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1. Executive Summary

The 2011 ISCN Conference was the first ISCN meeting conducted after initial ISCN-GULF Sustainable Campus Charter Reports were released in coordination with the World Economic Forum’s GULF session. Experiences from using the Charter as a guidance and disclosure tool were key discussion points at the conference. The keynote speakers provided a broader perspective as a context for these discussions. They spoke of the need for an integrated approach to local, national, and global action (in campus sustainability as much as in for example battling illegal drug markets), disaster preparedness on campus illustrated by the case of Japan with the Tohoku Earthquake and its aftershocks and nuclear disasters, and the call for major corporations to work closely with academia to boost innovation and sustainability.

Campus sustainability was then explored more deeply in plenary presentations from leading universities in America, Europe, and Asia, with a focus on partnership and outreach, reporting what matters, and the future of sustainability in higher education. Leaders from the diversity of colleges and universities which epitomize the ISCN network shared their insights as well as challenges in forging sustainable change on their respective campuses. The ISCN continued its program of recognizing exceptional individuals and projects with the third annual ISCN Sustainable Campus Excellence Awards. This year’s recipients included Excellence in Campus winner, Brown University, for outstanding achievements in greenhouse gas reduction planning and implementation, and the Cornell University Sustainable Design team which won the ISCN oikos Student Leadership Award in Sustainable Campus for their Schoolhouse South Africa project, a student-led project to finance, design, and build a 6,000 square foot preschool and teacher training center in South Africa.

It is an essential feature of the ISCN meetings that presentations don’t take the majority of time. Shared learning and exchange in interactive formats is at the center of the gatherings. The three ISCN Working Groups – focused on buildings and their sustainability impacts, campus-wide planning and target setting, and the integration of research, teaching, facilities, and outreach – had in-depth working sessions that profited from the first ISCN-GULF Charter Reports being available and shedding light on how Charter Member universities approach those topics. These sessions provided fruitful discussion and action items for future development of resources and approaches to common campus sustainability challenges such as finding comparable and meaningful sustainability metrics, cultivating holistic campus-wide planning, fostering interdisciplinary research, and use of the campus as a living laboratory. In addition, for the first time at an ISCN meeting, smaller peer-to-peer workshop discussions allowed participants to share the latest strategies for green purchasing, reconciling campus growth with sustainability, defining success in a sustainability program, engaging middle and senior managers in campus sustainability, and turning student enthusiasm into productive outcomes.

The closing segment of the conference was focused on next steps in the development and extension of our network, including increasing collaboration between the working groups, formation of the new ISCN Strategic Advisory Committee, and funding for the network and its activities. This was followed by a warm thank you by the ISCN program manager and the participants to the conference hosts at the University of Gothenburg for organizing a wonderful meeting. Finally, the next conference host was announced: *The 2012 ISCN Symposium will be held at the University of Oregon on June 19-21, 2012.*
# 2. Conference Program

**Wednesday, June 8, 2011**

<table>
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<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>11:00 am - 1:30 pm</td>
<td>Registration, main entrance at the School of Business, Economics and Law</td>
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<tr>
<td>12:30 pm – 1:30 pm</td>
<td>Lunch Buffet at the restaurant at School of Business, Economics and Law</td>
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<td>1:30 pm – 2:00 pm</td>
<td>Opening Ceremony: &lt;br&gt;<strong>Pam Fredman, Vice-chancellor, University of Gothenburg</strong>&lt;br&gt;Katarina Gårdfeldt, Dean of Centre for Environment and Sustainability (GMV), &quot;Two Universities Working Together for Sustainable Development&quot;</td>
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<tr>
<td>2:00 pm – 2:30 pm</td>
<td>Opening Keynote: &quot;Policy Perspectives on Sustainability&quot;&lt;br&gt;<strong>Jan Eliasson, Millennium Development Goals Advocacy Group</strong></td>
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| 2:30 pm - 4:50 pm  | **Working Group Sessions**<br><br>**Working Group 1:** Buildings and their Sustainability Performance  
Moderated by WG 1 Co-chair: Ying Hua, Cornell University  
Input by: Sandra Wöhrer, Technische Universität Braunschweig | **Working Group 2:** Campus-wide Planning and Target Setting  
Moderated by WG 2 Co-chair: Mikala Holme Samsoe, Danish University & Property  
Input by: Bojan Baletic, Zagreb University; Angela Mensing-de Jong, University of Applied Sciences Dresden; Hisashi Komatsu, Nagoya University; Tomas Refslund Poulsen, Copenhagen University; Takao Ozasa, Hokkaido University | **Working Group 3:** Integration of Research, Teaching, and Facilities  
Moderated by WG 3 Co-chair: Ariane König, University of Luxembourg  
Input by: Leanne Denby, Macquarie University |
| 4:50 pm – 7:00 pm | Campus Tours of the University of Gothenburg and Chalmers University of Technology |
| 7:00 pm – 9:00 pm | Evening Reception and Conference Opening Dinner at Vasaparken, University of Gothenburg  
Dinner speech: “Disaster Management on Campuses in Japan”  
**Naomichi Kurata, Professor,** Kogakuin University |
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<th>Time</th>
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| 8:15 am – 8:30 am | Plenary Session Introduction  
Bernd Kasemir, ISCN Program Manager |
| 8:30 am - 9:30 am | Partnerships and Outreach  
Heather Henriksen, Director, Office for Sustainability, Harvard University  
Jenny Forshufvud and Jennica Källstrand, Environmental Coordinator, Chalmers University of Technology  
Steve Lanou, Deputy Director of Environmental Sustainability, Massachusetts Institute of Technology |
| 9:30 am - 10:30 am | Reporting What Matters  
Dominik Brem, Deputy Head of Security, Human Health, and Environment, ETH Zurich  
Xu Lidong, Professor, Tsinghua University  
Joseph Mullinix, Deputy President (Administration) National University of Singapore |
| 10:00 am - 10:50 am | Coffee Break |
| 10:50 am - 11:50 pm | The Future of Sustainability in Higher Education  
Ann C. Kildahl, Sustainability Manager, University of Hong Kong  
Chris Powell, Director, Sustainable Energy and Environmental Initiatives, Brown University  
Neal Dunstan, Landscape Architect, University of Pretoria |
| 11:50 pm - 1:00 pm | Lunch at Restaurant Wasa Allé |
| 1:00 pm – 2:00 pm | Leadership Panel Discussion on Campus Sustainability  
Panelists include:  
Victoria Ivarsson, Senior Manager, Knowledge Organizations, World Economic Forum  
Per Cramér, Dean of School of Business, Economics and Law, University of Gothenburg  
Esther Barrazone, President of Chatham University |
| 2:00 pm - 3:00 pm | Poster Session and Networking Break  
Information Booths including:  
Nigel Gurnett, Sustainserv, ISCN Membership Q&A  
Ullika Lundgren and Ulf Andersson, University of Gothenburg, Environmental Management System |
### Working Group Sessions

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| 3:00 pm - 5:30 pm | **Working Group 1:** Buildings and their sustainability performance  
Moderated by WG1 Co-chair: Bart Meehan, National University of Australia |
| 5:30 – 7:00 pm | Break and optional visit to the exhibitions at the Museum of World Culture          |
| 7:00 pm - 9:00 pm (dinner) | Evening Reception and Main Conference Dinner at Museum of World Culture  
Campus Sustainability Award Ceremony presented by Claude Siegenthaler, Hosei University |
| 9:00 pm – 11:55 pm (Bar opens) | Dinner speech: “Corporate Perspectives on Campus Sustainability”  
Jan-Eric Sundgren, Senior Vice President of AB Volvo, Public & Environmental Affairs |
**Friday, June 10, 2011**

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<th>Time</th>
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| 8:30 am - 9:30 am | **Reports from the Working Groups**  
Hall B 32  
Led by **Working Group Co-Chairs**  
Key findings and lessons learned |
| 9:30 am - 11:00 am | **Peer-to-Peer Sustainability Workshop**  
B 34  
B21  
C32  
D 31  
D 34  
Moderated by cohort leaders:  
**Steve Mital, University of Oregon**  
**Claude Siegenthaler, Hosei University**  
**Ullika Lundgren, Gothenburg University**  
**Evgeny Krasnov, Baltic Federal University**  
**Katrina Groves, INSEAD**  
Workshop to collaboratively explore and innovate upon a set of key sustainability issues faced by colleges and universities in the International Campus Sustainability Network |
| 11:00 am - 12:00 pm | **Plenary Session:** “Next Steps for the ISCN”  
Hall B 32  
**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 - 1:00 pm | **Closing Ceremony and Buffet Lunch**  
Malmsten Penthouse, Top Floor  
**Eddi Omrcen, Environmental Manager, University of Gothenburg** |
3. Welcome and Keynotes

3.1 Opening Ceremony
Pam Fredman, Vice-chancellor, University of Gothenburg

Dr. Fredman opened the conference by identifying the role of universities in sustainable development as having three significant components:

- First, universities must promote greater interaction between the political and private sectors by creating and developing knowledge through research and technology, and by taking a multidisciplinary approach to social science.

- Second, universities must introduce sustainability to all of the education that they provide. Current practice is that some students are focused on sustainability and some are not. In the future, students from all disciplines should be educated in sustainability so that the whole world will ultimately benefit from the knowledge they bring with them to the workplace.

- Third, universities need to transfer knowledge and collaborate fully with society to make sure that sustainable development takes into account the cultural nuances that global social interaction can bring.

In order to help realize these goals the University of Gothenburg formed its own Environmental Unit in 2004 and has continued to develop the partnership it started with Chalmers University fifteen years ago. Striving for a fully sustainable society is one of the main targets and currently the University offers more than 300 sustainability-related courses across disciplines. The University of Gothenburg’s sustainability studies focus heavily on the marine environment, and on providing guidance to the developing world to help shift toward a more sustainable society.

Esther L. Barazzone
President, Chatham University

We are a new member of the ISCN but have been deeply engaged in campus sustainability for a number of years. We are also deeply committed to globalism, and the ISCN presents a perfect opportunity to meet colleagues from around the world. There is no reason to work alone for sustainability when you can have partners.

The key challenges to address include how to afford the transition to a more sustainable campus and how to create a sustainability curriculum that does not quickly become irrelevant.

A sustainable campus fits perfectly into the broader discussion of a sustainable society—a challenging goal that ultimately rests on the values of sharing and equality.
"Two Universities Working Together for Sustainable Development"
Katarina Gårdfeldt, Dean of Centre for Environment and Sustainability (GMV)

Ms. Gårdfeldt joined the Vice Chancellor to welcome the eighty or so participants to this year’s conference and spoke of the importance of collaboration as a key component in bringing all universities to focus collectively on sustainable development. The GMV is a platform and a meeting point for researchers, faculty, and the business community to work together on promoting sustainability-focused research and education at Chalmers and the University of Gothenburg. Collaboration is the GMV mantra and to-date there are over 1000 researchers and professionals from science, technology, economic, and social sciences involved. The GMV provides opportunities to collaborate on interdisciplinary research, networking, and education through such activities as support in the writing of grant applications and in the development of projects such as “Climate Neutral Road Transport,” a project focused through which fifteen companies have committed to improving emissions performance on Swedish roads. The Gothenburg Atmospheric Science Center and Mistra Urban futures are further GMV examples of sustainably-focused projects where the organization’s central theme of collaboration to facilitate research is in practice. To-date, over $10 million dollars in applications for sustainable development research at GMV has been received.

3.2 Keynotes

“Policy Perspectives on Sustainability”
Jan Eliasson, Ambassador of the UN Millennium Development Goals and Chairman of the Board of Water Aid Sweden

Mr. Eliasson presented the opening keynote on Wednesday afternoon, setting the tone for the conference. In his speech, he remarked that the sustainable development work that the ISCN and conference participants are doing is very important. Sustainable development is essential and universities are key players in this work.

Faced with the global financial crisis, the push toward sustainable development seemed to receive a setback when major political players failed to reach an agreement at the COP 15 Copenhagen meeting. Despite this disappointment, there is a sense of optimism that environmental issues are becoming more relevant to all areas of society. The most hopeful sign for the future is that businesses are increasingly seeing sustainable development as an opportunity to be embraced. As a CEO at a recent conference at the Aspen Institute remarked, due to both ecological and economic necessities, “we must go forward with the green economy.” Historically, society has always made positive gains when enlightened self-interest is aligned with societal needs. If sustainable development is in the interest of business, then economic activity will reflect as much.

In order to make progress, the strict distinctions between global, national, and local must be discarded. With challenges of deepening complexity, sustainability can only be achieved with an integrated approach. As an example of interdependence, 90% of the world’s opium market is controlled from within Afghanistan, but opium production is both a local problem with a very global impact and a global problem with a very local impact. In another instance, Somali piracy groups impact trade and travel.
routes on a global scale. To address issues of sustainable development effectively, we must combine national policy and decision-making with global policy and decision-making. This is also an important step in enticing the global business community to adopt a responsible approach toward sustainable development.

Sustainable development requires strong, “horizontal” interconnections between different areas of human activity. Therefore, successful approaches require society to create “horizontal” solutions that benefit all, rather than “vertical” solutions that only involve a few. For example, the Millennium Development Goal of providing adequate sanitation to the 2.5 billion people living without it has been largely unsuccessful. This is not only because the migration of global populations into cities places great strain on urban water infrastructure, but also because the “horizontal” collaboration and long-term thinking required to solve this problem are not present. If this goal were to be achieved, we would see great strides forward on other issues, like child mortality and maternal health.

The heart of the problem is that the future has no voters. This is why getting the younger generation engaged and inspired to work for sustainable development is essential. Universities have a key role in this regard - campus sustainability is an important avenue for raising awareness and honing sustainability-relevant skills among the leaders and citizens of tomorrow.

“Disaster Management on Campuses in Japan”
Naomichi Kurata, Professor of Urban Design, Kogakuin University

Professor Kurata gave the keynote speech at Wednesday evening’s dinner reception. In his talk, Professor Kurata presented a broader view of campus sustainability, primarily that sustainability on campus includes ensuring the physical survival of not only campus infrastructure, but also its students, faculty, and staff in extreme and unpredictable circumstances. Campus sustainability in this sense was tested by the recent natural disasters in Japan. The Tohoku Earthquake was the most powerful earthquake to hit Japan since 1900. It registered as 9.0 on the Richter scale, sent extensive shockwaves throughout the entire region, and resulted in nuclear damage. It was also the most costly natural disaster in the country’s history, with over 15,000 people killed and causing significant road and rail damage. Many university campuses were impacted. On Tohoku University’s Aobayama campus, at least 28 building structures were damaged, causing severe disruption in the academic schedule of at least 500 students and incurring reparation costs of approximately 77 billion Yen ($962 million). Other universities such as Fukushima, Gakuin, and several colleges in and around Tokyo also experienced extensive campus damage. Immediate response actions linked campuses and communities. For example, many universities allowed their campuses to be used as refuges for thousands of people who were displaced and homeless as a result of the disaster.
In the wake of such a catastrophe, what lessons have been learned? What can be done to prevent such losses in the future? Given the propensity of Japan to a broad scope of natural disasters, proactively focusing on the four stages of disaster management is important: mitigation, immediate response, recovery, and beyond recovery.

- First, mitigation involves the preparation of hazard maps, reinforcement of buildings, careful handling of hazardous materials to minimize potential impacts, and, where possible, locating campuses in areas that are less exposed to natural disasters.
- Second, the immediate response stage requires developing strategically-located evacuation routes and raising awareness through channels such as the Student Guide for Earthquake Preparation, which was distributed at Nagoya University.
- Third, the recovery stage involves facilitating the continuity of academic activity on affected campuses as quickly as possible after a disaster has occurred.
- Finally, the beyond recovery stage includes the identification of educational opportunities relating to disaster preparedness, research on buildings and emergency information management, estimations of potential refugee count, and further development of disaster maps.

To ensure success, all of these activities need to involve building assessments, campus-wide planning exercises, development of linkages between facilities, education, and research, and ongoing dialogue between campuses and communities—all central topics of the ISCN and its efforts to support experience exchanges on campus sustainability around the globe.

“Corporate Perspectives on Campus Sustainability”
Jan-Eric Sundgren, Senior Vice President of AB Volvo, Public & Environmental Affairs

Mr. Sundgren spoke at Thursday evening’s dinner reception. In his speech, he emphasized that sustainable development is critical for the future of human development. As with other challenges related to global change, the best way to make progress is by collaborating with different partners, including academia and business.

More and more corporations and countries face increasing competition for a limited supply of resources and capital. For AB Volvo, globalization has been an essential catalyst in shifting the way in which business is conducted. Presently the company is faced with increasing competitive pressure from domestic European companies, and from the shift of global economic power to Asia, most notably to India and China. So what is most critical in order for AB Volvo to remain competitive in an increasingly globalized market, both now and in the future?

A key element for success is securing strong, reliable partnerships with distinguished academic partners. Inside these universities ground-breaking research and knowledge is developing, and collaborative partnerships between business and academia will ensure that this research can address the needs of the business world. For AB Volvo, as a large-scale producer of commercial vehicles, these needs include improving the sustainability of its production and its products. The knowledge transfer between universities and AB Volvo helps develop a market and product strategy that will keep the company competitive.
“This is the reason I believe so strongly in the interaction of universities and corporations, and it is why I also believe that AB Volvo simply cannot survive competitively without creating, developing, and growing such partnerships,” remarked Sundgren.

This competitive reality is why the work of the ISCN is so important. The network approaches sustainability on campus by initiating and promoting interactions between universities, government, civil society, surrounding communities, and business partners—and it does so with a global focus. This is the spirit in which progress can best be achieved and the common interests of public and private sector partners can be met.
3.3 Campus Tours

On Wednesday evening, conference participants took a tour of both the University of Gothenburg and Chalmers campuses, to learn about and experience sustainable innovations in the built environment undertaken by both institutions.

University of Gothenburg “Idrottshögskolan” Building

The first stop was University of Gothenburg’s School of Sport Science (Idrottshögskolan). The Idrottshögskolan building was designed and constructed according to the Swedish classification system Miljöbyggnad (Environmentally Classified Building). It has achieved a “Gold” classification which is the highest level possible.

Miljöbyggnad is divided into three main categories: Energy, Indoor Environmental Quality (IEQ/IAQ) and Material and Chemical Substances. These categories are further divided into a number of aspects and indicators and each indicator has specific criteria which must be met to achieve a given rating.

Sustainable elements of Idrottshögskolan’s construction include:

- Concrete foundation
- Steel framework
- Wooden panel façade
- Concrete floors in public areas
- Inner walls with wood boarding
- Green roof (Veg Tech)
- Heat pump – geothermal heat
- Cooling water for air conditioning from thermal drill hole
- Demand-controlled ventilation and lighting

Employing the Miljöbyggnad classification system has resulted in a well-documented building with qualities such as:

- Low energy use
- Good and flexible indoor environmental quality and climate (IEQ/IAQ)
- Very few environmentally harmful materials or chemicals
- Sustainable materials from renewable sources
- Well-suited to avoiding problems from dampness
The second stop on the campus tour was the “Kuggen” low-energy office building at Chalmers University of Technology. Kuggen began its life in the autumn of 2007. It was born from a discussion between Chalmers, Lindholmen Science Park, Chalmersfastigheter and Älvstranden Utveckling about the further development of the Lindholmen Science Park. It was agreed that collaboration, or “clustering,” was the key as to why Chalmers and so many companies and organizations have chosen to locate to Lindholmen. Nevertheless, there was a lack of meeting places that provided intimacy and personal meetings across business and organizational boundaries. Consequently, the decision to create a building designed to facilitate meetings and relations seemed self-evident.

With Chalmers’ vision for a “sustainable future,” it was obvious that Kuggen should have a distinctive sustainability profile. Design and system selection were focused on creating the most efficient, socially and environmentally-sound building possible. This has influenced the form of Kuggen - the building grows with its height, in other words, the upper floors are larger than those below. By “displacing” the building, it flares out to the south. In this way, it shadows itself, effectively creating a better indoor climate. The upper floors are shaded by a mobile sun screen, which follows the sun around the building. The sun screen is 98 m² and has 8874 boxes. The windows are triangular with the tip facing downwards, spreading natural light far into the building in relation to the glass surface.

One objective was that the building’s energy usage would significantly undercut the Swedish National Board of Housing, Building, and Planning’s demand for a maximum power density of 100 kWh/m² per year. Kuggen was therefore fitted with a customized ventilation system, adaptive lighting and interactive systems for heating and cooling. These measures, together with solar panels on the roof that contribute up to 50% of water heating, have dramatically reduced power consumption. Calculations indicate that energy usage will be 55 kWh/m² per year.

One of the aims of Kuggen was to create a building that stands out, that creates joy and pride, and in doing so becomes a symbol of Chalmers, Lindholmen and the City. The most striking elements of the building, which was designed by Wingårdh Arkitektkontor, are its round shape, the bold colors and the fact that each floor is designed as a horizontal “cog” (hence the name Kuggen, “The Cog”). Five such cogs are stacked on top of each other, but each floor grows with two cogs in relation to the floor below. The cogs consist of 190 teeth, where each tooth forms an office module. Kuggen’s façade and walkways are covered by 3970 tiles in 8 different colors.

As early as in its conceptual stage, the building received several international awards. For example, it was the recipient of MIPIM’s (Marché International des Professionnels d’Immobilier) “Sustainable
Buildings Award” in Cannes in 2009 and it was chosen as one of two out of 300 contestants for the “Future Projects Awards” in the World Architectural Festival in Barcelona.
4. Plenary Presentation Sessions

On Thursday morning, the focus of the conference shifted to best practices and new frontiers of campus sustainability, from the experience of leading practitioners from universities across the globe. ISCN Program Manager Bernd Kasemir facilitated these discussions and introduced each speaker for the three plenary sessions tailored to the 2011 theme of making progress along the path toward campus sustainability: Partnerships & Outreach, Reporting What Matters, and the Future of Sustainability.

4.1 Partnerships & Outreach
Heather Henriksen, Director of the Office for Sustainability, Harvard University

Begun at the urging of students, the Harvard University Sustainability Program is a collaboration of students, faculty, and staff working as a community. This approach has proven to be the cornerstone of the University’s success. At every step it seeks to involve students—the future leaders in business, government, and the nonprofit sector—in creating solutions to critical environmental challenges on and off campus. In 2008, Harvard President Drew Faust stated that “Universities have a special role and special responsibility in confronting these challenges of climate change and sustainability…. A university community must not only carry out research but translate the findings of that research into action.”

The Harvard University Sustainability Program has three main goals:

1. Adherence to a set of Sustainable Principles that provide a broad vision for institutionalizing sustainability into campus operations.
2. Implementation of university-wide green building standards for the construction of new buildings, renovations, and building system upgrades, which were adopted in 2009. These standards include bringing operators and designers into the planning phase.
3. Achievement of the Harvard University Greenhouse Gas (GHG) Reduction Goal: to reduce GHG emissions 30% below a 2006 baseline by 2016, including growth. This goal was adopted by the President and the Deans in 2008.

Examples of success include a 55% recycling rate, a 31% drop in trash production from 1990 to 2010 (with campus growth included), and a 30% reduction of water use on 88 acres of Harvard’s land due to organic landscaping. The University has 90 LEED green building projects ongoing and over 700 cost-effective energy conservation measures have been implemented or are underway, providing an estimated savings of $9.3 million in FY11 alone.

So how is the University turning its commitments into results? The key is leadership from the top, from President Faust and the Deans to the Executive Vice President and Vice President for Campus Services.
With a campus-wide commitment to high achievement rates, the Office for Sustainability is empowered to lead a coordinated effort across all 12+ schools and departments, unifying a decentralized university around these goals. The Office is working with researchers, students, faculty, and staff to develop a culture of sustainable action. One example of such culture development was last year’s launching of the Harvard Green Carpet Awards to support the achievement of Harvard’s sustainability goals and recognize the many dedicated staff, faculty, and students working on campus sustainability initiatives.

Two student-driven projects implemented at historic buildings on campus (Phillips Brooks House and Freshman Dean’s Office) exemplify the involvement of the student community. The students wanted a way to actively participate in achieving Harvard’s energy reduction efforts and to work with the Office for Sustainability and staff on campus. After discussion of energy audit results, the students came up with the idea to partner on weatherization projects. Although it was a student-initiated idea, it was ultimately a partnership involving the Faculty of Arts and Sciences and many Campus Services groups. While this initiative resulted in students actively learning how to weatherize buildings, it also engaged them in driving a project from conceptual stages to completion. The end result was the weatherization of two historic buildings and the implementation of over 50 energy conservation measures that reduced annual energy usage by 20%.

**Jenny Forshufvud, and Jennica Kjallstrand, Environmental Coordinators, Chalmers University of Technology**

Both Ms. Forshufvud and Ms. Kjallstrand work together to manage all of the internal environmental work at Chalmers University. Many of the environmental issues at this school are common to universities worldwide. Research has long been a strong component of environmental activity at Chalmers, and student education for sustainable development (ESD) has recently become an increasingly more important area, with an established center working on the subject. Living up to the University’s public sustainable commitment and goals is easier said than done. For example, three Chalmers University researchers are members of the Intergovernmental Panel on Climate Change (IPCC), yet transport and travel–based emissions will be an important issue for Chalmers going forward. Global University-wide change is required and Chalmers’ strategy for environmental research is shifting to focus on eight specific “Areas of Advance” that are critical to the University regarding future sustainable development. The Areas of Advance include:

- Information and Communication Technology
- Built Environment
- Life Science
- Energy
- Nanoscience and Nanotechnology
- Material Science
- Production
- Transport

The eight Areas of Advance are important themes for this conference since sustainable development underlies them all. This unified purpose provides an avenue to reach out to stakeholders, whose backing could expand research in all of these arenas. Last year, one of the five Chalmers Vice Principals, John
Holmberg, was appointed Vice Chancellor of Sustainability, a very positive development for the sustainability initiative at Chalmers.

Where do we benefit from sustainability through outreach and research? Chalmers is planning for an ISO14001 certification in 2012, which will be important for the school’s sustainable reputation but also means that Chalmers will improve and expand the reach of its existing environmental management system. All 17 research departments have been very involved in the certification preparation process and Chalmers has already invested significant funds in research on sustainability initiatives. In addition, systematic environmental outreach to all faculty and staff has increased credibility externally. The areas of education, research, innovation, and sustainable campus development all have newly appointed sustainability managers assigned to manage them effectively. This outreach campaign has focused on issues connected to Communication, Laboratories, Design, Transportation, Waste, and Energy.

Steven Lanou, Deputy Director of Environmental Sustainability, Massachusetts Institute of Technology (MIT)

Campus sustainability at MIT focuses on minimizing the campus energy and environmental footprint, building and strengthening the local community, leading by example and sharing results, creating a learning laboratory consistent with MIT’s motto “mens et manus,” or “mind and hand,” which means applying knowledge to practical applications, and facilitating community aspirations. Partnerships and outreach can leverage and expand possibilities with regard to all these goals. Community interest in sustainability is continually expanding and issues around climate change have galvanized students, staff, and faculty. The challenge is to engage the diverse community constructively and align them with campus goals/objectives. The Sustainability Program within MIT’s Environment, Health and Safety Office plays a lead role in coordinating diverse activities, building institutional support, communicating progress, and engaging the community stakeholders (students, faculty, staff, city, and peers). Some highlights of MIT’s achievements include:

- Power production improvements: The 1995 co-generation investment improved plant efficiency 18% and reduced annual CO₂ emissions by 32%.

Jan Eliasson
Ambassador of the UN Millennium Development Goals and Chairman of the Board of Water Aid Sweden

I am impressed by the work of the ISCN in promoting cooperation on campus sustainability not only between universities, but also between corporations and schools. I think the network’s interactive, cross-disciplinary approach is very fruitful, and I hope that the University of Gothenburg, the host of this meeting, will remain an active participant in this group.

Universities must be role models for sustainability. To achieve this, they must collaborate between different departments internally and reach out to the rest of society—the private sector, government, and civil society. It is essential to raise awareness that sustainability initiatives are not only the right thing to do, they also serve enlightened self-interest, as evidenced by the business success increasingly realized by leading participants in the green economy.
• Conservation and efficiency: Over $3 million invested over the past several years is now returning $3.5 million in annual savings. Savings resulted from improvements in lighting, steam traps, data-based commissioning, fume hood face velocity reductions, and other strategies.

• Sustainable design: U.S. Green Building Council LEED Gold status was achieved for a new graduate dormitory, and the Sloan School of Management building is expected to achieve a Gold status and use 50% less energy than any other similar building on campus. MIT’s new Koch Institute for Integrative Cancer Research is also expected to be LEED Gold and use approximately 30% less energy than a typical lab building.

• Transportation: The percent of students, staff, and faculty driving alone to work has recently declined by over 26% to only 19%, reflecting progress in encouraging people to take alternative forms of transportation.

• Waste and recycling: MIT’s recycling rate has grown steadily from less than 5% when the Institute-wide program began to 47% today.

Partnering with academic departments deepens progress in the Institute’s campus sustainability programs, enhances its relevance, and broadens and builds relationships. This helps to position the campus as a living learning laboratory, advancing the core academic mission and finding innovative solutions for campus greening. Defining what MIT does on sustainability and focusing on environmental impacts has had positive spin-off effects such as the development of a curriculum that promotes awareness and interest in sustainability. The MIT Energy Initiative is a major new academic research and education program designed to link science, innovation, and policy to transform the world's energy systems. MIT’s campus sustainability staff partnered with the MIT Energy Initiative to develop a campus-focused component of the Initiative to leverage the expertise of faculty and students to address campus sustainability challenges. When designing the Energy Initiative in 2006, the faculty and administration felt strongly about leading by example and this presented a new opportunity for “campus greening” and engaging a new and broader set of stakeholders. There was also a critical need for collaboration between students, faculty, and staff, which in turn created greater interest in energy research.

External partnerships also can expand the scope of what can be accomplished towards environmental sustainability. By actively reaching out to and engaging with both alumni and its local utility company, MIT was able to establish a major energy efficiency program that was more comprehensive and better financed than if MIT were to develop the program alone. The Institute started with pilot projects and ended up saving over $3 million a year, spending the savings on additional energy efficiency programs.
4.2 Reporting What Matters  
Dominik Brem PhD, Deputy Head of Security, Human Health, and Environment, ETH Zurich

Eidgenössische Technische Hochschule Zürich (ETH Zurich) is a research and education–focused university divided into 16 departments across five disciplines covering engineering, architecture, sciences, mathematics, and management. The school is divided between two campuses, one inside the city and the other on the outskirts.

ETH Zurich has developed a matrix of action in the field of sustainability. A series of goals have been set to maintain and improve the school’s sustainability reputation. These goals encompass three fundamental themes: climate change and energy systems, sustainable world food and water systems, and sustainable urban systems. These goals will be explored in four fields of activities via education, research, outreach, and campus/corporate sustainability. ETH Zurich endorsed the ISCN-GULF Charter at the World Economic Forum (WEF) in 2010, which established sustainability as an essential issue for research, education, knowledge transfer, and campus infrastructure. In doing so, the school also committed to setting transparent and measurable goals, and to publicly reporting achievement toward those goals. ETH Zurich and École Polytechnique Fédérale de Lausanne (EPFL), in collaboration with the WEF, originally initiated the ISCN.

Reporting What Matters

The ETH Zurich Sustainability Report 2009/2010 integrates an ISCN-GULF Charter report into a full Global Reporting Initiative (GRI) sustainability report, and was published in order to increase transparency for stakeholders, include all aspects of sustainability, create awareness, and set a precedent within GULF as a pioneer among leading universities. There were many lessons learned from the reporting process such as the revealing of positive results, increased internal awareness, and the identification of gender as an important issue for reporting.

Reporting What Counts

The GRI framework enables a more intense reporting experience because of the broad scope it brings to the process. It also provides an opportunity to report on ETH Zurich’s efforts to reduce CO₂ emissions. For example, the “Seed City” project plants fruit trees on campus, “Klimablog” is the first scientific blog in Switzerland incorporating the voices of 20 professors, students, and guests, and the new energy concept for the Science City campus currently in implementation has a goal to reduce direct CO₂ emissions by 50% or more by 2020.
Singapore has a hot, humid, and oppressive climate. Therefore, its architecture must address these conditions in order to protect its people from heat, sun, and rain. The recent ISCN-GULF Charter Report published by National University of Singapore highlights climate-related issues in detail. Also addressed in its Charter Report, is the University’s search to find a balance between growth and sustainability.

National University of Singapore formally came into existence in 1980. It is a growing school with three campuses and has seen an impressive 85% increase in enrollment since 1995. A constantly expanding campus with research labs that are still well below global standards and rising GHG emissions highlight the imperative to focus clearly on campus master planning for the future.

The Kent Ridge Plan is a campus master plan that builds sustainability into the layout of the campus. It includes district cooling measures, a minimization of wind shadows, and protecting approximately 18% of the land as green space and a further 15% as public green space. Over 2,000 trees are being planted and more than 50% of these will be native, designed to provide shaded façades and pathways. Irrigation will include root drip and hand watering to reduce consumption.

The University’s biggest project is called “University Town,” a building with dorms, research labs, and facilities all located under the one roof. The project is a Building Construction Authorized (BCA) Greenmark District “Gold Plus” project. One of its sustainable features is that the site was selected for optimum sustainable performance. The building is energy efficient with the minimum amount of conditioned space, and contains a district chilled water plant. Air conditioning will be minimized and students will have to pay to use it.

The National University of Singapore encourages students to use public transportation, and most students and staff avail themselves of this opportunity. While biking can be challenging in Singapore’s climate, more bikeways are to be constructed in and around the campus and covered walkways will also be provided.
Student education and research is geared toward getting more students involved in campus initiatives. Current sustainability courses are designed to promote greater campus sustainability, but data to support the results is not yet available. Just over 20% of current students and 25% of the current faculty are international, creating a diverse and dynamic university culture. The overall feeling about the University’s future is positive, and the University is eager to continue to enhance and improve on a sustainable path.

Xu Lidong, Professor, Tsinghua University

To face issues regarding resources and environmental problems, the responsibility of a “green university” is to:

- Promote the construction of a sustainable campus
- Incorporate the principles and guidelines of sustainable development and environmental protection into the various activities of a university
- Cultivate high-quality technology and management personnel with strong ethics regarding sustainable development
- Spread and practice the concepts of sustainable development

Tsinghua University has implemented green university construction practices and has carried out the work of green education, green scientific research, and green campus demonstration since 1998. The aim is to integrate teaching, scientific research, and campus construction resources, and to promote sustainable talent cultivation and sustainable technology R&D. A very important component of Tsinghua’s Green University strategy is sustainable talent cultivation through education and research practices. The University has created a total of 279 courses in sustainable development, and approximately four to six thousand students have taken these courses annually since 1998.

Scientific Research Training (SRT) is another important element in its green strategy. From 1996 to 2010, the University has set up 503 SRT programs relevant to sustainable development and 1,135 students have been involved. SRT also helps undergraduate students select research topics under the guidance of teachers with specific sustainability experience. An environmentally-friendly technology competition has become an important event in Tsinghua, encouraging students to participate in the development of a resource-saving and environmentally-friendly society, by developing novel concepts and inventions in science and technology.

Tsinghua University’s reporting and communication efforts include its “Behavior Framework” initiative, a management system initiative focused on planning, management, measurement, and reporting in order to integrate sustainability into the administrative system completely. The University’s campus culture encourages outreach and vibrant student organizations, which will hopefully bring about greater campus awareness.
Another achievement is the Green Campus demonstration project, which compared the energy consumption between two university buildings, one at the University of Pennsylvania and one at Tsinghua. The results revealed that the Tsinghua building consumed less electricity than the one at the University of Pennsylvania.

4.3 The Future of Sustainability in Higher Education

Ann Kildahl, Sustainability Manager, The University of Hong Kong

In the 21st century, universities will be more important than ever as they are called on to provide leadership in research, prepare young people for positions of responsibility in multiple fields, and serve as models for low-carbon living in their communities. To meet these challenges in a time of rapid climate change, environmental sustainability—including the careful management of campus facilities and efforts to contain the physical impact of other activities—has the potential to become one of the most important focus areas for decision-makers in higher education in the decades ahead. Elaborating on ideas raised at the 2010 ISCN Symposium, Ms. Kildahl proposed the development of a collaborative research effort by members of the network to explore the potential relationship between the pursuit of excellence and sustainability in higher education.

In recent decades, the development of higher education has been marked by rapid expansion and an increasing emphasis on business-like management approaches, world-class university models, and university rankings. With global competition, perceived status is affecting the decisions of university leaders and other stakeholders, including potential students and their families, the wider academic community, funding organizations, and the general public. The pursuit of excellence and rankings are a prominent subject in the Education literature, and leading “world class” institutions are widely regarded as models by educators and policymakers around the world.
Over a similar timeframe, universities have been recognized as having a vital role to play in the wider effort to respond to the challenges of climate change and sustainable development. A growing body of literature in the emerging field of Sustainability in Higher Education ("SHE") describes the critical role of universities in advancing research and teaching, the practical solutions institutions have adopted to reduce the environmental impacts of campus operations, university/community linkages, and the activities of students on campus and beyond. The rapid growth of higher education suggests there is significant potential to expand SHE around the world.

The key characteristics of the world-class university identified in the literature point to a range of energy-intensive activities that inevitably impact universities’ environmental performance. Yet, the potential relationship between the world-class university movement and sustainability has not been a focus of the literature to-date. What strategies have the world’s leading institutions developed to balance the demands of excellence and environmental performance? In setting strategic policies, do university leaders take sustainability goals into account? What do their actions suggest for other institutions seeking to address climate change and sustainable development while at the same time striving to improve overall quality?

Drawing on the expertise and geographical reach of the International Sustainable Campus Network, the study will seek an understanding of how leading universities are balancing the priorities of excellence and sustainability through a series of case studies, surveys, and leadership interviews.

**Chris Powell, Director, Energy and Environmental Initiatives, Brown University**

Upon arrival at Brown University five years ago, Mr. Powell’s first task was to create a mission statement for sustainability at the University. In 2008, a target was set to reduce GHG emissions 42% below 2007 levels by 2020 as well as an aspirational target of 80% reduction by 2050, and the University is currently on track to reach the 2020 goal. Brown University has an old campus and so a lot of retrofitting needed to be done in order to reduce energy consumption. Although the organizational capacity to implement a plan across the campus was not there at the start, a 10% reduction in energy costs has been achieved to date, and at less cost than they originally thought was possible. Student organizations have been very effective and their networking with the staff helps strengthen connections and implement programs and ideas throughout campus.

Two characteristics from the original assessment were that the old buildings needed updating and the new buildings were not commissioned properly, so the task was to go back into these buildings and find out how to fix the problem and lower energy consumption in the process. Manpower and resources are always a constraint to completing the necessary changes. However, as the organizational capacity grew inside the University it was necessary to create a
database and collection system to track the progress made on the ongoing project work. The “BEE,” Brown Energy Efficiency, is a web-based energy efficiency decision-making and reporting tool that enables tracking and recording of progress over time. Significantly, it enables calculation of the estimated total cost of individual energy-saving pieces of technology and installation. The tool provides a basic Excel chart description of the technology to be installed and installation cost. It also provides the rate of return on the projected investment, followed by the monetary value of estimated savings in annual energy costs over the life of the equipment. This provides the University with the power to estimate both the cost of the initial investment and the potential savings on energy costs going forward—critical information to have available when planning the future of sustainability at Brown University. The institution also has a well-developed GHG reduction program in place to help reach emissions reduction targets.

Going forward, there is informal integration with other departments and limited integration of projects requiring further development. Greater student thesis support from the Energy and Environmental Office is needed in the future in order to link the research with the University’s needs. A broader student engagement across campus will be required to raise awareness and engage the University community more effectively.

**Neal Dunstan, Resident Landscape Architect, University of Pretoria**

Founded in 1908, the University of Pretoria is located in South Africa's capital city, about 60 km south of Johannesburg, and the climate there produces long, warm, and moist summers followed by cool, dry winters. The institution is divided and scattered over the city into six different campuses, and the main Hatfield campus is surrounded by three large urban areas. All of these areas are experiencing fast-developing building projects, which in turn is placing the University under increasing pressure from external building developers. The University is primarily a state-funded institution and, like all publicly funded higher educational institutions, is being consistently forced to come up with innovative methods to overcome the shortfalls created by the constant shrinking of available public funds.

Goals include developing a sustainable campus and incorporating sustainable development into strategic planning. The ultimate challenge is to become a leading research-intensive university on the African continent. The immediate challenges to this goal are limited resources, time, and expertise, the restructuring of departments to focus on sustainability without increasing head count, greater stakeholder commitment, and increasing collaboration and cooperation.
Despite such challenges, there are a number of opportunities that are unique to this institution and it will be important to develop solutions with an African theme to a fundamentally African set of problems. Actions must align with a strategic plan that needs to be in place right at the start of the process. The opportunity exists for the University to become a living model for students, staff, and the city for the potential and practicalities of sustainability. At present, the University’s efforts constitute a very theoretical approach with limited implemented models and references. But having such a living model in place will expose the next generation to solutions for addressing the challenges of the future.

Some of the projects already underway are water conservation, biogas digesters and composting, refining transportation bus routes, an architecture and landscape architecture audit, database software development, a solar-heated swimming pool, and, most importantly, the development of a master plan for all campuses.

4.4 Leadership Panel Discussion on Campus Sustainability
Facilitated by Bernd Kasemir, ISCN Program Manager

ISCN Program Manager Bernd Kasemir facilitated the leadership panel discussion which included Esther Barrazone, President of Chatham University, Per Cramér, Dean of School of Business, Economics and Law at the University of Gothenburg, and Viktoria Ivarsson, Senior Manager Knowledge Organizations at the World Economic Forum. A series of questions were posed to panel members, and led to a broader discussion involving the views of other conference participants.

How are the various elements of sustainability action balanced at different universities?

The School of Business, Economics and Law at University of Gothenburg, which currently has around 6,000 students, defines new sustainability research areas based on inventories of current and targeted activities. Research and education are approached more from a functional perspective instead of a purely disciplinary one. While the University and the school have integrated sustainability in their initiatives for a long time, they are committed to continuing to develop in this area. For example, the school has recently identified the need to create a top-quality advanced Masters Program in Sustainability. In this program, partnerships will be central: with the neighboring Chalmers University, corporate partners, and other actors in civil society, the local community, and government. Balancing priorities for the school includes consideration of the sustainability impact of the school’s infrastructure, but high quality sustainability education and research are seen as the key focus.

Chatham University, located in Pittsburg, Pennsylvania (USA) with around 2,500 undergraduate students, strongly tries to combine academic and operational aspects of sustainability in their organizational development. Since the inception of a new School for Sustainability, the application rate quadrupled in the last 2 years. Building from this, a Masters in Sustainability and Food-related issues has recently been added. Concerning facilities, the University added 400 acres of new property a few years ago and is developing a second campus there that can support 1,200 students. The master plan developed for that campus, and the first new buildings are compatible with the goal of achieving carbon neutrality. The Pennsylvania Dutch buildings will all be renovated to meet the standards of the new campus. All buildings will start at LEED Platinum, and part of the sustainability focus is minimizing connections to water mains and wherever possible, collecting and using rain water instead.
Sustainability and resource efficiency has entered the mindset of the students. For example, when asked for their feedback, many students remarked that their dorm rooms were too large.

What is the role of the corporate sector?

Throughout the discussion, panel members acknowledged that a critical element in achieving success is the need for partners from all sectors of society, including academia, civil society and government, and corporations, to work together. Such collaborations are at the center of the mission of the World Economic Forum, which focuses on bringing major players together for dialogue about today’s most pressing questions. Sustainability issues considered in the multi-stakeholder dialogues at the World Economic Forum include water security, agriculture and food security, sustainable consumption, and carbon management, among others. For further details, visit the World Economic Forum’s website.

The panel agreed that sustainability cannot be adequately addressed by any single company or even a single industry. It was noted that for this reason, the World Economic Forum has brought together stakeholders from the corporate sector and beyond to work in tandem to develop systemic solutions. In addition, higher education and research were seen as critical to making progress and contributing to such dialogues, but it was also mentioned that the academic sector may work rather slowly and that partnerships with the private sector help to maintain momentum.

Dialogues between academia, the private sector, and the government sector were also highlighted as essential, so that they may collectively contribute to redesigning policies and strategies that embrace sustainability. As an example, the group discussed the difficulties in becoming a truly sustainable society or operating a sustainable campus if the infrastructure in most countries remained primarily petroleum-based.

Measures of progress – is Gross Domestic Product (GDP) the right yard stick?

It was discussed that both for measuring “growth” and “competitiveness,” current indicators lack important aspects. For example, for competitiveness, a more meaningful metric would better incorporate social
elements, reflecting people and their preferences. Also, GDP does not take into account the true costs of “economic growth.” Including aspects of health and resource management could provide a more accurate measure of progress. Such improved measures are needed to make more sustainable policy decisions, and universities can contribute substantially to the development of these indicators.

Progress indicators should also take into account that sustainability includes not only environmental and social aspects, but also the links between these two dimensions. For example, gender and environmental issues are closely correlated. Women are often particularly affected by environmental degradation, thus it is essential to factor these correlations into assessments of progress and the design of programs to support awareness and mitigation.

Sustainability reporting and its role for universities

In the corporate world, there is an emerging consensus on what it means to run a more sustainable operation, and how to report on progress. Key elements include adherence to the United Nations Global Compact and transparent sustainability reporting under the guidelines of the Global Reporting Initiative (GRI). Is there similar clarity and consensus amongst organizations of higher education and research?

Panel participants remarked that the state of sustainability reporting was mixed. Sustainability still needs to be defined for universities in general, and specifically for each school. The link between research, operations, and facilities is a crucial issue. Integration of sustainability into research and curriculum with strong disciplinary roots is often not easy. Sustainability reporting along the lines of the GRI could be a good starting point toward achieving this integration. There are also a number of other sustainability reporting frameworks that are providing guidance and supporting comparability specifically for colleges and universities, including reporting under the ISCN-GULF Sustainable Campus Charter.

4.5 Campus Sustainability Awards Ceremony

Hosted by Claude Siegenthaler, Hosei University

At the evening reception on Thursday night, Claude Siegenthaler announced the winners of the third annual ISCN Campus Sustainability Awards. The ISCN Awards for Excellence are an offspring of the first ISCN conference held in 2007 at ETH Zurich when Leith Sharp from Harvard University and Susumu Nagai from Hosei University suggested to the plenary that an award scheme could become an important driver for the Sustainable Campus movement. The following year, a working group studied various existing, but local award schemes and cultivated a dialogue among ISCN members on what impact an award should enable and how outstanding achievements could be identified. The working group eventually set out the following three goals: 1) The award program should result in motivation and support for leaders within universities by giving them recognition for excellence; 2) It should trigger the emulation of best practice inspired and substantiated by the collection of competition entries, and 3) It should institutionalize an international dialogue on and benchmarks for the evaluation of projects.

Since the first call for applications issued in 2009, the ISCN has received more than 100 entries from schools in Africa, the Americas, Europe, Asia and Australia. In the first round awards were given to the Australian National University (ANU) and the Swiss Federal Institute of Technology Lausanne (EPFL) in
Switzerland. The second round saw four awardees, namely the Leuphana University in Lueneburg Germany, the King Abdullah University of Science and Technology (KAUST) in Saudi Arabia, the University of Bradford in England and the University of Rotterdam in the Netherlands.

In 2011, the jury decided to give awards in two categories: the Excellence for Campus Award was given to Brown University for its Greenhouse Gas Reduction Program. Brown University has shown an impressive pace in implementing their comprehensive program involving all relevant stakeholders on campus. They are well ahead of their initial schedule with a reduction of 21% since 2007 and annual savings of $1.8 million. The judges had no doubt that the program managed by Chris Powell and his small team created both effective tools as well as social momentum to leverage resources in ways that can inspire others to follow and emulate. The second award – the oikos Student Award for Sustainable Campus sponsored by oikos International and the oikos Foundation – went to Cornell University’s Sustainable Design Initiative. This entirely student lead organization is a landmark project substantiating the living laboratory metaphor with their Schoolhouse South Africa project - an interdisciplinary project and research endeavour to finance, design and build a 6,000 square foot pre-school and teacher training center in South Africa.

Mr. Siegenthaler closed by expressing appreciation for all the efforts taken by the ISCN Secretariat, namely by Matthew Gardner, the panel of judges, and especially all applicants, who once more impressed the judges with many examples of good practice.

5. Shared Exploration

5.1 Working Group Sessions

On Wednesday and Thursday afternoon, conference attendees participated in concurrent working group sessions to research and discuss in-depth campus sustainability issues, as clustered into one of the three principles of the ISCN-GULF Sustainable Campus Charter:

- Principle 1. Buildings and their sustainability impacts
- Principle 2. Campus-wide planning and target-setting
- Principle 3. Integration of research, teaching, facilities, and outreach

Each session was led by the ISCN Working Group co-chairs, and featured a series of guest speakers and structured conversations over a longer timeframe to adequately explore the chosen topics. On Friday morning, the co-chairs summarized the key discussion points, outcomes, and action items from these sessions. Working Group activities over the coming year will reflect these critical inputs to their ongoing research agendas.
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 conference, 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

| Zora Baletic Salopek, University of Zagreb | Heather Henriksen, Harvard University | Bart Meehan, Australian National University |
| Dominik Brem, ETH Zurich | Ying Hua, Cornell University | James Middleditch, INSEAD |
| Rene Colding, DTU Technical University of Denmark | Viktoria Ivarsson, World Economic Forum | Anders B Møller, DTU Technical University of Denmark |
| Alexandra Demoustiez, Université Libre de Bruxelles | Satu Kankaala, Aalto University Properties Ltd | Mathilda Silva, Chalmersfastigheter AB |
| Andreas Dionysiou, Cyprus University of Technology | Peter Karlsson, Akademiska Hus Väst AB | Roland Stulz, ETH Domain/Novatlantis |
| Anna Eckerstig, Chalmersfastigheter AB | Evgeny Krasnov, Immanuel Kant Baltic Federal University | Mattias Sundemo, University of Gothenburg |
| Nigel Gurnett, Sustainserv Inc | Jonathan Leape, Cornell University | Sandra Wöhrer, TU Braunschweig |
| Johanna Hellborg, INSEAD | Liv Lyskjær Kartved, Danish University and Property Agency |

Agenda

| Wednesday June 8 | Presentation by Sandra Wöhrer (on behalf of Professor Norbert Fisch) Institute of Building Services and Energy Design (IGS), Technische Universität Braunschweig “Research at IGS & the EnEFF Campus project” |
|                   | Presentation by Ying Hua Department of Design and Environmental Analysis, Cornell University “Summary of ISCN-GULF Charter Member Reports – What’s in Common and What’s Unique?” |
|                   | Group Discussion led by Ying Hua, Cornell University |

| Thursday June 9   | Presentation by Jonathan Leape and Jesse McElwain Cornell University Sustainable Design “Student-Initiated Sustainable Building Project – A Design-and-Build School Project in Africa” |
|                   | Group Discussion led by Bart Meehan, National University of Australia |


**Discussion Topics**

Questions and issues which were explored during the Working Group 1 sessions included the following:

- **Gathering data** (building performance as well as occupancy/use patterns) is important for the following purposes:
  - Performance improvement and trouble-shooting
  - Communication with building users
  - Supporting policy making and implementation

- **Defining metrics** can be difficult, particularly for international benchmarking. Is it meaningful to compare campus building performance, given the geographic, climatic, legislative, and operational differences across the globe?

- Reconciling between **growth and demand versus sustainability and carbon reduction** is not straightforward, i.e. struggling to stabilize emissions. If growth is inevitable, how do we design a sustainability program to complement that growth and achieve sustainable outcomes? Do we move from a focus on conservation to a focus on substitution?

- Reconciling between **user (faculty, students) expectations of building services and demand for "convenience" versus sustainability** can be a challenge. How do we address the conflict between research/study needs and sustainability goals?

- How do we **involve/motivate/incentivize building users**? — Can we define the role of users in building performance?

- **What building standards and certification systems** are used on campus buildings? Which are the most appropriate?

- How do we find and share examples of **best practices**?

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**Mr. Toshiaki Tsukamoto,**  
**Professor City/Regional Planning**  
**Hiroshima University**

I attended this conference because I wanted to learn from other universities. The quality of the discussions which took place was very high, and there were many opportunities for all of us to learn from each other.

One thing I have learned during the conference is that raising awareness for campus sustainability at the leadership level is very important. Explaining the ideas of sustainable development to the leaders is a struggle. We need to work hard to communicate more effectively.
**Key Outcomes**

The core themes and outcomes arising from this 2-day discussion consisted of the following:

**Defining sustainability.** There needs to be a common understanding of the language used in establishing campus sustainability goals. For example, there was consensus that “sustainability” is not only about reducing campus buildings’ environmental impact but should also include social and financial goals. The emphasis should be on establishing sustainability as a corporate and community value - in that strategy the performance of building, campus and IT infrastructure is not only about improving the environmental footprint, but using that infrastructure to develop sustainable behavior and values.

**The importance of accurate data.** Asset and campus performance data are the keys to understanding the real environmental impact of infrastructure. Data is the basis for informed decision-making and the foundation for discussions with the university executives and the campus community. What is measured can be managed and modified.

**Benchmarking campus sustainability.** The differences between campuses (climate, size, type of operations etc.) make the benchmarking of output performance impractical and largely meaningless. However, there is opportunity to benchmark “inputs” on a range of indicators, such as university investment in sustainability, commitment, community engagement, resource allocation, as well as innovation and ideas. This type of benchmarking allows universities to better understand the links between inputs and successful outcomes, and helps them move towards the development of best practice campus sustainability models.

**Developing consistency between university strategic objectives and sustainability goals.** Universities are in a period of substantial growth, with many expanding the physical infrastructure and scale of operations, as well as growing the community. Environmental sustainability goals need to reconciled with longer-term goals of the university, ensuring that they are part of the strategic planning mix.

**Developing skills and understanding.** Universities will need to develop the skill sets of planning, property, and administrative staff to ensure they are able to establish and operate the campus in an environmentally sustainable manner. Additionally, the broader campus community needs to understand the consequences of their individual actions and decisions on the campus footprint. As part of this process, there must be a focused effort on engagement across the campus community, in particular with the student community.

**Sharing experience.** There needs to be a process to allow universities to share their experiences - what worked and what did not. Additionally, campuses which are similar should be able to share performance data, using matched metrics for benchmarking partners.
Working Group 2. Campus-wide planning and target-setting

The focus of Working Group 2 is to research and 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**

| Bojan Baletic, University of Zagreb | Bernd Kasemir, Sustainserv Inc | Joseph Mullinix, National University of Singapore |
| Esther Barazzone, Chatham University | Hisashi Komatsu, Nagoya University | Eddi Omrcen, University of Gothenburg |
| Jonna Bjuhr Männer, University of Gothenburg | Naomichi Kurata, Kogakuin University | Takao Ozasa, Hokkaido University |
| Neal Dunstan, University of Pretoria | Ellen Lagrell, University of Gothenburg | Barbara Piga, Politecnico di Milano |
| Anders Englund, Linköping University | Lijun Liang, Tsinghua University | Tomas Refslund Poulsen, University of Copenhagen |
| Jenny Forshufvud, Chalmers University of Technology | Ida Lindbergh, University of Gothenburg | Toshiaki Tsukamoto, Hiroshima University |
| Amanda Forsman, University of Gothenburg | Meri Löytyniemi, Aalto University | Naoki Tsurusaki, Kyushu University |
| Katrina Groves, INSEAD | Jesse McElwain, Cornell University | Takeshi Ueno, Chiba University |
| Vivian Ho, The Chinese University of Hong Kong | Angela Mensing-de Jong, HTW Dresden | Xu Lidong, Tsinghua University |
| Mikala Holme Samsøe, Danish University and Property Agency | Eugenio Morello, Politecnico di Milano | |

**Agenda**

| Wednesday June 8 | Group discussion moderated by Mikala Holme Samsøe, Danish University and Property Agency |
| | Presentations by: Mikala Holme Samsøe, Danish University and Property Agency, Bojan Baletic, University of Zagreb, Angela Mensing-de Jong, University of Applied Sciences, Dresden, Takao Ozasa, Hokkaido University, Hisashi Komatsu, Nagoya University, Tomas Refslund Poulsen, University of Copenhagen |

Discussion Topics

Working Group 2 sessions explored the challenge of putting ideas into practice, with an overarching question of “How do you define a sustainable campus? Who should be involved?” Topics discussed during Wednesday’s presentations are summarized below:

- **International study:** What does a world-class university look like? The campus is a layered composition. How can we make it interesting? How can we make the campus a showroom for the future, or a playground for ideas and innovation?

- **We need to match physical planning with the overall university strategy.** Decision-makers may not be aware of the possibilities. More mixed-use facilities are needed.

- **Learning is about transforming yourself, and this concept can be applied in campus planning.**

- **Sustainability requires a holistic approach and collaborative planning.** For example, transportation connections are crucial (train, roads). Campus planning needs to be integrated with city/regional planning as a whole. Another key consideration is that campuses need to consider building a buffer for the built environment in case of natural disasters.

- **Goals can include targets such as zero CO₂ emissions, particularly since energy consumption is one of the most important environmental impacts.** Critical challenges in this area include the concept of a “24/7” university, labs using more and more equipment, and limited and lacking qualifications and energy focus among staff and faculty. One strategy which could work is to make faculty members pay their own energy bill.

- **Some universities are not growing so their focus must be on using existing infrastructure and improving the existing environment and landscape, and increasing the density of their urban campus.** Sustainable technologies can be applied, such as LED lighting, natural ventilation, solar shading, and green infrastructure.

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**Jonathan Leape**  
Construction Coordinator  
Schoolhouse South Africa  
Cornell University Sustainable Design (CUSD)

**Jesse McElwain**  
Publicity and Outreach Director  
CUSD

The conference was such a great experience – not just to meet students, professors, and administrators from all over the globe, but also to gain a better understanding of what different universities and institutions are initiating on their own respective campuses. During several conversations with attendees it became clear that involving students in sustainability initiatives has proven to be a great challenge. We realized that students have unique perspectives on the issue, and that educators and administrators are eager to hear about how students would like to be involved.

The ISCN has helped me realize that campus sustainability is a much broader field than what I originally expected. Hearing experiences from around the world brought the students’ role on campus into focus, and triggered a push for greater outreach opportunity within CUSD. We now have a much more active outreach branch, and are targeting specific academic departments on campus to increase involvement on the professor, graduate student, and undergraduate levels.
**Key Outcomes**

Thursday's format was a “world café workshop.” Participants were divided into five facilitated groups and focused on solutions to some of the issues discussed on Wednesday. Key outcomes are summarized below:

**Sustainability Programming**
It is better to view sustainability activities as ongoing processes rather than one-time projects, as this will shift the focus to continuous improvement. In these processes, practitioners must devise a well-planned schedule with goals and milestones that are measurable, achievable, and time-bound. Despite the variety of campus compositions, collaborative discussions such as these in the working group sessions will allow us to see that we have common questions and problems, which we can help each other solve.

**Campus Sustainability Identity**
Campuses need to decide if they want a strong sustainability identity or not. If so, they must define why it is important and how it relates to the existing mission and culture of the institution. For example, a strong sustainability identity can be used to attract students interested in the environment and sustainability, or the institution may already have a strong “brand” which it wants to promote further. How can a sustainability vision be crafted and expressed? This is more easily done when building a new campus, as opposed to changing an already existing campus. The identity should reflect the research/educational activities that take place at the university and can include aspects such as highly visible recycling programs, deployment of new green technologies on-site, and signage and public spaces which epitomize a sustainable point of view.

**Outreach**
This group discussed how, under society’s current educational model and motivations, young children are raised to become adults driven by personal material gain rather than balanced individuals who take in a broader worldview encompassing sustainable concepts of equity and environmental responsibility. The question was raised, “How do we break this cycle?” Central themes which were discussed included changing pedagogical perspectives, more flexibility in scheduling and in the curriculum, more outdoor experiences, and hosting events such as sustainability fairs. As centers of learning, universities have a special responsibility to spread knowledge and encourage positive values.

**Partnership**
This group talked about the types of partnerships which universities can promote among various sectors and the aspects of these relationships that make them successful. Representatives from Politechnico de Milano discussed how the upcoming World Expo 2015 has been the trigger for a partnership between the city’s two universities that earlier hadn’t had any form of cooperative programs. Many similar examples came up during the discussion. A key consideration is that there needs to be a win-win situation for both parties for the relationship to develop. For example, National University of Singapore (NUS) has had many collaborative projects with universities in the United States. The relationship is mutually beneficial: for NUS, it’s good to have a well-known American university to lean on and the American universities are looking to establish a presence in Asia. Often these relationships are multidimensional, reflecting the numerous and sometimes complex interests of each party. Many of the participants discussed partnerships across a variety of sectors including local government/municipalities, and other academic institutions.
**Engagement**

This group explored the questions of where engagement around sustainability needs to take place, and with whom should the engagement occur? The first question in the group was, “Who do we need to engage?” Categorizing broadly, one can view campus stakeholders as either internal or external. Internally, engagement needs to happen both vertically (from senior administration to day-to-day operations) and laterally (cutting across faculty, staff, and student constituencies). Externally, engagement should occur with government, the city (municipality), residents of the surrounding community, and so on. Students, in particular, require involvement which is inspiring, creative, and provides “hands-on” opportunities to shape the campus sustainability agenda.

**Working Group 3. Integration of research, teaching, facilities, and outreach**

The ISCN-GULF Sustainable Campus 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.” Working Group 3 supports this principle by exploring how universities can assume their role with respect to fostering sustainable development of campus and in society at large by integrating learning, research, campus development and the development of new forms of community engagement on and beyond campus.

During the two sessions held at the conference, Working Group 3 had the objective of formulating working group expectations and identifying outcomes which could serve as a basis for developing joint objectives, deliverables and a work process. The list of Working Group 3 participants, session agendas, discussion topics, and key outcomes are provided below.
Participants

<table>
<thead>
<tr>
<th>Name</th>
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<tr>
<td>Ulrik Abild</td>
<td>Danish University and Property Agency</td>
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<td>Amanda Forsman</td>
<td>University of Gothenburg</td>
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<td>Xu Lidong</td>
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<td>Sara Anderson</td>
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<td>Antonio Gomera</td>
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<td>Ullika Lundgren</td>
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<td>Bhishna Bajracharya</td>
<td>Bond University</td>
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<td>Jakob Grandin</td>
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<td>Steve Mital</td>
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<td>Almut Beringer</td>
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<td>Emma Griffiths</td>
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<td>Heather Henriksen</td>
<td>Harvard University</td>
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<td>Eddi Omrcen</td>
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<td>Nancy Budwig</td>
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<td>Daniel J. Lang</td>
<td>Leuphana University Lüneburg</td>
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<td>Chris Powell</td>
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<td>Ann Kildahl</td>
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<td>Andrew Chamberlain</td>
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<td>Jennica Kjällstrand</td>
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<td>Claude Siegenthaler</td>
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<td>Yves Corminboeuf</td>
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<td>Ariane König</td>
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<td>Leanne Denby</td>
<td>Macquarie University</td>
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<td>Stephen Lanou</td>
<td>MIT</td>
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Agenda

Wednesday June 8

**Session 1: Sustainable education?** (90 Minutes)
Ariane König, University of Luxembourg
“10’ Introductions & Expectations”
“10’ Overview: Objectives for Working Group 3 and this session & approach”

Daniel Lang, Leuphana University
“20’ Case 1: Curriculum reform in Lüneburg: courses on sustainable development for all”

Discussion by group members of related activities at their own universities - successes and challenges. Led by Ariane König, University of Luxembourg and Nancy Budwig, Clark University

Thursday June 9

**Session 2: Research for sustainable development** (90 minutes)
Nancy Budwig, Clark University
“5’ Overview: Session objectives & approach”

Leanne Denby, Macquarie University
“20’ Case 2: Connecting Sustainability @ Macquarie University”
**Agenda (continued)**

<table>
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<tr>
<th>Thursday June 9</th>
<th>Discussion by group members of related activities at their own universities - successes and challenges. Led by Nancy Budwig, Clark University</th>
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|                 | Next steps for WG3: Led by Ariane König, University of Luxembourg  
|                 | - Expectations of WG3 work?  
|                 | - Development of case studies for a book?  
|                 | - Objectives for the case study and proposed structure?  
|                 | - Who would like to propose a case study of their own University?  |

**Discussion Topics**

This was the first time Working Group 3 met. Working Group 3 was asked to make meaning of the ISCN-Gulf Charter principle 3 for the development of tools and best practices for change agents within universities.

*Expectations of participants – useful tools for change agents – main questions raised:*

- What experience can we draw on for curriculum reform? (Brown, Clark, Harvard, HKU, Leuphana, Luxembourg, Macquarie, MIT, and others)
- How can interests of students, staff, faculty and partnership organizations be balanced in such reform processes?
- What does “integration” mean and how can it be achieved?
- How can we use campus and city as living laboratory?
- How do on-campus and off-campus situated learning and knowledge production opportunities compare?
- What questions can we ask ourselves to improve our approach and practice? What aspects of our organizations can we compare, and what can we learn from the differences?

**Case presentations**

Daniel Lang and Leanne Denby each presented case studies. The two presentations nicely contrasted the variation in approaches to sustainability. In Prof. Lang’s case, the University adopted a new vision that centered on issues of sustainability and interdisciplinarity which provides affordances for progress and coherence on Working Group 3 issues. Ms. Denby pointed out some of the complexities of bringing sustainability into the curriculum.

*Prof. Daniel Lang* presented on a novel approach to institutionalizing sustainability in research, partnership, campus development and education based on experiences at Leuphana University in Lueneburg Germany. The University is in the midst of a major restructuring that takes sustainability as a central axis of the university. One of the goals of the work at Leuphana has been to rethink the approach towards sustainability science based on stressing the importance of inter-disciplinary and trans-
disciplinary study and research. Also emphasized is the notion of the importance of collaboration in networks with strong partners on authentic projects. The model presented was based on a unified vision which included the construction of a new sustainable building.

Another key feature is a semester of the bachelor’s degree program required for all students (regardless of their major) which includes a significant focus on sustainability issues. The University also has coordinated programs across bachelor, master, MBA and doctoral level with sustainability foci. The educational mission of the University is highly connected to sustainable community development and transdisciplinary research processes. All of the various activities of the University (education, research, campus facilities, and community development) come together under a unified vision related to the sustainable university. The presentation was inspiring and clearly represented how a university could develop a plan around the topic of the working group which then is implemented, as opposed to adding on sustainability programming at the margins.

Ms. Leanne Denby presented the case of Macquarie University, which underlined the reality of implementation: holistic integration of sustainability into curriculum is not an easy task. Even with strong supporting governance structures, and in the case of Macquarie University this includes strategic documents, graduate capabilities and curriculum focus all supporting sustainability, embedding it into curriculum has been difficult. Some good progress has been made on an ad hoc basis, including utilizing the campus for teaching and research, but many barriers have impeded efforts to move this agenda along. Practitioners and academics alike need to ask very basic questions pertaining to what it is they are trying to achieve, and what can realistically be achieved. Understanding what success looks like is also important. A good starting point is to have a high-level definition of sustainability, which can be interpreted and articulated across the various disciplines. It is hard to start the conversation with academics without this. Furthermore, an approach purely from a content perspective (i.e. inserting information about sustainability into units) is not helpful. Rather, the importance of process should be emphasized (i.e. how is learning occurring? Experiential learning, reflective practice, peer mentoring and interactive learning are examples of good practice). Institutions should look for trigger points to incentivize change across academic departments and ask how this can be leveraged to achieve goals and objectives. Real integration will take time.

**Key Outcomes**

Discussions highlighted the need to produce quickly accessible tools for practitioners and change agents to draw upon to inform their efforts to integrate teaching, research, facilities and community engagement in a meaningful manner. A website as repository allowing quick access to such tools that have an overview function and facilitate drawing on diverse experience brought together by the ISCN was suggested. On the other hand, the group also agreed there was a need to draw on diverse experiences brought together under Working Group 3 to do conceptual work that will help to give each
member institution’s activities more traction and for their campuses to serve as more effective living laboratories. The group thus agreed to work on three main types of products / deliverables, and that the level of engagement to contribute to any one of these was open to all participants.

1. Develop a webpage as part of the ISCN site with practical resources for change agents: the first product to be posted there will be the overview table on key measures for “integration” from ISCN-GULF Sustainable Campus Charter reports as well as from direct input of other ISCN members. This overview table can, for example, help each institution to decide which reports from other universities will be most worthwhile for them to read in more detail.

2. Develop case studies of selected universities

3. Develop concept papers. For a more detailed description, see the extended Working Group 3 summary on the ISCN website.

   • Changing notions of knowledge and practice and the concept of living laboratories—Moving toward knowledge that transcends disciplinary boundaries and is embedded in action and communities of learning.

   • Interdisciplinarity—Most challenges our society faces today come from the interaction of complex social and natural phenomena. This study will investigate ways to overcome the blind spots which arise from our historical focus on producing knowledge rooted in discreet disciplines.

   • Well-being, quality of life, and value change (to be developed further).

Working Group 3 processes and outcomes count: The working group itself with diverse participation of sustainability officers and academics from a variety of disciplines, and people who consider themselves being at the interface of both, was also seen as an experimental field suitable for refining and getting feedback on individual cases. This group will allow establishing processes for integration by linking research from diverse disciplines, practice, and community engagement. Joint knowledge production will draw upon both practitioner and academic input. Thus one can consider this group as a safe place for experimentation in a diverse learning community.

At the next ISCN meetings, the group will plan for two types of Working Group 3 meetings (of 3 hours): an issues-based world café that will allow them to collaboratively work on selected issues of the Working Group 3 members, and a case-based working session. The group will ask members of the network to suggest their provocative issues. The collaborative process and the deliverables will count as success for the group.

Issues suggested for World Café sessions:

   • Transition from a well-funded grass roots initiative to an institutionalized non-funded initiative – where and how to find funds? (Emma Griffiths, Bradford University)

   • How to prepare for a leadership transition in your organization (Emma Griffiths, Bradford University)

   • Integration of research, teaching and community engagement in innovative learning environments (Daniel Lang, Leuphana University)
5.2 Peer-to-Peer Sustainability Workshops

On Friday morning, a series of concurrent workshops were held to collaboratively explore and innovate upon a set of key sustainability issues faced by colleges and universities in the ISCN. Each of these five facilitated workshops was designed to encourage direct exchange of best practices and collectively develop new approaches to a specific campus sustainability challenge.

“Green Purchasing” Led by Steve Mital, University of Oregon

In this workshop, attendees met to discuss sustainable purchasing. Each participant described their respective campus environments, with the common challenge of decentralized purchasing. They discussed appropriate strategies to identify green products and barriers to getting staff to consider them. Tools and approaches to overcoming these challenges include third party eco-labels, institutional purchasing guidelines, targeting high value and frequently purchased items, life-cycle analysis and triple bottom line trainings. Mr. Mital also described plans to launch a Green Purchasing Network at University of Oregon. This will be an IT-supported learning community that provides campus purchasing agents with communications tools to better facilitate peer-to-peer exchanges, access product reviews, and use a triple bottom line decision tree to help make better purchasing decisions.

“Reconciling Campus Sustainability Goals with Campus Growth” Led by Claude Siegenthaler, Hosei University

This workshop included a large group of participants who focused their discussion on the challenges of seeking sustainability goals, such as energy and greenhouse gas reduction targets, in light of most campuses’ overarching motivation to continue growing. The challenges which arise include facing a “rebound effect” after targets are set, due to engrained organizational behaviors and perceived barriers to implementation (such as perceptions that sustainability costs more or entails a sacrifice in comfort or functionality). In order to overcome these barriers, sustainability practitioners must embrace methods for engagement both with leadership and with all the stakeholders across campus and beyond. These techniques can incorporate quantitative measures and creating the business case for sustainability (i.e. converting sustainability performance into cost savings), as well as behavior change and social marketing to foster a culture of sustainability on campus (i.e. on-campus competitions and peer-to-peer leadership models). Participants also pointed out cases in which substantial progress could be achieved by joining forces with stakeholders beyond the campus on specific projects like energy supply or IT centers to build shared facilities.

“How to Define the Success of Campus Sustainability Programs?” Led by Ullika Lundgren, Gothenburg University

In this workshop, participants explored the challenges of shaping campus sustainability programs and ways to define and track the success of the program. Topics included measuring attitudes, values, and norms as they relate to sustainability, and tangible outcomes which can be considered a marker of success. The participants broke out into three groups to map out a definition of “success” and the ideas
which were generated included both internal measures (campus-wide targets, leadership support, learning outcomes, positive attitudes toward sustainable change, participation rates) and external measures (such as publicity, production of peer-reviewed research, and performance in benchmarking programs). Some overarching themes of the discussion were that sustainability programs need to focus on engagement from the initial formulation of an idea through completion, rather than just informing stakeholders of the results, and sustainability should be viewed as a continuous improvement process rather than discreet projects with concrete end-dates.

“Engaging Middle and Senior Management in Campus Sustainability” Led by Katrina Groves, INSEAD

In this session, Ms. Groves led a discussion and brainstormed with participants on how to obtain top down buy-in from senior and middle management for the implementation of a sustainable development policy on campus. Among the best practices shared between the participants was the importance of establishing a school charter. This implies cross campus/cross department involvement and full integration of staff and the student body throughout the organization. The importance of external auditing and international accreditation was also discussed and recommended. This can be used and leveraged not only as a promotional tool but also as a means of the setting up and an environmental measurement and management system. The integration of sustainable development issues in the core curriculum was also highlighted. This was recognized as a difficult and long process but can be overcome as several universities have already demonstrated. Another important engagement tool which has proven to be effective is the showing hard figures (quantitative metrics and other facts) to senior and middle management proving that a sustainability policy within the institution is vital from both an environmental and economical standpoint.

Christopher Powell, Director, Sustainable Energy and Environmental Initiatives, Brown University

The ISCN conference did a great deal to inspire participants to further develop their sustainability programs and I learned how different universities from across the globe are integrating sustainability more deeply into their campus. It was really interesting to connect with the other roles in sustainability instead of just practitioners, i.e. academics. One exciting development is that the conference inspired me to write a chapter in a book through ISCN collaboration.

Compared to similar networks, the size of the ISCN makes it easier to develop more meaningful connections rather than the seminar / presenter type of situation. The ISCN has also helped Brown University understand where our current sustainability initiatives are lacking and hopefully we can use the information gained here to inspire others at the university to understand the value of expanding our sustainability efforts.
Participants in this session discussed ways to successfully harness student interest in campus sustainability. Ms. Budwig pointed out that a growing body of research exists in the learning sciences, which can be applicable to sustainability, suggesting a variety of ways to leverage student enthusiasm for productive outcomes. Clark University is in the midst of a curricular reform that is trying to capitalize on the deep connections to be found between undergraduate and graduate education, cutting-edge faculty research, and impact on campus sustainability. Powerful examples have been found where students join and at times lead critical campus initiatives with sustainability impacts. Mr. Leape shared a few insights from the failures and successes of his various sustainability-related endeavors at Cornell. A project redesigning a building near campus failed due to few hands-on activities, the slow timeline of U.S. construction, and an inability to create a rigorous course that fit the project. A successful project involved the participation in a two-week urban planning workshop in China. Elements of success included a short commitment time, intense work and interaction with professionals, and well-designed documentation. The Schoolhouse South Africa project takes all of these lessons into account. Most notably, the scale and type of project proved a perfect fit for courses in developmental ethics, social studies, architecture and engineering. Students were drawn to the “applied” nature of the project, motivating them to work independently. Students should be encouraged to consult faculty for advice, but not be directed. Key suggestions from the discussion included approaching the development of a student organization as an NGO, involving students in project-based work, incorporate student projects in campus management activities, and specifying the skills which will be developed by the students involved in these projects, crystallizing the connection between sustainability project work and learning outcomes tied to existing academic goals.
6. Closing Session

6.1 Next Steps for the ISCN
Bernd Kasemir, ISCN Program Manager

The “Next Steps” section started with taking stock of what has been achieved in the past year and where the ISCN currently stands. A key development was the consolidation of ISCN-GULF Sustainable Campus Charter membership and the first successful season of ISCN-GULF Charter reporting. As reflected on the new ISCN website, around thirty leading universities from all over the globe are currently ISCN-GULF Charter Members. More than a third of these have already reported their past performance and future goals in ISCN-GULF Sustainable Campus Charter Reports. As an example, the report by the National University of Singapore (NUS) was discussed at the conference, with its introduction to NUS, a description of how issues pertaining to all three Charter principles are managed at the institution, and an overview of results achieved and future goals by NUS for key topics within each of the Charter principles.

Next steps with regard to the Charter and Charter Reporting will include broadening the ISCN-GULF Charter membership in a meaningful way, in other words, to make sure that institutions that join the Charter are established or new leaders in the field of campus sustainability and have lessons to offer to other Charter members and others beyond. All Charter Members and informal ISCN network participants are asked to point out suitable candidates to the ISCN Secretariat team. With regard to Charter Reporting, gaining experience of how the reports can be used most effectively as an internal management and awareness raising tool (for all groups from university leaders to students) and how other schools can best benefit from the lessons contained in these reports will be important.

With regard to the ISCN Working Groups, knowledge exchange between participants is most effectively achieved with a mix of formal collaborations (e.g. in case studies) and informal exchanges, where group participants use each other as a resource for inspiration and feedback -whether it’s at the ISCN meetings or via email in between. One issue that gained interest as a topic to be explored further is the tension and trade-offs between excellence and sustainability (see the presentation by Ann Kildahl in section 4.3). Another topic that was seen as important was how best to integrate carbon management issues in the ISCN Working Group structure. Following the Charter, this topic is seen as part of Working Group 2’s purview (institution-wide carbon goals), but it has clear cross-linkages to Working Group 1 with its building focus, and Working Group 3 when it comes to the integration of research, teaching, facilities and outreach on carbon-related issues. Part of the Next Steps of the ISCN will be to clarify how the ISCN Working Groups work together on issues related to carbon management and climate action plans.

The session closed with some highlights on the organizational development of the ISCN. As of 2010, the ISCN Secretariat is now hosted by EPFL, ETH Zurich, and “Novatlantis- sustainability in the ETH domain.” Core funding has been secured up to 2013, and other income including Charter Membership fees has started to complement these sources for a sustainable funding of the organization. In addition, the hosts of the ISCN Conferences and Symposia are making major contributions to the development of the ISCN by funding the local costs that cannot be covered by meeting participation fees.

This discussion moved the session to its final point: the declaration of the 2012 ISCN Symposium host: The 2012 ISCN Symposium will be held at the University of Oregon (USA) on June 19-21, 2012.
6.2 Closing Ceremony
Eddi Omrcen, Environmental Manager for the University of Gothenburg

At Friday’s buffet lunch, conference host Eddi Omrcen, Environmental Manager for the University of Gothenburg, drew the day to a close with reflections of the week’s events, and a review of lessons learned through the development of the University of Gothenburg’s recent sustainability report. This comprehensive report was written in accordance with the rigorous standards of the Global Reporting Initiative. Eddi also commented that the ISCN has a growing and important role in encouraging international discourse on campus sustainability, and should continue to expand in this area in the future. Members of the conference planning team, speakers, and participants were warmly thanked for making the event a success. As a final touch, University of Gothenburg graciously presented each of the attendees with a parting gift, a certificate for the planting of a tree as part of an agroforestry project aimed at supporting farmers and combating desertification in the Lake Victoria region of Africa.
# 7. Participants List

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<td>Ulrik</td>
<td>Danish University and Property Agency</td>
<td>Head, Development and Innovation</td>
<td>Denmark</td>
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<td>Bojan</td>
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<td>Barazzone</td>
<td>Esther</td>
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Online question and comment form:
http://www.international-sustainable-campus-network.org/about/contact.html

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