Institute for Sustainable Solutions Annual Report (2013-2014)

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AT THE INSTITUTE FOR SUSTAINABLE SOLUTIONS (ISS), we believe that higher education has the potential to address the world’s most pressing and complex challenges through sustainability’s integrated approach to problem solving. Supported by a generous 10-year grant from the James F. and Marion L. Miller Foundation awarded in 2008, the work at ISS has become increasingly focused on refining programs with long-term potential and clarifying the roles it plays at Portland State University. 2013-14 was a year of acceleration toward more comprehensive integration of sustainability throughout the University. This brief annual report captures the highlights from the year and signals where sustainability at PSU is headed in the years to come.

It is helpful to view the events of the past year in the context of the broader evolution of sustainability leadership at Portland State. Even before the Miller Foundation first chose to make a transformative grant to advance sustainability programs, the University was already capitalizing on discrete areas of strength in sustainability research and scholarship. In the first years of the Miller gift we allocated resources to faculty already engaged in sustainability, with a focus on those willing to work collaboratively, and began the process of identifying the need for new programs and developing partnerships with community organizations.

Among the lessons learned in those early years was that simply investing in an individual or group of faculty interested in a common topic wasn’t sufficient to achieve success or to build the institution’s longer-term capacity. With experience gained from challenging transitions, ISS recognized the need to provide enabling infrastructure that offered leadership, programmatic focus, and institutional context to our investments. In the past six years, ISS has been most successful in building capacity by creating conditions where students, faculty, and community partners engage in an ongoing, intentional, and powerful way.

For example, ISS fostered the creation of the Sustainability Leadership Center in 2009 for student-related programs. From the beginning, the Center was integrated with PSU’s Enrollment Management and Student Affairs division. This integration ensured that it was closely linked to other student programs, but still innovative in its development of student sustainability leadership. It also led to the EMSA division elevating sustainability as its first division-wide assessment initiative in 2012-13. Developing this kind of embedded program, with strong ties to existing institutional structures, is a core ISS strategy.
As a hub for sustainability at Portland State University and the first stop for many PSU partnerships pertaining to sustainability, the Institute for Sustainable Solutions has built on these lessons to play a pivotal role in institutional capacity building and in raising PSU’s profile at the local, regional, and national levels. ISS articulates its roles as follows:

» As a **convener**, ISS creates University cohesion around sustainability and facilitates connections and partnerships between community partners working toward shared goals.

» As an **innovator**, ISS acts as a catalyst to spark entrepreneurial solutions to vexing problems, carve pathways for interdisciplinary work, and build new models for learning, research, and co-curricular activities.

» And as a **steward**, ISS helps to increase accessibility to programs, provides resources to maintain or embed programs within the University structure, and creates discrete pathways for students to navigate and benefit from everything sustainability contributes to their PSU education.

We are learning as we go, and have invested much of the last year in developing a robust assessment framework for all of our programs in order to understand what is working and what we need to improve as we seek transformational outcomes in an increasingly complex and challenging world.

**HIGHLIGHTS OF 2013-14**

In addition to increased national recognition, a full calendar of engaging public events, leadership building, and student success, 2013-14 saw the maturation of programs designed to increase Portland State University’s capacity for impact.

In July 2013, the **Urban Sustainability Accelerator** convened its first cohort of representatives from eight mid-sized cities from across the U.S., each of which sent a team to Portland to learn about the implementation of sustainable planning and development, and then spent the following year working with experts on topics including complete streets, heat island mitigation, air quality, and downtown revitalization. The accelerator, funded by the Summit Foundation and the Institute for Sustainable Solutions, received widespread national attention in its first year of working with these cities to advance sustainability projects. July 2014 saw a successful reconvening of the original participating cities in Portland, plus the second class of cities and their university partners focused on joint sustainable development projects.

**STUDENT STORY**

**Val Holdahl**

After Steve Duin, columnist for The Oregonian, spent several hours on interviews with and about PSU graduating senior Val Holdahl, he didn’t know where to start. “The Russian orphanage?” he wrote. “The missing fibula? The Quaker upbringing or the dozen surgeries at Shriners Hospital for Children? The coming out?” There’s plenty to say about Val, who during her senior year worked as the volunteer coordinator for the Sustainability Leadership Center. Val chose Portland State for its diverse population and welcoming environment. Early on, she developed an activist’s passion for recycling and waste reduction and charted a pathway that allowed her to hone as many professional skills as possible, working in 11 different on-campus jobs and becoming a role model for other students in the process. “Service learning has always been a passion of mine,” says Val. “When I was 11 years old, I started walking all the dogs in my neighborhood and fundraising for a new animal shelter.” Val plans a career in environmental law.
ISS
The Institute for Sustainable Solutions is the hub for sustainability at PSU, advancing sustainability research, education, student activities, and community engagement.

CONVENER
Connecting PSU with the broader community by fostering communication and partnerships on campus and beyond.

INNOVATOR
Pushing the boundaries to ensure PSU’s ongoing relevance and leadership in sustainability activities.

STEWARD
Providing ongoing support and guidance for PSU sustainability programs as they emerge, develop, and become integrated into the institution.
In September 2013, six multidisciplinary student teams gathered at the Oregon BEST Fest conference to display their clean technology prototypes to judges and potential investors. The PSU Cleantech Challenge, created by ISS in partnership with the PSU Center for Entrepreneurship, underlines PSU’s role as an innovator of entrepreneurial solutions to climate-related challenges. Teams competing in the challenge came up with a nanotechnology application to improve the performance of solar cells, a compact, closed-loop system for growing salad greens and fish, and many other green innovations. PSU joined with Wells Fargo to present the grand prize—and a big check—to the two teams that emerged from the competition in a tie. The second annual Cleantech Challenge took place this September, and Wells Fargo has committed to a $100,000 grant to support and expand the Cleantech Challenge in the future.

The 2013-14 year was also one of advancement for PSU’s reputation as a center for expertise on urban ecosystem services. The four-year-old interdisciplinary Integrative Graduate Education and Research Traineeship (IGERT) Ph.D. program focused on Ecosystem Services for Urbanizing Regions has established the University as a center of expertise in this increasingly important regional and global research area. The program is funded by a prestigious National Science Foundation grant and empowered by additional funding from the Institute for Sustainable Solutions and other sources. The PSU-led Cascadia Ecosystem Services Partnership works closely with IGERT faculty and students to build strong collaboration and communications channels between regional ecosystem services leaders. In 2013, the two groups convened a regional panel of researchers and practitioners to develop a set of principles to guide comprehensive ecosystem services valuations, sparking high-level conversations from Portland to Washington, D.C., about the importance of including cultural and social factors alongside their environmental and economic counterparts in assessing nature’s benefits. In addition, research on optimal methods of ecoroof development, the potential for salmon to return to urban waterways, and herbicide resistance made headlines over the course of the year, providing ample opportunity for PSU faculty to step forward as experts on the health of the region’s natural environment.

**PARTNER STORY**

**My Street Grocery and Whole Foods Market**

Amelia Pape set out to address the issue of a lack of access to healthy foods by creating a mobile market called My Street Grocery. A graduate of Impact Entrepreneur’s Social Innovation Incubator, My Street raised the money for a food truck and started in the summer of 2012 with a route designed to reach Portland’s so-called food deserts, bringing fresh produce and healthy staples, along with easy-to-make meal kits. A partnership with Central City Concern followed, and Pape was looking for creative ways to grow what had proven to be a successful model. So in 2013, she approached Whole Foods. The natural food chain’s Northwest division loved the idea and executives hired Pape into a new position: food access coordinator. The new food access division has since grown to three employees, serving five locations in Portland each week with a new mobile grocery called “Molly the Trolley.” Pape has since dissolved the My Street Grocery business entity, going all in with Whole Foods. “We’re running this unit as a break-even model. The regional president is very passionate about the mission,” Pape told the Portland Business Journal in June.
FACULTY STORY
David Sailor

November 2013 found David Sailor, director of the ISS-funded Green Building Research Laboratory and professor of mechanical engineering, scaling a ladder to the rooftop of a soon-to-open Walmart store in North Portland. The giant 92,000-square-foot roof was essentially going to be Sailor’s lab for the next two years. In the months that followed that initial ascent, Sailor led the installation of scores of sensors and a weather station that will collect data to inform an improved future for the ecoroof industry. The Walmart rooftop features 40,000 square feet of vegetative roof installed in three separate sections—each devoted to testing different aspects of ecoroof design, such as materials and soil depth. The remaining 52,000 square feet of white membrane rooftop will also be monitored by sensors, providing an opportunity to deliver side-by-side comparisons on factors including surface temperature, water flow, and building operations. Data collected from the Portland store’s roof will be compared to similar data collected on a Walmart ecoroof in Chicago, providing a comprehensive view of ecoroof performance in various conditions.

In November 2013, the Sustainability Leadership Center kicked off their annual Social Sustainability Month event series with the 10-year anniversary celebration of the Native American Student and Community Center and an inspiring keynote on diversifying the environmental movement by Marcelo Bonta, executive director and founder of the Center for Diversity and the Environment. The theme for the month-long celebration was Decolonizing sustainability: Unsettling the dominant paradigm. It was a pointed look at the patterns of colonization, imperialism, and expansion and highlighted the parallels and shared goals between environmental stewardship and equity.

In December 2013, a group of students and faculty from the School of Architecture traveled to Haiti to complete a design-build project, constructing a porch to serve as a much-needed shady gathering space and rain catchment system at an orphanage. The project was just one of many taken on over the course of the year by the Center for Public Interest Design, launched in May 2013 with support from the Institute for Sustainable Solutions. The Center also led design of the SAGE Green Modular Classroom, which is now in distribution with a handful of classrooms installed at schools in 2014.

In January 2014, the ISS-supported Impact Entrepreneurs program launched an innovative online certificate program titled The Business of Social Innovation. Already highly
successful, this certificate program attracts undergraduates, graduate students, and community members alike and includes a real-world field study practicum. In addition, working closely with the Impact Entrepreneurs team, ISS helped launch a Changemaker Campus website (pdx.edu/changemaker) and assisted in the production of a video series of Changemaker Stories—profiles of students, staff, and faculty designed to empower others in the PSU community to make positive change in their worlds. The on-campus partnership with this entrepreneurial group continues to enrich PSU as a whole and broaden the definition of what sustainability is and how it can be applied.

In May 2014, the Institute for Sustainable Solutions formally launched the Sustainable Neighborhoods Initiative (SNI). The Sustainable Neighborhoods Initiative builds on Portland State's legacy of community-based learning and the interest and enthusiasm among PSU faculty and students to work on projects in Portland neighborhoods that will make a difference in the lives of people who live there. The initiative pairs PSU classes with a small number of Portland neighborhoods for multi-year relationships that will match University assets, expertise, and energy with specific neighborhood sustainability initiatives. The SNI provides students with rich opportunities to develop meaningful community connections and gain valuable work experience.

This year the Institute for Sustainable Solutions also worked with the PSU Campus Sustainability Office and other staff from the Finance and Administration Office to formalize the Living Lab program as a platform for supporting student research and initiatives that help achieve PSU’s sustainability and climate action goals. PSU Finance and Administration has committed financial and personnel resources to the Living Lab program, and a core team of staff have developed a protocol for identifying and supporting Living Lab projects. The Living Lab is designed to empower students and faculty to make a difference in their campus community by helping PSU make measurable progress on stated goals.
Portland State’s leadership continues to shine on a national stage:

» In August 2013, PSU achieved the pinnacle of green schools rankings: the Princeton Review’s Green Honor Roll, placing the University among the 22 “greenest of the green” institutions for both programming and operations.

» In March, PSU achieved a Gold rating from the rigorous Sustainability Tracking, Assessment & Rating System administered by the Association for the Advancement of Sustainability in Higher Education.

» In April, PSU President Wim Wiewel was tapped to chair the American College & University Presidents’ Climate Commitment Steering Committee, which includes presidents from 20 institutions and represents more than 680 campuses that have committed to take action on climate-related emissions reductions.

» Also in April, ISS Director Jennifer Allen was named by Oregon Gov. John Kitzhaber as co-convener of a task force on the charged topic of genetically engineered agriculture.

» In May, Portland State University was the first university to sign on for the Alliance of Resilient Campuses, a national effort to prepare universities for climate adaptation and resilience.

Against the backdrop of national leadership, Portland State University remains true to its core mission of service to the city. A Bullitt Foundation grant helped to fund the Portland-PSU Climate Research Collaborative, launched in spring 2014 with Portland’s Bureau of Planning and Sustainability. This innovative partnership, shepherded by the Institute for Sustainable Solutions, will link the city’s climate action to-do list with University experts who can take on the necessary research projects to advance the city’s progress on its goals. Topics to be covered in this research-driven relationship include Portland's local food economy, urban air quality, urban heat islands, and green infrastructure.
Every year, Portland State University is responsible for raising matching funds for the Miller Foundation challenge grant. In 2013-14, the University secured $13.5 million in sustainability-related support. The majority of that support came in the form federal funding with other sources—such as foundations, corporate gifts, and others—making up close to one-third of the matching funds.
The 2013-14 Institute for Sustainable Solutions budget was $3.4 million with the following category allocations:

**ENHANCING THE STUDENT EXPERIENCE: $1.1 MILLION**
Programs include curriculum development for sustainability education, the funding of graduate and post-graduate fellowships, internships, scholarships, travel funding, career counseling, and the Sustainability Leadership Center.

**EXPANDING FACULTY EXCELLENCE: $1.5 MILLION**
Included in this category is the support for faculty positions, curriculum development, and research in key areas of sustainability as well as ISS staff and operations expenditures. Examples of research support include grant matching funds, research stimulus awards, and targeted strategic investments.

**EXPANDING COMMUNITY ENGAGEMENT: $0.8 MILLION**
Includes funding of community programs such as the Cascadia Ecosystem Services Partnership and Impact Entrepreneurs, outreach to local, regional, and international partners, hosting community events related to sustainability, and ISS development and communications programs.
LOOKING AHEAD TO 2014-15

The Institute for Sustainable Solutions spent 2013-14 on new starts—programs, events, and partnerships—both on and off campus. The pace of our work is brisk, but our strategic focus is targeted. After seven years of funding from the James F. & Marion L. Miller Foundation, we are heartened to see a campus where sustainability is known and practiced by more than just a few. It is firmly grounded across the campus and is characterized by innovative and entrepreneurial efforts that are contributing measurably to a more sustainable campus and society.

In the coming year, we expect to see these innovations bear fruit. There is great potential for interdisciplinary work to support the region’s neighborhoods, solve cleantech challenges, bolster health equity, and uncover new pathways to achieving campus and city climate goals.

While University structures continue to evolve in ways that make interdisciplinary work challenging, ISS is providing leadership to find ways to continue our cross-campus work—including the development of certificate programs, support for a continuation of the interdisciplinary study of urban ecosystem services beyond the sunset of the IGERT, and conducting faculty focus groups to single out and address roadblocks to interdisciplinary partnerships. Partners in this effort to support interdisciplinary work include Research and Strategic Partnerships and the PSU Honors College, both of which promote and participate in programs of excellence across departments. ISS is also increasingly prioritizing the integration of diversity and equity with sustainability in a meaningful way. It is imperative that we make sure that sustainable innovations are justly realized and accessible to all of society—on campus and beyond.

One of ISS’s top priorities is to find ways to embed our work at PSU. How can we model transformative approaches to education, research, and community engagement that the University as a whole can embrace, replicate, and institutionalize? Every effort we engage in—whether as convener, innovator, or steward—is guided by our commitment to take a long-term view and to provide a strategic trajectory for the University to maintain and advance its role as a leader, innovator, and deeply engaged institution of higher education. Our investments in the Urban Sustainability Accelerator, Sustainable Neighborhoods Initiative, Sustainability Leadership Center, and other core programs all demonstrate how PSU can continue to break new ground in harnessing the assets of higher education to make the world a better place.