OF RECORD

Building On Excellence:
The Leadership Agenda
A Strategic Plan for the University of Pennsylvania
2003

The following strategic plan is the result of an extensive effort that began more than two years ago at a retreat of the University Trustees, followed by a series of discussions with the Council of Deans, the Academic Planning and Budget Committee, the President’s Advisory Group, and the executive vice president’s senior management team concerning the goals and priorities that should be included in the new plan. These discussions resulted in a tentative outline that provided the framework for the next step: the establishment of 14 committees, consisting of over 200 faculty, staff, and undergraduate and graduate students from across the university, who spent the fall semester of 2001 developing the major areas of the plan. The following February, an open forum was held to solicit additional suggestions and encourage more input from the university community. On April 2, 2002 a draft plan was published for comment in *Almanac* and many of the suggestions received were subsequently incorporated in the plan that appears here. 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 provides a blueprint for school and resource center 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. We look forward to working with the deans and directors of each school and resource center and all members of the university community in realizing the aspirations and goals articulated below.

—Judith Rodin, President
—Robert Barchi, Provost
—Clifford Stanley, Executive Vice President

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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 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 several 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 its modern-day character and global reputation.
Building on Our Strength

Penn’s historically unique combination of the “ornamental” and the “useful” has helped us to 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 a 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 of these boundaries enhances 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, the Graduate School of Fine Arts (recently renamed the School of Design), and Education among them. Sixteen percent of our student body and fifty percent of our postdoctoral scholars come 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 its undergraduate experience, its strengths across a wide array of schools and fields, and its ability to foster innovative connections among disciplines, faculty, students, and the larger human 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 dynamic 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. Increasingly, the strength of a Penn education will depend to a significant extent on our ability to make international competence a major priority, both for our faculty and our students.

• 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. 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, faculty, and staff 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 many of our peer institutions. Our success will require effective marshalling of our available resources, active fundraising for new resources, and efficient operation of our infrastructure.

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 interdisciplinarity 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. Enhance our academic excellence and 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 pedagogical methods and our student 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 enterprise.
Solidifying Penn’s Excellence:
Strategic Objectives, Goals, and Initiatives

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 to 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

Enhance our academic excellence and 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 and professional education we provide in training future generations of faculty and practitioners, and the research we carry out. The quality of Penn’s faculty, research, undergraduate education, and graduate and professional training 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 efforts. We must work harder to retain outstanding junior and senior faculty when our competitors call; 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; to increase the presence and leadership of women and underrepresented minorities on the faculty; to integrate new learning technologies into our pedagogy; and 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. To sustain and reward an 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 a 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 colleagues.
- 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 will need 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 in each of our four undergraduate schools a broad education that 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.

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 ensure 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 integrating 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 curricular reviews to encourage continuing excellence and commitment to curricular goals.
- 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. Appropriate academic advising support is particularly important for students involved in cross-school, cross-disciplinary programs, helping them to synthesize their multi-faceted academic experiences into a single, integrated whole.
- 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, extracurricular and student support facilities and services. 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 extracurricular needs. We must continue to invest in a wide range of student support services 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. Outstanding faculty demand a talented 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 quality and visibility of Penn’s graduate programs, while addressing issues of 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 programs 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 programs with the purpose of establishing performance measures that assess these programs 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 interdisciplinarity 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 packages 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 interaction between graduate and undergraduate students through such venues as the Center for Undergraduate Research and Fellowships and the Graduate Student Center, and consider establishing forums where graduate students can assist in mentoring undergraduates and where undergraduates can learn about, and learn from, the research achievements of our graduate students.
- Sustain and extend efforts to provide training and support for postdoctoral scholars. In recent years we have made a major effort to develop a robust program for postdoctoral scholars, who constitute a critical component of our research enterprise. As with graduate students, we need to enhance our postdoctoral training programs, providing opportunities for our postdoctoral scholars to refine their teaching and research skills, to interact with our undergraduate students, and to assist them in independent scholarly and research activity. We will continue to make professional development opportunities for our postdoctoral scholars a priority throughout the university, with integrated support, training and placement services.

Goal: Sustain and enhance the excellence of Penn’s professional schools.

Penn has long been recognized for its professional schools. Ten of our twelve schools consider themselves to be professional and they are a major source of our worldwide reputation for excellence. The professional schools make a major contribution to Penn’s individuality and flavor; they also play an important role in cross-school and cross-disciplinary teaching and research efforts. Most important, however, are their roles in training outstanding practitioners, educating excellent teachers who can pass on the discipline of the profession to others, expanding the knowledge on which the professions are based, and providing leadership both within the professions and in the communities in which they practice.

Recommendations
- Continue to support those professional schools that have achieved national excellence while encouraging schools not currently ranked among the top ten to develop programs of excellence that build on the university’s strengths. Such an effort may require schools to forge effective partnerships with other programs within the university, to develop mechanisms for continuous innovation, and to carefully identify and nurture areas in which they can excel.
- Increase the involvement of professional school faculty in the broader educational programs of the University. Perhaps Penn’s greatest strength is its ability to integrate theory and practice. We need to foster and support new curricular and research linkages among our professional schools and between our professional programs and the undergraduate and graduate programs in the arts and sciences. We must encourage our professional schools to explore and develop new cross-school courses, to experiment with coordinated teaching of subjects common to several professional curricula, and to consider more extensive involvement of professional school faculty in undergraduate education.
- Encourage our professional schools to produce strong leaders who can change the practice of their profession by their generation and dissemination of knowledge and through their ability to work with, and lead, diverse peoples and institutions. Penn educates leaders in the professions, individuals who not only excel in the practical application of professional knowledge, but also define the changing nature of professional practice in the future. Our students should develop a cross-disciplinary focus, broad international knowledge and experience, and the ability to work strategically. They should also include organizations and disciplines that focus on the changing social and cultural environment, ethical issues, and on stronger interpersonal and management skills. We must foster the attributes and knowledge that will enable our graduates to better understand and deal with the rapidly changing world around them.
- Step up efforts to recruit the most competitive and diverse students possible in each of our professional schools. For some schools, this will require a greater effort to increase the presence of minority students; for others, to achieve gender balance. These efforts will require increased financial support and the creation of innovative ways to fund a student’s education. Our professional schools must provide a collegial and supportive environment for learning, establishing more formal mentoring programs and opportunities for students to interact with graduate and professional students and faculty outside of the classroom.

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 postdoctoral scholars 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 more effectively translate our efforts into the marketplace.

**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.** Our central administrative and research services should be organized to provide optimal technical support regarding requirements of research sponsors, compliance with regulations of Federal and other governmental agencies, and efficient fiscal management, and to ensure mitigation of institutional risk. 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. In all areas of the university, we will work to enhance the training, supervision, accreditation, and professional development of personnel who provide research support services. We must establish equitable guidelines for the recovery of research costs from projects funded through non-federal sources. Finally, all schools of the university, individually and collectively, should provide domain-specific support to encourage their faculty to seek extramural research support and to enhance the development of research proposals.

- **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 efforts, and resource sharing.

- **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 enhanced, and the efficiency and effectiveness of our current processes should be assessed and improved.

**II. Academic Priorities: Capitalizing On Differentiating Strengths**

**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 eight 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 much strength in this area. Under the Urban Agenda and the West Philadelphia Initiatives we have already established ourselves as a national leader in demonstrating ways urban institutions of higher education can engage with their surrounding communities by enhancing urban 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 programs 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 and cultural 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, Penn must make substantial investments in social science research, focusing in particular on public policy and urban issues, and in developing a supportive departmental 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 postdoctoral 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.

- **Position Penn as the premier academic resource for comprehensive information on our cities, their infrastructure, social and logistical support networks, and their demographics.** We must exploit Penn’s growing preeminence with geographical information systems to lead the way in the application of this transformative technology to the problems of the nation’s cities.

- **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, such study areas as the city’s history, politics, and demography, as well as community-based research. We should also expand our data sharing and policy analysis partnerships with Philadelphia.

- **Support and encourage the expansion of the Center for Community Partnerships.** Recognized as a national model for university-civic engagement, the center should be a priority for endowment of its core management and facility costs and its academically based community service courses that integrate research, teaching, and service. Collaboration with Penn arts and culture institutions in the development of model cultural outreach programs serving the community should be developed.

- **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.**

**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 is taking place in the life sciences. Many of our peer institutions are already making major investments in this area. Yet 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 proximity of our professional schools and hospitals, our uni-
versity-wide graduate group structure and our many interdisciplinary centers make Penn an ideal place to meet the challenges of cross-disciplinary research. 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 within previously disparate disciplines, from engineering to law, business, ethics, and public policy.

Thus 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 accommodate 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 will be critical for a continued biology of genomes, proteins and chromosomes to cells, to embryos, to adult aging. To answer it, Penn will need to strengthen stem cell biology and 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 neuroscience 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 biosensor 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**

- **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 recruitment 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, 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 both undergraduate and graduate levels must be nurtured and expanded. Strategic hiring in SEAS should focus on enhancing programs that are connected to the School of Medicine, the School of Nursing, and the School of Arts and Sciences in such areas as cognitive science, bioinformatics and biotechnology.

- **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 will need to create the special physical facilities that are critical to the development of this new area of technology.

- **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.

- **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 insuring 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 such international presence, as well as in 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.

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Recommendations

• Develop and launch new internationally focused academic programs and initiatives in areas where Penn already enjoys distinct competitive advantages. Penn has traditionally been strong in language and area studies and offers undergraduate and graduate degree programs in International Studies and Business that are internationally recognized. New areas of focused development might include international health, especially infectious disease research in third world countries; 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 focused on international expertise and cultural. This goal will be 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 among students with international interests on the Penn campus. The presence of faculty and staff having international expertise and of strong internationality-focused academic programs will help to 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, campus cultural programs, 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 not fully utilized 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 underutilization 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 not only enhance the vitality and the visibility of our artistic and cultural institutions, but will also—and more importantly—enrich the intellectual and social fabric that makes us a university.

Recommendations

• Construct a broad arts and culture curriculum to better integrate the resources of local cultural institutions into enriched common experiences 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 educational programs, giving students direct contact with world cultural and artistic expressions.

• Develop graduate and upper-level undergraduate courses that will both contribute to and draw enhancement from our cultural institutions at Penn, as well as those of the Philadelphia region.

• Strengthen ties between academic departments and cultural institutions, 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 also should 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 among 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 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 interact with and debate public intellectuals over key social issues such as terrorism, cloning, animal rights, genetic modification of foods, and racism.

• Establish a fund to provide support for new initiatives in the arts and humanities. While the existence of Penn’s cultural and artistic venues are increasingly strong and visible, there is at present no funding that would encourage either collaborative programs or new initiatives. The university should create a substantial central pool of funds, administered by the Provost, with the advice of the Council on Arts and Culture, which will consider proposals from schools and departments, cultural resource centers, and individual faculty. One example of a program that might find support would be 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.

III. Defining the Future of Education

Adapt our pedagogical methods and our student 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, university staff members, 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: Encourage the innovative use of educational technology to enhance teaching and learning.

Offering a preeminent 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 “course web” 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 and support creative educational experiments that use novel platforms and techniques.

Recommendations

• Incentives should be designed that will encourage faculty to teach in innovative and non-traditional formats. We should consider establishing a venture fund that will encourage faculty to create new kinds of courses as well as develop learning modules that can be applicable to other settings. Support for faculty-created special courses should help to foster invention that can be generalized across the wide spectrum of teaching and research. We must expand opportunities for faculty to explore varieties of traditional and innovative technologies and to learn how to use them effectively in both their teaching and in the management of their courses, and create more “wired” teaching and consultation facilities as part of our classroom renovation program.
• Construct an educational resource center that focuses on evolving educational technology. The university should create a central facility that will provide the environment, the tools, and the support necessary both to stimulate the adoption of existing teaching technology by all our faculty and to encourage experimentation with, and development of, novel technologies and applications.

Goal: Develop a continuum of educational opportunities that engages learners throughout their lives and in various stages of their careers.

Penn should strive to shift its focus for intellectual contact between the university and its students from a model of brief, episodic contact to one of continuous and ongoing interaction within a community of scholars while on campus, and 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 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 lifetimes. 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 need 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 identify potential areas of collaboration.
  • Provide better support for 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: Selectively identify new products and new markets of learners.

The university should focus on those groups that can best take advantage of Penn’s unique strengths, while also involving our full-time staff and their abilities as part of our community of learners. Improvement in this area may require the creation of a centrally coordinated service that can provide market research, planning, and analysis; the creative leveraging of existing courses, academic programs, and educational facilities; continued support for staff educational programs; and changes in our current administrative and support structures.

Recommendations
• Increase the visibility of all continuing and non-traditional education at Penn. Penn’s web site should be more responsive to lifelong learners, with daily information about educational opportunities. We should also provide a physical “front door” through which most of those interested in continuing education or non-traditional education can enter to seek information about what is available at Penn, to get answers to their questions or help with academic and financial issues, and to meet with fellow students. Such a mechanism could also help provide important linkages among the many offerings of continuing education on campus.
  • Develop markets that take advantage of Penn’s unique strengths. We must encourage the development of programs that respond to the changing demands of the marketplace and of the adult learner, while recognizing that we also must be selective about whom we try to reach. We need to incent our faculty to repackgage academic content in ways that meet the needs of these students, and we need to provide an effective and coordinated administrative structure that can assist individual schools with their marketing, advertising, and on-site needs.

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 and for 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 develop an inventory of existing alumni offerings and target audiences, with daily information about educational opportunities. We should also identify new markets of learners and provide services and facilities that meet their needs.

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: 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
• Evaluate the existing organization of technology transfer, corporate relations, regional economic development, and related entrepreneurial services on campus. Consider ways in which these services can be better integrated. Improve access to services for our faculty, and create a friendly single point of access for outside activities. Develop a stronger and broader network of relationships with others involved in the field of economic development at the local, state and national levels.
• 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. We should consider the establishment of an Innovation Bank that would help support new projects and initiatives that support these goals.
  • 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. Identify and then incorporate best practices models presently being utilized by peer institutions to create a leading-edge model for technology transfer and commercialization activities throughout the university.
  • 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 to identify entrepreneurial opportunities, with efforts then supported by
a central organization that provides overall administrative and financial support and is located 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 originated.

- 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. We need to identify ways in which these limited funds could be appropriately leveraged by non-university funding sources.

**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, postdoctoral scholars, faculty, staff, and visitors. Attractive, functional physical facilities are essential to this effort, and these physical resources must be woven together with other determinants of the University's vibrancy. One way to create an attractive, functional core is to develop a systematic plan to improve the physical environment. This includes improving shared infrastructure, and ensuring that the University provides attractive and functional facilities in the core and surrounding areas. This is an area in which resources are currently being utilized through exciting initiatives such as the Institute of Urban Science. The plan 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 eight 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. We also must continue to identify and implement better and more cost effective ways to service and maintain all areas of the campus.

- 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 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; support the development and improvement of arts and cultural venues on the Walnut Street and 40th Street corridors; 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 in partnership with other University City-based institutions, private businesses, local foundations, and the public sector.

- Develop new programs to encourage the purchase of housing within in University City, improvements to rental housing, and the provision of temporary accommodations for visiting faculty and students. We need to 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 judicious 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 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 periods, 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.**

In order to enhance our operational capacities, we must provide management with the resources and support to assist them in identifying and eliminating redundancies, reprioritizing work, and enhancing effectiveness and efficiency. In addition, we must continue to expand upon ways to encourage, recognize, and reward successful redesign and entrepreneurial efforts both at the central level and at the school and center level.

**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. New and innovative approaches to learning and research will require Penn to identify supporting technologies. Administrative and infrastructure projects that cross schools or departments or require high-risk capital investments must be prioritized to ensure that the benefits and costs of a given project are clearly understood. A body of strategic decisions makers should be convened periodically to ensure timely and regular communication of required investments; the appropriate definition of changing roles, rights and responsibilities; facilitation of collaboration across disparate organizations; and recognition of the challenges and opportunities in a multi-vendor, multi-technological and multidisciplinary environment.

- Make the career and professional development of staff a top priority. Our staff plays a crucial role in a wide variety of areas—business and finance, facilities and housekeeping, alumni affairs and development, student services, advising and academic support, research and the like. The development and retention of a highly qualified and committed staff is crucial if we are to implement the goals established for the university. To assist in this effort, we must continue to develop, implement, and support best policies and practices. We need to ensure that supervisors receive appropriate training that enable them to maintain the type of work environment that encourages staff productivity and development, and we need to provide opportunities for staff to upgrade their skills and to advance in their careers.

- 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.
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