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Address by Wim Wiewel, President,
Portland State University – Portland, Oregon, USA

TITLE: Roles of the Urban University in Pursuit of Sustainability

ABSTRACT: Portland State University (PSU) faculty, students, and staff integrate sustainability into teaching, research, and campus projects, many of which are conducted in collaboration with business, community, and public entities. PSU President Wim Wiewel **will offer his observations on** how the "triple bottom line" approach to sustainability can inform this work, how to build collaborations locally and globally, and how to focus these efforts to attain the greatest results.

PRESENTATION:
Thank you for your invitation to speak here today. **[Unscripted remarks by Wim Wiewel, reflecting on first days of his Japan trip.]**

I would like to offer some observations on Portland State University's approach to sustainability.

I also want to talk about how an urban university such as Portland State can use its teaching, research, and community partnerships to find sustainable solutions to environmental, economic, and social challenges. And I will ask you to work with us, and to let us work with you, as together, in partnerships, we define these challenges and pursue a better future.

Let me begin with a brief introduction to Portland State University.

We are a public university located right in the heart of Portland, Oregon, which is a modest-sized city on the West Coast of the United States, three hours by car south of Seattle and ten hours north of San Francisco. Portland State University

offers more than 120 bachelor's, master's, and doctoral programs across a diverse range of disciplines. Our current enrollment is nearly 28,000 students.

We are a relatively young institution. Founded in 1946, Portland State University has evolved over time in ways that have both reflected and directed our community.

The Portland metropolitan region, which today has a population of 2.2 million, has earned a reputation for smart urban planning and land-use policies.
It's a place that has made conscious decisions to limit the expansion of its urban area, and to instead encourage greater density of development. It's a place that has opted for parks and mass transit rather than parking lots and freeways. Those choices are the result of partnerships between the city and my university, which has a strong and influential urban planning program and a mission to serve the needs of the region.

Since 2001, Portland State University also has made systematic efforts to integrate sustainability principles into its operations, campus planning, and its academic and research programs. These efforts have been a natural extension of our connections to the community, and of the scholarly interests of our students and faculty.

So, how do we define our approach to sustainability? At Portland State, our sustainability vision is "to be an internationally recognized university known for excellence in student learning, innovative research, and community engagement that simultaneously advance economic vitality, environmental health, and quality of life."

We approach sustainability from a "triple bottom line" perspective, balancing economic outcomes with environmental implications, and at the same time integrating issues of social equity. Each aspect is necessary. Each aspect exists within the context of the others: the environment, social equity, and the economy. I'd like to take a moment now to explore each of those areas further.

Arguably, the least understood aspect of sustainability is its **social component**.

In 2009, a group of faculty members at Portland State University published *Understanding the Social Dimension of Sustainability*, an anthology of writings by our faculty from many different disciplines. The book begins with this definition of the challenge.

> "At this moment, we humans are caught between the twin imperatives to raise the living standards of the world's poor, partially captured in the [United Nations] Millennium Development Goals, and to live within environmental limits, exemplified by the current concern over global warming. The challenge of sustainability is to limit the environmental harm created by human activity while reducing the deprivation and suffering resulting from poverty as well as excess." *(From the introduction to* Understanding the Social Dimension of Sustainability, *edited by Jesse Dillard, Veronica Dujon, and Mary C. King (Routledge, 2009)).*

The social component of sustainability deals with equitable access to opportunity, regardless of race, gender, income and other social factors that stratify our communities. By "opportunity" we refer to education, health outcomes, housing, justice, and other infrastructure necessary to the overall well-being of a society.

Most often, sustainability simply means protecting the **environment.**
You well know the list of environmental threats: global warming, the depletion of natural resources, the increased acidity of our oceans, threats to native species, the scarcity of clean water, and so on. Rather than a strict definition, I'll offer this poem, titled "Global Warming" by Jane Hirshfield:

> *[TRANSLATOR NOTE: "Cook" refers to "Captain James Cook"]*
>
> When his ship first came to Australia,
> Cook wrote, the natives
> Continued fishing, without looking up.
> Unable, it seems, to fear what was too large to comprehend.

Unlike those natives, you here, of course, <u>are</u> looking up.

Similarly, on October 24, 2009, Portland hosted some of the more than 5,000 events worldwide commemorating International Day of Climate Action. The goal of this day was to bring awareness to an imminent danger: rising carbon dioxide levels. Many of the world's leading climate scientists now say that 350 parts per million is the upper limit of safety; a level that the world has not seen since 1989. The current level of carbon dioxide in our atmosphere is 387 parts per million and climbing. At some point, perhaps 450 parts per million, we reach a point at which the damage becomes irrevocable.

I don't equate today's sustainability movement with environmentalism, but at the same time, it is not overstating the case to say that we cannot achieve sustainability without alleviating the environmental pressures now facing civilization.

So the social aspect of sustainability means taking care of the people, and the environmental aspect means taking care of everything else. What then is the role of the **economic** piece? Where does the necessity to generate collective wealth fit in light of these other priorities? After all, we cannot allow environmental and social equity concerns to strangle the economic viability of communities.

The problem is not with profit. The problem is profit at the expense of people and planet.

There is a passage by Paul Hawken from his 1993 book, *The Ecology of Commerce: A Declaration of Sustainability*, that captures this:

> "The language of commerce sounds specific, but in fact it is not explicit enough. If Native Hawaiians had 138 different ways to describe falling rain, we can assume that rain had a profound importance in their lives, so important that over many generations they learned to discern the different types of rainfall and then passed that knowledge on to their descendants. Business, on the other hand, only has one word for profit. The extraordinarily complex way in which a company ends up with a profit is reduced to a single concept, numerically neat and precise, but eliminating distinctions as to how the profit was made, whether people or places were exploited, resources depleted, communities enhanced, lives lost, or

whether the entire executive suite was in complete and utter turmoil requiring stress consultants and outplacement services for the victims. In other words, it does not discern whether the profit is one of quality, or mere quantity."

(Excerpt from The Ecology of Commerce by Paul Hawken)

Sustainability gives us a framework to move beyond a financial monoculture. Can individuals, businesses, and industry find profitability while honoring commitments to an environmental and social bottom line? Of course. As with any new endeavor, there is tremendous risk in trying to do things differently. But the old ways of doing business—the race to the bottom, producing goods as cheaply as possible while externalizing their true costs—cannot continue if we as a civilization are going to avert disasters of a greater order.

I recognize that each of us may have our own particular definition of sustainability. But at this point in time, the need for a precise, universal definition of sustainability pales in comparison to urgent demands requiring action. In that spirit, I would like to introduce you to work that Portland State University and our partners are engaging in to address these diverse yet connected spheres of sustainability.

In **social sustainability**, faculty in our College of Urban and Public Affairs have initiated the "Social Bottom Line" project, in an effort to bring tangible meaning and measurement to the field of real estate development and investment. In interviews with over 100 leaders from business, finance, labor, development, government and other sectors, we heard again and again that there is a need for a tool that helps assess the social component of real estate development and investment.

Working with community and industry volunteers, the group distilled five core areas that characterize socially responsible development:

- The project responds to and benefits the community;
- The project fosters healthy living;
- The project strengthens community fabric;

- The project contributes to a vibrant community economy; and,
- The project fairly distributes the burdens and benefits of growth.

Faculty and students are now working to apply a test version of this framework to actual development projects. Ultimately, the group hopes to provide a tool that can answer the question: Do these development investments create more livable, sustainable communities?

This is an example of how we work with our partners in the community to conduct research that addresses real problems and real challenges.
And it shows where a university can add value to public and private enterprises: by being the entity to measure and assess how well ideas perform in their execution.

I'm going to talk a little more about real estate, but now in the context of sustainability's environmental components.

In the United States, buildings are responsible for nearly 40 percent of all carbon emissions. In the city of Portland, we are earning an international reputation for designing and constructing energy efficient buildings with a reduced environmental impact. This "green building" movement has had an impact on Portland State University's physical campus, where all new buildings must meet at least the minimum standards as set by the United States Green Building Council.

Those standards are known as LEED: Leadership in Energy and Environmental Design.

The state of Oregon requires its public agencies, including the university system, to build its buildings to this standard. And we have: since 2003, we've added two housing facilities, an engineering building, greenhouses, a remodel of a 100-year-old former elementary school, and a new student recreation center, all of which have met the LEED standard. But even without a state mandate, our researchers have embraced the green building movement. In 2009 we established the Green Building Research Laboratory, which supports fundamental and applied research relevant to industry, while serving as a teaching resource for students.

A group of our mechanical engineering faculty have systematically analyzed every aspect of vegetative roofs, or “green roofs,” to understand which variables have the greatest impact on increasing a building’s energy efficiency, such as soil depth, the species of plants, air temperatures, humidity, and so on.

In a related project, these engineers are working with chemistry and biology professors, the City of Portland, an energy utility, and a solar panel manufacturer, to see how these “green roofs” might benefit from being installed with solar panels. The researchers are interested in whether shade provided by the solar panels might benefit green roof vegetation, which often suffers during hot, dry months. The shading may allow for varieties of plants that improve carbon sequestration. These plants may also help to cool down the solar panels, which lose efficiency as temperatures rise.

Demonstrating how environmentally friendly building practices can save energy, and save money, is an important contribution for our faculty to make. But we aren’t just limiting our outreach to the Portland community. This summer, a delegation of 19 engineers and academics from Iraq came to Portland to learn more about these green building practices. Portland State University professors were able to demonstrate the potential for technologies such as green roofs to have an impact in cities and climates halfway around the world.

And finally, to return to something I said a moment ago: buildings may account for nearly 40 percent of all carbon emissions in the United States. But these buildings have occupants, who require heating and cooling and electricity for lighting and computers. That’s why our researchers are also studying the behavior of people to better understand how they behave in these buildings, and how changing behavior can improve building performance.

Now let me give you an example of our work in economic sustainability.

One of the challenges of sustainability is to find a way of resolving tensions between business and the environment.

In our School of Business Administration, Professor Mellie Pullman teaches courses on supply and logistics. One area of her research examines how regional businesses have changed their practices in order to compete in a global economy while staying true to their own values.

Professor Pullman began working with a group of cattle ranchers, most of whom live several hours east of Portland, in a region that is very different culturally and geographically. This part of Oregon has been cattle country for the past 150 years. But while the American West has long been associated with cattle and beef production, the globalization of this industry, and a transition to a factory-farming model, have made competition fierce for these ranchers.

At some point, these ranchers decided that they were going to change the terms of business. They chose to opt out of a business model that reinforced inhumane practices. These ranchers decided that their personal values and beliefs—treating animals humanely, allowing cattle to roam and graze on grasslands—had a value-added benefit.

Today, the beef produced by these ranchers can be found on menus and in groceries and kitchens throughout Oregon and the Pacific Northwest. There is a connection, between the ranchers and the urban markets where their product is sold. And Professor Mellie Pullman has helped build these connections, between rural and urban residents, between producer and consumer.

There is a business model here that works—that is sustainable. And what's important is that this model is being shared with business students in the classroom. That means that the next generation of business leaders will enter the world of commerce with sustainability as a viable pathway, rather than something relegated to the fringes.

It's this commitment to integrating sustainability in teaching and research that led to our Master of Business Administration degree program being ranked twenty-fifth in the world by "Beyond Grey Pinstripes" in 2009. Our program was ranked alongside programs at Yale University, Stanford University, and others for its leadership in integrating social, environmental and ethical issues into the curriculum.

Another example of the economic component of sustainability can be seen in the successful efforts by businesses and government to expand the Portland region's cluster of clean technology and sustainable industry. With a growing international presence through expertise in green building and infrastructure, Portland is creating good jobs and driving innovation while staking a claim as a leader in the global green economy.

We have made great efforts to integrate sustainability into the research, education, and outreach efforts at Portland State University. Rather than relegating sustainability to a single academic department, we are working to disseminate its principles throughout the undergraduate curriculum. Our goal is for students to graduate with a degree and with a basic understanding of what sustainability means, and how it can be applied, no matter what their field of study.

The university creates a space for ideas. It also creates a space for implementing those ideas—an urban campus, located in the heart of downtown Portland, comprising nearly 50 acres (20 hectares).

We can study best practices in urban design, and we can talk about ways to change behavior. But we are a community within a community: over 30,000 students, faculty, and staff members. And we recognize our own responsibility to model (and measure) ways of reducing our own impact on the environment. This means discouraging private automobiles, and indeed 65% of our faculty, students and staff commute by public transit, bike, or on foot. We buy energy only from renewable sources.

And Portland State University is one of several partners, including the city of Portland, currently planning to create an "EcoDistrict" around the university. The basic idea is that we begin to take a neighborhood-scale approach to implementing sustainability. That means constructing and retrofitting existing buildings to make them more energy efficient. It also means looking at energy creation and distribution from the standpoint of powering several city blocks at a time. It means looking at reducing water runoff and waste, and becoming carbon-neutral.

At the heart of this EcoDistrict will be a new building, the Oregon Sustainability Center, which when completed in 2012 will be the world's first high-rise building to meet the "Living Building Challenge": a building that produces all its energy on site, that captures, cleans and reuses water, and that creates no carbon footprint. The building will house researchers, government, business, and not-for-profit groups all dedicated to various aspects of sustainability. It will be an international showcase of what is possible. And it will do something that other green buildings have not: require its occupants to participate as energy-conscious residents.

Taking a sustainable approach to living is challenging enough for a single entity or property owner. Yet even as we consider our own actions, we must push forward to begin to make real changes at the neighborhood and community level.

That's why Portland State University is among the more than 650 institutions who've signed on to the American College & University Presidents' Climate Commitment. By signing the commitment, we agree to a number of actions, including the creation of a plan that leads to eventually eliminating all our greenhouse gas emissions. This is a voluntary action. In the short term, it's an expensive action. And yet, by taking the long-view of this commitment, we're helping redirect billions of dollars to renewable energy efforts, creating new jobs, and pushing our communities to take similar steps.

The City of Portland needs no further encouragement. In October of this year, the city approved a new climate action plan that moves to reduce emissions by eighty percent of its 1990 levels by 2050. With prior efforts already underway, our region has begun to turn the tide, with current emissions now just below 1990 levels. In fact, the region intends to hit the reduction targets established in the Kyoto Protocol. While the United States has never ratified the treaty, our own region has nevertheless accepted this challenge.

This seems to me to be a peculiarly American approach: tackling problems with a grassroots spirit of volunteerism and service, rather than a top-down mandate. It takes the action and persistence of individuals to provoke legislated solutions.

Just over a year ago, Portland State University received a ten-year, $25 million (230 million yen per year) challenge grant from the James F. and Marion L.

Miller Foundation. We chose to allocate this funding in support of our sustainability initiatives.

One of the first things we did was to put together a request for proposals from our faculty. We asked them what sustainability projects they envisioned, and offered to fund their work. We received 99 proposals, most of which involved multiple faculty members, and in the end we funded 21, for a total of $1.7 million [~150 million yen]. Our goal was to provide catalytic investment in key areas, such as green building research, while also supporting curriculum development and laying the groundwork for new partnerships.

Our funding supported a lecture series on the connection between sustainability and the humanities. We hosted academic and industry seminars on developing a "smart" electrical grid to address the antiquated power transmission infrastructure in the United States. We funded a research project that sent professors and students into communities to assess the economic, social, and environmental impacts of dam removal.

This investment has allowed us to hire new faculty, support more research, and create more opportunities for students interested in incorporating sustainability into campus life. But it has also amplified a running debate: How do we best allocate scarce resources in order to provide for the outcome of greatest value? Where do we begin?

As a president, I am more likely to be judged by the number of students who enroll and eventually graduate than how well I managed the university's carbon emissions. So how do we prioritize?

For me, establishing an institution's priorities means first establishing a rapport with colleagues and partners inside and outside the university. Where are the common goals? What are the unique strengths that each brings? By comprehending the common problems and goals that the university shares with its partners, it becomes easier to identify the pieces necessary to craft a solution.

Later this week, I will be joining the Mayor of Portland and representatives from our electric company in meetings with two of Japan's leading auto manufacturers

to discuss implementation of electric vehicles in our region. Portland, Oregon, already has a higher per-capita ownership of the Toyota Prius Hybrid than any other city in the United States. Portland has the highest percentage of bicycle commuters in the U.S., and a top-rated transit system that combines buses, light rail trains and streetcars.

Those attributes have helped to convince Nissan to send 1,000 of its new "Leaf" line of electric cars to Oregon beginning a year from now. As a region, we want to see other automakers follow suit.

The University also has worked in conjunction with the city to develop mutually beneficial long-term economic development strategies, encouraging us to move toward a more sustainable society as we develop programs and partnerships for future workforce needs.

So to play a role in the electrification of our transportation infrastructure, it's important for us to realize our strengths. We have broad and deep expertise in transportation research and planning. We are well versed in integrating land-use planning and policy with the built environment. We have strong programs in Japanese studies and international management. We work well with others—our faculty seek partnerships, our students expect to find these industry collaborations as a part of course work.

The volunteer spirit that has driven so much of our work, by faculty, students, and staff, has been the motivating factor behind our initial push toward sustainability. It calls to mind images of a traditional barn-raising, where members of a community come together at a farm and in a single day, help the farmer build a new barn. It calls forth the best elements of the American spirit.

This past spring, a group of students at Portland State offered to install a permaculture garden at my house, a residence provided to the president by the university. On a Saturday morning, this group came out, and over the course of the day, removed sod, dug the dirt, and put in plants and seeds to create a vegetable garden. My family worked right alongside them, and at the end of the day, we had a beautiful garden. What's more, we had new relationships with a

group that had previously been strangers with seemingly nothing more in common than a university.

It's along those same lines that I believe efforts like forming a local climate action plan can support broader climate action efforts—to think globally and act locally. Changing out our light bulbs won't save the polar bears. But if we, as a University, can reduce our greenhouse gas emissions, then we lend support to climate action efforts by our city. Our city's efforts support broader initiatives led by the state of Oregon, which in turn support efforts by a coalition of states throughout the western United States. And at some point, perhaps under the Obama administration, these efforts may be enough to generate a climate action mandate at the national and international levels.

I think that's where we provide a value beyond traditional delivery of education. What we do, collectively as universities, happens in the context of our communities, whether it's educating future leaders, creating new technologies, or showcasing best practices in sustainability. Those efforts have a ripple effect that extends well beyond the borders of our own campus, traversing borders of state, nation, and continent.

So, the question is not,Where do we begin? We have already begun. The task now at hand is to take these efforts to our partners – our neighbors, and communities and sister academic institutions – and offer them as compelling questions for us to explore together, as potential solutions, and as pathways to our common future.

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