

Informing the Sustainability Investment Plan

Context

As part of Portland State's strategic planning activities, "sustainability" was selected as a programmatic focus for investment. In January 2008, the Office of Academic Affairs convened the ad hoc Sustainability Advisory Group to assess the University's existing strengths in sustainability and identify opportunities where additional faculty positions could have the greatest benefit. The areas of strength and the descriptions of those focal areas are identified in this document. Following several meetings with the Advisory Group, the Provost approved the recommendation to recruit a director for the Center for Sustainable Processes and Practices. Once on board, the new director will lead the recruitment of up to seven additional faculty positions in selected focal areas over the next two years.

Sustainability at Portland State

PSU is already a recognized leader in sustainability in both its operational practices and its educational mission, and is actively contributing to deepening the knowledge base in these areas and to advancing sustainability efforts in local, state, regional and international settings. Through additional investment, the institution has the opportunity to leverage our joint commitments to sustainability and internationalization by developing a research agenda that ensures our leadership in sustainable development at the global as well as the regional and national levels.

Portland State University has an overarching commitment to understand sustainable development as it pertains to environmental integrity and human development, and to explore the ways that human and social systems and institutions guide the decisions that affect sustainability in the environmental, social and economic spheres. PSU's expertise is concentrated in **two main, inter-connected focal areas**—the coupling of human and natural systems, and sustainability in urban and urbanizing communities. PSU also has particular strengths in **two cross-cutting topical areas** – metrics and evaluation, and mechanisms that effect change and foster engagement at the individual, organizational, societal and ecosystem levels.

Recommendations for investment

With the goal of becoming a premier sustainability research institution in the region, nationally, and globally, PSU should seek to add faculty with expertise in specific sustainability-related areas. This investment is critically important, for while PSU has considerable competency in the social, economic, policy and other aspects of sustainability, our capacity is thin relative to the level of current demand and the growing opportunities in this field. With these new faculty investments, Portland State has the potential to catalyze new and expanded research in collaboration with its many public and private sector partners in the city, the state, the region, and beyond.

Those hired will contribute to sustainability directly through their research, teaching and service, through their involvement in cross campus, collaborative initiatives, and through engagement in the communities we serve. Knitting together individuals, programs and initiatives will be critical to the success of this investment strategy. For this reason, developing an organizational structure that supports collaboration in these areas and that ensures the effective integration of new and existing faculty is an essential step to support

the success of PSU's sustainability research agenda. The development of medium and long term goals for the sustainability research program and of an evaluation framework to assess progress toward these goals is another important step to ensure the success of the broader research program and to provide a robust and transparent programmatic context for this program. Members of the ad hoc Sustainability Advisory Group and others from the PSU community would welcome the opportunity to develop such organizational structures, goals and frameworks.

Description of PSU's two focal areas and two cross-cutting areas

The following section describes the **focal and cross-cutting areas** of PSU's sustainability research in more detail.

Focal area 1: Coupling of Human and Natural Systems – *ecological systems, policy, technology, behavior, social and economic aspects, hard and soft solutions*

The unsustainable practices and policies that threaten the health of ecosystems and communities of all types reflect a “disconnect” between natural and human systems. Sustainable solutions seek to integrate the environmental, social and economic spheres in ways which support the integrity, health and restoration of both of these systems. However, achieving this integration requires new ways of thinking across disciplines and new ways of translating academic research into practice.

PSU already has significant expertise in research related to the interface between biophysical systems (e.g. streams, lakes, watersheds, coastal margins, flora and fauna, ecosystem services, etc) and human communities (e.g. individual's mental, physical and economic well-being, sustainable practices, planning, food systems, etc.). Additional faculty members with complementary expertise in this area will help leverage existing strengths in this area and could reside in a number of departments across campus.

By investing in additional faculty whose expertise relates to the bridging between human and natural systems - particularly as it relates to urban environments, the rural-urban interface and international as well as regional contexts - PSU can develop a broader, deeper and more integrated program that could serve as a national and international leader in this area. The new scholars should also possess the capacity to deepen community engagement on such complex sustainability issues, collaborating with public and private sector partners at all levels.

Focal area 2: Sustainable Urban Communities – *urban ecology, social and economic systems and the built environment*

PSU is already known nationally and internationally for its expertise in urban systems and in the rural-urban interface--expertise that encompasses ecosystem management, planning and community development, transportation, governance, ecology, infrastructure, social sustainability, and community health. Expertise resides in departments across campus.

PSU has the opportunity to create a more integrated program that brings together these areas of expertise within a framework that addresses the social, economic and environmental elements of healthy and resilient urban communities (both biophysical communities and

social communities). This program would integrate PSU's growing understanding of ecosystem functions and services within the more human oriented sciences such as economics and sociology. As an urban university situated at the center of a progressive metropolitan area, PSU has the opportunity to establish long-term research projects that monitor the ecological and socio-economic conditions of this urban area and that reach beyond the built environment to incorporate the larger watershed context.

Hiring faculty members that can translate between the natural and built environments, as well as among ecology, sociology and economics, can help us achieve a more holistic understanding of the urban ecosystem and national leadership in this field.

Cross-cutting area 1: Implementing Sustainable Solutions: Mechanisms for Change

Developing a better understanding of how to enhance public awareness and engagement related to the challenges facing the planet must be central to any long term sustainable solutions to climate change, social inequities, landscape degradation and other issues. This realm encompasses issues of human development, consumer choice, lifestyle and behavior change at multiple levels.

PSU has a unique concentration of degree programs, certificates, schools, etc. with research focused on change at the individual, family, organizational and institutional levels.

Behavioral change at these different levels constitutes a focal area for most of the schools and colleges. PSU is one of a few universities in the U.S. with a graduate program in education and sustainability and is unique in offering an interdisciplinary and applied focus on social sustainability.

By linking existing faculty and integrating new faculty into a programmatic focus on these aspects of change, PSU has the opportunity to develop a program that would have impacts at the national and international levels. For example, one area of focus within such a program could be the human dimensions of climate change--how the consumer choices, business behaviors, and government regulations affect this issue both positively and negatively. Another example of focus within such a program could be the management of invasive species, which similarly constitutes a global threat with direct local implications. Such a program encompasses social investments, technology development, population growth and migration, cultural contexts, economic institutions, governance systems, the human impacts of a changing environment, human perceptions and valuations of ecosystem services, environmental justice, disaster management and mitigation, consumption patterns, systems of provision, supply chains, interactions of markets and policies, development of new business models, etc.

This focal area provide an overarching cross-disciplinary framework to bridge the work being done across PSU's campus on the multiple mechanism and strategies for effecting change at the individual, organizational and societal levels. By integrating these efforts, PSU can offer a unique analytical framework and understanding of what actions need to happen at all scales to realize truly sustainable development.

Cross-cutting area 2: Making Sustainability Credible: Measurement, Valuation, and Evaluation

As public and private sector players seek to develop and implement long term solutions to issues ranging from climate change to ecosystem degradation to public health, there is a significant need for more empirical and theoretically-grounded methods of impact assessment (health impact assessment, triple bottom line impact assessment, long term/intergenerational impact assessment) and for improved tools and strategies to inform public discussions, business decisions and public policy-making. These systems are essential to understand whether policies and programs are working, and to provide the feedback loops needed to refine and adapt decisions based on their impacts on the ground. Such information systems can improve the abilities of public and private actors to weigh the relative effects of their current actions and the impacts of choices made about future actions (that may produce either “more” or “less” “sustainable” results). What criteria are relevant? What kind of “metrics” are needed? How difficult are they to develop? How can they best be created, reported, and interpreted? How can they be best implemented?

In addition, the development of new and innovative valuation methodologies is needed to ensure that social and economic forces better reflect the value of natural systems (i.e. ecosystem services) to take into account long term and less easily quantifiable costs and benefits.

PSU offers the ideal platform to develop and test new and innovative decision-support systems to inform local, state, regional policy and market choices, and to help in conceiving, measuring, and communicating about socio-environmental change processes at the regional scale. Topical areas for sustainability include regional genuine progress indicators, salmon recovery models, flood prediction models, landslide models, climate change models, “evidence based” prescriptive models in medicine, criminal justice, etc. and social and economic well being models.

This focal area should be promoted as a core area that provides the underlying rigor and guidance that enhance the value and effectiveness of all the other areas of focus. It could serve both to guide research efforts as well as a sort of continuous “auditing/evaluation” center to gauge the effectiveness of research findings after implementation. The number of research projects that would be generated either by teams or individuals would be impressive as well as of tremendous value to a wider audience of practitioners.