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1. Executive Summary

After previous ISCN meetings in Europe and Asia, the 2012 Symposium at the University of Oregon represented the first time that the annual ISCN meeting was held in North America. It was also the first time that the hosts for the next two ISCN conferences were determined well in advance, allowing for an open discussion about how subsequent meetings could address the most pressing issues surrounding campus sustainability.

Since the launch of the ISCN and its first conference in 2007, campus sustainability programs have become significantly more common and well-established around the world. While not every university has a dedicated sustainability office yet, we continue to see more green teams, climate action plans, and initiatives to embed sustainability in the curriculum. That begs the question, what will be next in campus sustainability after these foundations have been laid?

Finding an answer to a “crystal ball” question like this is challenging. But, discussions in the working groups and at the plenary sessions of the Symposium offered some glimpses into issues that will likely be relevant in coming years. These include how universities can overcome challenges presented by the realization that green building certifications don’t automatically ensure meaningful sustainability performance in buildings; that strategic organizational objectives like international exchange can be balanced with sustainability goals such as reducing greenhouse gas emissions from travel; and that the need for experiential learning in projects with practitioners is not always easily reconciled with expectations of academic rigor. It was also noted that higher education sustainability programs can benefit from initiatives in organizational change management, behavioral psychology, or social marketing that are found more often in corporate than in academic settings.

This points us to another interesting topic for the future: the relationship between sustainability programs at corporations and institutions. While ratings, rankings, and reporting frameworks on campus sustainability grow quickly and are becoming increasingly consolidated, the private sector has developed similar instruments without much exchange or mutual learning between the two spheres. Valuable insights could be gained if the gaps between sustainability initiatives in higher education and in the private sector were bridged, and the ISCN is well positioned to contribute here. This could involve the further development of existing platforms, like the Global Reporting Initiative (GRI) framework for sustainability performance disclosures, to make them more suitable for experience exchange of both academic and corporate organizations.

The upcoming ISCN conferences, at the National University of Singapore in 2013 and at Harvard University in 2014 present great opportunities to explore these topics further. We are currently preparing the program for those meetings, and thinking about how the ISCN-GULF Charter reports and case study sharing on the ISCN website can be used to sharpen the focus of these meetings. I want to welcome you to contribute to these discussions, and to participate in what promises to be very exciting meetings.

Bernd Kasemir,
ISCN Program Manager
## 2. Symposium Program

<table>
<thead>
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<th>Time</th>
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<tr>
<td><strong>Tuesday, June 19, 2012</strong></td>
<td><strong>Registration</strong></td>
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<tr>
<td>11:00 am - 1:30 pm</td>
<td>Registration</td>
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<td>12:30 pm – 1:30 pm</td>
<td>Lunch</td>
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<td>1:30 pm – 1:45 pm</td>
<td>Opening Ceremony:</td>
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<td></td>
<td>• Welcome to the University of Oregon: Jamie Moffitt, Vice President for Finance and Administration and CFO, and Steve Mital, Sustainability Director</td>
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<td>• Welcome from the City of Eugene: Kitty Piercy, Mayor</td>
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<td>• Welcome from the ISCN: Bernd Kasemir, ISCN Program Manager</td>
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<tr>
<td>1:45 pm – 2:45 pm</td>
<td>Opening Keynote:</td>
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<td>David Orr, Oberlin College (Building Resilience in a Black Swan World)</td>
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<td>3:00 pm – 5:30 pm</td>
<td>Working Group Sessions:</td>
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<td></td>
<td><strong>Working Group 1: Buildings and their Sustainability Performance</strong></td>
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<td></td>
<td>Moderated by WG 1 Co-chair: Ying Hua, Cornell University</td>
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<td>Input by: Daniel Roth, Cornell University</td>
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<td><strong>Working Group 2: Campus-wide Planning and Target Setting</strong></td>
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<td></td>
<td>Moderated by Julie Newman, Yale University</td>
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<td>Input by: Takao Ozasa, Hokkaido University</td>
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<td><strong>Working Group 3: Integration of Research, Teaching, and Facilities</strong></td>
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<td></td>
<td>Moderated by WG 3 Co-chair: Ariane König, University of Luxembourg</td>
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<td>Input by: Yves Corminboef, University of Art and Design Geneva</td>
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<td>5:45 pm – 8:00 pm</td>
<td>Evening Reception &amp; Dinner at Falling Sky Brewery</td>
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<td>Remarks by Judy Walton, AASHE</td>
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<td>Time</td>
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| 8:15 am – 8:30 am | Plenary Session Introduction  
  Bernd Kasemir, ISCN Program Manager |
| 8:30 am - 9:30 am | Plenary 1: Partnerships with neighbors/cities/regions  
  Speakers:  
  Eugenio Morello, Politecnico di Milano, Italy  
  Dale Mikkelsen, UniverCity, British Columbia, Canada (UniverCity: Progressing Sustainability at the Community Scale) |
| 9:30 am - 10:00 am | Coffee Break |
| 10:00 am - 11:00 am | Plenary 2: Motivating action through ratings, rankings and reporting  
  Speakers:  
  Mark Orlowski, Sustainable Endowments Institute, USA (The Evolution of Campus Sustainability Data Collection and Evaluations)  
  Riri Fitri Sari GreenMetrics World Rankings, Indonesia (The Road to Sustainability Excellence: Lesson learned from UI GreenMetric Ranking of World Universities)  
  Aurore Nembrini, EPFL, Switzerland (Sustainability Reporting for Academic Institutions According to GRI: The case of EPFL) |
| 11:00 am - 11:30 am | Campus mini tour and walk to Autzen Stadium |
| 11:30 am – 12:00 pm | Keynote Speaker:  
  Jason McLennan, International Living Future Institute (Living Buildings and a Living Campus) |
| 12:00 pm – 1:00 pm | Lunch |
| 1:00 pm – 1:30 pm | Local case study: Getting to zero waste at large scale events – a business model  
  Speakers:  
  Ethan Nelson, City of Eugene |
| 1:30 pm – 2:00 pm | Walk back to main Symposium location |
| 2:00 pm – 3:15 pm | Plenary 3: Foundations for Building partnerships  
  Speakers:  
  Leith Sharp, Sustainability Futures Academy, Austria (Building a Change Capable University for the 21st Century)  
  Mark Alfano, University of Notre Dame, USA (Natural Artifice: Inducing Eco-Friendly Behavior)  
  Eric Siegel, Prediction Impact, Inc., USA (Predictive Analytics to Influence and Persuade Staff and Students) |
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<th>Time</th>
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<tr>
<td>3:30 pm - 5:30 pm</td>
<td><strong>Working Group Sessions:</strong></td>
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<td><strong>Working Group 1:</strong></td>
<td>Moderated by WG1 Co-chair: Bart Meehan, National University of Australia</td>
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<td></td>
<td>Input by: Urs Elber, Novatlantis</td>
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<td><strong>Working Group 2:</strong></td>
<td>Moderated by Bernd Kasemir, ISCN Program Manager</td>
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<td>Input by: Dave Hassenzahl, Chatham University</td>
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<td><strong>Working Group 3:</strong></td>
<td>Moderated by WG 3 Co-chair: Nancy Budwig, Clark University</td>
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<td>Input by: Robert Liberty and Bob Choquette, Sustainable Cities Initiative, and Eddi Omrcen, University of Gothenburg</td>
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<td>5:45 pm</td>
<td>Bus departs for winery</td>
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<td>6:15 pm - 8:30 pm</td>
<td>Dinner at King Estate Winery with ISCN Sustainable Campus Excellence Award Ceremony</td>
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<td>Presented by Matthew Gardner, Sustainerv/ISCN Secretariat</td>
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<td>8:30 pm – 11:55 pm</td>
<td>Bar opens, DJ and Dancing</td>
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| 8:30 am - 9:00 am | Key findings and lessons learned from the Working Groups  
Led by Working Group Co-Chairs  
*Full report to be developed 2-3 weeks following the symposium* |
| 9:00 am – 10:00 am | Campus sustainability in China and India - a road map for the future  
*Speakers:*  
Kai Liu, Huazhong University of Technology, China (*Campus planning in China: The influence of Sustainability*)  
G Poyyamoli, Pondicherry University, India (*A critical review of campus sustainability in India- a road map for the future*) |
| 10:00 am – 10:30 am | Coffee Break |
| 10:30 am – 11:15 am | Priorities for 2013 and 2014 ISCN Meetings  
*Amy Ho and Joseph Mullinix, National University of Singapore  
Heather Henriksen and John Spengler, Harvard University, USA*  
Interactive plenary to gather member input on 2012 and 2013 ISCN conferences |
| 11:15 am - 12:00 pm | Next Steps for the ISCN  
*Bernd Kasemir, ISCN Program Manager*  
Interactive plenary to discuss the needs of ISCN-GULF Charter Institutions and set the future priorities for ISCN |
| 12:00 pm - 1:30 pm | Closing Ceremony and Buffet Lunch  
*Steve Mital, University of Oregon  
Bernd Kasemir, ISCN Program Manager* |
3. Welcome and Keynotes

3.1 Opening Ceremony

On Tuesday afternoon Steve Mital, Sustainability Director, University of Oregon greeted over 100 participants of the 2012 ISCN Symposium. Joining Mital, Jamie Moffit, Vice President for Finance and Administration and Chief Financial Officer announced that their President had signed the ISCN-GULF Sustainable Campus Charter, making the University of Oregon the newest ISCN Member. As an institution with deep roots in sustainability, the University of Oregon served as a most appropriate venue for the meeting.

Reflecting on the uniquely global experience that the ISCN offers, Mital described the diversity of geographical regions represented by this year’s attendees, as shown by the map below:

![Map of participants' countries](image)

This year, participants hailed from 21 countries across six continents.

Kitty Piercy, Mayor of Eugene graciously welcomed visitors to the city. She described the long standing partnership between the City and the University of Oregon and the significant contributions the University’s students have made to the community over the years. Sustainability is a key aspect of this partnership, as both the University and the City consider sustainability a critical component of their operations. The City of Eugene uses triple bottom line accounting to help guide its decision-making. City departments are expected to reduce environmental impacts and pay wages at a level that makes jobs desirable. With the support of various green programs, the City has also developed a Climate Action Plan used for transportation and land use decisions. These aspects of a sustainable community strategy have been hugely influential and recognized by National Geographic, which named Eugene the “Greenest City,” and Entrepreneur Magazine, which celebrated Eugene for its “green consciousness.”
Bernd Kasemir, ISCN Program Manager thanked the University of Oregon and the City of Eugene for their generous hospitality, and provided an overview of the previous ISCN events as well as a glimpse into the upcoming meetings that will be hosted by the National University of Singapore (2013) and Harvard University (2014). As many of the attendees were new to the ISCN, Kasemir offered a brief introduction to the overall ISCN organization, covering the four program areas:

1) Conferences and Symposia
2) Campus Sustainability Excellence Awards
3) Working Groups
4) ISCN-GULF Sustainable Campus Charter

Together, these elements provide a platform for fruitful knowledge exchange and promotion of sustainable campus strategies on a global scale.

3.2 Keynotes

“Building Resilience in a Black Swan World”
Dr. David Orr, Oberlin College

In the opening keynote on Tuesday, David Orr presented a sense of urgency regarding the state of the climate and what must be done in light of the changes we will face. He began with some insight into the title of his presentation explaining that “black swan” referred to the theory developed by the economist, Nassim Nicholas Taleb, which describes events that unexpectedly occur but for which the observer can uncover a logical explanation in the aftermath. Orr used this theory to describe how climate change is already upon us and instead of waiting to be surprised by its effects, society should be proactively seeking ways to secure the future.

With a breadth of experience focused on shifting society toward a sustainable future, Orr presented the case study of a multi-stakeholder project he led called the Oberlin Project. Resonating with the Symposium theme, this project broke down silos by building tight partnerships across the college and the local community. The main objective of the project was to design a more robust community focusing on resilience, sustainability, and lifting people out of poverty through a bottom-up approach. One of the iconic symbols of the project was the design of a green building for Oberlin College. Orr led this charge starting in 1996 and in 2000, the Adam Joseph Lewis Center for Environmental Studies was officially completed. Since the building’s construction, it has received a host of awards and is considered one of the most influential green buildings on a college campus outfitted with a number of sophisticated sustainable design elements including an onsite wastewater treatment system and 100% independent energy supply through photovoltaics.

Reaching beyond the Oberlin College campus, they identified readily available opportunities within a given radius and projects were systematically selected to build a systems-theory model, in which the parts reinforce the resilience and prosperity of the whole. Acting on these opportunities where the greatest impact could be realized resulted in a number of initiatives contributing to the overarching mission of the Project. Some of these initiatives included investing in a 13-acre “Green Arts District” through which a local museum was renovated and the immediate neighborhood further developed to make the area more enticing for community use. There has also been a push to create new business ventures and develop relationships between local land owners and local businesses to strengthen the
local economy. A central theme of the development is encouraging a shift from fossil fuel energy systems to practices focused on energy conservation and renewable energy, and establishing an educational alliance between the college and other schools in the area. Today, the Project is managed by 11 City teams tasked with sustainability-specific activities to keep the momentum rolling. A key lesson learned was the need to reach out to members of society who may not have a sophisticated understanding of climate change and sustainability issues, by engaging them through the arts, community projects and sciences. This and other lessons learned throughout the implementation of the Oberlin Project have been instrumental in replicating the model in other areas of the country.

To close, Orr referred to the saying, “always hold hands when crossing the street” from Robert Fulghum’s book, *All I Really Need to Know I Learned in Kindergarten*. This familiar phrase teaches children how to safely get from one side of the street to the other, but it can also be used as a direct analogy to what sustainability means to society today: Through collaboration, we can move forward together and avoid harm.

**Words from AASHE**

**Judy Walton, Association for the Advancement of Sustainability in Higher Education (AASHE)**

As the symposium participants convened for dinner, Judy Walton from AASHE introduced herself and welcomed the group to her home state of Oregon. As the Founding Executive Director and active Chief Publications Officer of AASHE, Walton shared some background information about the organization. Highly regarded in North America as a leading organization in sustainable campus development, one of AASHE’s hallmark programs is Sustainability Tracking Assessment and Rating System (STARS), its platform for institutions to collect diverse sustainability performance data and gain recognition for their sustainability initiatives. AASHE’s roots are grounded in the success of a North American conference on sustainability in higher education held in 2004. The residing interest following this conference carried enough momentum to call for the formation of a formal group of sustainability practitioners within colleges and universities – thus, AASHE was born. Membership in AASHE is currently available for institutions in the U.S., Canada, and Mexico. Benefits range from discounts for use of STARS, to access to resources specifically prepared for sustainability practitioners in higher education. Excited to see so many sustainability leaders gathered together to cover topics fundamental to AASHE as well as the ISCN, Walton gave her accolades to the group for their participation at the Symposium. Recognizing the great deal of insight Symposium participants collectively possessed, Walton strongly encouraged everyone to engage in experience-sharing discussions.
“Living Buildings and a Living Campus”
Jason McLennan, International Living Future Institute

In his lunch keynote on Wednesday, Jason MacLennan gave an inspirational presentation on "living buildings." As the CEO of the International Living Future Institute and founder of the Living Building Challenge, MacLennan is an expert in green and living buildings. Buildings certified as “Living Buildings” are those structures that have addressed all the sustainable building aspects or, “imperatives,” outlined by the Living Building Challenge Council, in their design and have met all of the performance goals for the first twelve months. The 20 imperatives for living building designs fall into the following performance areas: site, water, energy, health, materials, equity and beauty.

MacLennan asked the group to open their minds—looking beyond current practice and consider what is possible. The Living Building Challenge is a vehicle for such a shift in perception, by promoting building designs focused on attributes which contribute positively to the environment, rather than having only incrementally "less negative" impacts. Living buildings function as an icon for what is currently possible and what has to be done given the pressing concerns of climate change.

Living building designs can be applied both in retrofit projects and new construction. However, one of the major challenges in new construction projects is the lack of information on future inhabitants of the building, which makes it difficult to design for specific user needs (a core aspect of sustainable design).

MacLennan went on to discuss a major focus of his projects which is to educate and engage the greater public about living buildings. To demonstrate this, he talked about a time when he visited one of his living building projects, which happened to be on a campus, for the first time since the building was open for occupation. MacLennan was scheduled to meet with the building operator to review the building’s performance. Arriving early, he struck up a conversation with a student, who, not knowing MacLennan was one of the designers, offered him a tour of the building. She was able to explain in great detail the major green attributes of the building and demonstrate the functionality of the building’s operations. MacLennan described this experience as a perfect example of how architecture can be used to illustrate the concepts of ecological balance. The opportunity to educate students about green building designs and operations makes university campuses an ideal location for living buildings.
4. Plenary Sessions

4.1 Plenary 1: Partnerships with Neighbors, Cities, & Regions

ISCN Program Manager, Kasemir introduced the first plenary session focused on real world examples of campus / regional partnerships for sustainability.

Eugenio Morello, Assistant Professor from Politecnico di Milano (POLIMI) opened the discussion by providing an overview of his work at Citta Studi Campus Sostenible, a project at POLIMI using the campus as a model for the city of Milan to enhance the quality of life and become more sustainable. This project started with a grassroots approach, depending on multi-stakeholder engagement to move it forward. One of the main achievements was establishing internal partnerships between students, faculty and technical and administrative departments. Another major component was developing external partnerships with the City Council, municipal departments, and local industries. Bridging internal and external stakeholders, the project shares its progress with the community by acting as a “living lab” and making project developments available online (Citta Studi Campus Sostenible). This structure has been helpful in engaging people outside the academic community and encouraging their participation.

Morello went on to highlight the importance that the ISCN has provided to POLIMI and the Citta Studi Campus Sostenible project. Signing the ISCN Charter helped POLIMI establish concrete metrics that were integrated into the university’s first ISCN Charter Report. This step also contributed to the planning for the future of the project and getting the support to launch a new website over the summer.

Building on the idea of launching a multi-stakeholder sustainability project, Dale Mikkelsen, Director of the Simon Fraser University Community Trust (SFU Trust), discussed his work on their "UniverCity" project. The objective of the project was to promote a more livable high density community amidst urban sprawl while preserving the local ecology and biodiversity. The Trust’s role was to act as a developer responsible for building a model sustainable community on land adjacent to the campus, while providing dividends for the University’s endowment for teaching and research. One major aspect of the project was to carefully design new infrastructure. To do this, they focused on performance-based goals for the building, rather than a design standard like the U.S. Green Building Council’s LEED (Leadership in Energy and Environmental Design) rating system. By choosing to follow performance rather than prescriptive design standards, architects could focus on...
incorporating building elements that were most relevant to the region. For instance, given its location at the top of a watershed, water re-use within the building was less important than the on-site management of water return to natural systems to feed the watershed below so the designers focused on rainwater capture and infiltration with no connection to standard municipal storm sewers. The community also benefitted from the development of a full green building ordinance and detailed design guidelines. In addition to environmental considerations, the Trust was also mindful of accommodating diverse economic markets and developed a fair financing structure to make new residences available to renters and middle and high-end buyers.

Now that the UniverCity project is underway, more than 4,500 homes have been constructed on 65 hectares, and the success of integrating the University campus and the community can be seen through the continual exchange between the two groups. An iconic example of the project’s success is a daycare facility constructed in the heart of the community, which was built using the rigorous Living Building Challenge guidelines. This facility serves the dual purpose of being a model green building as well as an educational opportunity for younger generations to understand passive building designs. To close, Mikkelsen summed up the project’s achievements in terms of carbon: While Vancouver’s annual greenhouse gas (GHG) emissions are measured at 4.6 tonnes per capita, UniverCity’s GHG annual emissions are more than 20% lower, at 3.5 tonnes per capita.

4.2 Plenary 2: Motivating Action Through Ratings, Rankings and Reporting

The second plenary session shifted the conversation to the evolving subject of external ranking and reporting schemes and how they can be employed for the development of campus sustainability programs. This is a popular and widely-debated discussion topic across higher education, and the speakers offered their thoughts about these status-drivers.

Recognizing the momentum that can be derived from measuring progress, Dr. Riri Fitri Sari, Professor at the University of Indonesia, discussed her project developing the GreenMetrics World Rankings. Launched in 2010, this program was intended to encourage universities across the globe to adopt their own metrics-driven initiatives and provide a structure for measuring sustainability efforts in both developed and developing countries. The response was encouraging with 178 universities across 42 countries participating. Sari also made the point that metrics can help universities establish themselves as role models. Many universities struggle with setting sustainability goals and collecting relevant data, but the more universities participate in these initiatives, the better opportunities there are for sharing best practices. This, according to Sari, is the greatest value arising from metric-driven rankings.

Mark Orlowski, Founder of the Sustainable Endowments Institute developed the College Sustainability Report Card, an initiative which grades U.S. universities based on the performance of their sustainability programs. Its online database stores the results of the universities’ report cards, making the sustainability metrics readily available to the public.

In an evaluation of over 300 U.S. and Canadian universities, a powerful story about the evolution of sustainability at higher education institutions and the importance of data to track these trends has emerged. Report Card surveys have shown dramatic increases on 52 green indicators since the
publication of the first edition in 2007. For example, the percentages of schools that now have the following programs are:

- 64% - Commitment to carbon emissions reduction (23% in 2006)
- 70% - Campus farm or garden (9% in 2006)
- 75% - Trayless dining (0% in 2006)
- 79% - Green building policy (22% in 2006)
- 95% - Sustainability committee (40% in 2006)

As rankings and ratings have proliferated in recent years, Orlowski described a recent collaboration between the Sustainable Endowments Institute, Sierra Club Magazine, the Princeton Review, and AASHE to launch a single sustainability data collector, and goals to exchange resources. The data collector is designed to reduce survey fatigue by means of a streamlining the data collection and reporting process.

Next, Aurore Nembrini, Sustainability Manager at the Swiss Federal Institute of Technology Lausanne (EPFL), shared her experience with sustainability reporting from the university perspective. Motivated by friendly competition, namely the release of a combined sustainability report following both the ISCN Charter and Global Reporting Initiative (GRI) guidelines by its sister university ETH Zurich, EPFL decided to also develop a combined sustainability report. EPFL’s commitment to sustainability was first established through the ISCN Charter, and its Charter report last year was their first public disclosure of institute-wide sustainability performance. Building from that experience, EPFL went through a more in-depth process to develop its combined ISCN Charter and GRI report.

The first step in producing the combined report was a workshop for key stakeholders from within the University, who had a firm understanding of campus-wide programs and the University’s interactions with external stakeholders. Because the GRI framework covers a wide array of topics, a number of which are more applicable to corporations than universities, it was important to carefully identify which indicators were the most relevant or “material” to the University's internal and external stakeholders. The product of this workshop was a list of GRI-specific indicators deemed important and relevant for incorporating into the report. The workshop confirmed the critical role of having a senior level sustainability officer engaging other staff members in the process. Nembrini also commented on the lack of sector-specific GRI guidelines for universities. For this reason, the ISCN Charter guidelines were helpful to supplement the GRI content with elements specific to campus sustainability. The final report received an official confirmation by GRI that it meets its sustainability reporting requirements at Application Level B. The release of the report on EPFL’s website, which “put sustainability on the institutional map,” stands as a testament to the University’s commitment to sustainability and supports
its dialogues with global stakeholders, including private sector partners that also use the GRI guidelines for their sustainability disclosures.

4.3 Plenary 3: Foundations for Building Partnerships

Following lunch on Wednesday, Mital introduced the third plenary session, a discussion of tools and techniques to support sustainability practitioners in developing successful partnerships and initiatives.

Leith Sharp, Chair of the Sustainability Futures Academy opened with an overview of her most recent work fostering change-leadership among sustainability directors, through an examination of mindsets and the current state of the field. To do this, she circulated a survey to sustainability practitioners, and the results (188 responses) revealed the harsh truth about sustainability leadership roles. Common feedback suggested that sustainability directors felt confined by hierarchical structures and received little to no support from their respective administration. These conditions make it extremely difficult to have a significant positive impact across an institution as a whole. Respondents suggested that there must be executive support and leadership to move ahead with a sustainability program, and that the most rewarding aspects of their positions were the creative element and social dynamics.

Collectively, the group understood that there needs to be a shift in how sustainability is perceived on campuses. Specifically, we must embrace a more deliberate, transdisciplinary approach including a co-creation of curriculum and research. To accomplish this, universities need a skilled change-management team, led by energized sustainability leaders who possess both emotional and social intelligence.

Following Sharp, Mark Alfano, Distinguished Fellow at the University of Notre Dame moved the discussion slightly from the perceptions among sustainability directors to a more theoretical, psychological assessment of human behavior as it relates to motivating sustainable choices. Alfano researches the ability to change an individual’s behavior by subconsciously exposing him/her to ideas or influences. He presented three concepts:

1) **Availability:** The idea that if you make a particular topic available more frequently, the individual will be more apt to consider its meaning. This method can be effective for those individuals who find it difficult to make a decision between different options.

2) **Social information/proof:** This occurs when an individual observes another person’s behavior and uses it as a guide. In situations where a large group selects even a clearly unethical or incorrect option, the individual feels compelled to conform to the group’s collective judgment. It could also be that an individual conforms to a certain choice or behavior because enough people expect a particular behavior.

3) **Virtue Labeling:** This is a scenario where a person is described as having a certain set of characteristics or virtues (even if it isn’t true) and then feels obliged to adopt the trait or act in alignment with the virtue.

Considering how individuals act according to external influences can be a helpful tool when developing behavior change campaigns. As Sharp discovered through her survey to campus sustainability leaders, there is a common feeling that they are lacking support across the campus. Therefore, the psychological attributes covered by Alfano provided valuable insight as to how sustainability directors could generate interest among faculty, staff and students, using subtle cues and changes in language.
Eric Siegel, President of Prediction Impact, Inc. and Founding Chair of Predictive Analytics World expanded on these concepts from a mathematical and marketing perspective. Siegel is an expert in predictive analytics, a process that uses data (such as marketing data, including consumer demographics, buying habits, etc.) to understand consumer behavior and identify the most likely prospects for sales. This includes the ability to differentiate where communications can strengthen desired behavior, and where people contacted on behalf of a company or a cause react negatively to receiving certain messages. Though this applies mostly to online marketing, it could be adapted to sustainability programs seeking ways to optimize their outreach initiatives. Before determining where to influence behavior change, Siegel noted the crucial importance of collecting meaningful data and preparing it properly for analysis. From here, statistical analyses may be run to estimate the likelihood that a given message will result in the desired outcome. For instance, this kind of model is currently used to determine the likelihood of an individual changing their buying behavior as a result of being contacted with certain marketing materials. Predictive analytics can be an important tool for optimizing behavior change initiatives. Intrigued by the various approaches presented, participants sparked a lively conversation about the difficulties in data collection, and the ethics of modifying behaviors with certain kinds of content, such as sensationalistic content. It was suggested that student interns could assist in data collection to reduce the burden on sustainability staff.

4.4 Campus Sustainability in China and India - a Roadmap for the Future

Wrapping up the plenary sessions, Kai Liu, Visiting Scholar at MIT, discussed his experience working on redesign efforts at Huazhong University of Technology (HUST) in China. Since 1997, there has been significant growth in China’s education system. To accommodate the growth in college enrollment, HUST needed to expand its campus, and used the opportunity to incorporate sustainable design features including a focus on saving energy, respecting the environment, designing versatile buildings that are adaptable to a changing climate and accommodating social and cultural needs of the local community and campus inhabitants. Liu also emphasized the theme of partnership within the HUST sustainable campus project by describing the sharing of resources between the city and University. On the campus itself, there is also a direct connection with the ecosystem through the support of agricultural and livestock management onsite.

G. Poyyamoli, Associate Professor at Pondichery University, described his experiences in India where there has also been a significant uptick in the popularity of higher education over the last two decades. This trend of more students attending colleges and universities has put increasing pressure on the campus resources and nearby ecosystems. In a country with a deep cultural appreciation for the five elements of nature: earth, water, energy, air and sky, there now has to be a rediscovery of these ecological themes and how they may be better integrated into the university campuses. Poyyamoli pointed out that there are significant advantages to a sustainable built environment including the reduction of energy costs, reduced waste, and short payback periods for more efficient designs. Emerging green campus initiatives in India may provide inspiration for innovation and research at the universities. Through several examples of successfully implemented sustainable designs at Indian universities, it was clear that this was a growing trend. In fact, government programs and private industry support has been a contributing factor that has great potential to drive sustainable campus developments even further.
4.5 Local Case Study: Getting to Zero Waste at Large Scale Events—a Business Model

The University of Oregon’s football stadium made a perfect backdrop for a local case study about making large scale events more sustainable. Ethan Nelson, Waste Prevention and Green Building Manager for the City of Eugene shared his recent work preparing for the Olympic Track and Field Trials, which were scheduled to begin the day after the close of the Symposium. The major sustainability focus for this event, called "Track Town," was to develop a legacy toolkit by piloting the first multi-day sporting event under an event sustainability certification system. With the assistance of the Council for Responsible Sport, Eugene hoped to set a high bar for sustainable events and encourage other communities to learn from their Track Town experience. Nelson made the point that 56% of Americans follow sports closely while only 18% are interested in science. Perhaps then, reducing the impact (and increasing the visibility of sustainable action) from sporting events could have a more significant influence on the greater public. Best practices include exploring opportunities for recycling, composting, energy reduction, green tickets and utilizing social media. To engage the crowd, key success factors include making it fun and easy for fans to participate, communicating the goals and showcasing success stories, and choosing initiatives that resonate with the crowd. One of the major achievements so far has been reducing the volume of garbage by switching to compostable serving ware and making co-mingled recycling receptacles available. These alternative waste streams have been color-coded to make the process more user-friendly. Nelson underlined the fact that these efforts go far beyond sporting events, as Oregon has a comprehensive sustainability perspective that supports local communities and economies, local foods and housing, reduction of greenhouse gases and zero waste initiatives.

Fredrik Grondahl, KTH Royal Institute of Technology

"Our institution has been involved with the ISCN since the very beginning as a founding member. The 2012 Symposium has focused more on education-ideas we can apply towards our teaching. Philosophical presentations such as the idea of 'natural artifice' presented by Mark Alfano, are highly relevant as we seek a transition of values. Behavior is key. You can have the greenest buildings in the world but if people are not making sustainable choices in their daily activities, then we will not achieve our goals."
5. Campus Sustainability Awards Ceremony

At the breathtaking King Estate Winery, Matthew Gardner, Director of Sustainserv, Inc. and member of the ISCN Secretariat, presented the fourth annual ISCN Campus Sustainability Excellence Awards, which are granted to projects demonstrating excellence in Campus, Buildings, Integration, and Student Leadership. Since the beginning of the ISCN Award program, over 150 nominations have been received from schools representing Europe, Africa, Asia, and the Americas. As with previous years, the selection process was extremely difficult due to the diversity of high quality projects which are submitted.

The Excellence in Building Award was presented to ETH Zurich’s Christina Bratrich for their project, "Anergy Grid for Enhanced Energy Efficiency of Campus Buildings." This project provided a technically advanced approach to solving the challenges associated with deploying stable, renewable energy sources in the urban and campus setting.

The Campus Excellence Award was accepted by Shequin Chen of Tongji University for their "Living Laboratory" project, a leading example of the important role that a university can play in the sustainable development of one of the world’s most important economies and societies.

Ulrich Scharf from Maastricht University was given the Student Leadership Award for the university's Green Office program, a world-class example of how to integrate the creative energy of students into sustainable campus operations. The Green Office initiative was developed to foster student creativity, initiative and motivation to advance sustainability at the University. Since then the program has proven hugely successful and continues to grow.

The Excellence in Integration Award recognizes projects that demonstrate how sustainable development and management can be used to support the educational and research mission of the institution, positively impact the campus community, and effectively communicate the results to stakeholders beyond the campus. This year, the award was given to two organizations: The University of British Columbia and Ball State University.
Orion Henderson accepted the award on behalf of the University of British Columbia, for their Sustainability Initiative that commits the University to integrate, demonstrate, and inspire sustainable action. Through the initiative, UBC has established ambitious greenhouse gas goals and views all operational decisions through a sustainability lens.

Orion Henderson, University of British Columbia

“The Symposium was really helpful in providing a space to think. I was able to reflect on the current state of our initiatives at UBC in light of what I was hearing in the sessions, which is much harder to do during normal day-to-day activities. I also found the length and program to be just right and allowed for valuable networking. It was particularly gratifying to have UBC’s drive to deeply integrate operational and academic efforts recognized with the ISCN Integration in Sustainability Award. This type of recognition, from an international organization of our peers, is both affirming and, we hope, inspiring to others.”

Paul Wolfe accepted the award for Ball State University, for its program which includes the University’s Council on the Environment chaired by Professor Bob Koester, the Academy for Sustainability, and a variety of educational and outreach programs that showcase how Ball State embodies the principles of the ISCN and the Sustainable Campus Charter.
6. Shared Exploration

One of the most important aspects of ISCN gatherings is the time set aside for in-depth discussions, to foster best practice exchange and innovation in the field of campus sustainability. This year’s Symposium included two sessions dedicated to the ISCN Working Groups as well as a broader discussion on the agenda for future ISCN events.

6.1 Working Group Sessions

Working Group 1. Buildings and their Sustainability Impacts

The focus of Working Group 1 is to research and explore Principle 1 of the ISCN-GULF Sustainable Campus Charter: To demonstrate respect for nature and society, sustainable considerations should be an integral part of planning, construction, renovation, operation of buildings on campus.

During the two sessions held at the Symposium, the group discussed a broad range of issues within the research agenda developed for this principle. A list of those who participated in this lively discussion is provided below, followed by the Working Group 1 session agendas, discussion topics and key outcomes.

Participants

- Ulrik Abild
  (Danish Building and Property Agency)
- Karen Blaney
  (University of Texas at Austin)
- Matther Gardner
  (Sustainserv, Inc. / ISCN Secretariat)
- James Gudjonson
  (Thompson Rivers University)
- Ying Hua
  (Cornell University)
- Teri Jones
  (University of Oregon)
- Darryl Knight
  (William Rainey Harper College)
- Liv Lyskjær
  (Danish Building and Property Agency)
- Dan MacKinnon
  (University of Victoria)
- Bart Meehan
  (Australian National University)
- Sandy Mendler
  (Mithun)
- Anders Mueller
  (DTU Technical University of Denmark)
- Joseph Mullinix
  (National University of Singapore)
- Daniel Roth
  (Cornell University)
- Yoshiyuki Shimoda
  (Osaka University)
- Mattias Sundemo
  (University of Gothenburg)
- Karen Blaney
  (University of Texas at Austin)
- Liv Lyskjær
  (Danish Building and Property Agency)
- Dan MacKinnon
  (University of Victoria)
- Bart Meehan
  (Australian National University)
- Sandy Mendler
  (Mithun)
- Anders Mueller
  (DTU Technical University of Denmark)
- Joseph Mullinix
  (National University of Singapore)
- Daniel Roth
  (Cornell University)
- Yoshiyuki Shimoda
  (Osaka University)
- Mattias Sundemo
  (University of Gothenburg)
Agenda

<table>
<thead>
<tr>
<th>Tuesday, June 19, 2012</th>
<th>Session 1: Buildings and their Sustainable Performance</th>
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<tbody>
<tr>
<td></td>
<td>Moderated by: Ying Hua, Cornell University</td>
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<td></td>
<td>Input by: Daniel Roth, Cornell University</td>
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<td></td>
<td>Behavioral approaches to optimizing campus building performance</td>
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<tr>
<th>Wednesday, June 20, 2012</th>
<th>Session 2: From Research to 2000 Watt Society</th>
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<tbody>
<tr>
<td></td>
<td>Moderated by: Bart Meehan, National University of Australia</td>
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<tr>
<td></td>
<td>Input by: Urs Elber, Novatlantis</td>
</tr>
<tr>
<td></td>
<td>Building standards and their effectiveness for creating sustainable buildings</td>
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Day 1

Introduction and Input Presentation

Daniel Roth, Associate Director of the Campus Sustainability Office at Cornell University, began the session by discussing a combined technical and behavioral approach to optimizing campus building performance. Strategies at Cornell include reducing emissions by transitioning from coal to natural gas, optimizing systems efficiency, and reducing consumption through behavior change. Examples of behavior change efforts include:

1. Developed a year-long pilot behavior change campaign called CALS Green (CALS is the College of Agriculture and Life Sciences). The initiative saved the college approximately $200,000. The final report from the pilot is available online.

   The pilot included:
   - Worked with a professor to create a humorous video called "mindless heating"
   - Deans and administrators encourage energy conserving behavior through messages sent out via different channels such as email, websites, meetings, and posters
   - Displaying participant commitments to personal actions via a webpage and tracking individual energy and carbon savings as well as the overall building energy savings
   - Facilitating building against building competitions with prizes
   - Coordinating student teams to visit offices and labs to do education with staff

2. Supported a student-led energy conservation initiative called ‘Lights Off Cornell’ that recruited student volunteers to turn off lights in academic buildings. The students developed sophisticated web-based tools to track volunteer efforts allowing them to calculate energy and carbon savings and acknowledge the impacts of the student volunteers.
3. Piloting real-time, **web based energy dashboard** to support floor to floor competitions and classroom education on building performance.

4. Their future goals include scaling up the CALS Green model to other colleges, implementation of real time, web-based energy dashboards in buildings all across campus, higher performing buildings, consistent energy modeling protocols, and reducing energy use intensity through education, motivation, and repetition.

**Discussion**

Participants delved further into the topics Roth presented regarding behavior change. Some highlights included the use of social media, friendly competition among students for culture change, and the use of incentives to reduce consumption (e.g., students paying for the resources they use such as additional air conditioning; personalization of consumption and savings). Several universities are experimenting with the use of highly visible dashboards to display real-time energy use and savings, and to tie these systems into the curriculum as an educational benefit. Another important element of behavior change campaigns is the ability to track outcomes, cost savings, and other institutional benefits to justify funding the programs.

The discussion then turned toward the second focus of the day, on building performance. The group discussed a number of issues that would impact campus buildings’ performance, and agreed that synchronizing the efforts from multiple stakeholders is crucial for achieving the sustainable campus goals. Specific issues discussed included the significance of pre-design phase decisions (including programming and space issues) and pre-design stage communication, benefits of facility managers’ early participation in design process, know-how level of facility managers and operating staff, the necessity of simplicity for operation, multiple systems and manufactures caused by “lowest bid” requirements, performance of existing buildings, adoption and promotion of passive design, as well as in-house standards and RFPs development to demand higher performance level. Several participants talked laboratory buildings on campus, as a building type that is especially challenging for performance improvement, due to its high ventilation needs, significant plug load because of equipment, as well as the lack of research and standards. Laboratory building was recommended as the topic for in-depth discussion for the next year’s WG1 workshop.
Day 2

Introduction and Input Presentations

Urs Elber of Novatlantis started the second day by talking about building standards for the United States and other countries, and whether or not those standards are an effective way to create sustainable buildings. For example, most houses in Switzerland are brick and mortar, and thus can be difficult to modify. Finding alternative solutions such as developing new materials (e.g., thin film photovoltaic panels) and ways to insulate them is key. Universities must play a role in developing these solutions.

Matlas Sundemo spoke about energy conservation at the University of Gothenburg. Through climate action planning, the University has established the goal of reducing energy consumption by 20% by 2015. Sundemo described their progress and also the challenges they currently face. For example, while they are on track to reach their goal, the University does not own its buildings, so there are many stakeholders to engage when trying to improve energy performance. When administrators called for a sustainable building policy for all new construction, a diverse group of University stakeholders worked to incorporate elements such as life cycle costing, renewable energy and promoting a safe working environment.

Discussion

A variety of building standards were examined and the advantages and challenges of each were discussed. Participants spent the rest of the session discussing the evolution of high performance buildings, and the need to move beyond "checklist" approaches such as U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED). Advances in campus building performance and the field of sustainable design may arise from initiatives such as:

- Designing one’s own green building (i.e., LEED) system
- Setting priorities around sustainable design that reflect the needs of the region or area
- Focus on building performance and lifecycle
- Going beyond the current standards
- Comparing building standards

Building Sustainability Standards

The group noted the following in its discussion:

- Standards based on regional priorities make it difficult to allow accurate international benchmarking.
- Unless approached with the right mindset, standards can generate a "check list" mentality that suppresses innovative (out of the box) thinking.
- On balance they are an effective mechanism for driving sustainability outcomes in engineered design and generating executive/governmental support.
- The fact that most standards do not require a post occupancy ongoing certification is a weakness (note the Swedish standard which only certifies after 3 years of operation and a survey of occupants; note the Singapore Green Mark standard that allows recertification).
• Several standards are developing district/community based accreditation standards (LEED Neighborhood; CASBEE for Cities; Green Star Community; BREAM Community) There is value in having a sustainability standard that would allow the campus to be rated. WG1 will review these and other standards/evaluation methodologies for ISCN Symposium 2013.

The group acknowledged the benefits of a building standards system that provides accreditation, in particular that allows sustainability activists to establish goals and metrics that can be presented to executive management. However, there was also discussion on the limiting elements of standards, in that they set acceptable minimums which may undermine the development of an innovative culture for sustainability.

**Key Outcomes Day 1 and 2**

Working Group 1’s sessions provided illuminating discussions around sustainable buildings, both in terms of design and operation. Central themes emerged included the importance of engaging stakeholders throughout a building’s lifecycle, from design through long-term occupancy, to ensure a building fits its intended purpose and delivers its services efficiently and in an environmentally responsible manner. Universities can play an important role in both shaping the technologies and conceptual frameworks for high performance buildings, and through demonstrating sustainable practices in campus buildings.

The group agreed that there should be ongoing discussion aimed at developing approaches to sustainable design for campus community and building infrastructure that work with, and build from, accredited standards. Further work should also be undertaken on developing methodologies that access the effectiveness of sustainable design and allow international benchmarking of key metrics.
**Working Group 2: Campus-Wide Planning and Target Setting**

The focus of Working Group 2 is to explore Principle 2 of the ISCN-GULF Sustainable Campus Charter: *To ensure long-term sustainable campus development, campus-wide master planning and target-setting should include environmental and social goals.* A list of those who participated in the Working Group 2 discussion is provided below, followed by the session agendas, discussion topics and key outcomes.

**Participants**

- Ulrik Abild  
  (Danish Building and Property Agency)
- Sarah Fisher  
  (University of Pennsylvania)
- Eugenio Morello  
  (Politecnico di Milano)
- Stephen Ames  
  (Office of Sustainability, University of Oregon)
- Hille Hakkinen  
  (Aalto University, Finland)
- Heather Nelson  
  (City of Eugene)
- Roxane Beigel-Coryell  
  (Southern Oregon University)
- David Hassenzahl  
  (Chatham University)
- Ethan Nelson  
  (City of Eugene)
- Margareth Bentsen  
  (University of Oslo)
- Robyn Hathcock  
  (University of Oregon)
- Aurore Nembrini  
  (EPFL)
- Zulkarnain Bin Mohd Shah  
  (Universiti Teknologi Malaysia)
- Orion Henderson  
  (University of Oregon)
- Takao Ozasa  
  (Hokkaido University)
- Kaitlin Boyd  
  (Thompson Rivers University)
- Amy Ho  
  (National University of Singapore)
- Nannette Plant  
  (Camosun College)
- Aina Bruno Diaz  
  (Pontificia Universidad Catolica Del Peru)
- Karyn Kaplan  
  (University of Oregon)
- Thomas Rohrer  
  (Central Michigan University)
- Rene Colding  
  (DTU Technical University of Denmark)
- Bernd Kasemir  
  (ISCN Secretariat / Sustainserv, Inc)
- Barge, A Roum  
  (University of Oslo)
- Sean Coleman  
  (Chatham University)
- Aurore Klepper  
  (UVSQ / FONDATERRA)
- Riri Fitri Sari  
  (University of Indonesia)
- Louisa de Heer  
  (University of Oregon)
- Kai Liu  
  (Huazhong University of Science and Technology)
- Debra Shepard  
  (ISCN Secretariat / Sustainserv, Inc)
- Prashant Dhawan  
  (Indian Institute for Human Settlements)
- Ullika Lundgren  
  (University of Gothenburg)
- Eric Siegel  
  (Predictive Analytics World)
- Emily Dougan  
  (Willamette University)
- Sonja Mae  
  (Oregon State University)
- Takeshi Ueno  
  (Chiba University)
- Marcelo Xavier Fernandez Orrantia  
  (Universidad Internacional del Peru)
- Jamie Moffitt  
  (University of Oregon)
- Alexandra Velasco  
  (University of Oregon)
- Jim Walker  
  (University of Texas at Austin)
Day 1

Introduction & Input Presentation

This session focused on specific challenges for topics that fall under Principle 2 including food services, carbon reduction, transportation, social inclusion, and strategic planning. The goal of the session was to discuss how each topic fits into campus-wide planning and to prepare for a hands-on exercise the following day.

Takao Ozasa from Hokkaido University provided a case study of how his University has concentrated on topics covered by Working Group 2. In March 2012, Hokkaido University developed a Sustainable Campus Action Plan. Their process included both a top-down approach with the support from the University Administration in combination with a bottom-up approach through engaging students. The Action Plan also sets strategic goals, implementation strategies, and identifies methods for assessing performance. Goals take into account social aspects of the campus community and compliment the University's Academic Plan and Campus Master Plan. It was also pointed out that taking advantage of the existing physical and non-physical campus resources, and emphasizing the relationship between the University and the City are important features of the Plan.

Discussion

Julie Newman, Sustainability Director at Yale University, followed by leading a World Café discussion on topics under Principle 2, starting with food. Common issues included operational aspects (contractual agreements, and training cooking staff, cost management), cultural context, food sourcing, and waste reduction. Participants discussed how these challenges can make it difficult to set goals. Trends included an overall focus on healthy living, purchasing fair trade and local and organic foods, biodegradable tableware, and "trayless" dining to promote waste minimization. Goals and initiatives included
purchasing 20% of food from local sources, assessing the ecological impact of food, Instituting "meatless" days in the dining halls, and starting a food studies program.

Next, the group discussed carbon. Many questions arose such as: With a lack of upper administrative support after the initial greenhouse gas (GHG) inventory, what is the best way to set GHG targets? With aging infrastructure, what is the best way to retrofit? As the campus grows, how can a campus continue to reduce GHG emissions? Answering these questions and developing a strategy requires support at the Presidential level. Additionally participants saw opportunities where the ISCN could help, including publishing success stories, benchmarking campus GHG reduction initiatives and simply, making carbon fun again.

The third topic discussed was transportation. Participants noted that changing staff behavior to include using alternative transportation and carpooling was more difficult than changing students’ behavior. Initiatives mentioned included assessing the connectivity of campus and optimizing transit options, creating partnerships between campus shuttles and local public transit authorities, providing incentives for using public transit and using parking lot fees to fund sustainability efforts on campus.

Regarding social inclusion and protection, participants noted that legislative requirements vary by region. Large universities may have the ability to look at social aspects, but it is harder for smaller institutions to develop these programs. Initiatives noted were assessing physical access to buildings, educational programs that accommodate different learning abilities and styles, and reaching out to other cultures. One tool discussed, which can help universities of any size, was the Global Reporting Initiative (GRI) framework which has a section on social metrics.

Determining how to address biodiversity on campus largely depends on who owns the land and the local and regional regulations. Challenges include creating green space in an urban setting, pest and water management, and incorporating native species. The topic of biodiversity is seen throughout the research world; however implementation tends to go unnoticed. Participants agreed that it is important to keep green spaces on campus.

Day 2

Introductions & Input Presentation

This session focused on how to set priorities for Sustainability Strategic Plans. Dave Hassenzahl shared his experiences at Chatham University. A central aspect of planning for campus sustainability is thinking in timescales of 100-200 years. Conversely, the rate of organizational change may be much shorter-
meaning that cultures can change within 10-15 years. Research has shown that faculty may be the least engaged in sustainability due to academic silos and a historical lack of concern for energy use in purchasing decisions. To support a cultural shift, Chatham is exploring incentives for faculty to embed sustainability in research, teaching, and everyday practices. The University is also rolling out a Center for Sustainability to create new academic programs and utilize a large parcel of donated land as a model and living laboratory for sustainability.

**Materiality Assessment Using Campus Profiles**

In this exercise, participants split into three moderated groups to explore how a materiality assessment could be used to establish priorities for sustainability strategic plans, using hypothetical campuses as case studies. Campus profiles and moderators for the group discussions consisted of the following:

<table>
<thead>
<tr>
<th>Campus Profile</th>
<th>Moderator</th>
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</thead>
<tbody>
<tr>
<td>A new and fast-growing Asian university</td>
<td>Amy Ho, National University of Singapore</td>
</tr>
<tr>
<td>A small liberal arts college in the U.S.</td>
<td>Debra Shepard, ISCN Secretariat</td>
</tr>
<tr>
<td>A mid-sized, established European university</td>
<td>Ullika Lundgren, University of Gothenburg</td>
</tr>
</tbody>
</table>

"Materiality" is a term borrowed from the accounting world, which is now being applied to sustainability particularly through reporting under the framework of the Global Reporting Initiative (GRI). A topic is considered "material" or relevant if it has a significant impact on the organization, from an external or internal perspective. The group used this approach to rank ISCN Principle 2 topics as either low, medium, or high importance to internal (i.e., faculty, staff, students) or external (community, government, alumni) stakeholder groups. Results were mapped on a materiality matrix, and topics which formed a cluster of high importance for both stakeholder groups would then be considered the most important for planning and reporting purposes.

**Discussion**

Discussions at each table included deliberations on stakeholder’s expectations and debates over the ability to accurately reflect these viewpoints. For example, the level-of-understanding may vary widely (alumni may know little about campus food waste but students may be very aware of it). The weighting of topics varied across the three groups and the results were quite interesting. For example, master planning and green building construction policies ranked very high for the fast-growing Asian university, where much of the campus landscape was still open for development. The European research university clustered many topics as highly relevant internally but more distributed externally. The small liberal arts college was highly concerned with commuting impacts since it would affect the local community as well as the faculty, staff, and students who do the commuting. Some commonalities appeared across all three campuses: carbon issues ranked high, while food sustainability ranked low.

**Key Outcomes Day 1 and 2**

Aspects of sustainability were discussed as important elements for campus master and strategic plans; however, the focus on content should not take precedent over implementation. Change management at
the leadership level is challenging and making the business case for sustainability is imperative to drive change. To support such change, institutions must select the most important and relevant sustainability targets, and disclose progress regularly, through processes such as ISCN-GULF Sustainable Campus Charter reporting. For this prioritization of topics for strategic planning and reporting on campus sustainability, the concept of materiality can be a useful approach as illustrated by the discussions in the second session. One suggestion to enhance the discussions at future sessions was to prepare attendees in advance with case study information or to use one of their campuses as a model.

Aina Bruno Diaz & Lourdes Guitierrez, Pontifica Universidad Catolica Del Peru

“It has been interesting to see that the path to sustainability is similar across the globe, despite differences in culture and management. Our experience here validates that we are moving in the right direction.”
Working Group 3: Integration of Research, Teaching, Facilities, and Outreach

Charter Principle 3 states, “To align the organization’s core mission with sustainable development, facilities, research, and education should be linked to create a ‘living laboratory’ for sustainability.” Civic engagement is a key element in successful programs along these lines. Working Group 3 explored how universities foster sustainability on campus and in broader society by integrating learning, research, and community engagement. A list of Working Group 3 participants, session agendas, discussion topics, and key outcomes are provided below.

Participants

- Joe Abraham (University of Arizona)
- Martina Bill (University of Oregon)
- Kate Bouchard (UQAM)
- Mathias Bouckaert (University of Versailles Saint Quentin en Yvelines)
- Emmanuelle Bureau-Rozec (UQAM)
- Sarah Fisher (University of Pennsylvania)
- Jenny Friman (University of Gothenburg)
- Fredrik Grondahl (KTH Royal Institute of Technology)
- Shpresa Halimi (Portland State University)
- Heather Henriksen (Harvard University)
- Ann Kildahl (University of Hong Kong)
- Ariane Koenig (University of Luxembourg)
- Eddi Omrcen (University of Gothenburg)
- Chris Powell (Brown University)
- Juan Reiser (Pontificia Universidad Catolica Del Peru)
- Ulrich Scharf (Maastricht University)
- Jorulf B. Silde (University of Oslo)
- Kurt Teichert (Brown University)
- Brandon Trelstad (Oregon State University)
- Judy Walton (AASHE)
- Helen Whitbread (University of Western Australia)
Day 1

Introduction and Input Presentation

In this first session, Working Group 3 participants discussed two cases, the Sustainable Cities Initiative at the University of Oregon and interdisciplinary project-based learning at the University of Gothenburg.

The Sustainable City Year Program at the University of Oregon was introduced by Robert Liberty, and was followed by a panel discussion with Dr. Deni Ruggeri, Professor of Landscape Architecture, Bob Choquette, Instructor of Planning, Public, Policy and Management, and Courtney Knox from the City of Springfield. This program pairs the University with different cities to engage in a broader dialogue about urban sustainability and work on specific projects such as energy efficiency. Students are given the opportunity to effect change, municipal employees gain knowledge and innovative approaches, and faculty get to oversee practical and creative learning applications.

Next, Jenny Friman and Eddi Omrcen from the University of Gothenburg described a course that was developed as an interdisciplinary project-based learning opportunity closely connected to practice. The course focuses on scenarios featuring regions exposed to the risks of rapid global environmental change, such as those affected by the rising sea levels. The course emphasizes stakeholder engagement and collaborative problem-solving with communities.

Discussion

The group compared and contrasted the approaches of the two cases. Some observations included:

- Experiential learning projects work well in smaller groups of 6-8 students.
Experiential learning projects are time-intensive; however, they can very rewarding if change is the result.

Careful planning is required to organize projects so they themselves are "sustainable" over the long term.

Experiential learning across traditional organizational boundaries calls for structured processes to guide social interaction on complex issues.

Definitions of sustainability and best practices are context-dependent.

Current reward and incentive structures at universities are not well aligned for interdisciplinary work, and thus, need improvement.

True community ‘integration’ requires a needs-based approach matching the capacities of local universities with the challenges of their neighboring cities.

The session was concluded with a "Third Eye" exercise led by Yves Corminboeuf, Geneva University of Art and Design, Emmanuelle Bureau-Rozec and Kate Bouchard from the University of Quebec in Montreal. Participants were asked to express what they perceived at that moment, writing down what struck them most about the discussion. These thoughts were captured on cards to identify themes for the world café session the following day.

Day 2

Introduction and Input Presentation

The World Café session focused on social experiential learning processes, and explored the changing role of universities in the face of the challenges of sustainable development. Participants formed small groups and in three structured conversations, they discussed: 1. Competing priorities & tensions in the pursuit of excellence and sustainability, and 2. Innovative learning: social interaction towards sustainability. Conversations consisted of framing the two issues above, exploring the tensions and challenges, and identifying action items for the short-term and mid-term.

Discussion

Several themes emerged, including the need for disruption from everyday routine to gain a fresh perspective. For example, we need to design space for informal conversation, such as that provided at ISCN events. Institutions should think first about values and intended outcomes and then align practices around them. Such a perspective may uncover outdated, entrenched practices which are no longer relevant. We need to rethink how to build sustainability into the campus without the rigid boundaries between disciplines and staffing structures. Restructuring incentives and rewards is key. For example, it might be necessary for institutions to change tenure and promotion processes to signal a valuing of practical application of knowledge in teaching. Finally, participants discussed the need to reflect on social learning and its ability to encourage communities of practice, where collaboration and a common language could be developed to foster sustainability practices.

Key Outcomes Day 1 and 2

In conclusion, the charge of the Working Group is complex, given the diversity in the types and locations of institutions, and perspectives represented. With more time and an iterative process, the group can
develop creative next steps for the issues explored in this session. A central topic for next year will be to provide leadership training for sustainability practitioners in higher education to serve as agents for organizational change. Working Group 3 will continue to work on the book of case studies (launch expected in June 2013), and developing the ideas of living labs and social learning for change.
6.2 Priorities for 2013 and 2014 ISCN Meetings

Kasemir opened this interactive plenary including Amy Ho, Director of the Office of Sustainability and Joseph Mullinx, Deputy President, from the National University of Singapore and Heather Henriksen, Director of the Office of Sustainability and John Spengler, Akira Yamaguchi Professor from Harvard University to gather member input on 2013 and 2014 ISCN conferences with the note that before this year’s symposium, previous ISCN conferences took place in Europe and China. With the intention of continuing the global reach of the ISCN meetings, the next two conferences will be held at the National University of Singapore (NUS) in 2013 followed by Harvard University in 2014. Taking advantage of having both of the next two ISCN conference hosts present at the symposium provided an opportunity for the group to learn about the host schools, their respective cities, and opportunities for future symposium themes.

Ho provided the participants with an overview of Singapore and its economy and culture, and of the background and profile of NUS. The University began as a medical institution but now has nine research institutes that act as technology test beds. Looking ahead to next year’s conference, it was proposed that there could be more sharing of case study presentations online before the meeting. The plenary sessions could then focus more on discussion amongst the authors of these case study presentations, and actively include all participants. It was also proposed to use the conference to increase mutual learning between campus sustainability programs of organizations in temperate climates and those in especially warm, humid climates. There will also be a concentration on building stronger networks and knowledge exchanges between ISCN members from other areas with current and prospective members in the Asia Pacific region.

In light of the significant distance many participants would need to travel for the Singapore Symposium, Ho also presented the suggestion of offering a pre-symposium workshop for those just getting started in building sustainability initiatives on their campuses. This pre-meeting would provide an opportunity for interested schools in the region that are just embarking on their sustainability journey to learn more about the fundamental methods of building momentum for their programs. These participants would be able to ask selected representatives from ISCN member schools with long-established sustainability programs specific questions before the larger symposium begins, thus making full use of the knowledge of those ISCN member participants and optimizing the networking benefits from their travel to Singapore.

Henriksen followed Ho with a brief summary of suggestions for the 2014 Symposium, which will be hosted by Harvard. She plans to encourage the participation of surrounding colleges as a means of building a “network of networks”. Also providing some background for the 2014 conference, John Spengler presented a video highlighting Cambridge and the Harvard campus. Spengler also made some suggestions for themes to consider for the 2014 symposium including an enhanced concept of sustainability viewing it explicitly as a function of the use of materials and natural capital, scientific and general knowledge, institutional commitment and integrity, as well as human capital. The latter would include quality of life perceptions of people on and off campus, which increasingly seem amenable to quantification. The Harvard team also suggested that ISCN members and participants in the 2014 meeting might explore the use of “energy points” as a common metric for environmental resource use.
on campus, expressing the consumption of other resources like water and gas in terms of the energy use it ultimately causes.

To hone in on the needs of the ISCN symposia participants, Kasemir opened a discussion for the group, encouraging participants to share their thoughts about what they would consider most valuable for future symposia.

In terms of the next symposia, there were some common suggestions made by the group related to the content, length, and structure of the ISCN Symposia. It was suggested that the inclusion of topics not necessarily of common place in campus sustainability discussions, like social media and predictive marketing approaches, can be valuable additions to future meetings when their presentation clearly links them with potential applications on campus. A number of participants thought that the plenaries could be used more for diving deeper into topics related to emerging trends in campus sustainability, that would be specific to one particular conference, rather than revisiting more general topics at successive meetings that might also already be covered in other sustainability conferences. The future of the working group sessions was also a popular topic of discussion. Recommendations included basing the discussion more on case studies and relevant parts of ISCN-GULF Charter Reports related to the respective working groups, thus reserving the discussion time in the groups for deeper conversations. Finally, to reserve longer timeslots for working group conversations and to also ensure that those traveling to the meetings from a long distance can justify the travel efforts, it was also suggested that the conference length be extended. As an additional method to making the symposium more obtainable for a greater number of people, there is also a potential to offer sessions through a webcast.
7. Closing Session

7.1 Next Steps for the ISCN

Looking beyond the upcoming ISCN conferences, Kasemir led a group discussion and a survey conducted, to determine how the ISCN as a whole could become more valuable and better meet the needs of its members.

One idea supported by many participants was to use the ISCN website as a platform to share online case studies. Additional recommendations included student, faculty or staff exchange initiatives, match-making programs or mentoring facilitated by the ISCN that would allow a more focused sharing of best practices. This knowledge could also be shared more widely in publications highlighting relevant experiences at the different ISCN-GULF Charter member schools. Topics that were mentioned as potentially interesting for future experience sharing within the ISCN included engaging stakeholders around sustainability, and a focus on technology transfer, and corporate partnerships. Another well-supported suggestion was to utilize the ISCN awards to further promote further knowledge exchange.

The group discussed the opportunity to expand the Network into additional geographic regions where it was not yet well represented, particularly in Africa, Russia and South America. In support of this effort, it could be beneficial for the Network to explore partnership opportunities with other organizations and potentially provide linkages between the ISCN meetings with the goals and outcomes of meetings held by such potential partner organizations.

7.2 Closing Ceremony

Pleased with the success of the symposium, Kasemir thanked everyone who attended and contributed to the many vibrant discussions. Special thanks also went to all the speakers and the Working Group Co-Chairs who invested time in preparing their sessions. He remarked on the fantastic job Mital and his colleagues at the University of Oregon did to plan and run the meeting. Kasemir thanked the teams from the National University of Singapore and Harvard for their commitment to hosting the next two conferences, and invited participants to continue their discussions at these two meetings.

Mital conveyed his gratitude to the group for their active participation. Considering the challenge associated with pulling together something great with a limited budget, Mital was grateful to those speakers who made concessions to be part of the conference. Finally Mital invited Leith Sharp to take the group a step beyond the intellectual component of the symposium, and to close the session with an exercise using the word "Om," combining the sounds for curiosity and insight.
### 8. Participant List

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<tr>
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9. Contacts

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Online question and comment form:
http://www.international-sustainable-campus-network.org/about/contact.html

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