# Cornell University at its Sesquicentennial

A STRATEGIC PLAN 2010–2015

This is the final version of the university's strategic plan 2010. It was developed during the 2009–2010 academic year by a Strategic Planning Advisory Council (SPAC), consisting of eight Cornell faculty members appointed by the provost. An electronic version is available at http://www.cornell.edu/strategicplan.



# **Contents**

Exec	utive Sum	mary		3
	The	Approach	3	
	An A	Aspiration	4	
	Spec	rific Objectives and Actions	4	
	Stra	tegic Priorities and Initiatives	4	
	Asse	essment	5	
I.	Preambl	e		6
		Develop a Strategic Plan?		
		tegic Planning in 2009–2010		
		roach to the Task		
		anization of the Plan		
II.	· ·	Enduring Commitments		q
11.	University Mission9			
		P Values		
	Umbrella University Goals.			
		resity Aspiration		
III.		itution and Its Environment		12
		lent Competencies in a Changing World		
		ncial Challenges		
		nell's Strategic Challenges		
	Broad Strategic Directions			
	Gov	ernance Issues	14	
IV.	Goal Areas: Objectives and Actions			15
	Faculty Excellence			
		cational Excellence		
		llence in Research, Scholarship, and Creativity		
	Excellence in Public Engagement			
	Staff Excellence			
V.	Strategic	Initiatives 2010–2015		37
VI.		ce in Organizational Stewardship		
	General Guidelines			
	Financial Resources			
	Physical Facilities and Environment			
	Information Technology			
VII.		at Its Sesquicentennial		/13
		-		
Appendix A. Appendix B. Appendix C. Appendix D.		Structure and Process of Strategic Planning 2010		
		Cornell's Statement on Diversity		
		Student Learning Outcomes		
		Assessing Progress 2010–2015		48

## **Executive Summary**

### The Approach

This strategic plan treats *Cornell University as a single unit or entity*. Cornell, aptly described as the "first American university," is today a comprehensive university that combines the finest attributes of an Ivy League institution with a deep commitment to public service, stemming from its history as a land grant institution. The academic strengths of the university are grounded in a wide range of outstanding colleges and schools, each of which has achieved academic excellence and a position of distinction in its own field. Cornell is a productive conglomeration of very strong colleges and schools, and it also is a whole greater than the sum of these parts. The focus of this strategic plan is that "greater sum," rather than the particular subunits or parts that compose it. The plan proposes university-wide goals and actions that crosscut or transcend the boundaries of colleges, schools, and administrative units. It suggests that the university can take even greater advantage of its distributed strengths while also reinforcing those strengths and facilitating the "bottom-up" blossoming of innovation and creativity characteristic of the colleges and schools. The relationship of individual academic units to the central administration of the university should involve an ongoing dynamic interchange.

Developing a strategic plan with a focus on *Cornell as a single entity* is important. The challenges and opportunities of Cornell's changing environment suggest the need for enhanced institutional capacity to act as a unit, that is, to chart strategic directions and mobilize colleges and schools around those directions. A few examples: The renewal of Cornell's faculty is a major issue for the university in light of anticipated retirements over the next ten to fifteen years, and this requires an institution-wide response. This challenge also presents an opportunity to increase significantly the diversity of the faculty. The growing infrastructure costs of research and scholarship (e.g., libraries, research facilities) require an institutional response that sets priorities and ensures support is cost-effective. Financial pressures from the cumulative declines in state support for the land grant mission create a need to rethink how the university fulfills and revitalizes Cornell's unique commitment to public engagement and whether historic structures and practices will be adequate in the future. Institutional, university-wide strategies and tactics will help Cornell meet such challenges effectively over the next five years and take advantage of opportunities for academic enhancements.

### An Aspiration

The plan puts forth an overarching aspiration for the university: to be widely recognized as a top-ten research university in the world, and a model university for the interweaving of liberal education and fundamental knowledge with practical education and impact on societal and world problems. This aspiration reflects both Cornell's stature as a first-tier, Ivy League institution of higher education and its special and unique capacity to bridge the world of thought and ideas and the world of practice and action. Having an overarching aspiration for the institution as a whole is important for the one-university theme of this plan.

The general strategy proposed here for achieving this aspiration is captured by two words: *focus* and *connectivity*. (1) Focus on strong or potentially strong academic programs that are strategically important to the university and maintain areas of excellence within *each* of the basic academic groupings—humanities and the arts; life sciences and agricultural sciences; physical sciences and engineering; social sciences; and professional schools. In other words, create and maintain academic leadership across all of the broad areas but do so selectively and strategically within each. (2) Build greater connectivity among the diverse colleges, schools, and programs around these basic academic areas by developing new integrations, boundary-crossing structures, and productive synergies. Greater connectivity implies that it will be easy for students and faculty to cross college and program boundaries in pursuit of their academic goals. The idea is to make academic boundaries at Cornell as permeable and seamless as possible.

The main elements of this document include *Goal Areas* with associated *Objectives and Actions* which define areas of focus for the plan and steps for achievement. Among these, there are *Priorities* that provide direction on where to start. *Strategic Initiatives* then describe in more detail how the priorities can be implemented.

### Specific Objectives and Actions

This plan develops a series of specific objectives (ends) and actions (means) to enhance excellence in five central domains or goal area of the university: Faculty; Education; Research, Scholarship, and Creativity; Outreach and Public Engagement; Staff and Organizational Stewardship. The Faculty section emphasizes the importance of increasing the size and quality of faculty in strategically important areas, enhancing the diversity of faculty, and anticipating future retirements by pre-filling positions and recruiting at lower ranks. The Education section identifies ways to enhance excellence in teaching across the university and ways to enable students to take full advantage of the university's educational breadth through more field-based or international activities in which they "engage the world" in their academic work under faculty supervision. The health and well-being of students are included as conditions for academic and life success. A key theme is to make public engagement and impact a more distinctive component of education at Cornell. The Research, Scholarship, and Creativity section stresses the need to increase the number of academic departments that achieve a position of leadership, strengthen support for emerging interdisciplinary areas, and provide libraries and shared research facilities. In the section on Public Engagement, the outreach mission is broadly defined as "public engagement" so as to include the entire university. The plan suggests the need for a rigorous assessment of the university's public engagement and impact with an eye toward connecting these activities even more closely to educational and research strengths on campus. A section on Staff Excellence affirms the critical role of staff in support of the academic mission and the importance of being an exemplary employer; under Organizational Stewardship, the plan develops objectives and actions for how the management of key resources (finance, capital, and information technology) can efficiently support the academic mission. Effective organizational stewardship will be necessary to free up the resources important for achieving the strategic initiatives of this plan. Overall, the specific objectives and actions of the plan suggest the need to move on a number of fronts to keep abreast of the competition and enhance academic excellence.

### **Strategic Priorities and Initiatives**

The highest overall priority proposed for the next five years is to *enhance faculty excellence*. Such a priority is timely and important because of the need to anticipate and be proactive about forthcoming faculty retirements. Along with a faculty excellence priority, special emphasis should be given to promoting and recognizing excellence and leadership in *research*, *scholarship*, *creativity*, *and graduate education*. Improving the quality of research and graduate education is critical for ensuring a place among the top-ten research universities in the world. These emphases can and should be pursued with a parallel focus on enhancing the teaching of undergraduates. *Excellence in teaching* is an integral component of faculty excellence, and this plan affirms Cornell's commitment to have faculty who achieve excellence in *both* research and teaching quality should be inextricably bound together at Cornell University.

In the context of these overarching priorities, the plan proposes seven strategic initiatives over the next five years.

1. Faculty renewal in the context of academic priorities and substantial retirements. Identify strategically important departments where the age distribution will result in a significant loss of reputation over the next ten years and develop multi-year hiring plans giving priority to recruiting new Ph.D.s and "rising stars." Use pre-fills of retirements, internal reallocation, and fund-raising to generate necessary resources.

- 2. Identify a few departments or fields of critical importance to the university and move them into a position of world leadership while working to prevent others from losing such stature. Identify departments on the cusp of leadership or on the verge of losing it and make proactive efforts to generate or preserve that leadership.
- 3. Create a culture in support of teaching in every department across campus. Improve assessments of teaching and enhance the importance of teaching excellence through the allocation of resources to departments, programs, and faculty. Identify good models for promoting a culture in support of teaching and use these as benchmarks to assess and improve teaching in other units.
- 4. Develop stronger connections across colleges to enhance educational opportunities for students and the quality and stature of disciplines or fields. Develop policies that encourage students in one college or campus to take courses in another, and devise new mechanisms of coordination and connectivity across academic disciplines or across colleges within a given academic discipline.
- 5. Implement strategically focused, cost-effective enhancements to the infrastructure in support of research, scholarship, and creativity. This includes in particular the university libraries, shared research facilities in the sciences and social sciences, and administrative support for faculty applying for or managing research grants.
- 6. Make significant progress toward a more diverse faculty, student body, and staff in terms of gender and race and ethnicity. Establish explicit and ambitious goals, considering appropriate pipelines and the importance of "critical mass"; enhance recruitment and retention processes; and ensure that mechanisms holding units accountable are effective.
- 7. Strongly connect outreach and public engagement with Cornell's areas of strength in research, scholarship, and education. Broadly redefine the outreach mission as public engagement and impact, extend it across campus, and develop approaches appropriate to different academic disciplines or fields; strengthen opportunities for students to "engage the world" as part of their academic work.

### Assessment

The plan develops a framework for assessing progress that emphasizes the importance of (a) multiple measures for a given objective or priority, (b) combining quantitative metrics and qualitative indicators, and (c) minimizing the staff time devoted to such measurements. This plan specifies a core set of metrics for assessing institutional progress toward key priorities. For example, these include the number of top-ranked programs and departments; amount and nature of faculty hiring; faculty and staff compensation; the age distribution of faculty; diversity of the faculty, students, and staff; student learning outcomes; student surveys; library rankings; and sponsored research. Such metrics need to be supplemented with qualitative assessments by colleges and regular external reviews of academic programs. The mechanisms of assessment should be developed and finalized at the implementation stage of this strategic plan and in consultation with academic units.

### Section I

### **Preamble**

Cornell University is a unique institution that from its inception has charted distinct pathways to academic excellence. It has been aptly described as the "first American university," broad in scope, open and accessible to all. At the institution's founding in 1865, Ezra Cornell said: "I would found an institution where any person can find instruction in any study." Cornell from the beginning developed a curriculum that transcended the traditional restrictions of learning to classical education, just as it transcended social divides of the time. It was truly a university for anyone who was qualified and open to study in vocational and classical, practical and scientific areas. There was no other institution of higher education quite like it.

Cornell today is a comprehensive research university that interweaves the main elements of an Ivy League university with an unusually strong public service mission. Many words have been used to describe the nature of this institution as a whole: complex, creative, entrepreneurial, eminent, and engaged. It has become and remains one of the most distinguished and preeminent institutions of higher education in the nation and world. Its complexity, diversity, and comprehensiveness are a fountainhead of creativity and innovation.

This strategic plan takes as an object of focus *Cornell University as a single entity or unit.* In part because of its complexity and comprehensiveness, Cornell University today is often characterized as a collection of excellent colleges and academic programs. Cornell is also a whole, greater than the sum of its parts. This plan addresses that "greater sum," meaning the university as a whole. At the same time, the plan affirms the responsibility of academic units to achieve excellence within specific academic disciplines and, moreover, the importance of a dynamic interchange between the responsibilities and capacities of individual academic units and leadership at the center of the university. The premise of this strategic plan is that amidst the essential, distributed academic strengths of the university, there is *One Cornell* that warrants attention in and of itself. The question is: How can Cornell as a single unit build on its diversity and strength to reach new heights as the institution reaches its sesquicentennial?

This plan identifies broad directions for the university and institution-wide actions for implementing those directions. Given the *One Cornell* theme, the focus is on issues that crosscut or transcend the boundaries of colleges, departments, and other units of the university, while recognizing that the locus of implementation for many of these actions is and must be in colleges and departments. The plan does not refer to or analyze particular colleges, departments, or supporting units (e.g., north campus, career services). The Strategic Planning Advisory Council made careful and deliberate choices about the appropriate content of a plan for *One Cornell* with due attention to which issues they could effectively address, given their collective capacities and the time available.

The plan, for example, does not identify research themes for the future. There certainly are important and worthy themes, such as sustainability, that are in place and are having an important interdisciplinary impact across the university. While these efforts are to be applauded, it is beyond the scope and capacity of the Strategic Planning Advisory Council to thoroughly and fairly assess a full range of thematic options, much less to choose among them. This is an issue for the implementation stage of this strategic plan. It is also important to note that among the major components of the student experience on campus, the plan gives primacy to faculty teaching rather than to the living-learning environment (e.g., North Campus, Career Services). The university has invested heavily and achieved great success in creating a rich and varied living-learning environment for students, and this should continue. With that success as a backdrop, this plan calls for a shift of focus to the excellence of faculty teaching for the next few years.

### Why Develop a Strategic Plan?

This strategic planning process was initiated by the president and provost of Cornell University in the summer of 2009.<sup>2</sup> It was a response to the changing environment for higher education in general and for Cornell in particular. The value of having a strategic plan was suggested by the fact that in fall 2008 Cornell University faced a potential budget deficit of \$215 million if immediate action was not taken. This prospective deficit was due to debt financing for construction projects, excessive financial commitments in the operating budget, and the worldwide economic downturn of fall 2008. For the short term, the president and provost made significant budget cuts and implemented efficiencies in administrative areas

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<sup>&</sup>lt;sup>1</sup> There have been three recent efforts to develop a strategic plan for Cornell University. In 1994, shortly before the transition from President Rhodes to President Rawlings, the university completed a comprehensive strategic plan that was the culmination of a multi-year effort; in 2002 President Lehman organized a "call to engagement" in order to develop programmatic directions for the university leading up to its sesquicentennial; and in 2008 the Office of the Provost develop a plan. Material from these other planning efforts at Cornell provides useful background for the 2009–2010 planning effort.

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(e.g., procurement, facilities, finance, human resources). For the longer term, they launched this strategic planning process in order to provide the university with a forward-looking, aspirational road map for the university's future beyond the immediate financial crisis. As this plan is being completed, the university has made significant progress in reducing the budget deficit and is on a pathway to recovery.

### Strategic Planning in 2009–2010

In fall 2009, Provost W. Kent Fuchs formed a Strategic Planning Advisory Council consisting of eight faculty members.<sup>3</sup> His intent was to create a faculty-driven planning process. The Strategic Planning Advisory Council stood at the center of the planning process, and all ideas and input went through this faculty group.<sup>4</sup> The task or charge was to develop broad directions and priorities for Cornell University over the longer term, not to address immediate budgetary problems. The strategic plan would serve as a general framework or guide for decisions about where to invest resources (i.e., time, effort, and money), but not be so detailed as to determine such decisions or unduly impinge on the prerogatives of the provost, deans, and department chairs to make specific decisions within the broader planning framework.

The strategic planning effort was organized around four questions:

- 1. Who are we as an institution?
- 2. Where do we want to go?
- 3. How can we get there?
- 4. How will we tell if we have?

The first question suggests the need to identify the essential qualities of Cornell University, in particular its fundamental commitments. This is the purpose of section II. The second question refers to goals or objectives toward which the university should work over the next five years. The plan uses the term *objectives* to refer to the specific goals (ends) or directions. The third question refers to the actions (means) needed to move in these directions. The objectives should be *actionable*, and this is why the plan (see Section IV) uses the term *actions* in lieu of *tactics* or *strategies*. Finally, in response to the last question, the plan proposes an institutional-level framework for assessing progress toward objectives of the plan, recognizing that the metrics and indicators need to be developed further at the implementation stage in colleges and departments (see Appendix D).

This strategic plan is a "living document" that will change over time. It offers a common framework and flexible guide to decision makers across the university and, as such, it should foster greater coherence, coordination, and unity across the university. At the same time, however, it is designed to be adaptable enough to leave significant room for individual academic units to pursue academic excellence in ways important to those particular units.<sup>6</sup>

### Approach to the Task

The Strategic Planning Advisory Council began meeting in October 2009. Early in its deliberations council members defined the key challenge facing Cornell University as follows: *How can Cornell University preserve and especially enhance academic quality in the context of limited or constrained resources?* There was from the beginning a tension between having ambitious aspirations and being realistic about the availability of new resources to fund priorities of the strategic plan. The SPAC aimed to balance these two considerations and made the following assumption: *Cornell University will over the next couple of years emerge from its budgetary shortfalls and be ready to invest vigorously and proactively in its future.*Early on, the Strategic Planning Advisory Council also made a decision to focus on *Cornell as a single entity.* The *One Cornell* or *One University* concept was in part an overarching strategy for addressing the key challenge above. This strategy assumes that Cornell's academic strengths stem from and are based in colleges; yet Cornell's reputation and status are not solely a function of the strengths of the various colleges but also depend on how well colleges take advantage of cross-college synergies. This is likely to be even more important in the future because the changing environment for higher education in general and Cornell in particular suggests the need for a greater institutional capacity to act as a unit—for example, to become more adaptable, more efficient, more collaborative, and to create more "connective tissue" among the distinct parts.<sup>7</sup>

<sup>&</sup>lt;sup>3</sup>The members of the Strategic Planning Advisory Council were Lance Collins, Mechanical and Aerospace Engineering; Jonathan Culler, English; Sandra Greene, History; Martha Haynes, Astronomy; Katherine Hajjar, Cell and Developmental Biology, Weill Cornell Medical College; Edward Lawler, Organizational Behavior (ILR) (Advisory Council Chair); Susan McCouch, Plant Breeding and Genetics; and Michael Waldman, Economics (JGSM).

<sup>4</sup>The Strategic Planning Advisory Council was assisted by faculty, students, and staff in four working groups, each of which developed ideas within one of the following areas: education; research, scholarship, and creativity; public engagement (outreach); and organizational stewardship. [See Appendix A.]

<sup>5</sup>The terminology used in strategic planning efforts varies considerably. The approach in this plan is to use objectives for the primary ends of concern and actions for the means to those ends. The objectives and actions are developed for a set of standard "goal areas" based in part on the principal dimensions of the university mission (e.g., research, education, outreach).

<sup>&</sup>lt;sup>6</sup>The term *dynamic interchange* is used throughout this plan to convey the importance of continual discussion, joint problem solving, and negotiation between units (e.g., colleges) and the university center (e.g., provost's office) about the intersection of priorities and interests at the local level with those at the university level. In the context of dynamic interchange, there is no necessary inconsistency between having a strategic plan for *One Cornell* and decentralized academic decision making.

 $<sup>^7</sup>$ The one-university theme has emerged independently in the Middle States Accreditation Review to be completed in 2011.

### Organization of the Plan

The plan is organized around four topics. First, sections II and III establish a context for the strategic plan by affirming Cornell's enduring commitments and stating assumptions about Cornell's changing environment and challenges. Second, section IV presents specific objectives (ends) and actions (means) that fall within umbrella goal areas such as education, research, and public engagement. Third, section V develops strategic initiatives for the next five years that extract important themes from these objectives and actions. Fourth, section VI treats excellence in organizational stewardship as a necessary or enabling condition for implementing and achieving the academic objectives and priorities of the plan. The plan concludes with a statement on Cornell at its sesquicentennial (Section VII).

### Section II

# **Cornell's Enduring Commitments**

Cornell is an unusually complex institution and that complexity can be traced to the founding vision of Ezra Cornell. To incorporate practical and vocational education into an institution of higher learning was unprecedented, as was the idea of opening up classical education to the masses of American society. Today Cornell remains unique among institutions of higher education, as a distinguished private Ivy League institution that also is the land grant university of New York State. To provide context for this strategic plan, this section presents the mission of the institution and makes explicit the core values and enduring commitments of Cornell University.

### **University Mission**

The official mission statement is as follows:

Cornell is a private, Ivy League university and the land grant university for New York State. Cornell's mission is to discover, preserve, and disseminate knowledge; produce creative work; and promote a culture of broad inquiry throughout and beyond the Cornell community. Cornell also aims, through public service, to enhance the lives and livelihoods of our students, the people of New York, and others around the world. [Strategic Plan 2008]

This mission statement follows a standard form for research universities, capturing in general terms the nature of Cornell University. This strategic plan draws on the mission in two respects. First, the three dimensions of the mission (knowledge creation, education of students, and public service or outreach) are umbrella *goal areas* within which this strategic plan develops more specific objectives and actions. Second, becoming a model university for interweaving fundamental and practical knowledge is an important component of the aspiration for Cornell proposed by the plan.

The university also has a statement of vision, used in some communications, as follows:

Cornell aspires to be the exemplary comprehensive research university for the 21st century on the basis of our distinctive status as a private university with a formal public mission. Faculty, staff, and students will thrive at Cornell because of its unparalleled combination of quality and breadth; its high standards; its open, collaborative, and innovative culture; the opportunities provided by beautiful, vibrant rural and urban campuses; and programs that extend throughout the state of New York and across the globe. [Strategic Plan 2008]

In this vision there are noteworthy references to Cornell's exemplary breadth and quality as well as its collaborative and open culture. The plan assumes and builds on these qualities.

### **Core Values**

Core values are defined as inviolable commitments that express "who we are as an institution" and what principles or qualities should infuse all practices and activities within the institution. The nature and implicit values of Cornell University were the theme of President Skorton's "State of the University" address on October 23, 2009. He argued that Cornell University is supported by four fundamental pillars:

- 1. Classical and contemporary inquiry, "shaped by the founder's commitment to liberal and practical education." In other words, Cornell values the arts and humanities as well as advanced scientific and technological research; in broader terms, the university is committed to the interweaving of fundamental knowledge and practical education. The strategic plan builds on this unique combination.
- 2. "Thinking otherwise" Cornell's faculty members have a history of being intellectually diverse and entrepreneurial and as Carl Becker indicated, "thinking otherwise." This reflects a deep commitment to academic freedom and a belief that such freedom is essential to creativity and innovation. The *One Cornell* theme of this plan stresses the value of creative collaborations that emerge from the "bottom up" rather than from the "top down."
- 3. Student access, which expresses a central principle of Ezra Cornell's original vision, namely a university open and accessible to all who merit entrance ("any person"). The longstanding and recently reaffirmed commitment to need-blind admissions reflects this value, as does the commitment of the university to diversity and inclusion and the notion that diversity and excellence are interrelated (see Appendix B). The university's commitment to student access has been tested in recent years, given significant competition with peer institutions, and Cornell has addressed this challenge successfully with a program to reduce the costs of a Cornell education for students from families in lower income quintiles.

4. Public engagement, which expresses the university's commitment to search for knowledge-based solutions to societal and world problems. Public engagement is an interpretation of the university's outreach mission that emphasizes being proactive (actively engaged) and having a public impact. It implies a broadening of the historic land grant mission of the university. This strategic plan adopts and develops this concept of the university's outreach mission.

These four pillars of Cornell imply a set of core values that stand at the center of Cornell as an institution. At the beginning of the strategic planning process, the Strategic Planning Advisory Council asked: What are the core values of Cornell? They developed an initial list and then solicited feedback from university leaders and members of the community.

The resulting set of core values is as follows:

- Seek knowledge
- Support free and open intellectual inquiry and expression
- Sustain excellence in teaching, research, and public engagement
- Use knowledge to enlighten ourselves and benefit the world
- Reward and recognize merit, creativity, and innovation
- Treat all individuals with dignity, respect, and fairness
- Embrace difference and diversity
- Promote cross-cultural and cross-national understanding
- Be a collaborative, collegial, and caring community
- Be accessible and affordable to all who meet high academic standards

Themes in the values, echoed throughout this plan, include excellence; diversity and inclusion; openness; and collaboration.

### **Umbrella University Goals**

Cornell University has broad, overarching goals that are timeless and enduring. All universities have such goals, whether they state them or not, and when stated, they express long-term commitments within which planning tends to occur—hence the term "umbrella goals." The Strategic Planning Advisory Council developed the set of umbrella goals below, based on widespread consultation with members of the university community.

- 1. Enroll, educate, and graduate the most deserving, promising, and diverse student body possible. Provide all students (undergraduate, graduate, professional) with an education that is innovative, distinctive, and of the highest quality, and that inspires in them a zest for learning.
- 2. Maintain and enhance world leadership in research, scholarship, and creativity.
- 3. Maintain and enhance efforts to recruit, nurture, and retain a diverse faculty who are outstanding scholars and teachers and an excellent, diverse staff who provide outstanding support to faculty and students.
- 4. Strengthen the public engagement of the university's education, research, and clinical programs with local, national, and international communities, consonant with its stature as an academically distinguished private university with a public mission.
- 5. Establish and maintain organizational structures and processes that promote and support academic excellence.

These five goals represent general areas within which this plan develops objectives (ends) and actions (means) to achieve them. These goals are similar to those of other research universities, but there are signature ideas about Cornell here: a distinctive education, world leadership, outstanding scholars and teachers, public engagement. These are guiding principles for the subsequent sections of this planning document.

### **University Aspiration**

Having an overarching aspiration for the university is consistent with the *One Cornell* concept. Many of Cornell's departments or schools are in the top five or ten of their fields and some are of unequaled stature (#1). For the university as a whole, we suggest the following: <sup>8</sup>

Cornell University will be widely recognized as a top-ten research university in the world, and a model university for the interweaving of liberal education and fundamental knowledge with practical education and impact on societal and world problems.

The first phrase of the aspiration, being among the top ten research universities, is an important and worthy longer-term goal. The second phrase in the aspiration communicates the importance of pursuing the top-ten aspiration in part by taking further advantage of Cornell's special qualities.

The aspiration articulates the centrality of research, scholarship, and creativity (Goal 2 above) to a research university, yet implies the importance of the interconnections between the creation of fundamental knowledge and use of that knowledge to have a positive impact on the world. In no way does this aspiration diminish the centrality of teaching and education at Cornell. The Strategic Planning Advisory Council accepts no trade-offs between the research or application emphasis of this aspiration, and excellence in undergraduate, graduate, and professional education.

This aspiration should be pursued through a strategy of greater *focus* and *connectivity* within and across basic academic areas: humanities and the arts; life sciences and agricultural sciences; social sciences; physical sciences and engineering; and Cornell's professional schools and colleges. Cornell has consistently had humanities and science disciplines ranked in the top ten or even higher among peers in addition to contract and specialized colleges of very high or unequaled stature in their respective fields. Life sciences is a critical area of emerging and growing strength, and the social sciences have a realistic prospect of growing significantly in strength and stature over the next ten years.

A diverse mix of academic areas, and distinctive professional schools and programs, are essential sources of Cornell's special character and eminence among research universities. This combination needs to be nurtured. However, the university does not need to be strong in every discipline or field within these broad academic areas, or necessarily even retain all of the subfields within these areas as currently represented on campus. The proposed strategy of *focus* and *connectivity* suggests that, in pursuing the above aspiration, the university should create and maintain academic leadership across all of the broad areas but do so selectively and strategically within each and be prepared to consolidate or even, under some conditions, eliminate departments or programs that are no longer critical, as constituted, to the university and its colleges.

At the implementation stage, the aspiration requires that the university define a set of criteria or dimensions—objective and reputational—upon which it will judge where it currently stands and how much progress it makes over time. It also should identify its primary competitor institutions and track those institutions over time on these dimensions. Finally, the university will need to make ongoing assessments of the strategically important or critical academic areas for Cornell—i.e., to identify current academic strengths or emerging strengths and to determine how the diverse, college-based strengths can be efficiently and effectively built upon.

<sup>&</sup>lt;sup>8</sup> The appropriate aspiration for particular colleges or programs should be higher if at all possible. Each college or department should have aspirations that are challenging.

### Section III

### The Institution and its Environment

This section identifies several assumptions about the external and internal environments that inform this planning process. It is a selective treatment of those environments. Topics include how the world is changing, what these changes imply about abilities or competencies students need today, and Cornell's main strategic challenges and broad directions.

### Student Competencies in a Changing World

The millennial change to the 21st century has spawned much analysis and commentary about the changing world that people live in today. While some commentaries are hyperbolic and too sweeping, it is not an exaggeration to say people are living in a period of major transformation. Some changes are social, economic, and political (e.g., economic globalization, interdependencies among states, the demise of the traditional employment contract, and the capacities of people to interact with others who are different or distant from themselves). Other changes involve physical or biological resources (e.g., sustainability, energy sources, food resources, health and well-being). Cornell is well positioned to contribute important knowledge for the understanding of the issues that underlie world problems, given its capacity to connect fundamental knowledge with practical knowledge and applications.

What implications does this changing world have for higher education today? One is that it is even more critical than in the past for democracies to have an educated citizenry that can assimilate and assess vast arrays of complex information. Second, students need to have a sufficiently general knowledge of the world in order to be adaptable, prepared for unexpected job or career changes, and able to understand and participate constructively in solutions to world problems. Clearly, institutions of higher education need to prepare their students for the complex and changing demands of careers in today's challenging global environment. Given such changes, Cornell has initiated an effort to define the appropriate learning goals for students. [See Appendix C.]

A key premise is that Cornell should foster a range of abilities, some of which extend beyond formal classroom work. For example, students at Cornell should learn:

- to understand the values and beliefs of multiple cultures
- to embrace moral and ethical values
- to participate in community and civic affairs and engage with social problems
- to use knowledge in their own lives and pursue lifelong learning
- to develop leadership and teamwork skills
- to care for themselves and manage physical and emotional needs responsibly

These abilities have direct relevance to many of the changes in the world noted above, and thus it is reasonable to infer that Cornell students need preparation in these skills for successful lives, professionally and personally. This makes outside-of-the-classroom educational experiences increasingly important to the development of such abilities. Cornell's tradition of public service or engagement and international scope provides many relevant opportunities.

To conceptualize learning outcomes in more comprehensive terms, the university has developed a set of core competencies, distinguishing academic and personal abilities, as follows: <sup>9</sup>

### Academic Competencies

- disciplinary knowledge
- critical thinking
- communication skills
- scientific and quantitative reasoning
- self-directed learning
- information literacy
- engagement in the process of discovery or creation

### Personal Competencies

- multicultural competence
- moral and ethical awareness
- self-management
- community engagement

<sup>&</sup>lt;sup>9</sup> These are a draft as of spring 2010. The draft learning outcomes and competencies were derived from learning outcomes defined by each college, as well as from the university mission statement, and from a wide range of campus-wide activities and services for students. [See Appendix C for more information.]

This strategic plan emphasizes the importance of educationally rich international and public engagement experiences under the supervision of faculty. This emphasis involves a focus on what are termed "personal competencies" above, but it also implies that personal competencies should be addressed in the context of academic work that enhances academic competencies. Thus, the plan gives special emphasis to those educational activities that interconnect academic and personal competencies.

### **Financial Challenges**

The changing world also presents significant resource challenges to institutions of higher education in general and to Cornell in particular. The most telling are financial. Universities have relied heavily on tuition increases over the last forty years or so to deal with rising costs, for example, those associated with infrastructure (educational and research), competition for faculty, and the decline of funding for the humanities. The main point is that the costs of higher education continue to grow well in excess of the cost of living. The financial challenges are compounded by political ones, having to do with education priorities in many states and demands for more costly accountability mechanisms (e.g., compliance issues). It is not an exaggeration to claim that higher education in the U.S. is experiencing the end of a 50-plus-year period of revenue growth.

Cornell enters this period of financial challenge and uncertainty with important strengths and advantages, many of which have already been mentioned. The breadth and quality of Cornell's academic programs give the university a capacity to adapt in a strategic way; Cornell has an impressive tradition of promoting creative interdisciplinary collaborations built on strong disciplines, as illustrated by recent successes of the life sciences initiative and interdisciplinary synergies around environmental sustainability; Cornell philanthropy is very strong; and the tradition of public engagement and impact, along with faculty creativity, academic entrepreneurialism, and international visibility are promising capabilities upon which to build. It is also the case that Cornell is on a road to recovery from its recent financial issues. Nevertheless, Cornell University does face significant strategic challenges. The next section overviews these.

### Cornell's Strategic Challenges

This plan assumes six major challenges for Cornell over the next five years, some external and some internal.

- 1. Intense competition for faculty. This will increase as faculty retirements increase over the next ten years. Dual-career issues compound the challenge of renewing the Cornell faculty.
- 2. Intense competition for students—at all levels—makes financial aid, scholarships, fellowships, and the living-learning environment more critical, but also more expensive. Limited availability of fellowships for graduate students is a significant problem for graduate education.
- 3. Limitations on tuition revenue. The university will need to reduce the growth rate of tuition increases and apply more of the revenues from tuition to financial aid, creating pressures on other parts of the university budget.
- 4. Increasing infrastructure costs (libraries, research facilities) of high-quality scholarship and teaching will continue, making strategic choices necessary to determine where to invest limited resources and where to disinvest.
- **5. Declines in state funding for contract colleges and the land grant mission**. The real-dollar support for contract colleges will continue to decline, leading to, among other things, the need to reassess how the university fulfills its public engagement mission.
- **6. Diverse and excessively complex funding models for academic units**. These create obstacles for the cross-college ties and collaborations that are likely to be necessary to effectively and efficiently use available resources.

### **Broad Strategic Directions**

Following are four strategic themes that identify broad directions for responding to the challenges in Cornell's changing external and internal environment. These themes are manifest in several objectives and actions proposed in subsequent sections of this plan:

- Focus
- Adaptability
- Coordination
- Efficiency

A comment on each is warranted. To become more focused, it is necessary to make difficult choices about which academic areas or units to emphasize and which to de-emphasize; what to keep and strengthen; what to downsize or eliminate. These choices need to be made while preserving Ezra Cornell's original vision. To become more adaptable, Cornell's administrative arrangements and structures need to be more flexible, to be evaluated and changed on a continual basis, and to have fluidity so that they do not become set in stone. To introduce more coordination, the institution needs more permeable boundaries and connectivity across academic fields, disciplines, programs, and colleges, so that both students and faculty can cross these boundaries or transcend them when opportunities to enhance academic excellence emerge and also to ensure that the university uses its intellectual resources efficiently and effectively. To be more efficient, Cornell needs to examine administrative structures and policies carefully, with an eye toward creating a tighter fit between our methods of accomplishing tasks and the institution's goals and aspirations.

Greater focus and connectivity are essential to preserve and enhance academic excellence, whereas greater adaptability and efficiency are especially critical to the stewardship of resources. Implementation of these broad directions would need to respect and affirm the longstanding principles of collegiality and shared governance.

### **Governance Issues**

Meeting strategic challenges over the next five years will require university-wide responses that could exert pressure on the university's historic patterns of decentralized decision making. As stated earlier, a dynamic interchange between academic units and the university center will be critical. Whereas the One Cornell theme of this plan suggests strategic framing and coordination from the university center to address selected strategic issues, much of the actual academic decision making still must occur at the local college or departmental level. With this in mind, the Strategic Planning Advisory Council suggests that there be concerted efforts over the next five years around fundamental governance principles as follows: First, strengthen collegial organization (shared governance, faculty role) wherever possible. Second, ensure robust consultative processes (involvement, participation of those affected) when decisions at the center have significant effects on departments, colleges, or other units. Third, promote a culture of openness throughout the university, maximizing transparency (information, communication). Fourth, expect the highest standards of ethical conduct for all members of the university community, but especially for those who occupy leadership or authority positions and whose decisions have a significant impact on others. Affirming and, where possible, strengthening the impact of such principles should help to ensure that the collegial qualities of Cornell University will be preserved or even enhanced as the university addresses its strategic challenges over the years ahead.

### Section IV

# **Goal Areas: Objectives and Actions**

#### Introduction

The umbrella goals of the university (see Section II) define the broad areas within which this strategic plan develops specific objectives and actions. This section identifies the main objectives (ends) within each of these goal areas and a series of actions (means) for achieving each objective. The objectives specify particular directions within the goal areas. The action items for each objective identify a few key ways to make significant progress on these objectives over the next five years. Some of these involve resources and some do not. The actions for a given objective should be read as a package, but it is feasible to phase in the actions on the basis of priority, cost, opportunity, timeliness, and the like. Decisions about phasing in the objectives or actions are part of the implementation stage of the strategic plan.

It also is important to recognize that the university is currently making significant efforts and achieving successes in several of these areas. By including an objective related to ongoing efforts, this plan affirms the importance of such activities and proposes to focus more energy on that area and push it even higher on the university's agenda. Whereas all of the objectives are important as such, resource constraints (time, effort, money) will make it essential to set priorities among the objectives for the next five years, and with this in mind, each section concludes with a statement of priorities among the objectives. These priorities suggest which objectives should be addressed first and thus have implications for the phasing in of efforts directed at each objective.

### Overview of Objectives

Below is a listing of the objectives in the plan. There are five to seven objectives for each umbrella goal. Priorities among these objectives are established in this section. The next section (V) develops strategic initiatives that draw on themes of these priorities.

### **Faculty Excellence**

- 1. Increase the size and quality of faculty in strategically important academic areas.
- 2. Significantly increase the diversity of faculty through new hires and enhanced retention efforts.
- 3. Ensure competitive faculty compensation.
- 4. Develop and implement policies to retain highly valued faculty.
- 5. Devise and implement new mechanisms or policies for rewarding outstanding faculty and for continually assessing faculty performance as scholars and teachers.
- 6. Foster an exciting intellectual environment by providing opportunities for more dialogue and engagement.
- 7. Develop ways to enable faculty to focus their time on being highly productive in their core academic activities (research, scholarship, and creativity; teaching; public engagement).

### **Educational Excellence**

- 1. Create and sustain a culture that supports teaching excellence in all academic units.
- 2. Strengthen institutional structures that promote pedagogical innovations both centrally and within colleges and programs.
- 3. Provide a more unified and shared educational experience for Cornell undergraduates.
- 4. Strengthen the educational impact of international opportunities and experiences for students.
- Promote the health and well-being of students (undergraduate, graduate, and professional) as a foundation for academic and life success.
- 6. Strengthen efforts to attract and educate an excellent and diverse body of undergraduate students.
- 7. Strengthen the capacity of graduate and professional programs to recruit and educate a diverse body of the very best students.

### Excellence in Research, Scholarship, and Creativity

- 1. Increase the number of Cornell departments or graduate fields that have achieved world leadership in their areas.
- 2. Build and maintain world leadership in a select set of departments within the following broad areas: humanities and the arts; life sciences and agricultural sciences; physical sciences and engineering; social sciences; and professional schools and programs.
- 3. Strengthen support for and recognition of important interdisciplinary areas, while ensuring excellence in disciplines as a foundation.
- Significantly improve institution-wide services for the administration and support of research grants (including government, foundation, and industry funding).
- 5. Maintain and selectively strengthen in cost-effective ways the core infrastructures for research, scholarship, and creativity, including in particular libraries and shared research facilities.
- 6. Encourage productive, mutually beneficial collaborations between faculty and students in Ithaca-based programs and faculty and students at Weill Cornell Medical College and Graduate School.

### **Excellence in Public Engagement**

- 1. Make public engagement a distinctive feature of education at Cornell.
- 2. Construct a unified concept and vision for the university's public engagement mission.
- 3. Develop rigorous, systematic evaluations of all outreach and extension programs.
- 4. Strongly connect public engagement to on-campus research and educational strengths.
- 5. Promote stronger collaborations and partnerships between the university and stakeholders that can make use of and strengthen Cornell's research (e.g., business, K-12 schools, nonprofit organizations, government).

### Staff Excellence

- 1. Give priority to retention of highly qualified staff in valued positions as the university reorganizes to address budgetary constraints.
- 2. Attract a talented and diverse workforce to Cornell.
- 3. Be an exemplary employer across the entire spectrum of staff.
- 4. Provide job skill training to staff in a variety of venues.
- 5. Sustain and, wherever possible, enhance flexibility in the workplace and workforce.
- 6. Work with the local community to keep Ithaca and Tompkins County vibrant places to live and work.

In addition to these five goal areas, a separate section (VI) on excellence in organizational stewardship develops objectives and actions for creating and sustaining the necessary resource conditions for achieving academic excellence. Topics include financial resources; capital and physical facilities; and information technology. These are enabling conditions for the five goal areas above.

As a whole, the objectives suggest that the university should move on a significant number of fronts to keep abreast of the competition, respond to a rapidly changing environment, and enhance academic strengths. Resource constraints (e.g., money and time) will make this difficult in some cases, but there are low-cost (or even no-cost) action items for most objectives and, as noted above, attention to the objectives can be phased in over the five-year period. The priorities at the end of each section provide a framework or guide for addressing such issues.

# **Faculty Excellence**

### Introduction

There is a critical need to renew the faculty ranks proactively, given anticipated retirements over the next ten to fifteen years. It is essential to keep abreast of and deal with intense competition for faculty, to reduce losses of valued faculty through enhanced retention efforts, and to take advantage of an historic opportunity to increase the diversity of the faculty as a whole. This section emphasizes these issues.

### Objectives and Actions

**Objective 1:** Increase the size and quality of faculty in strategically important academic areas.

*Rationale*: Many Cornell departments are already relatively small, compared to peer institutions, and it is critical to maintain or selectively enhance faculty size in distinguished departments that are too small, and to have the capacity to invest in faculty positions in areas of substantial potential and opportunity.

### Actions:

- a. Emphasize a faculty recruitment strategy of *building from the bottom* (recruiting new Ph.D.s and "rising stars") over the next five years, recognizing that this may not be appropriate for all units or at all times within a given unit.
- b. In strategically important areas, where a significant percentage of high-quality faculty are nearing retirement, pre-fill during the next five years a significant proportion of expected faculty retirements across the next ten years.
- c. Enhance and sustain state-of-the-art dual-career efforts and support designed to offset the disadvantages of a small, geographically isolated community. <sup>10</sup>
- d. Develop regular, systematic, and transparent mechanisms for reallocating faculty positions across academic units in order to strengthen select areas.
- e. Increase funding for new faculty positions by making this a priority of fund-raising.

**Objective 2:** Significantly increase the diversity of faculty through new hires and enhanced retention efforts.

*Rationale*: Diversity is a high priority over the next five years, important in principle given core values of the institution and of significant educational value to students and programs (see Appendix B). Having a more diverse faculty is also important because of the increasing diversity of the student body and larger society. The next five to ten years offer an unusual period of opportunity for Cornell to increase the diversity of its faculty, given prospective faculty retirements.

- a. Develop specific goals for gender, racial, and ethnic diversity of faculty in all units that take account of both the pool of available candidates (pipeline) and the importance of critical mass within units or fields
- a. Expand the pools from which we recruit faculty by more broadly defining faculty positions, wherever possible.
- c. To enhance pipelines of racially and ethnically diverse faculty candidates, develop stronger ties to faculty at institutions that historically educate African American, Hispanic, or Native American students.
- d. Ensure that colleges and departments give appropriate attention to diversity throughout the recruitment process, from the point at which positions are defined, to the short lists and interview lists, to the final decision stage.
- e. Develop in each college an efficient mechanism for monitoring progress in searches and retention (e.g., by assigning this task to an individual or faculty committee) based on accepted best practices.
- f. Make more proactive and expeditious efforts to reduce the departures of high-quality faculty who contribute to the gender and racial/ethnic diversity of the university community. [See objective 5 below.]
- g. Establish better funding mechanisms at the center of the university and in colleges to promote and encourage vigorous efforts to recruit, nurture, and retain a diverse faculty in terms of gender and race/ethnicity.

<sup>&</sup>lt;sup>10</sup> The university policy that precludes other university employment for a faculty member who is denied tenure may warrant reconsideration in order to allow dual-career-related exceptions under carefully defined conditions.

### **Objective 3:** Ensure competitive faculty compensation.

*Rationale*: The university has invested substantial resources over the last ten years to raise average faculty salaries to a competitive level among its peers, and it cannot afford to lose ground on this dimension.

### Actions:

- a. Keep average faculty salaries at or above the median among peer institutions.
- Benchmark and regularly assess fringe benefits to ensure that these remain abreast of the competition, including work/life issues.
- Assess and benchmark start-up packages and ongoing support for research, defining a set of peer universities for this purpose.

### **Objective 4:** Develop and implement policies to retain highly valued faculty.

Rationale: The competitive environment within higher education makes retention of outstanding faculty a critical issue and growing challenge. The most effective strategy is prevention, that is, ensuring that highly valued faculty have a vibrant intellectual environment, excellent students (undergraduate, graduate, and professional), and the resources to achieve their professional goals and aspirations. At the same time, it is important to be proactive and prompt when highly valued faculty are being courted or have offers from other universities.

### Actions:

- a. Enhance efforts to retain highly valued faculty by ensuring that they have strong support for their research, teaching, and public engagement.
- b. When working to retain highly valued faculty who have offers, be proactive by making counteroffers promptly and addressing work-life issues (e.g., dual careers) early.
- c. Make aggressive and extraordinary efforts to retain early- to mid-career faculty who are "rising stars" or highly promising or accomplished for their career stage.

**Objective 5:** Devise and implement new mechanisms or policies for rewarding outstanding faculty and for continually assessing faculty performance as scholars and teachers.

Rationale: To retain and nurture outstanding faculty (including non-tenure-track faculty), all available means of recognition and reward are important, not only salary. Relatively modest measures may reap significant benefits. This also implies well-understood methods or metrics of assessing the quality of the research, teaching, and public engagement, appropriate to the discipline or field.

- a. Develop a provost fund for providing special monetary rewards (bonuses, summer pay, and seed funds for research) for exceptional academic accomplishments.
- b. Assess whether there is sufficient merit differentiation in salary decisions within colleges and departments to reward faculty who already are or are likely to become leaders in their discipline or field.
- c. Develop a campus-wide effort to nominate candidates every year for national prizes, awards, and membership in distinguished societies.
- d. Give special recognition to and publicize faculty who receive distinguished academic awards and honors from their peers.
- e. Develop in each college or academic unit performance assessments for all faculty to promote excellence in faculty teaching, research, and public engagement and to ensure it is recognized and rewarded.

Objective 6: Foster an exciting intellectual environment by providing opportunities for more dialogue and engagement.

*Rationale*: The intellectual environment is critical to the attractiveness of Cornell and to the retention of faculty. A negative department culture is commonly mentioned in exit interviews, and, as one example of impact, this is a key factor in the departure of women from the faculty.

### Actions:

- Devise new ways to foster constructive dialogue on important intellectual issues among faculty, students, and staff within and across academic units.
- b. Promote intellectually rewarding cross-department, cross-college, or interdisciplinary collaborations among faculty.
- c. Develop a revamped faculty club on campus and ensure that there are conversation spaces for faculty, postdocs, and graduate/professional students across areas of campus.
- d. Assist department chairs in their efforts to create and sustain a positive department culture in which faculty engage in constructive exchange on their scholarship and work together effectively as department or program colleagues.

[NOTE: Also, see objective 6 under Staff Excellence.]

**Objective 7:** Develop ways to enable faculty to focus their time on being highly productive in their core academic activities (research, scholarship, and creativity; teaching; public engagement).

*Rationale*: In many areas, this plan proposes action items that require more faculty effort and time (e.g., on teaching excellence), and therefore it is important to re-assess how the institution is currently using the time of faculty. Every effort should be made to focus that time on teaching, scholarship, and public engagement. Below are several possible measures.

- a. Have the provost, deans, and department chairs review how they use faculty time to accomplish administrative tasks.
- b. Streamline university and college procedures that make substantial use of faculty time and draw them away from their core academic activities (e.g., reduce the number or size of faculty committees).
- b. Carefully consider the impact of staff on faculty productivity in their core academic activities when deciding staffing levels and functions.
- c. Develop creative ways to use new technologies to reduce administrative burdens on faculty.

### **Conclusion: Faculty Priorities**

Faculty renewal and faculty diversity are the two highest priorities here. Across the next ten years, it is reasonable to expect a significant proportion of current faculty to enter retirement—in 2008–2009, nearly half of Cornell professorial faculty members were 55 or older. Renewal of the faculty ranks is a major issue for the institution at a time when the capacity of the university to recruit faculty has been hampered by budgetary problems and the national financial downturn in 2008–2009. The large number of anticipated retirements also is an opportunity to increase the diversity of the faculty ranks at a rate faster than has occurred in the past. While there have been small-to-modest gains in the gender diversity of faculty ranks over the last ten years, there has been little progress toward greater racial and ethnic diversity. Forthcoming retirements offer an historic opportunity to build greater diversity.

Thus, the Strategic Planning Advisory Council proposes priorities based on objectives 1 and 2: (1) Enhance the capacity of the institution to recruit and rebuild an outstanding core of faculty in order to maintain and strengthen departments and programs, especially those that are strategically important to the university and have academic strength or potential strength that makes them worthy of investment. Increasing faculty size in strategically important academic areas, pre-filling positions when strategically advantageous, focusing on hiring new Ph.D.s or "rising stars," and dealing with dual-career problems created by our location are especially important actions here. (2) Substantially strengthen efforts to increase the diversity of Cornell faculty by setting explicit targets for gender and underrepresented minorities and by improving recruitment processes and accountability mechanisms from the start of a search to its completion. Efficient mechanisms are important to send consistent signals about diversity and to ensure that departments and colleges are held accountable for making progress. The action items for diversity (Objective 2) should be treated as a package.

### **Educational Excellence**

### Introduction

The emphasis of this section is (a) the excellence of faculty teaching, (b) international and public engagement aspects of education, and (c) the health and well-being of students. Faculty teaching is a component of the faculty excellence priority of this plan; involvement in international and public engagement experiences enables students to take full advantage of Cornell's educational breadth; and health and well-being are foundations or pre-conditions for academic and life success. Over the last 15 years or so, the university has invested heavily in the student living-learning environment and achieved great success in providing an impressive range of educational and co-curricular activities outside formal class work. Cornell has many outside-the-classroom educational and co-curricular activities (e.g., North and West Campus programs) beyond those treated in this plan. While such existing strengths should be maintained and nurtured, this strategic plan argues that, for the next five years, the university should give special attention to enhancing faculty teaching, enriching opportunities in the international and public engagement arenas, and promoting students' overall health and well-being. The health and well-being of students deserve special attention, because increasing reports indicate that excessive stress is negatively affecting students' learning.

### Objectives and Actions

**Objective 1:** Create and sustain a culture that supports teaching excellence in all academic units.

Rationale: Cornell, like most top-tier research universities, has a strong culture in support of research and scholarship. It should have an equally strong culture in support of outstanding teaching. Effective teaching is a central responsibility of departments and programs, and a key component of each individual faculty member's professional activity. This means, for example, that faculty members should remain actively involved in teaching across their careers, recognizing that loads may vary due to other responsibilities or research grant support. The institution needs to ensure that the best scholars are in the classroom, where they have an important impact on students' education and serve as good models for junior faculty. Involvement in mentoring and advising is also important. Moreover, "signals" from top to bottom of the institution need to convey consistently the value of effective teaching, advising, and mentoring.

- a. Ensure that all academic units have a robust form of assessment that generates full information, includes some type of student feedback and peer assessment, and provides feedback to teachers that enables them to improve their teaching continually.
- b. Strengthen Cornell's resources for instructional support, through integrated efforts that involve both central and college-based activities, so that faculty (especially junior faculty) have easy access to new pedagogies and "best practices" for being effective teachers.
- c. Recognize and celebrate in new ways pedagogical innovation and strong teachers who are responsive to students and rigorous in their approach to teaching.
- d. Ensure that academic leaders (chairs, deans, and the provost) communicate clear expectations about the importance of teaching and advising, and that they hold programs and individual faculty responsible for demonstrating teaching effectiveness (e.g., rewarding excellent teaching in resource allocations and salary decisions).
- e. Examine current policies on course reductions and "buy-outs" of teaching, and assess whether alternative forms of relief (e.g., from administrative and committee responsibilities) or monetary rewards (e.g., summer salary, research monies) can effectively substitute for course reductions.
- f. Ensure that senior faculty members with teaching appointments remain actively involved in and committed to teaching and mentoring students over their careers at Cornell.

**Objective 2:** Strengthen institutional structures that promote pedagogical innovations both centrally and within colleges and programs.

*Rationale*: Faculty have many reasons not to devote more time to enhance the innovativeness of their teaching, adopt new pedagogies, or experiment with new methods, given the opportunity costs of such time investments (e.g., time from research and other professional activities). There is a national market for excellent research, but no comparable market for excellent teaching, which makes the local institutional policies, practices, and priorities of particular importance for teaching.

### Actions:

- a. Strengthen the capacity (administrative and budgetary) of the office of the provost to facilitate and support educational innovations.
- Encourage faculty to experiment with new pedagogies (e.g., field-based learning) and new technologies, recognizing the different pedagogies appropriate for different disciplines and programs.
- c. Establish funds to provide summer salary or other forms of support to faculty with creative proposals for new courses that meet important educational needs of students and that cross intellectual boundaries.
- d. Encourage more courses that involve team teaching across colleges or disciplines within them by being more flexible about faculty teaching credits.
- e. Promote and support educational innovations beyond the classroom (e.g., service learning), taking advantage of Cornell's living-learning environment on campus and its public engagement mission and related programs.

Objective 3: Provide a more unified and shared educational experience for Cornell undergraduates.

Rationale: Cornell is the most educationally diverse research university among its peers. This objective is designed to increase the extent to which Cornell students experience that educational diversity by adding convergent or common intellectual experiences early in their time at Cornell. For example, these could involve additional living-learning programs on North Campus, common courses for Cornell students, or courses in colleges around a common theme. The idea is to promote a more fully shared educational experience at the university, while recognizing and building on the distinctiveness of college-based educational programs.

### Actions:

- a. Develop coordinated sets of core competencies in colleges and at the institutional level to help guide teaching and programming. [See Appendix C.]
- b. Create a series of common intellectual experiences within the first two years directed at core competencies, including living-learning programs and formal coursework.
- c. Have colleges reassess their programs and make appropriate revisions in their courses and course requirements to realize core competencies in ways that are suitable for particular colleges, disciplines, or interdisciplinary fields.
- d. Encourage students to cross college and program boundaries in pursuit of their educational goals, and encourage colleges to reduce the inherent difficulties (posed by transfer pricing policies and college constraints).

**Objective 4:** Strengthen the educational impact of international opportunities and experiences for students.

Rationale: International education and experiences could be a distinguishing feature of a Cornell education, especially when combined with field-based (service) learning and other ways that Cornell students can and do engage the world and encounter students from other cultures. Cultural awareness and sensitivity are important core competencies that international programs and experiences help to develop. We need to be clear about what we want students to gain from these experiences, and the development of learning outcomes (see Appendix C) will make this more feasible. International opportunities also are a way to increase the involvement of undergraduates in research. [See Appendix C.]

- a. Evaluate tuition, financial aid, and administrative structures for study abroad programs (external and Cornell-based) to ensure that they are affordable, sustainable and of high quality.
- b. As a complement to credit programs, expand noncredit opportunities such as international internships, global service learning, and summer work experiences with an important educational component.

- c. Assess the appropriate proportions of international students in programs, considering (i) the quality of the applicant pools, (ii) the educational value of having students from diverse international and cultural backgrounds interact with domestic students, and (iii) the costs of attracting the very best of these international students.
- d. Ensure that faculty participation and involvement in international programs (including study abroad) are sufficient to promote and sustain high-quality educational experiences for students.
- e. Create inter-university collaborations with top-tier universities abroad in order to foster two-way flows of students, while being selective about the number of such programs.

**Objective 5:** Promote the health and well-being of students (undergraduate, graduate, and professional) as a foundation for academic and life success.

Rationale: This objective is included because Cornell University has a rigorous and demanding educational environment, and students experiencing excessive pressures will have difficulty achieving academic success. Uncertainties in the job market and competition for post-graduate study further accentuate the stresses students face, making health and well-being programs even more important. Handling such pressures is an important part of the learning experience and is a life skill that Cornell should develop and nurture. Thus, the Strategic Planning Advisory Council believes that over the next five years, health and well-being of students should be a priority in the student services area. The following action items exemplify a few directions for achieving this objective.

### Actions:

- a. Promote a campus-wide culture in which asking for help is a sign of wisdom and strength.
- b. Ensure that there are sufficient resources for proactive outreach and intervention and timely availability of services to students experiencing excessive stress or showing evidence of mental health issues.
- c. Ensure that faculty, as teachers and advisors, recognize the importance of student health and well-being for learning, academic success, and general success in life.
- d. Make the health and well-being of students a community-wide responsibility by strengthening efforts to ensure that all members of the university community (faculty, staff, and students) have the information and training to recognize signs of excessive stress and know how to get assistance for themselves or others.
- e. As preventive measures for reducing isolation and alienation, develop new ways to foster closer ties between faculty and students (e.g., through improved advising, academic programming on North and West Campus), and a stronger sense of community among students within and outside of their formal class work.

Objective 6: Strengthen efforts to attract and educate an excellent and diverse body of undergraduate students.

Rationale: Attracting an excellent and diverse student body is a critical aspect of being a top university, and competition for students is growing. Having a diverse student body is integral to Cornell's core value of embracing difference and diversity (e.g., see Appendix B). Diversity generates important educational benefits because it brings students in contact with those different from themselves and gives them the experience of living in and learning from a diverse and collaborative community. This is particularly important in a global, multicultural society and world. Excellent, highly ranked departments and faculty are crucial to attracting students, as are competitive award packages. Below are several ways that Cornell can do a better job of highlighting certain university strengths to attract the most promising and diverse student body possible—especially by emphasizing the breadth and comprehensiveness of its programs and the opportunities for working closely with outstanding faculty. The implication is that in recruiting undergraduate students, the university needs to more effectively or consistently bring to the foreground the personal attention from faculty, research opportunities, and prospects for service learning available to students at Cornell.

- Maintain need-blind admissions and the competitiveness of financial packages for undergraduate students.
- b. In order to increase significantly the proportion of underrepresented minorities and also students from other cultures, develop targets and plans for enhancing diversity, as well as support mechanisms designed to facilitate and promote the academic success and retention of minorities at Cornell.
- c. Redesign the university web site to highlight the special opportunities that students have at Cornell to work closely with faculty and the wide variety of courses and programs available to Cornell students.

- d. In recruiting students, emphasize the capacity of Cornell to provide opportunities for undergraduate research (e.g., Presidential Research Scholars), study abroad, civic engagement, field-based learning, advising and mentoring by faculty, and the advantages of its living-learning environment.
- e. Expand (in collaboration with colleges) institutional mechanisms to involve undergraduates in research with faculty, and encourage faculty to actively involve undergraduates in their research projects.
- f. Develop more effective ways to ensure students have access to advising of high quality by, for example, developing "best practices" for faculty advisors, clarifying the appropriate role of faculty advisors, and making better use of the internet to compile information for students.
- g. Support strong efforts to build pipelines (e.g., through charter schools, summer programs, and the like) that significantly increase success in the recruiting of minority students.
- h. Explore whether some of Cornell's named scholarships could be used more effectively to enhance the yield among the very best applicants to Cornell.

**Objective 7:** Strengthen the capacity of graduate and professional programs to recruit and educate a diverse body of the very best students.

*Rationale*: The quality of graduate students is critical to the stature of departments and programs and to the recruitment and retention of faculty. Enhancing diversity is critical to building a strong pipeline of candidates into the academic fields. The emphasis here is on maintaining the university's competitiveness (the first three items) and improving the field system. <sup>11</sup>

### Actions:

- a. Maintain competitive stipends and health benefits for graduate students.
- b. Make fellowships more widely available to entering Ph.D. students, especially in disciplines or fields that are high in quality and important to the university, and where fellowships are essential to maintain competitiveness.
- Examine the feasibility and trade-offs of continuing to reduce graduate tuition rates to the levels of peer institutions.
- d. Develop a stronger, more organized web presentation on graduate education at Cornell that highlights Cornell's research infrastructure, its distinguished faculty, and the opportunities for collaborative and interdisciplinary work.
- e. To increase significantly the proportion of underrepresented minorities in graduate programs over the next five years, establish targets for diversity and develop plans for achieving them in graduate fields and professions where women and minorities are underrepresented.
- f. Consolidate graduate fields or reorganize small fields into clusters if and when such reorganizations have a strong academic justification, create a "critical mass" of graduate students, and enhance the research of Ph.D. students.
- g. Create effective mechanisms at the institutional level for supporting the development of graduate students as teachers, including the possibility of seed funds if needed to promote development and preparation.
- h. Expand professional master's programs where market-based opportunities dovetail with the academic strengths of a Cornell program, taking account of any adverse effects on current programs of high quality.
- Develop regular mechanisms at the institutional level for assessing the quality and impact of professional master's programs.

[NOTE: See Objective 1 under Public Engagement.]

<sup>&</sup>lt;sup>11</sup> A 2007 document, entitled "A Vision Statement for a Graduate Community Initiative" (GCI) and commissioned by the Graduate and Professional Student Assembly, makes a number of recommendations for improving the support for and services provided to graduate students. These include proposals for a Graduate Student Center and Graduate Resource Center that would enhance institutional career services for graduate students. The GCI document warrants continued discussion and consideration by the university, with appropriate weighing of the financial trade-offs.

### **Conclusion: Education Priorities**

While all of the objectives are important to move on in some way, *improving teaching*, enhancing the *diversity* of the student body, and nurturing *student health and well-being* are the priorities proposed by the Strategic Planning Advisory Council for the next five years. Overall, Cornell should strive for a commitment to excellence in teaching that is unsurpassed among major research universities. This requires a university-wide cultural shift. Specifically: (1) *Creating a culture of support for teaching across each and every academic unit of the university,* by consistently aligning symbolic signals, assessments, opportunities for innovation, faculty rewards and recognition, and the teaching components of graduate education.

In addition, (2) it is important to increase the diversity of the undergraduate and graduate student body, both to improve the quality of the education that Cornell undergraduate and graduate students receive and to build on the fact that the university is an influential pipeline for diversity into occupations and professions where minorities or women are underrepresented. Finally, given the pressures faced by students today at major research universities, Cornell University should enhance efforts to (3) foster health and well-being of students through greater awareness of health issues, proactive outreach to address excessive stress, and stronger ties between faculty and students. These three priorities, along with others here and in subsequent sections, will contribute to providing students a distinctive education that appropriately leverages Cornell's uniqueness and strengths.

# Excellence in Research, Scholarship, and Creativity

### Introduction

This section emphasizes the importance of raising the quality and stature of select departments to a position of academic leadership and of providing support for research, scholarship, and creativity in a careful, strategic, and cost-effective way. The latter is particularly important because of the increasing costs of research, the competitive environment for external support for research, and the financial pressures on areas with less potential for external funding (i.e., humanities and the arts).

### Objectives and Actions

**Objective 1:** Increase the number of Cornell departments or graduate fields that have achieved world leadership in their areas.

Rationale: In the short term, this is imperative to preserve academic excellence, even in a period of limited resources. For the longer term, a distinguished institution of higher education must achieve leadership in a significant number of departments, disciplines, or fields. In 1995 National Research Council (NRC) rankings, nineteen of Cornell's graduate fields were ranked in the top ten (in the U.S.), and currently four of Cornell's professional schools or programs are ranked first or second in their respective fields. A set of well-understood and transparent criteria is needed to define the academic success and stature of departments and graduate fields.

### Actions:

- a. Increase by at least five the number of disciplines or graduate fields in the top ten among U.S. peers using criteria such as those specified by the National Research Council (NRC); maintain the current number one ranking of several Cornell schools or colleges; and move at least one professional school into the top ten among its peers.
- b. Identify and support departments that become or already are world leaders in their disciplines or fields.
- Develop better data, criteria, and procedures for evaluating and tracking the quality of research, scholarship, and creativity of faculty, departments, and colleges.
- d. Require departments to develop strategic plans for enhancing or achieving academic distinction and leadership.
- e. Selectively invest in departments that demonstrate the greatest capacity to build on current strengths and achieve new intellectual heights in research and graduate education and disinvest in those with the lowest capacity.

**Objective 2:** Build and maintain world leadership in a select set of departments within the following broad areas: humanities and the arts; life sciences and agricultural sciences; physical sciences and engineering; social sciences; and professional schools and programs.

Rationale: Cornell must achieve and maintain academic distinction in a reasonable representation of departments within these broad areas, given the breadth and comprehensiveness of its mission. This implies that it is important to set priorities among departments and programs within these groupings. It is also critical to promote greater coordination and collaboration that enhance opportunities for departments to improve their stature. Cornell's history of academic distinction in several professional schools, which interweave the pursuit of fundamental knowledge with its use and impact on the world, also should be enhanced and nurtured. While it may not be feasible for every department to reach the pinnacle in its field, each should have aspirations that are ambitious yet realistic.

### Actions:

a. In order to develop new academic initiatives and advice on fields for strategic investment or disinvestment, use current *internal advisory groups* for the life sciences and social sciences and establish internal faculty advisory groups for humanities and the arts, physical sciences and engineering, and agricultural sciences drawing on the diversity that exists in these groups of faculty.<sup>12</sup>

<sup>&</sup>lt;sup>12</sup> An important role of these internal advisory groups should be to identify areas of strength to build and strengthen. Recently, the Life Sciences Task Force Report (October 1, 2009) identified three such areas for the life sciences: computational biology; genetics and genomics; and molecular and cellular biology. The Social Sciences Task Force (October 1, 2009) recommends public policy for the social sciences. This strategic plan is intentionally silent on whether these are optimal areas for the life sciences or social sciences respectively. Exploring or developing such ideas further should be a key responsibility for ongoing internal advisory groups of faculty, charged with advising the university administration on specific academic directions within and across the disciplinary groups and professional schools and programs. Whereas such groups already exist for the life sciences and social sciences, they do not exist in the other areas.

- Consider more formal cross-college structures of coordination (e.g., steering committees, shared departments, super-departments, mergers) in disciplines or fields where these would significantly enhance academic excellence and reputation and/or improve the utilization of faculty resources.
- c. Encourage efforts of professional programs and schools to enhance academic quality and generate ties of mutual benefit to basic disciplines.
- d. Eliminate, consolidate, or downsize academic departments or programs that (i) are no longer strategically important to the university, or (ii) are of weak quality and do not have the prospect of becoming strong in a reasonable period of time.
- e. Promote and support new initiatives that develop "cutting-edge" research and scholarship synergies across these academic groupings (e.g., life sciences, physical sciences, and engineering; humanities and social sciences; life sciences and social sciences; professional programs and basic disciplines).

**Objective 3:** Strengthen support for and recognition of important interdisciplinary areas, while ensuring excellence in disciplines as a foundation.

Rationale: Interdisciplinary research including international area studies, grounded in strong disciplines, is an historic strength of Cornell. Interdisciplinary work is important to remaining in the forefront of scholarship and research and to contributing to solutions for societal challenges (e.g., poverty, environment). Moreover, interdisciplinary research and scholarship are ways to enhance or leverage the distinctiveness of Cornell and to act as "one university." It is important to stress that strong disciplines are a necessary condition for strong interdisciplinary efforts or programs.

### Actions:

- a. Encourage departments to (a) recruit faculty likely to have an impact beyond the hiring unit, and (b) include faculty from more than one discipline or college on faculty search committees.
- b. Ensure support and encouragement for untenured faculty whose scholarly work extends beyond traditional department structures, including clear expectations that their interdisciplinary or crossdepartmental research will be fairly evaluated in renewal, tenure, and promotion decisions.
- c. Promote grassroots development of new interdisciplinary initiatives by improving the capacity of colleges and the provost's office to identify, set priorities among, and nurture interdisciplinary efforts emerging from the faculty.
- d. Establish more effective procedures for encouraging and supporting the preparation of interdisciplinary proposals for external grants, traineeships, or contracts with a broad impact across departments and colleges.
- e. Regularly assess interdisciplinary programs to ensure that they involve faculty from multiple academic units and are magnets for excellence; and phase out those that do not meet rigorous standards.
- f. Examine whether existing seed funds across campus are being used effectively to stimulate major new interdisciplinary initiatives.

**Objective 4:** Significantly improve institution-wide services for the administration and support of research grants (including government, foundation, and industry funding).

Rationale: The university needs to minimize administrative burdens on researchers and work to facilitate better their capacity to compete for research funding. Such investments could be paid back promptly by increasing grant support across the university. University-wide efforts and practices should foster and sustain a culture of proactive, solution-oriented, collaborative, customer-focused administrative services where actively consulting and partnering with researchers is the norm.

- a. Identify and eliminate administrative barriers to successful competition for external funding, including those associated with the negotiation of intellectual property.
- b. Develop and successfully implement financial accounting and research administration systems in a manner that identifies and meets the needs of all stakeholders: administrators, faculty, and support staff both in units as well as centrally.

<sup>&</sup>lt;sup>13</sup> For example, the Management Programs Task Force of October 5, 2009, suggests ways to interlink Cornell's three accredited business programs, and the Social Sciences Task Force Report of October 1, 2009, identifies a range of different models for strengthening connections within social science disciplines that crosscut colleges.

- c. Keep abreast of external regulatory trends (and proposed changes) and ensure that the regulatory requirements are adequately met, but be careful not to impose unnecessary bureaucratic constraints on investigators.
- d. Develop and maintain efficient staffing structures for research administration across campus in order to handle the administrative aspects of the research process as much as possible (e.g., for proposal development, financial management, contract management, protocol administration, human subjects review, data stewardship, and hiring).
- e. Establish clear expectations, qualifications, and competencies for research administrators and train or hire highly qualified individuals to serve in these roles in all colleges.
- f. In support of excellence in research, review performance of research administrators with established performance standards, including customer satisfaction and assessment by researchers and college research officers.
- g. Effectively participate in advocacy directed at funding agencies in support of the needs of higher education, principles of academic freedom, and capacities to conduct fundamental research.

**Objective 5:** Maintain and selectively strengthen in cost-effective ways the core infrastructures for research, scholarship, and creativity, including in particular libraries and shared research facilities.

Rationale: The financial challenges of the institution are exerting significant pressures on these resources, which are essential to the recruitment and retention of outstanding faculty and to Cornell's academic reputation. The libraries are a well-recognized strength of the university, and Cornell has exercised national and international leadership in the development of "state-of-the-art" shared research facilities. In light of constrained resources, it is important to define and track the changing needs of diverse users of these facilities and to invest selectively to ensure effective and efficient support for faculty and student research.

### **Objective 5A.** *University Library*

Rationale: The library is foundational to excellence in virtually all departments and programs. It is the "core facility" for humanists who, in particular, need access to books and monographs; natural and social scientists need access in particular to digital resources, open source journals, and the like. It is also important to emphasize that the libraries are integral to the educational experience of students at all levels. However, recent cuts to the budget for library acquisitions and burgeoning publication costs have threatened the competitive standing of Cornell's library, and this problem could hamper attempts to recruit outstanding faculty, especially in the humanities. Strengthening the collections and ensuring that they are at a competitive level should be a high priority, as should be a recognition and understanding of the differential needs in the sciences, social sciences, and humanities.

### Actions:

- a. Assess how the university libraries are supporting the research and scholarship of faculty.
- b. Develop deeper engagement between faculty and librarians across campus in order to identify priorities for collection building; to enhance support for new, under-supported, or interdisciplinary fields; and to respond to emerging needs in areas such as data curation, visual resources, and digital culture.
- c. Ensure that collaborations and partnerships with other libraries serve the needs of faculty and students at Cornell and strengthen faculty scholarship and productivity.
- d. Examine and track the library needs of students (undergraduate, graduate, and professional) to ensure strong services to support their academic work.

### Objective 5B. Shared Research Facilities

*Rationale*: Cornell should strive to remain a leader in the development and provision of core research facilities for local, national, and international science communities. Financial pressures and constraints mean that strategic choices will need to be made. The action items below suggest some guiding principles.

### Actions:

a. Selectively maintain and promote core shared facilities in the sciences and social sciences, taking account of the research needs of local, national, and international scientific communities, external funding opportunities, and cost efficiency.

- b. Review the university's investments in shared research facilities on a regular basis to ensure that these facilities maximize impact on the productivity and reputation of the university in national and international domains.
- c. When investing central resources to support shared research facilities, give priority to those facilities that have external matching funds and those that serve multiple research groups on and off campus in order to enhance Cornell's academic stature.

**Objective 6:** Encourage productive, mutually beneficial collaborations between faculty and students in Ithaca-based programs and faculty and students at Weill Cornell Medical College and Graduate School.

Rationale: The geographical separation of the university's main campus and the medical school creates special challenges and makes it difficult to take full advantage of potential synergies in research, teaching, and clinical programs. Some challenges are historical and cultural and others are administrative. Historically, Cornell's Ithaca-based campus and the medical school have had few academic ties across related disciplines or fields, and administratively, there are unique and special obstacles to collaboration. This is changing, in part because of new capabilities in electronic communication and intercampus transportation, and in part because of increasing potential for cross-fertilization between basic and applied biological sciences (e.g., importance of "translational research") and between engineering and medical fields. Recent examples of growing collaborations include joint retreats, collaborative seed grants in biomedical science, and dual faculty appointments. Such collaborations can generate "value added" results in research and strengthen the university's competitive position in the recruitment and retention of faculty. It is important to continue and to nurture this momentum over the next five years. The actions below exemplify some of the important steps to enable fruitful collaborations among the faculty.

- a. Develop mechanisms that allow graduate students to engage in research and coursework on both campuses by addressing issues such as academic requirements, student housing, and health insurance.
- b. Identify areas of common and complementary interest between the life sciences and other academic disciplines, and nurture these by encouraging joint retreats or joint seminars among interested faculty in both locations.
- c. Assess the main administrative barriers to collaboration by faculty and students and to joint externally funded research projects, and work to resolve those.
- Explore additional joint recruitment efforts and joint appointments that would be of mutual advantage to Cornell's Ithaca-based and Weill Cornell programs.

### **Conclusion: Research Priorities**

The Strategic Planning Advisory Council recommends three interrelated priorities for research, scholarship, and creativity. First and foremost is (1) to selectively nurture and build world leadership in a greater number of departments within each of the major academic groupings: life sciences and agricultural sciences; physical sciences and engineering; social sciences; humanities and the arts; and professional schools and programs. Focus is needed within each of these areas, but to reach the aspirations of this plan, it is important to achieve world leadership in more departments. Building innovative bridges across them may be critical (e.g., physical and life sciences, life and social sciences, humanities and the social sciences). This is a longer-term priority, whereas the next two address immediate problems or needs.

Those immediate problems involve the university libraries, shared research facilities, and support for externally funded research grants. (2) As indicated by Objective 5, the university libraries and shared research facilities need special attention over the next five years because of financial pressures on these core infrastructures and the changing and varied needs across disciplines and fields. Given the prospective costs of such facilities, the university needs to be focused and strategic in how it defines and works to meet the current and future needs within and across disciplines and fields. Finally, (3) as indicated by Objective 3, it is important to make expeditious changes in how the university supports and administers external research grant funding (see relevant action items). Solving such problems should yield benefits in the form of greater external research funding that could offset the additional costs required. The second and third priorities are important to the first but also to the recruitment and retention of outstanding faculty.

# **Excellence in Public Engagement**

### Introduction

Public engagement refers to the proactive involvement of faculty, students, and staff designed to have an impact on the world outside the university, from local to global communities. It subsumes the full panoply of ways that Cornell's faculty, staff, and students make meaningful contributions to local, societal, and global issues (e.g., problems of environmental sustainability, health, and poverty), from participating in public discourse or the performing arts to applied research and formal extension programs. Conceiving of the university's outreach mission as "public engagement" is an important shift because it recasts that mission in broader and more inclusive terms. <sup>14</sup>

### Objectives and Actions

**Objective 1:** Make public engagement a distinctive feature of education at Cornell.

*Rationale*: Cornell has a unique capacity to interweave public engagement with its educational and research programs for students, given its status and history as a private university with a land grant mission. An integration of fundamental science with application of that knowledge and its use for the public good should be a distinguishing feature of Cornell programs.

#### Actions:

- a. Explore and assess whether or how engaging the world can become a more integral component of educational programs across campus.
- b. Strengthen the participation and leadership of faculty in public engagement programs available to students.
- c. Find new ways to work with Cornell alumni to expand the opportunities of students to engage the world (e.g., through internships, having alumni speak in classes, etc.).
- d. Ensure that it is easy and efficient for students to become aware of and access information about public engagement opportunities (e.g., service learning, internships) that serve their educational goals.
- e. Develop better institutional mechanisms for coordinating off-campus, non-classroom teaching and field-based or service learning opportunities for faculty and students.
- f. Evaluate the organizational structures through which Cornell makes available internships, educational work opportunities, and other off-campus learning to determine how they can be improved.

**Objective 2:** Construct a unified concept and vision for the university's public engagement mission.

Rationale: The educational and research activities of the university's outreach efforts are highly fragmented. For example, public engagement includes formal extension programs; translational research; clinical programs; technology transfer; education programs such as service learning; international engagements; and faculty involvement in public policy or as public intellectuals. This plan calls for greater connectivity among many of these disparate programs and activities, without introducing new central administrative structures or constraining academic entrepreneurialism. The administration of public engagement should be as lean as possible in order to enable a "bottom-up" entrepreneurial spirit to blossom.

- a. Embrace a broad and inclusive definition of the land grant mission of the university that is directed at local, state, national, and global communities.
- b. Recognize and highlight the public engagement of faculty across endowed, contract, and medical colleges.
- c. Develop university-wide mechanisms to promote interconnections across forms or types of public engagement (e.g., extension, technology transfer, translational research, clinical programs, international programs, and service learning) without introducing new centralized structures.
- d. Develop an integrated and more user-friendly web portal for delivery of public engagement programs and activities, including extension.
- e. Make better use of electronic and other media to foster greater public recognition and appreciation of Cornell's public engagement accomplishments.

<sup>14</sup> The term "public engagement" is adopted from President David Skorton's "State of the University" address (October 23, 2009).

f. Engage stakeholder groups and appropriate partner agencies in assessing and planning for the future of publicly supported extension activities.

**Objective 3:** Develop rigorous, systematic evaluations of all outreach and extension programs.

Rationale: Given objectives 1 and 2, there is need for an inventory and assessment of public engagement activities across campus. This should inform the development of a unified concept for Cornell's public engagement mission and help to identify new opportunities for public engagement to become a part of Cornell students' experience. An institution-wide approach to this assessment and common set of criteria would be important as would ongoing methods of gathering information on quality and impact.

### Actions:

- Develop explicit criteria for evaluating programs that emphasize quality, importance to the university, and impact on society.
- b. Include an external-review component in regular evaluations of outreach programs.
- Establish an institutional mechanism for collecting data and information on the quality and impact of
  extension and outreach programs and for conducting evaluations.

**Objective 4:** Strongly connect public engagement to on-campus research and educational strengths.

Rationale: The strengths of the outreach mission derive from the research and educational strengths of the university and the capacity of the institution and its faculty to build and sustain enduring collaborations with stakeholders. Emphasizing the ties to on-campus research and education is an important way to establish boundaries for outreach, enhance its quality, and bring more focus and coherence to the university's public engagement programs. This should be a guiding principle and key criterion in the assessment proposed by Objective 3.

### Actions:

- a. Emphasize evidence-based or scientifically based extension and outreach efforts that meet the educational or informational needs of stakeholders (ranging from local communities to New York State to international arenas).
- b. Make research an overarching theme for interconnecting community-based extension programs with on-campus research as well as with basic and applied science in the life sciences, agriculture, engineering, and medicine.
- c. Invest in and build on public engagement programs with strong, mutually beneficial ties to research and educational programs on campus, particularly those that can be funded by external grants, and reduce focus and resources directed at programs without such ties or the potential for external grants.
- d. Develop enhanced strategic partnerships between on-campus education programs and community-based extension and outreach.

**Objective 5:** Promote stronger collaborations and partnerships between the university and stakeholders that can make use of and strengthen Cornell's research (e.g., business, K-12 schools, nonprofit organizations, government).

*Rationale*: Partnerships with stakeholders are an important way for the university to identify policy-related problems and effectively bring the research expertise of faculty to bear on them. Strong outreach and extension programs tend to require productive two-way interactions between researchers and stakeholders.

- Establish a clearly enunciated philosophy and policy concerning intellectual property and technology transfer.
- b. Improve university mechanisms for making technologies and knowledge that can be defined as public goods readily available to those who can benefit from them (e.g., business, industry, government).
- c. Encourage the development (e.g., in licensing agreements) of ongoing relationships between Cornell researchers and those who use Cornell research innovations for commercial purposes.
- d. Promote and support collaborations between faculty and local schools that contribute to the quality of K–12 education in New York State.
- e. Strengthen collaborations with Cornell alumni in order to promote and enhance the public impact of faculty research on the world.

- f. Explore new partnerships with state, regional, and national industries in order to promote economic development.
- g. Build a stronger footprint or base for Cornell's education, research, and outreach programs in New York City.

### **Conclusion: Public Engagement Priorities**

Public engagement subsumes a complex and wide array of disparate programs and activities, formal and informal, with varied ties to academic strengths on campus. In the absence of an assessment, it is difficult to make firm judgments about which types of programs are most important and which are least important for the future. The most immediate and fundamental issue, therefore, is expressed by Objective 3. More specifically: (1) *Implement a rigorous assessment of the quality and impact of all public engagement programs with the purpose of deciding where to invest and where to disinvest in the future*. This assessment should be framed by a broad, inclusive concept and definition of public engagement (see Objective 2) that gives particular weight to how well public engagement connects to the research and educational strengths of the university (see Objective 4).

The quality of public engagement is founded on Cornell's academic strengths, yet excellence in public engagement can facilitate and enhance research and education in important ways, i.e., there can be reciprocal effects on quality. With this in mind, the second priority is (2) *Make public engagement a more integral component of Cornell education and research across campus*. This may not apply equally to all programs, but it should be pursued where feasible and, again, with a broad, inclusive definition of public engagement. This should enhance the distinctiveness of education and research at Cornell by taking better advantage of the fact that Cornell interweaves a private, Ivy League research university with a substantial public service mission, stemming from its history as a land grant institution.

### **Staff Excellence**

### Introduction

Staff excellence is a critical component in virtually all of the university's academic and nonacademic activities. From postdoctoral fellows to supervisors to administrative assistants and the custodians, staff are essential to achieving the central mission of the university. Many staff, in fact, have daily contact with students and contribute significantly to the overall educational experience of students (e.g., in career, health, counseling, and advising services). Cornell's core values suggest the creation and maintenance of a workplace that provides respect, dignity, and fairness to all employees across all job classifications and units. Moreover, Cornell has a history of constructive relations with its academic and nonacademic and union and nonunion staff, as reflected in its commitment to a fair and humane workplace. Due to budgetary reductions, however, the recent period has been marked by staff reductions through retirements, attrition, and layoffs, and this has generated heightened levels of uncertainty among staff. This is a context in which to view the objectives and actions below.

### Objectives and Actions

**Objective 1:** Give priority to retention of highly qualified staff in valued positions as the university reorganizes to address budgetary constraints.

*Rationale*: In light of constrained resources, the importance of retaining highly qualified staff and the most important positions is greater than normal.

### Actions:

- a. Reward staff who assume additional duties due to the reductions in staff and who continue to excel during difficult times.
- b. Identify positions that will be needed through the administrative reviews being conducted during the 2009–2010 academic year.
- c. Clearly define skills and talents needed to excel in these positions and accurately define positions to reflect expected outcomes.
- d. Identify career ladders and training opportunities for advancement.
- e. Provide staff annual performance reviews that accurately and honestly assess performance in current positions and identify development plans for growth.
- f. Align annual and ongoing salary increase programs to performance, and maintain a clear focus on a total compensation philosophy that will attract and retain top talent.

Objective 2: Attract a talented and diverse workforce to Cornell.

Rationale: Diversity is a fundamental value of the university (see Appendix B) that applies to staff as well as to faculty and students.

- a. Ensure, and continuously reinforce by training and communication, that hiring supervisors at all levels are aware of the operational advantages of a diverse workforce.
- b. Ensure that effective procedures are in place for reviewing positions, assessing short lists of candidates, and including diversity impact as a factor in hiring decisions.
- c. Create and share successful strategies for attracting diverse candidate pools (including more use of networks to identify candidates).
- d. Assign all new hires a mentor/advisor for 90 days.
- e. Develop and implement diversity plans for units in consultation with those units.
- f. In such plans, include explicit goals for gender, racial, and ethnic diversity for job categories in which these groups are underrepresented.
- g. Create accurate position descriptions and career path models so that new hires understand their positions and see career opportunities for the future.
- h. In order to understand better how to retain women and underrepresented minority staff, particularly in upper management positions, regularly assess their experiences at Cornell.

 Assess orientation programs at the university and unit levels to ensure that they are informative and enjoyable, so that new employees reach peak efficiency as soon as possible and feel welcome and valued in our community.

**Objective 3:** Be an exemplary employer across the entire spectrum of staff.

*Rationale:* Cornell has been recognized for the quality of its human resource programs, and it is important to maintain and build on its strengths in human resources.

- a. Promote family-friendly policies and practices across academic and non-academic units of the university.
- b. Recognize and celebrate the value and contributions of staff across all job groupings or classifications.
- c. Continue the university's commitment to pay all employees an hourly "living wage."
- d. Ensure that unit leaders enable all employees to take full advantage of the staff training and development opportunities.

**Objective 4:** Provide job skill training to staff in a variety of venues.

*Rationale*: Providing staff the opportunity to advance their careers, develop their talents, and improve their lives is an important aspect of being a good employer. It is also important to accomplish this in a way that actually does enhance the promotion opportunities of staff.

### Actions:

- a. Increase the current job-skill offerings through the Division of Human Resources and track usage, reporting to the college/unit leadership on a regular basis.
- b. Make greater use of online short courses and training to develop needed skills and talents.
- c. Encourage staff to take advantage of the university "health and well-being" programs.
- d. Tie training to identified development plans obtained in annual performance appraisals.
- e. Require supervisors to undergo training in basic supervisory skills and to refresh and update those skills on a regular basis.

**Objective 5:** Sustain and, wherever possible, enhance flexibility in the workplace and workforce.

*Rationale*: Flexibility is essential to manage work efficiently, to ensure a healthier workforce, and to support work/life balance. Different approaches or structures are likely to be required in different units, so policies and practices need to be adaptable at the local unit level.

### Actions:

- a. Reassess job design and work allocation processes in light of recent declines in the university workforce.
- b. Create more collaborative, team-oriented units or work settings in which staff explicitly share responsibility for outcomes, have complementary skills, and have the capacity (talents) to substitute for each other.
- c. Encourage supervisors to make arrangements for staff to be away from their work, if necessary, for purposes of professional development.

**Objective 6:** Work with the local community to keep Ithaca and Tompkins County vibrant places to live and work.

*Rationale*: The university and the community are highly interdependent in this respect. A vibrant community is important for many practical reasons, not the least of which is its role in the attraction and retention of outstanding faculty and staff.

- a. Promote affordable housing and accessible transportation for members of the university community.
- b. Encourage faculty and staff to contribute time and effort to maintaining and strengthening the quality of local schools.
- c. Encourage "volunteerism" of university members on behalf of the local community.

### **Conclusion: Staff Excellence Priorities**

The Strategic Planning Advisory Council finds it difficult to choose priorities among these objectives. All are important to pursue in some way over the next five years if Cornell is to remain a model employer, as affirmed by recent awards. However, among these important objectives, one stands out above all of the others given the priorities in previous sections: *attracting a diverse staff*. This objective is consistent with a key theme of the plan, namely, to enhance the racial, ethnic, and gender diversity in the community as a whole. Staff diversity is an important component of this effort, and in many areas, staff have a direct impact on the student experience at Cornell.

#### Section V

# Strategic Initiatives

This section proposes university-wide initiatives directed at the main priorities of the strategic plan. The highest priority of this strategic plan is faculty excellence. This is the principal pathway for sustaining and building the preeminence of Cornell University and for achieving the longer-term aspiration of this plan. A faculty excellence priority is also timely given the challenge and opportunity of renewing the faculty ranks as roughly one-third to one-half of the faculty retire over the next ten or so years. Faculty excellence in this plan means excellence in *both* scholarship and teaching. As indicated in earlier sections, teaching excellence is a critical component of faculty excellence.

The top-ten aspiration for Cornell, as a single entity, implies that special attention and focus be given to research, scholarship, creativity, and graduate education over the next five years. These are the principal foundations for university stature and reputation, and they are contingent on the quality of the faculty. The research and graduate education focus must be implemented without sacrificing the centrality and importance of undergraduate education. The Strategic Planning Advisory Council believes strongly that there is no necessary trade-off between research and undergraduate teaching; scholarship and teaching are inextricably bound together in a research university. Moreover, Cornell should continue its efforts to have the very best undergraduate education among first-tier research universities.

With these priorities in mind, below are seven strategic initiatives and a series of steps to initiate work on them. These crosscutting, university-wide issues should be addressed as *One Cornell*, although the implementation and success of these initiatives will require consultation with and the support of deans and faculty in colleges, departments, and fields. The Strategic Planning Advisory Council intends these strategic initiatives to be collaborative efforts involving faculty, deans, and the provost, as well as students and staff where appropriate.

#### 1. Renew the faculty in the context of academic priorities and forthcoming retirements.

- a. Identify high-quality academic units of significant importance to the college and university where the age distribution of a department could lead to a substantial loss of faculty excellence over the next ten years or so.
- b. Develop multi-year hiring plans for those academic units that emphasize the recruitment of "rising stars" and promising new Ph.D.s, and generally do so in the context of the college's longer-term plans for faculty sizes across units and for the college as a whole.
- c. Create the resources to support these hiring plans through fund-raising, internal reallocation within colleges, and a central fund in the provost's office to assist colleges by selectively "pre-filling" on future retirements.
- d. Make proactive efforts to ensure that outstanding Cornell faculty are rewarded and supported in ways that reduce their motivation to pursue outside opportunities.
- e. Mitigate the disadvantages of a small, isolated university community with extraordinary dual-career efforts, and leverage the advantages by enriching collaborative intellectual communities among Cornell faculty, staff, and students.

# 2. Identify a few departments or graduate fields of critical importance to the university and move them into a position of world leadership while working to prevent others from losing such stature.

- a. Ask colleges (deans in consultation with their faculty) to identify departments or graduate programs that are strategically important and on the cusp of leadership or on the verge of losing it.
- b. Seek the advice of faculty advisory committees regarding whether or not to invest in the department or unit.
- c. Where the answer is in the affirmative, develop a plan for raising the quality and stature (or preventing a decline) of that department or program over the next five years.
- d. If necessary, reallocate faculty positions or resources from other departments and programs in order to secure a position of academic leadership for the chosen departments.

#### 3. Create a culture in support of teaching in every department across campus.

c. Survey policies and procedures used by departments and colleges to support and encourage excellence in teaching, and identify good models on campus.

- d. Ask deans, department chairs, and faculty to assess their policies, procedures and symbolic signals about teaching, using the models identified above as benchmarks (or others they deem more appropriate for a particular discipline or area).
- e. Identify departments and programs for improvements in teaching and provide targeted instructional support designed to foster higher-quality teaching and a stronger teaching culture.
- f. Ensure that there is sufficient, well-integrated support at the center and in colleges to promote excellence in teaching and to develop junior faculty as teachers.
- g. In consultation with faculty, develop indicators (quantitative or qualitative) for regularly assessing progress, appropriate to the discipline or department, and report to the department chair and dean on that progress.
- h. Consider the quality of teaching and the strength of the teaching culture as significant factors in the allocation of resources to departments by colleges and to individual faculty by departments.

# 4. Develop stronger connections or ties across colleges that enhance educational opportunities for students and the quality and stature of disciplines or fields.

- c. Review the academic necessity and justification for policies and procedures that limit or create obstacles to the capacity of students in one college to take courses in another.
- d. Make it easier to arrange and sustain joint appointments of faculty across colleges, especially those that strengthen the quality and stature of an academic discipline or area.
- e. Develop new mechanisms of coordination or connectivity in academic areas or disciplines within and across the life sciences and agricultural sciences, social sciences, humanities and the arts, and physical sciences and engineering.
- f. Use internal faculty advisory committees to develop ideas for new synergies across disciplines or disciplinary areas.

# 5. Develop and implement strategically focused, cost-effective enhancements to the infrastructure support for research, scholarship, and creativity—including the libraries, shared research facilities, and the administration of research grants.

- c. Define the relevant indicators or measures for assessing the library infrastructure for scholarship and education, and set a goal of Cornell having a library ranked in the top ten among university libraries in these terms.
- d. Develop a plan with significant faculty involvement to assess the library needs of different disciplines and how best to meet those needs in a cost-effective manner over the next five years.
- c. In recognition of the critical role of shared facilities, locally and nationally/internationally, develop a plan that defines future needs and includes a realistic assessment of funding options and sources.
- d. Strengthen the administration and support for research grants, and consult regularly with faculty and postdocs to track success and solicit suggestions for improvement.

#### 6. Make significant progress toward greater diversity among faculty, students, and staff.

For Faculty:

- a. Set explicit goals based on absolute criteria or the pipeline (whichever is greater).
- b. Assess current recruitment policies and practices to determine how they can be changed to generate more diverse candidate pools and to ensure that diversity impact is considered at each step of the recruitment process.
- c. Assign to a person or committee the responsibility for tracking progress and for reporting to the unit chair or college dean.
- d. Ensure that deans hold departments accountable for progress toward their goals and that the provost holds deans accountable for progress in their colleges.

#### For Staff:

The principles and steps are identical to the above for professional- and management-level positions, given a national market. For other job categories, where markets are local and pools are extremely thin, it is most important to ensure that those in an underrepresented category (e.g., a female painter or male kitchen worker) receive fair consideration.

#### For Students:

- a. Set explicit goals for yearly growth in the proportion of underrepresented minorities among the undergraduate student population, and in the proportion of women and minorities in graduate and professional fields where they are underrepresented.
- b. Assess the adequacy of current programs for recruiting minorities and for ensuring a hospitable and supportive environment for minorities on campus.
- Strengthen programs that support, encourage, and recognize the academic achievements of minority students.

# 7. Strongly connect public engagement with Cornell's areas of strength in research, scholarship, and education.

- a. Inventory the public engagement components of academic programs, defining these in broad terms (see Public Engagement in Section IV).
- b. Identify a range of models for public engagement in different academic disciplines, departments, or areas and ask departments and their faculty to consider the value and appropriateness of these models (or others they deem more relevant) for their programs and their students.
- c. Develop innovative approaches to public engagement that link the generation of knowledge through research, scholarship, and creativity with the transmission of that knowledge to local communities, the state of New York, the nation, and the world.
- d. Determine how best to ensure faculty involvement and leadership in programs involving public engagement.
- e. Enhance opportunities and reduce any bureaucratic obstacles for students to engage in service learning, study abroad, internships, working with local schools, and the like to create a more dynamic interface between the university and the larger world community.
- f. Encourage collaboration among departments to develop new, cost-effective ways of sharing knowledge and expertise with the public at large and to connect research with public engagement and education more effectively.

#### Conclusion

These strategic initiatives specify more concrete tactics or actions for advancing Cornell University over the next five years. Success at faculty renewal (initiative #1) is a critical issue that could determine whether the university rises or falls in quality and stature. Having a diverse faculty (#6) is fundamental here. Furthermore, recruiting and retaining distinguished and diverse faculty are contingent on the preeminence of academic departments (#2) and the quality of the infrastructure support for research and scholarship (#5). More connectivity among departments or programs (#4) contributes not only to faculty renewal but also to world leadership, because closer connections enable Cornell to leverage more productively its distributed and diverse academic strengths, thereby enriching the intellectual opportunities and experiences of faculty and students. These seven initiatives as a whole will have important effects on the educational experience of students, especially if faculty in preeminent academic units nurture a strong culture in support of teaching (#3) and a deep commitment to public engagement (#7).

#### Section VI

## **Excellence in Organizational Stewardship**

#### Introduction

Stewardship refers to processes and structures that manage, allocate, and monitor resources that are crucial to fulfill the university's academic mission. These are enabling conditions for achieving the primary academic goals and strategic initiatives of the plan, detailed in prior sections. This section begins with a set of general guidelines and then focuses on three resource areas: budget and finance; capital projects and physical facilities; and information technology. Human resources (faculty and staff) are treated in other sections of this plan. Given the university aspirations proposed by this plan, the adaptability and efficiency of organizational stewardship will be more important than ever over the next five to ten years in order to generate and preserve the resources necessary for the implementation of this plan.

#### Objectives and Actions

#### Objective 1: Affirm general guidelines for organizational stewardship

Rationale: The university must function in a manner that ensures, on an ongoing basis, that all its operations align with and support its core academic missions. To this end, principles of good stewardship must be understood and followed at all levels of the university. These principles include a commitment to protect and enhance the reputation of the university, an understanding of priorities and responsibilities at an organizational and individual level, an appropriate respect for and use of shared governance and collaborative decision making, and a commitment to open communication and transparency within planning, priority setting, and decision making. All members of the community are stewards of the university, and they should understand their obligations to act in ways that are responsive to the interests and needs of the university.

#### Actions:

- a. Implement resource allocation strategies that enable and motivate actions that enhance academic excellence.
- Clearly define and align roles and responsibilities for effective and efficient operations in a decentralized academic environment.
- Implement cost-effective investments in support systems and infrastructures that meet mission-based needs.
- d. Recognize, anticipate, and manage the different types of institutional risk (e.g., operational, compliance, reputational) and promote a university-wide sense of responsibility for these.
- e. Align support operations with the core academic mission and university strategic plan by maintaining clear priorities, metrics for assessing them, and appropriate internal controls.
- f. Develop and improve the skills of unit leaders to promote and manage change, especially given the need for continuous improvements in administrative and academic functions.
- g. Support and, where feasible, strengthen informed, collaborative, and transparent decision making.
- h. Review current mechanisms of shared governance in light of changes in the responsibilities at the center and in units (administrative and academic).

#### Objective 2: Make continual improvements in the stewardship of financial resources.

Rationale: Rigorous and effective stewardship of the university's financial resources, with appropriate "checks and balances," is critical to Cornell's ability to achieve its core mission. Because of the complexity of the university's budget and finance functions, it is imperative that such processes be open, transparent, and effective in protecting the university's fiscal health and in supporting its central and unit-level institutional priorities. Clear areas of responsibility and lines of authority, along with means to ensure accountability, are needed. Resource flows must be clear and predictable, but there must also be sufficient institutional flexibility to allow the strategic pursuit of important opportunities when they arise. The following are actions that should be undertaken by the appropriate administrators or officers of the university.

#### Actions:

- a. Review existing budget models that determine resource flows to units in order to revise, simplify, and align these budget processes and ensure support for central and unit priorities.
- b. Seek to simplify or eliminate cross-charging schemes within the university to reduce time and effort.

- c. Clarify institutional roles and responsibilities related to budget and finance to facilitate effective collaboration and communication between responsible parties and appropriate monitoring of performance and accountability.
- d. Ensure that there are effective internal controls, sufficient transparency, and appropriate "checks and balances" to prevent excessive financial commitments and overspending.
- e. Prepare and present operating and capital budgets reflecting complete program and operating costs and sources of funding, and regularly review these to ensure that planned uses of resources do not exceed funds available.
- f. Ensure clear and explicit reporting documents for senior leadership and trustees, including reports on in-year operating budget performance, capital budget sources and uses, short-term lines of credit, the university's debt portfolio, and a multi-year financial model.
- g. Seek to balance the need for purchasing efficiencies through centralization with an allowance for flexibility and individual solutions necessitated by the diverse array of products and services utilized in units and departments.
- h. To the extent appropriate and possible, keep the Faculty Senate and/or the UFC's Financial Policies Committee informed of major budget issues and make public suitable information regarding the annual capital and operating budgets.

#### Objective 3: Promote effective stewardship of the built and natural environment.

Rationale: The beauty of Cornell's natural surroundings and its built environment are key assets that must be enhanced and preserved. At the same time, facilities must be allowed to grow and evolve as necessary to support the university's core mission. Decisions regarding facilities and the physical environment typically involve the complex interplay of multiple factors and interests that must be recognized and addressed in order to steward effectively the university's physical resources. These decisions should be framed by and consistent with Cornell University's commitments to sustainability and accessibility. An integrated planning model should involve the following elements:

#### Actions:

- a. Make environmental sustainability a guiding principle in the stewardship of the university's facilities and resources and in assessments of its impact on the community and region.
- Pursue the sustainability objectives in Cornell's 2008 Master Plan for the Ithaca Campus and the Climate Action Plan of 2009.
   [See http://www.sustainablecampus.cornell.edu/]
- c. Ensure effective financial planning for construction projects, guaranteeing that budget effects, including ongoing facilities operations and maintenance costs, are known, understood, and agreed upon, and that a specific and approved funding plan is in place, before they are initiated.
- Optimize existing space use, and use renovation whenever appropriate as an alternative to new construction and expansion.<sup>15</sup>
- e. Follow the Cornell Master Plan guidelines and requirements and emphasize the maintenance of openness on central campus, even though there may be short-term cost savings for construction there.
- f. Determine optimal use of open building sites by considering the full range of possible unit and university uses.
- g. Ensure that resources available for facilities, including those from the State University Construction Fund, are optimally allocated by a strategic analysis of unit or university priorities.

<sup>&</sup>lt;sup>15</sup> Major renovation decisions should seek to avoid creating excess duplicative capacity and whenever possible should seek to support the needs and interests of adjacent units or functions. They should also honor the interior and exterior architectural integrity of the renovated buildings.

- h. Seek to create campus-wide space utilization that optimizes university and unit priorities, while accounting for the specific legal requirements and ownership issues of contract college buildings.
- i. Allocate sufficient funding for maintenance and renewal of existing facilities, and for university projects relating to infrastructure, common and shared facilities, public spaces, natural areas, and the like.
- j. Ensure proactive and long-term planning efforts with affected local governments and constituencies to optimize Cornell's investments, enhance community relations, and leverage local, state, and federal funding.

#### Objective 4: Provide cost effective infrastructures for information technology.

*Rationale:* Information technologies (IT) and infrastructure need to be maintained and renewed, while balancing technology needs with budgetary demands and other priorities of the university. Technologies and infrastructure that contribute to the core academic mission of the university warrant the highest priority.

- a. Effectively coordinate the delivery of IT services and infrastructure that support academic and research missions as well as business needs of the university in a financially responsible way.
- b. Ensure that information technology services and infrastructure support the access, security, and privacy needs for information stored within the infrastructure.

#### **Conclusion: Stewardship Priorities**

Stewardship along all of the domains covered here is an enabling condition for academic excellence and crucial to generate resources for implementing priorities of this plan. It is not possible or necessarily even wise to set priorities across these general areas. Instead, the Strategic Planning Advisory Council suggests that within each of these, priority be given to those aspects of stewardship that have the most direct impact on the seven strategic initiatives (see Section V). Adaptability and efficiency are the strategic themes of particular relevance to the effective stewardship of university resources.

#### Section VII

## Cornell at its Sesquicentennial

The central theme of this plan can be captured by a single phrase, **One Cornell.** Think of Cornell University as a single entity, embedded in but transcending and overarching strong colleges and units. The "greater sum" that represents this One Cornell is the primary focus of this plan. The plan argues for an institutional strategy that combines this One Cornell idea with two others: **focus** and **connectivity**. If Cornell is to reach the aspiration of being indisputably among the top ten research universities in the world and being a model university for public engagement and impact, it will require more focus throughout, albeit without losing the essential breadth and diversity of Cornell, and more developed connections among and between the impressive strengths that are distributed across academic units on campus. One Cornell, Focus, and Connectivity are three prongs of the overarching strategy proposed herein.

This plan recommends seven strategic initiatives that reflect the above overarching strategy. These initiatives are interrelated and they have important ties to each of the two aspects of the aspiration. The initiatives dealing with faculty renewal and world leadership in departments are foundational to the first component of the aspiration—being widely recognized as among the top ten research universities in the world; the initiative on public engagement is foundational to the second component—being a model for using fundamental knowledge and education to inform practical issues and vice versa. All seven initiatives are intertwined and important to the aspiration. Cornell University, because of its diverse, distributed strengths and its special commitment to public service, has a unique capacity among universities to be a preeminent research university with unparalleled impact on the world. The seven strategic initiatives and overarching institutional strategy chart pathways to build on this capacity and move toward the dual components of the aspiration for Cornell as a single entity.

If this plan is successfully implemented, how will Cornell University change over the next five to ten years? Will the university have done a more effective job of renewing the faculty ranks than other Ivy or comparable institutions of higher education? Will the teaching of faculty reach a standard of excellence that few, if any, other research universities can match? Will the university achieve a stronger position among its peer institutions and be even more successful at attracting exceptional students and faculty? Will it become even more widely known and recognized for its constructive impact on the world, from local to global communities? Will this public, worldwide impact be more widely and integrally a part of the student experience at Cornell? If the answer to each of these questions is "yes," it will be a tribute to the dedication and collaborative work of the broader Cornell University community. Creating a strategic plan is the first step of an ongoing planning process. Mobilizing effort and consensus around its main themes and deciding what to do with it—that is, implementation—is the next step. This plan must be treated as a living document, changeable and adaptable in the course of implementation and further planning.

### Appendix A

#### STRUCTURE AND PROCESS OF STRATEGIC PLANNING 2010

#### Structure

The structure of this planning effort involved two types of groups: First, there was an eight-person faculty group at the center of the strategic planning effort, the Strategic Planning Advisory Council (SPAC). That council was charged with developing and writing the strategic plan. All ideas and input were processed through and by that group. Second, there were four working groups consisting of a total of 54 faculty, students, and staff, each focused on one of the following areas: Education; Research, Scholarship, and Creativity; Public Engagement; and Organizational Stewardship.

The SPAC provided questions and issues for these working groups (WGs), and members of the WGs"drilled down" more deeply into the goal areas of the plan and provided detailed input and suggestions to the SPAC.

#### Membership of Strategic Planning Advisory Council

Lance Collins, Mechanical and Aerospace Engineering
Jonathan Culler, English
Sandra Greene, History
Martha Haynes, Astronomy
Katherine Hajjar, Cell and Development Biology, Weill Cornell Medical College
Edward Lawler, Organizational Behavior, ILR School (Advisory Council Chair)
Susan McCouch, Plant Breeding and Genetics
Michael Waldman, Economics, Johnson Graduate School of Management

#### **Steps in Planning Process**

The major steps in the planning process were as follows:

- a. The SPAC developed a set of questions and issues which Working Groups (WGs) analyzed in more depth.
- b. The WGs provided reports to the SPAC from which the SPAC developed draft objectives and actions for several goal areas.
- c. The SPAC sent these back for comment and suggestions to WGs, the president, provost, deans, vice presidents, and vice provosts.
- d. A draft plan outline was made available to the university community for comment on January 25, 2010. February and early March were devoted to gathering feedback across campus through meetings in every college, with student groups, and with staff.
- e. During that period, the SPAC set priorities among the objectives in each section, formulated seven strategic initiatives for 2010–2015, and developed metrics for assessing progress.
- f. On March 11, 2010, a complete draft of the plan outline was made available to the university community for further comments and suggestions.
- g. On April 7, 2010, the trustees spent half a day at a retreat discussing the plan.
- Breakout groups of trustees, based on the goal areas of the plan, provided valuable input to the SPAC.
- i. April to May, the SPAC drafted the final version of the Strategic Plan.

### Appendix B

#### CORNELL'S STATEMENT ON DIVERSITY

#### Open Doors, Open Hearts, and Open Minds

http://www.cornell.edu/diversity/history/statement.cfm

#### **Open Doors**

"I would found an institution where any person can find instruction in any study." This statement, made by Ezra Cornell in 1865, proclaims Cornell University's enduring commitment to inclusion and opportunity, which is rooted in the shared democratic values envisioned by its founders. We honor this legacy of diversity and inclusion and welcome all individuals, including those from groups that have been historically marginalized and previously excluded from equal access to opportunity.

#### **Open Hearts**

Cornell's mission is to foster personal discovery and growth, nurture scholarship and creativity across a broad range of common knowledge, and affirm the value to individuals and society of the cultivation of the human mind and spirit. Our legacy is reflected in the diverse composition of our community, the breadth of our curriculum, the strength of our public service, and the depth of our commitment to freedom, equity, and reason. Each member of the Cornell community has a responsibility to honor this legacy and to support a more diverse and inclusive campus in which to work, study, teach, research, and serve.

#### **Open Minds**

Free expression is essential to this mission, and provocative ideas lawfully presented are an expected result. An enlightened academic community, however, connects freedom with responsibility. Cornell stands for civil discourse, reasoned thought, sustained discussion, and constructive engagement without degrading, abusing, harassing, or silencing others. Cornell is committed to act responsibly and forthrightly to maintain an environment that opens doors, opens hearts, and opens minds.

## Appendix C

#### STUDENT LEARNING OUTCOMES

#### Purpose

In fall 2009 the provost and vice provost for undergraduate education formed a Core Assessment Committee to develop mechanisms for assessing the outcomes of educational programs, in particular the impact on students. To accomplish this, the committee pulled together "assessment agents" designated by each college. The educational goals and competencies that were first developed in each college became the basis for the competencies defined below.

#### **Draft Core Competencies for Cornell Students**

- 1. Courses of study at Cornell should generate proficiency in the following core academic competencies:
  - a. Disciplinary Knowledge: demonstrate a systematic or coherent understanding of an academic field of study.
  - b. Critical Thinking: apply analytic thought to a body of knowledge; evaluate arguments, identifying relevant assumptions or implications; formulate coherent arguments.
  - c. Communication Skills: express ideas clearly in writing; speak articulately; communicate with others using media as appropriate; work effectively with others.
  - d. Scientific and Quantitative Reasoning: demonstrate the ability to understand cause-and-effect relationships; define problems; use symbolic thought; apply scientific principles; solve problems with no single correct answer.
  - e. Self-Directed Learning: work independently; identify appropriate resources; take initiative; manage a project through to completion.
  - f. Information Literacy: access, evaluate, and use a variety of relevant information sources.
  - g. Engagement in the Process of Discovery or Creation: demonstrate the ability to work productively in a laboratory setting, studio, or field environment.
- 2. In addition, the Cornell environment strives to foster collegiality, civility, and responsible stewardship. Through academic studies and broader experiences on and off campus, Cornell graduates should attain proficiency in the following:
  - c. *Multicultural Competence*: have knowledge of the values and beliefs of multiple cultures; effectively engage in a multicultural society; interact respectfully with diverse others; develop a global perspective.
  - d. Moral and Ethical Awareness: embrace moral/ethical values in conducting one's life; formulate a position/argument about an ethical issue from multiple perspectives; use ethical practices in all work.
  - e. Self-Management: care for one's self responsibly; demonstrate awareness of one's self in relation to others.
  - *f. Community Engagement*: demonstrate responsible behavior; engage in the intellectual life of the university outside the classroom; participate in community and civic affairs.

#### Assessment Implementation Plan and Benchmarks

#### Stage 1-Initial Implementation

- Each college establishes an assessment process (utilizing standing committees, e.g., curriculum committees or educational policy committees, or setting up a new committee).
- Each college surveys already-existing assessment activities (including those generated by external review requirements and those conceived within ongoing program and course conceptions), in order to incorporate these into the college process.
- Each college generates an educational goals/outcomes statement for the college.
- These statements are added to a specifically designated assessment site on the college web site.
- Each college targets 2–3 majors or programs for which an assessment plan will be generated and incorporated into curricular materials. These should be stable programs, ideally representing a range of fields/areas.
- For each major/program, 2–3 program goals should be provided and learning outcomes should be collected, using both direct and indirect measures (at least 2 measures per major/program).

- Statements of these goals/outcomes should be posted on the college web site and on other sites (to be determined).
- These activities of the colleges are coordinated and facilitated by the Core Assessment Committee.

#### Stage 2-Full Implementation

- College assessment sites are maintained and expanded to include department and program goals.
- Each college continues the process of generating assessment plans for the majority of its majors/programs, with this process to be completed by the end of spring 2011.
- Progress is reviewed; process is revised as necessary; further need for resources is reviewed; wider inclusion
  of the campus is reviewed.
- The Core Assessment Committee becomes a standing committee, overseen by the provost's office, and given the task of coordinating and facilitating college assessment processes.

#### Stage 3-Institutionalization

- College committees with designated responsibility regularly review educational goals, according to a timetable.
- Colleges maintain and update their assessment web sites regularly (according to a timetable designated within each college).
- Departments/programs review their assessment outcomes (according to a regular process established internally).
- New programs are included in the assessment process (according to the established process within each college).
- The Core Assessment Committee facilitates the assessment process, identifies needs as they arise, addresses challenges, and provides an annual report to the provost.

# Appendix D ASSESSING PROGRESS

#### 2010-2015

#### Introduction

This section proposes a *general approach* and set of *assumptions* that should guide the development and use of metrics and qualitative indicators for assessing progress on plan goals, objectives, and strategic initiatives. It includes an initial list of *core metrics* as well as an elaboration of qualitative and quantitative indicators for each objective in the plan. The Strategic Planning Advisory Council is offering this broad framework for using existing data or institutional capacities to assess and track progress on plan priorities and objectives. This proposal is a first step, intended to be a starting point from which appropriate groups of administrators, faculty, and staff can develop and further refine the appropriate metrics and qualitative indicators.

#### A. General Approach:

- Focus on university-wide (aggregated) metrics and qualitative indicators but include, where appropriate, unit-level ones.
- 2. Organize metrics and qualitative indicators around goals and priorities.
- 3. Include both quantitative and qualitative indicators.
- 4. Have multiple indicators for each goal, given the complexity of the assessment, but as few as possible to enhance focus.
- 5. Make the metrics flexible and adaptable to be useful across a wide range of academic areas or units.
- 6. Consider the need to minimize the amount of staff time or additional staff to implement the metrics.
- 7. Insofar as possible, use existing sources of data and information.

#### B. Assumptions

- 1. It is exceedingly difficult to develop fully adequate measures of progress toward greater excellence in a research university.
- 2. No particular metrics or qualitative indicators will be sufficient, but some sets or combinations of them will be significantly better for tracking progress than others or than having none.
- 3. Metrics and qualitative indicators need to be developed in consultation with those people in the areas being measured (faculty, students, and staff). The metrics developed in this plan, therefore, must be considered a draft for further consultation and development.
- 4. Metrics help to promote progress and improvement by holding the institution or units accountable for working toward goals or objectives, but they also can do harm if action is focused on moving particular numbers or indicators rather than the larger purposes for which they are created.
- 5. Any set of metrics will have unintended consequences that are important to analyze and anticipate.
- 6. Any set of metrics or indicators should be viewed as a whole and be part of an overall qualitative assessment and judgment.

#### C. Core Metrics

With the above approach and assumptions as context, listed below are a provisional set of core metrics that are important to track over the next five years. These are related to strategic priorities and initiatives in previous sections of this plan. This list should be modified and developed further over time with assumptions 4 and 5 above in mind.

#### Faculty and staff compensation

Compare salaries and fringe benefits to peer institutions (faculty) or appropriate markets (staff).

#### · Amount and nature of faculty hiring and retention

Number of hires/year; rank distribution of hires; tracking of changes in faculty size; yearly assessment of faculty exits.

#### Age distribution of the faculty

Percent of faculty 55 and above; 60 and above (university-wide and by unit).

#### Diversity of faculty, students, and staff

Percent women and underrepresented minorities. For faculty, comparison to specific goals of 20% or pipeline percent (whichever is higher). Set comparable goals for students and staff.

#### Number of top-ranked departments and programs

Select appropriate NRC criteria; discipline-specific rankings; regular program reviews.

#### Sponsored research

Total expenditures; expenditures per faculty member.

#### Student learning outcomes and health

College assessments of learning outcomes based on core competencies (see Appendix C); data from Gannett on student mental and physical health.

#### Student access

Cost of Cornell education by family income quintile.

#### Student surveys (undergraduate, graduate, and professional)

Satisfaction with teaching; satisfaction with research opportunities and training; perceptions of international and public engagement opportunities; ease of taking courses across boundaries and administrative/bureaucratic barriers; perceptions of living-learning environment at Cornell.

#### Library rankings

Compare to research university libraries, using appropriate measures from the ARL (Association of Research Libraries).

#### Faculty and staff surveys

Conduct surveys on a regular schedule.

#### Ithaca-Weill interactions

Joint research grants; collaborative teaching programs; and cross-usage of core facilities.

#### • Stature of university as a whole

Institutional reputation based on appropriate high-quality rankings of research universities (e.g., based on NRC data and criteria); use of select metrics from above list (e.g., faculty quality, student quality; external research funding; library rankings including collections).

#### Indicators for University-Wide Excellence

#### A. <u>Institutional Reputation and Stature</u>

- 1. Select reputational rankings of research universities.
- 2. Aggregate data on the university and academic units (e.g., indicators of faculty excellence, student quality, and excellence of research, scholarship, and creativity).
- 3. Choose a set of metrics from forthcoming National Research Council evaluations to track institutional progress toward the university's aspiration.

#### **Indicators for Faculty Excellence**

#### A. Faculty Recruiting and Size (Objective 1)

- 1. Amount and nature of faculty hiring.
- 2. Have there been pre-fills where future faculty quality warrants it?
- 3. Funding for new faculty positions in strategically important departments or programs (from fund-raising, internal reallocation, or other sources).
- 4. Has Cornell's dual-career program expanded the window for commitments beyond three years? Are there new elements that distinguish Cornell from its competition?

#### B. Faculty Diversity (Objective 2)

- Comparison of proportion of women in departments to a 20% absolute standard or the pipeline level (whichever is higher), with the federal standard as a reference. This extends the CU ADVANCE standard across departments and colleges.
- 2. Comparison of the proportion of underrepresented minorities to the appropriate pipeline and federal standards. Develop an absolute standard that serves the same purpose as the CU ADVANCE standard does for women in science.
- 3. How many departments have reached the 20% or pipeline goals for women and underrepresented minorities? How many have reached the federal standards?
- 4. Have funding mechanisms to promote diversity improved?
- 5. Is there an efficient and effective monitoring mechanism in place for each hiring unit?

#### C. Competitive Faculty and Staff Compensation (Objective 3)

- Define peer groups appropriate to given disciplines, fields, departments, professional schools, and staff job categories.
- 2. Track faculty and staff salaries and fringe benefits against appropriate peer institutions.

#### D. Faculty Retention (Objective 4)

- 1. Have efforts to prevent exits by highly valued faculty increased?
- 2. A qualitative assessment each year of cases in which highly valued faculty have left (to determine how responses can be improved).
- 3. Have dual-career and work-life issues (e.g., childcare) been given appropriate attention in retention efforts?
- Track percent of faculty exits per year across faculty career stages (pre-tenure, tenure to mid-career, and more senior).

#### E. Rewarding Outstanding Faculty (Objective 5)

- 1. Have new forms of recognition and reward for outstanding performance among faculty (in teaching, research, and public engagement) been implemented in departments and colleges?
- 2. Faculty awards and honors; leadership positions in field.
- 3. Number of faculty in distinguished national academies (e.g., the National Academy of Sciences).
- 4. Do all departments have systems for reviewing the teaching, research, and public engagement of faculty after tenure?

#### F. <u>Intellectual Environment (Objective 6)</u>

- 1. What new cross-college or cross-department interdisciplinary collaborations have formed? What is the potential impact of these?
- 2. Has a sustainable "faculty club" been developed and/or other measures to promote informal conversation and dialogue?
- 3. Have concerted efforts been made to improve or maintain a strong culture of collaboration in departments? Have these efforts had an impact?

#### **Indicators for Excellence in Education**

#### A. Shared Educational Student Experience (Objective 3)

- 1. Have academic or administrative barriers to students in one college taking courses in another been reduced?
- 2. Have additional shared educational components for Cornell undergraduates (living-learning programs, courses, and so forth) that address core competencies been added? What impact have these had?
- 3. Have course or credit hours out-of-college for Cornell undergraduates increased?
- 4. Senior survey results on perceptions of how easy or difficult it is to take courses outside of their department or college.

#### B. Student Learning Outcomes

- 1. Assessments by colleges and other units of how they contribute to students' acquisition of core competencies.
- 2. Are mechanisms for measuring learning outcomes, indicated by these core competencies, in place? [See Appendix C.]

#### C. Student Psychological Health and Well-Being (Objective 5)

- 1. Staffing levels directed at quick, effective response to students experiencing excessive stress.
- 2. Waiting or lag times between contact and appointment or intervention.
- 3. Regularity of communications and outreach to encourage students to seek help and ensure that they know how to do so.

- 4. Surveys of student psychological health and well-being.
- 5. Programs to enhance faculty and staff knowledge of and capacity to detect students undergoing excessive stress and encourage them to seek help.

#### D. International and Public Engagement Opportunities for Students (Objective 4 in Education and Objective 1 in Public Engagement Section)

- Student participation rates (for credit and noncredit).
- 2. Are more programs offering public engagement opportunities to students under faculty supervision and
- 3. Have costs to students for study abroad decreased? Have administrative obstacles been reduced for international and public engagement experiences?
- Have we examined and affirmed the quality of current international and public engagement options for
- Student survey data about these experiences.

#### Culture in Support of Teaching (Objective 1)

- 1. Develop Cornell benchmarks for rigorous assessment, by identifying good models within Cornell, and use these to compare departments' attention to and support for teaching excellence.
- 2. Have forms or ways to recognize excellence in teaching increased?
- 3. Student survey data on teaching environment.
- 4. Per capita credit hours (or courses) taught by senior faculty (full professors).

#### F. Supporting Pedagogical Innovation (Objective 2)

- 1. Usage rate of technological support.
- 2. Increase in number of teaching projects supported by the office of the provost.
- 3. Has team teaching across colleges or disciplines increased?

#### G. Undergraduate Student Quality and Diversity (Objective 6)

- 1. Standard student quality measures for enrolled students.
- Competitive position of financial award packages.
   Acceptance rate, retention rate.
- 4. Costs of a Cornell education by income quintile.
- 5. Has the percent of underrepresented minorities in each entering class grown? Has it reached 20% or greater?
- 6. Quality of URM educational experience: percent of URMs who are deans' scholars or whose GPA is in the upper quartile.
- 7. Senior student survey data on minority experience and perceived educational benefits from a diverse community.
- 8. Student survey data on perceptions of academic and personal dimensions of student life at Cornell.

#### H. Graduate Student Diversity and Quality (Objective 7)

- 1. Standard student quality measures.
- 2. Competitive position of stipend and benefit levels.
- 3. Graduate student surveys (overall satisfaction; perceptions of support for research and of opportunities to develop as teachers).
- 4. Have graduate fields been reduced in number or consolidated?
- 5. Do more fields have teaching components in their graduate programs?
- 6. Have fellowships for entering graduate students increased?
- Quality of job placements (graduate and professional students).
- 8. Has the percentage of women in graduate fields or professional programs reached the pipeline or 20% (whichever is higher)? Has the percentage of underrepresented minorities reached the pipeline, 20%, or the federal standard (whichever is higher)?

#### Indicators for Research, Scholarship, and Creativity

#### A. Leadership Position/Department or Program Stature (Objectives 1 and 2)

- 1. Have dimensions for comparing departments to peers been defined, and are they being used by departments and colleges to track changes?
- 2. Number and quality of faculty publications, appropriate to discipline or field (e.g., citation data, journal publications, book publications, qualitative assessments).
- 3. Scholarship evaluations in regular external reviews of departments.
- 4. Placements of Ph.D. graduates and of postdoctoral associates.
- 5. Metrics on grant support (where appropriate), e.g., percent of faculty who are PIs on external grants; total sponsored research per FTE faculty; proposals submitted/successful, etc..

#### B. Support for Interdisciplinary Initiatives (Objective 3)

- 1. Inventory new interdisciplinary initiatives emerging from the faculty, how they were nurtured, and the impact to date (actual or potential).
- 2. Annual review of faculty search results, assessing cross-departmental and cross-disciplinary impact.
- 3. Have academic units reviewed tenure and promotion policies to determine if interdisciplinary work of untenured faculty is evaluated in appropriate and effective ways?
- 4. Assess the success of seed funding programs on a regular basis.

#### C. Administration and Support for Research Grants (Objective 4)

#### Central and Units:

- 1. Administrative and support services: annual customer satisfaction surveys—both centrally (OSP, ORIA, SFA) and at unit level.
- 2. Ratio of cost of research administration to sponsored funding (expenditures).
- 3. Number of proposals submitted per research administrator.

#### Central:

- 1. OSP—average number of days to execute awards by sponsor category.
- 2. ORIA (IACUC, IRB, IBC)—average number of days to review protocols.

#### Units:

- 1. Quality of quarterly financial management reports.
- 2. Number of proposals submitted error-free.
- 3. Number and dollar value of awards per unit research administrator.
- 4. Number of overdue sponsor reports.

[Any metrics for improving the administration of external research grants need to be vetted by focus group discussions with faculty PI's and administrators.]

#### D. <u>University Library (Objective 5A)</u>

- 1. Annually publish the library's acquisition budget by area of research and scholarship.
- 2. Publish comparisons to other major research universities with respect to collections, subscriptions, etc.
- 3. [Focus groups on library services every year or two with faculty and students from different disciplinary groupings.]

#### E. Shared Research Facilities (Objective 5B)

- 1. Report annually on each university-supported shared research facility—number of users served, user fees generated, and the dollar amount of externally funded research enabled by the shared facility.
- 2. Yearly number (and dollar value) of instrumentation grants submitted for and by the shared facilities, and the success rate.

#### F. <u>Ithaca-Weill Collaborations (Objective 6)</u>

- 1. Have new synergies or collaborations developed between faculty and graduate students on the Cornell campus in Ithaca and faculty and graduate students at Weill Cornell Medical College and Graduate School? Joint research grants? Collaborative teaching programs? Cross-usage of core facilities?
- 2. Has there been improvement in administrative issues or barriers? Is it easier for graduate students to take courses at both locations?

#### **Indicators for Excellence in Public Engagement**

For public engagement, the appropriate metrics and indicators should come from the proposed university-wide assessment of public engagement programs and activities. The action items within each objective suggest some things to consider tracking in the interim. For example:

#### A. <u>Unified Concept (Objective 2)</u>

- 1. Has there been an increase in the use of electronic media and the internet to deliver public engagement (including extension) programs?
- 2. Have new innovative connections among disparate outreach or public engagement programs been developed? What impact have these had?

#### B. Research Foundation (Objective 4)

1. Have new or deeper ties to research been developed?\_

#### C. Partnerships with Stakeholders (Objective 5)

- 1. Have new partnerships with stakeholders been developed or existing ones strengthened?
- 2. Data on technology transfer (patents, licensing).
- 3. Have we capitalized on Cornell's base in New York City in new ways?

#### Indicators for Staff Excellence and Organizational Stewardship

Metrics and qualitative indicators for assessing the objectives for staff excellence and excellence in organizational stewardship should be developed by the professionals in those areas.

#### **Concluding Comment**

This framework is provisional. There are many objectives in this strategic plan. While we do believe the institution should move on all of these fronts, some objectives are more important than others, and progress on some is easier to track than on others. Some may receive greater priority now and others be deferred for later. This appendix does not distinguish among the most and least important but does offer methods for tracking the university's movement along them. The purpose is to provide a general framework for the implementation stage of the university strategic plan.