

Summary of Activities in Response to CAHNRS Strategic Plan (2008-11) Progress Update Spring 2012

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 and Outcomes:

- 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.
 - Completed major revisions to Ag and Food Systems degree, with 5 majors and 1 minor.
 - Developed and implemented Integrated Plant Sciences degree, with 7 majors.
 - Completed major curriculum revisions in AMDT and SES.
 - Completing major curriculum revisions in FS, NRS, ID, and LA, as a result of formation of Bi-State School of Food Science, School of the Environment and School of Design and Construction.
 - Eliminated 10 majors (Crop Science (1 major, 4 options), Soil Science (1 major, 3 options), Hort (1 major, 3 options), original AFS (5 majors, 7 options), original Economics (1 major, 8 options), and NRS Forestry major in conjunction with above curriculum changes.
- Plan and implement an organizational structure in CAHNRS Academic Programs which will enhance interdisciplinary learning experiences for students.
 - Implemented interdisciplinary Ag and Food Systems (AFS) and Integrated Plant Sciences (IPS) degrees, replacing disciplinary degrees.
 - Established a program steering committee comprised of chairs and directors of all participating academic units for purpose of administering curriculum and activities for AFS and IPS interdisciplinary programs.
 - Implementing integrated and interdisciplinary natural resource curricula and degree programs in association with forming the School of the Environment.
 - Implementing integrated design curricula in association with forming the School of Design and Construction.
- 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.

- Worked with the director of Assessment of Teaching and Learning to offer curriculum mapping workshops for academic programs in CAHNRS.
- Developed and implemented low-enrollment course audit process that is executed each semester.
- Eliminated 204 (104 undergraduate level; 100 graduate level) low enrollment courses since 2008.
- 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.
 - Developed assessment reports for all academic programs for the university-wide accreditation process.
 - With support from the Office of Assessment of Teaching and Learning, initiated new efforts to implement course and curricula improvements based on assessment results.
 - Developed learning outcomes for all academic programs and mapped learning outcomes to curricula.
- 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.
 - Developed college-wide teaching load expectations, and defined teaching expectations by developing teaching performance expectations matrix.
 - Developed new electronic course evaluation process, which automatically provides students with access to evaluations for all CAHNRS courses each semester.
 - Implemented system by which student course evaluations results are electronically delivered to chairs/directors for courses delivered by faculty under their supervision.
 - Created a voluntary mid-term electronic course evaluation process to support instructors with addressing course issues in real time.
 - Implemented more rigorous assessment of teaching performance in annual reviews, including documentation of strategies with action plans and timelines for faculty to improve in areas of deficiency.
- Recognize and reward outstanding teaching and advising within CAHNRS and encourage faculty development through peer review, seminars, and workshops related to teaching.
 - Sponsored 4-6 workshops per year for faculty and/or students to support teaching and/or writing efforts.
 - Implemented program and forms for peer review of teaching.
 - Developed and implemented an advisor evaluation system and survey in cooperation with Office of Assessment of Teaching and Learning.
 - Implementing a professional advisor model throughout the college.

- Create mentoring systems and expectations for teaching faculty to acquire competitive grant funding to support the expansion of the scholarship of teaching in CAHNRS.
 - Approaches for acknowledging contributions to the scholarship of teaching were defined in the teaching performance expectations matrix.
 - Fifty-one (51) competitive grants were submitted through Academic Programs from 2008 to 2011, of which 5 included curriculum development or delivery objectives. Forty-one were funded, which collectively generated \$8,168,123.
- Routinely assess skill level and employability of CAHNRS graduates.
 - Conducted an alumni survey to assess the ability of CAHNRS programs to prepare graduates for the work force.
 - Created an exit survey that is delivered electronically to all graduating senior in CAHNRS. Several chairs/directors follow the survey up with face to face senior exit interviews.

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 and Outcomes:

- 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.
 - Created and implemented a marketing plan to recruit community colleges for articulation agreement development.
 - Actively engaged community colleges through personal visits and mailings.
 - Re-established positive working relationships with Washington State Agricultural Education high school teachers.
 - Re-established and strengthened our relationship with the Washington FFA, including providing coordination and recruitment activities for participants during the annual state convention.
 - Increased undergraduate student enrollment by 31 percent since 2008.

- Improve articulation with community colleges to insure successful transition into CAHNRS degree programs.
 - Developed articulation protocol, handbook, web site, and SharePoint site. Assigned a coordinator to manage the process for the college.
 - Established 51 articulation agreements across seven academic 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).
 - Developed and implemented individualized recruitment plans and materials for each undergraduate program in CAHNRS.
 - Developed Facebook, Twitter and YouTube sites for Academic Programs in CAHNRS.
 - Developed recruitment DVD and video profile for each academic program.
 - Revamped the CAHNRS Fall Festival as a major recruitment, retention, and community building event.
- Expand and broaden CAHNRS scholarship programs by increasing private gifts and allocating scholarship resources to areas with enrollment deficiencies.
 - Revamped process by which CAHNRS scholarships are awarded.
 - Raised \$3.2 million in new funding for undergraduate scholarships in 2008-2011.
 - Awarded \$1,477,425 in CAHNRS scholarships from 2008 to 2011.
- 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.
 - Participated in Team Mentoring Program to engage minority students in experiential learning and support opportunities in CAHNRS.
 - Actively engaged in several university recruitment events targeted to underrepresented groups (Imagine U at WSU, Future Cougars of Color, Connexion, etc.).
- 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.
 - Completed distance course offerings for the Organic Ag. Certificate Program.
 - Expanded enrollment in existing distance courses in CAHNRS.
 - Developing introductory plant science courses in distance delivery formats to support ease of transfer of students into AFS and IPS programs.
 - Increased total number of courses delivered via distance delivery from 144 to 158 between 2008 and 2011.

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 and Outcomes:

- Increase and enhance opportunities for undergraduate students to work in research laboratories and engage in other student research experiences.
 - Developed Undergraduate Research Program in partnership with ARC and Academic Programs.
 - One hundred and nine (134) undergraduate students completed formal undergraduate research program in 2008-2011.
 - Organized annual Undergraduate Research Poster contest in conjunction with CAHNRS Awards Banquet. Created four award categories (Applied Ag and NRS, Basic Ag and NRS, Design Disciplines and Human Sciences) with two monetary awards given per category.
- Integrate teaching with technology to provide enhanced learning environments for undergraduate students.
 - Provided \$200,000 of Omnibus funding to purchase equipment needed to improve our ability to deliver and receive asynchronous and synchronous distance courses within departments and at R&E Centers.
 - Assisted with the development of on-line support tools for instructors of large enrollment classes with personnel from the Office of Assessment of Teaching and Learning.
- Develop the CAHNRS Transformational Learning and Leadership 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.
 - Developed internship management protocol, handbook, assessment process and web site.
 - Creating a translational undergraduate summer internship program for students enrolled in AFS or IPS majors to conduct summer research with faculty at each of the four R&E Stations.
 - Developing a campaign initiative to solicit donations to fund internships and professional development opportunities for CAHNRS students.
- Increase student participation and leadership opportunities in CAHNRS and WSU student organizations, as well as in professional organizations.
 - Restructured CAHNRS Ambassadors Program.

- Revitalized CAHNRS Student Senate.
- Organized Life Skill Enhancement Workshops for CAHNRS students.
- Increase the number and accessibility of international exchange programs and opportunities available to undergraduate students.
 - Raised \$200,000 Christiansen Endowment for Undergraduate Experiences.
 - Undergraduate study abroad programs were executed by AMDT, LA, ID, and SES.
 - Contributed to the development of WSU's Global Leadership Certificate program.
 - Acquired funding for student training and undergraduate curriculum development in grants funded in collaboration with CAHNRS International Research and Development.
 - Revitalized the "Ripple Effect" effort to raise funds for student international experiences.
 - Developing an international internship experience for undergraduates in Rwanda and Malawi.

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 and Outcomes:

- Develop and implement a performance-driven model for routinely assessing and evaluating the quality of graduate programs.
 - In 2008, the Graduate School coordinated the development of learning outcome assessment plans for every graduate program at WSU.
 - In 2010, the Graduate School worked with departments/program to establish PhD degree enrollment and time to degree targets to achieve by 2015.
 - During 2011, the Graduate School conducted a review of all doctoral programs that involved a self-study, a review of IR data, and an evaluation of program practices.
- Create synergies among existing degree options and majors to build interdisciplinary programs that sustain and expand our ability to evolve CAHNRS graduate programs.
 - The Molecular Plant Science (MPS) program underwent a revitalization process

that resulted in leadership, support and policy changes that improved the clarity and quality of the program. The number of PhD students in MPS increased by 25% (40 to 50 students) since 2008.

- Redesigned and revitalized the distance-based MS in Agriculture program was in 2009, including the development of seven new on-line graduate level courses in an array of disciplines (FS, IPM, ENTOM, PP, AS, HORT, ECON), to improve rigor, expand access and improve appeal to a diverse audience of practitioners involved in agricultural and food systems.
- Significantly enhance and expand recruiting efforts at both the college and program level to attract high achieving students to CAHNRS graduate programs.
 - A majority of the recruitment efforts for graduate programs are managed at the department level with cooperation from the Graduate School.
 - Based on results, departmental/program efforts have been successful.
 - Enrollment across graduate programs in CAHNRS expanded from 452 to 540 students (~19.5%) since 2008.
 - Doctoral enrollment increased approximately 18% since 2008
 - Several departments/programs (Bio Systems Engineering, Crop and Soil Sciences, Plant Pathology, and MPS) have dramatically increased graduate student enrollment.
- 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.
 - Increased total extramural funding for graduate assistantships 217 %, from \$1.6 million in 2008 to \$3.6 million in 2011.
 - Engaging in \$4 million graduate fellowship funding raising effort in association with the Campaign for WSU.
 - Partnered with the Center for Distance and Professional Education to provide six, half-time PhD assistantships to CAHNRS students to support the on-line course builds for the MS in Agriculture program in 2011.
- Assess and develop interdisciplinary graduate programs in areas with high growth potential.
 - Developed an interdisciplinary PhD program in Prevention Sciences led by the Department of Human Development that was approved by the HEC board in 2011. The first cohort will enroll in this program in Fall 2012.
 - Initiated planning for the development of a Ph.D. program in plant breeding, but project has not advanced.
 - New interdisciplinary doctoral program in design is under consideration within the new School of Design and Construction
- Increase the percentage of faculty involved in graduate student supervision by reinforcing this priority in annual reviews, resource allocation decisions, and tenure

and promotion.

- Increased the percentage of tenure-track faculty serving as a graduate student advisor increased from 74 percent in 2008 to 88 percent in 2011.
- 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.
- The following number of workshops were sponsored by Academic Programs. Programs were developed and delivered by AP personnel and CAHNRS faculty. Graduate students were invited to attend all of these events
 - 2008: 2 Workshops (68 participants)
 - 2009: 11 Workshops (175 participants)
 - 2010: 11 Workshops (303 participants)

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 and Outcomes:

- Improve the visibility and stature of college research programs within and outside the university.
 - Increased the visibility of college within WSU through use of internal media, awards, and research performance, re-establishing CAHNRS as premiere research college at WSU.
 - CAHNRS led the university in grants, intellectual property, and doctoral students enrolled in 2009-2011.
 - Increased visibility of agricultural research programs externally through use of public media, e-newsletters (e.g., *On Solid Ground*, *Voice of the Vine*, *Green Times*), and social networking media (e.g., YouTube videos).
 - Accepted invitation to join the prestigious University Industry Consortium (a prestigious group of university and industry members).
- Allocate resources preferentially to defined areas of preeminence and emerging areas of preeminence within the university and college.
 - Established hiring plan process to direct resources to areas of preeminence and maximum impact.

- Implemented internal competitive grant programs to stimulate development of research and/or extension teams focusing on priority areas.
- Funded infrastructure improvements in high priority areas.
- Develop at least one program in each academic department that is nationally and internationally recognized for research excellence.
 - Identified “pinnacles of excellence” in each academic unit.
 - Tied hiring plans to identified areas of excellence.
- Continue to accentuate the importance of refereed publications and juried designs in faculty annual reviews, unit evaluations, tenure and promotion, etc.
 - Developed performance matrices to define research expectations for faculty with research and/or extension appointments.
 - Increased refereed publication productivity 32 percent between 2008 and 2010.
- Reinforce the defined scholarship expectations for faculty within the human sciences and design disciplines.
 - Defined and reinforced scholarship expectations within AMDT, ID, SES, and HD.
 - Refereed publication output in human sciences increased 47 percent from 2008 to 2011.
 - Extramural funding in human science units increased 3.3 percent from 2008 to 2011.

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 and Outcomes:

- Reinforce the role of the center directors as thematic research and extension program leaders.
 - Replaced three of four directors with focus on bringing research leadership to the position.

- Transferred some budget responsibility (e.g., technician funding) from chairs to center directors.
- Enhanced role of R&E center directors in annual review and tenure and promotion.
- Eliminated extraneous programs from R&E centers to enable focus on thematic areas.
- 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.
 - Completed \$1.6 million of infrastructure improvements to R&E centers in 2008-11.
 - Developed and implemented uniform land, orchard, and vineyard service fee policy to assure appropriate use and allocation of land resources at centers.
 - Developed long-term capital improvement plans for each center.
 - Added staff support positions for perennial crops and funded molecular laboratory instrumentation and winery improvements at Prosser.
 - Added core operating fund to NWREC through Unified Ag Initiative.
 - Added funds for operating newly purchased Sunrise Orchard at TFREC.
- Create a positive and supportive environment for undergraduate instruction and internships and graduate research and education at the research and extension centers.
 - Set expectation of all tenure-track faculty (including those at R&E centers) to be actively engaged in graduate education. 90 percent of R&E center faculty advised graduate students in Fall 2011.
 - Increased number of graduate courses taught and received at R&E centers (38 courses available to graduate students at R&E centers in AY 2010-11).
- 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.
 - Invested \$63,000 in additional WECN units, as well as increased bandwidth at R&E centers.
- Define and deliver a focused interdisciplinary program at each research and extension center and deliver this program statewide.
 - Redefined focus of Puyallup R&E Center to urban-rural interface (e.g., storm water runoff, low-impact development, etc.).
 - 8 multidisciplinary or multi-institutional grant projects in excess of \$1 million led by center-based faculty were funded in 2008-11 period.

- 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.
 - Defined role of directors and chairs in annual review and tenure and promotion processes.
 - Enhanced collaboration of chairs and research and extension center directors in management of faculty and programs located at research and extension centers.
- 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 and Outcomes:

- Recognize and reward interdisciplinary and team research and outreach initiatives through tenure and promotion, annual review, and awards and recognitions.
 - Modified college tenure and promotion criteria to assure appropriate recognition of interdisciplinary research and team participation.
- Encourage the development of interdisciplinary and team Hatch projects and Extension Plans of Work.
 - Implemented joint Extension/ARC Federal Annual Plan of Work.
 - Increased the number of multi-investigator CRIS projects by 11 percent.
 - Developed joint research/extension planning teams in irrigated agriculture, western WA agriculture, livestock, and dryland agriculture.
 - 95 multidisciplinary or multi-institutional grant projects in excess of \$1 million were developed and 23 funded in 2008-11 period.
- Improve internal competitive grants programs that encourage the development of interdisciplinary research and extension teams.
 - Funded 16 interdisciplinary grants through internal programs.
 - 23 multidisciplinary or multi-institutional extramural grants of \$1 million or more were awarded in 2008-10.
- Improve administrative support for the grants process to facilitate interdisciplinary and collaborative research and outreach efforts.
 - Hired two-person grant writing team in ARC. Assisted with 34 proposals from

August 2010 and through 2011.

- Recognize and eliminate institutional barriers to interdisciplinary initiatives.
 - Initiated university-wide adoption of “credit for grants” process through REX form.
- Capture the benefits of the college’s breadth by seeking research collaborations that span the agricultural, human, and natural resource sciences.
 - Received one large extramural grant that includes faculty from Plant Pathology, Horticulture & Landscape Architecture, and Apparel, Merchandising, Design, and Textiles.

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 and Outcomes:

- Strengthen relationships with traditional agriculture stakeholder groups through enhanced communication, attendance at stakeholder meetings, etc.
 - Maintained regular communication and attend board meetings with 40 key agricultural stakeholder groups.
 - Agricultural stakeholder groups provided an average of \$4.9 million per year in annual research funds and \$7.4 million in “gift grants” 2008-2011.
 - Agricultural stakeholder groups provided over \$47 million in gifts from 2008-11.
 - Significantly expanded (in excess of doubling) WSU’s coverage in industry publications (e.g., *Wheat Life*, *KetchPen*, *Capital Press*, *Good Fruit Grower*).
- Develop and implement a comprehensive communication plan for promoting the college and its programs to the public and update this plan annually.
 - Significantly expanded breadth and depth of coverage in publications, web sites, e-newsletters, on-line learning modules, videos, and PowerPoint and Prezi presentations that cover traditional news areas (e.g., events, workshops and grant announcements).
 - Targeted paid advertisement of CAHNRS programs in high-profile industry publications.
 - Cultivated strong working relationships with other communicators on the WSU campus, leveraging our capacity and increasing coverage in internal publications such as *Washington State Magazine* and *WSU Today*.

- Significantly expanded the use of video to promote CAHNRS programs and communicate success stories.
- Utilized social networking sites (You Tube, Twitter, Face Book) to reach new audiences.
- Increase engagement with the CAHNRS Advisory Council and other advisory groups.
 - Developed Ag Kitchen Cabinet and utilized group as primary source of input from agricultural community.
 - Engaged with Ag President's Group (comprised of leadership of all major commodity commission and producer groups) to incorporate WSU priorities into agricultural community's legislative priorities. Research was identified as their number one priority in 2010 and 2011.
 - Eliminated CAHNRS Advisory Council due to lack of effectiveness and clear purpose; currently, implementing a new vision.
- Foster the development of advisory groups for departments and research and extension centers.
 - Small number of advisory boards developed by subject matter centers and academic units.
- Establish relationships with key businesses, government agencies, and stakeholder groups in areas served by human science and design programs.
 - Developed improved relationships with apparel industry through Enterprise Seattle and other activities.
 - Developed strong relationships with State Economists Office and other key economic development agencies and organization.

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 and Outcomes:

- Rigorously define college benchmarks, update progress toward attaining these goals annually, and report progress to internal and external stakeholders.
 - Thirty benchmarks developed and updated on an annual basis and reported to college leadership team.

- 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.
 - Piloted a CAHNRS Assessment Office from 2008-09 with mixed results.
 - Conducted Evaluation-based Program Development Workshop series in 2011.
 - Created Sharepoint site to provide guidelines on documenting outcomes, survey templates for impact assessment, and links to program evaluation reference.
 - Developed comprehensive listing of references and tools for assessing program impacts and made available of Extension and Professional Development website.
- Define and utilize measures of accountability for allocating resources within the college.
 - Unit-level metrics (particularly research productivity and enrollment) are closely monitored and inform faculty hiring decisions.
 - Developed and utilized faculty metrics for allocation of college-held resources such as technicians and lab space.
 - Most academic units have developed metrics which are updated and monitored on an annual basis.
- Prior to initiating new programs, identify 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.
 - “Milestones” documents (enumerating measurable benchmarks) were prepared prior to initiation of new academic units (e.g., School of Food Science, School of the Environment).
- Improve WORQS and other reporting systems as mechanisms for providing information to assess accountability to goals of units and the college.
 - Developed student census process and reports annually to assure accurate enrollment data by program and unit.
 - In collaboration with Institutional Research, improved reliability of university enrollment data.
 - Using WORQS data, developed process and maintain accurate records of quantity of refereed journal article productivity by faculty, unit, and college.
 - In collaboration with OGRD, implemented system to define grant expenditures and awards by “credit”, as opposed to PI.
 - Established OGRD data as official record of grant activity when measuring faculty and unit performance.

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 and Outcomes:

- Increase the number of extension specialists in high priority and under-served areas within agriculture, natural resource, and human sciences.
 - The number of extension specialists (faculty with Extension appointments in CAHNRS departments) decreased by a net of 3 positions between 2008 and 2011. (unaccomplished)
 - Modified the role of many county Extension faculty to regional specialists, several with statewide responsibilities.
- Improve the linkage between CAHNRS departmental faculty and county extension educators.
 - Implemented integrated administrative planning meetings in agriculture, natural resource, and human sciences.
 - Developed procedures for affiliate faculty status in departments and encouraged extension faculty involvement.
 - Implemented process where search committees and mentoring committees for county faculty include a departmental faculty member with a similar subject matter specialization, and vice versa.
 - Developed and implemented "Initiation of Collaboration" program to foster collaborations in human sciences.
- Reconfigure the college's administrative structure to provide more explicit leadership to CAHNRS extension programming.
 - In 2009, the University Administration reorganized Extension, placing it under the leadership of the Dean of CAHNRS.
 - In response to reorganization, formed Integration Task Force which identified and implemented several strategies to foster greater integration between CAHNRS and Extension.
 - Organized first All-CAHNRS/Extension Faculty Retreat in 2010.
 - Developed and implemented integrated CAHNRS and Extension hiring plans.
 - Developed common business, finance, and hiring procedures for CAHNRS and WSU Extension.
- Integrate Extension Plans of Work and Hatch projects, where appropriate.

- Integrated Extension/Experiment Station Plan of Work developed in 2009 on.
- Ensure that all faculty members, regardless of appointment, are responsible and accountable to the college's research and outreach missions.
 - Developed performance matrices that included engagement as a responsibility of all faculty, regardless of appointment.
 - Defined graduate education as a responsibility of all tenure-track faculty, regardless of appointment.
 - Increased accountability of all faculty to research productivity through annual reviews, tenure, and promotion.

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 and Outcomes:

- Expand the number of intensive continuing education offerings (e.g., not-for-credit courses, multi-day workshops, certificate programs) in high-demand areas.
 - Not-for-credit certificate programs offered in viticulture, enology, and small farms.
- Expand, coordinate and organize web-based technologies to allow users to access all available educational and informational resources.
 - Attempted (with mixed success) to develop content management system (CMS) across Extension.
 - Developed new web sites for CAHNRS, Academic Programs, Alumni & Friends, and all CAHNRS academic units.
 - Most department, center, and program web sites were expanded to better deliver research and extension resources.
 - Integrated Extension and CAHNRS web development units and developing an integrated web presence.
 - Integrating all CAHNRS and Extension decision support tools for agricultural producers.
- Increase the visibility of CAHNRS research programs in popular media, such as web sites, newspapers, magazines, and radio and television programs.

- CAHNRS/WSU Extension coverage in print, broadcast, and on-line media greatly increased by focusing on impact-oriented research and extension stories.
- Developed three regular e-newsletters: *On Solid Ground*, *Voice of the Vine*, and *Green Times*.
- CAHNRS and Extension news has become a regular feature of WSU Today and the WSU News site, and in fact, has dominated some issues of those outlets;
- Obtained national media coverage, including the Associated Press, for tree fruit gift, NARA grant, sequencing of the apple genome, and others.
- Support Rock Doc nationally syndicated column which regularly features CAHNRS research.
- Implement outcome-based training, reporting tools, and processes to assure improved program design and evaluation.
 - Outcomes-based reporting emphasized in Extension and ARC Plans of Work.
 - Some training provided on outcomes-based reporting and assessment.

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 and Outcomes:

- Develop mutually beneficial partnerships with state and federal agencies.
 - New and expanded partnership include:
 - Washington State Department of Ecology: Biomass energy, Wastewater runoff, Soil and water management including biochar use, residue management, and buffer zones.
 - Washington State Department of Agriculture: Testing potential biomass crops in various areas of the state, State SCRI block grant program
 - USDA APHIS: Clean Plant Network
 - Sustainable Aviation Fuels NW (SAFIN): Partnership with Alaska Airlines, Boeing, Climate Solutions, Port of Portland, Port of Seattle, Spokane International Airport, WSU <http://www.safnw.com/about-safn/>
 - USDA-ARS: Numerous partnerships in cereal research, entomology,

- engineering, and horticulture
 - USDA Forest Service: Community fire prevention strategies
 - US and WA Fish and Wildlife Service: Endangered Species restoration and management (pygmy rabbits), species management (cougar, lynx, black-tailed deer)
 - NOAA: salmon recovery and pesticide toxicity.
- Actively seek out partnerships with other colleges, centers, and regional campuses within WSU.
 - Expanded partnership with WSU-Tri Cities to deliver Viticulture and Enology program and build Wine Science Center.
 - Developed School of Environment in collaboration with College of Sciences.
 - Developed School of Design and Construction in collaboration with College of Engineering and Architecture.
 - Expanded partnership with WSU-Vancouver to increase Human Development faculty and programs.
 - Expanded biofuels partnership at WSU-Tri Cities and PNNL; two CAHNRS faculty added to BSEL.
- Encourage the development of cluster hiring strategies across departments and/or colleges that would assemble critical mass in areas of preeminence requiring interdisciplinary approaches.
 - Implementing phenomics cluster hire.
- 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.
 - Formed Bi-State School of Food Science with University of Idaho.
 - Expanded joint Extension and research programming with Oregon State University.
 - Expanded Western Regional SunGrant – Oregon State University and University of Hawaii
 - Enhanced TriState Potato Breeding Program – Oregon State University, University of Idaho, and USDA-ARS
 - Participated in University-Industry Consortium and National Agricultural Biotechnology Council
- Increase the number and scope of the college's international partnerships.
 - Transferred International Research and Development (IRAD) unit to CAHNRS. Average annual extramural awards exceeding \$4 million with ongoing projects in seven countries.
 - 11 CAHNRS faculty participated in IRAD projects abroad in 2011.

- Initiated at least six agreements (MOUs) with international institutions in 2008-2011.

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 and Outcomes:

- Successfully develop and execute major legislative initiatives to bring significant new state funding to bear on food, agriculture, human, and natural resource science research and outreach.
 - Implemented Unified Agriculture Initiative, \$6 million in funding for faculty positions, internal grant programs, and operating funds.
 - Implemented \$2 million in new funding for biofuels research and extension.
- 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.
 - Advanced storm-water runoff and low-impact development initiatives at WSU-Puyallup with Dept. of Ecology.
 - Assumed administrative leadership of Small Business Development Centers.
- Proactively engage federal agencies to explore funding opportunities and showcase WSU capabilities.
 - Initiated several biofuels initiatives:
 - USDA AFRI, BRDI, and Sun Grant biofuels initiatives. Also, multiple initiatives in development stages such as US Navy Phase I & II and DOD Title III.
 - Northwest Advanced Renewables Alliance (NARA)
 - Green Navy (partnership with Oregon State University, University of Hawaii, US Navy).

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 and Outcomes:

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

- Increase the emphasis of extramural fund procurement in hiring decisions, tenure and promotion, and faculty reviews.
 - Increased ARC extramural grants over 72 percent from FY 2008 to 2011 (\$29 million to \$50 million).
 - Increased CAHNRS “gift grants” 58 percent from FY 2008 to 2011 (\$11.7 million to \$18.4 million).
 - Significantly increased extramural funding success of new faculty. Sixty-nine new faculty members with less than six years of experience at WSU accounted for nearly \$21 million of competitive extramural funding in 2010-11.
 - Increased number of hires with established funding streams (e.g., hired three faculty members with more than \$500,000 of annual grant expenditures in 2010-11).
- Enhance 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.
 - Increased the number of \$1 million plus proposals submitted annually from an average of 18 per year in 2007-2008 to 43 per year in 2010-11. Average annual requested funding increased from \$45 to \$144 million per year.
 - Increased the number of \$1 million plus funded proposals annually from an average of 11 in 2007-2008 to 18 in 2010-11. Average annual new awards associated with \$1 million plus grants increased from \$14 to \$43 million per year.
- Develop internal competitive “seed grant” programs to catalyze the development of successful grant proposals to federal agencies and foundations.
 - Implemented ARC internal competitive grant programs to stimulate development of research and/or extension teams focusing on priority areas.
 - Implemented “Emerging Research Issues” internal grant program through Unified Ag Initiative funding. Operated for three years (\$1.71 million) with impressive success in leveraging federal competitive grants (\$32 million in new awards were obtained from this program, of which \$18.9 was expendable in Washington).
- Increase the grant-writing capacity of faculty and staff.

- Created program to assist faculty to improve previously submitted federal competitive grants.
 - Co-funded participation by faculty in university-sponsored grant writing workshops and intensive mentoring: 18 in 2008, 21 in 2009, 13 in 2010, 9 in 2012 for Russell workshop (61 total) Mentored proposal writing: 6 in 2008, 1 in 2009, 6 in 2010 (13 total).
 - Engage grant specialists to identify funding opportunities and assist faculty in preparing grant applications.
 - Hired two-person grant writing team in ARC. Assisted with 17 proposals between 8/2010 and 12/2011 with 24% success rate.
 - Accessed additional grant writing resources in Office of VP for Research.
- b. Augment the number of gifts to finance college teaching, research, and outreach programs by:
- Develop and execute a plan for successful accomplishment of the college's goal in the upcoming capital campaign.
 - Raised \$167 million of CAHNRS/Extension \$242 million (69 percent) campaign goal to date.
 - Executing targeted sub-campaigns in tree fruit, dryland agriculture, viticulture and enology, and organic agriculture; funds raised for sub-campaigns total \$29 million for tree fruit, \$6 million for dryland agriculture, and \$8 million for viticulture and enology.
 - Allocate additional college resources to development activities and expanding the development staff.
 - Expanded development staff to five major gift officers through college funds and funds provided by WSU-Foundation.
 - Engage all academic units and centers, and key faculty, in development activities.
 - Assigned major gift officer to work with each academic unit in CAHNRS.
 - Several major gifts raised through leadership of department chairs (ASI, CSS, PPath)
 - Strengthen alumni relations through additional events and communications.
 - Strengthened alumni events and recognitions.
 - Initiating National Board of Advisors.
- c. Increase revenue from intellectual property created by college research by:
- Strengthen relationships with the Office of Intellectual Property Administration.
 - ARC Director appointed to Board of WSURF.
 - Partner with industry in sharing the costs and benefits of commercialization of new technologies developed by college researchers.

- Limited joint ventures (e.g., microwave sterilization consortium, apple variety release).
- New partnership with Washington Grain Commission and Washington Crop Improvement Association about marketing strategies and royalty distribution.
- Developed apple and cherry commercialization model with tree fruit industry concerning marketing strategies and royalty distribution.
- Identify an individual within the ARC to serve as the principal point of contact for patents and licensing of new technologies.
 - Tom Kelly assigned to work in OIPA.
- Provide educational programs to faculty and staff concerning intellectual property issues and opportunities.
 - One workshop held.

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 and Outcomes:

- Reallocate state and federal funds to rebalance the percentage of "hard dollars" allocated to salary and benefits versus operating capital.
 - Percentage of total budget allocated to salary and benefits decreased from 2008 through 2009 (84.7 to 72.6 percent), but increased above pre-2008 levels in 2011 as a result of recurring budget reductions (81.5 percent).
 - Greater than \$1 million per year allocated to competitive operating support programs (Emerging Research Issues, Federal competitive grant re-submission program).
 - Instituted significant internal grant programs for BIOAg and Emerging Research Issues to fund seed grants in areas not covered within single disciplines.
 - Investments in Future Success to assist in revising unfunded proposals that have significant chance of success with changes.
- Evolve to a system of allocating ARC resources through the project system, as opposed to allocating technicians, GRAs, etc. to individual scientists.

- Nearly all ARC expenditures are now funded through the ARC project system. Department/Center chairs/directors manage allocations within units.
- Allocate research and extension faculty positions and operating resources to areas of strategic excellence and based upon measurable performance criteria.
 - Unit performance figures heavily into allocation of faculty positions, as does alignment of positions with strategic priorities. “Refilling” of vacant positions has been eliminated as a justification for a position request.
- Move from ARC projects of 3-year duration to 5-year projects.
 - All ARC new and revised projects are now 5-year projects with renewal potential to 7 years.
- Hired grant support team to help faculty pursue large awards
- Support faculty participation in Steve Russell grant writing program run by the office of Research.
- Support chair participation in leadership training like LEAD 21.

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 and Outcomes:

- 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.
 - IAREC Ag Technology Building completion, IAREC Viticulture and Enology Building completion, dairy renovation, and Bookie AMDT facility all were identified as top-15 priorities in 2011-13 WSU major capital prioritization.
- 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.
 - Raised over \$8 million for Wine Science Center.
 - Raised \$5 million for new organic farm in Pullman.
 - Raised over \$900,000 for operations of dryland research farms.
- Include selected facility projects in the college’s priorities for the upcoming WSU capital campaign.
 - Initiated \$20 million campaign for Wine Science Center at WSU-TC.

- Obtained \$5 million commitment for endowment to manage orchard facilities at IAREC and TFREC.
- Obtained \$2 million in commitments to improve or operate other off-campus facilities.
- Facilities included in college campaign priorities: Bookie renovation, fruit quality facility at TFREC, greenhouse facilities at NWREC.
- Develop and begin implementing capital improvement plans for Prosser, Wenatchee, and Puyallup research and extension centers.
 - Capital plans were completed for IAREC, TFREC, NWREC, and WSU-Puyallup.
 - A total of \$1.6 million of capital improvements were made at the four research and extension centers from 2008-2011
- Develop a comprehensive plan for CAHNRS on-campus facilities, including buildings comprising the life science research and education complex.
 - Secured commitment of REC #5 building project for plant sciences.
 - Secured one floor of REC #4 for Animal Science laboratories.
 - Secured additional space for Human Development in Wilson-Short Hall.
 - Secured additional space in Daggy Hall for School of Design and Construction and relocation of Landscape Architecture.

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 and Outcomes:

- Improve recruitment processes and employment offers (e.g., salary, start-up packages, partner accommodations) to assure we are hiring the most elite candidates available.
 - Streamlined hiring steps for faculty and AP positions.
 - Committees have worked to advertise to broader audiences and recruit more diverse applicant pools.
 - Multiple application review processes have been made available for committees to model to improve discussion of applicant qualifications.
- Aggressively seek to recognize and reward superior achievement and scholarship by both faculty and staff.

- Revitalized the CAHNRS Awards process, including adding two new award categories, to recognize outstanding contributions made by teams and individuals within the college.
- CAHNRS faculty routinely win university level awards. 11 faculty were selected as university award winners from 2008 to 2011 (46% of the awards for 2008 – 2011 were awarded to CAHNRS faculty).
- Develop institutional policies and incentives that help retain superior faculty and staff.
 - Established transparent expectations for teaching, research and extension.
 - Revised CAHNRS tenure and promotion policy to better align with the Provost's expectations.
 - Develop a space allocation process based on research performance metrics.
 - Developed college wide teaching load expectations and adjusted appointments as needed to support teaching and research strengths among faculty.
- Establish endowed professorships for the purpose of attracting and retaining high-quality faculty.
 - Raised funds or commitments for 8 endowed chairs and 3 endowed professorships since 2008.
- Develop and implement a strategy for professional development and mentoring of new faculty.
 - Revamped and streamlined New Faculty Orientation to provide a more meaningful and focused experience.
 - Implemented mandatory mentoring committee processes for all untenured faculty in every CAHNRS program.
 - Nominated junior faculty with leadership potential for the Provost's Leadership Academy.
- Increase faculty salaries with the objective of achieving the average of peer institutions.
 - Have lost ground in faculty salaries due to four-year hiring freeze.
 - Actively offered and converted annual salaries to 9-month or 75 percent FTE appointments for high-performing faculty.

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.

Strategies and Outcomes:

- a. Increase diversity of faculty, students, and staff.
 - Enhance efforts to recruit and retain minority students, faculty, and staff.
 - Increased diversity of CAHNRS faculty: 45 percent women, 11 percent minority, 17 percent non-US citizens.
 - 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.
 - 15 faculty participated in international sabbaticals and 169 students participated in formal international experiences through the college in 2008-11.

- b. Create a safe academic and workplace environment.
 - Identify potential future leaders within the college and invest in leadership development activities for these individuals.
 - 4 CAHNRS administrators attended two-year leadership programs in 2008-11.
 - 15 CAHNRS faculty participated in Provost's leadership programs.
 - Appointed 9 new academic chairs/directors and 6 new center directors (research and extension center or subject matter centers) from 2008 through 2011.
 - Continue opportunities for faculty, staff, and student training and educational experiences in workplace environment, team building, and diversity issues.
 - Continued proactive response to addressing faculty/staff who contribute to an unfriendly work environment.
 - Three CAHNRS units obtained ADVANCE mini-grants to address faculty and unit-level development priorities.
 - Provided life skill enhancement workshops for faculty, staff and/or students to support community building and to strengthen interpersonal relationships. Over 30 workshop opportunities were offered from 2008 to 2011.
 - Review and enhance communication strategies within CAHNRS about values, goals, and actions to be taken.
 - Conducted at least one retreat per year focusing on leadership and/or communication with the CAHNRS administrative team.