

Washington State University

College of Agricultural, Human, and Natural Resource Sciences

Strategic Plan

June 2008



World Class. Face to Face.

Mission

Recognizing its unique land-grant research and education mission to the people of Washington and the state's increasing global involvement, the College of Agricultural, Human, and Natural Resource Sciences provides leadership in discovering, accessing, and disseminating knowledge through the development and delivery of high quality research, instruction, and extension programs that contribute to securing a safe, abundant food and fiber supply; promoting the well-being of individuals, families, and communities; enhancing sustainability of agricultural and economic systems; and promoting stewardship of natural resources and ecological systems.

Vision Statements

In striving to be one of the nation's premiere programs focused on the evolution and expansion of the knowledge base in agricultural, human, and natural resource sciences to better support the wellbeing of the citizens of Washington State, the College of Agricultural, Human, and Natural Resource Sciences at Washington State University will be:

1. A leader and primary source of research information for identifying and solving problems related to food, agricultural, human, natural resource and environmental sciences for individuals and organizations.
2. A recognized national and international leader in research and discovery in tar-

geted areas of excellence.

3. Known for its reputation of excellence in integrated problem solving through interdisciplinary research and education programs.
4. A valued partner with internal and external peers, collaborators and stakeholders in conducting research and educational programs of excellence.
5. The preferred destination in the region for undergraduate students interested in food, agriculture, human, and selected natural resource sciences.
6. The most recognized provider of high-quality graduates in food, agriculture, and human sciences within the Northwest.
7. A nationally and internationally recognized leader in graduate student education in targeted areas of excellence.

Core Values

The following core values underlie all activities of the College of Agricultural, Human, and Natural Resource Sciences:

- A commitment to excellence, integrity and accountability
- A commitment to developing integrated teaching, research, and extension programs that support the land-grant mission
- Intellectual leadership, innovation thinking and openness to diverse ideas and perspectives.
- A spirit of cooperation and collaboration.
- A safe, supportive, encouraging workplace environment.

- Inclusion of the opinions and needs of all audiences that may benefit from our research and educational initiatives.
- Forward thinking focused on addressing the future needs of constituents.
- Providing relevant and credible information to the people we serve.
- A commitment to the economic and social development of the state, nation, and world.
- Trust and respect in all that we do.
- A commitment to diversity in all activities.

Comparative Advantages

The following comparative advantages were recognized as being important in identifying future strategic directions for the college:

- A diverse array of programs spanning across food, agriculture, human, and natural resource/ environmental sciences, as well as design disciplines.
- A mission-specific focus on scientific and educational programs that meet the priority needs of constituents.
- A multitude of stakeholders within the food, agriculture, natural resource, and human sciences requiring assistance from WSU to support the advancement of their industries and interests, who are committed to assisting WSU in delivering these programs.
- A statewide presence that provides access to WSU programs and an involvement in every county of the state

through extension offices, learning centers, regional campuses, and research and extension centers.

- A tradition of effective partnering with county, state, and federal governments; tribes; colleges and regional campuses of Washington State University; and community colleges and with other Washington and regional higher education institutions.

Planning Context

The college's previous strategic plan was developed in 2001-02 and officially launched in May 2002. Several organizational changes have occurred since that time, which change both the context and organizational elements of the strategic plan. First, and perhaps most importantly, WSU Extension was separated from CAHNRS and placed under the leadership of a separate Dean and Director. Concurrently, WSU Extension was charged with a mandate of university-wide outreach across the WSU system. Second, the college implemented a name change, moving from the College of Agriculture and Home Economics to the College of Agricultural, Human, and Natural Resource Sciences. A third important organizational change involved the formation of a comprehensive School of Economic Sciences and a decision to locate it within the college. As a result, CAHNRS is responsible for WSU's entire portfolio of activities within the economic sciences. Finally, substantial turnover of

administrators has occurred, with few college- or department-level administrators remaining who were involved in developing the 2002 plan.

Several external events occurred which led to a very different situation than was anticipated in 2001-02. During the early part of the decade, significant state budget rescissions occurred, which required difficult program prioritization decisions and resulted in a significant downsizing of faculty and staff, as well as operating resources. In addition, economic events adversely affected several traditional constituents served by the college, most notably agriculture, resulting in increased demand for research and educational services.

Since adoption of the previous strategic plan in 2002, many of the proposed goals in the plan were accomplished and CAHNRS has made significant contributions in the areas of teaching, research, extension, and public service. The current planning environment provides us with a chance to inventory these accomplishments, identify remaining relevant goals, and develop new goals and directions for the college.

This strategic plan was also developed in concert with the current university strategic plan which was developed in 2002 and “refreshed” in 2008. The four university strategic goals -- (1) achieve national and

international preeminence in discovery, innovation, and creativity; (2) provide a premier education and transformative experience that prepares students to excel in a global society; (3) lead in relevant local, national and global outreach and engagement; and (4) embrace an environment of diversity, integrity, and transparency -- provided overarching themes that guided the development of this plan.

Over the past three years, WSU has been engaged in an active benchmarking exercise across all levels of the university. Within the college, a series of benchmarks have been identified to provide quantifiable measures of progress in areas of undergraduate and graduate instruction, research, outreach, resource acquisition, and workplace environment. These benchmarks provide a critical link to many elements of this strategic plan, and serve as a means of quantifying progress toward the goals included herein.

Academic Programs

CAHNRS offers 23 undergraduate majors through the main Pullman campus, each of the three regional campuses, as well as through WSU’s distance learning programs. The college has a tradition of excellence in teaching and advising, and the goals and strategies comprising this plan build upon this reputation.

Many of the areas of concern within un-

dergraduate programs focus on declining enrollment trends within the agricultural sciences and some natural resource sciences. Conversely, within the human sciences the critical issues concern managing significant enrollment growth and providing the resources needed to advance these growing programs. While improvements in recruiting activities can certainly help improve enrollment trends in agricultural and natural resource programs, it is clear that curriculum changes are warranted.

The recently approved interdisciplinary Agricultural and Food Systems degree is an excellent example of the type of innovative thinking that is required to develop enticing, relevant undergraduate degree programs designed to create the next generation of change agents in agriculture and associated food industries. Many programs continue to teach a set of courses created in an environment of greater student enrollment and faculty numbers. Course and curriculum changes must be implemented to better match student enrollment with faculty resources to maximize our ability to efficiently and effectively delivery high quality academic programs.

The College of Agricultural, Human, and Natural Resource Sciences offers 4 masters of arts, 13 masters of science, and 13 doctor of philosophy degrees. Consistent with the university's objectives, CAHNRS is focused on advancing its graduate programs by

building upon the positive elements of its current programs and developing programs that provide a contemporary academic experience and are in high demand by prospective students. As with undergraduate programs, several CAHNRS graduate programs are small and lack the resources necessary to become vibrant and nationally acclaimed. Graduate programs are largely departmentally based and many include a set of course offerings that is inconsistent with student enrollment and faculty resources. Both the Graduate Education Commission Report and the Yardley Report provide an excellent set of recommendations that are applicable to graduate programs in CAHNRS.

Research and Extension

Through its research and extension programs, CAHNRS is committed to making major contributions which advance the disciplines represented in the college; enhance Washington's food, agriculture, and natural resource industries, as well as making significant contributions to society through its human science programs. CAHNRS has historically been a university leader in research productivity regardless of the measure used (e.g., extramural funds, publications, patents and discoveries, faculty recognitions). At the same time, much of the university's activities in the area of outreach and economic development also have emanated from the college. The strategic intent of this plan is to continue the

college's leadership role within the university, while expanding its global reputation in key programmatic areas.

Two important organizational entities within WSU are actively engaged in the research and extension missions of the college. The Agricultural Research Center (ARC) lies within CAHNRS, but also partners with other colleges across the university to address issues of critical importance to the state's food and agriculture industry. WSU Extension now rests outside of CAHNRS, but makes major investments in faculty, staff, and operating funds to support college outreach activities in the agricultural, human, and natural resource sciences.

Research and extension are presented in an integrated manner throughout this plan to emphasize the importance of viewing these two important missions from a holistic perspective. Many of the goals and strategies contained in this plan focus on advancing a more integrated approach to executing research and outreach. This is a critical objective if the college is to remain true to its mission of discovering, applying, and disseminating knowledge to advance the quality of life of the people of Washington State and the world.

A primary objective of the research and creative scholarship conducted by the faculty of CAHNRS is to advance the disciplines represented in the college's departments.

To this end, all faculty of the college are expected to devote significant effort to individual and team, including interdisciplinary, research and scholarship that enhances the reputation of the departments and contributes to the academic vitality of the university. In addition, CAHNRS has an historic and significant research responsibility to fulfill a major portion of the university's land grant mission. Much of this research effort focuses on issues associated with food and agriculture, and falls within the purview of the Agricultural Research Center.

Agricultural Research Center

The mission statement of the Agricultural Research Center (ARC) is as follows:

The goal of the Washington State University Agricultural Research Center (ARC), the Agricultural Experiment Station of the State of Washington, is to promote research beneficial to the citizens of Washington. The ARC recognizes its unique land-grant research mission to the people of Washington and their increasing global involvement. The ARC provides leadership in discovering and applying knowledge through high-quality research that contributes to a safe and abundant food, fiber, and energy supply while enhancing the sustainability of agricultural and natural resource systems.

Faculty members associated with the ARC conduct basic and applied research, using the most sophisticated laboratory technolo-

gy, field experiments, and multidisciplinary teams to accomplish targeted goals. Research is funded by a wide range of competitive federal and other extramural grant programs including substantial support from agricultural commodity commissions and other groups within Washington.

While always the largest component of the ARC's research portfolio, research associated with the food system was defined as the central focus of the ARC during the mid-1990s and is reflected in the revised mission statement. Narrowing the focus became necessary due to repeated budget reductions and anticipated future budget constraints coupled with an imperative to remain excellent in core areas of research. This focus has proven effective in preserving our strength in many key areas within the college's food and agriculture programs. The narrowed focus does not exclude any discipline, but rather encourages departmental faculty to concentrate their effort on research closely aligned with the food system focus of the ARC. This focusing of ARC resources will continue into the future and the ARC will draw on faculty expertise from across the range of disciplines within the College of Agricultural, Human, and Natural Resource Sciences and from other colleges across the university, as necessary.

WSU Extension

The mission of WSU Extension is: to engage people, organizations and com-

munities to advance economic well-being and quality of life by connecting them to the knowledge base of the university and by fostering inquiry, learning, and the application of research.

Throughout 2006, WSU Extension conducted its own strategic planning exercise which resulted in the document "WSU Extension Strategic Planning Framework, 2006-2011." Within this plan, seven programming goals were identified that address societal challenges and opportunities. Most of these programming goals are complementary with the mission and direction of extension and research programs within the College of Agricultural, Human, and Natural Resource Sciences. In addition, four strategic initiatives – crosscutting efforts aimed at enhancing the reach and effectiveness of the entire organization – were identified.

CAHNRS Core Research and Scholarly Programs

Four programmatic themes characterize the research and extension endeavors of the college. Within each, several programmatic areas are identified. These areas encompass all research in the college and are not limited to ARC-affiliated research. The four programmatic areas define the complete scope of research, scholarship, and outreach endeavors of the college. As such, they also define the boundaries where the college's investment in research and outreach programs will occur in the coming

years. A major feature of these programs is that they are highly integrative, involving collaborations across disciplines within and outside CAHNRS, as well as with extension educators, government agencies, and external stakeholders.

1. Agricultural Production and Post-Harvest Systems

Improvement in the production and utilization of agricultural products is a long-standing strength of the College of Agricultural, Human, and Natural Resource Sciences and one that remains critical to the economic vitality of Washington State. WSU maintains strong programs that focus on the development of new technologies and production systems to assure that the state's \$30 billion food and agriculture industry remains viable, globally competitive and environmentally sustainable. Technological advances strive to develop production systems that either are benign or beneficial to the environment, enhance the nutritive value and safety of food products, improve non-food consumer products (especially production of bioenergy and bioproducts), and utilize scarce resources (e.g., water) more efficiently. Consistent with the increasing consumer-driven orientation of the food sector, elements of this theme that are becoming increasingly important in size and scope include topics related to consumer behavior, especially nutrition and health consciousness.

- Technologically-intensive agriculture
- Biologically intensive, organic and small farm systems
- Dryland cropping systems
- Perennial horticulture production and post-harvest systems
- Irrigated cropping systems
- Plant and animal protection from diseases and pests
- Selected plant breeding programs
- Public policy and economics
- Bioenergy and bioproduct production and processing in agricultural systems
- Food processing and technology
- Health and nutrition of food products
- Improved animal efficiency through reproduction, nutrition, and growth
- Urban and environmental horticulture
- Human and social dimensions of agriculture

2. Food System Plant and Animal Biotechnology

CAHNRS has developed a significant strength in plant and animal biotechnology directed toward agricultural systems. The college's large investment in plant biochemistry, genetics, and genomics represents a significant proportion of the university's commitment in its defined strength of basic plant sciences. Investments in animal biotechnology have expanded the college's capabilities in this area. Genomics and metabolomics, coupled with the college's breadth of expertise in animal and plant physiology and genetics, provide a powerful

opportunity for the college to advance the field of functional genomics and applied metabolomics, where the analysis of genes and their functions will require extensive expertise at the organism level. Research programs in genomics, metabolomics, and genetics will lead to major advances in agricultural productivity, environmental quality and human well-being. CAHNRS is poised to become an international leader in functional genomics and metabolomics.

- Plant biochemistry
- Plant and animal genetics
- Plant and animal genomics and metabolomics
- Bioinformatics in agricultural plant and animal systems
- Economics and sociological issues related to biotechnology

3. Natural Resource and Environmental Sustainability

Economic growth and its resulting affluence place increasing demands on Washington's natural resources and environmental amenities. The state's resources and amenities are vital inputs that fuel the engine of growth and enhance the quality of life of the state's citizens. WSU and CAHNRS have a long history of environmental and natural resource programs spanning across a variety of disciplines. While not expansive in size and scope, natural resource and environmental programs within the college should be interdisciplinary in nature and

address the critical issues facing the state.

- Water, wildlife, and related dimensions of sustainable ecosystems
- Natural resource and environmental economics and policy
- Bioproducts, biofuels, and bioprocessing in non-agricultural systems
- Environmental soil science
- Sustainable, low-impact development in urban landscapes

4. Human Sciences and Design

CAHNRS maintains active and growing research and outreach programs in a variety of human sciences (e.g., human development, community and rural sociology, and economic sciences), as well as several design disciplines (e.g., landscape architecture, interior design, and apparel, merchandising, design, and textiles). A strategic thrust in recent years, and one that will continue into the future, is the growth of vibrant programs of research and scholarship in these areas.

- Early childhood, adolescent, and family studies
- Economic policy and development
- Applied economic analysis and econometrics
- Sustainable development and design
- Apparel and textile development, marketing, and design

Areas of Preeminence

For WSU and CAHNRS to achieve the academic and scholarly excellence to which it aspires requires that the university and the college identify and strategically invest in a select set of areas of excellence. The university has identified six areas of preeminence in research and scholarship that build upon a strong foundation of excellence and have extraordinary potential to enhance the university's reputation. Criteria used in identifying these areas included prestige with funding agencies, industry, and peers; scholarly impact (e.g., publications, citations, and creative works), societal impact, and educational impact. Employing similar criteria, and coordinating with university areas of preeminence, led to the identification of the following four areas of preeminence within the college:

1. Basic plant sciences, genetics, and genomics.
2. Horticultural production and processing systems.
3. Dryland production systems.
4. Biologically intensive (sustainable) and organic agriculture.

Like the university areas of preeminence, these areas are distinctive, thematic, and interdisciplinary. These programs represent core strengths of the college – a foundation that must remain strong if we are to successfully build new capabilities and achieve higher levels of excellence in agricultural,

human, and natural resource sciences. As such, these areas will continue to be a strategic investment priority and will receive priority when operating in a budget rescission environment.

All four areas of preeminence fall into the college's traditional strength of food and agriculture. A critical goal for the college is to expand the scope of its nationally pre-eminent programs to include targeted areas within human sciences, economics, natural resource sciences, and design disciplines.

Several other subject matter areas were identified as emerging or desired areas of preeminence. While perhaps not as fully developed as the four areas of preeminence identified above, these areas have seen recent advancements in meeting several of the criteria listed above, and/or represent a critical area for the college to expand its activities in the future. As such, these areas will receive priority in decisions concerning faculty expansion during the term of this plan.

1. Biofuels and bioproducts (feedstock development, bioconversion, and social/economic dimensions).
2. Early childhood and youth development.
3. Water resource science and management.
4. Food safety and health policy and economics.

5. Food technology to enhance health and nutrition.
6. Viticulture and enology.

Goals and Strategies

Strengthen undergraduate, graduate and professional education to enhance student success.

Goal 1

Deliver superior undergraduate teaching and learning experiences in agricultural, human, and natural resource sciences.

CAHNRS has always practiced the “World Class. Face to Face” commitment of the university by placing a high value on providing a student-centered approach to learning and high-quality undergraduate instruction and advising. Constant innovation and relevance in a real-world context is an integral part of our vision for academic programs.

Strategies

- Conduct strategic curriculum review and revision to better serve the educational needs of undergraduate students and prepare them for professional careers and/or graduate studies.
- Plan and implement an organizational structure in CAHNRS academic programs which will enhance interdisciplinary learning experiences for students.
- Routinely audit course and degree offerings, course content, and enrollment to identify areas of high demand, and to eliminate courses with overlapping content, limited need, and/or lack of student appeal.
- Develop and continually improve expected learning outcomes and assessment procedures for individual degree or teaching programs and course evaluation processes to assist in course and instructor improvements.
- Document action plans for improving teaching activities and results during the annual review process, and develop an assessment plan for determining whether adjustments or improvement strategies were effective.
- Recognize and reward outstanding teaching and advising within CAHNRS and encourage faculty development through peer review, seminars, and workshops related to teaching.
- Create mentoring systems and expectations for teaching faculty to acquire competitive grant funding to support the expansion of the scholarship of teaching in CAHNRS.
- Routinely assess skill level and employability of CAHNRS graduates.

Goal 2

Improve access and increase enrollments to support the diversity of academic programs (majors and options) in CAHNRS.

The college’s commitment to excellence

in undergraduate education is dependent upon the ability to recruit a high-quality student body for its programs. Undergraduate enrollments in the human sciences and design disciplines have expanded significantly in recent years, whereas enrollments in the agriculture and natural resource sciences have declined. College benchmarks target a 20 percent increase in students majoring in agriculture and natural resource programs over the next five years. Even greater competition for high-quality students is expected in the future, requiring the college to expand its recruiting efforts and to develop curricula of interest to today's student.

Strategies

- Increase efforts directed toward improving high school and community college student awareness of the diverse array of majors, options, and career opportunities offered through academic programs in CAHNRS.
- Improve articulation with community colleges to insure successful transition into CAHNRS degree programs.
- Improve recruitment materials and media to assure a modern and appealing message to today's prospective student (e.g., web page, recruiting and career DVDs).
- Expand and broaden CAHNRS scholarship programs by increasing private gifts and allocating scholarship resources to areas with enrollment deficiencies.

- Increase minority student recruitment through participation in organized WSU activities and scholarship opportunities, and by assuring curriculum and communications are appealing to a diverse audience.
- Expand distance delivery course and degree offerings to enhance the educational opportunities for place bound, time bound and non-traditional students, as well as increase enrollment possibilities for CAHNRS courses.

Goal 3

Expand experiential and leadership learning opportunities within CAHNRS Academic Programs.

CAHNRS is committed to delivering an undergraduate experience that extends well beyond classroom learning. It is our goal that every graduate will have one or more transformational learning experiences through participating in leadership, internship, study abroad, and/or undergraduate research opportunities.

Strategies

- Increase and enhance opportunities for undergraduate students to work in research laboratories and engage in other student research experiences.
- Integrate teaching with technology to provide enhanced learning environments for undergraduate students
- Develop the CAHNRS Experiential

Learning Center to increase the number and scope of internship and other experiential opportunities so that undergraduate students acquire essential personal and professional skills required for success.

- Increase student participation and leadership opportunities in CAHNRS and WSU student organizations, as well as in professional organizations.
- Increase the number and accessibility of international exchange programs and opportunities available to undergraduate students.

Goal 4

Provide world-class graduate student education and training that includes strong research experiences and enhanced disciplinary and multidisciplinary skills.

CAHNRS is a principal contributor to the university's graduate education program and fully supports the university's call to embrace our mission as a national research university by enhancing the size and quality of our graduate programs. As with the university as a whole, successful transformation of our graduate programs will require significant changes in the culture, curricula, incentives, and financing of these programs. College benchmarks target a 25 percent increase in graduate student enrollment over the next five years, with an explicit focus on increasing doctoral student enrollment.

Strategies

- Develop and implement a performance-driven model for routinely assessing and evaluating the quality of graduate programs.
- Create synergies among existing degree options and majors to build interdisciplinary programs that sustain and expand our ability to evolve CAHNRS graduate programs.
- Significantly enhance and expand recruiting efforts at both the college and program level to attract high achieving students to CAHNRS graduate programs.
- Develop new and augment existing revenue streams to support significant growth of graduate programs, including greater utilization of extramural funds for graduate assistantships and procurement of private gifts for graduate fellowships.
- Assess and develop interdisciplinary graduate programs in areas with high growth potential.
- Increase the percentage of faculty involved in graduate student supervision by reinforcing this priority in annual reviews, resource allocation decisions, and tenure and promotion.
- Provide professional development opportunities for graduate students involving teaching, grant writing, project management, personnel management, teamwork and life skill enhancement, to ensure success as they integrate into the work force.

Advance agricultural, natural resource, human, and economic systems through basic and applied research and outreach.

Goal 5

Build a strong culture of excellence in research and scholarship.

CAHNRS has demonstrated research excellence in several areas, and many individual faculty members are nationally and internationally recognized as leaders within their disciplines. The college is a leader in patent development and technology transfer within the university. However, the college needs to develop more nationally and internationally recognized programs, and to recruit even more high-quality faculty. These actions will further the college's goal of creating a culture of research excellence across its academic programs and departments.

Strategies

- Improve the visibility and stature of college research programs within and outside the university.
- Allocate resources preferentially to defined areas of preeminence and emerging areas of preeminence within the university and college.
- Develop at least one program in each academic department that is nationally and internationally recognized for research excellence.
- Continue to accentuate the importance

of refereed publications and juried designs in faculty annual reviews, unit evaluations, tenure and promotion, etc.

- Reinforce the defined scholarship expectations for faculty within the human sciences and design disciplines.

Goal 6

Enhance the role of research and extension centers in all functions within the college (undergraduate education, graduate education, research, and extension).

WSU's research and extension centers form a unique resource within the university and are well situated to meet the future needs of Washington's communities and agricultural and natural resource industries. The centers have a history of fostering interdisciplinary teams that serve as models for integrating knowledge and expertise to address complex biological and ecological issues associated with agricultural production and environmental stewardship. To fully capture the benefits of the centers, recent efforts have focused on improving their infrastructure, facilities, and program support. A unique vision for each center focuses its efforts and activities on priority areas inherent to its geographical location.

Strategies

- Reinforce the role of the center directors as thematic research and extension program leaders
- Improve the infrastructure, facilities,

and program support at the research and extension centers through a portfolio of funding sources, including reallocating existing resources, private funding, and state, federal, and local funding.

- Create a positive and supportive environment for undergraduate instruction and internships and graduate research and education at the research and extension centers.
- Improve the infrastructure for distance course delivery at research and extension centers to improve the ability of off-station faculty to successfully contribute to course delivery and student mentoring.
- Define and deliver a focused interdisciplinary program at each research and extension center and deliver this program statewide.
- Improve the coordination between CAHNRS departments and research and extension center directors to emphasize joint responsibility for improved programming, staffing, and resources to conduct each center's defined mission.
- Advance the concept of a system of research and extension centers working in a collaborative manner to address agriculture and natural resource issues statewide.

Goal 7

Strengthen and support interdisciplinary, team-based initiatives.

To make meaningful contributions in addressing the increasingly complex problems facing society requires interdisciplinary, team-based approaches. Although interdisciplinary approaches have expanded significantly in the college, the institutional culture and infrastructure sometimes inhibits the success of teams. The college must provide the tools, training, incentives, and infrastructure to encourage and facilitate team-based initiatives.

Strategies

- Recognize and reward interdisciplinary and team research and outreach initiatives through tenure and promotion, annual review, and awards and recognitions.
- Encourage the development of interdisciplinary and team Hatch projects and Extension Plans of Work.
- Improve internal competitive grants programs that encourage the development of interdisciplinary research and extension teams.
- Improve administrative support for the grants process to facilitate interdisciplinary and collaborative research and outreach efforts.
- Recognize and eliminate institutional barriers to interdisciplinary initiatives.
- Capture the benefits of the college's breadth by seeking research collaborations which span the agricultural, human, and natural resource sciences.

Goal 8

Strengthen communication and engagement with external stakeholders.

To make significant contributions to economic development and the quality of life of the state's citizens, the college must be committed to a culture of continuing communication with its constituencies. These stakeholders are many and diverse and include traditional agricultural commodity groups, as well groups and individuals served by natural resource, human science, and design programs.

Strategies

- Strengthen relationships with traditional agriculture stakeholder groups through enhanced communication, attendance at stakeholder meetings, etc.
- Develop and implement a comprehensive communication plan for promoting the college and its programs to the public and update this plan annually.
- Increase engagement with the CAHNRS Advisory Council and other advisory groups (e.g., "Kitchen Cabinets").
- Foster the development of advisory groups for departments and research and extension centers.
- Establish relationships with key businesses, government agencies, and stakeholder groups in areas served by human science and design programs.

Goal 9

Increase accountability through outcome assessments of research and extension programs and enhance communication of outcomes to stakeholders.

All public agencies face an increasing level of accountability for their use of public funds. CAHNRS is committed to accountable management of its fiscal resources through the use of defined performance benchmarks. In 2006, a set of benchmarks was developed to measure the college's progress in meeting its strategic goals, and similarly, all units within the college developed similar metrics. These and other performance metrics must be used to inform resource allocation decisions and to evaluate the introduction, continuation, and termination of programs.

Strategies

- Rigorously define college benchmarks, update progress toward attaining these goals annually, and report progress to internal and external stakeholders.
- Develop the capacity to rigorously estimate the contributions of selected research and extension programs, as defined by factors such as adoption rates of new practices and technologies, economic impact, etc.
- Define and utilize measures of accountability for allocating resources within the college.
- Prior to initiating new programs, identi-

fy the expected outcomes, performance measures, and results time line to assess the effectiveness of the program, and use these metrics to evaluate the program for continuation.

- Improve WORQS and other reporting systems as mechanisms for providing information to assess accountability to goals of units and the college.

Goal 10

Improve integration of research and extension activities.

The college's research mission is to encourage and support science that serves society and that is purposefully directed to aid specified stakeholders through educational intervention. To accomplish this end requires a seamless integration of research and extension activities between the college and WSU Extension. Two-way information flow must exist to inform researchers of the most pressing issues facing stakeholders and communicate the most current research findings to stakeholders. Given the size of the CAHNRS faculty relative to the scope of the college's programs, this goal requires that all faculty and staff embrace the outreach mandate of the land-grant university.

Strategies

- Increase the number of extension specialists in high priority and underserved areas within agriculture, natural resource, and human sciences.

- Improve the linkage between CAHNRS departmental faculty and county extension educators.
- Reconfigure the college's administrative structure to provide more explicit leadership to CAHNRS extension programming.
- Integrate Extension Plans of Work and Hatch projects, where appropriate.
- Ensure that all faculty members, regardless of appointment, are responsible and accountable to the college's research and outreach missions.

Goal 11

Enhance capability to deliver research-based information to users in a timely and effective manner.

CAHNRS has a long-standing tradition of providing research-based information to its clientele through traditional extension mechanisms. Recently, our ability to deliver this information has been compromised due to a variety of factors, including reductions in extension staff, technological challenges, and changing needs and expectations of traditional clientele. Through its alliance with WSU Extension, CAHNRS is committed to improving its outreach capacity and delivering programs using an appropriate mix of traditional and contemporary media.

Strategies

- Expand the number of intensive con-

tinuing education offerings (e.g., not-for-credit courses, multi-day workshops, certificate programs) in high-demand areas.

- Expand, coordinate and organize web-based technologies to allow users to access all available educational and informational resources.
- Increase the visibility of CAHNRS research programs in popular media, such as web sites, newspapers, magazines, and radio and television programs.
- Implement outcome-based training, reporting tools, and processes to assure improved program design and evaluation.

Expand resource base and create capacity to accommodate growth in critical programs.

Goal 12

Actively seek to strengthen and expand partnerships both within and outside of WSU.

Modern research and educational endeavors involve interdisciplinary partnerships that often span across a variety of units within the university, as well as various organizations outside of WSU. Building effective interactions with other institutions, the private sector, public and private foundations, stakeholder groups, and other organizations worldwide is critical to expanding the scope and impact of the college's activities.

Strategies

- Develop mutually beneficial partnerships with state and federal agencies.
- Actively seek out partnerships with other colleges, centers, and regional campuses within WSU.
- Encourage the development of cluster hiring strategies across departments and/or colleges that would assemble critical mass in areas of preeminence requiring interdisciplinary approaches.
- Develop regional partnerships with universities located in the Pacific Northwest for the purpose of expanding the depth, breadth, and reach of teaching, research, and outreach programming.
- Increase the number and scope of the college's international partnerships.

Goal 13

Enhance state and federal funding to support food, agricultural, human, and natural resource science research.

CAHNRS has historically employed a variety of sources to fund its teaching, research, and outreach activities. Over the past two decades, traditional "hard dollar" support from both federal and state sources has declined precipitously. Therefore, the college must aggressively seek new support through directed initiatives focused on addressing issues of priority to state and federal agencies.

Strategies

- Successfully develop and execute major legislative initiatives to bring significant new state funding to bear on food, ag-

riculture, human, and natural resource science research and outreach.

- Develop partnerships with key state agencies (e.g., Washington State Department of Agriculture, Department of Early Learning, Department of Ecology) to bring new issue-based resources to the college.
- Proactively engage federal agencies to explore funding opportunities and showcase WSU capabilities.

Goal 14

Increase and diversify the funding base for college programs.

As a consequence of the reduced state and federal funding referenced above, the college's future success and the impact of its programs will be significantly influenced by its ability to diversify its revenue stream. An increasing share of the college's research expenditures must come from "soft funds," including extramural grants, gifts, service fees, and revenue earned from the sale or licensing of intellectual property. By diversifying this funding portfolio, the level of funding can be increased, while reducing year-to-year funding variability.

Strategies

a. Improve college-wide success in the procurement of extramural grants by:

- Increasing the emphasis of extramural fund procurement in hiring decisions, tenure and promotion,

and faculty reviews.

- Enhancing the role of the ARC in the organization of faculty teams and development of large institutional proposals in response to requests for applications from federal agencies, foundations, etc.
- Developing internal competitive "seed grant" programs to catalyze the development of successful grant proposals to federal agencies and foundations.
- Building the grant-writing capacity of faculty and staff.
- Engaging grant specialists to identify funding opportunities and assist faculty in preparing grant applications.

b. Augment the number of gifts to finance college teaching, research, and outreach programs by:

- Developing and executing a plan for successful accomplishment of the college's goal in the upcoming capital campaign.
- Allocating additional college resources to development activities and expanding the development staff.
- Engaging all academic units and centers, and key faculty, in development activities.
- Strengthening alumni relations through additional events and communications.

- c. Increase revenue from intellectual property created by college research by:
- Strengthening relationships with the Office of Intellectual Property Administration.
 - Partnering with industry in sharing the costs and benefits of commercialization of new technologies developed by college researchers.
 - Identifying an individual within the ARC to serve as the principal point of contact for patents and licensing of new technologies.
 - Providing educational programs to faculty and staff concerning intellectual property issues and opportunities.

Goal 15

Implement resource management policies and procedures to encourage excellence.

External consultants who have assessed WSU's research and graduate programs have identified its culture of egalitarian budgeting as a significant impediment to achieving greater excellence. They also identified an over reliance on hard-dollar allocations to fund research and graduate programs. At the same time, prolonged periods of budget rescissions have resulted in operating funds being spread over a large number of programs with only small marginal impacts. New policies and procedures are needed to reallocate funds to spur program expansion and earn the largest return on investment.

Strategies

- Reallocate state and federal funds to re-balance the percentage of "hard dollars" allocated to salary and benefits versus operating capital.
- Evolve to a system of allocating ARC resources through the project system, as opposed to allocating technicians, GRAs, etc. to individual scientists.
- Allocate research and extension faculty positions and operating resources to areas of strategic excellence and based upon measurable performance criteria.
- Move from ARC projects of 3-year duration to 5-year projects.

Goal 16

Upgrade and improve facilities for college research and teaching programs.

Achieving and maintaining excellence in teaching and research requires competent people and excellent facilities to support their work. CAHNRS programs operate throughout the state in a wide variety of buildings and facilities of varying quality. The continual improvement of these facilities to enable world-class research, creative activities, and instruction is a significant challenge.

Strategies

- Proactively advocate for the inclusion of both on-campus and off-campus facility improvement and replacement projects in the WSU capital facility requests to

the State of Washington.

- Aggressively seek private gifts and federal funds to support facilities projects, and use these funds to leverage state financing for critical facility improvement or replacement projects.
- Include selected facility projects in the college's priorities for the upcoming WSU capital campaign.
- Develop and begin implementing capital improvement plans for Prosser, Wenatchee, and Puyallup research and extension centers.
- Develop a comprehensive plan for CAHNRS on-campus facilities, including buildings comprising the life science research and education complex.

Create an environment that fosters diversity and supports all faculty, students, and staff.

Goal 17

Enhance faculty and staff recruitment, development, and retention.

People are the most important resource of our organization, and hence, the recruitment and retention of high-quality students, faculty and staff is imperative for long-run success. All indicators confirm that the college has made significant progress in attracting superior candidates to faculty positions; however, retaining faculty must be a priority and requires constant attention.

Strategies

- Improve recruitment processes and employment offers (e.g., salary, start-up packages, partner accommodations) to assure we are hiring the most elite candidates available.
- Aggressively seek to recognize and reward superior achievement and scholarship by both faculty and staff.
- Develop institutional policies and incentives that help retain superior faculty and staff.
- Establish endowed professorships for the purpose of attracting and retaining faculty of National Academy-level status.
- Develop and implement a strategy for professional development and mentoring of new faculty.
- Increase faculty salaries with the objective of achieving the average of peer institutions.

Goal 18

Develop an environment of trust and respect that fosters and values diversity.

The college must continue to foster a climate of trust and respect so it will be a desirable place to work and learn. Diversity in the faculty, staff, and student body must be increased to help create an atmosphere where people of diverse backgrounds and views feel welcome and can contribute to the improvement of the entire college.

- a. Increase diversity of faculty, students, and staff.
 - Enhance efforts to recruit and retain minority students, faculty, and staff.
 - Develop a mindset of respect, and encourage faculty and student exchanges, sabbaticals, and similar activities that bring diverse international and domestic perspectives to the campus.

- b. Create a safe academic and workplace environment.
 - Identify potential future leaders within the college and invest in leadership development activities for these individuals.
 - Continue opportunities for faculty, staff, and student training and educational experiences in workplace environment, team building, and diversity issues.
 - Review and enhance communication strategies within CAHNRS about values, goals, and actions to be taken.