

Ohio State University
College of Veterinary Medicine
Strategic Plan (2008-2012)
December 8, 2008

Overarching goal

Be a global leader in transforming veterinary medicine to meet the needs of society

Mission

Benefit society by improving animal and public health through education, discovery, service, and outreach

Mission Statement

The College believes in the concept of ‘One Medicine-One Health’ for animals and humans. We will diagnose, treat, prevent, and understand animal diseases, conserve livestock resources, promote public health, advance biomedical knowledge, and commercialize new technologies. We will educate professional and graduate students, conduct research, and serve the global community. As part of the largest land grant university in the United States, the College is committed to disseminating new knowledge to the public, providing advanced training and continuing education, and delivering specialized veterinary medical services.

Core Values

- Commitment to excellence
- Integrity
- Comprehensive education
- Innovative discovery
- Meaningful service and outreach
- Collegiality
- Creative leadership

Setting the Stage: Strengths and Weaknesses of the College

The Ohio State University College of Veterinary Medicine is ranked fifth in the nation among veterinary schools according to the 2008 *U.S. News and World Report's* “Best Graduate Schools.” The College includes more than 1,000 faculty, staff and students in the Departments of Veterinary Biosciences, Veterinary Clinical Sciences, and Veterinary Preventive Medicine. The Veterinary Teaching Hospital is a comprehensive referral center for veterinary practitioners and is among the largest facilities of its kind in the world, with more than 30,000 large and small animal patients each year. In addition, the College operates a nationally-recognized large animal ambulatory practice and teaching unit in Marysville, Ohio and a Food Animal Health Research Program in Wooster at the Ohio Agricultural Research and Development Center. The College provides comprehensive veterinary medical education to nearly 560 students seeking to earn the Doctor of Veterinary Medicine degree (140 per class for a four-year degree program). In addition, many one-year internships and three-year residency programs in specialty medical

fields are administered through the Veterinary Teaching Hospital, nearly 30 students currently participate in the Veterinary Public Health master's degree (a joint program with the College of Public Health), and more than 100 Ph.D. candidates conduct research in the College. Indicators of a high quality professional program in veterinary medicine are presented in Table 1.

STRENGTHS

Nationally and internationally recognized high quality faculty

The quality of the College's faculty is exceptional, and they are strongly motivated and dedicated to fulfilling the academic missions of the College. Several have received national and international recognition for their excellence in teaching, research, specialty clinical service, and continuing education. The College has a rich tradition of excellence in clinical teaching, which is evidenced by the presence of senior faculty interacting with clients, students, interns, and residents in the teaching hospital. Likewise, our biomedical research programs have enjoyed remarkable success.

Comprehensive teaching hospital with large and diverse caseload

Comprehensive patient services cover nearly all specialty areas at our Veterinary Teaching Hospital and Marysville Large Animal Services Clinic. Last year, professional students were exposed to a caseload of nearly 33,000 patient visits. Our large in-hospital farm animal (i.e. food and fiber) caseload is unusual in academic veterinary medicine today.

Large applicant pool of highly qualified professional students

Our College continues to enjoy a strong applicant pool of well-prepared and highly-qualified students. For currently enrolled classes (2008-2011), the ratio of applications per seat has ranged from 5.7 to 7.1 and the average admission grade point average was 3.57 for in-state applicants and 3.66 for out-of-state applicants. The average combined GRE score of admitted students in 2007-2008 was 1248. Between 2001 and 2007, The College's student pass rate on the North American Veterinary Licensure Examination has exceeded the US average by two to nine percentage points each year, with the exception of one year when the College's pass rate equaled the US average.

Strong clinical residency and graduate education programs

The College of Veterinary Medicine has had a strong commitment to residency training programs for over 30 years and in 2001 established a small animal internship training program that currently attracts more than 200 applications for eight positions. In 2007, our residency programs attracted 313 applications for 10 positions including 112 applications for one position in small animal surgery. In 2008, we matched our first or second-ranked candidates for all open clinical residency positions. In a recent assessment of the 87 doctoral programs within the university conducted by the Office of Academic Affairs, the doctoral program in Veterinary Biosciences was one of only 12 that received the highest ranking. These 12 programs were recognized as outstanding in terms of overall quality, planning, focus and potential to enhance the stature of the University.

Established leadership in research

The College has several well-respected and highly funded research programs, with particular emphasis on infectious diseases and oncology. Cellular infection by retroviruses is the subject of

a \$12 million National Institutes of Health (NIH) program project grant involving investigators in the Department of Veterinary Biosciences, and a recently renewed Institutional Training Grant trains veterinarians to develop and effectively utilize mouse models of human disease. A successful \$4.9 million Targeted Investment in Excellence (TIE) project entitled “Public Health Preparedness for Infectious Diseases” (PHPID) weaves together exceptional programs in six colleges (Veterinary Medicine, Medicine, Public Health, Biological Sciences, Food, Agricultural and Environmental Sciences, and Pharmacy) for the protection of public health. Other areas of research expertise include the pathogenesis of rickettsial infection, feline immunodeficiency virus as a model of AIDS, and the pathogenesis of avian influenza. The strength of the Department of Veterinary Biosciences in research recently was affirmed by an external program review.

WEAKNESSES

Aging facilities

Our College has been fortunate to have opened two new buildings in recent years: the Veterinary Medicine Academic Building in 2003 and the Marysville Large Animal Services Clinic in 2005. We are proud of these successes, but our Veterinary Teaching Hospital badly needs renovation and expansion. The hospital is 35 years old and receives the heaviest use of all of our buildings because it houses the clinical program. The strong national and international reputation of our clinical programs is inconsistent with the condition of the Veterinary Teaching Hospital. The facility has insufficient space to accommodate the new clinical disciplines that have emerged in the past 20 years as well as house the academic and administrative staff needed to conduct our professional teaching programs in an excellent and efficient manner. The poor condition of this facility frequently is cited as a problem in faculty recruitment and retention efforts.

Low numbers of faculty and staff

The College has excellent didactic, clinical and research programs. We have exceptional faculty and staff, and need more. Our student-to-faculty ratio of 5.4 based on 2007-2008 data from the American Association of Veterinary Medical Colleges (AAVMC) is almost twice the average value of 2.8 for 11 of our peer institutions (see Table 2). Despite a very high student-to-faculty ratio, the national reputation of the College’s programs is high due to the strong work ethic of the faculty and the visibility of their scholarly works (e.g., authorship of several veterinary textbooks). The heavy workload of the faculty, however, puts the College at risk for faculty attrition. Low faculty numbers lead to burn out, low morale and impairment of faculty recruitment and retention.

Insufficient funds to support our mission

Erosion of state support over the past five years has resulted in the College making maximal use of student tuition as a source of operating revenue (with a nine percent increase for the upcoming school year). On a per-student basis, our support is the lowest of our peer institutions (see Table 2). Relying on increases in tuition places an excessive burden on the students. Between 2001 and 2007, indebtedness of our College’s graduating students increased 58% from \$66,756 to \$105,806 whereas starting salaries increased only 32% from \$39,132 to \$51,608. Most of our students elect a 30-year plan to pay off debt and, at a current interest rate of 6.8%, they will spend approximately \$290,000 to retire their debt. At a starting salary of \$51,608, approximately 16% of gross and 20% of net monthly income is required for debt repayment. Thus, we believe

that increases in professional student tuition greater than normal inflationary increases are not a viable long-term solution to increase college revenue. We must identify innovative methods to increase state support, such as proactive targeted public relations campaigns to attract the attention of our state legislators, as well as pursuing mutually beneficial industry collaborative efforts, and redoubling our efforts at private development.

If state support continues to erode, the primary sources for revenue growth in the College will be development, corporate partnerships (e.g. pet food industry, pharmaceutical industry), and creative enhancements of earnings operations (e.g. expansion of emergency services, expanded hours of regular clinic operation, provision of innovative clinical services not available elsewhere). Increased faculty awareness of commercialization of intellectual property (strategy 7C), collaborative partnerships with other colleges of veterinary medicine (strategy 7E), and provision of on-line distance education courses (strategy 5A) are other examples of opportunities for revenue growth. Increased indirect cost recovery from expanded extramural research programs also could contribute.

Faculty recruitment and retention

Faculty recruitment and retention constantly are challenged by a relatively small candidate pool of veterinarians at academic institutions and lucrative employment opportunities in the private sector. Specialty practice has emerged as a tempting option for highly trained clinicians who often feel the additional responsibilities of an academic appointment (e.g. teaching, research, and administration) are not justified by the unfavorable salary differential. The academic market likely will not be able to compete with specialty practice and industry on a salary basis alone, so we must attract promising young faculty members using means other than salary (e.g. superior health benefits, facilitation of life-work balance).

Limited flexibility in curriculum

Our curriculum provides a strong, balanced and diverse core experience for professional students. The fourth year clinical experience, however, should be expanded to offer additional flexibility to students so they may participate actively in tailoring their education to their varying career goals.

Strategic Plan

List of strategies

- *Attract and retain nationally and internationally recognized faculty.*
- *Build and maintain modern comprehensive facilities with technology that enhances delivery of our programs.*
- *Provide comprehensive professional, graduate, and clinical residency programs that promote analytical thinking, clinical competence, and dedication to professional growth and lifelong learning.*
- *Promote translational research programs that improve the lives of animals and people and foster commercialization of discoveries.*
- *Enrich the lives of Ohio's residents by providing specialized medical care of the highest standard for animals, promoting public health, and disseminating new knowledge to our graduates and the general public.*

- *Insure a positive work environment for faculty, staff and students – one that rewards excellence in scholarship and creativity and respects work-life balance.*
- *Develop mutually rewarding partnerships with constituents outside of the College including industry, international institutions, other colleges of veterinary medicine, and private benefactors as well as participate in relevant and meaningful outreach and engagement activities for Ohio's veterinary profession and citizens.*

List of appended tables

- *Table 1: Indicators of a high quality professional program in veterinary medicine*
- *Table 2: Comparison of Ohio State University College of Veterinary Medicine to peer institutions*
- *Table 3: College of Veterinary Medicine development goals*
- *Table 4: Prioritization grid for strategic initiatives*
- *Table 5: Centers and institutes at the College of Veterinary Medicine*
- *Table 6a: Financial analysis of College strategic plan by strategy*
- *Table 6b: Strategic plan PBA net marginal revenue analysis*
- *Table 6c: Construction and renovation timeline for College of Veterinary Medicine Hospital for Small Animals*

STRATEGY 1 Attract and retain nationally and internationally recognized faculty.

INITIATIVE 1A Increase faculty numbers by at least 12 over the next five years.

OVERVIEW

The College's student/faculty ratio of 5.4 is almost twice the average of our peer group of institutions (see Table 2). Our faculty members are nationally and internationally recognized, but their low number impairs delivery of a high quality program to our professional and graduate students. We are beginning to see the effects of this unfavorable student/faculty ratio on faculty morale with signs of strain even in some of our best faculty members. The addition of 12 faculty members within the next five years would decrease our student/faculty ratio to 4.86.

We strive to hire faculty who can successfully advance the College's teaching, clinical service, research, and outreach programs and provide them ample opportunity for personally satisfying and productive careers. In Veterinary Biosciences, prospective faculty members must be capable of developing sustainable extramural research programs in the department's areas of strength. Faculty in Veterinary Clinical Sciences have major commitments in the pre-clinical curriculum as well as clinical teaching and patient care responsibilities for a broad range of domestic species and clinical specialties in the Veterinary Teaching Hospital. Hiring must be guided by these responsibilities with due consideration of scholarly activity and professional development. Veterinary Preventive Medicine must hire faculty focused on epidemiology, food animal production and food safety while fulfilling its programmatic commitments to external collaborators such as the Ohio Agricultural Research and Development Center (OARDC), Ohio State University Extension, and Ohio Department of Rehabilitation and Corrections.

In addition to 12 new positions, present budget allocation will be used to reconfigure existing positions in Veterinary Clinical Sciences and provide funding for faculty positions in three areas:

anesthesia and pain management, small animal internal medicine, and neurology/neurosurgery. Clinical revenue will be used to support three additional reconfigured positions: one in small animal community practice, one in comparative reproduction, and one in equine emergency and critical care. A similar strategy will be used in Veterinary Biosciences to support two positions in anatomic pathology (one regular tenure track and one clinical track) as well as a position in general and reproductive endocrinology.

IMPLEMENTATION

The College recognizes the need to identify new sources of funding to support additional faculty positions and will use a combination of success in competitions within and beyond the University, development (i.e., funding endowed positions), partnerships with industry, and clinical earnings to fund 12 or more additional positions as follows:

- Our successful TIE program in PHPID will provide funding for three positions. The College will supply matching funds committed to the PHPID proposal at the time of submission for one position in Veterinary Preventive Medicine (veterinary epidemiologist) and two positions in Veterinary Biosciences (retroviral molecular pathogenesis, zoonotic disease).
- Endowed professorships will provide one position in Veterinary Biosciences (Ranier Chair in Industrial Veterinary Medicine) and three positions in Veterinary Clinical Sciences (Powers Chair in Clinical Pharmacology, Jenne Chair in Equine Medicine, Tharp Chair in Food Animal Medicine).
- Clinical revenue will provide funding for up to four positions in Veterinary Clinical Sciences including one ophthalmologist, one dermatologist, one oncologist, and one additional neurologist/neurosurgeon.
- One position in small animal outreach and community practice will be funded in part by clinical revenue and in part by a pending grant application to the Kenneth Scott Trust (see initiative 7A)
- Addition of one clinical food animal position at the Marysville facility in the Department of Veterinary Preventive Medicine funded from increased clinical income arising from larger numbers of dairy operations in northwestern Ohio
- Creation of one veterinary clinical pathologist position in Veterinary Biosciences from clinical revenue derived from expanded diagnostic pathology services, possibly with matching industry sponsorship (e.g., IDEXX Laboratories)

METRICS

Success will be defined according to the number and professional emphasis of faculty hired. The strategies described above will account for 14 new positions and will require a success rate of approximately 85% to achieve our goal of 12 new faculty members. If all strategies are successful (14 new faculty) we will reduce our student/faculty ratio to 4.77, assuming no growth in the student body. Our yearly targets are as follows:

- Year 1
 - 1 TIE PHPID position (veterinary epidemiologist)
- Year 2
 - 2 TIE PHPID positions (retroviral molecular pathogenesis, zoonotic disease)
 - 1 neurologist/neurosurgeon
 - Powers Chair in Clinical Pharmacology

- Ranier Chair in Industrial Veterinary Medicine
- Year 3
 - 1 oncologist
 - 1 interventional medicine specialist/cardiologist
 - 1 ophthalmologist
- Year 4
 - Tharp Chair in Food Animal Medicine
 - 1 dermatologist
 - 1 food animal clinician (expanded dairy program)
- Year 5
 - Jenne Chair in Equine Medicine
 - 1 diagnostic pathologist (expanded diagnostic pathology services)

The success of existing and new faculty will be assessed by:

- National peer recognition of clinical service and teaching;
- Numbers of grant awards and dollar amounts of extramural research funding;
- Peer-reviewed publications in scientific journals;
- Publication of books, book chapters and other scholarly works;
- Citation data;
- National and international recognition by formal extramural awards and honors;
- Editorships and editorial board service;
- Extramural study section service; and
- Leadership in extramural professional organizations.

RESPONSIBILITY

Dean, Department Chairs, Hospital Director, Chief Financial Officer, Senior Director of Development

INITIATIVE 1B Increase the diversity of the College's faculty.

OVERVIEW

Only nine percent of the College's faculty are minorities as compared to an average of 16 percent at peer institutions (see Table 2). In the past five years, however, four of 20 (20%) faculty members hired by the College were self-reported as minority (3) or undisclosed (1). With respect to gender, the College's male-to-female faculty ratio is 1.8, which is slightly higher than the average value of 1.6 for our peer institutions. In the past five years, the College has hired 11 female and 9 male faculty members (female-to-male ratio of 1.2). Increasing the racial and ethnic diversity of our faculty will enhance the educational experience of our students by exposing them to a broader range of cultures. This perspective is important given the international reach of veterinary medicine, especially food animal medicine. Furthermore, successful recruiting of minority students (see initiative 3C below) will be facilitated by the input and guidance of a more diverse faculty. Minority senior faculty members also can serve as mentors for junior minority faculty and facilitate recruitment of additional minority faculty.

IMPLEMENTATION

- Develop a College position statement on diversity and include it on the College's website.
- Insure that all faculty search committees include women faculty.
- Appoint one member of each faculty search committee to serve as a diversity representative.
- Target minority applicants (e.g., screen graduate and residency trainees at peer institutions for possible minority faculty prospects) for four of the new faculty positions described in initiative 1A (see above).
- Provide diversity training seminars for faculty.

METRICS

- Survey faculty to assess their understanding and attitudes about diversity and use data obtained as a baseline by which to determine the effects of faculty diversity training seminars.
- Within five years, the percentage of minority faculty members in the College will increase from nine percent to 11 percent. Our target of 11% minorities would require that four (33%) of the 12 projected new hires be minorities (i.e., $9 + 4 = 13$ minority of $102 + 12 = 114$ total faculty). We believe this is an ambitious metric considering 16% of US academic veterinarians are minorities and 7 to 9% of all veterinarians nationwide are non-white. Increasing our minority faculty to 16% would require that 9 of the 12 new hires (75%) be minorities, which is unrealistic. Although targeted minority hiring is possible by identifying candidates presently employed by other academic institutions and industry and proactively recruiting them, we do not believe positions should remain open indefinitely for this purpose considering the College's extremely high student-to-faculty ratio and strong competition from the private sector for veterinary specialists. We believe the best approach is to identify and recruit talented faculty members regardless of their minority status.

RESPONSIBILITY

Dean, Department Chairs, Associate Dean of Academic and Student Affairs

STRATEGY 2 Build and maintain modern comprehensive facilities with technology that enhances delivery of our programs.

INITIATIVE 2A Identify, cultivate and solicit private philanthropic support to build a new Small Animal Medical Center (SAMC) and renovate the existing Veterinary Teaching Hospital (VTH) (estimated \$20 million for the philanthropic portion of the project).

NOTE: Table 3 (appended to this document) is an overview of the College's development plan keyed to specific strategic initiatives.

OVERVIEW

The national and international reputation of our academic and clinical programs is inconsistent with the condition of the VTH, and the facility has insufficient space to deliver these programs. Recognizing the critical need for new facilities, the College has conducted feasibility studies with Flad and Associates, and these findings have been presented to University officials. A

proposed timeline for this capital project and related development activities can be found in Table 6C.

Over the last five years, the College has averaged \$3.4 million in cash gifts per year directed to various areas of the College. Although approximately 50 percent of the College's donors are veterinary alumni, 80 percent of the dollar value of cash gifts to the College comes from non-alumni donations. Greater emphasis must be placed on a grateful client fund-raising program that will emphasize identifying, cultivating and soliciting the non-veterinary alumni clients of the VTH. Until recently, the Development Office has had limited access to the hospital client database and extracting the necessary data has been difficult. The Development Office has worked closely with the Information Technology group at the College, and a program to access current client data has been developed.

A philanthropic feasibility study for the College has been completed by consultants Hodge-Cramer and Associates. The consultant met with 19 high net worth individuals currently involved philanthropically with the College. Those interviewed have a history of generous support of the College over the years, and they were in complete agreement about the College's need for new hospital facilities. Furthermore, the donors indicated that full support of the University is necessary if the building campaign is to be a success. The donors fear that if the campaign does not occur or fails, the College risks losing key faculty members as well as major donors and long-term supporters.

IMPLEMENTATION PLAN

- Recruit a capital campaign advisory committee consisting of approximately 20 major donors. A University official should serve on the committee to send the message to potential donors that the University considers the College's capital campaign a high priority. Some members of the advisory committee and possibly other lead donors will become members of a campaign cabinet consisting of 3-5 members who will develop and direct the campaign.
- Establish an educational plan that will familiarize faculty and staff with development principles and procedures as well as a cultivation plan that will encourage donations by faculty and staff. The intent of the cultivation plan is to encourage widespread faculty and staff participation rather than obtain a specific dollar amount.
- Establish an alumni capital campaign advisory committee to develop and direct an alumni cultivation and contribution plan.
- Develop a marketing and communication plan for the capital campaign that can be used for all constituents including private donors, alumni, referring veterinarians, grateful clients and the general community. Revise the College's "case for support" and produce high quality marketing materials including printed brochures designed for use with the specific groups mentioned above, conduct cultivation tours to demonstrate the College's critical facilities needs, and produce a "fly-through" DVD that can be distributed to potential donors who cannot participate in site visits. Increased access to the hospital database will facilitate an aggressive grateful client cultivation program. A source code will be assigned to envelopes included in newsletter mailings so gifts that arise from receiving the newsletter can be tracked.

- Establish a five-year College capital campaign under the direction of the campaign cabinet (described above). The capital campaign will have an initial silent phase targeting lead donors, faculty and staff, and alumni followed by a public phase targeting current students, grateful clients, and the general community.

METRICS

- All members of the capital campaign advisory committee and cabinet will pledge gifts themselves and identify additional lead donors.
- The capital campaign advisory council will meet on a quarterly basis and plan at least one fund-raising event by the end of 2010.
- Lead gifts totaling at least 60% of the campaign goal will be secured before launching the public phase of the campaign.
- Regardless of the dollar amount of individual donations, at least 80% of faculty and staff will pledge contributions to the faculty and staff campaign.
- At least 15% of alumni will pledge contributions to the alumni campaign as compared to the 10% of alumni who currently make donations.
- The marketing and communications plan will increase donations as follows:
 - Annual cash gifts from all donors will increase by 15 percent, with 10 percent of this increase arising from hospital clients. This increase is considered reasonable because increased access to the hospital's client database has generated a mailing list of approximately 12,000 new potential donors.
 - Multi-year pledges to hospital programs and facilities will increase by 10 percent.
 - The number of newly qualified client major donors will increase by at least five percent per year.
 - The number of donor prospects contacted by face-to-face visits will increase by at least 200 in year one of the plan. This goal will be facilitated by University Development's recent hiring of a third major gift officer for the College and increased access to the hospital client database.

RESPONSIBILITY

Dean, Department Chairs, Hospital Director, Senior Director of Development, Director of Communications and Marketing, Director of Alumni Affairs

INITIATIVE 2B Deploy a college-wide (including hospital) information system that will facilitate business and clinical operations, provide for data storage and retrieval and promote clinical research.

OVERVIEW

The College's present Hospital Information System (HIS) (VetStar) no longer serves the needs of the VTH and College. It is cumbersome to use and does not provide support for all necessary functions of the College's clinical and academic programs. The highly complex information systems designed for use with human patients are costly, and veterinary hospitals have unique requirements that differ from those in human medicine, including substantial differences in patient demographics, billing characteristics (i.e., no third party payment), and diagnostic coding. Opportunities do exist however for sharing of data with Ohio State University Medical Center's Information Warehouse for research purposes. Veterinary Information Systems (VIS) is working

closely with representatives from each department in the College to determine requirements, establish benchmarks, and implement a comprehensive veterinary college information system (VCIS) that will advance the College's goals in clinical service, teaching, research, and program administration.

IMPLEMENTATION

Phase 1: During the summer of 2008, VIS and the VCIS committee have been determining the detailed, functional requirements for all College departments and benchmarking these requirements against other American Veterinary Medical Association (AVMA)-accredited colleges of veterinary medicine. The VCIS committee also will conduct a satisfaction survey of the VetStar user community to be compared to the satisfaction feedback that will be gathered in Phase 4 of the VCIS rollout (see below).

Phase 2: By fall 2008, VIS and the VCIS committee will provide functional requirements to vendors via a request for proposals (RFP). The committee then will evaluate the proposals, invite promising candidate vendors to demonstrate their products to the committee, and select a vendor to provide the base for the VCIS system. During this phase of the initiative, VIS and the VCIS committee also will explore possible partnership opportunities with other AVMA-accredited colleges of veterinary medicine that have similar needs. This part of the process will conclude by the end of 2008. The project will be funded in part from the Dean's technology strategic funds. VIS and the VCIS committee are hopeful that the new system can be developed using an existing commercial system as a base. A crucial unknown factor at this time is how many of the features desired in the new VCIS are available in existing commercial systems, and how much time and resources will be required to incorporate unique required features into available products.

Phase 3: By the end of 2008, we will begin development on the VCIS system and implementation will continue through the end of 2009. During this time, VIS and VCIS will work closely with the vendor to configure, test, and release the VCIS into production both in the VTH as well as throughout the College via the data warehouse that will be created.

Phase 4: A post-implementation assessment will be conducted shortly after the new VCIS is implemented and at six-month intervals thereafter.

METRICS

- Phase 1: By summer 2008, project requirements will fall within five percent of predicted functionality.
- Phase 1: We will circulate a survey of all AVMA-accredited colleges of veterinary medicine to determine their governance, policies, and best practices with respect to hospital or college information systems in order to inform the College's information technology group on how best to proceed with development of the VCIS. A 60% or greater response rate is expected for this benchmark survey of other colleges of veterinary medicine.
- Phase 2: We will measure success in this phase by the number of initial requirements that can be incorporated into the base VCIS system provided by the selected vendor as well as their ability to meet the proposed deadlines.

- Phase 3: Success of the implementation phase will be determined by a survey of relevant stakeholders (e.g. hospital faculty and staff) to determine satisfaction before and after implementation of the VCIS (i.e. comparison of the present system VetStar to the new VCIS).
- Phase 3: Success also will be judged by how closely the rollout of the system matches initial estimates of time and cost of implementation.
- Phase 4: The satisfaction of VCIS stakeholders will increase progressively during the first two years after implementation. Assessments will be performed every six months for the first two years after the VCIS system is deployed, and annually thereafter.
- Phase 4: If the College chooses to partner with another institution, a survey determining satisfaction of both groups of stakeholders will be conducted.

RESPONSIBILITY

Dean, Director of Information Technology, Hospital Director, Veterinary Teaching Hospital Faculty and Staff

STRATEGY 3 Provide comprehensive professional, graduate, and clinical residency programs that promote analytical thinking, clinical competence, and dedication to professional growth and lifelong learning.

INITIATIVE 3A Review, revise and expand the veterinary curriculum to provide live animal experience early in the program, enhance species specific course offerings, and increase flexibility for students in clinical rotations by 2012.

OVERVIEW

The College's curriculum is an organ system-based program built on a core of basic scientific knowledge and supplemented by elective courses, many of which are species or discipline-based. Clinical experience begins in the spring of the third year and continues throughout the fourth year of the program. The curriculum provides a strong, balanced and diverse core experience for professional students. However, the fourth year curriculum has limited flexibility to accommodate the individual interests and career goals of our students. Also, live animal experience is minimal until students reach the third year of the program. A survey of peer institutions (University of Pennsylvania, University of California at Davis, Texas A&M, Cornell, Colorado State) indicated that between 40 and 90% of their clinical rotations are elective whereas only 10% of our clinical rotations are elective. Changes in the College's curriculum that would increase time spent in elective clinical rotations by at least 10% would bring us within range of our peers.

IMPLEMENTATION

- The curriculum committee will map the current professional curriculum to identify omissions and redundancies by 2010.
- The curriculum committee, the electives committee and individual faculty task forces will review the professional curriculum and make recommendations for changes. The task forces will be charged to assess the strengths and weaknesses of existing courses and make recommendations for changes that will assure adequate preparation of pre-clinical students for clinical rotations involving all major domestic species, increase exposure to

live animals of all major domestic species earlier in the curriculum, provide more student choice in fourth year clinical rotations, and increase the amount of problem solving and small group interactive learning throughout the curriculum. The recommendations of the task forces will be discussed by the Council on Education and voted upon by faculty by the end of 2011.

- Recommended curriculum changes will be compatible with conversion to a semester system if this change is approved at the University level.
- Approved recommendations will be instituted in 2012.

METRICS

- A new modified curriculum will be adopted by a vote of the College's faculty.
- The number of days in elective clinical rotations will increase by at least 10 percent.
- The number of hours in the core curriculum devoted to problem solving and small group interactive learning will increase by 10 percent.
- At least one foundation course in animal handling will be developed for first year students.
- Surveys of students graduating after curricular change will indicate better perceived career preparedness than surveys conducted before curricular change.
- Surveys of employers of graduates of the new curriculum will indicate better perceived preparedness of students for clinical practice than surveys of employers of graduates of the old curriculum.
- Surveys of faculty will indicate better perceived preparedness of students reaching fourth year clinical rotations under the new curriculum as compared to the old curriculum.

RESPONSIBILITY

Associate Dean of Administration and Curriculum, Program Coordinator for Academic Studies, Associate Dean of Student Affairs, Council on Education, Curriculum Committee

INITIATIVE 3B Deploy a plan for clinical competency outcomes assessment by 2009.

OVERVIEW

Veterinary graduates must have the basic scientific knowledge, skills and values to practice veterinary medicine independently at the time of graduation. Graduates must be competent to provide entry-level health care for a variety of animal species. To meet the requirements for accreditation, the Council on Education of the AVMA now requires colleges of veterinary medicine to develop relevant measures and provide evidence that students have had adequate access to primary care cases and hands-on experiences with live animals during their clinical rotations and to address the clinical competencies of their students. Evidence of student learning outcomes for clinical competencies must be obtained by direct assessments of clinical performance based on measurable objectives. Currently, the College surveys its alumni one and five years after graduation to assess their perception of how well the curriculum prepared them for their professional careers. At the same time, employers of new graduates are surveyed about their perception of the preparedness and technical competency of the graduates. Results of surveys conducted before curricular change can serve as a baseline by which to assess the impact of curriculum revision.

IMPLEMENTATION

- The curriculum committee will meet with the faculty to review and refine the list of core clinical competencies developed during the College's 2006 accreditation self study, which was prepared for the AVMA Council on Education.
- The final list of core clinical competencies will be approved by the Council on Education by summer 2008.
- A hard copy checklist of core clinical competencies will be developed and distributed to students in autumn 2008 (class of 2010) for completion during the third and fourth years of their curriculum.
- An online system will be developed for weekly logging of completed skills by students to provide digital backup of the record of completed competencies.
- The program will be phased in for the remaining classes by 2012.

METRICS

- The list of core clinical competencies will be accepted by the faculty of the College in 2009.
- The list of core clinical competencies will be accepted by AVMA Council on Education in 2009.
- Surveys of students graduating after curricular change will reflect perception of better career preparedness than surveys of students conducted before curricular change.
- Surveys of employers of graduates of the new curriculum will reflect perception of better preparedness of graduates for clinical practice than surveys of employers conducted before curricular change.

RESPONSIBILITY

Associate Dean of Administration and Curriculum, Program Coordinator for Academic Studies

INITIATIVE 3C Increase professional student diversity.

OVERVIEW

The College should have a student body with demographics that match those of the state with respect to ethnic and racial diversity. Socioeconomic and cultural factors, however, lead minority college students to seek careers other than veterinary medicine. We need to target younger students (K-12) to change these perceptions. We will use targeted student recruitment tactics to increase the College's percentage of minority students from its current level of five percent (30 students) to eight percent (45 students) within the next five years with African-American students increasing from 0.7 percent (four students) to 1.1 percent (six students).

IMPLEMENTATION

- Devote staff and office support for our newly formed student group, Veterinary Students as One in Culture and Ethnicity (VOICE). This group focuses its efforts on outreach to K-12 students from disadvantaged socioeconomic areas of Columbus, predominantly African-American children. They will target programs such as Weinland Park Elementary School, the Schoenbaum Center, Sunrise Academy, the African-American and African Studies Community Extension Center, Metro High School, and Blueprint College (a program designed to help minority parents prepare their children for college).

- Participate in the Upward Bound Program at Ohio Wesleyan University, which targets low-income and first-generation college students, primarily those of African-American background.
- Participate in career days sponsored by Columbus City Schools and local churches that target minority students such as Success Works Academy; Indianola Math, Science, and Technology Middle School; Berwick Alternative Elementary School; and Mount Olivet Church.
- Participate in Breakfast of Science Champions, a program that allows middle school students from Columbus City Schools to come to the College and meet faculty, students, and staff.
- Increase the College's involvement in the Minorities in Agriculture, Natural Resources, and Related Sciences (MANRRS) Program.
- Develop summer opportunities for targeted high school minority students.
- Encourage faculty participation in Ohio State University's Summer Research Opportunity Program for minority undergraduate students by providing funds to match those provided by the University to support the research of participating undergraduate students. Increased participation in College research programs by minority undergraduate students will facilitate recruitment of minority students into the College's professional and graduate student programs.
- Participate in career fairs targeting minority students and sponsored by the AAVMC.

METRICS

- Success will be measured by a yearly increase in number of minority students who matriculate into the College. Addition of three new minority students each year will allow us to achieve our goal of 45 minority students (eight percent of the student body) in five years.

RESPONSIBILITY

Associate Dean of Academic and Student Affairs

INITIATIVE 3D Consolidate graduate and combined clinical residency-graduate programs by 2009.

OVERVIEW

The College of Veterinary Medicine's graduate program is among the top doctoral programs at the Ohio State University. The recent university-wide assessment of doctoral programs rated the College's Comparative and Translational Medicine program as *High Quality*. The College program is undergoing a period of reorganization in which the three individual departmental graduate programs are being merged under the Comparative and Translational Medicine structure.

The College program is comprehensive, combining residency training with advanced graduate research-focused degrees (MS and PhD). The program plays a crucial role in fulfilling the College's mission of conducting research to improve animal health and preparing the next generation of scholars to assume career positions as university faculty. The College strives to

offer the highest level of education and training for its graduate students and to prepare them for a wide range of career opportunities.

The expansion of our Comparative and Translational Medicine program is in part a response to the unmet need addressed in several reports by the National Academies. In summary, failure to produce adequate numbers of veterinary scientists has impacted academia, where insufficient numbers of veterinarians with advanced graduate training are available to fill open faculty positions. Highly-trained veterinarians also are needed to fill important positions in the corporate world, particularly in the pharmaceutical industry. The government also needs senior-level veterinary scientists to fill needs in the United States Food and Drug Administration (FDA), United States Department of Agriculture (USDA), NIH and Homeland Security.

With the exception of the University of Minnesota, the Ohio State University is unique in having Colleges of Medicine, Veterinary Medicine, Pharmacy, Public Health, Dentistry and Optometry on the same physical campus. Only seven universities in North America have colleges of medicine and veterinary medicine on the same campus. Comparative and Translational Medicine, which crosses the boundaries of animal and human medicine, is of vital interest to all medical colleges. Therefore, Ohio State University's College of Veterinary Medicine is uniquely positioned to expand its program in Comparative Medicine in ways not available to most other universities.

IMPLEMENTATION

- Combine three existing departmental graduate studies programs into one College program
 - Form a College Council for Graduate Studies to oversee the combined graduate program and replace the three existing graduate studies committees.
 - Prepare a new Graduate Handbook describing the operations of the new combined graduate program by the end of 2008.
 - Submit materials to the Graduate School and the Office of Academic Affairs for review of the revised combined graduate program by the end of 2008.
- Develop a tuition and fees funding policy for the new graduate program.
 - Work with the Council for Graduate Studies and College Fiscal Officer to design a sustainable funding model for graduate studies by Spring 2009.
 - Compete for NIH training grants in comparative medicine by the end of 2008.
 - Work with the development and alumni offices to attract endowed fellowships to support the One Medicine-One Health initiative.
- Develop a revised curriculum for the Comparative and Translational graduate program.
 - Build on existing courses with an emphasis on the concept of One Medicine-One Health over the next five years.
 - Work with other colleges at Ohio State to expand and strengthen course content over the next five years.
- Enhance graduate student recruitment.
 - Develop a recruitment program to attract highly qualified graduate students to the One Medicine-One Health Graduate Program by involving the College's communications office (public relations), the Office of Minority Affairs and the Council for Graduate Studies.

- Establish competitive stipends for prospective graduate students.
- Extend recruitment to other universities by advertising and conducting recruitment visits to institutions that do not have comparative medicine programs (especially in Ohio).
- Establish liaisons with minority colleges to increase the diversity of applicants to the combined graduate program.
- Work with the veterinary clinical residency program coordinators to recruit residents who wish to pursue PhD training upon completion of their clinical residency programs.

METRICS

- A new College Council on Graduate Studies will be appointed and operational by the end of 2008.
- The revised Graduate Studies Handbook will be submitted to the Graduate School by the end of 2008.
- The combined Graduate Studies Program will be accepted by the University by the end of 2009.
- A College program to allocate available funding for graduate student tuition and fees will be established by the end of 2009.
- The number of available enrolled graduate credit hours in the College will increase by 10 percent within five years.
- Improvement in graduate education in the College will be assessed by quality indicators such as job placement, time to degree, number and quality of scholarly publications, and success obtaining fellowships and training grants.
- Over the next five years, at least one doctoral student per year in the Graduate Studies Program will originate from clinical residency training programs in Veterinary Clinical Sciences.

RESPONSIBILITY

Associate Dean of Research and Graduate Studies, Department Chairs, Council on Research

INITIATIVE 3E Increase student scholarships and endowments.

OVERVIEW

The cost of professional student education has increased dramatically over the past decade, while starting salaries for newly graduated veterinarians have remained relatively static. Veterinary students graduate with debt that averages \$100,000, and they face the prospect of spending their entire careers retiring this debt (see section on “Strengths and Weaknesses of the College” above). The budget structure of the University supports the College primarily through the Medical 1 Model, which averages the cost of educating Dentistry, Optometry, and Veterinary students despite the fact that education of veterinary students is as costly as the education of students in human medicine. The subsidy models currently are being addressed by the University. Determination of an appropriate subsidy model for the College that addresses its true costs is critical to the College’s future financial health. Because the College must work to maintain fiscal stability, we have been required to increase student tuition at rates that create financial hardship for many students. As a consequence of limited financial aid availability, this

approach has favored students with abundant financial resources and limits our ability to recruit minority students.

IMPLEMENTATION

- Allocate a portion of the College's Development Office to building a student scholarship endowment.
- Utilize the Office of the Associate Dean of Student and Academic Affairs to develop relationships with donors interested in addressing the financial needs of veterinary students.

METRICS

- The number of donor contacts for the scholarship endowment will increase 10 percent per year.
- Available scholarship funds will increase 30 percent (\$80,000) from a current total of \$250,000 to \$330,000, which will require development to raise at least \$2 million.

RESPONSIBILITY

Dean, Associate Dean of Academic and Student Affairs, Senior Director of Development, Chief Financial Officer

STRATEGY 4 Promote translational research programs that improve the lives of animals and people and foster commercialization of discoveries.

INITIATIVE 4A Increase research productivity and extramural research funding, and improve infrastructure for translational research. Expand research expenditures from \$11 million to \$14 million within five years (a 28 percent increase in five years) and invest in shared services for research.

OVERVIEW

The College's signature programs promote multidisciplinary and interdepartmental collaboration in research beneficial to animal and human health. Key to the success of these programs is their translational nature, which links basic laboratory discoveries to clinically relevant outcomes. Translational research is the central feature of the NIH Roadmap that has identified the three most compelling opportunities in modern medicine: new pathways to discovery, building research teams of the future and re-engineering the clinical research enterprise. The College will incorporate these three elements into its ongoing strategic planning for signature programs. Increasing the level of extramural funding is one measure of research productivity. A 28 percent increase in extramural research expenditures is based on the assumption that research in the College will grow at a rate of approximately five percent per year. This conservative estimate of growth is based on our historical growth rate over the past decade and the premise that expansion of research will come with the addition of new research intensive faculty. The College plans to add between 12 and 14 new faculty (see initiative 1A) of which five are expected to be research intensive. It is reasonable to assume a similar level of research productivity for new faculty as for existing faculty. If the College successfully adds 12 new faculty members, approximately \$14 million in annual research expenditures is a reasonable expectation. The College also will experience a number of faculty retirements over the next five years. Some of these retiring

faculty members will be replaced with more research intensive faculty, which will facilitate achieving the goal of \$14 million in research expenditures. Some additional gains may be realized as a result of inflation of research grants from the NIH, but in the current research environment such increases have not been forthcoming. To facilitate the growth and translational focus of the research program and to help increase research productivity, the College will invest in translational research infrastructure such as the clinical trials office and tissue procurement laboratories in coordination with the Ohio State University Center for Clinical and Translational Research, as well as invest in other shared services that promote clinically relevant discoveries. In addition, the College will promote collaborations with other biomedical colleges to better integrate veterinary and human medical research in the spirit of the One Medicine model.

IMPLEMENTATION

- Hire high quality faculty members in strategic areas to create the greatest opportunity for faculty success in research (see initiative 1A for strategic areas of faculty recruitment).
 - Search committees will include research intensive faculty members to evaluate candidates for research aptitude and potential
 - Faculty recruitment packages will provide adequate research support infrastructure including laboratory space, equipment and personnel
- Build strategic research teams that include expert research faculty from university programs outside of the College.
 - Strengthen existing signature programs and identify opportunities to add new signature programs as described in initiative 4B
 - Create incentives for becoming engaged in university-wide research programs
 - Reward collaborative research in the promotion and tenure process
- Provide for and continue to develop infrastructure to support research and promote translational medicine
 - Commit resources to the purchase of state-of-the-art instrumentation for shared services laboratories
 - Provide staff support for shared services
 - Expand key laboratory operations (e.g., clinical trials office) that have the greatest impact on translational research
- Build stronger relationships with corporate partners for the purpose of development of intellectual property and translation of basic research discovery into clinical application (see initiative 7C).
 - Establish collaborative research relationships with industry partners that foster development of improved technologies and commercial products
 - Collaborate in Third Frontier opportunities for developing new products and services
 - Work with Technology Licensing and Commercialization (TLC) to educate faculty through seminars and workshops about intellectual property, and licensing for commercialization opportunities of research findings (see initiative 7C)

METRICS

- At least \$2 million per year in research expenditures will be generated by extramural grant awards to new research intensive faculty (i.e., \$300,000 to \$350,000 per year arising from six successful NIH R01 grant awards).

- Current research intensive faculty will increase research expenditures by 10 percent, adding an additional \$1 million per year in research expenditures as a consequence of increased signature program activities and increased numbers of clinical trials.
- We will participate in five applications to Third Frontier or other government-funded programs that target commercialization of research findings in the next five years.
- We will participate in five agreements with corporate partners for the sharing of intellectual property rights in the next five years.

RESPONSIBILITY

Department Chairs, Associate Dean of Research and Graduate Studies

INITIATIVE 4B Strengthen signature programs.

OVERVIEW

The Signature Programs in the College of Veterinary Medicine are recognized areas of research investment and contribute substantially to collaborative research that has major impact on the health of animals and humans. The Center for Retrovirus Research is the College's oldest signature program and has been a university-wide Center of Excellence at Ohio State University for more than 17 years. Since 2004, the College has approved three additional signature programs: Comparative Oncology, Infectious Disease and Biomedical Imaging. Our goal is to continue to support and strengthen the established signature programs over the next five years, and to encourage new programs in developing areas to seek signature program status. The criteria and application procedures for signature programs are described in the College's Criteria for Signature Program Status [<https://intranet.vet.ohio-state.edu/index.php?id=1094>].

IMPLEMENTATION

- Faculty leading signature programs will prepare annual reports, following guidelines outlined in the Annual Report form, for submission to the Associate Dean of Research and Graduate Studies. These reports will be distributed to the College's Council for Research for review and comment.
- Department Chairs will identify and report the specific efforts to support signature programs to the Dean on an annual basis.
- The Development Officers will describe activities of the signature programs and opportunities for new signature programs in developing areas to potential donors.
- The Director of Communications and Marketing will include information about the signature programs in promotional materials developed for the College.
- The College will allocate a portion of its annual indirect cost funds from extramural grants to support signature programs.

METRICS

- Annual reports of the signature programs will provide the metrics described in the College's *Guidelines for Signature Program Annual Report* [<https://intranet.vet.ohio-state.edu/index.php?id=1094>]. The report will include current membership, expenditures, interdisciplinary interactions, sponsored research, infrastructure improvements, research training, program activities that impact animal health, national prominence, and future directions.

- Research expenditures by faculty participating in signature programs will increase by 25 percent over the next five years.
- Gifts and contracts to faculty members in signature programs will increase by 25 percent over the next five years.
- 75 percent of the scientific manuscripts produced by faculty members participating in signature programs will be published in journals ranked in the top 20 percent of their relevant scientific disciplines over the next five years.

RESPONSIBILITY

Department Chairs, Council for Research, Associate Dean of Research and Graduate Studies

STRATEGY 5 Enrich the lives of Ohio’s residents by providing specialized medical care of the highest standard for animals, promoting public health, and disseminating new knowledge to our graduates and the general public.

NOTE: The clinical faculty and facilities necessary to provide specialized veterinary care are described in strategic initiatives 1A, 2A, and 2B (see above).

INITIATIVE 5A Develop distance learning programs in Veterinary Public Health and Continuing Education for practicing veterinarians and design a collaborative program for sharing educational resources with other colleges of veterinary medicine.

OVERVIEW

Veterinarians in practice are required to complete continuing education credits for licensure, and other veterinarians seek advanced training that will enhance their employment opportunities. To achieve these goals, they must take time away from their practices, which results in loss of revenue and decreased availability of veterinary care. Consequently, the demand for flexible distance education in veterinary medicine and public health is increasing. An online Veterinary Public Health program will promote the health of humans and animals by providing training in prevention and control of zoonotic diseases, food safety and control of food-borne diseases, biomedical research, improvement of environmental health in agricultural settings, and bioterrorism preparedness and emergency response training. An online continuing education program will allow veterinary practitioners to obtain the credits they require in a flexible manner without the necessity of leaving their practices to attend meetings. Finally, online courses can be adapted to provide veterinary students at other colleges with content they do not have in exchange for access to content available in their colleges but not our own (see initiative 7E)

IMPLEMENTATION

- Within five years, establish an online distance education certification program in Veterinary Public Health consisting of three required core courses and one to two elective courses.
 - Establish university logistics (e.g. enrollment, payment of tuition and fees, assignment of grades) by year one.
 - Expand the College’s instructional design division to accommodate the online Veterinary Public Health program by year one.
 - Train interested faculty in content development for distance education by year two.

- Transform existing content and create new course materials for online delivery by year three.
- Recruit the first cohort of students for the distance education program by year four.
- Within three years, establish an online program in the College to provide distance continuing education to practicing veterinarians.
 - Identify and seek sources of funding (e.g., Ohio State Office of Outreach and Engagement Grants, Ohio Veterinary Medical Association) by year one;
 - Identify industry sponsors (e.g., P&G Pet Care, IDEXX Laboratories, Banfield Veterinary Hospitals, Bayer Pharmaceuticals) for specific continuing education content by year one.
- Make online continuing education courses available to veterinary students in the College and provide credit for them as elective courses.
- Establish two online courses that can be made available to other colleges of veterinary medicine with specific needs.
- Identify two courses (e.g., avian and exotic animal medicine, behavior) at other colleges of veterinary medicine that would enhance the educational experience of our own students.

METRICS

- A partnership between the College and The Ohio State University will be established to allow registration, fee payment and grade assignment for students in the distance Veterinary Public Health certification program by year one.
- Sufficient funding will be obtained by grants and sponsorship to support an instructional design position by year two.
- At least five College faculty members will be identified, and trained as content providers and instructors for the Veterinary Public Health program by year two.
- At least three online core courses will be deployed by year three, and two additional elective courses by year four in the Veterinary Public Health program.
- At least 10 paying Veterinary Public Health students will be enrolled in the first cohort of students by year five.
- At least 24 continuing education courses for veterinary practitioners will be developed using a progressive content delivery strategy including text-based self-study, audio and video on-demand, and live video streaming by year three.
- An average of at least 50 veterinary practitioners will be enrolled per continuing education course within three years.
- At least one new corporate sponsor will be identified per year at a sponsorship rate of \$3,000 per course over the next five years.
- Establish agreements with three other colleges of veterinary medicine to share content within five years.
- At least 10 percent of veterinary students enrolled in the College will have taken at least one course in Veterinary Public Health, Continuing Education, or at least one content-sharing elective within five years.

RESPONSIBILITY

Department Chair of Veterinary Preventive Medicine, Associate Dean of Administration and Curriculum, Director of Veterinary Public Health Program (Dr. Armando Hoet), Director of Instructional Technology

STRATEGY 6 Insure a positive work environment for faculty, staff and students – one that rewards excellence in scholarship and creativity and respects work-life balance.

INITIATIVE 6A Explore the feasibility of a quantitative system to assess the balance of faculty commitment to teaching, research, clinical service, and administrative work.

OVERVIEW

Faculty contribute to the College's mission by teaching in the classroom, laboratory and clinic; conducting research; providing clinical service and patient care in the hospital; participating in outreach; and, administering programs at the department, college and university levels. The efforts of individual faculty members may vary over time according to job description, professional interests and aptitude, and stage of career as well as the programmatic needs of the College. Accurate data about faculty effort will improve strategic planning, and development of an instrument to identify, quantify and assess the diverse contributions of the faculty will facilitate collection and interpretation of such data. With proper planning, individual faculty strengths and interests can be fostered, frustration can be reduced, and faculty members can be productive while simultaneously advancing the overall mission of the College. Productivity can be leveraged by emphasizing the value of individual faculty career development as well as College administrative goals. Such a system will provide benchmarks for performance in research, teaching, clinical service, and administrative responsibility for all faculty members of the College. Furthermore, future strategic initiatives based on such data will facilitate communications with the state, university, and potential philanthropic donors.

IMPLEMENTATION

- Articulate the administration's vision of the value placed on faculty contributions in research, clinical service, teaching, outreach, and administrative work in a faculty forum (year 1).
- Appoint a task force to consult with experts in the field of effort measurement and adapt an instrument for the College that will balance accuracy of data with practicality of data collection (e.g. self-reporting of effort, maintaining logs to demonstrate distribution of effort, outsider observations of effort) (year 1).
- Deploy the proposed effort distribution instrument and collect data for one year using annual report data as a baseline (year 2).
- Assess current faculty distribution of effort and create outcomes profiles for various categories (e.g. classroom teaching, clinical teaching and service, research, administration) of effort (e.g. a specified percentage of research effort correlates with a certain level of extramural funding and supervision of graduate students, a specified percentage of clinical service effort correlates with treatment of a certain number of patients managed and hospital revenue generated, a specified percentage of didactic teaching effort correlates with a certain number of hours of lecture preparation and delivery) (year 3).
- Refine the effort distribution instrument to facilitate ongoing data collection (year 4).

- Use information generated to develop a needs assessment of the College that will facilitate future strategic planning (year 5).
- Use information generated to facilitate career development of individual faculty members (see initiative 6C on mentoring and professional development) (year 5).

METRICS

- Estimate accuracy of data collected using the effort distribution instrument by comparing results to information obtained from faculty annual reviews by the end of year 2.
- Reconcile estimated accuracy of data with effort required to collect data using the instrument and determine whether or not to continue with data collection and analysis by the end of year 3.
- Perform a comparison of needs profile of the College to existing distribution of effort and determine if future modification of strategic initiatives is warranted by the end of year 3.
- Assess value of the effort distribution instrument in strategic planning both retrospectively and prospectively by the end of year 5.
- Assess value of effort distribution instrument in faculty development using metrics provided for initiative 6C (mentoring and professional development) by the end of year 5.
- Assess faculty success by constituent satisfaction surveys that include veterinary administrators and faculty members by the end of year 5.

RESPONSIBILITY

Dean, Associate Dean of Administration and Curriculum, Associate Dean of Academic and Student Affairs, Associate Dean of Research and Graduate Studies, Hospital Director, Chief Financial Officer, Department Chairs

INITIATIVE 6B Enhance communications between veterinary administration and faculty, staff and students.

OVERVIEW

Results of the University's 2007-2008 faculty and staff survey as well faculty and staff forums conducted in the College for strategic planning purposes indicate that some faculty and staff feel disconnected from the decision-making process in the College. They feel a need for increased transparency and enhanced communication between administration and the faculty and staff. In particular, some staff feel they are under-appreciated, their work environment is not positive and they perceive limited opportunity for career advancement. Not all forms of communication work for all faculty and staff, and the College recognizes the need for communication on multiple levels including e-mail memoranda, printed materials, informational meetings, faculty and staff forums, and informal interactions among faculty members, staff, and the College leadership.

IMPLEMENTATION

- Quarterly updates from the Associate Dean of Administration and Curriculum will detail activities in Veterinary Administration.
- Informal individual faculty and staff member meetings with the Dean ("breakfast with the Dean") will be conducted to hear faculty and staff concerns and suggestions for improvement in the College.

- Administrative activities will continue to be reported to faculty in individual departments by the Chairs at normally scheduled faculty meetings and meeting minutes will be posted on the College website for review.
- The Dean will provide a detailed yearly overview of College activities in the “State of the College” address (typically held in February of each year) and the presentation will be posted on the College’s website.
- The College Quality of Life Committee will develop an agenda of specific initiatives to be completed each year.
- Faculty and staff will be encouraged to participate in career development courses available on central campus and participation in these courses will be monitored.
- Hospital and departmental staff advisory committees will be developed to provide an avenue for staff concerns and suggestions for improvement of the College.
- Informal forums will be held for veterinary students on a monthly basis and will be attended by veterinary administrators and the veterinary teaching hospital director.
- The Office of Communications and Marketing and the Office of Alumni Affairs will develop promotional materials that highlight activities within the College and promote increased contact between alumni and the College.

METRICS

- Results of a faculty and staff job satisfaction survey conducted by the College Quality of Life Committee one year after implementation will be compared to results obtained during the University’s 2007-2008 faculty and staff survey.
- Participation in campus career development courses by faculty and staff will increase by 50%
- Improved communications with veterinary students will be reflected in focus group sessions (“fireside chats” with Associate Dean of Academic and Student Affairs) and in student evaluations of clinical rotations.
- Case referrals to the hospital by alumni veterinarians will increase as a reflection of improved communications.

RESPONSIBILITY

Dean, Associate Dean of Administration and Curriculum, Associate Dean of Academic and Student Affairs, Department Chairs, Hospital Director, Quality of Life Committee Chair, Director of Alumni Affairs, Director of Marketing and Communications

INITIATIVE 6C Establish a faculty mentoring and professional development program.

OVERVIEW

A formal structured faculty mentoring program helps junior faculty successfully navigate the complexities of an academic career. Mentored faculty members are more likely to be successful in the promotion and tenure process, have successful and satisfying careers, maintain their enthusiasm and productivity, and be retained by the institution. Mentoring in the College largely has been informal in nature. A formal mentoring program will insure consistency in the availability and delivery of mentoring.

IMPLEMENTATION

- Establish a mentoring committee of three faculty mentors for each probationary faculty member. At least one of the mentors should be in the probationary faculty member's department and area of specialty. Inclusion of one faculty member from a different department should be considered, especially for regular tenure track faculty.
- The mentoring committee will meet with the probationary faculty member within 30 days of being assigned and every six months thereafter.
- The mentoring committee will serve as an advocate rather than an evaluator. Among other possibilities, responsibilities may include identification of research opportunities, review of teaching materials, assessment teaching effectiveness, and guidance on development of the dossier.
- Participating faculty mentors will be committed to mentoring and probationary faculty members will be receptive to discussions with the members of their committee.

METRICS

- Ratings on faculty surveys of workplace and career satisfaction will be higher one year after implementation of the faculty mentoring and professional development program than before.
- Success rate for promotion and tenure of mentored faculty will exceed the success rate achieved before implementation of the program.
- Percentage retention of faculty in all departments will be higher after implementation of the program than before implementation.
- Faculty honors and awards will increase after implementation of the program.
- The quantity and quality of scholarly works produced by mentored faculty will exceed those indicators as assessed before implementation of the program.

RESPONSIBILITY

Department Chairs

STRATEGY 7 Develop mutually rewarding partnerships with constituents outside of the College including industry, international institutions, other colleges of veterinary medicine, and private benefactors as well as participate in relevant and meaningful outreach and engagement activities for Ohio's veterinary profession and citizens.

INITIATIVE 7A Enhance College outreach and engagement activities by developing sustainable programs directed at underserved communities in Columbus and throughout Ohio.

OVERVIEW

The College conducted a self-assessment of its community outreach and engagement activities in 2007 and identified a need for better access to veterinary care in underserved communities in Columbus and throughout Ohio. The College has been successful in outreach as demonstrated by its shelter medicine and surgery program, which provides community service and offers practical learning opportunities for veterinary students. The program engenders a sense of responsibility and commitment to lifelong service to society while providing education about animals and veterinary medical services to the community, as well as offering students and faculty an opportunity for animal population research and scientific investigation into naturally-occurring animal diseases.

IMPLEMENTATION

- Submit a proposal to the Kenneth A. Scott Charitable Trust (a private foundation established to promote humane treatment of animals) by the end of 2008 to fund a program that will provide improved access to affordable companion animal care for lower income households in underserved urban neighborhoods and rural regions of Ohio.
- Establish a program for delivery of veterinary medical care to underserved urban neighborhoods in Columbus such as the Weinland Park district designed to collaborate with and reinforce current efforts by the College of Education and Human Ecology (Schoenbaum Community Education Center) as well as Ohio State University's Gateway Project.
- Work with the Office of Development to identify grant opportunities and gifts from other community partners who can provide ongoing support for the project.

METRICS

- The program will positively impact animal shelters as assessed by a decrease in shelter intake rate and an increase in "return to owner" rate.
- The program will improve the core clinical competency skills of veterinary students as assessed by clinical competency outcomes assessment (see initiative 3B) and improved ratings in surveys of employers of new veterinary graduates.
- The program will increase community awareness among veterinary students as assessed by on-line pre- and post-rotation survey instruments and qualitative focus group discussions during the rotations.
- The program will enhance community awareness among the served populations regarding the importance of basic veterinary care and population control for pet animals as assessed by client instrument surveys and in-person interviews conducted at the initial visit to the community clinic and after delivery of care and provision of client education materials.
- The program will lead to an increase in the number of publications by College faculty on the human-animal bond, pet overpopulation, shelter medicine, community outreach practice, and the epidemiology of common infectious diseases of pet animals over the next five years.

RESPONSIBILITY

Department Chair of Veterinary Clinical Sciences (Dr. Rustin Moore), Dr. Linda Lord, and Dr. Larry Hill

INITIATIVE 7B Develop international programs in the College that provide international educational opportunities for students and faculty.

OVERVIEW

As veterinary professionals, the College's graduates will be asked to address both animal and human public health issues. Throughout the world, human health concerns arising from animals (e.g., zoonotic diseases) have been increasingly recognized, especially infectious diseases such as bovine spongiform encephalopathy ("mad cow" disease) and avian influenza. Furthermore, some diseases endemic in other parts of the world could emerge in the United States as a result of animal travel or bioterrorism. Consequently, our graduates must be knowledgeable about

diseases not currently reported in the United States, but with the potential to emerge in the future. Development of international programs will allow the College to expand the horizons of its own students while simultaneously contributing to the education of foreign veterinary students and veterinarians.

IMPLEMENTATION

- Appoint a College task force to identify geographical areas of opportunity for international programs based on global needs and the interests of College faculty. The task force will solicit ideas for current and future opportunities from faculty members in each of the College's three departments.
- Establish an elective course to familiarize students with international veterinary medicine.
- Investigate previously-identified opportunities for partnership with the University of Tokyo and Hokkaido University (e.g., training visiting Japanese students in public health)
- Investigate other potential international opportunities identified by the College international task force

METRICS

- An elective course on international veterinary medicine will be offered to veterinary students within two years with enrollment of at least 15 students.
- A memorandum of understanding for a mutually beneficial international program will be signed with at least one foreign partner within three years.
- The College's international task force will identify at least two additional potential international program opportunities within the next two years.

RESPONSIBILITY

Dean, Department Chairs, Associate Dean of Administration and Curriculum, Dr. Wondwossen Gebreyes

INITIATIVE 7C Increase faculty awareness of and success with commercialization of intellectual property.

OVERVIEW

Research findings of faculty may have important intellectual property value and beneficial commercial application. For example, many years of research on ehrlichiosis by Dr. Yasuko Rikihisa in the Department of Veterinary Biosciences recently led to licensing of a commercial diagnostic test for this disease in dogs. Royalty income to Ohio State University arising from this commercial application amounted to \$360,000 in FY 2007 and \$613,000 in FY 2008. In some instances, faculty may not be fully aware of the importance of protecting their intellectual property, the commercial applications of their research, and the benefits of these applications to the College and University. The College will work with Dr. Jean Schelhorn and the Technology Licensing and Commercialization (TLC) Office to increase faculty awareness of these important aspects of their work.

IMPLEMENTATION

- Require TLC training of all new faculty.

- Provide annual faculty workshops on TLC.
- Include TLC activities of College faculty in faculty annual reports to department chairs.
- Create an annual faculty and staff award for TLC.
- Using income derived from TLC activity, consider creating a College TLC staff position to assist faculty and staff with proper utilization of TLC income.

METRICS

- Patent applications from the College will increase by an average of 50 percent over the next five years.
- Signed licensure agreements from the College will increase by an average of 100 percent over the next five years.
- College revenue arising from TLC will increase by 50 percent in the next five years.

RESPONSIBILITY

Department Chairs, Associate Dean of Research and Graduate Studies

INITIATIVE 7D Develop a College Center of Excellence in Food Animal Health, Production and Well-Being.

OVERVIEW

Livestock and poultry production and processing are vital components of Ohio's economy. Food safety has become an increasingly important issue to consumers. Ohio-based companies such as Wendy's are being challenged to purchase meat and eggs from farms that raise animals under humane conditions. These challenges provide great opportunities for collaborative teaching and research as well as external funding. The College's Center of Excellence in Food Animal Health, Production, and Well-Being will be an interdisciplinary program that includes educators, clinicians, and researchers. It will focus on diseases of livestock and poultry, production medicine, food animal well-being, and pre-harvest safety issues that affect Ohio, the nation, and the world. Educating veterinarians to protect Ohio's livestock and poultry populations, providing service and outreach to producers and stakeholder groups, conducting research on food animal diseases and well-being, and creating new technologies will position the College and the University as nationally recognized leaders in food supply medicine as well as providing service and outreach to Ohio producers.

IMPLEMENTATION

- Identify collaborative partners from among College departments, colleges within the university, state and federal agencies, and private industry to support the Center.
- Leverage our successful TIE program in PHPID to provide funding for three faculty members who can support the Center through clinical and research activities (see Initiative 1A).
- Utilize two additional food animal positions in the College (see Initiative 1A) to support the Center (Tharp Chair in Food Animal Medicine, clinical position in food animal medicine at the Marysville facility to be supported by increased dairy operations in northwestern Ohio).
- Obtain support from private organizations (e.g., pharmaceutical industry, Select Sires Inc.) to fund research programs and clinical trials in the Center.

- Implement a quarterly symposium on contemporary issues in animal agriculture by the end of 2009.
- Appoint an external advisory board consisting of members from government and industry partners to evaluate the Center's direction and progress.
- Capitalize on the "Veterinary Early Commitment Program for Students Interested in Production Animal Medicine" in collaboration with the College of Food, Agricultural and Environmental Sciences. This program identifies and mentors undergraduate animal sciences students so they will qualify for seats specifically identified for students committed to production animal medicine.
- Actively pursue potential state support for debt forgiveness programs for veterinary students who agree to work in food animal medicine after graduation.

METRICS

- Funding sufficient to support 50 percent of the administrative cost of the Center for one year will be obtained from industry and private organizations by the end of 2009.
- Each of the quarterly seminars will be attended by at least 100 veterinarians and industry professionals and will generate sufficient revenue to support 50 percent of the administrative cost of the Center for one year by the end of 2009.
- Program evaluations by attendees at the quarterly seminars will be favorable and support continued investment in the program.
- The Center will receive favorable ratings by an external advisory committee that will compare the Center to established programs at other institutions and provide an evaluation of the program's progress on a yearly basis.
- The College will accept up to 10 qualified students per year into the early commitment program in production animal medicine beginning in 2010.
- Administrators from the College will meet with commodity groups and the state legislature to promote support for state-sponsored debt forgiveness programs.

RESPONSIBILITY

Dean, Department Chair of Veterinary Preventive Medicine

INITIATIVE 7E Explore the feasibility of sharing resources with other colleges of veterinary medicine.

OVERVIEW

As colleges of veterinary medicine have continued to lose highly-qualified clinical faculty to specialty private practice, it has become increasingly challenging for colleges to maintain the comprehensive, high quality educational programs required by the profession and society. The ongoing loss of clinical faculty requires creative solutions that potentially involve sharing of resources and expertise among colleges of veterinary medicine.

IMPLEMENTATION

- Identify areas of deficiency (e.g. avian/exotic animal medicine, behavior) and strength (e.g. food animal medicine, cardiology, radiology) in our clinical programs that could derive benefit from or provide benefit to other colleges of veterinary medicine. This step will be accomplished during curriculum review in year one (see initiative 3A above).

- Participate in discussions with Academic Affairs administrators at other colleges of veterinary medicine with guidance and administrative support from the AAVMC during year one. A committee to do so has been established by the AAVMC with Associate Dean Jean Sander of the College chairing the committee.
- Identify and establish formal agreements with colleges of veterinary medicine that wish to exchange expertise with Ohio State University's College of Veterinary Medicine.
- Establish a mutually beneficial voluntary program in collaboration with at least one other college of veterinary medicine that will allow exchange of up to 20 veterinary students between schools without tuition fees during years two through three.
- Establish a guest lecturer exchange program with at least one other college of veterinary medicine in which a member of their faculty travels to Ohio State to provide a series of presentations, and a member of our College's faculty travels to their institution to provide a series of presentations. Each college would pay the other college's expenses so that neither school would incur substantial net expenses.
- Identify and participate in distance education courses provided by other colleges of veterinary medicine to provide our students with educational experiences not available in our College, and develop distance education courses in our College (see initiative 5B above) to provide other colleges of veterinary medicine with access to the expertise of our faculty members. Participating schools may incur hardware and software expenses to develop distance education tools, but course content could be exchanged between participating colleges at no expense.

METRICS

- Establish policies and processes for sharing expertise among colleges of veterinary medicine within two years (facilitated by the AAVMC).
- Establish at least one cooperative student exchange program by year three, with participation of at least five veterinary students from each of the two schools in the program.
- At least 10 Ohio State University veterinary students will participate in at least one online distance education course offered by another college of veterinary medicine by year two.
- Ohio State University's College of Veterinary Medicine will provide at least one online distance education course for another college of veterinary medicine by year three and at least 10 veterinary students from other colleges will enroll in the course.

RESPONSIBILITY

Associate Dean of Academic and Student Affairs, Director of Instructional Technology

TABLE 1: INDICATORS OF A HIGH QUALITY PROFESSIONAL PROGRAM IN VETERINARY MEDICINE

<i>High quality, successful faculty</i>
• Numbers of grants submitted and awarded
• Numbers of peer-reviewed publications in scientific journals
• Numbers of books, book chapters and other scholarly works
• National and international peer recognition for clinical service and teaching
• National and international recognition by extramural awards and honors
• Editorships, leadership in extramural professional organizations, editorial board service, and extramural research study section service
• Strength of graduate programs provided
• Strength of post-DVM internship and residency programs provided
• Diversity
<i>High quality, successful students</i>
• High entering GPA and GRE scores
• Successful employment placement: numbers of job offers and starting salary
• Success on North American Veterinary Licensure Examination
• Success in post-DVM programs (e.g. internships, residencies, graduate programs)
• Diversity
<i>Diverse revenue streams with potential for growth</i>
• Good educational value: reasonable tuition and debt load of graduating professional students
• Good record of state support
• Successful development: gifts for current use and endowments
• Strong hospital: high caseload, high revenue, fiscally solvent, good facilities
• Strong research expenditures and indirect cost recovery
• Strong collaboration with private industry
• Record of success in commercialization of intellectual property

TABLE 2: COMPARISON OF OHIO STATE UNIVERSITY COLLEGE OF VETERINARY MEDICINE TO PEER INSTITUTIONS

School	Faculty and students					Diversity						Student expense Total student expenses (resident)
	Students	Faculty	S/F Ratio	GPA	GRE	Faculty		Students				
						All minorities	Minority/ Faculty	All minorities	Minority/ Students	African American	African-American/ Students	
Ohio State	554	102	5.4	3.60	1248	9	9%	29	5%	4	0.7%	\$38,561
Illinois	427	117	3.6	3.56	1149	20	17%	34	8%	2	0.5%	\$35,118
MSU	439	172	2.6	3.53	1150	39	23%	50	11%	6	1.4%	\$34,712
Minnesota	357	128	2.8	3.52	1180	24	19%	20	6%	0	0.0%	\$38,216
Purdue	263	125	2.1	3.72	1134	22	18%	22	8%	5	1.9%	\$27,162
Wisconsin	310	94	3.3	3.58	1230	18	19%	35	11%	3	1.0%	\$30,470
UC Davis	499	231	2.2	3.47	1276	31	13%	126	25%	3	0.6%	\$43,510
Colorado State	536	233	2.3	3.70	1183	29	12%	69	13%	2	0.4%	\$23,712
Cornell	336	165	2.0	3.68	1312	22	13%	72	21%	16	4.8%	\$39,000
North Carolina	310	154	2.0	3.66	1200	26	17%	23	7%	10	3.2%	\$29,168
Pennsylvania	438	142	3.1	3.56	1288	16	11%	50	11%	5	1.1%	\$52,704
Texas A&M	505	196	2.6	3.64	1163	35	18%	58	11%	1	0.2%	\$27,722

School	Revenue		Research				Development		Caseload	US News & World Report		
	State & Tuition	Total	(State & Tuition)/ Student	(State & Tuition)/ Total	Hospital	Total	Research Expenditure	Research/ Faculty	(Last FY)			
	Millions	Millions		%	Millions	%	Millions		Endowment income	Gifts for current use	Total patients*	Rank
Ohio State	\$26.8	\$62.1	\$48,414	43%	\$14.5	23%	\$12.9	\$126,214	\$1,073,826	\$1,650,934	34,641	3.9
Illinois	\$22.9	\$45.6	\$53,657	50%	\$7.7	17%	\$6.6	\$56,766	\$667,949	\$806,013	19,078	2.9
MSU	\$25.2	\$90.7	\$57,442	28%	\$15.6	17%	\$21.1	\$122,697	\$6,048,725	\$6,732,064	28,067	3.8
Minnesota	\$33.7	\$84.4	\$94,336	40%	\$22.7	27%	\$16.6	\$129,374	\$440,146	\$2,658,802	40,470	3.7
Purdue	\$18.4	\$46.5	\$70,134	40%	\$9.1	20%	\$8.8	\$70,389	\$818,000	\$1,128,950	17,383	3.0
Wisconsin	\$21.6	\$56.5	\$69,678	38%	\$9.5	17%	\$20.2	\$214,667	\$582,308	\$3,167,490	25,818	3.9
UC Davis	\$52.6	\$151.4	\$105,359	35%	\$20.3	13%	\$34.4	\$148,724	\$2,028,852	\$5,428,343	33,820	4.3
Colorado State	\$27.8	\$126.0	\$51,919	22%	\$11.9	9%	\$61.7	\$264,884	\$557,537	\$13,553,585	26,370	4.3
Cornell	\$78.3	\$145.2	\$232,947	54%	\$11.7	8%	\$54.2	\$328,248	\$6,423,460	\$4,284,523	23,453	4.5
North Carolina	\$27.7	\$70.1	\$89,303	40%	\$15.8	23%	\$12.4	\$80,224	\$1,625,866	\$4,392,797	22,556	3.9
Pennsylvania	\$53.5	\$131.8	\$122,055	41%	\$29.4	22%	\$33.9	\$238,632	\$3,307,000	\$3,416,000	39,118	4.1
Texas A&M	\$40.4	\$83.7	\$80,057	48%	\$11.2	13%	\$14.0	\$71,650	\$1,788,641	\$600,000	21,591	3.9

* Total patients includes hospital patients and ambulatory calls

Source of data: American Association of Veterinary Medical Colleges Comparative Data Report 2007-2008 and US News and World Report

NOTE: Research expenditure data in Table 2 reflects activity at the Ohio Agricultural Research and Development Center which is not reflected in initiative 4A of the strategic plan.

TABLE 3: COLLEGE OF VETERINARY MEDICINE DEVELOPMENT GOALS

Facilities support (Initiative 2A)	\$20.0 M
Faculty support (Initiative 1A)	\$ 5.0 M
Student scholarships (Initiative 3E)	\$ 7.5 M
Programmatic support (Initiatives 4B, 7A, and 7D)	\$ 7.5 M
TOTAL DEVELOPMENT GOAL	\$40.0 M

TABLE 4: PRIORITIZATION GRID FOR STRATEGIC INITIATIVES

Strategic initiative	2008	2009	2010	2011	2012
1A: Increase faculty numbers	1	1	1	1	1
1B: Increase faculty diversity	1	1	1	1	1
2A: Identify philanthropic support for hospital renovation	1	1	1	1	1
2B: Deploy college-wide information system	1	2	2	3	3
3A: Review and revise curriculum	1	1	2	2	3
3B: Deploy clinical competency outcomes assessment	1	2	3	3	3
3C: Increase student diversity	1	1	1	1	1
3D: Consolidate graduate/residency programs	1	2	3	3	3
3E: Increase student scholarships	1	1	2	2	2
4A: Increase extramural research expenditures	2	2	2	2	2
4B: Strengthen signature programs	2	2	2	3	3
5A: Develop distance education programs	2	2	2	3	3
6A: Develop quantitative system to assess work balance	2	2	2	2	2
6B: Enhance communication between administration and faculty	1	2	2	3	3
6C: Establish a formal mentoring program	1	2	2	3	3
7A: Enhance outreach and engagement	1	1	2	2	2
7B: Develop international programs	2	2	2	2	2
7C: Increase commercialization of intellectual property	1	2	2	3	3
7D: Develop Food Animal Center	1	2	2	3	3
7E: Explore resource sharing with other veterinary colleges	2	2	2	3	3

Priority: 1 = high, 2 = moderate, 3 = low

TABLE 5: CENTERS AND INSTITUTES AT THE COLLEGE OF VETERINARY MEDICINE

Center or Institute	Date of inception	Director
Center for Retrovirus Research	1989	Patrick Green
Center for Excellence in Food Animal Health, Production and Well-Being	Under development	William Saville