

Carnegie Mellon Strategic Plan

Vision and Mission

Industrialist and philanthropist Andrew Carnegie laid the foundation for Carnegie Mellon University in 1900 when he established the Carnegie Technical Schools to provide educational opportunities for the children of Pittsburgh's steelworkers and coal miners. Carnegie Mellon's strengths in education and research developed from an early practical approach to problem solving, so that today Carnegie Mellon is a distinctive member of the small group of research universities shaping the world through leadership in education, research and their impact on society.

Carnegie Mellon's rapid and successful transformation can be attributed to a core set of institutional strengths and values that inspire the university's vision, and to the dedication and achievements of its faculty, students, staff and alumni. As Carnegie Mellon enters its second century, we must continue to build upon our fundamental strengths, to sharpen our priorities and to pursue the university's vision.

The university values the following attributes that make Carnegie Mellon distinctive among research universities:

- A tradition of innovation which is sustained by an entrepreneurial faculty and an institutional willingness to assume risk.
- A commitment to problem-solving that is reflected in all of the university's colleges and programs.
- Unusual success in interdisciplinary research.
- Relatively small size that allows Carnegie Mellon to be responsive to new opportunities.

Our Vision:

Carnegie Mellon will be a leader among educational institutions by building on its traditions of innovation, problem solving and interdisciplinary collaboration to meet the changing needs of society.

This vision acknowledges that higher education will be challenged to meet the needs of society in the 21st century. Carnegie Mellon must be positioned to accept this challenge and responsibility so that we can continue to lead advances in educational and technological innovation, scientific discovery, creative expression and artistic production by fostering an atmosphere of intellectual excitement, innovation and entrepreneurship.

To exploit our comparative advantages and to identify opportunities for fruitful collaboration beyond our boundaries we remain committed to interdisciplinary research and education, not only within and across academic fields, departments, schools and colleges, but also across institutional, national and cultural boundaries. We shall continue to focus our attention and resources where we can achieve excellence and comparative advantage in achieving our mission.

Our Mission:

To create and disseminate knowledge and art through research and artistic expression, teaching and learning; and to transfer intellectual products to society.

To serve our students by teaching them problem-solving, leadership and teamwork skills, and the value of a commitment to quality, ethical behavior, society and respect for one another.

To pursue the advantages provided by a diverse and relatively small university community, open to the exchange of ideas, where discovery, creativity, and personal and professional development can flourish.

Carnegie Mellon will continue to develop as a distinctive research university, one in which research and education are integral. Our faculty share with one another and with their students the excitement of creative inquiry, discovery and expression. However, we are interested not only in theory and practice, but also in production, or *making*, for example, making devices and processes, art, hardware and software, new management tools and literary works.

To achieve fully our goals, we cannot limit our focus to internal concerns, we must also nurture a concern for the welfare of others and a commitment to improve the world. Through our education, research and creative expression, the university relates to an unusual

extent to the world beyond its campus. Our activities have impact by creating knowledge, improving the quality of life, enhancing culture, and advancing economic and environmental sustainability.

Our research-based graduate programs aim to develop future leaders for academe, industry and government. Doctoral education represents an essential component of our mission as a research university and of our contribution to society. The development of Ph.D. students is as important as the research products themselves.

The development of problem-solving skills within a liberal-professional framework is a hallmark of a Carnegie Mellon education. The undergraduate programs prepare our students to become accomplished professionals who are broadly educated, independent and humane leaders. A Carnegie Mellon education challenges students to create intellectual depth and breadth, as well as professional skills. We must provide a social environment that reinforces academic objectives and the personal development of students.

A diverse academic environment is essential to enrich intellectual exchanges and to enhance cultural understanding. Likewise, it is important for the diversity of our community to reflect our regional, national and global constituencies. We must be more successful than we have been in realizing and nurturing a diverse community.

Goals and Strategies

Carnegie Mellon continues to improve and to contribute to society in meaningful ways. The goals described in the following section reflect our highest priorities as we strive to fulfill our mission and realize our vision.

These university-wide goals are organized into three categories: our core activities, including education and research; our strategic areas of focus, including strategic areas of leadership, international initiatives and regional impact; and our foundation, including community success and financial strength.



Education for Leadership

A Carnegie Mellon education prepares students for life and leadership. In a continually changing world, the most important qualities we can help our students develop are the ability to think independently and critically, the ability to learn and the ability to change and grow. As future leaders they must have courage to act, be sensitive to the needs and feelings of others, understand and value diversity, and honor the responsibilities that come with specialized knowledge and power. The university has historically provided exceptional depth of educational experience, including intensive instruction, a focus on decision making and problem solving, and opportunities for research and practical training. We also reaffirm our broader educational mission, founded upon the ideals and tradition of the Carnegie Plan, for undergraduates, graduate students and, by extension, the lifelong development of all members of the university community.

Goal: Build upon our educational programs, distinctive in their rigor and focus, by expanding intellectual and personal development. Our students will become broadly educated and humane leaders who will have an important impact in their professions and communities.

Strategies:

Broaden curricular experience and more fully integrate with learning opportunities outside the classrooms, studios and laboratories:

- Expand educational experiences beyond a student's major discipline.
- Expand opportunities for interdisciplinary educational experiences.
- Strengthen the coordination between educational and expanded extracurricular activities.
- Enhance student advising and mentoring with a focus on personal/professional guidance.

Enhance experiential learning opportunities:

- Extend the range of opportunities for intensive research experiences.
- Develop more opportunities to gain professional experience, such as internships.

Research

Carnegie Mellon has established itself as a premier research university, drawing on its interdisciplinary culture to seek new opportunities, making research, artistic creation and education integral to one another, and including the whole campus in a wide

array of research and creative endeavors. The external environment in which we operate is a world of rapid change. Carnegie Mellon must continually look for new opportunities and new collaborators, and assume a leadership role in defining future research directions. The university must invest in research and in artistic and scholarly creation, not just to maintain its current preeminent position, but also to reach higher levels of achievement in all its fields of endeavor.

Goal: Lead in defining the national and international research agenda by leveraging our strengths across disciplines and exploiting opportunities to contribute to scientific and humanistic understanding, technological advances and artistic creation. Ensure that the benefits of the research experience - the power of collaborative discovery - help educate leaders for the next generation.

Strategies:

Foster an environment that promotes interdisciplinary collaboration within our university and among Carnegie Mellon, other universities, government and industry:

- Provide a supportive environment for entrepreneurial activities, such as establishing an interdisciplinary venture fund to support faculty research initiatives.
- Promote faculty, student and alumni interactions. For example, establish a database of capabilities and expand and promote forums for sharing ideas.

Continuously evaluate our position and either reinforce or refocus our strengths to exploit comparative advantages. As the external environment changes, we must reshape existing programs or initiate new programs to maintain or gain leadership positions.

Systematically evaluate and improve our infrastructure, including facilities, equipment, networks and libraries, to support research.

Strategic Areas of Leadership

Carnegie Mellon strives to have an impact that is larger than its size would indicate. Our academic departments tend to be smaller and more narrowly focused than those of our competitors. The university makes focused resource investments in order to exploit areas of comparative advantage. We have compensated for our limitations in size through strategic positioning, building from core strengths and leveraging our limited resources through interdisciplinary collaboration. These strategies, along with reasoned risk-taking and the talent and entrepreneurial spirit of our faculty, have allowed us to compete effectively with larger, better-endowed universities. We will continue to pursue selected areas of comparative advantage.

Goal: Aggressively develop and implement selected areas of focus that capitalize on strengths across the university and for which resources are obtainable.

Strategies:

Extend our strengths in the development and use of information and communication technology:

- Prepare our students to excel in an information society.
- Pursue opportunities in areas such as entertainment technology, technology-enhanced learning, the universal digital library, advanced computing to solve large and complex models, data storage and retrieval, and electronic commerce.
- Critically assess the impact of technology on society and individuals.
- Strengthen and maintain our information and communication infrastructure.

Reinforce and better coordinate our current educational and research strengths in environmental science, engineering and policy to advance our leadership in this area:

- Pursue opportunities in areas such as green design, the built environment and brownfield site development.

Take advantage of our unique strengths across the university to enhance our impact in biotechnology and health policy:

- Establish a task force to identify niche areas in which the university can exploit current strengths and emerging opportunities to attain a leadership position.

Capitalize on our unique strengths in fine arts and humanities to pursue an area of interdisciplinary strategic focus:

- Establish a task force to identify niche areas in which the university can exploit current strengths to attain a leadership position.

International Initiatives

In achieving its status as a premier research university, Carnegie Mellon has pursued selected international initiatives. These include: global recruitment of faculty and students, international faculty research collaborations, institutional alliances and consortia, student exchange programs with non-U.S. universities, distance learning programs, executive education programs and educational technology transfer. Still, as the university continues its progression from a regionally distinctive to a nationally and internationally prominent institution, we must expand our international activities and perspectives. This expansion is essential given the rapid progress of worldwide information connectivity, growing international economic integration and the increasing degree to which both our constituents and our competitors view their own environments as global.

Goal: Selectively expand our international impact by building on existing strengths in order to compete effectively on a global basis for research and educational opportunities, academic talent and financial resources.

Strategies:

Identify and pursue focal areas for international activities:

- Identify strategic educational, research or technology transfer activities.
- Identify high-opportunity geographical areas that relate well to our capabilities.
- Develop strategic partnerships in these areas with universities, industries and governments.

Define a range of innovative international educational experiences for our students so that our graduates can participate fully in a global society.

Regional Initiatives

Carnegie Mellon's education and research missions are aimed at establishing global excellence. At the same time, Carnegie Mellon has benefitted significantly from the people and institutions of Pittsburgh, and the university's success is integrally tied to the success of its region, Southwestern Pennsylvania. Our ability to attract and retain the best faculty, staff and students is dependent on the educational, economic, cultural and social vitality of our regional community. Carnegie Mellon advances its own interest by helping advance the region.

Goal: Use our strengths, in collaboration with other Pittsburgh institutions, to advance the educational, economic, social, and cultural opportunities of the region for all its citizens.

Strategies:

Expand technology commercialization in order to attract, grow and retain businesses in the region through initiatives such as the creation of a venture capital fund, expanded technology transfer and business-support services.

Use issues and problems of the region for creative inquiry, research and educational innovations globally.

Provide regional policy leadership and strategic planning, matching the needs of the region with our strengths.

Community Success

The people of Carnegie Mellon are its greatest asset. The accomplishments of Carnegie Mellon's students, faculty, staff and alumni will ultimately determine our ability to realize our vision of being a leader among educational institutions. We must ensure an environment that promotes individual and community success. This environment should challenge and enable all of our members to reach their fullest potential. A diversity of talents, perspectives and experiences is essential to intellectual strength. We value an inclusive, ethical and nurturing community. The challenge of new ideas, energies and vigorous debate generates new fields of inquiry, stimulates discussion of accepted ideas and standards, shifts models and improves professional practice.

Goal: Provide a rewarding environment that enables our students, faculty, staff and alumni to succeed in advancing the university mission.

Strategies:

Increase diversity of perspectives and backgrounds of students, faculty, staff and Trustees, and enrich and nurture the intellectual and ethical growth of all members of the university:

- Significantly improve recruitment and retention of under-represented populations.
- Promote multicultural awareness and tolerance.
- Foster personal and professional integrity and ethical development.

Create extraordinary value for our students through their experience at Carnegie Mellon, and enhance the successful transition of our students to post-graduate activities and the world of work and citizenship.

Enhance departmental and university-wide mentoring and development activities to help faculty and staff realize their fullest potential as contributors and leaders within their disciplines and across the university.

Create and sustain a supportive work environment that promotes employee success by providing training for all supervisors and ensuring performance feedback mechanisms to foster employee development.

Establish lifelong connections between the university and our alumni in order to stimulate their ongoing intellectual growth and to provide professional support.

Financial Strength

Carnegie Mellon's endowment is significantly smaller, and its operating budget is more dependent on tuition and research funding than its competitors. While we have managed our limited resources effectively in order to compete with larger, better-endowed universities, our financial position is a limiting factor in our future. Tuition and research revenue will not experience substantial growth over the next several years; yet we will need internal venture funding to stimulate continued innovation. The university will also require funding to support expansion and improvements so that we can achieve high-priority university-wide and college goals. Facility requirements include: expansion space for all of the colleges and the libraries; renovation of existing laboratories, studios, classrooms and offices; expansion of technology-supported classrooms; and deferred maintenance.

Goal: Expand and diversify our financial base to enable us to achieve our mission.

Strategies:

Significantly increase the real value of the endowment through actions such as expanding fund-raising capacity, and reevaluating our investment and spending strategies.

Pursue high-margin opportunities whose net revenues would support our broader education and research mission.

Continuously evaluate our programmatic achievements and position, and either maintain, reinforce or redirect our investments and ensure a resource allocation process that reinforces this evaluation throughout the university.

Streamline university-wide administrative and decision-making processes in order to deliver the highest value services for the least cost to our students, sponsors, faculty and staff.