged by the shifting demographics of its students, by serious financial constraints, and by an unpredictable political climate. We will need to apply all of our agility and imagination to meet the demands of the professions and the educational needs of our students in the decades ahead.

- **Regional Economic Development**

Occupying a key economic and geographic position in the fabric of urban Philadelphia means that Penn is a major factor in determining the quality of life and attractiveness of the Delaware Valley region—in turn, a crucial determinant of our ability to attract students and faculty to the region, and especially to West Philadelphia. Finding ways to help Philadelphia renew its regional economy will be one major determinant of our own future success.

- **Financial Capacities and Constraints**

Large investments in Penn's future—first and foremost in academic programs, faculty and students, but also in land, in buildings, in new technologies, in regional development and in preparing for the unpredictable—require financial resources. Unfortunately, we are still seriously under-endowed relative to our peer institutions.

## Challenging Ourselves

Taken together, these considerations have led us to conclude that we will continue to need the breadth of perspective, the engaged practicality, the adaptive flexibility, and the openness to the interdisciplinary that have become the hallmarks of our university. Thus, as we face the world of the twenty-first century, we know that over the next five years Penn must challenge itself to achieve four strategic objectives that form the framework of the following plan:

- I. *Solidify Penn's position as one of the premier research and teaching institutions in the nation and in the world.*
- II. *Build upon our special strengths to develop five selected academic priorities that will differentiate Penn among international research universities of the first rank.*
- III. *Adapt our educational and alumni offerings to the learning needs of current and future generations.*
- IV. *Develop the physical, financial, operational, and entrepreneurial capacities to sustain our academic excellence.*

## Solidifying Penn's Excellence: Strategic Objectives, Goals, and Initiatives 2002-2007

The Strategic Goals and Initiatives that follow build upon the accomplishments of our past, while setting out a new course that meets the challenges of both the present and the future. Achievement of these goals will fulfill the four strategic objectives outlined above and help secure Penn's place as one of the great universities at the forefront of education, research, and scholarship in the twenty-first century.

### I. Academic Excellence

*Solidify Penn's position as one of the premier research and teaching institutions in the nation and in the world.*

Nothing is more essential to the securing of Penn's preeminence than recruiting and retaining a faculty of universal excellence. This excellence, in turn, must be reflected in the undergraduate education we offer, the graduate education we provide in training future generations of faculty, and the research we carry out. The quality of Penn's faculty, research, undergraduate education, and graduate education are the major determinants of our reputation, vitality, attractiveness, and competitiveness.

#### Goal: Build and retain an outstanding faculty.

A major international research university must have as its highest priority the building, strengthening, and retention of a world-class faculty. We must continue to attract and retain outstanding faculty if we are to sustain our position as one of the top universities in the nation and the world. Although many on our faculty are already exceptional, virtually every one of our chosen academic priorities will require strengthening of our faculty in key areas. Competition for top talent will increase in the coming years—not only for junior faculty, but also through the senior professorial ranks—and we must be vigilant in our recruitment and retention initiatives. We must work harder to retain outstanding junior and senior faculty when our competitors come calling—indeed, our goal is to anticipate competitive recruitment before it occurs. We must make effective mentoring of junior and mid-career faculty the norm. Building and retaining a universally outstanding faculty will also require us to address: the tension between specialization and the increasingly interdisciplinary nature of research and teaching; the need to increase the presence and leadership of women and underrepresented minorities on the faculty; the need to integrate new learning technologies into our pedagogy; and the need to recognize the changing demographic profile of the faculty. To meet these challenges will require the strongest possible commitment of resources—both in human effort and in finances—from across the institution.

#### Recommendations

- *Be creative and proactive in retaining our best and brightest faculty at all levels.* We must sustain and reward exceptional Penn faculty with a strong compensation program and with an environment that encourages and nurtures their scholarly growth throughout their careers. Improving our efforts to retain outstanding junior and senior faculty will require better information and a dramatically higher level of cooperation among departments, schools, and the central university administration. Effective mentoring of junior and mid-career faculty, as well as attention to quality-of-work-life issues and responsiveness to the individual needs of senior faculty, will be required. We will need to increase the number of funded endowed professorships and explore options for term chairs for our more junior faculty.
- *Assist schools and departments in identifying outstanding candidates for the faculty, paying particular attention to gender and minority equity, and develop new mechanisms for appropriately enhancing and expanding recruitment efforts in key areas and key populations.* To achieve our ambition to recruit and retain the finest faculty, we will have to expand recruitment networks beyond the usual disciplinary and professional organizations. Deans and department chairs must be enabled to engage in carefully coordinated recruiting efforts. Central mechanisms must be developed that can respond quickly and effectively to special needs and situations.
- *Develop mechanisms to recognize and enhance the roles and contributions of faculty members in the later stages of their careers.* We must systematically initiate long-term planning with senior faculty to help them map out professional development goals. In particular, we should develop creative ways in which senior faculty can be productively engaged in activities relating to the university's core mission, such as the mentoring of junior colleagues.

- *Focus on teaching as well as research in crafting faculty incentives and goals.* Facilities and resources must be provided to train and support faculty in the innovative use of new technologies in their teaching. Outstanding teaching must continue to be recognized in the promotion process.

- *Consider new, more creative and flexible models for the appointment of future faculty, exploring such innovative possibilities as joint faculty appointments with top universities, both locally and abroad. In this spirit, we must find new ways to encourage and facilitate inter-school appointments, teaching, and research.* We should also encourage the use of practice faculty, with the faculty of each school determining whether and how the use of practice faculty advances the educational mission of the school. We should explore new models of faculty activity and scholarly engagement at multiple sites.

**Goal: Sustain excellence in all undergraduate education programs, while building on those unique aspects that differentiate Penn among its peers.**

We are committed to offering a broad undergraduate education in each of our four undergraduate schools. Such an education lays a durable foundation of knowledge, analytical skills, habits of critical thinking, and imagination that are essential to a multi-faceted, satisfying, and productive life. To foster such an educational experience, we must also create the best possible community in which students live and learn and in which mutual tolerance and adherence to the highest standards of academic integrity are principles of paramount importance. We must ensure that all of our students take advantage of the diverse intellectual and cultural resources available to them, both on campus and in the greater Philadelphia region. Our students must be able to create and use new technologies effectively and be prepared to exercise intellectual, creative and organizational leadership in all areas of their lives. Finally, we must provide our students with an education for citizenship, helping them to become knowledgeable about today's society and comfortable engaging the complex moral, political, cultural, and social issues they will face as citizens.

#### Recommendations

- *Improve the integration of the undergraduate educational program across the schools.* A more integrated approach to the undergraduate educational experience will require us to develop common curricular experiences for all our undergraduates that ensures an introduction to broad areas of human knowledge, as well as the development of writing and communication skills, foreign language competency, technological and quantitative proficiency, and exposure to the arts. A Penn undergraduate education should culminate for all students with an integrated academic experience, such as a senior design project, an independent research experience, or the creation of a work of art or business plan. We must develop the financial, technological and human resources necessary to facilitate such student efforts. To achieve our ambitious goals in undergraduate education, we must increase the participation and strengthen the involvement of graduate and professional school faculty in our undergraduate educational programs to ensure that every undergraduate student has access to Penn's best faculty in all of the university's departments and schools.
- *Expand cross-school and cross-disciplinary programs, focusing on differentiating strengths and the development of new signature interdisciplinary programs and tracks—particularly in the strategic academic areas identified in the Agenda for Excellence and this strategic plan.* This might include the development of courses that integrate campus and city cultural institutions within a common curricular experience for all undergraduates, a program that focuses on leadership and society, or new cross-school majors. But first and foremost, expanding such inter- and cross-disciplinary initiatives for undergraduates will require that Penn reduce or eliminate impediments and disincentives to such programs that may be present in our administrative and budgeting systems. It will also require regular curriculum reviews to encourage continuing excellence and commitment to curricular goals, and appropriate academic advising support for students to help them synthesize their multi-faceted academic experiences into a single, integrated whole.
- *Encourage excellence in the innovative use of technology to enhance teaching and learning.* Offering a preeminent undergraduate educational experience in the twenty-first century will require Penn to become a leader

in the application of state-of-the-art technological methods in our educational programs, and the adoption of innovative teaching technologies by the faculty in all aspects of education. We must make educational and “courseweb” software available to all faculties and offer training to both faculty and students in the use of these programs to their best educational advantage. We must also encourage our faculty to develop innovative, cutting-edge courses and instructional methods.

- *Encourage, emphasize, and reward excellence in every aspect of the teaching mission.* We must continue to require evidence of teaching excellence in all decisions to hire and promote faculty. We must also continuously review and improve the methods we use for teaching evaluation and assessment. In order to make available to all faculty the resources that will enable them to enhance their teaching, we should develop a University-wide Teaching and Learning Center.
- *Provide every undergraduate with superb academic and career advising—essential components of an excellent undergraduate education.*
- *Attract and retain students of different origins and cultures.* To ensure diversity in our student body, we must enhance the recruitment of minority and international students to our campus, and ensure that, once here, they find an environment that is supportive and welcoming to all cultures and racial backgrounds. Attracting the best and most diverse students to Penn will require that we improve the resources for financial aid in order to ensure that all students, independent of need, have access to a Penn education.
- *Make substantial investments in the university’s residential, classroom, and extracurricular facilities.* If we are to provide the kind of environment that will make the Penn undergraduate experience the best that it can be, then we must support the further development of the College House System as living-learning communities, paying particular attention to the expansion of the Wheel program, which provides on-site academic advising and mentoring. We must also accelerate the renovations of classrooms and the installation of, and support for, instructional technology. We must consider the establishment of additional hubs to help meet student academic, cultural, and extra-curricular needs. And we must continue to develop facilities and venues that provide sufficient, equitable and attractive athletic and recreational spaces.

#### **Goal: Strengthen the quality and national visibility of graduate Ph.D. education across all of Penn’s schools.**

Penn’s standing as a university of the first rank depends in large part upon its reputation as a center of graduate Ph.D. education and its commitment to train a new generation of scholar-teachers. Many of the leading faculty at premier research universities and colleges are the product of only a handful of institutions, and we will work to continue to be one of those elite institutions. Outstanding faculty demand a vibrant graduate student population as an integral part of their academic environment. The training of graduate students as cutting-edge researchers and teachers is also indispensable both to research and to the undergraduate experience at the university. Sustaining and extending excellence in graduate education requires recognition that graduate education is an essential component of the university’s mission.

#### **Recommendations**

- *Improve the national rankings and visibility of Penn’s graduate programs, while addressing issues of program quality and consistency of education throughout the graduate program.* Penn’s unique graduate group structure for doctoral education has many strengths, but also allows disparities in program quality and in the quality of mentoring graduate students receive. Each of our graduate groups should strive to provide an educational program that is ranked among the top decile in its discipline. We should consider improving central oversight of graduate education to assist with issues of standards and quality control. We should reevaluate current review procedures for graduate groups with the purpose of establishing performance measures that assess these groups on their ability to recruit top students, monitor student progress, achieve timely completion of degree, and place graduates in top positions. We should reduce or eliminate budgeting and administrative issues that constrain interdisciplinary and interschool educational programs, and encourage all graduate groups to include faculty from several departments to the greatest extent possible.
- *Recruit the most competitive and diverse population of graduate students possible in each of our identified graduate programs.* Improving Penn’s ability to attract and nurture the very best graduate students will require that we strengthen every aspect of the graduate academic environment. We must ensure that fellowships, benefits, and support pack-

ages are consistently competitive, and enhanced recruitment tools and resources are available. We must expand support for professional advancement and extraordinary research expenses. We must enhance opportunities for graduate students to refine their research and teaching skills, increase opportunities for them to interact with our undergraduate students, and assist them in independent scholarly activity.

- *Improve the integration of undergraduate and graduate education.* We should facilitate greater graduate and undergraduate student interaction through such venues as the Center for Undergraduate Research and Fellowships, and consider establishing forums where undergraduates can learn about, and learn from, the research achievements of our graduate students.

#### **Goal: Improve the quality, impact, visibility, and translatability of Penn’s academic research and scholarly activity.**

Our standing as a premier scholarly institution is directly related to the quality and vitality of the research of our faculty, just as our aspiration for excellence is dependent on the ability to create and transmit new knowledge. Such efforts help to attract the best students and the most distinguished and productive faculty. They are also a critical determinant in defining our influence on national and international issues, policies, programs, and goals. Penn’s research not only seeks to answer fundamental questions in science, engineering, medicine, the social sciences, the humanities, and the professions, it is also part of the university’s teaching mission, helping to fulfill Franklin’s original vision of a learning community that serves the national purpose. In planning for research at Penn, it is essential to preserve and promote an environment conducive to scholarship, to focus on the quality and impact of our research efforts, to develop ways to make our research excellence more visible to the larger community, and to translate our efforts into the marketplace more effectively.

#### **Recommendations**

- *Assess research impact and quality throughout the institution.* Such an assessment will require the development of appropriate metrics that will allow us to identify areas in which substantial investments will strengthen key university research efforts, to recognize and reward outstanding research accomplishments by our faculty, and to plan effectively for future research initiatives.
- *Continue to improve the infrastructure for the management of research and the control of research risks.* We must invest in our research management infrastructure and in our education and compliance programs to update our staff and investigators continuously in all aspects of their research efforts. Continued improvement in this area may require that we reorganize our central administrative and research support services along domain-specific lines that cut across school and departmental boundaries. We should also consider using a distributive staffing model to facilitate grant management, human subject research and laboratory animal care, and expanding efforts to enhance the professional development of support personnel in all areas of the university providing research support services.
- *Strengthen social science research and develop the appropriate infrastructure for this research at Penn.* Strengthening our social science research activities will require the development of a university-wide mechanism to encourage, support, and coordinate efforts in social science research across the university. This mechanism should help to bring together faculty with common interests and approaches and facilitate all aspects of scholarly activity, including the exchange of ideas, collaborative research, and resource sharing.
- *Improve the efficiency of research administration and work to moderate the operational costs of research and research facilities.* With the availability of more refined cost data, we must now focus on containing and, where possible, moderating the escalating expenses associated with our research enterprise. We should establish equitable guidelines for the recovery of research costs from projects funded through non-federal sources. To the greatest extent possible, automated systems should be developed to streamline and integrate the processes of grant submission and administration, investigator certification, and protocol approval.
- *Strengthen our support for the translation of research advances to the public domain.* As one of the nation’s great research universities, Penn is at the forefront of the generation of new ideas. Consistent with Franklin’s mandate, we must now be more attentive to the extension of those ideas from the laboratory to practical application. Support for the development and commercialization of the intellectual property developed by our faculty should be increased, and the efficiency and effectiveness of our current processes should be assessed and improved.

## II. Academic Priorities

*Build upon our special strengths to develop five selected academic priorities that will differentiate Penn among international research universities of the first rank.*

We must capitalize on our special strengths to define specific and targeted academic opportunities in order to secure and differentiate our position among international research universities of the first rank. In realizing Franklin's vision and the strategic objectives that emerge from it, we have identified five interdisciplinary areas in which we believe Penn is most likely to leverage its historic and contemporary strengths and successfully differentiate itself during the next five years.

### The Urban Community

**Goal: As one of the nation's premier academic institutions, Penn can and should be a nationally recognized leader in urbanism.**

Philadelphia, the nation's fifth largest city, is a microcosm of the challenges facing American cities today. Our location creates many opportunities for model partnerships, analysis of the critical problems confronting cities, and the design and testing of new approaches to urban revitalization.

We already have many strengths in this area. Under the Urban Agenda and the West Philadelphia Initiatives we have established ourselves as a national leader in demonstrating ways urban institutions of higher education can engage with their surrounding communities: by enhancing public spaces, public education, housing, and commercial development. We also have demonstrated a leadership role in our Urban Studies program, one of the strongest of its kind in the nation.

However, while we are known for our work in city and state governance, criminal justice, health policy, education policy and communications and the media, we are not recognized as an institution for public policy research or training despite having numerous research centers, faculty and courses in this area. This is in part due to our long tradition of decentralized, entrepreneurial approaches to urban issues. If we wish to achieve a national reputation in urbanism and public policy, a central organizing mechanism that would provide visibility for these efforts is essential.

The university's commitment to its urban agenda and its concrete actions in West Philadelphia and across the city have set a high standard of achievement. We must now build on these successes by marshalling and enhancing our intellectual resources and extending Penn's impact to the closely related areas of civic engagement, leadership, and public policy.

### Recommendations

- *In order to advance our reputation as a national leader in urban scholarship, we will need to make substantial investments in social science research, focusing in particular on public policy and urban issues, and in developing a supportive academic infrastructure.* Such an effort will require a variety of steps: facilitating a set of strategic faculty hires to catalyze interdisciplinary work on cities and their regions, creating prestigious postgraduate fellowships that will bring experts to the campus who can strengthen our academic and research programs, establishing a graduate group in urban studies that will collaborate with other graduate groups in developing joint doctoral degree programs, and encouraging greater participation of standing faculty in the undergraduate urban studies program by reducing the barriers to their teaching in that program. We need to strengthen and improve the coordination of existing public policy and urban education programs across the campus. We must find a mechanism to facilitate closer collaborations among these programs; find ways to bring together faculty members working on public policy and urban issues from a variety of different perspectives; begin to sponsor joint activities, such as lectures and symposia; and assist faculty in seeking grants to support their research.
- *We should develop a broad urban research program that focuses on the Philadelphia metropolitan area.* Such a program should support a broad range of interdisciplinary research projects, including regular surveys of the population and panel studies of the city's social and economic institutions and such study areas as the city's history, politics, and demography. We should also expand our data sharing and policy analysis partnerships with Philadelphia.
- *We should support and encourage the expansion of the Center for Community Partnerships.* The center is recognized as the model for university-civic engagement. Penn should help fund its core management

and facility costs and support its academically-based community service courses that integrate research, teaching, and service.

- *We should continue to forge academic linkages with the West Philadelphia Initiatives by establishing an independent board of scholars who will have sufficient funding and authority to assure that data and methods for evaluation will meet a standard worthy of Penn and its faculty.*

- *We need to develop a coherent focus for leadership development, encouraging each school and academic program to examine how leadership is taught, and to consider ways in which this topic can appropriately be introduced into the curriculum and other academic activities.* Such an effort would be facilitated by the development of a central database or clearinghouse of information about faculty doing research in or teaching about leadership.

### The Life Sciences

**Goal: Building upon our unique resources, we must seize the opportunity to differentiate ourselves from our peers in the critical and rapidly moving area of life sciences research.**

It is widely acknowledged that the next revolution in the expansion of human knowledge will take place in the life sciences. Many of our peer institutions have recognized this and are making major investments in this area. However, Penn is virtually unique in having a world-class medical school and medical research enterprise, an academic health delivery system, and a natural sciences and engineering academic infrastructure on the same compact campus. The contiguity of these resources provides an opportunity for synergy and innovation that is unsurpassed.

The 1990s witnessed a significant renaissance in the life sciences at Penn, encompassing diverse components of the Schools of Arts and Sciences, Dental Medicine, Veterinary Medicine, Nursing and, most dramatically, Medicine. There was also a highly visible increase in the integration of the life sciences with previously disparate disciplines, from engineering to law, business, ethics, and public policy. In many respects, Penn is ideally suited to meet the challenge of cross-disciplinary research with its self-contained urban campus, the proximity of professional schools and hospitals, the supra-departmental graduate group structure, and the many interdisciplinary centers.

Penn approaches the life sciences initiative with a great deal of strength. But there are challenges to be confronted. First-rate research and educational facilities must be made available throughout the university in order to minimize resource disparities among collaborating departments; opportunities must be created for faculty who transcend traditional departmental identities; there must be ongoing investment in shared equipment resources and core facilities that facilitate the interdisciplinary agenda; and the life sciences research programs in some of the schools must be strengthened through greater attention to leadership and resources.

In surveying the emerging biological landscape, a number of conceptual themes emerge, defining experimental viewpoints that cut across systems, diseases, and disciplines and that represent areas of particular opportunity for Penn.

### Recommendations

- *Genomics and Beyond: The Biological Information Continuum.* What is the information substratum upon which biological systems are built? How can statistical and mathematical models be used to interpolate and extrapolate information to predict biological outcomes? In order to answer these questions Penn will need to strengthen existing efforts in genomics, develop new initiatives in proteomics and other emerging genomic technologies, support genomic-scale biomedical research projects that seek to apply new technologies at all levels, and promote bioinformatics and biocomputational modeling.
- *Formative Processes in Living Systems: Traversing the Life Span.* How does structure take form in biological systems? This fundamental question can be considered for a continuum of biological structures from proteins and chromosomes to cells, to embryos, to adult aging. To answer it, Penn will need to strengthen stem cell biology, promote clinical translation in this area, and strengthen aging research.
- *The Continuum of Structure and Function: Integrative Physiology and Beyond.* How does structure translate into function, and function to behavior? This fundamental question can be addressed in a diversity of biological contexts, such as the study of how pathological interactions between proteins cause disease, or the study of the physical basis of the mind and behavior. Penn will need to strengthen existing efforts in both cognitive neurosciences and systems neuroscience, to nurture the already rich environment of immunological sciences, and to build programs in cardiovascular biology.

- *Advancing the Biology of Tomorrow: Diagnostic and Therapeutic Frontiers.* What are the molecular and cellular bases of complex disease processes, and how can insights into pathogenesis be leveraged for innovating the next generation of diagnostics and therapeutics? Penn must enhance its research capabilities by building on existing strengths in quantitative and integrated biological imaging, structural biology, drug design, gene therapy, cancer biology, infectious diseases, fetal surgery, and transcriptional and RNA disorders.

## Technology Innovation

**Goal: Penn must be a leader in the application of technology, in the development of new technology, and in the technological education of its students.**

We recognize that the physical size of our technology facilities will require us to focus our efforts in selective areas and build on our differentiating strengths. Based on this assumption, we have selected several areas for special development: computer and information science, bioengineering and biotechnology, and nanotechnology.

The boundary between engineering and the life sciences is crumbling, with rapid advances ranging from the engineering of living cells to the development of biomedical devices. In this area Penn enjoys a unique differentiating opportunity, with remarkable strength in life science research and related engineering fields.

The cutting edge of engineering is now at the level of molecules, and the manipulation and organization of nanometer-scale material into technologically useful devices has become a new and rapidly expanding area of interest for the discipline. The future needs of our nation and the world will require innovative approaches to supplying our energy needs while respecting our environment.

The information and computing sciences underlie the technological revolution now underway in academic disciplines ranging from ancient history to medicine. It is imperative that all of our students, no matter what their specific area of focus, are technologically literate, that all of our faculty have access to the newest advances in technology, and that our engineering faculty are at the cutting edge in the development of this field.

## Recommendations

- *We must continue to focus on the development of Computer and Information Sciences within the School of Engineering and Applied Sciences.* Building on recent successes, additional key faculty recruitments must be made, allowing the expansion of educational and research programs that link to and interact with other schools on campus. Special attention must be given to opportunities to develop and support the information-processing infrastructure that will be the common language of tomorrow's life sciences research.
- *Building on our current strengths in bioengineering and in the life sciences and medicine, we should aggressively expand our efforts in the areas of bioengineering and biotechnology.* New facilities will be needed to house new faculty and research programs. Interdisciplinary educational programs at the undergraduate and graduate level must be nurtured and expanded. Strategic hiring in SEAS should focus on enhancing programs that are connected to the Schools of Medicine, Nursing and Arts and Sciences, in such areas as cognitive science, bioinformatics and biotechnology.
- *We must develop an intellectual and physical focus in the new area of nanotechnology that includes improved facilities for research and curricular activities related to nanoscale science.* Our efforts in this burgeoning field must differentiate us from other efforts around the nation, and should focus on the interface between physical and biological systems, drawing on our unique strengths in the life sciences and the proximity of our physical sciences, engineering sciences, and medical sciences.
- *We must maintain our core capabilities in engineering and the physical sciences in order to be at the forefront of technology changes in the critical area of energy and the environment.* Penn has significant strengths in environmental science that provides differentiating opportunities at this interface; these opportunities for both research and curricular innovation should be explored and developed.
- *We should encourage the development of curricular offerings and research efforts that span the twelve schools, their faculties, and their student bodies.* A series of courses should be developed for the general undergraduate population that address technology in society, with the goal of ensuring that all our undergraduates are technologically literate. We

need to encourage all our schools to exploit opportunities for new programs in technology as they arise. We also must expand cooperative efforts between SEAS and other schools to develop unique educational programs at the master's level in biotechnology, information technology, and related fields.

## The Global Opportunity

**Goal: In order to develop a coherent global strategy for the University, we must leverage and enhance our distinctive strengths as an international institution.**

All twelve of Penn's schools and virtually every academic program incorporate a global perspective as part of their curricula, and faculty in a wide variety of disciplines view international issues and comparative approaches as integral to their own research agenda. Indeed, the global dimension of virtually every discipline is becoming increasingly important as technology reduces the natural barriers of time and space, and this trend is likely to continue. In addition, the Penn community includes students, faculty, and staff from many different countries and cultural backgrounds, generating a truly diverse environment in which to live, learn, teach, and work.

However, while the Penn campus abounds in international presence, as well as international study programs, area studies, centers, and institutes, the university receives comparatively little recognition for its academic strengths in global studies, due at least in part to its decentralized academic environment. Moreover, in the absence of central coordination, Penn cannot fully realize the synergies inherent in the existence of so many international programs and resources on one compact campus.

## Recommendations

- *Develop and launch new internationally focused academic programs and initiatives in areas where Penn already enjoys distinct competitive advantages.* We are currently strong in language and area studies and offer strong undergraduate and graduate degree programs in International Studies and Business. New areas of focused development might include international health, international business and finance, and the interdisciplinary study of ethno-political conflict.
- *Strengthen disciplinary and professional academic programs that focus on areas of critical importance to international studies and research, such as comparative politics, strategic studies, the legal aspects of international relations, and communication.* We need to reinforce the global reputation of the university by recruiting and supporting faculty and staff with international expertise in key areas. This goal would build directly upon recent successful efforts to strengthen the Political Science Department, which has recruited a number of outstanding new faculty.
- *Create the infrastructure to develop bolder future international initiatives.* Penn needs a coordinating mechanism, such as an Institute for International Studies, to promote scholarly collaboration among faculty and students who pursue overlapping international interests, facilitate external funding, encourage the recruitment and appointment of faculty dedicated to international studies across disciplinary boundaries, and act as an advocate for advancing the global dimension in education and research across all twelve schools.
- *Encourage the presence of international students and American students with international interests on the Penn campus.* The presence of faculty and staff having international expertise and of strong internationally-focused academic programs will help attract students with global interests, as will the continuing development of international linkages and faculty and student exchange programs. We need to emphasize to a greater extent our international environment in our admissions literature and recruitment programs, identify meeting and social spaces for international groups and programs, and implement co-curricular experiences that provide global, cross-cultural educational experiences for students, such as study tours, student-run conferences and global service learning initiatives.

## Arts, Humanities and Society

**Goal:** In order to capitalize on our academic strengths in the humanities and our unique cultural resources, Penn must build an infrastructure that supports innovative, interdisciplinary cultural programs and curricular development.

Penn is home to a remarkable collection of scholars dedicated to deciphering languages, literatures, and artistic expressions of peoples around the globe. We are also home to a number of premier cultural institutions capable of transmitting humanistic understandings to a broader public. In addition, Philadelphia itself contains outstanding cultural institutions that provide still more opportunities for research, learning, and outreach to a broader public.

Despite these potential strengths, Penn has underutilized its cultural institutions and those of the city, as well as its arts and humanities faculty, in enriching the education of its students and its interactions with the public. This under-utilization is, in part, related to a lack of collaboration between Penn's academic departments and the cultural institutions of both Penn and the city. If implemented, the recommendations here will significantly enhance both the vitality and the visibility of our artistic and cultural activities.

### Recommendations

- *Construct a broad arts and culture curriculum to integrate better the resources of local cultural institutions into an enriched common experience for all undergraduate students.* Under the guidance of the Provost's Council on Arts and Culture, we should integrate our cultural institutions more thoroughly into our educational programs, giving students direct contact with world cultural and artistic expressions.
- *Develop graduate courses that will contribute to the enhancement of our cultural institutions, as well as those of the Philadelphia region.* The Provost's Council on the Arts and Culture should work with schools and departments to encourage proposals for graduate and upper-level undergraduate courses aimed at contributing to the enhancement of Penn's cultural institutions, as well as those of the broader Philadelphia area.
- *Encourage closer ties between academic departments and cultural institutions at Penn, as well as those of the Philadelphia region.* Such efforts could include the improved publicity of events, both on campus and in the Philadelphia community; the development of a Penn Arts and Humanities website; and distribution of a weekly Arts and Humanities calendar of events. We should also share the ongoing interpretation of the arts and humanities by our faculty with a broader public through our cultural institutions. In this way, we will enhance public understanding of the world and knowledge of the ways that the world understands itself.
- *Make possible, through short-term institutes, greater scholarly collaboration between arts and humanities faculty and those in the professional schools around issues of public values and world cultural diversity.* These institutes could form part of an expanded Penn Humanities Forum and would include faculty fellows and graduate students drawn from the arts and humanities and the professional schools. The fellows would be given teaching relief during their tenure at the institute. The institutes themselves would represent rapid responses to emerging opportunities and would be time-limited. Two specific proposals are: an Institute for World Cultures, which would be designed to promote direct engagement among Wharton, SAS, and other schools in the area of languages, cultures, regions, and globalization; and an Institute for Public Values, which would engage in the contemplation of values and ethics, as well as interacting with and debating public intellectuals over key social issues (such as terrorism, cloning, animal rights, genetic modifications of food, or racism).
- *Fund a Visiting Professorship in the Arts and Humanities for one semester per year that would encourage interdisciplinary research and teaching, and foster collaboration with Penn's cultural institutions.* Candidates could be proposed by programs, departments, or cultural institutions, with the professorship awarded competitively through the Provost's Council on Arts and Culture.

## III. The Continuum of Education

*Adapt our educational and alumni offerings to the learning needs of current and future generations.*

As we envision the changing character of higher education in the years ahead, we know that we will need to reach beyond the limited, episodic transactions of past years. We intend to build a lifelong continuum of learning, encompassing current students, alumni, pre-college matriculants, executives, and a wide range of professionals. We will expand the number of constituencies to whom we reach out, and we will enhance the quality of the academic experiences we offer. To do so, we will need to take advantage of the technologies that make distance education possible, and we will have to re-examine structures of academic governance across the university.

**Goal:** Penn should provide a continuum of educational opportunities that engages learners throughout their lives and in various stages of their careers.

Penn should strive to shift its model for intellectual contact between the university and its students from a model of brief, episodic contact to one of continuous and ongoing interaction throughout their careers and their lives. We should examine our role as an educational institution in serving non-traditional learners, and consider expanding our vision of Penn's educational portfolio. The university should enter into a lifelong-learning commitment with all participants in its education programs, both those who have studied in our traditional degree-granting programs, and those who participate in any of our continuing education activities. Increased focus on, and involvement with, our alumni must form a central part of this effort. We should identify basic standards and best practices for all programs across the twelve schools that provide education along the continuum of learning. We should also identify new markets of learners and provide services and facilities that meet their needs.

### Recommendations

- *All students and alumni should expect an intellectually and professionally enriching educational connection to Penn that extends throughout their lifetime.* This initiative will require that we actively pursue new concepts for educational offerings, including new professional master's degree and certificate programs, as well as alumni education and enrichment programs. We will have to consider multiple delivery platforms, such as the Internet, on-line reading groups, travel and on-site study, short on-campus programs, summer campus stays, and individual mentoring. We will also have to cultivate more intensively our pre-matriculated students, already a target audience, to ensure their lifelong connection to Penn.
- *Establish a Provost's Council on the Continuum of Learning that will develop an inventory of existing continuing education projects, develop approaches to integrating and strengthening these programs and their marketing, and identify potential areas of collaboration.*
- *Selectively identify new markets of learners, focusing on those groups that can best take advantage of Penn's unique strength, while also involving our full-time staff and their families as part of our community of learners.* Improvement in this area will require greater support for marketing activities and creative leveraging of existing courses, academic programs, and educational facilities as well as continued support for staff educational programs. We should create a centrally coordinated service to provide market research, planning, and analysis for Continuum of Learning programs. Incentives should be designed that will encourage faculty to teach in innovative and non-traditional formats.
- *Provide better service to non-traditional learners participating in Penn programs by making services available at the times when these students are on campus, such as evenings, weekends, and during the summer.* We should analyze our current academic, residential, and support facilities and develop a plan that optimally utilizes all these facilities by both traditional and non-traditional learners. Our aim is to make Penn an active and vital learning environment throughout the day, week and year.

**Goal:** Encourage the reconnection of our alumni to Penn and one another.

When each student matriculates, Penn enters into a commitment with that student to provide education and enrichment over the course of his or her life. Potentially, our alumni could regard Penn as their enduring "intellectual home." When this happens, alumni become a critical competitive advantage as they communicate the strengths of the university while



advocating our need for resources and support. To achieve this intellectual bond, our relationship with our alumni must go well beyond the traditional focus on volunteer activities and fundraising. Penn must set the standard among peer institutions for facilitating our commitment to a lifetime of education and enrichment for every alumnus. Our Alumni Relations program must be developed to assure that Penn is a special learning community for alumni while also engendering their pride in Penn.

#### **Recommendation**

- *Improve educational programs for and ongoing contact with alumni.* Engaging our alumni in a lifelong educational continuum and creating a stronger intellectual bond between them and Penn will require that we integrate alumni education and academic program planning. We need to showcase the strength of the Penn faculty with educational programming and events stratified by age, geography, interest, ethnicity, and affinity group. We need to partner with other university constituencies to bring targeted programming and events to our global alumni. We should also consider expanding our programs in alumni education and begin to think of alumni as teachers and mentors who can help us enrich the educational experience of our students.

### **IV. Operational Capacity**

*Develop the physical, financial, operational and entrepreneurial capacities to sustain our academic excellence.*

To achieve the academic and programmatic goals outlined in the previous sections, it is critical that Penn's non-academic activities be carried out with administrative professionalism, strategic vision and fiscal responsibility. These values are important not only for their own sake, but also because they serve our academic purposes. Building our institutional capacities by operating efficiently, strategically, and cost-effectively, is essential so that academic research and education can flourish.

#### **Goal: Create a physical environment supportive of the academic and research missions of the university, both on campus and in its surrounding environment.**

The accomplishment of the university's academic mission depends on attracting to Penn an exceedingly talented and highly motivated population of students, faculty, staff, and visitors. Attractive, functional physical facilities are essential to this success, and these physical resources must be woven together with other determinants of the Penn environment—a vibrant cultural hub, varied shopping and dining opportunities, and efficient transportation. The Campus Development Plan, adopted last year, provides a framework for campus improvement and growth in support of the academic mission. It calls for the creation of a campus environment that knits the buildings, walkways, and open spaces together into an attractive, functional urban setting and recommends improvements in classrooms and student residences. During the next five years, we should strive to make substantial, but strategic, progress in implementing this plan.

#### **Recommendations**

- *Preserve and strengthen the core academic buildings at the center of campus life and learning.* We should develop a long-term strategy for improving and renovating older academic buildings in the center of campus. We will need to invest in the capital renewal, rehabilitation, and appropriate adaptive reuse of these existing buildings.
- *Create a coherent identity for the entire campus by extending the quality, character, and amenity of the pedestrian core to the rest of the campus.* We need to consolidate and improve the academic infrastructure within the core and consider the relocation of non-student support and service activities to the periphery. We should also begin to address the disparity that exists in the condition and maintenance of university buildings and classrooms, with a special focus on how best to maintain facilities that are shared by several schools or divisions. We need to move forward with plans for renovating and upgrading student housing on the campus and to explore strategic partnerships with third party developers to build such housing.
- *Create a culture that encourages Penn and the surrounding community to become a more inviting and supportive place within which to live, work, study, and visit.* For example, we should help create a new and improved University City transportation environment in conjunction with SEPTA and neighboring institutions that continues the work already in progress with regard to streetscape improvements, traffic calming, new signals and bicycle lanes. We should better integrate food, retail, and cultural venues and begin to develop a plan for more comprehensive and

varied retail to support our diverse campus constituencies. We also need to sustain the ongoing improvements to Penn's West Philadelphia neighborhood.

- *Develop new programs to encourage the purchase of housing within the University City, the expansion of rental housing, and the provision of temporary accommodations for visiting faculty and scholars.* We must sustain and build upon the progress already achieved through our previous investments in this area. To do so, we need to increase the level of home ownership in University City, identify and then transform—with the help of the public and private sectors—vacant and poorly maintained properties into new apartments and condominiums, and, in partnership with other University City-based institutions and the private sector, further enhance the quality-of-life in University City.

#### **Goal: Build and enhance the university's financial capacities.**

Because the short-term outlook for revenue growth and enhancements is limited, Penn's financial capacities will be enhanced largely through the efficient use of current resources. Support for targeted priorities will need to be generated by redirecting investment of our current resources to a specific set of priorities.

#### **Recommendations**

- *Undertake a comprehensive assessment of Responsibility Center Management budgeting to ensure that the principles, process, and formulas that drive resource allocation at Penn continue to serve the university's strategic needs.* Several of the strategic planning committees have identified institutional goals they believe are being impeded by our current responsibility center budgeting system. Given the significant period of time that has elapsed since this system's initial implementation, we believe it is time to review all facets of this budgeting model and, where necessary and appropriate, make changes that will increase its responsiveness to the university's current requirements.
- *Implement new strategies for revenue generation and asset maximization.* In addition to aggressively controlling costs and, where appropriate, reducing expenses, we need to identify and pursue suitable opportunities that will help to increase the university's revenues. One possible opportunity is to leverage our existing assets in off-cycle times, particularly during the summer, identifying appropriate ways in which our facilities and other resources could be made available to meet external market demands.
- *Continue to develop strong internal control and compliance mechanisms.* We need to further enhance and build upon our existing framework for control and compliance, to ensure that the gains achieved in recent years are not lost.

#### **Goal: Enhance the university's operational capacities.**

Reprioritizing work, eliminating unnecessary tasks, and significantly increasing the skill base of staff are a few measures that can be taken to improve our overall efficiency and effectiveness within schools and centers. Such efforts should help to provide funds needed for academic programs and goals.

#### **Recommendations**

- *Further leverage the shared services model for existing central services and eliminate redundancies between the center and the schools.* Wherever possible, we must identify services that are currently being provided in an inefficient and needlessly redundant fashion so that any underlying resources can be recaptured and directed to support other institutional needs and programs.
- *Establish a priority-setting body to determine what information technology priorities will be developed with existing resources.* Given the ever evolving nature of information technology systems and their escalating costs, we must establish a system for prioritizing such demands to ensure that our investments address the most compelling needs and generate the maximum returns.
- *Make the career and professional development of staff a top priority.* We can achieve this goal in part by continuing to link performance appraisals with merit pay increases, but we must also commit to building depth and strength in key operational areas.
- *Develop incentive plans for cost containment, and establish targets with stated rewards.* In addition to identifying possible new revenue streams, we must also focus our efforts on achieving appropriate expense reductions and making our service delivery systems more efficient.

**Goal: Encourage and support entrepreneurial activity.**

Penn routinely generates innovative opportunities that have the potential to enhance both institutional reputation and revenue. Some are entrepreneurial opportunities that create the potential to generate new businesses around faculty research discoveries. A much larger number are innovative opportunities that can be pursued as new programs or services or by licensing technology to a company. Significant gains from innovation can be attained only if we create a climate that encourages and rewards individuals and departments pursuing these opportunities.

**Recommendations**

- *Engage in a long-term effort to create an institutional culture that encourages the creation and support for innovative initiatives.* We must infuse throughout our institution an appreciation for creative thinking and innovation that can help us to enhance our processes and systems, improve the quality of our internal services, and identify possible new sources of revenue.
- *Examine and optimize the university's policies relating to patenting and licensing, to ensure that the entities responsible for facilitating technology transfer are well organized, efficiently run, and adequately resourced.*

- *Improve our ability to identify and support new entrepreneurial initiatives in the social sciences, humanities, and administrative areas.* Where possible, we should use existing staff in schools and centers as agents to identify entrepreneurial opportunities, with efforts then supported by a central organization that provides overall administrative and financial support (patterned after the Center for Technology Transfer's distributed staffing model for the life and physical sciences).

- *Improve our success in launching new initiatives by identifying a resource pool to fund feasibility analyses, proof of concept work, and start-up support for new initiatives.* Such a resource pool would not be a venture fund; rather it would help Penn projects compete more effectively for pre-seed and seed stage venture capital. The resource pool would provide all of the funding to make an initial assessment of the feasibility of an opportunity. Subsequently, resources would be provided by both the pool and the school, center, or institute from which the opportunity originates.

- *Provide meaningful incentives for innovations that fall outside the patent policy, with a particular focus on the social sciences, humanities, educational ventures, and administrative services.* This broader policy should be patterned after the patent policy, but should consider a different revenue sharing model that enables reinvestment in improving shared infrastructure and replenishing the resource pool.

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The earlier reports were:

*Agenda for Excellence, 1995-2000* (Almanac May 1, 2001);

*Agenda for Excellence:  
The Strategic Plans of the Schools*  
(Almanac Supplement January 21, 1997);

*Six University Academic Priorities*  
(Almanac Supplement September 24, 1996);

*The Agenda for Excellence*  
(Almanac Supplement November 21, 1995).

Comment on *Building on Excellence: The Next Agenda* may be sent via e-mail  
by April 23, 2002 to [koons@pobox.upenn.edu](mailto:koons@pobox.upenn.edu).