

INTERNATIONAL ALLIANCE OF
RESEARCH UNIVERSITIES

IARU Presidents' Meeting 2014

ETH Zurich

24–25 April 2014

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IARU Presidents' Meeting – Agenda

ETH Zurich, 24–25 April 2014

Wednesday, 23 April

- 16:00 *Pick-up at hotels, transfer by bus to Campus Höggerberg*
- 16:30 **Promoting Entrepreneurship at ETH Zurich**
(Optional program with the delegates of IARU Tech Transfer Workshop)
Welcome address by Prof. Dr. Roland Siegwart, VP Research and Corporate Relations
- 16:45 Entrepreneurship in the Life Sciences, Visit HPL Labs
Dr. Marjan Kraak, ETH transfer / ieLab Life Sciences
- 17:30 *Walk to the Department of Material Sciences, Drinks at D-CHAB Pub*
- 18:30 *Transfer by bus to restaurant (pick-up at Department of Material Sciences or at hotels)*
- 19:00 **Welcome Dinner** (Villa Hatt)
- 21:30 *Return by bus to hotels*

Thursday, 24 April

- 08:00 *Pick-up at hotels, walk to ETH Main Building*
- 08:30 **Opening & Welcome**
Prof. Dr. Ralph Eichler, IARU Chairperson
- 08:45 **Session 1: Institutional Joint Working & Research**
- 1.1 **Value of Research Intensive Universities** (UCPH / NUS / IARU Secretariat)
 - 1.2 **Academic IP Pooling and Collaborative Technology Transfer** (PKU / ETH)
 - 1.3 **Research Administrators' Network** (PKU)
 - 1.4 **EdTech Horizons Workshop** (NUS)
 - 1.5 **International Student Teaching & Support** (Oxford)
 - 1.6 **Women and Men in Globalizing Universities** (ETH)
 - 1.7 **Librarians' Contact Group** (ETH)
 - 1.8 **Alumni Associations Network** (UTokyo / ETH)
 - 1.9 **Aging, Longevity and Health** (UCPH)
- 10:15 **Session 2: Global Education Initiatives**
- 2.1 **Global Summer Program GSP**
 - a) GSP Report (IARU Secretariat)
 - b) IARU-Santander GSP Scholarships Extension (IARU Secretariat)
 - c) Memorandum on Student Exchange for GSP (UTokyo)
 - 2.2 **Global Internship Program GIP** (IARU Secretariat)
 - 2.3 **Global Cross Disciplinary Tournament GXT** (ANU)
- 10:30 *Refreshment break*

- 11:00 **Session 3: University-Industry Cooperation**
Dr. Hubertus von Grünberg, Chairman of the Board, ABB
- 12:30 *Lunch (Faculty Club)*
- 13:30 **Session 4: Presidents' Regional Round-up**
- 15:15 *Refreshment break / photo session*
- 15:45 **Session 5: New Proposals**
5.1 National Research Foundation Proposal (NUS)
5.2 IARU-Santander Research Fund (IARU Secretariat)
5.3 Global Transformation in IARU Member Strategies (ETH)
5.4 Graduate Student Conference (UCPH)
5.5 Partnership with Futurity (ETH)
5.6 PKU Medical City (PKU)
5.7 Participation in 'The Limits of the Numerical' (Cambridge)
- 17:00 **Session 6: IARU Membership** (UCPH / Oxford / NUS)
- 17:30 *End of meeting day 1, walk to focusTerra (Building NO)*
- 18:00 **IARU Alumni Networking Session** (focusTerra)
- 19:00 *Bus transfer to restaurant*
- 19:30 **Formal Dinner** (*Restaurant zum Storchen, Presidents dine separately*)

Friday, 25 April

- 08:30 *Pick-up at hotels, walk to ETH Main Building*
- 09:00 **Session 7: Setting the Tone: The Role of Leading Universities in Self-Policing University Values**
Robert Quinn, Executive Director of Scholars at Risk Network
- 10:30 *Refreshment break*
- 11:00 **Session 8: Sustainability Activities**
8.1 Sustainable Campus Initiative (ANU / ETH)
8.2 Sustainability Science Congress 2014 (UCPH)
- 11:30 **Session 9: Business Matters**
9.1 IARU Chairperson and Secretariat 2015–2016 (IARU Secretariat)
9.2 Financial Report (IARU Secretariat)
9.3 Presidents' Meeting 2015 (IARU Secretariat)
9.4 Wrap-up (Prof. Dr. Ralph Eichler, IARU Chairperson)
- 12:00 *End of meeting, buffet lunch*
- 13:00 **Optional: Visit to Disney Research Lab Zurich** (*approximate end at 15:00*)

Participants

Australian National University

Dr. Erik LITHANDER – Pro Vice-Chancellor, International & Outreach

ETH Zurich

Prof. Ralph EICHLER – President

Prof. Gerhard SCHMITT – Senior Vice President ETH Global

Dr. Jürg BRUNNSCHWEILER – Director Global Institutional Affairs

National University of Singapore

Prof. Chorh Chuan TAN – President

Prof. Andrew WEE – Vice President, University & Global Relations

Prof. Barry HALLIWELL – Deputy President, Research & Technology

Mr. Bernard TOH – Director (Projects & Communications), Office of the President

Peking University

Prof. WANG Enge – Chair Professor of Physics, President

Prof. CHEN Dongmin – Dean, School of Innovation and Entrepreneurship

Prof. SHAN Wang – Head, Peking University International Hospital

Prof. LI Chenjian – Vice Provost and Associate Dean of School of Life Sciences

Prof. ZHANG Xudong – Chong Keung Chair Professor, Dep. of Chinese Language & Literature

Dr. XIA Hongwei – Director, Office of International Relations

Ms. LI Yun – Deputy Chief, Division for Exchange Programs, Office of International Relations

University of California, Berkeley

Dr. Nicholas B. DIRKS – Chancellor

Prof. Pradeep CHHIBBER – Director, Institute of International Studies

University of Cambridge

Prof. Leszek BORYSIEWICZ – Vice-Chancellor

Dr. Jennifer BARNES – Pro-Vice-Chancellor for International Strategy

University of Copenhagen

Prof. Ralf HEMMINGSEN – Rector

Prof. Thomas BJØRNHOLM – Prorector for Research and Innovation

Mr. Steen ULRICH – Director, Rector's Office

Ms. Astrid GUFLER – Senior Consultant, Rector's Office

University of Oxford

Prof. Andrew HAMILTON – Vice-Chancellor

Mr. Ed NASH – International Strategy Officer

The University of Tokyo

Dr. Junichi HAMADA – President

Prof. Yoichiro MATSUMOTO – Executive Vice President

Dr. Masako EGAWA – Executive Vice President

Prof. Kiichi FUJIWARA – Professor, Graduate Schools of Law and Politics

Mr. Kentaro SUGIURA – General Manager, International Affairs Department

Ms. Midori OZAWA – Specialist, International Planning Group

Ms. Mayuko NAKAI – Administrative Staff, International Affairs Department

Yale University

Mr. Don FILER – Executive Director, Office of International Affairs

IARU Secretariat

Mr. Anders HAGSTRÖM – IARU Secretariat

Ms. Romana RUTZ – IARU Secretariat

Host (ETH Zurich)

Ms. Lucia ARPAGAUS – Administration, ETH Global

1.1 Value of Research Intensive Universities

Lead	University of Copenhagen National University of Singapore
Reporting	IARU Secretariat
Executive summary	<p>UCPH and NUS presented a revised draft of the position paper on the “Value of Research Intensive Universities” and of the website write-up to the Senior Officers’ Meeting 2013. The final draft, which no longer contains key performance indicators, was approved by Senior Officers for publication on the IARU website.</p> <p>With the publication of the website in February 2014, the initiative is closed. Keeping the page up to date and relevant will be the next challenge. Periodical new case studies and links to the respective universities’ news stories will be required from all partners.</p> <p>This document contains:</p> <ul style="list-style-type: none"> ▪ Final report on the initiative “Value of Research Intensive Universities”
Funding to date	USD 12,151: Workshop, October 2010
Outcomes of previous meetings	<p>Senior Officers’ Meeting, November 2013</p> <p>UCPH and NUS presented a revised draft of the position paper on the “Value of Research Intensive Universities” and of the write-up of the website. The key performance indicators have been taken out and more emphasis has been put on storytelling, on the Humanities and on research-based education.</p> <p>The meeting thanked UCPH and NUS for their hard work with this paper. A few partners regretted the removal of the metrics, but these could be included in case studies when describing the impact of research. It was decided to publish the revised position paper and the web write-up on the website. The partners were asked to let the Secretariat have any objections by 30 November 2013. Each individual IARU member could then use the website as a point of reference and translate it to the official language of the country when discussing the value of research intensive universities at home.</p> <p>Case studies should be continuously added to the paper to keep the paper relevant and fresh. The universities will be annually prompted by the Secretariat to send new stories or links to the respective universities’ news stories.</p> <p>IARU partners wishing to translate the position paper into their national languages are welcome to do so and are asked to send copies of such translations to the Secretariat.</p> <p>Jennifer Barnes (Cambridge) drew the Senior Officers’ attention to the <i>HEFEI Statement on the Ten Characteristics of Contemporary Research Universities</i> announced in October 2013 by four university consortia (Association of American Universities, Group of Eight, League of European Research Universities and Chinese 9 Universities). These</p>

consortia include UC Berkeley, Yale, ANU, Cambridge, Oxford, and PKU.

Presidents' Meeting, April 2013

Copenhagen presented a position paper which it developed with Senior Officers from NUS, Berkeley and Cambridge. The purpose of the position paper was to be a resource point for various IARU partners in their own efforts to create a more nuanced argument to various stakeholders and the public, on how research universities contribute to society. If they choose to do so, partners can publish the position paper, or link the webpage to their university website.

Presidents did not agree on the set of ecosystem indicators or "KPIs" that were proposed. ETH thought that the measures were useful and good indicators of value. However, Cambridge shared that such indicators are likely to assume the form of another league table or ranking, preferring qualitative measures. Yale expressed concern that the indicators do not capture the value of humanities research, which is the area most severely attacked. Adding to this, ANU suggested that the term used should be "knowledge transfer" rather than "technology transfer". The leads noted the suggestions and would work on including more case studies.

Copenhagen also presented the website containing write-ups based on value-streams identified at its 2012 workshop, supplemented by case studies. The website link has been disseminated to partners to solicit comments, before publishing the website online. Once approved, the position paper would be included on the website. Partners were requested to revert with their comments by the end of April 2013.

Final Report on the Initiative “Value of Research Intensive Universities”

Background

The discussion on measuring the value of research intensive universities was started at the Presidents' Meeting 2010. A workshop, organized at ETH Zurich in October 2010, discussed possible methodologies to demonstrate the value of research universities. At a second workshop in Copenhagen prior to the Presidents' Meeting in April 2012, a goal was set to further develop and discuss why and how the value of universities should be measured in order to begin the process of writing a *position paper* on university value and how to document it.

The starting point for the position paper was a reflection paper which was discussed and further developed during a workshop at the Senior Officers' Meeting in Cambridge in October 2012 and in a workgroup consisting of representatives from NUS, UCPH, UC Berkeley and Cambridge. As a supplement to the position paper, a section was set up on the IARU website. The purpose of the web pages is to collect and publish reports on university value and case studies from the IARU members.

The Presidents at their meeting 2013 in Singapore decided to remove the key performance indicators from the position paper. NUS and UCPH then presented a revised draft of the position paper and the website write-up to the Senior Officers' meeting at Berkeley in November 2013, with the metrics removed and more emphasis on storytelling, on the Humanities and on research-based education. Senior Officers approved the final draft and decided to publish the position paper and the web write-up on the website.

Result and Outlook

In February 2014, the Secretariat published the position paper on the “Value of Research Intensive Universities” (see Annex) and the write-up on the IARU website: <http://www.iaruni.org/institutional-joint-working/value-of-research-intensive-universities/>

Each individual IARU member can now use the website as a point of reference when discussing the value of research intensive universities in their national context. IARU partners wishing to translate the position paper into their national languages are welcome to do so and are asked to send copies of such translations to the Secretariat.

Case studies should be continuously added to the paper to keep the paper up to date and relevant. Partners are free to include metrics in case studies when describing the impact of research.

The universities will be annually prompted by the Secretariat to send new case stories or links to the respective universities' news stories.

Annex – Position Paper

The Knowledge Ecosystem

Measuring the Value of Research Intensive Universities

IARU Position Paper

IARU believes...

The purpose of research-intensive universities is to make ground-breaking discoveries and to seek and transmit knowledge and new understanding.

In its own right and to the benefit of society.

This research should of course be independent and respect the fundamental principles of academic freedom. And this applies to all areas of human endeavour from the medical and natural sciences to the arts and humanities. And it involves both education and research.

It will never be possible to quantify every aspect of the entire value produced by research-intensive universities by simple metrics.

It is however necessary for the universities to be able to document their value to society, including taxpayers and politicians.

Today, this is done by applying a wide range of metrics in order to measure the three elements which constitute the core of research-intensive universities: Research, education and (knowledge exchange) technology transfer. It is mainly done by measuring *input flows* such as money and the number of students and *output flows* such as citations, number of publications and graduates.

These methods do not adequately show what IARU considers to be the *special value* of research-intensive universities: The fact that research, education and technology transfer/knowledge exchange, are concentrated in the same physical space and constitute a critical mass of excellent researchers and students, state-of-the-art infrastructure and a spirit of curiosity and innovation. This is only indirectly encompassed in simple in- and out-put metrics.

The key to understanding how research-intensive universities create value lies in what happens when the elements co-exist and form what could be described as a “**knowledge ecosystem**”.

IARU suggests that a new and comprehensive way to describe the overall value creation of research-intensive universities should include this knowledge ecosystem.

As such, we must – in addition to metrics for isolated research, education and technology transfer flows – describe and tell the many stories of the effects of the *synergy* created by the **co-existence** of research, education and technology transfer.

Introduction

1. IARU's members share the experience that expectations from society and stakeholders towards universities and their ability to document their value are increasing and are likely to increase for the foreseeable future.
2. These increased – and legitimate - expectations are often translated into societal and/or political demands.
3. Historically universities have maintained a commitment to excellence in spite of resistance to measuring it. But this resistance is changing, as stakeholders demand more evidence. IARU recognizes a need for a dual response to this development.
4. IARU's members recognizes the need to meet the constant challenge to improve the understanding among decision-makers and the general public of the fundamental societal role played by research universities.
5. We also recognize the need to improve and refine the ways in which universities can demonstrate the direct and indirect value they bring to companies and society as a whole. This should be done in a balanced way that takes into account that a good part of the value of research intensive universities can and should not be measured by a simple metric.
6. For quite some time, IARU has constituted a forum for debating the issue of measuring the value of research intensive universities. The discussions were initiated at the IARU Presidents' Meeting in April 2010 and further developed at subsequent workshops and through discussions at ETH Zürich in October 2010, in Copenhagen in April 2012 and again at a IARU Presidents' Meeting in Singapore 2013.
7. The following position paper is the result of these discussions and constitutes IARU's position on documenting the value of research intensive universities.

The value of research intensive universities can and must be established – but it is an act of balance to do so

8. Research and higher education are a high priority on the political agenda these years. Taxpayers and politicians alike are asking for value for money. Universities are increasingly being held accountable through “hard” facts such as bibliometrics, rankings, ability to attract funding, number of students and bottom line numbers that show the value of universities for companies and society.
9. At the same time, universities have vastly extended their reach and ways of achieving economic and social impact:
 - Technology Transfer Offices have proliferated in order to manage and license a growing IP from research.
 - Universities have created incubators and science parks to nurture new enterprises.
 - Many universities have instituted courses to help undergraduates and graduate students acquire the skills for successful entrepreneurship.
 - Some universities have taken equity positions in spin-off firms.
 - Some universities are engaging their students in “science-dating”, internships or other activities through which they help companies solving specific research tasks during their education.

- Many universities participate in solving societal challenges in partnership with governments.
 - Research-intensive universities are increasingly trying to mix disciplines and in that way search for holistic solutions to problems by drawing upon both natural sciences, social sciences and the humanities.
 - And many of these universities have understood that for many - if not most - of their graduate students, education and research are inseparably linked: By definition the outcome of research must be unknown from the outset. But at the end of a failed experiment, a university has at least educated a researcher. This is an important part of the value that universities create.
10. IARU believes that research intensive universities play an important role in their respective countries and beyond by contributing to society by reaching for the highest level of education and research.
11. IARU also believes that it is important for both universities and society to be able to sensibly document the impact of universities in order to attempt to prove to "investors", the public and to ourselves how our research and education contribute to society.
12. The ability to demonstrate specific kinds of impact has greatly improved, especially with the development of powerful tools for collecting, interpreting, and displaying massive amounts of data.
13. It should however also be taken into account, that universities and the political system still face a real challenge when documenting the comprehensive value of universities. The breadth of the universities' contribution poses a particular problem for the analyst, and there are several pitfalls to be taken into consideration:
- It is relatively easy to measure the impact of new inventions sold to the industry or to measure the value of spinoffs, i.e. applied sciences. Measuring the impact of fundamental research is much more difficult because of the long term timelines over which the value of fundamental research becomes evident.
 - There is a longitudinal problem: How long past investments in research take to bear fruit, but also how long developments going forward need to (and sensibly can) be monitored.
 - It also poses a challenge to find ways to measure the value of humanities and arts, educating good historians, language teachers, psychologists etc.
 - Many analytics are devoted to measuring outputs mainly important to science – e.g. bibliometrics – rather than outcomes important to society.
 - There is a high risk of perverse incentives encouraging "bad" behaviour. "What you measure is what you get", a fact which can also, potentially challenge the academic freedom, which is crucial to research intensive universities.
 - There is a lamppost problem: Ignoring the immeasurable or the tendency to measure in favour of what *can* be measured.
 - And finally: There is a risk, that a too intensive focus on measuring and documenting will overburden administrators and researchers, taking up time from core activities.
14. The act of measuring is thus an act of balance, showing only a very limited part of the comprehensive value of a university. This is why IARU suggests that it is necessary to show the

value of research intensive universities in alternative ways in order to document their value towards stakeholders and taxpayers/the general public.

The value streams of research intensive universities

15. The fundamental contribution to society by universities lies in creating and passing on knowledge for its own sake *and* engaging with society in its application.
16. Universities today are an integral part of society, actively participating in fulfilling “a third mission” for universities, namely involvement in socio-economic development, thus becoming the third element of what has been described as the “triple helix” – the collaboration between Government, Industry and Universities in order to create innovation and economic growth.
17. Today there is a clear tendency that universities contribute more and more to solving the grand challenges of society. This also leads to an increasing demand (for instance from foundations) for more holistic solutions, involving interdisciplinary research in order to solve these challenges, which continues to grow in complexity. Thus there is not only a greater focus on the triple helix model, mixing Government, University and Industry, but also a demand for universities to mix disciplines in order to come up with *sustainable solutions* to the challenges societies are facing.
18. This means that the way of looking at the value of a university should change.
19. A common way to describe output of research intensive universities today is by measuring the output of the three main **value streams** of research intensive universities:
 - a. **Research** (production and distribution of new knowledge through articles, publication and access to research)
 - b. **Education** (the knowledge and “soft skills” of candidates)
 - c. **Technology transfer/knowledge exchange** (collaboration with the outside world, hiring of graduates by industry, consultancy, patent/licensing/spinoff companies)
20. The challenge is, that quantifiable indicators such as citations, graduate salaries, number of patents etc., most often describe the value streams as separated and in terms of a simple input/output logic.

A fourth and new way of describing the special value of research intensive universities: The knowledge ecosystem

21. While it can make sense to measure the value streams separately, IARU argues that the crux of the specific value of research intensive universities is that the three main value flows of universities are interrelated and interact in a way that creates value far beyond the simple sum.
22. The fact that the three flows are gathered in one university, in the same organisational and physical space, is a key to understanding the special value of research intensive universities. Research, education and exchange of knowledge with the outside world fertilize each other: Challenges met by industry and society may inspire new basic and applied research, contact with students inspires the researcher, researchers include students in their work on research projects, companies exchange knowledge with graduates when they employ them or through internships, student projects etc.

23. This means that research intensive universities are able to simultaneously perform fundamental research with a sufficiently broad scope, be the pacemaker for the creation of new products and technologies, a think-tank for governmental strategies and regulations, a provider of skilled manpower to industry and society and provide valuable input to society and the way we think about life, culture, history – i.e. research that expands intellectual breadth and develops ideas and discourses about human experiences which will prepare us more effectively for an increasingly global and cosmopolitan world: Things which are not only giving us something to live from, but also to live for.
24. Another valuable consequence of this inseparable link between education, research and knowledge exchange is that research intensive universities always will be sure of creating value for society: By definition the outcome of research must be unknown from the outset. But at the end of a failed experiment, a university has at least educated a researcher. This is an important part of the value that universities create.
25. A way to describe this special value of research intensive universities caused by intertwined value streams – and thus painting a fuller picture of the value of universities – could be to show the vitality of this “knowledge ecosystem”.
26. In the ecosystem we include the interaction between the three value streams, taking place at a research intensive university and in relation to the outside world: The special value produced in the space between research and education. Between knowledge exchange with the surrounding world and research. And between education and knowledge exchange.
27. This cannot be done by using numbers. It has to be done by using words, describing the cases from real life to show how the ecosystem creates value. IARU thus believes, that much more emphasis should be put on telling the many stories of how research, education and knowledge exchange at the research intensive universities creates value far beyond a mere input/output point of view.
28. As IARU members we will strive to tell the stories of how the knowledge ecosystem works and we will, when possible, urge politicians and other opinion makers to apply this perspective and not only the quantifiable perspective when discussing the value of universities in the future.

Conclusions

29. However difficult, IARU recognizes that documentation of the value of research universities is demanded and that it is in the interest of universities to contribute to the political debate on the value of universities by suggesting alternative methods to show value which are meaningful to the universities themselves.

The overall value of universities as cultural and societal institutions is next to impossible to measure by simple metrics. First of all, the value of good high school teachers, people with language skills, economists, doctors, lawyers, musicians, historians etc. etc. cannot be measured in exact numbers. Secondly, the value of investing in university research and education is more often than not visible only in a long-term perspective.

30. IARU believes that a good part of the value of research intensive universities lies in the fact that their three value flows, research, education and knowledge exchange coexist in the same physical space and that they are thereby closely interrelated, constituting a **knowledge ecosystem**.

31. It is only possible to understand or describe the full complexity of the research intensive universities, when being able to describe what happens when the three value streams interacts in this knowledge ecosystem.
32. In order to paint a fuller picture of the special value of research intensive universities, IARU suggests that the many excellent examples of how research, education and knowledge exchange collaborate in order to create new meaning, new inventions and new contributions to society should be described.
33. Only in this way, will it be possible to take fully into account the complexity and time span of research, education and knowledge exchange and to describe how these value streams are inseparably intertwined and how this is what creates true value for society – whether it is in the field of humanities, natural sciences or social sciences. Discoveries and research results that might seem without any immediate benefit can turn out to be extremely valuable to future generations of researchers – and to society.
34. This is also why we believe that describing universities as ecosystems is a more fruitful way instead of seeing universities in a simple input/output perspective.

1.2 Academic IP Pooling and Collaborative Technology Transfer

Lead	Peking University
Reporting	Prof. Chen Dongmin (Peking University) Dr. Matthias Hölling (ETH Zurich)
Executive summary	<p>PKU and NUS run a pilot program to collaborate on strategic and specific areas to pool IP. NUS has offered to develop a web portal to access technologies available at the various member universities that can be grouped into families of patents using a built-in search engine. A demo website is under development that converts the IP/Technology databases of PKU, NUS and UCPH to a new standardized format and integrates them into a virtual IP Pool. A recommendation of linking this IP portal to the official IARU website will be submitted.</p> <p>The progress of the pilot program will be reviewed at the Technology Transfer Workshop on 22–23 April 2014 at ETH Zurich. The meeting will also discuss topics related to university-industry-government partnerships, collaboration on spin-offs and entrepreneurship, funding models and incubation programs.</p> <p>This document contains:</p> <ul style="list-style-type: none"> ▪ Progress report on the IP Pooling pilot program. A recommendation of linking the IP portal to the IARU website will be submitted. ▪ Agenda of the Technology Transfer Workshop, 22–23 April 2014 at ETH Zurich
Funding to date	<ul style="list-style-type: none"> ▪ Up to USD 15,000: Technology Transfer Workshop, ETH Zurich, April 2014 ▪ USD 15,091: Academic IP Pooling Workshop, Peking University, March 2013
Outcomes of previous meetings	<p>Senior Officers' Meeting, November 2013</p> <p>At the first workshop of the technology transfer officers in March 2013, it was agreed that PKU and NUS would run a pilot program to collaborate on strategic and specific areas to pool IP. Under the recommendation of NUS, PKU has engaged an experienced software company to develop the IARU collaborative technology transfer web portal. A preliminary version of this program will be ready by the end of 2013. PKU invited other IARU partner universities to join the program.</p> <p>The second workshop hosted by ETH in April 2014 will focus on entrepreneurship. As the workshop overlaps with the Presidents' Meeting, a joint session with the Presidents is envisaged. The group will seek inputs from partners to shape the program. The title of the initiative will need to be renamed to adequately reflect the shifted focus of this institutional joint working group. Once the proposal is developed in more details, the funding request of USD 15,000 can be accepted.</p>

Presidents' Meeting, April 2013

Beida organized the Academic IPP workshop on 7–8 March 2013, the first time technology transfer officers came together to network and discuss areas where they were facing challenges. Dr. Lily Chan and Prof. Wong Poh Kam from NUS Enterprise attended the workshop, and were present to take questions from the meeting.

An outcome from the workshop was that Beida and NUS would run a pilot program to collaborate on strategic and specific areas to pool IP, before approaching industry. Possible areas were biomedical and environmental technologies, but more areas would be considered. NUS shared that it has successfully pooled IP with the University of Auckland, as well as with A*STAR in Singapore. Dr. Chan noted that it is hard work but the benefits were high. Technology transfer officers have indicated support for the pilot, and if successful they could consider joining the program. As IARU was already collaborating multilaterally on a number of initiatives, it was a good opportunity to see if IP Pooling efforts were possible.

To enable IP Pooling, NUS would develop a web portal to access technologies available at the various member universities that can be grouped into families of patents using a built-in search engine. Technology transfer officers agreed on the guiding principle that the member university that was approached first for licensing would assume the role as lead negotiator. The web portal would be submitted for approval to its oversight committee as well as IARU Presidents before its launch.

Beida requested for a follow-up workshop in 2014 at ETH, to discuss how to generate funding for proof-of-concept research, and to learn more about entrepreneurship education programs which were very successful at ETH. A proposal would be submitted at the next Senior Officers' Meeting for agenda and funding approval.

Academic IP Pooling

IP Pooling Web Portal

The IARU “Workshop on Collaborative Technology Transfer” was held successfully 7–8 March 2013 at the Peking University School of Innovation and Entrepreneurship in Beijing, China. An outcome of this workshop was that Peking University and National University of Singapore would jointly lead the effort to build a pilot program with the input of IARU members; NUS generously offers its resources to create a web portal and search engine for the test.

Under the recommendation of NUS, we have engaged the Singapore-based company PatSNAP (www.patsnapglobal.com) to develop the IARU collaborative Technology Transfer portal. PatSNAP has extensive experience in building academic IP & tech transfer service website. Their clients include NUS, AUTM and many more. A demo website is under development, and we are converting the IP/Technology database of Peking University, National University of Singapore and the University of Copenhagen to a new standardized format and integrate them into a virtual IP Pool. We plan to report the progress and showcase this pilot database and the related tools to IARU members during the follow-up workshop on Entrepreneurship to be held at ETH on 22–23 April 2014. A discussion on the improvement and rules of sharing the database will also be held. Once a consensus is reached by majority of the member universities’ TT Officers, a recommendation of linking this IP portal to the official IARU website will be submitted to the Presidents’ Meeting for approval.

Follow-up Workshop

During the 2013 March meeting, the attendees recommended reconvening in spring 2014 to review the progress of the pilot program. In addition, the goal of the meeting is to expand the discussions on how to collectively generate funding for proof-of-concept research and to link the POC research and the hands on entrepreneurship education programs to the spin-off and other technology transfer collaborations amongst the IARU members. ETH Zurich will host the IARU Technology Transfer Workshop on 22–23 April 2014. The program and agenda can be found below.

IARU Technology Transfer Workshop 2014

Senior participants from the technology transfer offices of the IARU institutions meet to discuss topics related to university-industry-government partnerships, collaboration on spin-offs and entrepreneurship, funding models and incubation programs.

The technology transfer officers look into the opportunity to collaborate on strategic and specific areas to pool IP. The envisaged collaborative technology transfer web portal would be a further successful multilateral collaboration initiative of IARU.

The focus of this meeting will be a wrap up and an outlook of the technology transfer platform of NUS and Peking University, to realize IP pooling and as a result from last year's meeting, on one hand, and the exchange about modes and possibilities for entrepreneurship as a vehicle for technology transfer, on the other hand.

All members of the workshop are invited to share their experiences and different approaches to use entrepreneurship as a vehicle to technology transfer. Aspects of presentations from the participants could involve:

- Proof of concept funds, experiences, financing etc.
- Promoting student entrepreneurship and the effect on technology transfer
- Professional management teams for spin-offs and/or entrepreneurs in residence programs
- Internal and external incubators
- Seed funding

Participants could of course also share experiences on different aspects of technology transfer or elaborate further on IP pooling and joint licensing schemes.

We expect that the members have different approaches and very different experiences on these matters. At the same time, we suspect that entrepreneurship as a vehicle to realize technology transfer is – in many cases – more efficient than direct licensing to existing companies.

An exchange on these issues among the IARU members therefore bears a lot of potential and may lead to further collaboration on the topic.

Preliminary Meeting Agenda

Tuesday, 22 April 2014

Individual travel arrangements to get to Zurich. A hotel near the ETH Zurich city centre campus will be suggested and reservations will be made, if required.

18:00 *Welcome all participants at the hotel. Stroll through the old town*

19:00 *Dinner at restaurant Kronenhalle*

Wednesday, 23 April 2014

08:00 *Pick-up at hotel, walk to ETH Main Building*

- 08:30 – 10:00 Session 1:
 08:30 Welcome by Dr. Silvio Bonaccio, Head of ETH transfer
 08:45 Keynote speech (Jean-Pierre Vuilleumier, CTI invest). High-tech ventures and start-ups in Switzerland
 09:30 Impulse talk by Micheal Dillhyon: Experiences of an Entrepreneur in the Bay Area and in Switzerland
- 10:15 – 10:30 *Coffee break*
- 10:30 – 11:00 Entrepreneurship at ETH Zurich, an Overview (Dr. Matthias Hölling)
- 11:00 – 12:00 Joint presentation of NUS and Peking University: Collaboration platform in technology transfer
- 12:00 – 13:30 *Lunch at “Dozentenfoyer”, ETH Zurich*
- 13:30 – 14:00 *Transfer to ETH Hönggerberg, HPL ieLab*
- 14:00 – 14:50 Presentations from participants
 14:00 Entrepreneurship and spin-offs at the University of California, Berkeley
 14:25 Entrepreneurship and spin-offs at the Peking University
- 14:50 – 15:20 Spinning out and investing in technologies. Success models from the UK (Tony Hickson, Imperial Innovations)
- 15:20 – 15:40 *Coffee break*
- 15:40 – 16:15 Start-ups as an innovation driver for big corporates (Stephan Hess, Alstom Power Systems)
- 16:30 – 17:00 *Join Presidents Meeting Agenda, Coffee*
- 16:30 – 16:45 Welcome address
 Prof. Dr. Roland Siegwart, VP Research and Corporate Relations
- 16:45 – 17:30 Entrepreneurship in the Life Sciences, Visit HPL Labs
 Dr. Marjan Kraak, ETH transfer / ieLab Life Sciences
- 17:30 – 18:30 Drinks at D-CHAB Pub
- 18:30 *Own agenda for TT Workshop Participants: Dinner at Restaurant “Die Waid”*
- 22:00 *Return to hotel by bus*

Thursday, 24 April 2014

- 08:00 *Pick-up at hotel, walk to ETH Main Building*
- 08:30 – 10:00 Session 2:
 08:30 Impulse Keynote: Prof. Didier Sornette, “Viral Growth and Social Bubbles”
 09:15 Experience of an alumnus of the programme “US market entry”
- 10:00 – 10:30 *Coffee break, walk to ieLab, LEO Building*
- 10:30 – 12:05 Presentations
 10:30 Short presentation of Pioneer Fellows

10:50 Entrepreneurship and spin-offs at ANU

11:15 Entrepreneurship and spin-offs at the University of Copenhagen

11:40 Entrepreneurship and spin-offs at NUS

12:10 – 13:30 Lunch at restaurant Palmhof

14:00 – 14:20 Meet at ETH Polyterrasse Passage to transfer to “Kreis 5”

14:20 – 14:50 Walk to Technopark and visit of Technopark

15:30 – 16:30 Conclusions and next steps

16:30 – 18:00 Visit of Zurich West, guided tour by Zurich office of city development

18:00 – 19:00 Apéro in Nietturmbar, Schiffbau, Zurich

19:00 – 21:30 Dinner at La Salle Restaurant, Schiffbau, Zurich

End of Meeting, optional drinks. Transfer back to the hotel by public transport.

Participants

University	Name / Function
ANU	<ul style="list-style-type: none"> ▪ Chris Pugmire, Business Development Manager
ETH	<ul style="list-style-type: none"> ▪ Matthias Hölling, Senior Technology Manager – Spin-Offs ▪ Silvio Bonaccio, Head ETH transfer ▪ Marjan Kraak, Manager ieLab Life Sciences ▪ Patricia Huber, Secretary ETH transfer
NUS	<ul style="list-style-type: none"> ▪ Poh-Kam WONG, Director, NUS Entrepreneurship Centre and Professor
PKU	<ul style="list-style-type: none"> ▪ Dongmin Chen, Director, Office of Science and Technology Development, Dean, School of Innovation and Entrepreneurship ▪ Guo Lei, Deputy Director, Office of Science and Technology Development, Vice Dean, School of Innovation and Entrepreneurship ▪ Jiang Lan, Director, Office of Innovation and Entrepreneurship Education, School of Innovation and Entrepreneurship
Berkeley	<ul style="list-style-type: none"> ▪ Irvin Mettler, Associate Director, IPIRA/Office of Technology Licensing
UCPH	<ul style="list-style-type: none"> ▪ Gert Balling, Project manager, Tech Trans Office ▪ Bo Steenhus, Project manager, Tech Trans Office

1.3 Research Administrators' Network

Lead	University of Copenhagen Peking University
Reporting	Zhou Hui (Peking University) Anna Haldrup (University of Copenhagen)
Executive summary	<p>The 2nd Research Administrators' Network meeting was held at PKU on 14–15 September 2013. The group discussed how to play an influential role in the enhancement of research collaboration. Key measures involved minimizing barriers for research mobility, exploring global funding opportunities and staff exchange.</p> <p>The 3rd meeting will be hosted by Oxford on 12–13 June 2014. Topics to be discussed are given in the report.</p> <p>This document contains:</p> <ul style="list-style-type: none"> ▪ Report on the Research Administrators' Network meetings
Funding to date	<ul style="list-style-type: none"> ▪ <i>up to USD 10,000</i> <i>Research Administrators' Meeting 2015</i> ▪ <i>up to USD 10,000</i> <i>Research Administrators' Meeting 2014</i> ▪ USD 8,736 <i>Research Administrators' Meeting (Sept. 2013)</i>
Outcomes of previous meetings	<p>Senior Officers' Meeting, November 2013 Prof. Chen Dongming (PKU) reported about the second Research Administrators' Network meeting that was held at Peking University on 14–15 September 2013 with the representation of eight partner universities. The network proposed to introduce a Research Administrators' Fellowship Program and asked for funding of USD 20,000 for the years 2014 and 2015. The meeting supported the idea of introducing a fellowship for research administrators. However, in order to be consistent with similar other IARU programs, such as the self-funded Sustainability Fellowship program for students, the meeting rejected the funding request and encouraged the institutions to fund the fellowships individually.</p> <p>The funding request for meetings of the Research Administrators' Network 2014 and 2015 (up to USD 10,000 per meeting) was approved.</p> <p>Presidents' Meeting, April 2013 Beida gave an update on the Research Administrators' Meeting one-day workshop program that would be hosted on 15 September 2013. The organizers also planned to run a symposium on junior research talent recruitment alongside the IARU workshop. The add-on symposium would provide greater opportunities to learn about the Chinese scientific research management system, and establish links for collaboration and staff exchange.</p> <p>The Chair requested that the initiative should aim to have five or more IARU partners in attendance to have a valuable discussion and exchange of best practices.</p>

The 2nd IARU Research Administrators Symposium

14 – 15 September 2013, Peking University, China

Participants

Institution	Name	Title
Australian National University	Douglas Robertson	Director of Research Services
ETH Zurich	Agatha Keller	Co-Head EU Grants Access, International Research Programmes
National University of Singapore	WANG Hui	Director, Research Administration
Peking University	LI Yansong	Vice President for International Affairs
	CHEN Shiyi	Vice President for Research
	ZHOU Hui	Director, Office of Scientific Research
	CHEN Dongmin	Director, Office of Science and Technology
	ZHANG Yan	Chief, Division for Overseas Projects, Office of Scientific Research
	YANG Lingchun	Assistant Director, Office of Scientific Research
	LIAO Rikun	Deputy Chief, Division for Overseas Projects, Office of Scientific Research
	SHI Zhongming	Senior Program Officer, Office of International Relations
UC Berkeley	Patrick Schlesinger	Assistant Vice Chancellor, Research Administration and Compliance
University of Copenhagen	Jan Andersen	Senior Executive Advisor
	Anna Haldrup	Director, Research & Innovation
	Poul Petersen	Senior Executive Officer, Head of EU office
The University of Tokyo	Teruyuki Hayashi	Director, Office of Research Administration, Graduate School of Science
	Masako IZUMI	Administrator, Research Promotion Department
	Masahiro Yamano	Research Administrator/Project Researcher, Graduate School of Science
Yale University	Andrew B. Ruczynski	Associate Vice President for Research Administration

Brief introduction

The IARU Research Administrator Network has been established to strengthen the support for the academic community across our universities. The group has previously met on two occasions.

The initial meeting was held at the University of Copenhagen in June 2011 and six IARU partners were in attendance. During this meeting, a plan was developed that the group would meet over the

next three years to network, share best practices and work towards simplifying research administration processes.

The second meeting was held at Peking University in September 2013 where 19 colleagues from eight IARU partners attended. The group reviewed the original plan developed at the first meeting and also discussed how IARU could play an influential role in the enhancement of research collaboration. Minimizing barriers for research mobility, exploring global funding opportunities and staff exchange were key issues that were discussed.

Topics

Main topics at the symposium

- a) **Mobility of researchers** (topics: funding, quality of PhD and post docs, inter-institutional barriers and potential researchers). Whereas mobility among EU schools and US schools are very well facilitated, the mobility between Asian schools and EU or US schools remains to be enhanced.
- b) **Benchmarking** (topics: key performance indicators for research and innovation and prospective outcome: a common framework between IARU universities for benchmarking). On this topic, it is generally felt that within universities, we have more or less adopted a universal tenure-track system, national and international evaluation system for individual investigators. The system functions quite well. However, when we evaluate cross campus, cross country or cross continent collaborations, there is a general absence of standards and proper process of evaluation. We suggest that the next meeting may discuss this aspect in more depth.
- c) **Sharing best practice in research funding** (topics: EU, NIH and other large global research funding agencies). The funding system in EU, USA or Asian countries are very different. There are many opportunities for international collaborations. However, it is very hard for investigators to know about these opportunities. We may need to develop a computer network for these information.

Main topics discussed at the 2013 business meeting (Anna Haldrup in charge)

- a) Framework for benchmarking through the sharing of key figures
- b) Improving the communication platform on the IARU website
- c) Fellowship program for staff exchange
- d) Sparkling ideas (such as identifying barriers for increased cross-institutional collaboration on a global scale, creating pathways from research to innovation)

Decisions

- a) **To minimize barriers for research mobility, the network will establish a working group to decide on a joint model for handling the Marie Curie fellowships between IARU countries.**

The working group will develop this model over a three month period and it will include establishing a common research template with agreed IPR terms and other relevant elements. "The Inner Peace Agreement" is the suggested working title for this document.

Members of the group:

- Patrick Schlesinger (UC Berkeley) (in charge of the group)
- Andrew B. Rudczynski (Yale)
- Agatha Keller (ETH -Zürich)
- Poul Petersen (University of Copenhagen)
- Anna Haldrup (University of Copenhagen)

Budget: No budget necessary

b) To align and share best practice, the IARU Research Administrators decided to apply for IARU funding to establish a Research Administrator Fellowship program for 2014–2015.

The fellowship program will allow for exchange of administrative staff among the IARU member Universities. IARU will contribute a \$2,000 stimulation grant per fellow as an incentive for the administrative offices to strengthen daily collaboration within IARU.

The fellowship program is suggested as a follow up on a successful staff exchange between Oxford University and UC Berkley in 2012.

Candidates for the fellowships should be put forward by 1 December 2013 and undertaken during 2014. A guide is produced, based on the EARMA-NCURA fellowship-program. This includes a description of what is expected for the host and for the fellow and the requirements for reporting and evaluation. The purpose is to learn from each other e.g. to learn about NIH or EU funding.

Once the candidates have been put forward, IARU members will then vote on who they consider the most suitable candidates (excluding their own applications). If there are more applicants than the budget allows each member will take responsibility for prioritizing their own applicants.

The IARU Research Administrator Fellowship will be announced on the IARU webpage and via e-mail to all IARU members with information on how to access the webpage and utilize the offer.

After taking part in the fellowship, the participant is required to provide a short report to the IARU network that outlines the outcomes and their learnings from the experience.

Members of the group:

- Jan Andersen (University of Copenhagen) (in charge of the program and announcement on the IARU webpage)
- YANG Lingchun (PKU)
- Anna Haldrup (University of Copenhagen)

Budget: 10 fellowships of \$2,000 (2014–2015) = \$20,000

Note: The proposal was discussed by the Senior Officers' Meeting 2013, who supported the idea of a fellowship program but rejected the funding request, encouraging the institutions to fund the fellowships individually.

c) Establishment of a lexicon (dictionary) on terms (legal and formal) used in research management so they are universally understood.

For example, “PI” in EU-term would be “Beneficiary”. A number of universities and associations have already provided a basic list, among them UC Berkeley, so there is a good starting point. All IARU members will add terms and descriptions accordingly.

Members of the group:

- Douglas Robertson (ANU) (Responsible for the project)
- Patrick Schleisinger (UC Berkeley)
- Poul Petersen (University of Copenhagen)

Budget: No budget necessary

d) Next meeting agenda suggestions: Oxford University is planning to host the next meeting on 12–13 June 2014.

Subjects may include:

- How do universities demonstrate their benefit to society – exchange of practice and ideas?
- Developing working relationships with large national and multi-national businesses who want access to a global university network via funding and strategic partnerships.
- Follow up on fellowship program, joint agreement framework and dictionary

It was decided to plan for annual meetings in order to follow up and progress the collaboration.

Budget: \$10,000 per year (2014-2015) – \$20,000 (approved by SOM2013)

1.4 EdTech Horizons Workshop

Lead	National University of Singapore
Reporting	Prof. Lakshminarayanan Samavedham (Director, CDTL) (NUS) Mr. Ravi Chandran (Director, CIT) (NUS)
Executive summary	<p>IARU Pedagogy / Education Technology (EdTech) Directors will meet in November 2014 in Singapore (back-to-back with the Senior Officers' Meeting) to discuss trends, opportunities and challenges IARU members are experiencing in using technology for effective teaching and promoting student learning. It is hoped that this workshop will create opportunities to jointly implement innovative technology enhanced education projects among IARU universities.</p> <p>This document contains:</p> <ul style="list-style-type: none"> ▪ Status report on the IARU EdTech Horizons Workshop 2014 in Singapore
Funding to date	Up to USD 15,000: EdTech Horizons Workshop, November 2014
Outcomes of previous meetings	<p>Senior Officers' Meeting, November 2013 Mr. Ravi Chandran (NUS, per videoconference) presented the proposed meeting agenda of the two-day Education Technology Workshop on 13–14 November 2014 and asked to send him or Bernard Toh (NUS) inputs with regards to the proposed program or speakers of the workshop until the end of December 2013. The meeting requested that the workshop has a stronger pedagogy and learning process focus rather than focusing on learning technology. Approximately 30 workshop participants are expected.</p> <p>Presidents' Meeting, April 2013 Presidents approved the USD 15,000 budget request and Mr. Ravi Chandran's (NUS) proposal to conduct a workshop on 13–14 November 2014 in Singapore. The aim of the workshop is to discuss trends, opportunities and challenges IARU members are experiencing in using technology for effective teaching.</p> <p>NUS would invite the relevant participants and finalize an agenda. An intended outcome is to develop a benchmark matrix to facilitate the comparison of educational technologies in IARU universities. It would also discuss and identify educational technology projects for possible collaboration.</p>

Update to IARU EdTech Horizons Workshop

13–14 November 2014, National University of Singapore

Background

1. IARU Presidents and Senior Officers have approved a workshop for Pedagogy / Education Technology Directors to meet and discuss trends, opportunities and challenges IARU members are experiencing in identifying, selecting and using technology for effective pedagogy.
2. Expected outcomes of this workshop are:
 - a. To identify, implement and showcase successful collaborative projects in technology enhanced education among IARU universities.
 - b. An educational technology mapping exercise among IARU Universities
 - c. To set up a collaborative site to monitor action items from IARU EdTech projects

Progress

3. The agenda and program for the workshop have been circulated on 17 January 2014. Program details for this workshop are now available on the website iaru.cit.nus.edu.sg. The registration site, accommodation and meeting venues have also been confirmed.
4. Guest speakers have been identified and invitations have been sent out:

Name	University	Topic	Status
Dr. Lynne O'Brien	Associate Vice Provost, Digital and Online Education Initiatives, Duke Centre for Instructional Technology, Duke University	Current and future trends in education technology and how they help address pedagogical challenges	Accepted
Dr. Abelardo Pardo	Associate Head of Teaching and Learning, Lecturer, School of Electrical and Information Engineering, The University of Sydney	Analytics for decision making in Learning Environments	Accepted
John Traxler	Professor of Mobile Learning, University of Wolverhampton	Mobile Learning – Current and Future Trends	Invitation sent. Awaiting reply.

IARU EdTech Horizons Workshop will also provide opportunities for IARU faculty members to present and share their technology enhanced education projects to solicit feedback and garner support for collaboration.

The following individuals have been nominated by IARU universities as IARU EdTech liaisons:

University	Name
ANU	n/a
ETH	Dr. Konrad Osterwalder, Director, Educational Development and Technology (LET) unit
NUS	Prof. Lakshminarayanan Samavedham Director, Centre for Development of Teaching and Learning Mr. Ravi Chandran Director, Centre for Instructional Technology
PKU	Prof. Bi Minghui Vice Director, Office for Students' Affairs, Department of Musicology
Berkeley	Mr. Scott Shiremen Chief Operating Officer, Berkeley Resource Center for Online Education
Cambridge	Mr. John Norman Director, Centre for Advanced Research in Educational Technology (CARET)
UCPH	Prof. Carsten Smith-Hall
Oxford	n/a
UTokyo	n/a
Yale	Dr. Bryan E. Penprase Co-Director for the new liberal arts consortium for online learning (LACOL), Pomona College Prof. Laura Wexler American Studies and Women's, Gender & Sexuality Studies, Director, The Photographic Memory Workshop Prof. Anne Balsamo Dean, School of Media Studies, The New School

Next steps

5. The next steps leading up to the workshop in November are to:
 - a. Confirm the guest speakers
 - b. Confirm participation from IARU members
 - c. Refine and finalize the workshop agenda

Annex: EdTech Horizons Workshop – Program Schedule

13 November (Thursday)

- 8.30am *Registration and Welcome and Program Overview*
- 9.45am **Dr. Lynne O'Brien**
Associate Vice-Provost, Digital and Online Education Initiatives, Duke Centre for Instructional Technology, Duke University
- Current and future trends in education technology and how they help address pedagogical challenges**
- 10.45am *Tea break*
- 11.00am **IARU Presentation I**
IARU members share their EdTech initiatives
3 presentations, 30 min. each (20 min. presentation + 10 min. QA)
- 12.30pm *Lunch*
- 1.30pm **IARU Presentation II**
IARU members share their EdTech initiatives
2 presentations, 30 min. each (20 min. presentation + 10 min. QA)
- 2.30pm **Guest Speaker II**
Mobile Learning: What works, and what does not?
- 3.30pm *Tea break and breakout sessions – projects for IARU collaboration*
- 5.30pm *End of day 1*
- 7.30pm (tbc) *Dinner with IARU Senior Officers*

14 November (Friday)

- 9.00am **Dr. Abelardo Pardo**
Associate Head of Teaching and Learning, Lecturer, School of Electrical and Information Engineering, The University of Sydney
- Analytics for decision making in Learning Environments**
- 10.00am *Tea break*
- 10.30am *Breakout session – Learning analytics (facilitated by guest speaker)*
- 11.30pm *Lunch*
- 12.30pm **IARU Presentation III**
IARU members share their EdTech initiatives
5 presentations, 30 min. each (20 min. presentation + 10 min. QA)

3.00pm Tea break cum Projects for Collaboration among IARU Members
4.00pm Consolidation & summary
5.00pm *End of day 2 and workshop*

1.5 International Student Teaching & Support

Lead	University of Oxford
Reporting	Ed Nash, International Strategy Office (University of Oxford)
Executive summary	<p>Oxford has gathered data from IARU partners to identify the different activities IARU universities run in order to provide academic and social support to international students, and to provide a quick overview of the Alliance members' opinions of the successes and challenges of these activities.</p> <p>The initiative lead recommends the creation of an IARU working group to carry out a more detailed study into the best ways of delivering support to international students. It is envisaged that the group would work towards the publication of a formal IARU advice paper defining minimum and ideal standards for international students' support.</p> <p>This document contains:</p> <ul style="list-style-type: none"> ▪ An overview of the different activities IARU universities run in order to provide academic and social support to international students ▪ Proposal to form an IARU group that would work towards the publication of a paper defining minimum and ideal standards for international students' support
Funding to date	n/a
Outcomes of previous meetings	<p>Senior Officers' Meeting, November 2013 Many international students face challenges in making a successful transition to their new institution. Universities need to consider how to help the various groups of international students to thrive and reach their academic potential. Loren Griffith (Oxford) proposed on behalf of Oxford and Cambridge to create a joint institutional working group focused on the teaching and support of international students at IARU universities. At this point, no funding request was put forward. All IARU partners were supportive of the proposal. Jennifer Barnes (Cambridge) reminded to also keep an eye on domestic students with an underprivileged background in this discussion.</p> <p>Loren Griffith will send a questionnaire around the group to define areas of interest, gather data and share experiences. The results will be presented at the Presidents' Meeting 2014 together with a plan for further action.</p> <p>Presidents' Meeting, April 2013 This paper was withdrawn as the initiative lead was unable to attend.</p>

Support for international students at IARU universities

Introduction

Despite a global trend towards greater internationalization in higher education, students still face significant barriers to integration into university life in a foreign country. Adapting to new academic expectations, as well as living in a different culture, both continue to be problematic to significant numbers of students, including at IARU institutions.

With proportions of international students ranging from eight percent up to 39 percent (the average is 21 percent), the IARU universities are amongst the world's most international. This means that they are able to benefit from the excellence of their international populations more than many other universities within their countries, but also that they must address the challenges faced by international students on a greater scale.

In a survey of IARU institutions, the most commonly reported challenges encountered by their international students were perceived to be:

- Understanding new academic expectations
- Confidence expressing themselves in the classroom
- Studying in a second language
- Knowing what support services their university offers
- Engaging outside their social/cultural/language group
- Financial pressures (high international fees, higher cost of living than in their home country)

This paper follows a report presented jointly by Oxford and Cambridge at the 2013 Senior Officers' meeting, which suggested the establishment of an IARU working group for international student teaching and support. It presents the results of a survey of IARU institutions' approaches to supporting international students, illustrating the main trends in support programmes. The final section suggests further IARU joint working in student support, through the creation of a working group and the publication of a paper defining minimum and ideal standards for international students' support.

Current provision

There is already a wide array of support available to international students at IARU universities, although there is little standardization in the sorts of services that international students can expect across the Alliance's institutions. All of the IARU universities surveyed provided additional support in both academic skills and social adaptation for international students, or for all students. However, at some universities these services are only available on a specific basis, for example when teaching staff decide a student needs remedial assistance, and in many cases students may receive a different standard of support depending on what course they are studying or what college they are assigned to.

For the sake of clarity, this paper categorises ongoing student support activity into three main areas:

- 1) Programmes that aid international students in their academic studies
- 2) Programmes that aid international students' social integration
- 3) Language programmes

As well as splitting into these three areas, support activities can also be divided between programmes that are available to all students (although may be especially useful for international students) and programmes that are only open to international students.

Programmes that aid academic studies

Academic studies support that international students can draw on takes a variety of forms at IARU universities. At all institutions this activity is targeted at improving core academic skills vital to teaching and research, such as critical thinking, note taking, essay writing, and exam preparation. However, the ways in which this support is provided differ widely, from dedicated learning centres staffed by professional personnel, to structures whereby students support each other, to online provision.

Common forms of academic support include:

Teaching centres

The most intensive form of support provided is through dedicated teaching centres, such as The Australian National University's Academic Skills and Learning Centre (ASLC). The ASLC provides additional teaching assistance in key academic areas, including transition to higher education, note-taking, research, oral presentations, academic writing and exam preparation. Students who use the service can attend study skills workshops, or arrange one-to-one tutorials with professional learning advisors. The 50-minute tutorials provide an opportunity for students to submit and discuss written work; they can be used to seek guidance on sensitive issues such as meeting progress requirements, disciplinary conventions and presenting papers.

Other institutions have similar services, one example being the Centre for Internationalisation and Parallel Language Use at the University of Copenhagen, which aids with both language teaching and academic skills.

Student mentoring

Another intensive, though less formalized, form of support is through student mentoring. Mentoring arrangements are common at various Oxford and Cambridge Colleges, though their design varies. Academic-focused mentoring systems include, for example, a programme at one Oxford college in which specially selected postgraduate students are paired with undergraduates and meet regularly to read and critique their essays in a semi-formal, tutorial-type environment. Typically, postgraduates are paid an hourly rate for taking part in such systems.

The University of Tokyo also uses more experienced students to provide support for international students, under a system that is designed to aid both academic skills development and adaptation to daily life in Tokyo.

Another mentoring-style system also common at Oxford and Cambridge colleges is 'college parents', under which first year students are paired with second year undergraduates who provide both academic advice and social and pastoral care. Such arrangements are typically designed and initiated by undergraduate students and offer a friendlier, more holistic type of support than purely academic programmes. College tutors report that first year students value the academic support given by academic parents very highly, especially in terms of advice on performance in tutorials. This demonstrates the value of student-to-student interaction in adaptation to new learning cultures.

Study skills materials

Provision of study skills materials – whether online or through distributed material – is also a major form of academic support provided by IARU universities. Such material increasingly has taken the form of videos and other more engaging material, rather than text. Online study skills material is desirable from the point of view of universities, as the material can be verified to ensure absolute accuracy. It is also generally an affordable approach, offers a uniform service to all students, and can even help enhance an institution's profile, if there is open access to the material via the Internet. The main drawback of this approach is that videos are not interactive in the way that face-to-face discussions with academic staff, fellow students or professional learning advisors are.

In all of these examples, the support provided is open to all students, but many institutions report that international students are more likely to make use of – and benefit from – such services.

Social programmes

The challenges international students may face in integrating socially with home students and local people have been universally recognised by IARU institutions. All surveyed universities run additional social activities for international students – often shortly after enrollment – and most also provide support to existing university societies in running such events. As with academic support programmes, activity in this area includes both initiatives specifically designed for international students, as well as programmes designed for all students, but which may have particular benefits for international students.

Common social programmes include:

Orientation programmes

Many IARU institutions' international offices or student administration departments run orientation or welcome events for international students. These take part around the start of academic courses and range from aiding the student with formal duties such as opening bank accounts and registering with local immigration officials (where necessary), to social events including trips to local tourist sites, welcome dinners and other cultural events. In some instances they may also involve an academic element, such as additional lectures to clarify study expectations.

As well as orientation on arrival, some institutions provide pre-departure events to introduce incoming international students to the academic and social aspects of their institutions. These include the bridging courses run for selected students by the National University of Singapore and the integrated approach taken by the University of Cambridge, under which incoming international students can attend social events organized by alumni in their home country before taking part in institutional and college orientation programmes when they arrive in the UK.

Funding for national student societies

At universities where societies play a prominent role in student life, it is common to see national societies (e.g. The Chinese Students and Scholars Association) providing a wide range of social integration and transition events. As with orientation programmes run by university administrators, national societies' events range from support with vital activities, such as finding accommodation, through to social events. Many national student societies are also specifically founded to create cultural bridges between their members and host nations, as well as students of other nationalities at the university.

Oxford's International Strategy Office has recently begun supporting national student societies with small grants to fund events designed to bring together students of several nationalities. The Office initiated the programme after a study of international students at the University found that integration with students of other nationalities was one of biggest challenges for international students.

Language programmes

The importance of language skills to the achievements of international students and staff at IARU universities has long been recognized, and many Alliance institutions have provided additional language services for several decades. Such services can be delivered by academic departments or dedicated centres and are either free or incur small fees (further to any fee that students may be paying for attendance at the university).

The growing scale of internationalization at IARU universities over the past two decades has increased the need for this provision, with many institutions noting that difficulty studying in a second language is one of the most commonly reported challenges faced by international students. Provision of language training is increasingly seen as vital from the start of studies – or even before. The University of Tokyo not only provides a variety of Japanese language classes for international students, but also provides e-learning materials to international students due to attend the University, so they can begin their Japanese studies before enrollment.

The increasing ubiquity of English as the international lingua franca of academia has simultaneously encouraged an increase in English language learning services at leading research universities. The Centre for Internationalisation and Parallel Language Use at the University of Copenhagen offers both Danish language courses and courses on academic English. These courses were previously available solely to international students, but have recently been opened up to all students, at home students' request.

Language support services are typically available to all students (as opposed to international students only), but many IARU institutions report that international students are more likely to make use of such services than home students. Several IARU institutions specifically advise international students to use language services, despite the fact that the services are open to all students. When this advice is delivered through other international student support services it can aid in providing a holistic support experience.

At Peking University, language training is integrated with social programmes through a student-organized one-to-one language partner program, under which international and Chinese students are able to learn their mutual languages from each other.

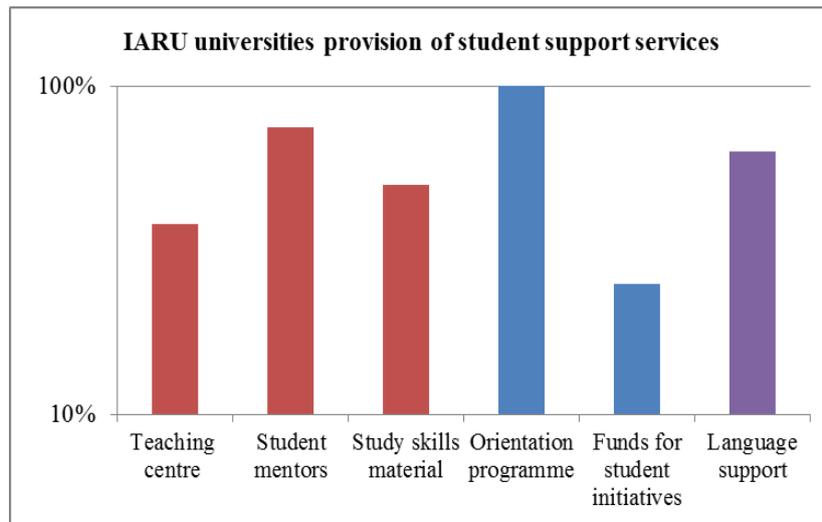


Table 1: Ubiquity of different types of student support services at IARU institutions, according to survey responses

Programmes' success and ongoing challenges

Success in international student support is difficult to define and measure. So far, most support services provided by IARU institutions have focused on academic skills development, social issues and language, while the tendency of international students to lack confidence when expressing themselves has not been explicitly confronted. Nevertheless, institutions that have surveyed support services' users say that using such services helps international students feel confident about study. This suggests that well implemented support services can provide a holistic experience, strengthening students' ability in several areas.

The Australian National University notes that the number of international students attending academic skills support workshops and induction sessions open to all has increased, while events specifically targeted at international students are often less well attended. The University has therefore encouraged provision of and student attendance at such universally accessible sessions. Providing student support services that are universally available can both aid in study skills and encourage students of different nationalities to mix. Importantly, it can also serve to reduce the stigma of students of certain nationalities needing 'remedial' classes that others do not. Nevertheless, international students often do face genuine learning challenges that differ from other students' challenges and require targeted support. There is a risk that, in a climate of limited resources, opening up support services to all students could reduce international students' access to the help they need.

The argument for wider access to support encourages the increased use of student support networks, whether through mentoring systems or the activities of student societies. However, challenges such as studying in a foreign language may require professional support that fellow students cannot provide.

Challenges

Ongoing challenges to the effective and efficient provision of high-quality support services for international students will continue to confront IARU institutions for the foreseeable future.

Close to 60 percent of universities surveyed rated securing funding or other resources (i.e. staff, teaching spaces) as a key challenge to providing excellent teaching and support services for international students, making this the biggest challenge in ensuring provision of support services.

Beyond funding, two other challenges reported by multiple institutions were decentralised institutional structures that hamper the extension of good practice throughout the university, and a lack of knowledge about the best approaches to international student support.

The survey did not reveal any tactics for confronting these challenges, though further information sharing between institutions may reveal formal or informal processes by which they are mitigated.

Future steps

The importance of support services to international students is almost universally acknowledged within IARU institutions. However, large international student populations are still a relatively new phenomenon for many universities, and there is as yet little standardization of the ways international students are supported. Nor is there much literature providing guidance on the most effective way to support international students.

The IARU universities are confronting similar challenges in ensuring international students achieve to the best of their ability, but more work is required for institutions to be able to understand which initiatives will work and how they can be most efficiently implemented. There is also little understanding about how the challenges of implementing these services – funding them, navigating the barriers presented by institutional structures and effectively promoting them to students – can be overcome. More understanding of how support services can be usefully integrated with each other is also required.

In light of these issues, Oxford is suggesting the creation of an IARU working group to analyze and discuss the different forms of support provided for international students. It is envisaged that the group would work towards the publication of a formal IARU advice paper that defined minimum and ideal standards of international students support, thereby aiding universities (including non-IARU institutions who were able to access the publication) in providing excellent education to their international students. This is an area in which IARU could usefully exercise intellectual leadership.

1.6 Women and Men in Globalizing Universities

Lead	University of California, Berkeley (Prof. Angelica Stacy) The University of Tokyo (Prof. Sawako Shirahase) ETH Zurich (Prof. Renate Schubert)
Reporting	Prof. Renate Schubert (ETH Zurich)
Executive summary	<p>In October 2013, the “Women and Men in Globalizing Universities“ group met to analyze and discuss the data of the benchmarking study on the academic ladder. A summary of the gained insights is given in the report. As the gender issue proved to be more complex than expected, the group expects this initiative to continue for quite some time. A plan of action has been defined. The group will meet again in spring 2015.</p> <p>This document contains:</p> <ul style="list-style-type: none"> ▪ Report of the group on Women and Men in Globalizing Universities
Funding to date	<p>USD 3,638 Workshop (October 2013) USD 6,512 Workshop (March 2012) USD 8,500 For project development (PM 2006)</p>
Outcomes of previous meetings	<p>Senior Officers' Meeting, November 2013 The group's co-lead, Prof. Angelica Stacy (UC Berkeley) reported on the results of the workshop held at ETH Zurich on 28–29 October 2013. The group had collected gender-related comparative data prior to the meeting to benchmark the academic ladder, changes over time, and the international mobility of academics. The meeting had discussed these data and also shared and discussed initiatives on gender equality implemented by IARU institutions. All IARU institutions were represented at the workshop except for PKU whose representative was not able to attend.</p> <p>The member institutions plan to leverage their participation in the group by working at their home institutions to gather and analyse data, and to implement evidence-based initiatives aimed at improving the rate or reaching gender equality. The group as a whole seeks to provide global leadership by analysing comparative data and making recommendations based on an understanding of the data. The group plans to do regular collection, reporting and comparison of data. They will also begin to collect narratives of the academic career life course of men and women in order to probe similarities and differences among the various IARU institutional structures. On the basis of the data analysis, concrete measures will be identified to provide for greater gender equality.</p> <p>The group plans to meet again in spring 2015 at Oxford. The gender issue has proved to be more complex than expected. It is expected that this initiative will have to continue for quite some time.</p> <p>Senior Officers thanked the working group for their impressive work.</p> <p>Presidents' Meeting, April 2013 Presidents noted the updates of the Women and Men in Globalizing Universities group.</p>

Report on Activities Concerning Women and Men in Globalizing Universities

The IARU Committee “Men and Women in Globalizing Universities” met at ETH Zürich on 28-29 October 2013. Data were collected prior to the meeting to benchmark the academic ladder, changes over time, and the international mobility of academics; these data were distributed and discussed. Committee members also shared and discussed initiatives on gender equality implemented by IARU member institutions, and considered explanatory frameworks for the slow rate of change. A next meeting is planned for spring 2015 in Oxford.

What can be learned so far from the comparative data

- The percent of women decreases the higher the status on the academic ladder.
- The greater the number of faculty in PTEM (physical science, technology, engineering, and mathematics) fields, the smaller the total percent of women on the faculty.
- Improvement in the percent women at each step on the academic ladder is steady, but slow.
- Globalization is evident in the large number of international postdocs and assistant professors.

Recommendations

- **Member institutions should leverage their participation in the group** by working at their home institution to gather and analyze data, and to implement evidence-based initiatives aimed at improving the rate of reaching gender equality. The Committee asks that each President provides sufficient resources to support such activities.
- **The IARU group as a whole should provide global leadership** by analyzing comparative data and making recommendations based on an understanding of the data. The Committee asks the Presidents to commit to the tasks identified as important in the areas of disciplines, selection processes, advancement, resources, advocacy and knowledge transfer (see listing below).

Identified tasks:

- 1) Establishing new procedures to promote multidisciplinary innovation, not just renewal of existing disciplines
- 2) Adapting faculty selection processes to ensure progress
- 3) Assuring transparent processes with sufficient time to promotion
- 4) Providing funding for auditing resource distribution
- 5) Installing a champion for the cause of gender equity in a senior level position
- 6) Organizing a knowledge transfer across institutions to identify best practice models

1.7 Librarians' Contact Group

Lead	ETH Zurich (2014)
Reporting	Dr. Wolfram Neubauer (ETH Zurich)
Executive summary	<p>At its 2nd meeting in June 2013 in Copenhagen, the Librarians' Contact Group discussed the major issues facing university libraries today. The group decided to develop an "IARU Green Library Toolkit". The draft will be ready by May 2014 for discussion at the group's 3rd meeting at Berkeley in June 2014 and subsequently presented to the Senior Officers' meeting in November 2014.</p> <p>This document contains:</p> <ul style="list-style-type: none"> ▪ Report of the Librarians' Contact Group
Funding to date	n/a
Outcomes of previous meetings	<p>Senior Officers' Meeting, November 2013 The Librarians contact group held its 2nd meeting in Copenhagen on 24–25 June 2013. The group considers their meetings to provide a useful venue for exchanging information, experiences and ideas on themes of common interest and for developing an agenda for collaborative action and therefore plans to continue to hold annual meetings. The group will begin the agenda for collaboration through initiating a project to develop an "IARU Green Library Toolkit". The next meeting is planned to be held at UC Berkeley on 23–24 June 2014.</p> <p>Presidents' Meeting, April 2013 ANU reported on behalf of the IARU librarians and put forth a draft statement (an amended version was tabled for the Presidents' consideration) on Open Access to be adopted by IARU. Presidents were divided on the draft statement, with several noting that the statement was rather general and unlikely to add much value to their institutions. Presidents decided that it would not be helpful for IARU to publish such a public statement.</p>

Report of the Librarians' Contact Group

2nd Librarians' Meeting, Copenhagen, June 2013

The 2nd meeting of the Librarians' Contact Group took place in Copenhagen in June 2013; all institutions were represented.

Following an efficient agenda, all major issues facing university libraries today were discussed on a broader level: existing and next generation library and discovery systems, new services for researchers (e.g. virtual research infrastructures, data curation activities), altmetrics and user studies, e-books, MOOCs and the libraries, the green university library.

The group agreed that it could be very helpful to develop an agenda for future cooperative activities. Besides the annual meeting of the library directors, other staff members should come together in specific working groups to address relevant topics. Those groups should work together by using modern communication technologies.

All group members fully agreed that regular discussions and meetings are very beneficial venues to exchange information, experiences and visions about collective projects.

Green Library Project

As a starting activity for future collaboration, Cambridge and Oxford developed the terms of reference for a Green Library Project Group. The primary purpose of this group is sharing information and best practice experiences in the field of "Green Libraries". The next objective is to develop an **IARU Green Library Toolkit** by May 2014 which means that this paper can be discussed at the next Senior Officers' Meeting. The work of the project group will be aligned to the IARU Sustainability Initiative and support its aims and objectives (see <http://www.iaruni.org/sustainability/presidents-statement>).

The terms of reference are the following:

- Develop and implement a IARU Green Library Toolkit (GLT)
- Consider the IARU Presidents' Grand Challenge and provide an overview on Green Libraries for IARU University Librarians
- Outline the major challenges for University Libraries in relation to carbon reduction
- Advise IARU University Librarians on potential green initiatives in support of IARU's strategic Sustainability Initiative with a view to making a significant contribution to the overall reduction of the campus carbon footprint, and where possible to reducing both recurrent and capital costs in IARU libraries.

In the meantime, every library appointed a representative with the following tasks:

- To share institutional best practice and expertise
- To agree scope of the GLT
- To agree timelines and deliverables
- To identify costs over and above existing staff time

- To assign and to take on actions and responsibilities
- To provide advice and time to develop the GLT
- By utilizing technology to participate in meetings and between meetings provide input by taking forward action.

The communication between the group members will be virtual. In this context the group members developed useful mechanisms for regular contact. The group is chaired by Beth Dupuis, UC Berkeley.

3rd Librarians' Meeting, Berkeley, June 2014

At the next Librarians' Meeting, 23–24 June 2014, the group will discuss the progress report of the Green Library Project Group and will also try to identify other topics which could be useful for a more detailed discussion.

1.8 Alumni Associations Network

Lead	The University of Tokyo / ETH Zurich / University of Copenhagen
Reporting	Dr. Masako Egawa (The University of Tokyo) and Dr. Peter Brunner (ETH Zurich)
Executive summary	<p>The Alumni directors met for the 5th time in fall 2013 to share best practices and explore the possibility of joint activities. Ideas discussed include joint events in Tokyo, New York, San Francisco, London and Zurich, as well as a global event in March 2015 – back-to-back with the Presidents' Meeting in Tokyo.</p> <p>This document contains:</p> <ul style="list-style-type: none"> ▪ Report on the 5th Alumni Associations Summit in 2013 including an outlook for 2014/15 ▪ Draft proposal for discussion on an IARU World Alumni Forum in 2015 (back-to-back with the Presidents' Meeting)
Funding to date	USD 12,705: Alumni Associations Summit, October 2010
Outcomes of previous meetings	<p>Senior Officers Meeting, November 2013</p> <p>Dr. Masako Egawa (UTokyo) reported on the 5th Alumni Associations Summit, held at UTokyo on 30 September – 3 October 2013. All 10 universities are now actively participating in the group. The alumni directors shared best practices. The meeting theme was how alumni activities can support the internationalization strategies of the universities. The meeting also looked into the possibility of joint activities and discussed the possibility of joint events in Tokyo, New York, San Francisco and London. An international alumni forum on the topic of “Sustainable Cities/Societies” is proposed to be organized in conjunction with the Presidents' Meeting in March 2015 in Tokyo. The Alumni Associations Summit concluded with an alumni networking event with some 150 participants.</p> <p>For the international alumni forum, a networking reception, workshops and presentations are planned with a target of 200–300 participants. The overall budget amounts to USD 100,000 to 150,000, to be funded by sponsors and through entrance fees. Senior Officers supported the idea of the forum but expressed concerns about the suggested topic that might not be sufficiently attractive (or out of fashion by 2015). Proposed ideas included <i>urban planning</i>, <i>big data</i> and <i>reassessing the role of Asia</i>. The Senior Officers mandated the group to rethink the topic and work out a proposal to be presented at the Presidents' Meeting 2014. Funding might be requested for the planning process but not for the forum itself.</p> <p>Yale proposed to organize an IARU Alumni Event in Rio de Janeiro in the end of July 2014 in conjunction with the <i>3rd International Universia Meeting of Chancellors</i>. Partners were supportive of this idea.</p> <p>Presidents' Meeting, April 2013</p> <p>Presidents noted the update for the Alumni Associations Summit that would take place from 30 September to 3 October 2013. Oxford expressed their support for the Alumni Associations Summit.</p>

Alumni Associations Summit

5th IARU Alumni Associations Summit, 30 September – 3 October 2013

The 5th “IARU Alumni Associations Summit” was held 30 September – 3 October 2013 at the University of Tokyo, organized by the University of Tokyo Alumni Office. The event was attended by alumni association representatives from ANU, Copenhagen, ETH Zurich, NUS, Oxford, Peking, UTokyo, Yale, and an observer from UC Berkeley. All 10 universities are now active participants of the Alumni Summit.

In addition to an extensive exchange of experiences and best practices, the delegates discussed several new ideas for joint programs and activities. Programs discussed are joint events in Tokyo, NY, SF, and London, and a global event in March 2015 (see below) with topics related to sustainable city (society) that will showcase the benefit of the alliance.

For the first time, alumni from all 10 universities joined the Alumni Networking Reception on the final day of the Summit.

Next “IARU Alumni Associations Summit” will be held from 6–8 October 2014 in Copenhagen.

Outlook 2014/2015

IARU World Alumni Forum 2015

The idea of the world alumni forum is to increase the importance and the international visibility of the IARU Presidents' Meeting. In connection to this meeting, the Alumni Associations invite the Alumni for a discussion forum with one of the main topics of the IARU universities. The presenters are the Presidents and top researchers of IARU Universities as well as industry leaders in the field.

Embedded in the event, the Presidents will invite to the Presidents' Reception.

The international alumni forum workshops and presentations are planned with a target of 200–300 participants. Registration fees will cover the costs.

For further information, refer to Appendix 1.

Appendix 1 – IARU World Alumni Forum

Draft proposal: for discussion purposes only

It is clear that alumni from all our institutions seek opportunities for life-long learning, an important mission in alumni relations efforts. They also enjoy opportunities to expand their alumni networks, explore other cultures, and seek out ways to reconnect to their universities. And if one of the goals of IARU is to foster a sense of global citizenship and leadership amongst students, it would be crucial to continue fostering these goals amongst alumni.

Through these alumni engagement activities, universities foster alumni gratitude and a sense of connectedness – a sense of community – important antecedents to alumni giving.

Heretofore our alumni leadership “exchanges” have been dedicated events between two partnering institutions at a time – Yale visits Tokyo for example, or ANU visits Cambridge. Whilst these have been remarkably successful, it is the broader goal of the alumni relations directors to create a forum for alumni from all of our institutions – engaging our collective educational resources – focusing on one of the primary educational and research goals of IARU.

The World Alumni Forum will increase importance and visibility of the IARU Presidents’ Meeting and the IARU university alliance in general.

The specific goals of a World Alumni Forum would be to:

1. Bring together thought leaders in an area of key interest to IARU to further the conversation on a specific IARU initiative
2. Engage greater numbers of IARU alumni, raising greater awareness of alumni programs
3. Offer the extensive educational resources of all participating IARU institutions to alumni
4. Further the specific educational goals of IARU
5. Provide opportunities to students to meet with alumni for career mentoring, internships, and job networking
6. Benchmark university alumni relations and development initiatives
7. Afford alumni opportunities for professional and job-related networking
8. Identify alumni not currently connected to our individual universities
9. Provide a forum for IARU Presidents to meet and collectively address their alumni constituents

We are proposing that the conference focuses on one of the education initiatives put forth by the mission statement of IARU:

- Climate change
- Aging, longevity and health
- Global security
- Sustainable city and society development
- Global citizenship and leadership amongst students

The conference might follow the model of the **Sustainability Science Congress** organized by IARU for 22–24 October 2014 at the University of Copenhagen – however the target audience for this forum is primarily business leaders and policy makers as well as researchers, academics, and students.

We propose the ‘forum’ – focusing on an IARU related issue such as Global Economy, Global Challenges or Leading the Way to Sustainable Cities: Technology and Opportunities – to be specifically devoted to an audience of *alumni*, featuring presentations and panels by experts who are alumni of the IARU members, as well as to include a portion within the academic framework. There would also be opportunities for alumni networking, student career mentoring, and workshops dedicated to the sharing of best practices in alumni relations and development initiatives.

Historically a number of IARU institutions have made significant investments in alumni relations, while other universities have nascent or newly emerging programs. In any case, all of the institutions recognize that alumni associations are key to successful advancement and development efforts – that are so vital to the long term financial health and growth of our respective institutions.

An Alumni World Forum would engage alumni whilst advancing the interests of the IARU institutions.

Proposal Basic Facts

What	IARU World Alumni Forum – topic tbd
Purpose	To engage a global alumni audience in a high level discussion of a critical issue, to benchmark best practices in alumni relations among volunteer leaders, to discuss ideas for collaborative networking and educational alumni efforts, and to offer career mentoring and networking opportunities
Where	The University of Tokyo, Japan. Depending on available facilities the conference could be held at a convention hotel or on campus.
When	One and a half days in the beginning of March 2015, to coincide with the annual meeting of the IARU presidents.
Who	Alumni industry leaders, faculty, and researchers would be invited to be the key speakers. The conference would be designed for an alumni audience – not only specialists but all alumni with an inherent interest in the topic. We would also welcome university staff and faculty that have an interest in learning about alumni relations at the IARU institutions.
Hosts	Alumni Relations Directors at IARU institutions led by The University of Tokyo.
Cost	Covered by the registration fee of the participants

IARU World Alumni Forum 2015 Sample Agenda

Draft – for discussion purposes only

Day 1

Programming dedicated to the conference topic

8:00 AM	<i>Breakfast</i>
9:00 AM	Opening plenary session
10:30 AM	<i>Break</i>
10:45 AM	Breakout conference presentations and workshops
12:15 PM	<i>Networking lunch with students</i>
1:30 PM	Afternoon plenary session
2:15 PM	Panel discussion with Q&A
3:15 PM	<i>Break</i>
3:30 PM	Breakout conference presentations and workshops
4:30 PM	Tour of host campus
	Walking tour of key architectural highlights
5:30 PM	Reception with IARU Presidents
6:30 PM	IARU Presidents Reception
	Entertainment by student groups

Day 2

Programming for the day dedicated to the Conference topic

8:00 AM	<i>Breakfast</i>
9:00 AM	Plenary session
10:30 AM	<i>Break</i>
10:45 AM	Breakout conference presentations and workshops
12:15 PM	Feedback and closing remarks
12:30 pm	<i>Lunch</i>

Appendix 2 – IARU Alumni Networking Session

Program

17:30	Arrival and registration of IARU alumni
18:00	Arrival of IARU Presidents' Meeting Delegates Welcome by Prof. Ralph Eichler, President of ETH Zurich Welcome by Dr. Ulrike Kastrup, Director of <i>focusTerra</i>
19:00	Departure of IARU Presidents' Meeting Delegates <i>focusTerra</i> guided tours (optional)
21:30	End of event

Drinks and food will be served.

Free admission for alumni and guests

Location

focusTerra at the Department of Earth Sciences at the ETH Zurich is an inspiring new museum which explains in an easily understandable way the geologic processes in and on our planet. It displays exciting aspects of the Earth and shows how earthquakes are triggered, what makes volcanoes erupt, where gems come from and what fossils tell us about the origin of life. The exhibit also explains how the Alps came to be and what the climate was once like in the past.

The dynamic Earth affects our whole lives. The visitor approaches this dynamic system on the first exhibition level of *focusTerra* where the internal structure of the Earth is described and processes like earthquakes, geomagnetism, volcanic eruptions, mountain building, and rock deformation are explained. On the second and third levels, visitors can discover the many treasures of the Earth by viewing an archive that spans millions of years. The formation of crystals, the nature and origin of gems and minerals, and the development of sediment formations are explained. Unique crystal groups, fascinating fossil plants, and impressive landscape reliefs are only a few of the aesthetic highlights of *focusTerra*.

Using media stations the burning issues of climate change, acute and long-term geologic hazards, the use of energy and other resources as well as the role of geosciences in tunnel construction and the disposal of hazardous waste are discussed.





Earthquake simulator in *focusTerra*: The facility, weighing a massive 3 tons, can simulate the ground motion of earthquakes up to intensity 8.

1.9 Aging, Longevity and Health

Lead	University of Copenhagen
Reporting	Tina Gottlieb (University of Copenhagen)
Executive summary	<p>This document contains:</p> <p>Report on:</p> <ul style="list-style-type: none"> ▪ Empowerment of the ALH network The UCPH Center for Healthy Aging works to strengthen the ALH network among researchers and students (joint workshops, exchange programs and funding opportunities). An ALH Steering Committee has been appointed: ANU, NUS, PKU, UC Berkeley, Cambridge, UCPH, Oxford and UTokyo are represented. The first meeting will be on 20 June 2014 in Copenhagen. ▪ Three IARU Congresses in June 2014 UCPH hosts and supports three concurrent IARU ALH Congresses 17–22 June 2014: “Genome Dynamics in Neuroscience and Aging”, targeted at scientists and clinicians; “Cultures of Health and Aging?”, for researchers in the humanities, and the social and behavioral sciences; and a Graduate Student Conference on “Aging Research and Scientific Careers”. Partners are asked to promote the Congresses internally at their universities. ▪ Center for Healthy Aging funding extended for five more years In 2009, UCPH launched the multi-disciplinary Center for Healthy Aging (CEHA), enabled by a grant of USD 26 million from the Danish foundation Nordea-fonden. In 2013, Nordea-fonden extended its support, providing USD 26 million to support CEHA from 2014–2018. ▪ Activities in the ALH Project Initiatives and activities within the ALH network include series of seminars, meetings, workshops, course activities, research and publications. ▪ EU Knowledge and Innovation Communities (KIC) Aging researchers exchanged ideas and promoted ongoing initiatives within the aging research community at a CEHA organized workshop in Copenhagen. Joint grant writing and funding applications to, for example KICs, were also discussed. ▪ IARU Summer School on Healthy Aging A fourth IARU Summer School on healthy aging is being planned within the IARU Global Summer program 2014, following up on the 2013 course that received an excellent evaluation.
Funding to date	USD 38,000 for Oxford project management salary (2009)
Outcomes of previous meetings	<p>Senior Officers’ Meeting, November 2013</p> <p>The Aging, Longevity and Health initiative is a well-established and successful IARU activity under the lead of UCPH. The Presidents’ Meeting 2013 supported the idea of establishing a steering committee for</p>

the initiative consisting of IARU scientists in order to achieve greater engagement across the ten institutions. UCPH reported that the steering committee is almost in place with full IARU representation. An establishing meeting is planned for June 2014, when UCPH will organize three simultaneous IARU Congresses. IARU universities are asked to support the Congresses actively by communicating the events internally and providing traveling grants for researchers and students. A Graduate Student Conference will be part of the Congresses.

There are links between the initiative and the University of Copenhagen's engagement in a new EIT/KIC proposal connected to aging and health. Other funding opportunities, e.g. Horizon 2020, NFR/CREATE (Singapore) and NIHR (UK) have not been further pursued at this point.

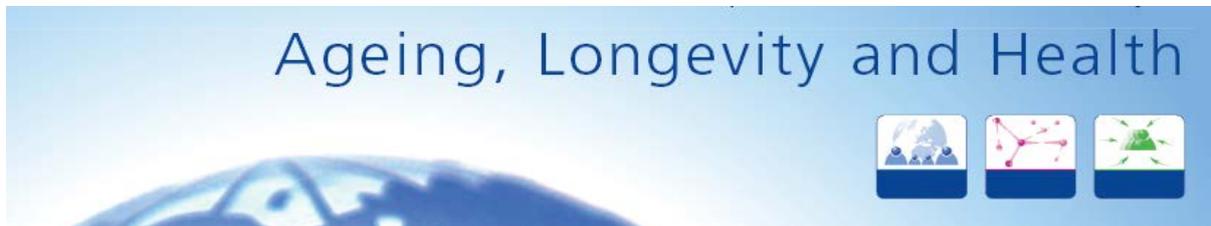
Senior Officers complimented UCPH on the exemplary approach to research collaboration within IARU.

Presidents' Meeting, April 2013

Copenhagen updated the meeting on ALH initiatives, and presented plans to "Empower the Network". All present in the meeting expressed their support for the proposal to establish a steering committee to enable even greater engagement across IARU campuses through workshops, exchange programs and joint funding opportunities. Members would send their nominees to Copenhagen by the end of April 2013. Beida offered to link up the ALH team with China's "Smart Project" on Aging, which studies the situation of the elderly in over 80 provinces in China.

In addition to exploring possible common funding activities under the Horizon 2020, the ALH group was invited to consider opportunities through CREATE in Singapore and NIHR in the UK.

Short Update: The Aging Longevity and Health Project



Empowerment of the ALH network

In the future, the University of Copenhagen and CEHA intend to work to strengthen the ALH network among IARU researchers and students. For example, at the IARU Presidents Meeting in 2013, member universities endorsed the idea of greater engagement across IARU campuses, and more joint workshops, exchange programs and funding opportunities. It was also decided that an IARU ALH Steering Committee would be formed to implement this proposal. To date, member universities NUS, ANU, PKU, UTokyo, Berkeley, Oxford, Cambridge and UCPH have appointed representatives to the Steering Committee.

The current members of the IARU ALH Steering Committee are:

- NUS: Prof. Barry Halliwell
- ANU: Prof. Kaarin Anstey
- PKU: Prof. Xiaoying Zheng
- Univ. of Tokyo: Prof. Junichiro Okata
- Berkeley: Prof. Guy Micco
- Oxford: Dr. Louise Lafortuna
- Cambridge: Prof. Sarah Harper
- UCPH: Prof. Lene Juel Rasmussen (Chair)

The first meeting of the IARU ALH Steering Committee will take place on 20 June, 2014, in Copenhagen, in connection with the concurrent IARU Congresses described below.

Invitation: Three IARU Conferences in 2014

With the endorsement of IARU to enhance the AHL network, the University of Copenhagen will host three concurrent IARU Congresses from 17–22 June 2014. Approximately 250 IARU and non-IARU scientists working on aging are expected to attend. The conferences are entitled:

1. *Genome Dynamics in Neuroscience and Aging*, targeted at scientists and clinicians interested in genomic stability, mitochondrial function and neuronal development and degeneration.
Time: 17-20 June 2014, Elsinore, Greater Copenhagen
2. *Cultures of Health and Aging?*, for researchers in the humanities, and the social and behavioral sciences.

Time: 20-21 June 2014, Copenhagen

3. **2nd Interdisciplinary Graduate Student Conference: *Aging Research and Scientific Careers*** (IGC), targeted at PhD students from various research fields with interests in health and aging.

Time: 21-22 June 2014, Copenhagen

We hereby invite all interested IARU researchers to participate in these events and request that IARU universities encourage PhD students to attend the 2nd Interdisciplinary Graduate Student Conference: “Aging Research and Scientific Careers” (IGC).

More information on the conference subthemes, speakers, programs, registration and practicalities is available at <http://www.iaru-conferences-2014.dk/>.

The University of Copenhagen supports these IARU activities with USD 235,000.

Center for Healthy Aging funding extended for five more years

In 2009, the University of Copenhagen launched the Center for Healthy Aging (CEHA), which grew out of and was inspired by the IARU Aging, Longevity and Health (ALH) project. For its first five years, CEHA was funded by the Danish Nordea-fonden, which committed USD 26 million to support CEHA's multi-disciplinary research activities through 2013. In June 2013, Nordea-fonden extended its support, providing USD 26 million to support CEHA from 2014–2018.

CEHA is now an established research program, with a reputation for quality research, novel insight into the mechanisms of aging, and outreach activities in greater Copenhagen and Denmark. Looking forward, CEHA will build on its past achievements and continue to promote interdisciplinary collaborations focused on healthy aging. CEHA will also focus in future on the unifying theme of “energy” in aging, at the level of the cell, the individual and society. Energy, in this context, is understood to have physical, biological psychological, social, psychosocial and economic dimensions. To solidify this unifying vision, CEHA will be restructured around three research themes and a new communication platform, as follows:

Theme 1: Community innovation for healthy aging

Research on health-promoting activities among older people and interventions in three distinct Danish municipalities. How do different local communities “energize” individuals and groups for active, healthy aging?

Theme 2: Life course aging processes: Lifespan exposures and healthy aging

Aging processes throughout the life course; an intervention project will be conducted in collaboration with the City of Copenhagen. The intervention will explore whether physical activity protects against age-related frailty, lack of vitality, and deterioration in muscle and brain function.

Theme 3: Energy levels in humans: What are the mechanisms underlying reduced energy levels?

Does unrepaired DNA damage and mitochondrial dysfunction contribute to defects in ATP production or utilization in older individuals, leading to reduced ‘vitality’? Does mitochondrial dysfunction alter cognition and muscle function? Cohort studies, qualitative social research, molecular biology,

physiology experiments and surveys conducted during CEHA phase I provided insights into healthy aging; for example, data suggested that physical exercise in late life promotes longevity and reduces aging-related disease and dysfunction. In future, CEHA will design and perform intervention studies to determine how physical activity might promote healthy aging. Ultimately, these studies will help medical professionals advise Danish citizens on how to ensure longevity with lower risk of disease and disability in late life.

Health promotion, communication and outreach

CEHAs goal is to promote healthy aging and to reduce aging-associated decline and dysfunction in Denmark and beyond. To achieve this goal, basic knowledge about healthy aging needs to be communicated broadly within the academic community and to other government and social leaders, thereby promoting vigorous public discourse on how to achieve healthy aging. In CEHAs next phase, a new communication team will help implement this vision, using dissemination in traditional mass media, dialogue-based communication between researchers and the public, and public event programming.

More information on CEHA: healthyaging.ku.dk.

Activities in the Aging, Longevity and Health Project

Neurodegeneration and Life Course Issues

In the subproject *Neurodegeneration and Life Course Issues*, several interdisciplinary research projects on life course issues have been established in CEHA, as well as the International Healthy Aging Network (iHAN), led by Professor Albert Gjedde from CEHA. iHAN is a group of researchers affiliated with IARU who study molecular and cognitive markers of healthy and unhealthy brain aging. These scientists are collecting and analyzing PET images from brains of individuals with and without Alzheimer's disease, searching for molecular markers of disease. Researchers working on this project are from Monash and Queensland Universities in Australia, Yale, Johns Hopkins, and University of California, Berkeley in the US, Aarhus and Copenhagen Universities in Denmark, and Oslo University in Norway.

iHan sponsored a series of seminars by Albert Gjedde in November and December 2013, entitled *Beyond the Amyloid Cascade*. The seminars were, given at three locations: 1) the Lawrence Berkeley Laboratory in Berkeley, California, where iHAN trainee Adjmal Nahimi MD was hosted by Director William Jagust MD; 2) the Center of Advanced Imaging at the University of Queensland in Brisbane, where iHAN analyst Anders Rodell PhD and iHAN trainee Michael Gejl MD currently are hosted by Director David Reutens MD; and 3) the BRAINlab at the Panum Institute's Department of Neuroscience and Pharmacology of the University of Copenhagen. Also in November 2013, the BRAINlab of the Department of Neuroscience and Pharmacology and CEHA hosted Professor Fahmeed Hyder PhD of Yale University, who spoke on *Changes of Brain Energy Metabolism with Aging*.

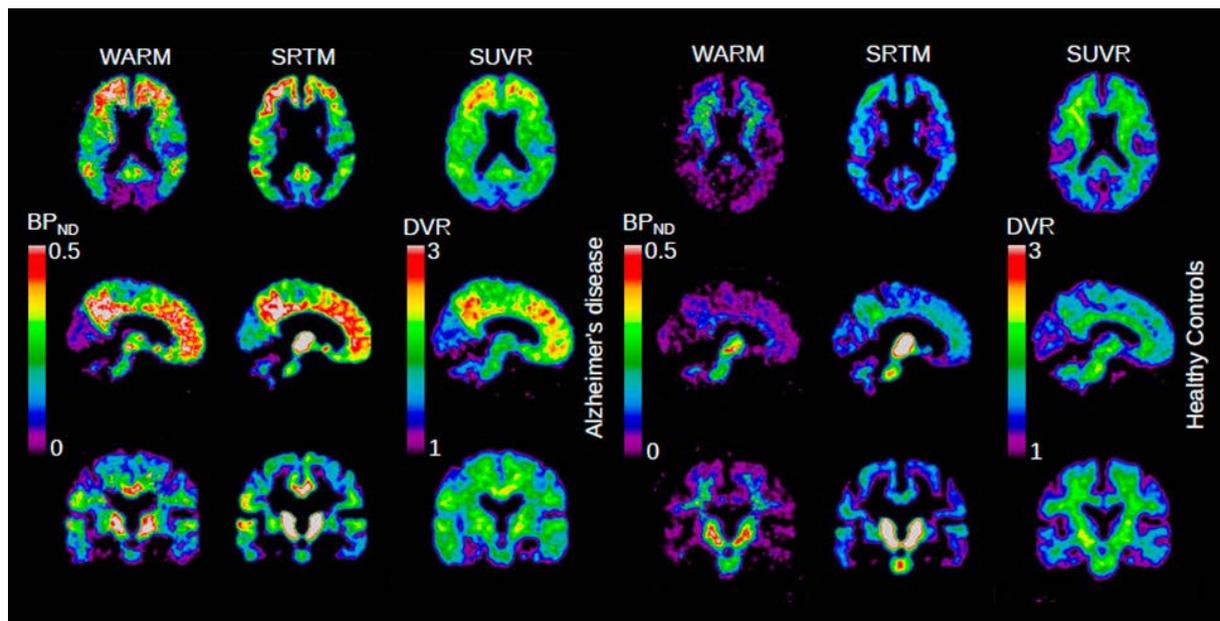


Image of brain maps of amyloid-beta accumulation in brain of patients with Alzheimer's disease, analyzed by three different methods (WARM, SRTM, SUVR). Left panels: Patients. Right panels: Healthy age-matched volunteers. Note the greater differentiation observed with WARM (from Rodell et al. 2013, see list of references).

Publications of the Danish arm of iHAN in 2013

- Darusman HS, Call J, Sajuthi D, Schapiro SJ, Gjedde A, Kalliokoski O, Hau J. Delayed response task performance as a function of age in cynomolgus monkeys (*Macaca fascicularis*). *Primates*. 2013. [Epub ahead of print]
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- Fast R, Rodell A, Gjedde A, Mouridsen K, Alstrup AK, Bjarkam CR, West MJ, Berendt M, Møller A. PiB Fails to Map Amyloid Deposits in Cerebral Cortex of Aged Dogs with Canine Cognitive Dysfunction. *Front Aging Neurosci*. 30;5:99, 2013 doi: 10.3389/fnagi.2013.00099. eCollection 2013.
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- Lauritzen KH, Morland C, Puchades M, Holm-Hansen S, Hagelin EM, Lauritzen F, Attramadal H, Storm-Mathisen J, Gjedde A, Bergersen LH. Lactate Receptor Sites Link Neurotransmission, Neurovascular Coupling, and Brain Energy Metabolism. *Cereb Cortex*. 2013 [Epub ahead of print]
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- Rodell A, Rasmussen LJ, Bergersen LH, Singh KK, Gjedde A. Natural selection of mitochondria during somatic lifetime promotes healthy aging. *Front Neuroenergetics*. 12;5:7, 2013. doi: 0.3389/fnene.2013.00007. eCollection 2013.

Health Policy Challenges of Aging Populations

Within the subproject *Health Policy Challenges of Aging Populations*, Professor George Leeson visited CEHA on 4 July 2013. Professor Leeson, co-Director of the Oxford Institute of Population Ageing (OIA), University of Oxford, was formerly responsible for the Longitudinal Danish Future Study and served as advisor to the Danish Government Programme on Ageing Workers, and Older People and Technology. He is the author of *New Horizons*, *New Elderly* and Editor of the *Journal of Population Ageing*. During the meeting, potential for further research collaboration and joint EU-funding were discussed, including joint community studies in CEHA on health promotion and a research initiative in Oxford on the role of urban space for healthy aging. During his visit, Professor Leeson also lectured in the CEHA IARU Summer School. In spring 2014, Professor George Leeson and co-Director Sarah Harper, OIA, will meet with CEHA to discuss a new collaboration entitled “environmental walkability”.

Evolutionary Medicine

Evolutionary Medicine is an established research and education program of the Centre for Social Evolution (CSE) in the Department of Biology, University of Copenhagen, coordinated by Professor Jacobus J. Boomsma. Marie Curie postdoctoral fellow Sean Byars conducted evolutionary analyses of mental disease using the Danish National Hospital Register and the Danish Civil Registration System. This study provided an explicit test of the Badcock & Crespi hypothesis that autistic and schizophrenic diseases may in part have a deep evolutionary background related to imbalances in genomic imprinting, and found strong correlative evidence for this hypothesis. The study was initiated when Professor Steve Stearns (Yale) was on sabbatical in Copenhagen in 2008. PhD student Birgitte Hollegaard is studying pregnancy-induced hypertension and preeclampsia using the same data sets. CSE scientists will hold the MSc course in Evolutionary Medicine for the sixth time in spring 2014, expecting an enrollment of more than 30 students from the biology, biochemistry and molecular biomedicine curricula.

KIC

Professor George Leeson (OIA) participated in a half-day networking workshop on 23 August, 2013, for Scandinavian aging centers. The purpose of the workshop, organized by CEHA, was to exchange ideas and promote ongoing initiatives within the aging research community. Workshop participants also discussed grant writing and applications for funding to EU Knowledge and Innovation Communities (KICs), managed by the European Institute of Innovation and Technology (EIT). The EIT based in Budapest, Hungary, has recently launched a call for KICs to provide innovative solutions to societal problems as part of Horizon 2020, the European Union’s framework program. A KIC is a highly integrated, creative and excellence-driven partnership which brings together the fields of education, technology, research, business and entrepreneurship. The KIC tackles grand-challenges of the European Community to ensure economic growth along with sustainable solutions in the 21st century.

IARU Summer School on Healthy Aging

The third IARU Summer School on healthy aging took place from 3–22 July, 2013. Investigators representing all CEHA programs lectured at the summer school, which was coordinated by CEHA Associate Professor Ying Liu. Students from the Peking University, University of Tokyo, Australian National University, National University of Singapore, ETH Zurich and University of Copenhagen attended the course, which received an excellent evaluation.

The CEHA Summer School is aimed at students who are interested in aging research. The lectures provide instruction in basic research concepts and principles in aging research, covering multiple disciplines, including humanities, social sciences, epidemiology, neurology, physiology, and molecular biology. Students also conduct supervised research projects during the summer school term. For more information on CEHA summer school including the summer school of 2014, please visit <http://healthyaging.ku.dk/education/iaru-summer-school/>.



IARU students and teachers at the Campus of the University of Copenhagen, July 2013.

2.1.a Global Summer Program (GSP) Report

Lead	IARU Secretariat GSP Coordinators
Reporting	IARU Secretariat
Executive summary	<p>The GSP continues to be a strong program. GSP 2013 marked another successful season with the participation of all partners. The 2014 program – the 7th GSP cycle – is around the corner. Keeping the program affordable is a major challenge.</p> <p>This document contains:</p> <ul style="list-style-type: none"> ▪ Report from the GSP 2013, outlook GSP 2014 and beyond
Funding to date (in USD)	<ul style="list-style-type: none"> ▪ 9,363 (September 2013) GSP Meeting, Zurich ▪ 7,188 (September 2012) GSP Meeting, Beijing ▪ 10,280 (September 2011) GSP Meeting, Copenhagen ▪ 7,018 (September 2010) GSP Meeting, Cambridge ▪ 10,200 (September 2009) GSP Meeting, Oxford ▪ 3,500 (September 2008) GSP Meeting, Antwerp ▪ 2,500 (February 2008) GSP Workshop, Cambridge <p>---</p> <ul style="list-style-type: none"> ▪ 200,000 (2014) IARU-Santander GSP Scholarships ▪ 200,000 (2013) IARU-Santander GSP Scholarships ▪ 200,000 (2012) IARU-Santander GSP Scholarships ▪ 75,000 (2011) Student grants ▪ 100,000 (2010) Student grants
Outcomes of previous meetings	<p>Senior Officers' Meeting, November 2013</p> <p>Anders Hagström (IARU Secretariat) presented a summary report on the 2013 edition of the GSP. 328 students participated in 19 courses in (2012: 352 students in 21 courses). GSP is an ambitious endeavour; already the scheduling across ten campuses is a major challenge. Especially for universities without a summer school tradition, a great administrative effort is involved. But the program continues to be a success story and works smoothly, very much thanks to the dedicated efforts of the GSP coordinators. This year saw an increase in student cancellations. The coordinators are looking for ways to address this. Overall, student survey showed high satisfaction rates.</p> <p>Preparations for GSP 2014 are well underway. 19 courses are currently being planned. An alumni survey for the student cohorts 2011–2013 will be conducted to get a more distant view. The alumni will also be asked for ideas on how to celebrate the 10th GSP anniversary in 2017.</p> <p>Further developments of the GSP concept towards more interaction between courses, joint teaching, reducing the administrative effort etc. continue to be on the agenda. ANU and UC Berkeley will put forward a proposal of the “hub” idea of several partners offering their courses in one location.</p>

The IARU-Santander GSP Scholarships of USD 200,000 per year for three years has given the GSP a further boost. The current agreement will terminate with GSP 2014. Santander has signaled interest to continue the support for the GSP. The Secretariat will approach Santander for a follow-up funding in spring 2014.

Presidents' Meeting, April 2013

The Secretariat updated the meeting that there were 693 applications for 18 courses in 2013 offered by all IARU institutions. Although there was a 22% drop in the overall number of applications, it was likely that GSP 2013 would be able to sustain participation rate at about 300 – 350 students. The summer courses run between June and August 2013.

The sponsorship funds for the 2013 GSP have been received in full from Santander ahead of the stipulated 15 April date, and have been disbursed to all partners. In response to questions by Cambridge, the Secretariat responded that it has not heard of cases of Santander approaching students for marketing efforts, and Santander have been very flexible and accommodating with requests from the IARU GSP group.

Global Summer Program: Review and Outlook

Global Summer Program (GSP) 2013

A total of 328 students participated in one or more of the 19 courses offered by the ten IARU universities in the 2013 Global Summer Program.

A summary of the offered GSP 2013 courses including duration and finances is given in Annex A.

GSP 2013 was marked by numerous student cancellations, some for financial reasons and others due to students opting for a competing offer from another program. While the GSP coordinators' efforts to streamline the application and nomination process can address the latter reason, the financial issue is harder to address. Although the funding from Santander is a great financial support to students, it does not cover the cost of organizing courses, which remains at the responsibility of each partner university. Partners are continuously facing the challenge of trying to keep tuition fees low.

Despite the high cost, the post-course survey showed a very high overall satisfaction of the participating students. 91% would recommend GSP to their peers (8% maybe, 1% no). As particular strengths of GSP 2013 students perceived the performance of the instructors, the diversity of the student body and the classroom discussions.

Global Summer Program (GSP) 2014

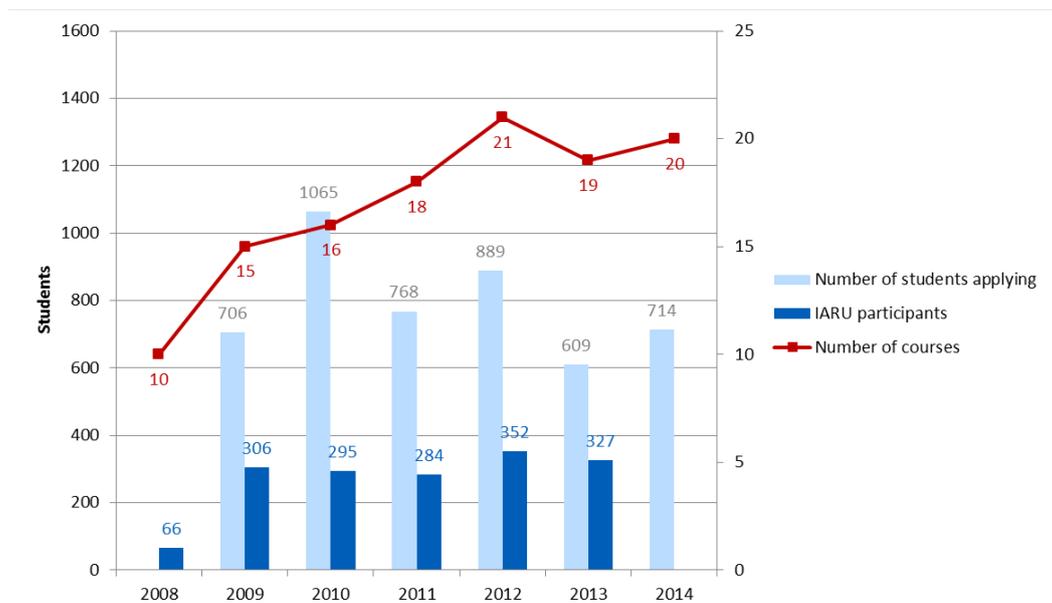
GSP 2014 is the seventh cycle of the program. A total of 20 courses are offered. Course descriptions and costs are given in Annex B.

The table below shows the number of GSP applications and confirms the continued interest of students in the program. The numbers clearly reflect the different summer school cultures at the universities.

University	Abbr.	Course	ANU	ETH	NUS	PKU	UCB	CAM	COP	OXF	TOK	YAL	Total
Australian National University	ANU1	Long-Term Biodiversity and Climate Change in Asia-Pacific			7	2	2	2	2	1		1	17
	ANU2	Indigenous Peoples and Development		1	4	3		1	4		1	1	15
ETH Zurich	ETH1	ETH Sustainability Summer School 2014	7		5	1	1	1	6		2	1	24
	ETH2	Sustainable Agriculture and the World Food System	1		4	4	3		3		5	1	21
National University of Singapore	NUS1	Southeast Asia in Context	8			2	1		10	1	3	8	33
	NUS2	Asia Now! The Archaeology of the Future City	3			2		2	1	2	2	3	15
Peking University	PKU1	Major Issues Concerning the Rise of China	11	3	3		4	2	6	4	2		35
	PKU2	Silk Road: A History of Cultural and Material Exchanges	7	2	5		1		2	2		1	20
	PKU3	Special Topics in Chinese Economy	10	1	5		3	1	1	4	1	9	35
University of California, Berkeley	UCB1	Environmental Leadership Program	21	2	7	1		3	3	2	1		40
	UCB2	Media and Global Protest Movement	9		7	0		5	12	1	3	1	38
University of Cambridge	CAM1	Shaping the World: Understanding the Past, Predicting the Future	18		11	2	5		5			3	44
University of Copenhagen	COP1	Kierkegaard: The Individual in the Global Society	11		11	2		1		3	2		30
	COP2	Interdisciplinary Aspects of Healthy Aging	10		2	3				1	5	2	23
University of Oxford	OXF1	Global Challenges of the 21st Century	26		8	4	7		8				53
University of Tokyo	TOK1	Introduction to the Japanese Language	18	1	n/a	2		6	8	4		2	41
	TOK2	Sustainable Urban Management	8	2	9	3	5	4	6	2		2	41
	TOK3	Japan in Today's World	16		9	7	3	8	12	4		2	61
	TOK4	Nanoscience	12	3	9	2	4	6	11	4		4	55
Yale University	YAL1	Foreign Policy and International Law	24		8	10	1	6	16	3	5		73
Applications to courses (outgoing students, first choice, one student can take part in up to 3 courses)			220	15	114	50	40	48	116	38	32	41	714

Summary and Outlook

GSP continues to be a flagship program of IARU. The graph below shows the developments of GSP since its inception in 2008.



In 2012 a survey was conducted of GSP alumni (cohorts 2008, 2009 and 2010). A second alumni survey (cohorts 2011, 2012 and 2013) will be carried out in 2014. Alumni will also be asked for ideas on how to celebrate the 10th GSP anniversary 2017.

The current IARU-Santander agreement is valid for three years and will terminate with GSP 2014. The Secretariat is in dialogue with Santander for a follow-up funding.

While most GSP courses are primary targeted at undergraduate students, some courses are also open to graduate/postgraduate students. Some partner universities will look at offering courses specifically for graduate students in the future.

At the 2013 Meeting 2013, GSP coordinators agreed to continue efforts to seek collaboration in offering courses, e.g. through faculty team teaching. Partners will seek to invite faculty members from other IARU universities to teach in joint programs.

A further idea to create more interaction opportunities between individual GSP student groups centers around the idea of regional GSP “hubs”. Such hubs could entail several thematically related courses, gathering a larger pool of students in one location. This would make it easier to organize team teaching, comparative studies and interaction between different groups of students. ANU and Berkeley have taken the lead in exploring the “hub” idea and will present the proposal at the next GSP Working Committee Meeting which will be held on 22–23 September 2014 at University of Oxford.

Annex A – GSP 2013 Course Duration and Finances

University	Abbr.	Course	Dates	Length (days)	Tuition fee (USD)	Accommodation fee (USD)	Field trip (USD)	Total (excludes any other add. fees, USD)
Australian National University	ANU1	Long-term Biodiversity & Climate Change in Asia-Pacific	24 Jun - 12 Jul	19		700	500	1,200
	ANU2	Indigenous Peoples and Development	8 Jul - 27 Jul	20		800	500	1,300
ETH Zurich	ETH1	Future Cities: Networks and Grammars	24 Jun - 12 Jul	19	1,000			1,000
National University of Singapore	NUS1	Southeast Asia in Context	17 Jun - 20 Jul	34	4,100	600	800	5,500
	NUS2	Asia Now - Southeast Asian Cosmopolitan Urbanism	1 Jul - 19 Jul	19		300		300
Peking University	PKU1	Population Ageing and Health	8 Jul - 2 Aug	26	1,500 (PKU1 & 2)	400		1,900
	PKU2	Communication, Culture, and Society: The Chinese Way	8 Jul - 2 Aug	26	1,500 (PKU1 & 2)	400		1,900
University of California, Berkeley	UCB1	Summer Peace Institute	3 Jun - 13 Jul	41	3,000	1,800		4,800
	UCB2	Media and Global Protest Movements	8 Jul - 16 Aug	40	2,200	2,300		4,500
University of Cambridge	CAM1	Shaping the World: Understanding the Past, Predicting the Future	7 Jul - 3 Aug	28	2,800	2,400		5,200
University of Copenhagen	COP1	Kierkegaard: The Individual in the Global Society	3 Jul - 26 Jul	24	EU: 500 non EU: 1,500 with agr.: 500	800		EU: 1,300 non EU: 2,300 with agr.: 1,300
	COP2	Security: Theories, Practices and Dilemmas of Widening the Concept	5 Aug - 22 Aug	18	EU: 400 non EU: 2,300 with agr.: 0	700		EU: 1,100 non EU: 3,000 with agr.: 700
	COP3	Interdisciplinary Aspects of Healthy Aging	3 Jul - 22 Jul	20	EU: 700 non EU: 1,400 with agr.: 0	800		EU: 1,500 non EU: 2,200 with agr.: 800
University of Oxford	OXF1	Global Challenges of the 21st Century	24 Jun - 20 Jul	27	1,600	3,800		5,400
University of Tokyo	TOK1	Introduction to the Japanese Language	1 Jul - 12 Jul	12	300	1,000		1,300
	TOK2	Sustainable Urban Management	1 Jul - 12 Jul	12	200	1,000		1,200
	TOK3	Japan in Today's World	11 Jul - 26 Jul	16	300	1,300		1,600
	TOK4	Nanoscience	11 Jul - 24 Jul	14	200	1,100		1,300
Yale University	YAL1	Sustainability and Institutions: Enabling Innovation and Transformation	30 Jun - 4 Aug	41	1,700	1,600		3,300

Note: Currency is rounded to the nearest hundred.

Annex B – Courses Offered in the GSP 2014

Code	Course	Length (days, incl. week-ends)	Total course fees in USD* (estimates only, include tuition fees, textbooks and accommodation fees)	Course Description
ANU1	Long-Term Biodiversity and Climate Change in Asia-Pacific	24	Non ANU: 1,640 ANU: 735	What can the past tell us about our future? Much of what we know of the deeper past comes from the remains of microscopic organisms and sediment properties found in depositional settings around the world. In Australia and the Asia-Pacific region there is a rich body of evidence for past changes in climate and biodiversity that is only just beginning to be explored. The course combines in-class learning and a 7 day fieldtrip to the Wet Tropics of northeast Queensland with 'hands-on' experience in field collection and analysis of a range of palaeo-environmental indicators including pollen, charcoal, seeds, biogenic silica, and stable isotopes. The will provide students with a deeper understanding and the practical skills to engage in palaeoecology, archaeological science, palaeoclimatology, and natural resource management research.
ANU2	Indigenous Peoples and Development	22	Non ANU: 2,380 ANU: 1,460	This course engages with three big ideas or questions. Who are Indigenous people or peoples? What does and can development mean in relation to them? And what sorts of policies do, or could, governments pursue in relation to Indigenous people(s)? The primary focus is on the Australian experience but the situation in the other settler-majority English-speaking nation-states of New Zealand, Canada and the USA will also be examined. The course will note that in remote sparsely-settled areas the Indigenous demographic presence is far greater than the national average and ask what consequences this has for development and policy.
ETH1	ETH Sustainability Summer School 2014	22	500 + accommodation	The ETH Sustainability Summer Schools provide young researchers with the opportunity to work on a topic of global relevance with focus on sustainable development in interdisciplinary and intercultural teams. Focus is given not only to teaching theoretical knowledge but also to solving specific case studies. The summer school will be divided into a teaching block where students meet and discuss with experts from various fields and a case study block. The 2014 course will focus on the topic of "Health" and be held in Switzerland (Emmental and Zurich).
ETH2	Sustainable Agriculture and the World Food System	14	845	The question of how to feed the world, while considering human health, the environment and social wellbeing is one of the defining challenges of our time. In order to address these challenges we need to understand the world food system and its complexity, which is a key aim of the program.
NUS1	Southeast Asia in Context	34	4,250	Southeast Asia in Context is a five-week exploration of Southeast Asia's geographical, historical and cultural diversity. This course takes advantage of Singapore's strategic position in offering a unique blend of classroom instruction at NUS campus with hands-on fieldwork in Cambodia and Thailand or Indonesia. The lecturers are experienced teachers and researchers of Southeast Asia, who will explore themes such as Southeast Asian religion, archaeology, rural development, politics and regional integration. The fieldtrip includes visits to magnificent ancient temples, rural agricultural communities, war memorials and a fair sampling of local village life that is well off the usual tourist track.

Code	Course	Length (days, incl. week- ends)	Total course fees in USD* (estimates only, include tuition fees, textbooks and accommo- dation fees)	Course Description
NUS2	Asia Now! The Archaeology of the Future City	19	1,530	This IARU course concentrates on the Asian built environment – architecture, urban planning, and sustainability – using the city-state of Singapore as a laboratory. Students will join one of two 15-student seminars taught by prominent social scientists with urban studies backgrounds. The venue will be Tembusu College, in the National University of Singapore's new "University Town" campus, which integrates housing and classrooms in a stunning environment. Field trips to urban sites in Singapore will be interspersed with discussions and readings that offer in-depth, analytical, critical, and alternative perspectives on Asian urbanism. Regular sessions will be supplemented by evening plenaries engaging prominent policy-makers and an evening of documentary film screening on societies and urban spaces in Asia. Students will come away with a deeper understanding of challenges facing a rapidly-urbanizing Asia, and some solutions being worked out in Singapore and elsewhere in the region.
PKU1	Major Issues Concerning the Rise of China	26	1,545	The rise of China is one of the most important and defining themes in contemporary international relations. This seminar course is intended for advanced undergraduate students and graduate students to examine major issues and topics concerning the rise of China from a broad theoretical perspective, and to engage in the academic discourse and policy debate about implications of China's rise for world politics. The seminar is organized around the central question – will China's rise bring about a fundamental change to the international system? It is roughly divided into three sections: (1) China's rise and the "paradigm change" in world politics; (2) China's quest for identity and order; and (3) implications of China rising for Asia and the world. Under each of these sections, a few specific topics are identified for class discussion.
PKU2	Silk Road: A History of Cultural and Material Exchanges	26	1,545	This course introduces the history of the Silk Road – a complex network of trade routes that connected China and Rome over land and sea – and examines the cultural and material exchanges between the peoples and cultures it connected. The course covers the period 500 BCE to 1500 CE, during which forces wielded by many peoples (e.g. Chinese, Greeks, Persians, Arabs, Turks, and Mongolians) shaped the geo-political landscape of Asia. It explores the roles played by the Silk Road in forming and transforming the cultural, ethnic, and religious identities of these peoples and their perceptions of one another. It highlights such themes as conspicuous consumption, cultural diversity, religious pluralism, and nomadic migration, as well as the financial, judicial, religious, and social institutions that were the fruits of these extended exchanges. The course begins and ends with an analysis of conceptualizations of the "Silk Road" against the backdrop of the "Great Game" that played out in the late 19th and early 20th centuries among various colonial powers as well as its legacy to this day.
PKU3	Special Topics in Chinese Economy	26	1,545	Over three decades, the Chinese economy has undergone a rapid economic transformation at an unprecedented pace and scale. Transforming from a centrally planned economy to a market-oriented system – institutional change ushered an era of industrialization and globalization. After experiencing decades of sustained growth, Chinese economy is at a crossroad – with

Code	Course	Length (days, incl. week- ends)	Total course fees in USD* (estimates only, include tuition fees, textbooks and accommo- dation fees)	Course Description
				emerging issues of economic imbalance, environmental degradation, inequity, to aging population – compels scholars to rethink China's development path. This intense course focuses on the special topics that are key to China's past, present and future economic development. Throughout the course, case studies and special topic research will serve as core teaching material.
UCB1	Environmental Leadership Program	21	4,500	The Beahrs Environmental Leadership Program (ELP) of the College of Natural Resources at the University of California, Berkeley provides state-of-the-art training in environmental and natural resource science, policy, and leadership to strengthen the capacities of environmental practitioners worldwide. Participants will benefit from a unique opportunity to interact with Berkeley faculty as well as their global peers to access new information and tools, share practical experiences, and develop collaborative leadership skills. The Beahrs ELP has graduated 500 environmental leaders from over one hundred countries.
UCB2	Media and Global Protest Movements	39	5,225	This course is concerned with the interplay between political activism and contemporary (mainstream/social) media in international perspective. It places focus on the chain of uprisings in the Arab world, Turkey, Europe, and the United States, and the use of social media as a tool for contention. It takes stock of the background factors characterizing the global protest wave, and examines the role that the mainstream media and digital sphere have played in shaping 'the politics of revolt', and globalizing its repertoires. It further assesses the economic and political implications of such protests for an emerging global order. The course additionally explores the extent to which digital activism is an innovative form of protest and contrasts it with more traditional forms of activism. It also asks the question whether recent forms of activism reconfigure the politics of space in contention.
CAM1	Shaping the World: Understanding the Past, Predicting the Future	28	5,700	The leaders of tomorrow will need to be skilled investigators, with ability to place any investigation in context. The ability to take a global perspective on matters which shape our world requires those same future leaders to foster their ability to think beyond an immediate and narrow field of interest. This program offers a unique opportunity for participants to draw upon a rich reserve of knowledge, to attend lectures across a broad range of subjects, and to draw together ideas in a series of focused discussions. Intensive 'supervisions' offer the chance to experience Cambridge teaching at its best: Participants will benefit immensely from the exchange of ideas both with lecturers and with their student peers from around the globe.
COP1	Kierkegaard: The Individual in the Global Society	24	With agr. (ANU, NUS, UTokyo): 810 EU: 1,350 non EU: 2,440	The course takes a Danish perspective on common existential themes by reading the world famous local philosopher, Søren Kierkegaard, in his home town and at his own university. At the same time the course draws on the IARU network by inviting well known specialists from the partner universities as guest lecturers. Based on GSP in 2012 and 2013, it is our

Code	Course	Length (days, incl. week-ends)	Total course fees in USD* (estimates only, include tuition fees, textbooks and accommodation fees)	Course Description
				experience that this combination of the local Danish perspective with the involvement of international experts meets the expectations of IARU-students.
COP2	Interdisciplinary Aspects of Healthy Aging	20	With agr. (ANU, NUS, UTokyo): 730 EU: 1,310 non EU: 1,810	Aging begins early in life. This program offers a unique opportunity for participants to gain new knowledge on how more people can live healthy lives and enjoy a robust old-age. The course is designed for students who would like to gain diverse experience in the Aging research field, and focuses on interdisciplinary research projects, which reflects the interdisciplinary nature of the Center of Healthy Aging (CEHA, http://healthyageing.ku.dk/).
OXF1	Global Challenges of the 21 st Century	27	6,170	The 2014 Oxford Global Summer Programme offers a general introduction to a range of scientific and development challenges of the 21st century. The course is designed for undergraduates, with topics ranging across social, technological and environmental issues, such as climate change, conservation and cities.
TOK1	Introduction to the Japanese Language	12	1,280	The University of Tokyo provides an introductory course for those new to Japan which will both facilitate participation in Japanese society and introduce characteristics of the Japanese language such as the Japanese writing system, elementary grammar, and communication patterns. To improve students' Japanese literacy, "practical" lessons (e.g. typing Japanese on PC with a dictionary) will also be included in this course to enable students to continue their study of the language after their return to their home country. With the Japanese learnt during this course, we hope that students will be able to enjoy various aspects of Japanese cultures when away from the classrooms.
TOK2	Sustainable Urban Management	12	1,205	The course provides basic knowledge of civil engineering, architecture and urban engineering in the context of sustainable urban management. Planning and management are taught on the building, urban and national scale. A one-day excursion related to the lectures will be organized for GSP students as part of the course.
TOK3	Japan in Today's World	9	1,050	This course will give an overview of modern Japan with emphasis on the works of the political system, including political parties, civil service, elections, and foreign relations with China, US, Korea, as well as Japan's role in international political economy. Along with those introductory classes, we will hold two workshops, one on Risk Management and Post Disaster Relief after the March 2011 Earthquakes and another - on Territorial Disputes and Nationalism, where participants are encouraged to make contributions in the discussion with invited specialists. There will be no field trips, but we expect the workshops to offer a different kind of excitement.
TOK4	Nanoscience	14	1,345	This lecture series provides a general overview of nanoscience, which has grown very rapidly in the last few years. It consists of three sub-courses of lectures (Biotechnology, Biomedicine and Nanobiotechnology and Nanotechnology). Each sub-course will include visits to active laboratories in the University of Tokyo.

Code	Course	Length (days, incl. week- ends)	Total course fees in USD* (estimates only, include tuition fees, textbooks and accommo- dation fees)	Course Description
YAL1	Foreign Policy and International Law	41	3,630	Open to IARU students only. The mutual influence of law and politics at the international level. Topics include the sources of international law, the participants, courts, dispute settlement, jurisdiction, and customary law. Readings on foreign policy making, international law, treaties, and international courts from the literature of United Nations bodies and the International Law Commission.

*Estimates only, include tuition fees, textbooks and accommodation fees)

2.1.b IARU-Santander GSP Scholarship Extension

Background

Since its inception in 2008, a major challenge for the Global Summer Program's (GSP) has been securing financial support for participating students. In 2011, the IARU Chair at NUS, Prof. Tan Chorh Chuan, approached Santander's Chairman Mr. Emilio Botín with a request for support for GSP. Santander agreed to provide an annual sponsorship of USD 200,000 for the three-year period 2012–2014 to be equally distributed to all ten partner universities.

Current Status

The Legal Agreement between with Banco Santander and NUS on behalf of IARU partner was signed at the Presidents' Meeting 2012. The agreement covers funding for the GSP seasons 2012, 2013 and 2014. The IARU Secretariat has approached Santander to explore the possibility of extending the agreement from 2015 onwards.

Santander is now preparing a draft for a new agreement by 30 April. The Secretariat will review the draft based on the experiences with the IARU-Santander GSP Scholarships 2012–2014. In character, the new agreement will be a continuation of the existing agreement without major changes but articles that have caused uncertainty will be more clearly defined. The Secretariat will then circulate the draft to all partners for comments.

Not being a legal person, IARU cannot be the contractual partner of Banco Santander, i.e. the agreement must be signed by one of the partner institutions on behalf of the Alliance. Ideally, this should be the institution hosting the IARU Secretariat from 2015. The preparation work of the contract will however be coordinated by the current IARU Secretariat at ETH.

Santander wishes to hold the signing ceremony for the new agreement during the *3rd Universia International Rectors Meeting*, 28–29 July 2014 in Rio de Janeiro. Santander's Chairman, Emilio Botín, will be present to sign the new agreement. All IARU institutions have received the Chairman's invitation letters (see Annex). To date, three IARU Presidents have confirmed their attendance.

Annex – Chairman's Botín invitation letter to the IARU Universities

Example taken from ETH Zurich



Rector
Prof. Dr. Lino Guzella
 Eidgenössische Technische Hochschule Zürich

Madrid, July 1st 2013

Dear Rector,

I am pleased to invite you to the 3rd Universia International Rectors Meeting on 28th and 29th July, 2014 in Rio de Janeiro. The theme of the meeting is "The University of the 21st century. An insight from Latin-America."

Today, Universia (<http://www.universia.net/en/>) is one of the largest networks of university collaboration in the world, representing 1,242 universities across 23 countries.

As I had the pleasure to announce at the closing ceremony of the 2nd Universia Rectors Meeting held in 2010 in Guadalajara (Mexico) to 975 presidents from 37 countries, with this 3rd Meeting we would like to continue the Universia initiative launched in 2005 with the 1st Rectors Meeting in Seville. These two meetings have strengthened ties between universities in Latin-America and Iberia and among other initiatives, have fostered international mobility among students and academics.

With this 3rd Rectors Meeting (<http://www.universiario2014.com/index/>), organised by Universia and sponsored by Santander Universities, we would like to take a step further and create the necessary conditions to globally facilitate and boost the relationships of Latin-American and Iberian universities with other institutions.

We have created the following committees to define the content and structure of this meeting:

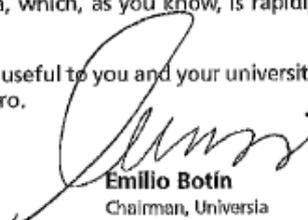
- An International Committee chaired by Dr. Carlos Antônio Levi da Conceição, President of the Universidad Federal de Rio de Janeiro
- An Academic Committee chaired by Dr. Carlos Alexandre Netto, President of the Universidad Federal de Rio Grande do Sul, constituted by 16 university rectors from Europe and the Americas.

In the next few months, the Organising Committee chaired by Ignacio Berdugo, former Rector of the University of Salamanca, will bring you exciting news about the Meeting.

I believe this is an excellent opportunity for you to strengthen your existing relationships and establish new links with universities in Latin-America and Iberia, which, as you know, is rapidly growing in importance for the education sector worldwide.

I am confident that this 3rd Rectors Meeting will prove to be very useful to you and your university community and I look forward to welcoming you in Rio de Janeiro.

Kind regards,



Emilio Botín
 Chairman, Universia

2.1.c Memorandum on Student Exchange for GSP

Lead	The University of Tokyo
Reporting	Kiichi Fujiwara (The University of Tokyo)
Executive summary	<p>The University of Tokyo has introduced new requirements for accepting students from overseas. This requires a memorandum of understanding for receiving GSP students. At the Senior Officers' Meeting 2013, partners responded positively to the request, asking UTokyo to amend the last paragraph of the MoU with an end date without automatic renewal. UTokyo sent the draft MoU to the partners for their review.</p> <p>UTokyo will bring the MoU to the Presidents' Meeting 2014 to be signed by all partners. If necessary, UTokyo will circulate the original copy of the MoU to any partner whose signatory is absent from the meeting.</p> <p>This document contains:</p> <ul style="list-style-type: none"> ▪ Memorandum on Student Exchange for GSP

Memorandum on Student Exchange for GSP – COPY

**MEMORANDUM ON STUDENT EXCHANGE
FOR THE GLOBAL SUMMER PROGRAM
within the
INTERNATIONAL ALLIANCE OF RESEARCH
UNIVERSITIES**

between

The Australian National University
and
ETH Zurich
and
National University of Singapore
and
Peking University
and
University of California, Berkeley
and
University of Cambridge
and
University of Copenhagen
and
University of Oxford
and
The University of Tokyo
and
Yale University

The International Alliance of Research Universities (hereinafter referred to as “IARU”), on the basis of the Memorandum of Understanding concluded among Members Universities of IARU and signed on January 13, 2006, in order to address the student exchange as defined in the Memorandum of Understanding, specifically on the Global Summer Program (hereinafter referred to as the “GSP”), hereby agree to the following.

The Global Summer Program (hereinafter referred to as “GSP”) is an educational initiative undertaken as part of the collaboration among IARU member institutions, the aims, descriptions and principles of which are agreed upon by the partners. The current version of the principles, as agreed in September 2009, are in Annex to this Memorandum of Understanding.

The GSP aims to enable students to develop a global perspective, provide students with an intensive summer learning experience and strengthen the ties between the member institutions of IARU. IARU members are committed to the internationalization of their campuses and the preparation of their students to be global leaders by offering students opportunities in addressing critical issues in global perspective, working with outstanding peers from around the globe and learning intensively at a foreign university and from top researchers.

This Memorandum is valid for five years effective from the date of the final signature affixed below by the Members hereto (hereinafter referred to as the “term”). . The term of the Memorandum may be extended upon the agreement by the members. Any IARU member may terminate its participation under the Memorandum at any time during the term by giving six months advance written notice to the other IARU members. Termination shall not affect any joint activity already agreed upon by the time of termination.

Members hereby establish this Memorandum on Student Exchange by duly signing it as of the dates below.

The Australian National University

Name: Professor Ian Young AO
Signature:

Title: President
Date:

ETH Zurich

Name: Professor Lino Guzzella
Signature:

Title: Rector
Date:

National University of Singapore

Name: Professor Tan Chorh Chuan
Signature:

Title: President
Date:

Peking University

Name: Professor Wang Enge
Signature:

Title: President
Date:

University of California, Berkeley

Name: Professor Nicholas Dirks
Signature:

Title: Chancellor
Date:

University of Cambridge

Name: Dr. Jennifer Barnes
Signature:

Title: Pro-Vice-Chancellor for International Strategy
Date:

University of Copenhagen

Name: Professor Ralf Hemmingsen
Signature:

Title: Rector
Date:

University of Oxford

Name: Professor Andrew Hamilton
Signature:

Title: Vice-Chancellor
Date:

The University of Tokyo

Name: Professor Junichi Hamada
Signature:

Title: President
Date:

Yale University

Name: Professor Peter Salovey
Signature:

Title: President
Date:

2.2 Global Internship Program (GIP)

Lead	n/a
Reporting	IARU Secretariat
Executive summary	<p>In 2014, so far 13 internships are being offered by 3 universities (NUS, PKU and UTokyo). IARU internships offer an international work opportunity for students. All partners are encouraged to offer internships.</p> <p>This document contains:</p> <ul style="list-style-type: none"> ▪ Report on the Global Internship Program (GIP)
Funding to date	n/a
Outcomes of previous meetings	<p>Senior Officers' Meeting, November 2013 In 2013, four universities (ETH, NUS, UTokyo, Yale) proposed a total of 11 internships of which 6 were carried out. The internships had very different formats. The Secretariat encouraged all universities to offer internships. Experiences have shown that it is a win-win situation for the students and universities alike – students gain international work experiences and universities receive excellent labour for a standard student salary.</p> <p>Presidents' Meeting, April 2013 The Secretariat reported that four universities are offering eleven internships in 2013 – ETH, NUS, UTokyo and Yale. ETH, who offered its first internship in 2013, shared that the application process has been positive. It received a healthy number of responses from IARU students, and high-quality applicants. However, the challenge was to secure the work permits, and further discussions may be necessary to see if the internship can be counted as part of a student's university curriculum.</p> <p>The Secretariat and ETH called for greater support from IARU partners to offer internship opportunities as there is a strong level of interest from students.</p>

Report on the Global Internship Program (GIP)

GIP 2013

For the 2013 IARU Global Internship Program, four universities proposed a total of eleven internships – ETH Zurich, NUS, UTokyo and Yale. Six of these were carried out with students from PKU, Berkeley, Oxford, UTokyo and Berkeley. The advertised internships attracted a total of 117 applications from highly qualified students.

GIP 2014

Three universities offer a total of 13 internships in 2014. The table below shows the details.

University	Internship Title	Applications	Sending University	Funding (USD)
NUS	Documentation and quantification of butterfly wing patterns	Yale: 1	none	940/m
	The impact of Pleistocene climate change on South-east Asian bird diversification	PKU: 1 Yale: 1	none	
	A bioeconomic modelling of 'oil palm pests' infestation in Southeast Asia	none	none	
	Using an equation to speed up cache simulations	none	none	
	Concurrency control for social network data	PKU: 1	PKU	
	Equation-based flash allocation to virtual machines	PKU: 1	PKU	
	On modeling 2-dimensional and 2-level caches	none	none	
	Query optimization for social network data	none	none	
	Wireless Sensor and Actuator Node Realization	none	none	
	Lee Kong Chian Collection Curatorial Research Intern	PKU: 5	none	
T.K. Sabapathy Collection Curatorial Research Intern	PKU: 2	none		
PKU	<i>Senior Program Assistant, Peking University International Summer School Program</i>	Cambridge: 1	none	320/m
UTokyo	Internship with the International Core Research Center for NanoBio	PKU: 1 non-IARU: 4	not yet available	---
Total	13 internships offered by 3 IARU universities	18	2	n/a

Appendix – Global Internship Program – General Information / Best Practices

Internship opportunities for IARU students are highly sought after. There are no standard requirements for IARU Internships. The partner universities are free to set up internships according to their own requirements. The Secretariat makes following recommendations:

- Internships can be held anytime of the year, but for ease of scheduling and convenience (as student accommodation will be available), it is best held during the summer break.
- Where possible, the hosting partner should be able to offer a stipend to offset living expenses (accommodation, food, transport etc.). It is preferable that on-campus housing can be arranged, otherwise assistance with off-campus housing should be provided.
- Typically, the interns themselves (if available, with support from their home universities) will cover the air travel costs.
- The hosting universities should provide logistics support and advice to the interns – such as providing visa letters, support in finding accommodation, workplace orientation, etc. Interns should be advised to purchase adequate insurance coverage. Experience shows that obtaining a work permit is often a challenge.
- The selection of interns is directly done by the hosting faculty or department. Interviews are usually conducted over Skype.

The Secretariat regularly asks partners for internship opportunities. Open internships positions are published online (www.iaruni.org/gei/internships). Please also refer to the web page for examples of past internships. IARU Key Contacts are informed about new internship opportunities and responsible to make them known among their students.

2.3 Global Cross Disciplinary Tournament (GXT)

Lead	Australian National University
Reporting	Erik Lithander (Australian National University)
Executive summary	<p>ANU has agreed to sponsor the Global Cross Disciplinary Tournament GXT2014 at ANU on the proviso that the event would have to attract participants from at least 6 IARU partner universities in order to receive any future financial support. The ANU student organizing committee is fully engaged and committed to the 2014 program, although as of 21 March 2014, only two other partner universities (PKU and NUS) have agreed to participate. Applications closed on 23 March 2014. A verbal update on the final number of applications and a list of participating partners will be provided at the meeting.</p> <p>This document contains:</p> <ul style="list-style-type: none"> ▪ Progress report from the GXT 2014
Funding to date	USD 13,809: 3 rd GXT, Peking University, July 2013
Outcomes of previous meetings	<p>Senior Officers' Meeting, November 2013</p> <p>The GXT 2013 was hosted by the students of PKU with the topic "The Future of Media". Students from 4 IARU universities participated. Bernard Toh (NUS) emphasised that GXT is a great learning opportunity for students to produce an event on an international scale. ANU students have shown interest to host GXT 2014 with the topic "The Future of the Body" and would ask for funding.</p> <p>Senior Officers agreed that if the GXT initiative is to be continued, participation of more universities is required. Ideally, a participant of one year should be the organizer of the next year to guarantee continuity. Some partners explained that they have difficulties to promote the event to their students because it is not clear what the GXT is about. Administrative staff who had attended GXT meetings in the past see the value of the initiative and expressed their support. If ANU students develop a strong proposal, IARU partners are encouraged to support approximately 6 home students with travel grants to be able to participate. The host is responsible to fund the local expenditures.</p> <p>Presidents' Meeting, April 2013</p> <p>Beida gave an update on the 3rd GXT which would be held on 10–19 July 2013. The theme of GXT 2013 is "The Future of Media". Until then, ANU and NUS had signed up, and Beida invited more universities to participate. Prof. John Richardson (NUS) who oversaw student organizers of the year before emphasized that the GXT is uniquely a student driven, student conceived initiative. He hoped more would support GXT 2013 as students would greatly benefit from the learning opportunities in the tournament.</p> <p>The Chair proposed that the decision regarding the 4th GXT would be made at the Senior Officers' Meeting in November.</p>

GXT 2014 Progress Report

Background

The IARU Global Cross-Disciplinary Tournament (GXT) is a student-run initiative designed to connect undergraduate students from different disciplines, universities and cultures, to promote collaboration and research in tackling a global problem and create a 'catalyst for change'. Since its inception in 2011 at ANU, the GXT has been successfully hosted at NUS and PKU and now returns to ANU for 8–18 July 2014.

After an intensive selection process, final participants are placed into small cross-disciplinary and cross-university teams. During a four-week online phase, each team will be challenged to produce a draft proposal of their 'catalyst for change'. This is followed by a ten-day residential phase designed to be both rigorous and inspiring through workshops, guest lectures and peer-review sessions. The tournament concludes with each team presenting their final 'catalyst for change' to a panel of judges, key stakeholders, academics and an audience of their peers at the Final Symposium.

In 2014 the GXT will explore the topic "The Future of the Body". This topic aligns with one of IARU's longest-running research programs: Aging, Longevity and Health, which reflects the need for the next generation of students to engage with these problems and propose solutions.

Expansion of the GXT, 2014 and Beyond

The future success of the GXT requires expansion to the rest of the IARU universities as future hosts. The ANU Cross-Disciplinary Students Academy (XSA), the student group responsible for founding and running the GXT, has thus introduced online applications with three core goals:

- Ensure that the tournament is more relevant to all IARU universities,
- Include students from all IARU universities as potential participants, and;
- Maintain that the selection process is predominantly student-run and thus guaranteeing that the GXT is a student-driven, student-run event.

Key Priorities

A strong core focus is on the academic nature of the tournament in which the final catalyst for change depends on successful application of research. Also to provide space for students to further develop their ideas, while fostering an interdisciplinary, intercultural ethos in all participants that will increase the connections between participants as future GXT Alumni.

Organization is on track for a successful tournament. The IARU Secretariat has provided key contacts at each partner university with information on the tournament, a poster for advertising and a draft email to be sent to students, all provided by the XSA. NUS and PKU are confirmed as participants. At this stage there have been no applicants from other IARU universities, but with further publicity it is hoped this will change.

At ANU, teams of student volunteers are developing workshops, designing the residential schedule and approaching guest speakers and external sponsors. Accommodation has been booked and both local and international selection rounds are currently in progress.

3. University-Industry Cooperation

Profile ABB

ABB is a global leader in power and automation technologies. Based in Zurich, Switzerland, the company employs 150,000 people and operates in approximately 100 countries. The firm's shares are traded on the stock exchanges of Zurich, Stockholm and New York. In 2013, ABB had revenues of almost \$42 billion.

ABB's business is comprised of five divisions that are in turn organized in relation to the customers and industries it serves. It supplies utilities, mining and oil and gas companies, industrial customers, and infrastructure projects, including power solutions for railways, trains and electric vehicles.

The company in its current form was created in 1988, but its history spans over 120 years. ABB's success has been driven particularly by a strong focus on research and development. The company maintains seven corporate research centers around the world and has continued to invest in R&D through all market conditions. Last year, ABB invested \$1.5 billion in R&D.

The result has been a long track record of innovation. Many of the technologies that underlie our modern society, from high-voltage direct current (HVDC) power transmission to a revolutionary approach to ship propulsion, were developed or commercialized by ABB. Today, ABB is the largest supplier of industrial motors and drives, the largest provider of generators to the wind industry, and the largest supplier of power grids worldwide.

ABB research institute cooperation

ABB is involved in research projects with around 70 research institutions around the world, including IARU members, ETH Zurich, the University of Cambridge and the Australian National University.

Cooperation includes projects with a focus on technology scouting, internships (around 200 per year in ABB corporate research) as well as sponsoring and donations for institutes or initiatives in the fields of electrical energy and industrial automation.

Dr. Hubertus von Grünberg

Dr. Hubertus von Grünberg (1942), a German citizen, is chairman of the board of directors of ABB Ltd., Zurich. He also sits on the boards of Deutsche Telekom AG and Schindler Holding AG, and is a member of the board of trustees of the Swiss think tank, Avenir Suisse, as well as chairman of the advisory board of Sapinda Holding B.V., of the Netherlands.

Dr. von Grünberg started his career at Alfred Teves GmbH, a subsidiary of ITT in Frankfurt, where he held various positions including chairman of the management board. In 1989, he became president and CEO of ITT Automotive Inc., in the USA, and a senior vice president of ITT Corporation. From 1991 to 1999, he was CEO of Continental AG, Hanover, before becoming chairman of the supervisory board, a post he held until 2009. He holds a doctorate in theoretical physics from the University of Cologne, Germany.

ETH transfer and ETH Industry Relations

Strong partnerships with industry

Year after year, hundreds of new ETH graduates feed the latest knowledge into society and the economy. In collaboration projects involving industry and research groups at ETH Zurich, new technologies are being developed, which industry partners then convert into products and services.

Since the mid-1990s, the internal technology transfer office, ETH transfer, has been linking the university and industry. This team of experts supports researchers in their dealings with cooperation and licensing partners in business and advises them on all aspects relating to protection of their inventions and setting up spin-off companies.

There are also 60 to 80 patents registered each year based on the results of research carried out at ETH Zurich. Some of these patents are used by new companies founded specifically for that purpose – often by the inventors themselves – as spin-offs from ETH Zurich. Surveys show that these companies are extremely successful and regularly win prizes for young entrepreneurs. ETH Zurich supports would-be company founders with its Pioneer Fellowships. They are given the opportunity to further develop their research in Innovation and Entrepreneurship Labs (ieLabs) and to work with external coaches and industry representatives.

ETH Zurich is deliberately extending its cooperation with industry on research. ETH Industry Relations is the central entry point which receives enquiries from industry and matches them up with the research skills that are available at ETH Zurich. As the next stage, it arranges for companies to contact the relevant research groups and experts and organizes initial meetings and laboratory visits. Further discussions may take place in the context of idea and project workshops held with ETH experts and industry representatives.

If a company is interested in a definite partnership with ETH Zurich, the technology transfer office, ETH transfer, helps to work out the best solution and to draw up the relevant agreements. The focus is always on sharing knowledge efficiently and on providing access to the research results on fair terms. This is intended to ensure that new technologies are implemented as quickly as possible and made available for the benefit of society.

ETH Zurich does not only address big companies but is also interested in developing practical solutions with SMEs. It is actively engaged in sharing information with a number of national industry associations and it organizes Industry Days to give interested companies an insight into the latest trends in research. ETH Zurich also uses various platforms and initiatives to encourage its industrial partners to support new professorships in strategic areas, imaginative projects, gifted students and young entrepreneurs. For strategic partner companies, events (Partnership Councils) are organized to discuss research projects and results, trends in specific thematic areas and developments at ETH.

ieLab – Speeding up the transfer

To support smart, talented entrepreneurs and to guide them to success – that is the aim of ETH Zurich with its new “Innovation and Entrepreneurship Lab” (ieLab). When it comes to knowledge and technology transfer, it fills an important gap between fundamental research and product development. Students and researchers can work on their ideas with partners from industry and are helped by experienced coaches all the way from their initial concept through to marketing. At the city-center campus there are facilities for budding entrepreneurs in the fields of engineering, automation,

microelectronics, robotics and medical technology; at ETH Hönggerberg, the ieLab has space for people working on biology, biochemistry, pharmaceuticals and biotechnology. The aim of the new initiative is to make the results of research available for industry and society faster so that they can be converted into ideas for actual products.

Dr. Silvio Bonaccio, Head of ETH transfer

Silvio Bonaccio is a chemist by training and obtained his PhD at ETH Zurich in 1995. He then joined the Nestec Productivity Team NPT, an internal consulting group of Nestlé. He participated in and led improvement projects in the company's operational units in Europe and the Americas. He returned to Switzerland by the end of 2000 and started as technology transfer manager at ETH transfer in April 2001. He heads the office since January 2005.

Silvio Bonaccio holds an MBA from IMD and is a co-founder and member of swiTT (Swiss Technology Transfer Association). He is also a member of ASTP (Association of European Science and Technology Transfer Professionals) and the American-Swiss Association.

Dr. Urs Zuber, ETH transfer

Since 2011, Urs Zuber is in charge of ETH Industry Relations. The Industry Relations team connects companies with ETH-researchers and organizes industry workshops and events (e.g. Partnership Councils, Industry Days). Before joining ETH, Urs Zuber worked for many years in the life science and chemical industry, for companies such as Shell, Amersham Life Science, Novartis and Syngenta.

Urs Zuber obtained his PhD at ETH Zurich in 1994 (plant sciences / molecular biology). He completed post-graduate trainings in Business Administration and Corporate Communications.

5.1 National Research Foundation (NRF) Proposal

Lead	National University of Singapore
Reporting	Prof. Barry Halliwell (National University of Singapore)
Executive summary	Verbal report will be provided at the meeting.
Funding to date	n/a
Outcomes of previous meetings	<p>Senior Officers' Meeting, November 2013 At the Presidents' Meeting 2013, the possibility of submitting a proposal for a IARU research activity to Singapore's National Research Foundation (NRF) was discussed. All partners were asked to send their input to NUS. Barry Halliwell (NUS) reported that NUS President Chorh Chuan Tan had presented these ideas to the NRF. NRF is currently reviewing the submitted proposals, considering a research collaboration in the field of neuroscience, neuroengineering, neuroimaging. Barry Halliwell will inform IARU about NRF's response and the outcome of the further discussions at the Presidents Meeting 2014.</p> <p>Presidents' Meeting, April 2013 Following the dialogue session with NRF, NUS shared that NRF is open to exploring research collaborations that would support Singapore's national goals. The new proposal would not interfere with the existing projects already involving IARU institutions.</p> <p>Presidents were invited to provide topics of interest in science and engineering. The meeting mentioned possible areas of collaboration such as synthetic biology, land and livability, and aging (assisted medical devices). Because of NRF's setup, purely social science research would not be of interest to them. Based on the responses, NUS would conduct a range finding exercise, and if there were sufficient interest, it would constitute a group of interested academics and prepare a detailed proposal for NRF's consideration.</p> <p>Cambridge asked if there were existing mechanisms or collaborations to refer as an example. NUS pointed in the direction to the research initiatives in CREATE. All members were requested to submit their ideas and areas of interest to the Secretariat by 19 April for compilation and submission to NRF.</p>

5.2 IARU-Santander Research Fund

Background

Following the Presidents' Meeting in Copenhagen 2012, the research proposal "Failure of the Numerical" has been developed in an iterative process by Cambridge (lead), Berkeley and Oxford. The proposal was submitted to Santander Bank by the IARU Secretariat with a funding request of USD 2.5 million. In fall 2013, NUS President Tan Chorh Chuan and Bernard Toh met with Santander's Chairman Emilio Botín and Vice-President Salvador Medina to discuss the proposal. Santander Bank signalled that it would not support the proposal but would be keen to set up an "IARU-Santander Research Fund". With funding of USD 200,000 to 300,000 per year, this fund would support research projects selected by IARU. Banco Santander's condition for the projects would be to be in partnership with one or more of Santander's list of top 20 universities in Latin America, Spain and Portugal.

Discussions at Senior Officers' Meeting 2013

Senior Officers agreed that the conditions of the proposal were still vague and many aspects would still need to be worked out, such as the handling/administration of the funds, the processes within IARU for selecting projects, the definition of the research focus of the projects, and the minimum number of IARU universities to be involved in the project. Some partners raised concerns about the requirement of partnering with a university from a list defined by Santander, about the small size of potential grants and how they would be meaningful for the researchers, and about the long-term benefit of the sponsorship.

Ideas raised in the discussion covered using the funds as seed money for bottom-up collaborations among IARU members, extending existing projects to new partners and supporting early career researcher mobility. Funds could be distributed based on calls for proposals, by dividing them among the 10 IARU partners, or by giving the available funds every year to three different universities. Senior Officers recognized Santander's idea to connect Latin American institutions with IARU, but agreed that the required collaboration should not be limited to the 20 universities on the Santander list. Instead, the research fund could focus on a specific country (e.g. Brazil) and leave the selection of the partner institutions to the IARU partners. This proposal would seem to be in line with Santander's desire to connect Latin American universities with IARU.

The Secretariat was asked to draft a proposal on the handling of the IARU-Santander Research Fund and circulate it among the partners before presenting to Santander. As Presidents had defined in 2013, the first priority in IARU's relationship with Banco Santander should be the continued support for the Global Summer Program.

Current Status

Securing Santander agreement to continuing support for GSP has proved slower than anticipated. The Secretariat is now in the negotiations with Santander to extend the current GSP agreement. Once the

new GSP agreement for the period 2015–2017 is finalized, the Secretariat will coordinate with Santander a draft proposal of the IARU-Santander Research Fund. An opportunity to move the dialogue with Banco Santander forward is the 3rd *Universia International Rectors Meeting* 28–29 July 2014 in Rio de Janeiro.

Ideally, an agreement with Santander should be reached by the Senior Officers' Meeting in November 2014. Depending on the progress, the signing ceremony with Santander could be proposed to take place at the Presidents' Meeting 2015 at UTokyo.

Appendix – Proposed Santander-IARU Research Fund (by Santander)

Objectives

- Addressed to stimulate research with South American universities (including Portugal and Spain)
- Based on IARU theme preferences
- Every IARU member can submit a proposal
- The fund starts with an initial amount of money and will increase based on the success or interest of the project
- It functions like a “Joint Research Incubator”
- Santander’s Top 20 Universities to be involved

Proposal Principles

1. Proposals can be presented by at least one of the 10 members of IARU. Proposals are presented to IARU.
2. A proposals must involve one of the Top 20 Research Universities of the Santander Network (USP, UNICAMP, UNESP, UNAM, TEC M, UAM, UCH, UCCH, UNC, Rosario, UPR, UBA, UNLP, UREP, UAM, UPF).
3. A proposal should cover one of the 3 major topics. Topics are to be defined by IARU (e.g. Education, Longevity and Health, Sustainability).
4. The fund starts with USD 200,000 per year but can increase depending on the USE and success of the research. The size of each grant can be defined by IARU (e.g. 5 projects à 40 kUSD or 2 projects à 100 kUSD). Depending on the number of universities involved or on the interest of the research, the request can access one or two blocks of the funding (IARU decision).
5. The fund can increase depending on the USE or on the success of the research.

5.3 Global Transformation in IARU Member Strategies

Lead	ETH Zurich Supported by University of Copenhagen
Reporting	Dr. Barbara Becker (ETH Zurich)
Executive summary	<p>This initiative proposes to establish a new institutional learning activity on relations with emerging and developing countries in the context of globalization. The proposal foresees a meeting of Emerging and Developing Country Relations Officers from the partner universities for exchange of experience and mutual learning on the role and relevance of developing countries in the strategic thinking of the IARU universities. As a follow-up of the workshop, two options for further action are envisaged: to establish a working group for the elaboration of guidelines or principles on relations with emerging and developing countries, or a Standing Panel for continuous exchange and potential advisory services.</p> <p>This document contains:</p> <ul style="list-style-type: none"> ▪ Proposal for a new institutional learning initiative “Global Transformation in IARU Member Strategies”: <ol style="list-style-type: none"> a) Decision to start the initiative b) Funding request of USD 10,000 for meetings
Funding to date	n/a
Outcomes of previous meetings	<p>Senior Officers’ Meeting, November 2013</p> <p>Jürg Brunnschweiler (ETH) proposed a new institutional learning initiative to discuss the experiences / best practices of the partner universities to include developing countries into their strategies. <i>Research for Development (R4D)</i> could be addressed as an explicit field of reflection within IARU.</p> <p>Partners lacked a clear definition of the concept of “global transformation”. They also wished a better definition of the focus of the initiative. Areas of focus could be capacity building in developing countries, research conducted in universities with the objective of helping developing countries, strategies of IARU universities in the South, brain drain / brain gain strategies, and the support of students from developing countries. ETH will consider these received comments and present a revised and more focused proposal at the Presidents’ Meeting 2014.</p>

Global Transformation in IARU Member Strategies

Concept Note for a New IARU Institutional Learning Initiative

Submitted by ETH Zurich

With initial support of University of Copenhagen

Contact person: Dr. Barbara Becker (bbecker@ethz.ch), Director Global Transformation Affairs, ETH Zurich, Switzerland

Objective

Mutual learning and exchange of best practices on relations of IARU universities with emerging and developing country partners

Background

Academic institutions worldwide are being profoundly affected by globalization and the rapid economic development in many countries, especially in emerging economies and developing countries. *The global university functions as a global web of knowledge, talent, and assets, and becomes a point of differentiation for its home base These universities think and act globally, and they deliver both locally and globally. Not all global universities are evolving from the pool of historically great research institutions. New entrants in higher education, responding to unmet demand for education and knowledge in the world, are attempting to leapfrog to the global arena by leveraging mobility and connectivity.* (Jean-Luc Chameau, former president of Caltech, now president of KAUST, Saudi Arabia)

IARU member universities can be considered *global universities* as defined by Chameau. So far, no institution from a developing country is represented in IARU. In the past *historically great research institutions* built their international relations on the paradigm of a bipolar world which at the academic level frequently led to two types of international relations: peer-to-peer relations with similar universities in the “Global North”, and largely asymmetric partnerships with institutions in emerging and developing countries. Such collaboration has often been triggered by humanitarian motives and incentives of the development cooperation sector.

Under the influence of globalization, the focus of partnerships with universities in emerging and developing countries is shifting. As developing countries are investing into strengthening their academic institutions, the number of potential partners – and at the same time - competing institutions is growing.

Chameau argues that such partnerships can bring benefits to both sides

- *Established universities bring experience and reputation while emerging universities bring the energy of a 'start-up' along with resources.*
- *Established universities can accelerate their discoveries through expanded resources and emerging universities gain the experience and credibility of the network.*

IARU is an alliance of *global universities*. In view of the increasing importance and dynamic shifts in weight between different world regions we would like to invite the IARU member universities to share their experiences and strategic considerations on their interaction with partners in emerging and developing countries, at the institutional level as well as with respect to research alliances and capacity building. These reflections will address the right balance between striving for excellence and exclusivity among peers and the recognition of potential benefits of greater inclusion and fresh insights and increased awareness - *the energy of a 'start-up' along with resources*. In a second step, this discussion should inform decisions on how to incorporate the perspective of developing countries in the Alliance, beyond the on-going discussion on expanding the IARU membership.

Suggested activities

1. Identify member representatives

The first step will be to elicit the interest of IARU members in this initiative and identify the entities and individuals who will represent the interested member universities.

Expected output: List of “Emerging and Developing Country Relations Officers”

2. Workshop of IARU officers in charge of relations with emerging and developing countries

The workshop should provide a platform for the exchange of experiences and mutual learning on the inclusion of emerging and developing countries in the strategic thinking of global universities as outlined in the background chapter. It should serve to

- compare different approaches of IARU member universities with respect to institutional structures, research collaboration and capacity building,
- derive conclusions on the associated benefits and risks, and
- assess the potential for elaborating common principles or guidelines for the alliance.

Expected output: Networking and assessment of potential follow-up activities as spelled out under 4.

3. Mapping of current institutional approaches and arrangements of IARU members

The mapping should address questions such as: How far do research partnerships with emerging and developing countries play a role in the university? Are they restricted to relations of individual researchers or do they include institutional partnerships? Which role do emerging and developing countries play in the research agenda? Is research collaboration with emerging and developing country partners focused on specific topics? Does the university have (a) regional focus area(s) in the Global South? Are there specific exchange or recruitment programs for students or staff from specific regions? Is the university involved in specific MOOCs targeted to emerging or developing countries? Is there a specific office dealing with emerging and developing country affairs? Which offices deal with international relations and/or relations with emerging and developing countries? What are the funding sources for research collaboration, capacity building activities or exchange programs with emerging and developing countries? What is the rationale and motivation for emerging and developing country partnerships?

The mapping will be done in two steps: Officers identified in activity 1 shall come prepared to the workshop with an initial assessment of their university landscape. Based on the workshop exchange, the institutional IARU map on emerging and developing country partnerships will be refined in the subsequent weeks.

Expected output: Matrix of the IARU members against the geographical focus / institutional setting / research programs / student exchange / capacity building activities / recruitment, etc.

4. Potential follow-up activities

If the workshop participants conclude that it is worthwhile to continue the interaction, two options for further action are suggested: to establish a working group for the elaboration of guidelines or principles on partnerships with emerging and developing countries, or a Standing Panel for continuous exchange and potential advisory services.

4a. Working Group

The Working Group would have a limited specific mandate, namely the elaboration of principles or guidelines for the Alliance on how to reflect partnerships with emerging and developing countries in the activities of its members. Once the document has been elaborated, the Working Group will have fulfilled its mandate and will be dissolved. If necessary it can continue as Standing Panel (as under 4b). The focus of the Working Group would be to inform decisions on strategies of the member universities on how to incorporate the relations with emerging and developing countries.

Expected output: Document for IARU information or approval

4b. Standing Panel

The Standing Panel will be a permanent group within IARU for the exchange of experiences and the critical reflection and monitoring of activities of member universities with emerging and developing countries and collective strategies of the Alliance. It should offer advisory services among member universities and for the Alliance, such as the assessment of relevant regional or global networks or initiatives and potential linkages. The focus of the Standing Panel would be on strategic options for the Alliance and on strategies of the member universities.

Expected output: Ad-hoc advice and recommendations on partnerships with emerging and developing countries (on request or as issues occur)

Timetable / Workplan

	Activities	2014			2015	2015ff
		Q2	Q3	Q4	Q1	
	Endorsement by Presidents' Meeting	#				
1	Compile list of member representatives	x				
(3)	Mapping, 1 st part		x	x		
2	Workshop			x		
3	Finalization of mapping				x	
4a	Working group to elaborate Guidelines (to be presented to PM)				#	
4b	Standing Panel					(x)

Budget

The budget covers the direct meeting costs of the workshop (activity 2) and its preparation as well as a follow-up meeting of the working group to elaborate Guidelines (activity 4a). IARU members will bear travel and accommodation costs of their representatives; the applicants will invest their labor as in-kind contribution (activities 1, 3). **The total amount requested by IARU is USD 10,000.**

Request for PM decision

- The applicants request PM approval to start the initiative in Q2 2014.
- The applicants request IARU funding of USD 10,000 for meetings.

Zurich, 14 March 2014, Barbara Becker

Annex: Relevant websites of member universities

(accessed in Oct 2013)

Cambridge

<http://www.admin.cam.ac.uk/offices/international/>

<http://www.cam.ac.uk/about-the-university/international-cambridge/cambridge-and-the-world>

Copenhagen

<http://development.ku.dk/>

<http://development.ku.dk/about-global-development/>

http://development.ku.dk/boxes/strategy/Strategi_for_KU_ulandsomr_det_2012-2015.pdf/

ETH Zurich

http://www.ethz.ch/about/international/index_EN

<http://www.global.ethz.ch/>

<http://www.global.ethz.ch/r4d/>

http://www.nadel.ethz.ch/index_EN

Oxford

http://www.ox.ac.uk/international/oxford_around_the_globe/index.html

<http://www.ox.ac.uk/international/>

The University of Tokyo

<http://www.u-tokyo.ac.jp/en/images/about/kyoten-map.gif>

Yale

<http://world.yale.edu/>

http://world.yale.edu/sites/default/files/files/Yale_International_Framework_2009-2012.pdf

Useful reading

KFPE principles: http://www.kfpe.ch/download/KFPEGuide_11P7Q_E.pdf

5.4 Graduate Student Conference

Lead	University of Copenhagen
Reporting	Tina Gottlieb (University of Copenhagen)
Executive summary	<p>As part of UCPH's empowerment strategy for the ALH network, the University of Copenhagen will host the 2nd <i>Interdisciplinary Graduate Student Conference: "Aging Research and Scientific Careers" (IGC)</i> on 21–22 June 2014, targeted at IARU PhD students from various research fields with interests in health and aging research.</p> <p>UCPH encourages partners to support this activity by nominating two PhD students each as well as to support the participating PhD students financially (travel expenses and accommodation).</p> <p>UCPH proposes that the GSC should be an annual IARU event, traveling between IARU Universities and enhancing networking opportunities between IARU PhD students, eventually within the AHL framework.</p> <p>This document contains:</p> <ul style="list-style-type: none"> ▪ Report of the planned Graduate Student Conference ▪ Funding request of USD 14,950 for co-funding the conference
Funding to date	n/a
Outcomes of previous meetings	<p>Senior Officers' Meeting, October 2012</p> <p>NUS ran the pilot event with 19 participants from ANU, NUS, PKU, UCPH, Oxford and Yale. However, there was currently no interest from any IARU partner to host the second GSC. If partners are keen to organize a graduate level conference in the future, they can do so under the GSC.</p>

2nd Interdisciplinary Graduate Student Conference: Aging Research and Scientific Careers

The Conference

As a consequence of the positive feedback from the IARU Universities to empower the ALH network, the University of Copenhagen has provided USD 235,000 in funding for three simultaneous IARU Congresses. These activities are planned for 17–22 June 2014. The organizers are expecting about 250 IARU researchers and others to attend within the field of aging.

One of the conferences is planned as the **2nd IARU Graduate Student Conference (GSC)** on 21–22 June 2014. This conference is targeted IARU PhD students from various research fields with interests in health and aging research.

Background of GSC

In 2012, the National University of Singapore (NUS), Singapore held an Inaugural IARU Graduate Student Conference titled The Challenge of Aging. The purpose was to facilitate interaction between IARU PhD students involved in aging research. The graduate students were presented studies on translating research to policy, social demography and gerontology in Asian cultures. The Graduate Student Conference coincided with the larger Global Asia Initiative (GAI) Conference, a forum to discuss multidisciplinary aging research relevant to Asian populations. The GAI presentations described studies in medicine, engineering, sociology, policy design and technology development, highlighting the need for multidisciplinary and holistic approaches in aging research.

Participants included PhD students from ANU, NUS, PKU, Oxford, Yale and UCPH, and it was the first formal gathering of graduate students from IARU. Later at a Presidents Meeting, some members expressed their wish to “institutionalize” GSC within IARU and have GSC on rotation at various members’ campus.

The UCPH supports this idea strongly, eventually linked to the ALH network. This idea will be discussed further at the upcoming ALH steering committee meeting held in Copenhagen on 20 June, 2014.

Invitation to the 2nd GSC

The University of Copenhagen has invited two PhD students from each IARU university to participate in the IGC in June 2014. The invitation is announced to all IARU universities via IARU key persons, as well as on the central IARU website and the first nominees have already been appointed (from Cambridge). The IGS serves as an interdisciplinary platform for graduate students to share their research and explore the possibility of collaborative partnerships within the IARU network.

The Conference Program of the 2nd GSC

In short

2nd Interdisciplinary Graduate Student Conference: *Aging Research and Scientific Careers*

Time: 21–22 June 2014, Copenhagen

Subthemes:

- Theories of aging
- Intervention projects
- Future direction of health and aging research
- Scientific careers for young scholars: Career Day at the Euroscience Open Forum 2014 (ESOF2014)

Detailed Program of the 2nd GSC

21 June 2014

- 09.00 – 09.30 Introduction / Welcome
- 09.30 – 10.45 **Theme 1: Theories of aging – How do we understand aging?**
- 10.45 – 11.00 Coffee break
- 11.00 – 12.30 **Theme 2: Intervention projects – How and why we intervene**
- 12.30 – 13.30 Lunch
- 13.30 – 15.00 **Theme 3: Future direction of health and aging research – from cell to society. The most important questions to be answered within the next 20 years**
- 15.00 – 15.15 Break
- 15.15 – 17.15 **Networking session**
- 17.15 Dinner at Scandic, social event at ESOF2014

22 June 2014

Career Day at Career Day at the Euroscience Open Forum 2014 (ESOF2014)

Participants are able to choose between two tracks all day.

- 09.00 – 10.15 A) Excellence in European doctoral education – a collaborative approach between universities, Glyptotek hall
- B) Life after a PhD: how professional career advisors support researchers in Europe, Ragnarok Hall

- 10.30 – 11.45 A) New concepts of mobility to foster career development and gender balance in Europe, Glyptotek hall
B) Training Europe's future, Dipylon hall
- 12.00 – 13.15 A) Dual career services and early career researchers, Glyptotek hall
B) Enhancing researchers' transferable skills and employability, Dipylon hall
- 13.30 – 14.45 A) Researchers' careers in Europe: looking for Ariadne's thread, Glyptotek hall
- 17.00 Dinner

23–26 June 2014

Departure or optional participation in ESOF

Please see <https://esof2014.pathable.com/#meetings> for the rest of the ESOF2014 program.

Nomination procedure

Each IARU university is encouraged to nominate two participants. The nominees should be reported back to UCPH key contact (Astrid Gufler; asg@adm.ku.dk) by the university's IARU key contact. Each IARU university decides how to organize the procedure of nomination within their university. Deadline for nomination of students is 15 April 2014.

Once nominated, students are required to submit a registration form for the GSC and an abstract of max. 400 words by 2 May 2014 at the latest.

Funding application: Support to nominees and USD 14,950

As our budget is limited, IARU universities are strongly encouraged to sponsor travel expenses and accommodation for their nominees (price for a single room per night at a student hostel amounts to EURO 58, breakfast included).

Further, the University of Copenhagen applies to the IARU Community for **USD 14,950** in co-funding for hosting the 2nd IARU Graduate Student Conference in connection to the two IARU conferences (<http://www.iaru-conferences-2014.dk/>). Please see the budget below:

Budget - IGC 2014: 25 participants	Expenses USD (round off)
25 PhD students	
Day meeting catering	2,800
Venue and equipment fees	7,000
22 June: Career event (ESOF2014)	
Tickets to the career event on day 2	3,500
Executing expenses	
Registration fee	1,500
Certificate of attendance	150
l alt	14,950

5.5 Partnership with Futurity

Joint Lead	ETH Zurich and University of Copenhagen
Reporting	Marianne Lucien (ETH Zurich) and Carl Hagman (University of Copenhagen)
Executive summary	<p>This initiative proposes a partnership between IARU and Futurity (futurity.org) – a non-profit online knowledge-sharing platform. The proposal foresees establishing a partnership or collaboration with the Futurity platform. This partnership will allow IARU member universities the option of engaging Futurity’s services that are otherwise not possible without such collaboration. Futurity’s services enable universities to multiply the publication of research findings, news, and other scholarships communicated to target audiences and subscribers worldwide. Futurity’s areas of interest are also aligned with IARU’s key activities in terms of health, sustainability, and demonstrating the value of research-intensive universities.</p> <p>Futurity currently partners with the following university alliances: the AAU (US/Canada), Russell Group (UK), and Group of Eight (Australia). When ETH Zurich and University of Copenhagen independently approached Futurity regarding a direct partnership, they expressed an interest in expanding their partners, but only through similar university alliances.</p> <p>Two current IARU member institution – the University of California Berkeley and Yale University already use Futurity services. They have profiles on the Futurity website, and contribute feature stories to Futurity’s platform through their membership in the AAU and AAU’s partnership with Futurity.</p> <p>This document contains:</p> <ul style="list-style-type: none"> ▪ Proposal for a new partnership between IARU and Futurity
Funding to date	n/a
Outcomes of previous meetings	n/a

Joint proposal for a partnership between IARU and Futurity

Contacts

- *Marianne Lucien, International Communications Officer, Corporate Communications, ETH Zurich, marianne.lucien@hk.ethz.ch*
- *Carl Hagman, Communications Officer, Communications, University of Copenhagen, cahag@adm.ku.dk*
- *Jenny Leonard, Editor, Futurity, editor@futurity.org*

Objective

Facilitate knowledge sharing within a network of research institutions aligned with the values of IARU partner universities.

ETH Zurich and the University of Copenhagen, like all IARU member institutions, strive to communicate research findings that spark interest and provoke the consideration of our target audiences: prospective university students, researchers, faculty, interest groups in science, technology, health research, and sustainability among others. We feel that Futurity's access to key media outlets and journalists affords an opportunity to multiply the reach to broader audiences within these targeted groups.

About Futurity

Futurity is an online resource platform that communicates research news from more than 60 partner universities, primarily from English-speaking nations such as: the US, Australia, Canada, and the U.K., to an international audience. The target audience is the layperson with a general interest in science, technology, health, society, and the environment.

Futurity is hosted at the University of Rochester, New York, in partnership with Duke University, Stanford University, the University of Leeds, and the University of Melbourne. It has established syndication outlets with well-known media partners:

- EarthSky.org – selected Futurity stories are featured on their website that attracts 2 million monthly visitors
- Pulse – a LinkedIn newsfeed app for mobile and tablet devices
- Flipboard – a magazine newsfeed app for iPhone and iPad
- NSF Science360 – the US National Science Foundation breaking news forum selects Futurity images to be included in NSF's science picture of the day
- @GuyKawasaki – a well-known writer, whose columns have been featured in Forbes, links Futurity articles to daily tweets to his 1.5 million Twitter followers
- HolyKaw/Altop.com – a website/blog focusing on health, culture, and technology news and features daily, Futurity stories

Potential Interests of IARU Member Institutions

Futurity's activities support the principles of IARU and its member institutions. The chart below briefly outlines the areas in which IARU and Futurity are aligned:

IARU	Futurity
Demonstrating the value of research institutions through knowledge sharing	Sharing science and technology research stories
Aging, longevity, and health	Health research and news, cultural stories
Sustainability	Environmental research and news
Global vision educating future leaders	Global outreach to engage the general readership and interest in science, health, technology, and culture
Added value to IARU members to achieve what they cannot achieve alone	Futurity partners only with alliances, like IARU rather than individual institutions – its reach allows institutions to communicate research knowledge beyond their current reach in various media outlets.
Opportunities for wide-ranging associations other than usual international university consortia	Offers universities access to media associations through their news story distributions

Why are ETH Zurich and University of Copenhagen interested in participating in Futurity?

Futurity offers ETH Zurich and the University of Copenhagen and potentially all IARU member institutions an opportunity to expand upon our strategic objectives to share knowledge and research through an international platform. Futurity provides nearly 8,000 subscribers, including many reporters at major news outlets such as the New York Times, Washington Post, NPR, ABC News, Gizmodo, Ars Technica, BBC, and Discover News a daily newsletter that serves as a source for story ideas. The newsletter is an inbound marketing tool a “pull” rather than “push” campaign that can draw our target audiences to the institutional profiles on Futurity as well as to our official websites.

Futurity also has more than 20,000 followers on Social Media (Facebook, Twitter, YouTube, Google+) that enable universities to expand the reach of their news stories and visibility in a global market.

Interests of Futurity.org

Futurity has indicated that as a non-profit organization it partners only with university alliances rather than individual institutions. As noted earlier, when ETH Zurich and the University of Copenhagen independently approached Futurity regarding a partnership, Futurity editors recommended that we approach IARU for consideration in this matter.

Futurity has also expressed an interest in expanding its collaboration with European and Asian universities that have English-speaking programs. Should IARU approve of a potential partnership, the Futurity Executive Committee will then convene to consider broadening their scope to include IARU member institutions.

Institutional Resources Required

- **Time:** Partner institutions would designate a single representative or editorial contact who submits stories or press releases and images to Futurity via e-mail. The contact is also asked to join a brief conference call once per month; however, Futurity will be adjusting the call to a quarterly schedule.
- **Content:** There is no limit on the number of stories submitted; however, most institutions regularly submit 2–4 stories out of their regular publication schedule per week (i.e., additional content creation is not required). The focus is primarily on new research findings or scholarships that have a broad general appeal. Stories that involve research in-progress or timely analysis are desired; however, institutional news, funding announcements, and awards are not included.
- **Futurity's expectations / terms of participation etc.:** Futurity maintains a small editorial staff that reviews submissions and posts stories that are considered compelling and engaging to audiences that encompass the target groups noted earlier. Futurity's editor has indicated that their editors typically write new headlines or leads and do some light editing for tone and style. If images are not available, editors can select stock photos suitable for publication. Institutions receive notification when stories are posted.

If approved by both IARU and the Futurity Executive Committee:

- Futurity would engage in a partnership with IARU in the form of a memorandum of understanding.
- As a result of the partnership, IARU member universities would have the opportunity, but with no obligation, to engage Futurity's services for an annual fee described in the chart below.
- Futurity would also invite a representative from IARU or from one of its member institutions to join Futurity's leadership group which reviews partnerships and expansion decisions as required.

Costs to IARU and/or Individual Institutions

Entity	Cost
IARU	No monetary costs are applicable. IARU would engage only in a memorandum of understanding with Futurity.
Member institutions	Once a partnership is in place with IARU, member institutions may opt at any point in time to engage Futurity's services by paying an annual fee of USD 3,000. This fee covers the cost of editorial staff, IT hosting, and support (billed annually in July).

Conclusions

ETH Zurich and the University of Copenhagen jointly propose that IARU approves a partnership with Futurity. The benefits of a partnership reach beyond the scope that IARU member institutions could achieve on their own. The potential reach institutions would gain in terms of access to journalists and media outlets as described above, far outweighs the relative cost of participation for universities who wish to engage Futurity services. In addition, the investment in time and resources on the institutional level is low. Futurity aligns well with IARU principles and their proposal provides expanded

opportunities to IARU member institutions without obligation and at no monetary cost to IARU. We, therefore, kindly request IARU's support and approval.

Appendix – Relevant Web References

Futurity

<http://www.futurity.org/>

- Facebook: <https://www.facebook.com/pages/Futurity/143906865226>
- You Tube: <http://www.youtube.com/user/FuturityVideo>
- Twitter: <https://twitter.com/FuturityNews>
- Google+: <https://plus.google.com/110823719798821535718/posts>

ETH Zurich

<https://www.ethz.ch/en/the-eth-zurich.html>

<https://www.ethz.ch/en/news-and-events/eth-news.html>

<https://www.ethz.ch/en/the-eth-zurich/global.html>

University of Copenhagen

<http://introduction.ku.dk/presentation/>

<http://news.ku.dk/>

University of California, Berkeley's Futurity Profile

<http://www.futurity.org/university/university-of-california-at-berkeley/>

Yale University's Futurity Profile

<http://www.futurity.org/university/yale-university/>

Futurity media partners

- EarthSky.org: <http://earthsky.org/>
- NSF Science360: <http://news.science360.gov>
- @GuyKawasaki – <http://www.guykawasaki.com/>
- Pulse: <https://www.pulse.me/>
- Flipboard: <https://flipboard.com/>
- HolyKaw/Alltop.org: <http://holykaw.alltop.com/>

5.6 PKU Medical City

Lead	Peking University
Reporting	Peking University
Executive summary	<p>PKU proposes to initiate a global medical collaboration among IARU universities.</p> <p>This IARU medicine collaboration would start with a meeting on 5–6 December 2014 hosted by PKU where the Presidents of the IARU universities, executives of hospitals, elite physicians and research leaders would meet to explore global medicine collaboration. “Real-life Medicine (RLM)” is foreseen as the initial project of this collaboration. The RLM project would unite all ten IARU institutions and provide a big data analysis platform on which life science research, translational medicine and clinical trials can be conducted.</p> <p>Phase II foresees to develop new research and collaborative ventures in clinical medicine, basic medicine and translation medicine.</p> <p>This document contains:</p> <ul style="list-style-type: none"> ▪ Proposal to start a joint research initiative in the area of medicine led by PKU
Funding to date	n/a
Outcomes of previous meetings	n/a

PKU Medical City

Proposal for Global Medicine Collaboration

Real-life medicine as the initial project

1. Background and Summary

With the wonders of technology, we are now more connected than ever. The key to success in this global world is to learn, share and exchange our experience beyond the borders-experience with people, cultures, and societies. Healthcare delivery system is different in all countries. Each system is set up to better serve the people, based on governmental guidelines, financial systems and the demographics of people. Each hospital has the unique expertise in treating people of the region, and the illnesses particular to the area and race. We all shared the same mission on how to shape the future of the healthcare of our country and of the world we all share, how to improve our healthcare delivery system, and how to better serve our people. The defining challenges of our time are shared challenges, and no single country can confront them alone.

There is an urgent need for global collaboration of academic institutions, healthcare services, medical experts, life science researchers and administrators to work united throughout all continents to make the world better for the future. In this innovative, highly technical era of the twenty first century, we have the privileges of having cloud computing, highly secured data mass storage, wireless transmission, mobile telemedicine, etc., to connect and to communicate in different parts of the world. By joining our strengths and resources, we should be able to design the best healthcare system for our people and make new discoveries in treatment, prevention of human diseases, medical technology and life sciences.

We propose “Real-Life Medicine (RLM)” as the first project in global medicine collaboration. RLM is an innovative and integrated healthcare delivery model involving modern health information technology, wearable medical devices and well trained healthcare providers (*Appendix I*). It is a new concept of healthcare delivery model designed by Peking University in 2008. RLM is able to move patient care services from hospital setting to patients’ home environment. It is novel, efficient, cost saving and proven to be safe. There is still room for continued clinical medicine, life sciences and research development needed in this area. RLM as an initial project will allow the collaboration of faculties, researchers and executives of all International Alliance of Research Universities (IARU) to share and exchange their expertise from a global view. It will help to establish the formal collaborative channel and forum in future research topics, such as medical equipment, informational technology, product development, drug analysis and healthcare policy. It will enhance future success in clinical medicine, basic medicine and translational medicine.

Peking University Medical City (PKUMC, *Appendix II*) is located at the Northwest skirt of Beijing, 20-minute drive from downtown. It serves Beijing and surrounding regions with a total population of approximately 50 million people. PKUMC has two major components which are clinical medical services and healthcare incubators for medical research & technology innovation.

PKU International Hospital is the flagship hospital of the PKU healthcare system. It is the largest non-profit general hospital in China with the state-of-the-art facilities, leading cutting edge technology and

expertise professionals to provide world standard of healthcare. PKU Rehabilitation Hospital and PKU Mental Health Hospital provide full services to patients with needs.

PKU Care Industrial Park and commercial office buildings provide 200 international standard laboratories for life science research. With full support by PKU healthcare system, PKU International Hospital facilities and staffs, and healthcare incubators on the premises, PKUMC undoubtedly offers great opportunities and platform to worldwide scholars and healthcare professionals for global medicine collaboration. It will enhance future joint venture among International academic centers in health sciences and technology.

The goal of global medicine collaboration is to improve patient services, quality of care, safety issues through international coalition. There are two phases to this movement proposed. In Phase one, RLM project functions by uniting all ten IARU institutions and providing a big data analysis platform on which life science research, translational medicine and clinical trials can be conducted. Potential chronic diseases which can be better diagnosed and managed by RLM are sleep apnea (RLM sleep neurobiology), erectile dysfunction (RLM Andrology), pain management (RLM Pain), and heart failure (RLM cardiology), among other chronic diseases. In Phase two, based on our experience, mechanism and achievement from Phase one, new research and collaborative ventures will be developed within our IARU alliance by joining our resources. We will be able to move beyond our individual limitations so as to understand the diseases more accurately, to improve healthcare delivery system, and to better serve our patients. RLM project in PKUMC will be the beginning of long term global academic institution alliance in knowledge exchange, data sharing leading to innovation and breakthrough.

2. Topic and Problems

Global medicine collaboration is important to understand the nature of diseases and to improve healthcare services. However, it is still a big challenge how to establish long term medicine collaboration with efficient mechanisms. We need urgently to work on building the platform to unite all ten academic institutions in IARU to discuss and formulate plans on global collaborative initiatives in the areas of medical technology innovation, healthcare policy and green environment. We believe it is time for IARU members to work together to set up the model for future collaboration on the research of clinical medicine, technology training, human resources, healthcare safety and delivery systems. We think RLM can be used as an initial project for this exploration.

RLM model offers accessibility to patients who do not have clinic labs in their vicinity. The RLM study is done in their own home which is comfortable and familial setting. It will increase the diagnostic validity and have high patient satisfaction when patients are in nature life environment.

Sleep disorder is a common health concern associated with increased cardiovascular related morbidity and mortality, respiratory disorders, diabetes mellitus, metabolic syndrome. Its prevalence rises with aging and obesity. Sleep apnea hypopnea syndrome is the most common cause of sleep deprivation, characterized by repetitive episodes of airflow reduction (hypopnea) or cessation (apnea) due to upper airway collapse during sleep. China has over 700 million people with sleep apnea. Diagnosis of sleep apnea is based on medical and family histories, physical examination and sleep study results. Shortage of sleep labs and long waiting list for a sleep test cause the delay of diagnosis. Monitoring patients in the strange and overwhelming environment will result in low diagnostic validity and low patient satisfaction. RLM is a practical solution to these problems. Sleep study testing equipment will be

delivered to the patient's home, and data can be transmitted in a real-time manner to the data bank of hospital for analysis.

Erectile dysfunction affects over 150 million patients all over the world, and is also an alert for cardiovascular diseases and mental disorders. This is a disease with difficulty in obtaining accurate measurements and treatment due to privacy and cultural concerns. RLM has been an ideal approach with high patient satisfaction, resulting in precise and early diagnosis.

Pain management is needed for a patient population of over 20 million globally. It lacks real time evaluation and personalized solution. RLM provides a real-time pain assessment and management with higher efficiency and lower side effects.

Heart failure is a chronic condition associated with high morbidity, mortality and health expenditures, affecting a population of over 20 million globally. RLM provides around-the-clock and standardized assessing, monitoring and treatment, reducing readmission rate and medical cost.

3. Goals

Our goal is to initiate global medicine collaboration with the support and guidance of IARU. We hope to build global connections between hospitals, scholars, scientists and entrepreneurs of different countries and backgrounds, because it is the diversity that truly will overcome the challenges of our future in healthcare delivery system.

RLM will be used as a pilot project to develop global medicine collaboration platform and mechanism in clinical medicine, life sciences and research development. RLM utilizes modern technology to allow patients to undergo clinic test when there is a shortage of clinic lab and long waiting list. It gives patients an opportunity to undergo their disease monitoring in their familial environment. RLM in the home setting will yield high diagnostic validity and high patient satisfaction.

- It decreases the time and financial burden of the patient.
- It yields un-skewed data.
- It allows accurate diagnosis and proper treatment planning.
- It serves large population in multiple regions.
- It decreases the financial burden of healthcare institutes.
- It provides the initial platform for global medical collaboration among IARU institutes.
- It formulates future global collaborative channel and forum.
- It can improve healthcare delivery system, clinical medicine, life science research, translation medicine and healthcare policy in better serving people in the world through collaboration globally.

4. Procedures

Global medicine collaboration is the main purpose of this collaborative proposal. RLM will be discussed as the pilot project in the IARU meeting of the ten presidents. First of all, we would like to set up a workshop on RLM as an initial project of global medicine collaboration for IARU University

Presidents, executives of hospitals, elite physicians and esteemed research leaders. The goal of this workshop is to provide a platform for the senior university officials among the IARU member universities to outline the collaborative program, to design RLM delivery model for selected diseases and to assign responsibilities. Next, IARU members are going to take actions of participation and commitment.

The innovative healthcare delivery model enables patients to live and work in their real-life environment without disturbances or interferences. It helps to collect patient data in the real-life and real-time manner which allows more accurate data, and leads to more precise diagnosis and tailored treatment. Healthcare professionals in multiple institutions can share information and perform large scale investigation based on the big data. It optimizes the utilization of healthcare resources for larger coverage.

Community clinic is the foundation of the delivery system, and it initiates online consultation, provides patient education, and sets up data collection and transmission. Regional hospital installs and maintains information-sensing mobile devices, collects data and transmission, formulates treatment plan. The Central hospital is responsible for data analysis, provides interdisciplinary consultation, oversees real-time monitoring and tailors treatment regimens accordingly.

We propose to hold the first workshop to discuss, seek feedback and recommendations of the details and logistics of this project.

Location Peking University, Beijing, China

Date December 5–6, 2014

Attendees IARU University Presidents, executives of hospitals, elite physicians and research leaders

The workshop will take one day. The tentative program for the workshop is as follows:

Registration and Check-in: Peking University, December 5, 2014

Workshop (December 6, 2014)

- | | |
|-------------|---|
| 9:00–10:30 | 1. Welcome Speech by PKU President Enge Wang
2. Presentation by PKUIH President Shan Wang
3. Invited Speech (20min each) by representatives of IARU member institutions
<i>Refreshment Break</i> |
| 11:00–12.30 | Invited Speech (20min each) by representatives of IARU member institutions
<i>Lunch</i> |
| 14:00–15:30 | Invited Speech (20min each) by representatives of IARU member institutions
<i>Refreshment Break</i> |
| 16:00–17:30 | PKUIH orientation and Group Discussion |
| 17:30–20:30 | Banquet |

5. Timetable

	Description of Work	Time
Phase One	Workshop: Prepare, Meet and Discuss; use RLM as an initial project to explore global medicine collaboration	One year
Phase Two	Based on the experience, mechanism and achievement of Phase One, develop new projects among IARU members in clinical medicine, basic medicine and translation medicine	Every year

6. Budget

For the first workshop, all IARU member participants are expected to fund their own travel and accommodation costs. Peking University will cover other local costs (including meals, conference material and organizing costs) in Beijing during the workshop.

For RLM projects on global medicine collaboration, all member universities are expected to fund their own cost of technical training, repair and maintenance of RLM devices and data analysis.

For the following projects in Phase Two, all IARU members will discuss and decide the budget.

7. Key Personnel

All IARU members are expected to participate in the project, collaborate, share the data and discuss together.

8. Evaluation

- 1) Obtaining feedback and recommendation on logistics of global medicine collaboration
- 2) Update the status of global medicine collaboration
- 3) Analyzing global medicine operating procedure and protocol
- 4) Evaluation of data and outcome from RLM as the initial project
- 5) Compare and improve procedures for different projects of global medicine collaboration

9. Endorsements

- Peking University International Hospital
- Peking University healthcare system

10. Next Steps

- Set up a Workshop: Meet and discuss
- Participation and commitment
- Evaluation of outcome and develop new projects

11. Reference

- a. Increased Mortality in Narcolepsy; Maurice M. Ohayon, MD, DSc, PhD, Jed Black, MD; Chinglin Lia, PhD; Mark Eller, PhD. *Sleep Journal*, March 2014.
- b. Portable Diagnostic Devices for identifying Obstructive Sleep Apnea among Commercial motor Vehicle Drivers: Considerations and Unanswered Questions; Chunbai Zhang, MD, MPH; mark Burger, MD; Atul Malhotra, MD; Stefanos N. Kales, MD. MPH. *Sleep Journal*, 35 edition, 2012.
- c. Sleep and Chronic Disease. Centers for Disease Control and Prevention; National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health.

Appendix I – Real-Life Medicine (RLM)

Definition of RLM

Real-life medicine (RLM) is an innovative and integrated healthcare delivery model using state-of-the-art health information technologies to provide healthcare services to patients in their real-life environment with various clinical data. Data collected via mobile sensor devices are being transmitted seamlessly from the patient's place to health professionals. It functions by collaboration among medical institutions in multiple locations at different levels, and provides big data analysis platform at a distance. It provides ample opportunities for collaborative research, translational medicine, and improves healthcare quality access to patients in all areas.

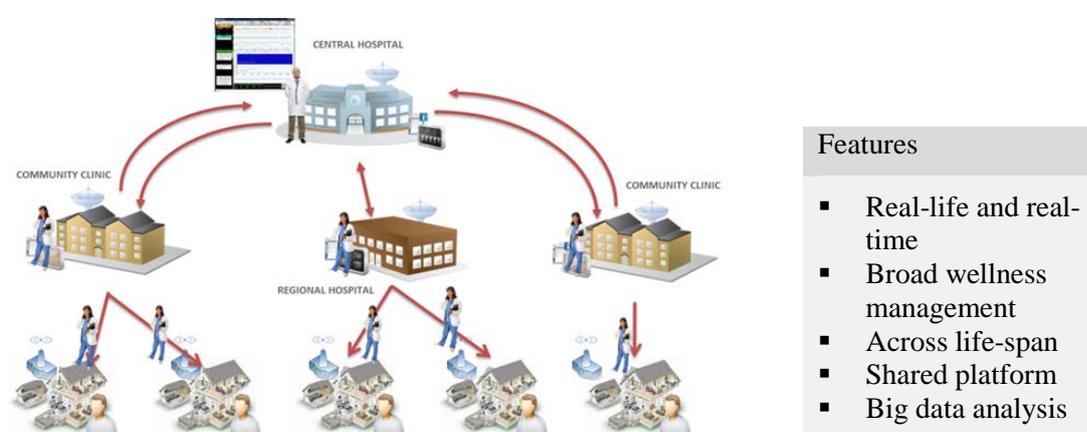


Figure 1: Real-Life Medicine Model

Functions of Different Institutions in Real-Life Medicine Delivery System

Medical Institution	Functions
Central hospital	<ul style="list-style-type: none"> ▪ Data analysis ▪ Interdisciplinary and/or inter-institutional consultation ▪ Tailoring of treatment regimens ▪ Overseeing real-time monitoring
Regional hospital	<ul style="list-style-type: none"> ▪ Installation and maintenance of information-sensing mobile devices ▪ Data collection and transmission ▪ Formulating treatment plans
Community clinic	<ul style="list-style-type: none"> ▪ Data collection and transmission ▪ Online consulting and education for patients ▪ Submit request for further consultation ▪ Rehabilitation

Advantages of RLM

- enables patients to live and work in their real-life environment without disturbance or interference by wearing portable devices
- collects and interprets patient data in a real-life and real-time manner, which allows more precise diagnosis and tailored treatment
- allows healthcare professionals in multiple institutions to share information on a public digital platform and to perform large-scale investigations based on big data analysis
- decreases overall health expenditure by reducing on-site visits, hospitalization and missed days of work
- improves access to quality healthcare for more population

Potential Fields of RLM

The rise in the prevalence of non-communicable diseases (NCDs) and the increase in the elderly population impose a large burden on healthcare delivery system worldwide. RLM, with its unparalleled features, provides an innovative and effective model for diagnosing and managing chronic diseases, protects patient privacy, improves patient care access without increased cost, and obtains accurate and real-time data in the real-life environment.

Summary

In summary, RLM is an innovative healthcare delivery model that will potentially optimize the utilization of medical resources, alleviate the pressure on scarce medical resources, and make affordable and accessible healthcare services possible for a large number of populations. RLM is a collaborative model that can provide big data analysis platform on which collaborative research, translational medicine research, and drug trails can be conducted.

Potential Fields of RLM

Conditions	Important Facts	Limitations of Traditional Diagnosis and Treatment	Advantages of RLM
<p>Sleep Apnea Hypopnea Syndrome (SAHS)</p>  <p>Variables: EEG; EOG; EMG; ECG; airflow; snoring; SaO₂; movement, etc.</p>	<ul style="list-style-type: none"> global mortality: 3,000+ deaths/yr prevalence in China: 700+ million a common health concern that is associated with increased cardiovascular-related morbidity and mortality, diabetes mellitus, and etc. prevalence rising with obesity epidemic 	<ul style="list-style-type: none"> long waiting list for a sleep test due to shortage of sleep labs poor-quality sleep in a strange & overwhelming environment in the hospital setting low diagnostic validity low patient satisfaction 	<ul style="list-style-type: none"> accessible to patients whose living areas have no sleep labs sound sleep in comfortable & familiar settings when monitored at home high diagnostic validity high patient satisfaction
<p>Heart Failure (HF)</p>  <p>Variables: intake and output; weight; physical activity; ECG; SaO₂; pulse rate; RR; HR; BP; treatment; subjective responses</p>	<ul style="list-style-type: none"> global prevalence: 20+ million prevalence in China: 4+ million a chronic condition associated with high morbidity, mortality and health expenditures prevalence rising with growing population aging treatment adjustments based on daily monitoring is of significance to improve quality and length of life for patients 	<ul style="list-style-type: none"> infrequent review inability to identify alert signs of exacerbations practice variation in assessment delay in treatment high rate of readmission incurring great costs 	<ul style="list-style-type: none"> around-the-clock and standardized assessing, monitoring and treatment early identification and intervention when condition worsening improved quality of life new variables can be included, such as subjective responses reduce readmission rate reduce costs

Conditions	Important Facts	Limitations of Traditional Diagnosis and Treatment	Advantages of RLM
<p>Pain Management</p>  <p>Variables: analgesia pump infusion; patient control over pump; pain score; side effects; EEG; microcirculation signal</p>	<ul style="list-style-type: none"> ▪ prevalence in China: 100+ million (estimated) ▪ 44%-50% of cancer patients suffer from moderate to severe pain and most patients do not receive adequate pain treatment (new cancer cases: 20 million globally and 1.6-2 million in China) ▪ approximately 80% patients experience mild to severe pain after surgery ▪ great variations exist in terms of pain severity and patient feeling 	<ul style="list-style-type: none"> ▪ lack of real-time evaluation ▪ variations in scaling and monitoring ▪ no timely reminders of side effect ▪ insufficient management due to lack of personalized solution ▪ low patient satisfaction 	<ul style="list-style-type: none"> ▪ real-time and personalized adjustment ▪ avoiding side effects ▪ standard pain assessment and management ▪ interdisciplinary assessment available ▪ high efficiency and effectiveness ▪ high patient satisfaction
<p>Erectile Dysfunction (ED)</p>  <p>Variables: penis girth; erection hardness; temperature; blood flow; penile SaO₂; brain waves during sleep</p>	<ul style="list-style-type: none"> ▪ global prevalence: 150+ million (projected to reach 320+ million by 2025) ▪ prevalence in China: 40 million ▪ a common condition associated with a significant effect on quality of life ▪ an alert signs for cardiovascular diseases and mental disorders 	<ul style="list-style-type: none"> ▪ underreporting and under treatment due to privacy and cultural concerns ▪ difficulty in obtaining accurate measurements 	<ul style="list-style-type: none"> ▪ home assessing with comfort and privacy ▪ precise and early diagnosis ▪ high patient satisfaction

Abbreviations:

EEG: electroencephalography; EOG: electrooculography; EMG: electromyography; ECG: electrocardiography; SaO₂: oxygen saturation; RR: respiratory rate; HR: heart rate; BP: blood pressure

Appendix II – Peking University Medical City (PKUMC)

Peking University Medical City (PKUMC) is located at the Northwest skirt of Beijing, twenty minutes driving time from downtown. It serves Beijing and surrounding regions with a total population of approximately 50 million people. It is in the second phase of Life Science Park. The first phase of the development of the Life Science Park has fully completed and has full occupancy of globally renowned life science enterprises, such as Novo Nordisk, Denmark CCBR, German Herauers, US Bioduro, etc. Providing healthcare services to full life cycle of all people with the most advanced facilities and services is the mission of PKUMC.



The 120-acre PKUMC is a premier location for medical care, research and education. PKU International Hospital, PKU Mental Health Hospital and PKU Rehabilitation Hospital are the hospitals within PKUMC providing medical care services. It is approved for 2,370 total inpatient beds. PKU Care industrial park, commercial office buildings and PKU Pharmacology Research Center provide environment for research and innovation to fulfill its mission.

PKU International Hospital

PKU International Hospital is the flagship of Medical City. Its mission is to provide international standard medical services and to lead the reform of the nation's healthcare system. It is the largest non-profit general hospital in China. Affiliated with Peking University, it is fully supported by the PKU healthcare system and has the advantage of



resource sharing within the system. The Hospital has total area of 4.8 million square feet and investment amount of 800 million dollars. It is approved for 1,800 inpatient beds, and has thirty-six Centers of Excellence as well as forty-six medical specialties. PKU International Hospital is the first hospital in the nation which is HIMSS stage-7 ready. It is equipped with state-of-the-art facilities and cutting edge technology and well-trained healthcare personnel to deliver multi-disciplinary coordinated patient care services with compassion and humanity. The Hospital has a six-story building for research and education, including core research labs with 35,000 square feet. PKU International Hospital has made its commitment to bridging innovative research with clinical medicine and training as well as producing the next generation of international leaders in medicine. The Hospital will be in full service in December 2014.



PKU Rehabilitation Hospital

PKU Rehabilitation Hospital will have 300 inpatient beds, total area of 320,000 square feet and investment amount of 80 million dollars. It provides total care to assist patients after chronic and acute illness able to return to their productive life. A long-term convalescent home will be built at a later stage of the development.



PKU Mental Health Hospital

PKU Mental Health Hospital collaborates with PKU Sixth Hospital. It is approved for 270 inpatient beds and will provide comprehensive treatment to patients and support services to family members.

PKU Care Industrial Park

PKU Care Industrial Park has total area of 2.4 million square feet and total investment of 330 million dollars. It has six buildings, providing two hundred advance research laboratories comply to the international GLP/cGMP regulations with various support services. It will be the incubators of the future leading healthcare enterprises, the hub of life science research and platform of translational medicine. Commercial office buildings in PKUMC will provide leasing and building management services to serve the international enterprises and entrepreneurs.



PKU Pharmacology Research Center

PKU Pharmacology Research Center is in full operation, collaborating with PKU Health Science Center in new compound research and development in treatment of cancer and cardiovascular diseases. It has been committed to develop innovative medicines with independent intellectual property rights, and to establish an original model of research and development for drug discovery through international cooperation.

China being the most populated country (1.36 billion) has mass big data in health related categories to provide scientific benchmark for data based research. With the full support by PKU healthcare system, PKU International Hospital facilities and staffs, and healthcare industry incubators on the premises, PKUMC undoubtedly offer great opportunities to worldwide scholars in their research and development endeavors. It will enhance future joint venture among International academic centers in health sciences and technology.



5.7 Participation in 'The Limits of the Numerical'

Lead	University of Cambridge
Reporting	University of Cambridge
Executive summary	<p>In response to Banco Santander's interest in a broader cooperation with IARU, Senior Officers agreed at their meeting in 2012 to submit the "Failure of the Numerical" proposal to Santander with a funding request of USD 2.5 million. Santander decided not to support the proposal and suggested a smaller-scale "IARU-Santander Research Fund" as an alternative.</p> <p>In the meantime, the "Failure of the Numerical" project consortium raised USD 1.4 million to start the project – now renamed to "The Limits of the Numerical". The project is a three-party collaboration between the Universities of Cambridge, Chicago and Toronto, and it will be looking at Health Care (at Cambridge), Climate Change (at Chicago), and Education and/or Urbanism (at Toronto).</p> <p>One element of the scheme is to run a week-long early career research colloquium each year. Cambridge proposes that IARU should fund early career scholars from their constituent universities to join the week-long colloquium.</p> <p>This document contains:</p> <ul style="list-style-type: none"> ▪ Proposal for IARU's participation in "The Limits of the Numerical" project ▪ Funding request of USD 35,000 per year for three consecutive years to fund ten early career scholars from its member universities to participate in the annual colloquiums
Funding to date	n/a
Outcomes of previous meetings	<p>Senior Officers' Meeting, November 2013</p> <p>Following the Presidents' Meeting in Copenhagen 2012, the research proposal "Failure of the Numerical" has been developed in an iterative process by Cambridge (lead), Berkeley and Oxford. The proposal was submitted to Santander Bank by the IARU Secretariat with a funding request of USD 2.5 million. In fall 2013, NUS President Chorh Chuan Tan and Bernard Toh met with Santander's Chairman Emilio Botín and Vice-President Salvador Medina to discuss the proposal. Santander Bank signalled that it would not support the proposal but would be keen to set up an "IARU-Santander Research Fund".</p> <p>(...)</p> <p>The project consortium of the original "Failure of the Numerical" proposal is currently looking for funding from other sources. The project will no longer be part of the IARU collaboration with Santander Bank but it will continue to be "associated with IARU".</p> <p>Presidents' Meeting, April 2013</p> <p>Cambridge presented the revised proposal on behalf of the project leads. The topic was approved at the 2012 Senior Officers' Meeting, and the</p>

initiative leads have reverted with revisions to the initial proposal. Although the invitation by the Santander representative in April 2012 was only for USD500,000, the funding request submitted is for USD2.5 million. Cambridge suggested that it might be effective to pitch this as sponsorship of USD\$250,000 per institution for this project.

The meeting agreed that the proposal crafted was sufficient for corporate sponsorship, and was ready to make a sponsorship request to Santander.

Concerned that Santander may wish to withdraw funding from the Global Summer Program, Presidents agreed that while Santander should be approached for funding for the proposal “The Failure of the Numerical”, it is of secondary priority to the Global Summer Program. NUS and Cambridge would coordinate to approach Santander. Other Presidents were also encouraged to speak to Santander and express their support for the IARU sponsorship requests if the opportunity arises.

Proposal

Background

Members will remember that in 2013 CRASSH (Centre for Research in the Arts, Social Sciences and Humanities) on behalf of Cambridge University proposed to IARU a collaborative project called “The Failure of the Numerical”. This was an interdisciplinary project involving several partners that set out to look at what happens to systems of evaluation when numerical quantification is introduced into areas where such forms of numerical evaluation are not immediately applicable – such as happiness, public good and so forth. One obvious test-case was education, where the thoroughly understandable desire to compare the success or failure of different educational institutions leads to numerical systems of evaluation – league tables, for example – which have an unintended and destructive effect on the very process of education they are designed to measure. We suggested that this was a general and repeated paradigm in contemporary society with far reaching consequences, which deserves analysis in the areas of health care, climate change, education and so forth. IARU members were very supportive of the proposal and recommended it to funders, but, in the event, the financial scale of the project proved too high, although the feedback on the project’s qualities was extremely positive.

Current State of Affairs

CRASSH has now raised the money (£900,000 / \$1,400,000) needed to start this project from a group of sponsors including the Mellon Foundation and the ISRF (Independent Social Research Foundation) who have passed it through rigorous academic peer review. I have attached to this document a version of the successful application – although in the final instantiation of the project itself there will inevitably be some changes – not least the title, which will now be the more ameliorative “The Limits of the Numerical”, to satisfy the more committed quantifiers amongst us. The project is a three-party collaboration between the Universities of Cambridge, Chicago and Toronto, and it will be looking at Health Care (at Cambridge), Climate Change (at Chicago), and Education and/or Urbanism (at Toronto). The idea is that we should take three areas of concern across three jurisdictions. Each team will appoint two post-doctoral fellows for three years, and each has two PIs already in place. Each team will run a seminar, work on its own strand of the project, and link with other researchers in their own university. The three teams, however, will also collaborate extensively on the central shared questions, meeting both virtually and in person on several occasions each year through the project’s duration. It is a fully collaborative, interdisciplinary project.

One element of the scheme is to run a week-long early career research colloquium each year in the summer at one of the lead universities of the collaboration. The six post-doctoral fellows and their PIs will form the core of this event, and senior academics will be invited to speak at a meeting at the end of the week and to engage with the early career academics during it. Each colloquium will focus on a central and major theme of the project. We would like to suggest that this would be an excellent opportunity for IARU universities to engage with this exciting project. We wish to propose that IARU should fund early career scholars from their constituent universities to join the week-long colloquium.

Here is how we hope things should work – although as ever, we are open to negotiation:

- Each IARU university which wishes to take part should run a seminar for its own scholars on some aspect of the project, by way of preparation before the workshop.
- Each IARU university which wishes to take part will propose an early career scholar to attend the colloquium.
- Each nominated early career scholar will come to the colloquium.
- The topic of the colloquium will have been announced; preparatory readings will have been circulated; and each nominated scholar will have the opportunity to have their work presented for discussion in the group, as well as to take part in the discussions of the circulated readings.
- The whole group will be part of a larger meeting at the end of the colloquium with more established scholars.

The aim of this collaboration is to allow early career academics to advance their scholarly research by exploring central issues in a critical but supportive atmosphere; to develop an extensive network of early career scholars across an international arena; to advance a major research project in a fully collaborative, international and interdisciplinary manner – aims often promised but rarely achieved. Above all, we think it will prove an extraordinary opportunity for a group of younger scholars to advance their thinking at one of the great research universities.

The costs, we believe, are quite manageable for such full-scale participation.

Each participating early career scholar will need travel costs, and accommodation, and subsistence for seven days. A contribution will also be needed for the colloquium's final meeting and for administration.

We suggest that for summer, international travel, an average of £800 per person should be budgeted – with the necessary proviso that economy travel only is to be allowed.

We suggest that accommodation and subsistence for seven nights should be (per person) £840.

Thus per person nominated the budget will be £1640 (= \$2,450).

We would suggest that £6, 000 (\$9, 000) per annum towards the costs of the colloquium and its administration would be suitable.

We would suggest that 10 participants, therefore, would need £22, 400 (\$33, 600) per annum.

It would be possible to increase the number of IARU participants to, say, 20 at most.

So we wish to propose that IARU offers to fund ten early career scholars from its member universities to participate in the annual colloquium and meeting of this project at a cost of ca. \$35, 000 per annum for three years.

Annex – The Failure of the Numerical

Introduction to the Project

This project explores one of the most pressing sets of questions for modern social science and its relation to policy. What is the effect of the pervasive introduction of numerically-based quantification into all aspects of social evaluation? When does the use of numbers work against the very values they are introduced to support, promote or capture? How do numbers as a system of evaluation clash with social values which cannot be so quantified?

The project has a large intellectual scope and an excitingly novel structure.

- i. **Its intellectual scope** covers three main strands of social policy: education, climate change, healthcare. In education the project focuses on how systems of league tables, IQ measures, exam results leads to a dangerously oversimplified instrumentalization and an increasing gap between the values of a liberal education and the means of evaluating it. In climate change, we investigate how natural capital is evaluated, and how the numerical understanding of climate change is to be mediated to a public. In healthcare, we analyse the impact of QALYs, the numerical, comparative system of allocating resources within the English National Health Service, now under threat from changes in government policy, to question the tension between social understandings of a good life and a just political order and the quantification of healthcare resource modelling.

These three areas of empirical research share a far-reaching set of questions about the underappreciated tension between numerical quantification as a form of evaluation and moral, social and political judgments of value in the formation of social policy.

- ii. **The structure of the project** offers a unique experiment in interdisciplinary research. Each of these **three strands of research** will be conducted by a team of two post-docs, a PI, with a co-PI, and an academic advisory board. Each team will be located in a major research university – Chicago, Cambridge, Toronto. The teams will come together for a month on four occasions to run shared seminars, and early career research workshops. Research will be developed and conducted in a collaborative manner, both within each strand and between the different strands. This model offers the rare possibility of bringing together detailed academic research in a broad, interdisciplinary, international framework. The project is co-funded, and has received support from each institution.

The results of the work will be publications and colloquia aimed not just at academics but also at policy makers. The project aims to change the manner in which policy makers conceptualize and rely on numerical evaluation.

This project is aimed at the central real-life problem of how value is constructed between social science and public policy, and what the effect of this idea of value is on real life, with a pressing relevance for current government policy. And we contend that this project thus conforms significantly to the aims of the ISRF.

The Research Question of the Project

It is fundamental to the design of the project that these three strands are integrated to create a single intellectual plan for the whole project. Thus the project as a whole has a single overarching question that motivates its different strands. The **Project Research Question** has **three parts**:

- i. What are the effects on a system of social policy when numerical quantification and evaluation is introduced into that system?
- ii. How does the use of numerical evaluation exclude, trivialize or distort other systems of political, moral and social evaluation?
- iii. What are the political and moral consequences of this shift towards numerical evaluation?

Theory and Methodology (all three centres)

The research questions will be explored in the three areas of education, climate change and healthcare, because these are the areas where social science, policy, and the gritty world of politics interact with intense urgency. There are no arenas where citizens and their behaviour are more implicated in social policy. Our central question faces a pressing and real-life problem full on.

- i. The first part of our central question starts from the fact that numerical evaluation is introduced into a system of social policy. It is introduced for good reasons to do with epistemic rigour, comparability across different jurisdictions, and the tractability of mathematical figuration for modeling and formalization. However, as the term “introduced” stresses, the introduction of any particular scheme of quantification, indeed quantification at all, is neither inevitable nor natural. Therefore, we want to explore why regulators seek to quantify, how these reasons shape the tools they use, and how these tools might misrepresent the things they purport to measure. Such work will draw both on existing analyses of the drive to quantification (Porter, 1996 Power, 1999) and on work on the uses, nature and meanings of measurement in the social sciences (Alexandrova, 2012).

But, on the other hand, we also stress ‘system’. A common ground between such diverse intellectual traditions as Chicago school “law and economics” (Lucas, 1976) and “social constructivist” analyses of psychiatric categorisation (Hacking, 1998) is that the introduction of quantitative tools can have unintended, sometimes perverse, effects on complex systems. It is crucial that the object of analysis here combines institutional frameworks, decision making bodies, normative discourse, planning agencies, authority figures and those who are in the system as patients, citizens, pupils as well as teachers, doctors, scientists, politicians. What is needed is an integrated analysis that moves beyond questions of policy or philosophy to stress the interaction of the different elements of the system. In analysing these interactions, we will draw on a wide variety of tools, most notably work in network theory, systems analysis, and the anthropology of institutions (Yearley, 2004). As the response to Latour and Woolgar’s analysis of the science lab reveals, such a process is likely to reveal the interconnections that the system’s smooth running needs to keep obscure (Latour and Woolgar 1986). This work is important not only because of the consequences to patients or pupils, say, of introducing numerical evaluation, but also because it reveals the consequences of quantification for policy makers and practitioners (and their vested interests) within the systems.

- ii. The second part of our central question draws out an issue that is often obscured both in theory and in practice. There is, of course, a well-known and well-developed set of philosophical debates on the nature of value and evaluation, not only in ethics and political philosophy following Rawls' seminal work (Rawls, 1971), but (relevantly to this project) in epistemology (Zagzebski 1996; Williamson 2000; Steup ed 2001; Pritchard 2005; Alston 2005). While these abstract discussions will, of course, inform our analysis, we hope to focus on a less commonly debated question. In a democratic, pluralist society, there is bound to be widespread disagreement over which values we should seek to promote, how they should be balanced and so on. When we choose to use a particular quantitative metric to assess and guide policy, we risk of downplaying, trivialising or simply ignoring value considerations which the particular metric does not measure, and which, perhaps, could never be quantified at all. Numbers can be used to ignore, trivialize, and distort other systems and ideals of evaluation; and the different rhetorical and political strategies of this process within a system demand further discussion.

This part of the question involves two approaches: on the one hand, it involves some theoretical, philosophical questions about whether all values are commensurable (Peterson, 2013) and on how to balance competing value systems in democracies (Fisch and Benbaji 2011); on the other, there are empirical test-cases to be explored of actual policy consequences of particular quantitative tools. We shall look at how regulative systems use numbers rather than other systems of evaluation within a set of test-cases. This work will build on important work analysing the relationship between different forms of expertise (Wynne, 1996). A fascinating phenomenon in the history of science is "Kuhn-loss", where a new paradigm cannot answer problems or questions which a superseded paradigm could resolve (Post, 1971). Systems of quantification seem to face an analogous problem: similar to a Kuhnian paradigm, any system of quantification will soon seem "obvious" and "natural" to those who use it, but, in fact, any such system will only be an incomplete approach to messy reality. Test cases will allow us to identify the features of such processes, while philosophical work will allow us to place these studies within a broader perspective.

- iii. The first part of the project looks at the often aggressive effects of introducing quantification, including their unexpected costs; the second looks at a very particular kind of cost of quantification, the distortion or downplaying of incommensurable values; the third, which will be dominant in the last part of the project, aims at a more constructive goal: the theoretical and practical possibilities of change. In this context, we hope to address at least two issues. First, if some systems of quantification are necessary for the smooth or just functioning of modern societies, what makes for a good system (or set of systems) of quantification (Nord, 1999)? In answering this question, our aim is not so much to adjudicate disputes between competing approaches, but, drawing on sociological and philosophical work (for example, Daniels, 2008), to suggest how they might be adjudicated. Second, more broadly, given the limits to quantification, what alternative ways of decision-making might we adopt, and how might these alternative approaches draw on or relate to quantitative metrics? Again, this task involves not only analysis of the rich philosophical literature on such topics as the relationship between abstract philosophing and policy needs (Wolff, 2011), but a close analysis of the successes and failures of alternative systems of governance and policy-making.

Finally, the project needs to be integrally comparatist as well as interdisciplinary and collaborative. To this end, we have deliberately chosen three different Anglophone jurisdictions where systems of public health, public/private education and attitudes and

institutions of climate change are different but interrelated. We believe that the three strands together tell importantly comparative stories that allow a far richer picture to emerge than any one study could reveal. So, the local politics of education contrast with the global politics of climate change. The personal and national politics of health care contrast with the personal and national politics of education, not least in terms of visible results: an education for life is not viewed in the same light as an operation to save a life. The aim of this project is that its final outputs should have a potentially significant impact in policy arenas, both within and beyond our chosen jurisdictions.

Interdisciplinarity of the Project

One of the most exciting aspects of the project is not just its novel structure but also its insistent requirement of a new methodological approach to the problems. Social science relies on the success of the numerical and we will need to turn the tools of social science towards their own processes and bring to bear on them both a rigorous philosophical and critical theoretical method. At the same time, while it would be premature to overdetermine the form or results of the research, it is clear that each strand of the project must be based on detailed empirical research.

Test cases

Although the final aim of the project is work that is both general and has policy implications, we will also develop and explore twelve detailed test cases over three years, four from each jurisdiction (England, USA, Canada), chosen collaboratively by the team members. The initial research will also require preliminary collection of the relevant data, and the evaluation of competing test-cases. These test-cases will be discussed in the four meetings, providing a tight and manageable focus for the group discussions.

Each test-case will require at least:

- a) a **historical account** of the introduction of numerical evaluation into a system.
- b) the contextualized **rationale** and explicit arguments for such introduction.
- c) the **effects of such numerical evaluation**, as perceived by actors and publicly, and as possible to determine by research.
- d) the **potential for change** within the schemes of evaluation.
- e) the **policy implications** of the research.

Analyses

Each strand must also develop a critical and historical analytical model in order to formulate and investigate the broader issues. Each strand will have its own requirements, but in coming together certain approaches must also be shared. This will require at least:

- a) a **critical understanding** of how such metrics affect such institutional and discursive systems: here recent history and sociology of science with its interest in network theory, system theory, and the role of automation in everyday life (Latour, Schaffer, Siskin and Warner, Castells) provide an initial approach to understanding the impact on a system of an introduction of numerical metrics.

- b) an **anthropologically-inflected analysis** of how numerical metrics change places of work: the analysis needs an anthropological understanding of social process to explore changes of behaviour and the relation between public discourse, normativity and behaviour within a community (Mackenzie 2008).
- c) a **philosophical understanding** of the interplay between the normative work of a normative system and the role of evaluation (feedback systems) within ethics. The question of competing value systems needs the clarifications of a philosophically trained analysis. Here, we start from the post-positivist resurgence of normative ethics, which already contains a small, but rich, literature on the relationship between meta-ethics and policy tools (Anderson, 1995). Furthermore, we hope to build on recent work in the philosophy of science which questions the possibility of value-free science (Douglas, 2009).
- d) The combination of anthropology, history of science, critical theory, philosophy and social science is an interdisciplinary goal rarely achieved. This is for good reason: members of different disciplines use different methodologies and vocabularies. However, we believe that the structure of the project and the methodology proposed make this goal achievable, by creating time and space for informed and mutually respectful discussion. Furthermore, the success of recent projects, most notably Brown's work combining sociology of science with normative political theory (Brown, 2009), and the growing field of "ordinary ethics", which combines anthropological insight with meta-ethical debate (Lambek, 2010), suggest the time is ripe for such inter-disciplinary work. Note, furthermore, that a project which investigates the importance of a plurality of tools of assessment will naturally lend itself to use of a plurality of methodological tools and approaches.

Research Proposal for *Project Strand 2* at CRASSH

The Research Background for Strand 2

This strand takes a historical, anthropological and philosophical approach to the question of how quantification affects systems by looking at the example of QALYs in the British Public Health system. The historical perspective is necessary for two purposes: first, to understand and contextualize the arguments that successfully established QALYs as the prime means of evaluating resource decisions; second, to understand the overall shift in the institutional practices over time from before the adoption of QALYs to their current dominance. The anthropological perspective also has two lines of enquiry. First, it will explore the effect of the introduction of QALYs on the actors within the institution; second, it will investigate the interface between the institution and its social context, and how this is affected by the use of QALYs. Finally, there is a double angle to the philosophical enquiry, too. On the one hand, through an analysis of the principle and functioning of QALYs we wish to broach the central question of the overall project, namely, how quantification, especially numerical quantification, alters normative social systems. On the other, we wish to map out the anxious terrain between ethical judgment and quantified evaluation in health care as part of social policy with an eye to articulating broader concerns about how quantification can distort or ignore important value considerations. It should be immediately evident that these three areas of enquiry overlap significantly. It is also the case that although there is a bibliography on each of these topics, not only is there much still to be done on each question discretely, but also there is no research group that is looking at this crucial and, in our judgment, integrated set of questions, either within a single jurisdiction or

transnationally. Furthermore, although there has been much collaborative work between philosophers and economists on ways of improving particular tools of quantification, there is far less work on the fundamental problem of why and whether to quantify at all. Indeed, we claim that it is only through such a collaborative, interdisciplinary combination of empirical historical analysis, with a detailed account of changing networks of actor interaction, and with a philosophical appreciation of the complex normative tensions involved, that anything like an adequate approach to the central concerns of modern society regarding quantification, as exemplified by the case of QALYS, can be articulated and addressed.

In health care, the UK has led the world in basing allocation of scarce resources on quantitative economic models. From its inception, the National Institute of Health and Clinical Excellence (NICE) has assessed novel interventions in terms of Quality-Adjusted-Life-Years (QALYs). This has allowed for a “rational” model for allocating scarce resources: broadly, if an intervention costs less than £20,000 per QALY produced, it should be funded; if the intervention costs more than £30,000 per QALY, then it should not be funded; if an intervention costs between £20,000 and £30,000 then further deliberation is required before a funding choice is made (NICE, 2013). This model for rationing resources has been extremely controversial, and, perhaps as a result, there has been a steady accumulation of exceptions to the broad framework (Steinbrook, 2008). More fundamental changes might well be afoot. The highly contested UK government reforms to the National Health Service – currently opposed by the British Medical Association – will shrink NICE’s role to that of a technical advisory body, as local physicians and clinical commissioning groups come to play a central role in deciding which health interventions get funded. At the same time, however, QALYs continue to be used in UK policy-making; for example, by the newly founded “Public Health England”, which has a remit to consider determinants of health outside the provision of healthcare.

In general terms, no one would deny that health care is a foundational element in contemporary society’s sense of itself and its notion of crisis as much as of well-being, and thus it is a key battleground of social policy. But the moment for a re-evaluation of the general question of the effects of quantification and specifically the role of QALYs could not be more timely. The first generation of QALYs are being re-considered from at least two directions: on the one hand, health care economists and policy makers, while insisting on their continuing usefulness, are refining and extending the models utilized; on the other hand, ethicists are beginning to put pressure on QALYs as an adequate response to the need for judgment within health care policy. This is a prime moment to make a telling contribution to an on-going debate, as well as to use this particular debate as the focus for more wide-ranging reflection.

Apart from official guidelines and reports, the academic literature on these issues can be separated into three main areas. First, there is technical literature, setting out variations of QALY-based assessment, typically in response to specific concerns (for example, Nord, 1999; Devlin, Tsuchiya, Buckingham and Tilling, 2011; Edlin, Tsuchiya and Dolan, 2012). Second, there is a philosophical literature, relating debates over QALY-based allocation to questions about distributive justice and the conceptualization of well-being (Daniels, 2008; Harris, 2005; Hausman, 2006), and a move towards reinvigorating questions of ethics with regard to the process of evaluation (Tabuteau and Morelle 2010, Leonard 2008). Third, there is a more diffuse literature in the history and sociology of medicine, studying the emergence and use of QALY-based measures as a part of more general trends in medical research and practice, most notably the rise of evidence-based medicine, and broader trends towards quantification, and the subsequent devaluing of other forms of knowledge (Asmore, Mulkay and

Pinch, 1989; Coulter, 2002; Timmermanns and Berg, 2003). We believe that by combining historical, anthropological and philosophical perspective we can ask a set of interrelated questions which will significantly illuminate, integrate and advance the current debates, not so much at the level of specific detail (should we prefer QALYS or DALYs), but at the more fundamental level of articulating the costs and benefits of quantifying at all.

The Cambridge team will be led by Stephen John who is one of very few academics in the country to have a position specifically in the philosophy of public health, and who has already published on the uses and limits of Cost-Benefit-Analysis in environmental and healthcare contexts (John, 2010; John, forthcoming). He will be joined by Anna Alexandrova, a philosopher whose work is dedicated to integrating perspectives from philosophy of science and moral philosophy on the notion of happiness as an element in public social policy (Alexandrova 2012). They will be assisted by two newly appointed post-doctoral fellows, one in history/history of science and the other in anthropology/social science. This team of four cutting edge researchers will be advised by a board of directors made up of Huw Price (philosophy); Tony Lawson (economics); Ash Amin (social science); Simon Goldhill (director of CRASSH, historian, and expert in interdisciplinary project management). The CRASSH management board also takes an overview of each of the centre's major projects, and this includes the sociologist of medicine, Sarah Franklin, the anthropologist, Caroline Humphrey, and the philosopher, Tim Crane. Cambridge University has recently established a Strategic Network in Public Health specifically to interlink the university's different medical research areas with local, national and international public health professionals: the network provides a forum to help us bring relevant scholars and professionals together for our project's seminars and colloquia. Together with the Centre for Science and Policy, with which CRASSH collaborates closely, we will be working to integrate policy makers into the project from the start.

The Research Questions for Strand 2

There are three areas of questions for strand 2, which correspond roughly to the project's historical, anthropological and philosophical bases. Each area will be conducted primarily by one of the research team, but the development of the research questions, the interrelation of the research questions, and the production of at least some of the final documents will be an actively shared collaboration, under the direction of the advisory board.

Research Question 1

What is the history of the introduction of QALYs?

This element of the project will be conducted primarily by the first appointed post-doctoral fellow who will have an expertise in history, history of science, history of medicine, under the direction of Stephen John, Ash Amin, Tony Lawson and Simon Goldhill, and within the framework of Cambridge's world-class Department of History and Philosophy of Science. It is a striking fact that despite an ongoing technical literature produced largely within the health care economics community, which evaluates the modeling of QALYs (e.g. Steinbrook, Nord, Devlin et al, Edlin et al.), there is as yet no adequate, contextualized, broad history of how QALYs were introduced and what the impact of their introduction has been on health care systems, either for Britain or in a wider comparative perspective. This history will provide a necessary empirical basis for the project's work. It must be stressed how novel such a history should prove to be. The interplay between institutions, ideology and science has been tellingly analysed by a string of scholars from Foucault's work on psychology and

hospitalization, to Palombo, Pelliteri, Verdeber and Fine who have shown the connection between hospital architecture and social process. Yet it is extremely rare to find a significant account of the introduction of a system of evaluation that views it fully as a historical event, with its social, political and philosophical implications, as well as a huge impact on policy and decision making. To this end, the researcher will need to draw on the history of science, history of institutions and history of public health, and will need to investigate (1) what QALYs are and what they actually measure, and what the arguments were that were successfully made for their adoption and what the opposition was; (2) how QALYS have been used and what the processes of qualification have been, and how this has changed as a result of political and other pressures across time; (3) how the introduction of QALYs should be understood within a broad history of medicine as social policy; (4) what the impact of decentralizing such decision making may be. The history of the introduction of QALYs opens a new perspective on what sort of history is needed for modern institutional processes and will provide a portrayal of a major process in modern social policy that will be of great interest and use across a series of fields. For our project, it is crucial to have a fully articulated account of how a particular form of numerical quantification became the dominant model of evaluation in healthcare decisions within a particular jurisdictions, and how it changed the social and medical practices of the institution, particularly given that NICE's work has been used both as a model for other nations and as a warning of the dangers of "socialized medicine".

Research Question 2

How do QALYs change the processes of health care?

The historical research of the first research question will be complemented by a different kind of analysis that is of equal significance. Although there is a growing literature from within the history and sociology of medicine that has studied the emergence and use of QALY-based measures as a part of more general trends in medical research and practice, most notably the rise of evidence-based medicine, and broader trends towards quantification, and the subsequent devaluing of other forms of knowledge (eg Asmore, Mulkay and Pinch; Coultay; Timmermanns and Berg), there is no detailed account of how the introduction of QALYs has changed the behavior of the actors within the hospital system, or the relationship between the hospital and a broader society. Using actor network theory, and an anthropological expertise in analysing group dynamics with regard to normative and regulatory systems, this will be the first detailed study at the level of actor behavior and public perception of the impact of QALYs. This element of the project will be primarily conducted by the second appointed post-doctoral fellow, under the guidance of and in collaboration with Stephen John and Ash Amin; and utilizing, along with the advisory board of the project, the unique facilities for integrating such research into professional environments provided by the University's Strategic Network in Public Health. Since QALYs are often regarded as a means to remove personal judgment from decision-making processes, this strand of the project will be a way of reinvigorating the question of how such a tendency towards quantification changes social interaction, with obvious relevance to broader claims for the merits of "Evidence-Based Policy-Making". This element of the project will be broaching, then, three topics. (1) How does the introduction of QALYs change the behaviour, social practices, strategic actions of stakeholders in public health – doctors, patients, families? (2) How has the introduction of QALYs been perceived in a broad public discourse? (This topic will overlap closely with the work of Research Question 1.) (3) What are the broad social and political conclusions to be drawn about the introduction of QALYs from these first two topics?

Research Question 3

What are the philosophical underpinnings, implications and limitations of QALYs as a mode of evaluation?

The third strand of the project will look most broadly at the philosophical implications of the introduction of QALYs, and will be conducted primarily by Stephen John in conjunction with Anna Alexandrova, under the guidance of Huw Price and Tony Lawson. The broadly utilitarian modeling of QALYs has been challenged in multiple ways. Interventions which have the greatest overall benefit do not necessarily benefit those who are least well-off, thereby conflicting with John Rawls' influential account of social justice (Daniels). Does utility maximization misrepresent communal concerns and fears (Wolff)? Can "equity weighting" adequately modify QALYs' distributive algorithm (Edlin, Tsuchiya and Dolan)? Can the relative judgment embodied in financial thresholds resist being reified as absolute measures (McCabe, Claxton and Culyer, Porter)? We wish first to ask a broader question which is too commonly obscured by such detailed analysis of the success or limitations of specific modeling of QALYs, namely, (1) can moral and social concerns be quantified numerically without loss? What have been the consequences of the quantification enacted by QALYs on the normative, regulatory, and decision-making capacity of the health system? This first general question will lead inevitably to a second more detailed set of issues. (2) Complementing the work of health care scholars such as Tabuteau and Leonard, lawyers such as Laude, and social theorists such as Porter, as well as Anderson's philosophically informed critique of quantification in environmental contexts, we will interrogate what QALYs measure, whether the translation of relative concerns into numerically quantified financial thresholds influences how NICE functions, and, thus, what the place of ethics is and can be within the financial modeling of QALYs. In turn, this will provide a broader framework for assessing debates over which particular ways of quantifying health should be adopted. More generally, it is clear enough that decisions about resource distribution must be taken and that they have to be taken with regard to broad social and political issues of justice, on the one hand, and, on the other, ethical issues concerning happiness, well-being and longevity. (3): the insistent question remains: how should quantification be used in a society characterized by multiple value systems, not all of which can be translated into numerical form?

Conclusion for Strand 2

This project is focused on Britain – only by such a delimitation is it feasible for four scholars to make significant inroads in three years. It is integral to this project, however, that it is also internationally collaborative, and that the interaction between Cambridge and the Chicago and Toronto groups will be mutually informative; that the methodological and substantive issues will be shared; and that active debate between the groups will sharpen the problems and solutions of each team. It must be underlined how rare an opportunity it is for such a collaboration to be established.

The case-study of the use of QALYs in healthcare provides a unique opportunity for a team of young researchers to investigate a set of exciting questions – about the quantification of values such as equity; about the quantification of our lived experience; and about the public life of numbers. Furthermore, as well as the intellectual interest of such a project, it occurs at a crucial transitional juncture in the development of the UK healthcare system where its results can be expected to have wide interest. It offers a chance to explore how different methodological approaches can and must be combined to produce a nuanced and sophisticated account of such a complex social process, and to

explore how history, anthropology and philosophy can join to have an impact on the thinking of policy.

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6. IARU Membership

Submitted by UCPH, Oxford and NUS

Presidents are requested to discuss and approve one of the two options on IARU membership based on the described criteria.

- 1) **No expansion**
- 2) **Limited expansion with one or two members: the University of São Paulo and/or the University of Cape Town**

Regardless of which option is approved, Senior Officers (SO) recommend that Presidents agree on a moratorium on further consideration for another 3 years.

Background

At the inaugural meeting in 2006, Presidents agreed on a moratorium on consideration of additional members for a three-year start-up phase. This moratorium was extended in 2008, but the issue has been discussed at various Senior Officers' and Presidents' Meetings since.

There has been a general consensus that the small size has been a key factor in establishing the strong level of trust and rapport which is a characteristic strength of IARU. However, the discussion has also acknowledged that there might be value in admitting members to broaden the geographic scope of IARU. Latin America, Africa and India have been identified as possible regions for expansion.

There has also been general agreement that the admission of new members must add value to IARU and not just be an exercise to be inclusive. New members should be research-intensive, dynamic, and bring an interesting mix in terms of institutional character to IARU.

Over the years, a number of institutions have expressed an interest in IARU, including the Chinese University of Hong Kong, Massachusetts Institute of Technology, King Abdullah University of Science and Technology (2007), Seoul National University, University of Toronto, Tehran University of Medical Science (2012), Tomsk Polytechnic University, Shanghai Jiao Tong University and Stellenbosch University (2013). Since the partnership with Santander Bank for the IARU-GSP Scholarship Program, Santander has also been approached by a number of universities seeking their support to facilitate access to IARU membership.

At their meeting in Singapore in 2013, Presidents requested SO to propose one or two universities each from South America and Africa for consideration as new members and a mechanism for selecting new members. The possibility of adding a university in India has also been discussed, but the consensus among IARU members is that no university in India is yet research-intensive in the sense that IARU members are. Rankings are imperfect, but there is no Indian university in the top 200 in the THE, QS, or Shanghai rankings, and research is regarded as a particular weakness of Indian universities. It is also worth mentioning that Indian universities tend to be relatively specialized, e.g., in the applied sciences or in management.

In the past, a mentoring approach of incorporating universities from developing countries into IARU projects has also been mentioned as an alternative to expanding the membership. Inviting potential

member(s) to IARU meetings as observers first, before confirming their status as members has also been suggested.

Senior Officers' Meeting, November 2013

The Presidents' Meeting 2013 requested SO to propose a mechanism for considering new members of the Alliance with the aim of identifying one or two universities each from South America and Africa for consideration for membership.

Some SO expressed worries about IARU's capacity to absorb new members. IARU's characteristic strength is the strong level of trust and rapport and there is the fear that the addition of more members could dilute the alliance. Others argued that a modest expansion of IARU would not harm the alliance's character (e.g. up to a limit of 12 members), but the gain could be substantial.

SO did not support the idea of inviting potential members to IARU meetings as observers before confirming their status as members as being too delicate.

SO formed a working group with representatives from UCPH, Oxford and NUS.

Criteria

Presidents may wish to keep in mind the following general questions:

- What does IARU stand for? What do we want to achieve as an alliance? What are the IARU shared values?
- What is the optimal/maximum size of an effective alliance? 10 or 12 members?
- Where are the gaps? Regional, thematic etc.?

Based on these questions, the working group has listed the following criteria:

- a) Research-intensity – any IARU member must be in the upper echelon of research universities, given the definition of IARU (see Annex for descriptions and bibliometric analyses).
- b) Ability to contribute to the alliance – bringing new skills and insights, e.g. impact on the members' internationalization strategies or access to specific research fields or education areas preferably covering a broad range of disciplines.
- c) Geographic diversification – if IARU members wish to form stronger ties to a specific country or region, and bringing an university from that region into IARU would help accomplish this goal, for example for members to be able to send their students for GSP.

Option 1: No Expansion

The argument for no expansion would be as follows:

- IARU is functioning well with ten members, and should not expand for its own sake.
- Any new members should share enough in common (in research, educational, and administrative terms) with existing IARU members to be able to participate fully in the alliance and to be able to contribute meaningfully to it – and no university in Latin America or

Africa has yet reached the stage of development at which IARU membership could make sense, in particular in research terms.

Option 2: Expanding with one or two members in Brazil and South Africa, respectively

IARU lacks a member from either Africa or Latin America, which are major omissions for an alliance that aspires to be viewed as genuinely global. In light of the three criteria introduced above – research-intensity, ability to contribute and geographic diversification, SO identified the following candidates at the 2013 SOM:

- 1) Universidade de São Paulo, Brazil
- 2) University of Cape Town, South Africa

There was much discussion as to the merits of both, and a bibliometric analysis was conducted by NUS to see if the universities are research-intensive. Data and short descriptions are attached.

The Rationale for the University of São Paulo

In Latin America, IARU would be particularly interested to find a member in Brazil, as the country is both an emerging economic power (already 7th in the world in GDP, at purchasing-power parity) and an important strategic target for many IARU universities. It would be valuable for IARU members to have the institutional ties provided by IARU with a university in Brazil, in order to understand trends and opportunities in the large, fast-improving, and ambitious Brazilian higher education and research landscape. For example, the Brazilian government's Science without Borders program, which provides thousands of Brazilian students with scholarships to enrol at foreign universities, is of major interest to many IARU universities; and both the Brazilian federal and state governments have launched well-funded research collaboration initiatives.

The University of São Paulo (USP) is widely regarded as the best university in Brazil, though its research performance is still developing; it is a university of strategic priority for many IARU members, and is located in a city of particular interest to many IARU members.

- USP is the only Brazilian – and indeed, the only Latin American – university in the top 300 in the THE (at #226-250), the only one in the top 200 in QS (at #127), and the only one in the top 200 in the Shanghai ranking (at #101-150).
- The picture in terms of research intensity is mixed. According to the Times Higher Education ratings, in 2013–14 USP scored reasonably well on research volume, income, and reputation (50.8, which is higher than 1 IARU university), though less well on research impact as measured by citations (30.2, which would be the lowest of any IARU university). (Note that in 2012–13 USP was rated much higher on research volume, income and reputation (65.7), for unknown reasons.) NUS' bibliometric analysis places USP at a solid #58 in the world in research productivity, impact, and excellence, with strong showings in Agricultural & Environmental Sciences, Life Sciences, and Natural Sciences.
- Many SO reported that USP is a university of particular focus for their universities. A brief web search reveals that at least 2 IARU universities have a student exchange or scholarship program with USP (and one has multiple student exchange links with USP), 2 have multiple research links, and at least 3 have another kind of existing institutional link.

- Several IARU members have other important links with São Paulo. At least 2 IARU members have a research agreement with the São Paulo state government, 2 IARU members have offices of their university press there, and 3 have alumni groups located there.

The Rationale for the University of Cape Town

Several IARU universities are also embarking on initiatives to expand links with Africa. South Africa is the most obvious country in which to look for a possible African member, given its economic prominence (as a member of the BRICS club) and the strength of its universities. The University of Cape Town (UCT) is widely regarded as the best university in South Africa, though its research performance is also still developing; and like USP it is a university of strategic priority, located in a city of particular interest, for some IARU members.

- It is the only African university in the top 250 in the THE (at #103), the only one in the top 300 in QS (at #145), and the only one in the top 300 in the Shanghai ranking (at #201-300).
- Again, the picture in terms of research intensity is mixed. According to the Times Higher Education ratings, in 2013–14 UCT scored well on research impact as measured by citations (84.6, which is higher than 5 IARU universities), though less well on research volume, income, and reputation (31.0, which would be the lowest of any IARU university). NUS' bibliometric analysis places USP at a #283 in the world in research productivity, impact, and excellence, a poor showing.
- IARU members already have a foundation of links with UCT that they may wish to build on through IARU membership. A brief web search reveals that 3 IARU universities have a student exchange program with UCT, at least 2 have multiple research links, and at least 2 have another kind of existing institutional link.
- Several IARU members have other important links with Cape Town. At least 2 IARU members have offices of their university press there, and at least 2 have alumni groups located there.

Recommendation

Based on the criteria, the working group recommends that the Presidents discuss whether to expand IARU. If the Presidents wish to prioritize, the working group suggests that the Universidade de São Paulo has primary priority and the University of Cape Town has secondary. But there is a logic in inviting a pair of universities to join at the same time, as it may be easier for a new member not to join alone, and it may be sensible for IARU to integrate two members at once rather than one now and another in a few years.

Annexes

Descriptions and bibliometric analyses of USP and UCT

Annexes

Short descriptions of Universities of São Paulo and Cape Town

by UCPH

Universidade de São Paulo (USP), Brazil

USP is a public university in the Brazilian state of São Paulo. It is the largest Brazilian university and the country's most prestigious educational institution. USP is one of the largest institutions of higher education in Latin America and generally considered the top university in the region. It has eleven campuses, four of them in São Paulo. USP is involved in teaching, research and university extension in all areas of knowledge.

- Students: app. 83,000 (57,000 undergrads, 26,000 grads, 2,500 int.)
- Faculty: 5,700
- Staff: 15,300
- Reported finances: budget 2013: R 4,725,126,513 Real (\approx 2,014,358,402 USD)
- Programs: 240 undergrad programs, 239 grad programs
- General rankings: 226-250 (THE), 127 (QS), 101-150 (Shanghai)
- Primary language: Portuguese
- President: Professor João Grandino Rodas (Reitor since 2010)
- Website: <http://www5.usp.br/en/>

USP covers a wide variety of disciplines within the Humanities and Social Sciences, from classical fields such as languages, literature and philosophy to economics, law and administration as well as departments for Architecture and Urbanism, Brazilian studies and International Relations. According to QS by subject, USP ranks within top 50 in the subjects of Communication and Media Studies, Education and Training and Philosophy, and is generally higher ranked in Arts and Humanities (95) and Social Sciences (57) than Natural (114) and Life Sciences (125).

Since 2010, USP has hosted the annual Summer School in Concepts and Methods in Political Science and International Relations with graduate and post-graduate level participants from 30 different countries.

See bibliometric analysis for USP below.

Description sources: University websites (numbers may vary from sub-site to sub-site), Wikipedia and rankings

University of Cape Town (UCT), South Africa

UCT is a public research university located in Cape Town in the Western Cape province of South Africa. It has 5 campuses in Cape Town. The academic departments of UCT are divided into six faculties: Commerce, Engineering and the Built Environment, Health Sciences, Humanities, Law, and Science. UCT is the highest-ranked African university in QS and THE.

- Students: app. 23,500 (15,800 undergrads, 6,700 postgrads, 4,300 int.)
- Faculty: 2,000
- Staff: 2,500
- Reported finances: recurrent revenue 2012: 3,813,643,000 Rand (\approx 349,495,281 USD)
- Programs: 166 undergrad programs, 629 postgrad programs
- General rankings: 103 (THE), 145 (QS), 201-300 (Shanghai)
- Primary language: English
- President: Dr Max Price (Vice-Chancellor since July 2008)
- Website: <http://www.uct.ac.za/>

According to QS by subject, UCT is ranked number 32 in Education and 51-100 in such subjects as English Language and Literature, History and Archaeology, Law and Legal Studies, Politics and Psychology. UCS is generally higher ranked in Arts and Humanities (108) and Social Sciences (112) than in Natural (254) and Life Sciences (142).

UCT has a summer school partnership with London School of Economics and Political Science (LSE) on social sciences issues relevant to Africa today.

See bibliometric analysis for UCT below.

Description sources: University websites (numbers may vary from sub-site to sub-site), Wikipedia and rankings.

Bibliometric Analysis

Overall Field and Subject Ranks of Universities of São Paulo and Cape Town in 2013
(based on the following 8 major bibliometric indicators)

by NUS

Criteria	2012 Overall Performance Indicators	Weighting	
Research productivity	Number of articles of the last 11 years (2002-2012)	10%	25%
	Number of articles of the current year (2012)	15%	
Research impact	Number of citations of the last 11 years (2002-2012)	15%	35%
	Number of citations of the last 2 years (2011-2012)	10%	
	Average number of citations of the last 11 years (2002-2012)	10%	
Research excellence	h-index of the last 2 years (2011-2012)	10%	40%
	Number of Highly Cited Papers (2002-2012)	15%	
	Number of articles of the current year in high-impact journals (top 5%) (2012)	15%	

Research Fields	São Paulo	Cape Town
	2013	2013
Overall	58	283
Engineering & Technology	118	-*
Computer Science	118	-*
Electrical Engineering	129	-*
Mechanical Engineering	139	-*
Chemical Engineering	60	-*
Civil Engineering	138	-*
Materials Science	141	-*
Clinical Medicine	84	218
Life Sciences	60	246
Natural Sciences	66	-*
Physics	76	-*
Chemistry	75	-*
Mathematics	31	-*
Agriculture & Environmental Sciences	21	140
Agricultural Sciences	11	-*
Environment	80	105
Plant and Animal	19	127
Social Sciences	143	156
Pharmacology & Toxicology	21	-*

* Data only available for top 300 universities

Further note on University of São Paulo

In contrast to its relatively high ranks in exercises using research bibliometric indicators which include those on quantity such as number of papers, the ranks of University São Paulo are rather low in reputational rankings – in the 2013 QS World University Rankings University of São Paulo ranked 127th and in the Times Higher Education World University Rankings, 158th.

This phenomenon may be explained by the size of the university as it has 5,900 faculty and its scientific paper production corresponds to 22% of all that is produced in Brazil. Another possible reason is University of São Paulo is relatively short of very top research papers. For example, its rank in Nature Publishing Index 2012 is out of the global 500 with only 11 articles in Nature and Nature branded research journals without a single main-author one (0.79 article equivalent with author contributions taken into account). However, improvement can be expected in 2013 as there are at least two main-author papers published in Nature Communications and Nature Medicine although all relied very much on the natural resources for research (post-rift stratigraphic evolution of the Santos Basin, southeastern Brazil, and Parasites infection and immunoresponse, respectively).

The above notion may be further supported by the 2013 ranks of University São Paulo on bibliometric indicators of high quality research and/or of combined research quality and quantity as summarized below.

Research Fields	São Paulo		
	General rank	h-index	Highly cited papers
Overall	58	142	145
Engineering & Technology	118	239	192
Computer Science	118	121	204
Electrical Engineering	129	144	191
Mechanical Engineering	139	119	288
Chemical Engineering	60	169	34
Civil Engineering	138	213	78
Materials Science	141	248	281
Clinical Medicine	84	126	175
Life Sciences	60	168	261
Natural Sciences	66	123	121
Physics	76	106	125
Chemistry	75	285	275
Mathematics	31	39	87
Agriculture & Environmental Sciences	21	70	150
Agricultural Sciences	11	16	66
Environment	80	117	187
Plant and Animal	19	43	157
Social Sciences	143	151	276
Pharmacology & Toxicology	21	16	273

Further note on University of Cape Town

University of Cape Town is generally not in the world top 300 as shown in the above bibliometric analysis. It is ranked as No. 145 in the 2013 QS World University Rankings and 113th Times Higher Education World University Rankings. It cannot be found in Nature Publishing Index which includes the top 500 global institutions.

7. Setting the Tone: The Role of Leading Universities in Self-Policing University Values

Abstract

Research-intensive universities are the vital core of the international higher education sector which is developing at an unprecedented rate, representing a market of over US\$ 2 trillion and 4 million globally mobile students annually. Such institutions are models for best practices for research productivity, teaching quality, cross-border cooperation, management and innovation. Moreover, with historically deep cultures of open inquiry, scientific integrity and other academic values that are vital to intellectual creativity and attraction and retention of academic talent, research-intensive universities can be models for the responsible exercise of intellectual freedoms in ways that most benefit the university and society generally.

Critical to this function is the concept of 'self-policing,' with leading research-intensive universities serving as models for how to address important issues of intellectual freedom and responsibility through general policies and practices, as well as in the handling of specific incidents. This may include, for example, policies relating to transparency, accountability, and internal dispute resolution. Implicitly 'self-policing' recognizes the social responsibility of the higher education sector to handle its internal affairs in a fashion that will withstand the heightened scrutiny that often accompanies the intellectual vanguard. At the same time, 'self-policing' recognizes the importance of insulating the sector against outside interference, which history shows undermines research, teaching and administrative functions, and ultimately risks diminishing the quality of institutions and higher education systems. By exercising leadership in this area, research-intensive universities not only reinforce their own preeminent positions, but can help to strengthen and stabilize the international higher education sector at this time of extraordinary change, helping to keep it creative, relevant and competitive, able to meet the demands of the workforce or global development challenges, and to better prepare students for a global, knowledge-based future.

Scholars at Risk

Scholars at Risk (SAR, scholarsatrisk.nyu.edu) is an international network of higher education institutions dedicated to protecting threatened scholars, preventing attacks on higher education communities and promoting academic freedom worldwide.

Robert Quinn

Executive Director, Scholars at Risk Network, New York University



Robert Quinn is the founding Executive Director of the Scholars at Risk Network, based at New York University. Mr. Quinn currently serves on the governing Council of the Magna Charta Observatory, based in Bologna, Italy, and is a fellow with the Woodrow Wilson Visiting Fellows Program in Washington, DC. He previously served as Executive Director of the Institute of International Education's Scholar Rescue Fund; on the Steering Committee of the Network for Education and Academic Rights (NEAR), based in London, UK; as a member of the Committee on Scientific Freedom and Responsibility of the American Association for the Advancement of Science; as a member of the Human Rights Committee of the Association of the Bar of the City of New York; and as the Crowley Fellow in International Human Rights and adjunct professor of law at Fordham Law School. He received an A.B. cum laude from Princeton, a J.D. cum laude from Fordham, and an honorary doctorate in law from Illinois Wesleyan University.

8.1 Sustainable Campus Initiative

Lead	Australian National University Steering Group: ANU, UCPH, NUS ETH	
Reporting	Dr. Dominik Brem (ETH Zurich) and the steering group	
Executive summary	<p>The Sustainable Campus Initiative is one of the flagship activities of IARU. After a period of transition, the working group has regained momentum and is now in a phase of very active work.</p> <p>The sustainability working group report presents the results of the work conducted in 2013 along with its goals and visions for the next few years. The group has completed the review of the website content and the update has been implemented by the IARU Secretariat. The reports on each institutions' sustainability targets have been published on the IARU website, and the <i>IARU – Green Universities Guide</i> (formerly referred to Green Paper) and the CO₂ benchmark study are ready in draft versions. The goal of the group is to finalize these two documents in 2014. As an effort to disseminate the results and reach out to other universities, the group will organize the conference <i>Making Universities Sustainable</i> in parallel with the <i>Sustainability Science Congress 2014</i> on 22–24 October in Copenhagen.</p> <p>For the dissemination and marketing of the publication of the <i>IARU – Green Universities Guide</i> the group wishes to engage on professional support and requests additional funding of USD 15,000.</p> <p>This document contains:</p> <ul style="list-style-type: none"> ▪ Campus Sustainability Officers' report, including status updates on: <ul style="list-style-type: none"> – Sustainability Meeting at UTokyo, March 2014 – Publication <i>IARU – Green Universities Guide</i> (“Green Paper”) – <i>Making Universities Sustainable</i> Conference – CO₂ Benchmarking Study – Website update – Individual campus sustainability progress reports – Sustainability Fellowship exchange program 2014 – Finances – Update about the lead of the group – Group's vision and goals for the next few years ▪ Funding request of USD 15,000 for publication and marketing assistance of the <i>IARU – Green Universities Guide</i> 	
Funding to date (USD)	<ul style="list-style-type: none"> ▪ up to 15,000 (2015) ▪ up to 15,000 (2014) ▪ 8,449 (March 2013) ▪ 9,146 (March 2012) ▪ 10,000 (2011-2012) ▪ 7,207 (March 2011) ▪ 4,055 (February 2010) ▪ 16,500 (March 2009) 	<ul style="list-style-type: none"> <i>Sustainability Meeting</i> <i>Sustainability Meeting</i> <i>Sustainability Meeting</i> <i>Sustainability Meeting</i> <i>Consultancy Fees</i> <i>Sustainability Meeting</i> <i>Sustainability Meeting</i> <i>Copenhagen related activities</i>

	<ul style="list-style-type: none"> ▪ 14,000 (October 2008) Sustainability Meeting --- ▪ up to 25,000 (PM 13) Campus Sustainability Conference 2014 ▪ up to 10,000 (PM 12) Benchmarking study (unspent) ▪ up to 15,000 (PM 11) Website write-up (unspent)
<p>Outcomes of previous meetings</p>	<p>Senior Officers' Meeting, November 2013</p> <p>The Sustainable Campus workgroup has significantly contributed to the activities and the reputation of IARU. Each IARU institution has established a sustainability office and has committed to institutional targets. The Sustainability Fellowships has developed into a strong exchange program. However, recently the group has lost momentum and it was questioned whether the initiative should be brought to an end once the Green Paper has been published.</p> <p>The Campus Sustainability Officers promised to issue to the Secretariat the compiled reports on each institution's sustainability targets by the end of November 2013, to complete the benchmarking study as well as the website upgrade by the end of 2013 and to officially release the Green Paper at the Sustainability Conference in 2014. The group will meet in March 2014 at UTokyo to discuss the benchmarking initiative and the Fellowship program and to prepare for the Sustainability Conference 2014.</p> <p>Senior Officers requested that the Campus Sustainability Officers prepare a progress report for the Presidents' Meeting 2014 outlining the group's vision and goals for the next few years. Based on the group's achievements in 2013 and on the outlined future direction, the Presidents will decide whether this initiative should be continued. If Presidents decide to continue the initiative, UCPH will consider taking over the leadership.</p> <p>Presidents' Meeting, April 2013</p> <p>The Campus Sustainability Officers met for the fourth time on 18–20 March 2013 at the University of Cambridge. ANU reported progress on the CO₂ Benchmarking Paper, as well as the development of a Green Paper, which details and demonstrates best practices for universities seeking to make their campuses sustainable. The Green Paper would also focus on water and waste management.</p> <p>I. Green Paper Marketing and Communications Resources</p> <p>Presidents did not approve the USD 50,000 funding request to develop the marketing and communications aspects of the paper. The meeting agreed that the group should fully utilize the USD 15,000 that was allocated in 2011 to update the IARU sustainability web pages with the Green Paper's content.</p> <p>The Secretariat requested for the Sustainability Fellows and case studies to be updated as well. Once the Green Paper is ready and website updates have been completed, Presidents would be open to consider funding requests for marketing and communication purposes, but any communication plan should be coordinated with the institutional communications departments.</p> <p>II. IARU Sustainability Conference/Workshop, in association with the</p>

	<p>IARU Sustainability Science Congress</p> <p>Presidents approved the USD 25,000 funding request to conduct a Campus Sustainability conference/workshop focusing on the results of the Green Paper and the CO₂ Benchmark Paper. The remaining funding required would be obtained through delegate fees.</p> <p>The Sustainability Science Congress organizers have expressed their agreement and support to host the workshop in conjunction with its congress.</p>
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Campus Sustainability Officers Report to Presidents' Meeting 2014

Introduction

This report provides updates on matters arising since the distribution of the IARU Campus Sustainability Officers Annual Presidents Report in March 2013. Key activities 2013 have focused on:

- The development and editing of the “IARU – Green Universities Guide” publication outlining key strategies towards sustainability for institutions of higher education. Notably, the first publication in the IARU context
- Planning for the IARU Sustainability parallel conference “Making Universities Sustainable”, back-to-back to the Sustainability Science Congress 2014 that will take place 22–24 October 2014 in Copenhagen
- Planning for the 2014 IARU Sustainability Fellowship exchange program
- CO₂ Benchmarking Report
- IARU sustainability working group website update
- Campus Sustainability Officers (CSO) workshop in Tokyo, 26–28 March 2014

Progress on all ongoing initiatives are described in more detail below.

Current membership – IARU Campus Sustainability Team

Australian National University	<ul style="list-style-type: none"> ▪ Wayne Ford (Associate Director, Facilities & Services) ▪ Jennifer McMillin (ANUgreen Sustainability Officer)
ETH Zurich	<ul style="list-style-type: none"> ▪ Dr. Dominik Brem (Environmental officer, Deputy Head SSHE unit)
National University of Singapore	<ul style="list-style-type: none"> ▪ Amy Ho (Director, office of Environmental Sustainability)
Peking University	<ul style="list-style-type: none"> ▪ Professor Bin Lu (Deputy Director, Office of Development and Planning, College of Urban and Environmental Sciences)
University of California, Berkeley	<ul style="list-style-type: none"> ▪ Judy Chess (Assistant Director and Chief of Staff, Capital Projects, UC Berkeley Facilities Services) ▪ Lisa McNeilly (Director of Sustainability)
University of Cambridge	<ul style="list-style-type: none"> ▪ Joanna Chamberlain (Head of Environment and Energy)
University of Copenhagen	<ul style="list-style-type: none"> ▪ Tomas Refslund Poulsen (Project Manager, Campus Service) ▪ Carl-Christian Munk-Nielsen (Campus Support Manager, Campus Service)
University of Oxford	<ul style="list-style-type: none"> ▪ Harriet Waters (Head of Environmental Sustainability, Estate Services)

The University of Tokyo	<ul style="list-style-type: none"> ▪ Professor Tomonari Yashiro (Vice President of Institute of Industrial Science – Management of Project)
Yale University	<ul style="list-style-type: none"> ▪ Virginia Chapman (Director, Yale office of Sustainability) ▪ Melissa Goodall (Assistant Director, Yale office of Sustainability)

IARU Publication “IARU – Green Universities Guide” (formerly referred to as “green paper”)

Introduction

Over the last 1.5 year the IARU sustainability working group has put considerable joint efforts in developing the Publication “IARU – Green Universities Guide” (final title still to be decided). The work will present IARU universities’ hands-on recommendations on the most important themes and approaches addressing university sustainability. Recommendations will include best-practice cases from IARU universities.

The work serves several purposes:

- addressing the IARU universities’ wish to show global leadership on university sustainability
- a significant contribution to increased international focus on, sharing and development of university sustainability
- improved collaboration and sharing of strategies, initiatives and best practices among IARU universities

The publication should be of value, inspiration and assistance to mainly institutions of higher education. The “IARU – Green Universities Guide” will be published in summer 2014 and will be presented and promoted at the IARU “Making Universities Sustainable” conference in Copenhagen (October 2014). The publication and its recommendations and cases will be used for further development of the IARU webpages on sustainability.

Organization

Lead (UCPH – Tomas Refslund), Steering Group: ANU, NUS, UCPH, ETH, External Consultant: Sustainia

All participating institutions contributed to the publication as chapter leaders or Co-Authors to at least 3 different chapters by end of 2013. So, all institutions are closely involved in the process and also most of the institutions are represented by individual case studies in the publication. For the reviewing, editing and publication process – the steering board involved “Sustainia” (www.sustainia.me) as an external consultant company. Sustainia now accompanies the further development of the publication and will contribute to international marketing of the “IARU – Green Universities Guide”. For close collaboration, videoconferences are held every 3–4 weeks within the steering group.

Current status (as of end of March 2014)

The content and the sequence of the defined chapters is ready and aligned with the structure suggested by Sustainia. Sustainia presented their first layout draft, which was discussed at the officers meeting in

Tokyo. Further adjustments to the synopsis of the chapters were decided by the group and will be implemented by Sustainia accordingly.

See a screenshot of a draft chapter below (e.g. Chapter 3 – Laboratories).

INTRODUCTION

Fume hoods, ventilation systems, chemical waste and equipment render laboratories one of the biggest challenges as universities strive to become more sustainable. The challenge lies in balancing requirements of research and safety with the technical management of equipment and overall sustainable behaviour.

Reducing energy consumption is one of the most important aspects of making laboratories more sustainable, because energy consumption here is generally 3-8 times higher than in ordinary office buildings (85% of the overall energy consumption in University of Copenhagen is used in laboratories) and because it is possible to get substantial results by fairly minor adjustments, such as switching off equipment not in use.

Users is another important focus area, often neglected or deemed less relevant, however it is absolutely vital that those who use labs are made aware that sustainability and high quality research are not mutually exclusive: it is indeed possible to accommodate sustainability and high standards simultaneously.

Naturally all laboratories are not one to one comparable, and working in a biological, chemical or physics lab will entail different challenges to and possibilities for the implementation of a green approach in terms of cost reductions, the improvement of health and safety as well as the optimization of workflows.

CHALLENGES & OPPORTUNITIES

Energy consumption

Several studies show that roughly half the energy consumption in laboratories is related to ventilation, including general lab ventilation, fume boards, LAF-benches and suction hoods. While university labs often suffer the general misconception that they have to be accessible and fully operational 24/7/365, research, however, reveals that labs are very seldom used outside normal business hours unless it is in relation to long-lasting experiments. Which is why implementing a default setting at OFF for ventilation equipment outside office hours is an easy and highly effective way of saving energy and reducing costs, and will have no or very few drawbacks for researchers.

It is important that there is also room for exceptions in relation to long-lasting experiments, e.g. overnight or longer, which would also require systemizing information on ventilation shutdowns, so as not to risk researchers breathing toxic fumes in labs that have not been sufficiently ventilated.

For physics labs in particular, storing secondary equipment that produces a lot of excess heat in a specifically designated room is highly recommendable, as it will reduce the heat load in the labs themselves and it will also allow for a more energy efficient cooling down of the rooms where the equipment is stored (e.g. allowing for higher room temperatures, using water loops as cooling media etc.). This will not merely help green the labs, it will also save universities money and will improve health and safety for the users of physics labs.

TYPICAL ENERGY END USE DISTRIBUTION IN LABORATORIES

Category	Percentage
Process ventilation	55%
Process equipment	25%
Comfort space heating	15%
Lighting	5%

85% OF THE OVERALL ENERGY CONSUMPTION IN UNIVERSITY OF COPENHAGEN IS USED IN LABORATORIES

SEVERAL STUDIES SHOW THAT ROUGHLY HALF THE ENERGY CONSUMPTION IN LABORATORIES IS RELATED TO VENTILATION

6

SUSTAINABLE UNIVERSITIES - THE WAY FORWARD

THEME 1: LABORATORIES

7

Next steps / timeline

The next steps include further refining and editing of the different chapters and finalization of the layout and definition of the title. The agreed production plan shows the following milestones:

- 2nd draft due by end of April (incl. final decision of the title)
- End-May: Final corrections and layout adjustments
- Before the final publication, the publication will be circulated among the partners and also to the IARU Secretariat for final approval
- Summer 2014: Publication ready for dissemination/print

The promotion of the publication is intended to use the following channels for dissemination. The steering group will decide on the final strategy and title by May 2014.

- Use local and international networks of all member institutions
- Production of a flyer, to be used by all member institutions at seminars and conferences
- IARU Conference on “Making Universities Sustainable” in October 2014
- Full site on IARU’s webpage, including more case studies
- Free download from IARU-webpage (in pdf format) and from individual sustainability offices webpages
- Limited amount of printed booklets

Funding Request

IARU Sustainability Officers are currently finalizing the IARU guide (final title still to be decided) and will be ready June 2014. The outcome of this work is a guide presenting IARU universities recommendations on the top activities to address when making universities more sustainable.

The guide will be a significant contribution to approaches to sustainability at universities internationally and will demonstrate IARU leadership on this issue.

The guide needs to be transferred into a professional and appealing publication through an appropriate service provider. This work will include final set-up, completion of layout and graphics and will be presented as:

- **an electronic version for free download at the IARU-site and from each IARU university website**
- **a hard copy publication for distribution at the “Making Universities Sustainable Conference” and individually by IARU universities at relevant national and international occasions**

Additionally, some marketing assistance is required to produce a choice of media and methods for international marketing of the IARU Green Universities Guide (postcards, web, articles, social media, press etc.).

The IARU Sustainable Officers Group requests USD 15,000 for publication and marketing assistance.

Campus Sustainability Officers Annual Workshop

University of Tokyo, 26–28 March 2014

The fifth annual Campus Sustainability Officers Group meeting/workshop was held at the University of Tokyo on 26–28 March 2014. A steering group consisting of UTokyo, ANU, UCPH & ETH developed the program and run this workshop. All 10 member universities attended the workshop.

Workshop participants reviewed the progress on topics tabled at the Campus Sustainability Officers meeting in March 2013 at Cambridge University, including the CO₂ benchmarking initiative, the IARU Fellowship Program and the website update. A full day of the workshop was dedicated to the publication. The goal was to find consensus on the target audience, the content of all chapters, the foreword, the name of the publication, the layout and the communications strategy.

Another important part of the workshop was the discussion of the group focus 2015 and beyond. The results of the discussions are summarized further down.

It was agreed that the next Campus Sustainability Officers workshop be held in early 2015. Location will be ETH Zurich.



“Making Universities Sustainable” Conference

The IARU Sustainability Science Congress in Copenhagen offers an ideal platform to host a parallel conference with focus on sustainable university campus. The conference and workshops will be focusing on case studies from the “IARU – Green Universities Guide” and the CO₂ Benchmark Paper.

Universities around the globe have a considerable environmental impact, and as producers of knowledge they also carry a unique responsibility to lead the way and show how sustainability can be integrated across teaching, research and operations. Universities educate millions of students each year and their influential role should be utilized to provide awareness among students and others involved in the institution’s activities. So let’s walk the talk. IARU has identified key themes to address when making universities sustainable, ranging from organizational and management aspects to concrete recommendations on laboratory design, building certification and green purchasing. The 10 themes will serve as a pivotal point for discussion of priorities and concrete actions when addressing sustainability at universities. Presentations of case studies and theme workshops with leaders in the campus sustainability sector will provide participants with an in-depth exploration of best practice examples.

The conference is open to all engaged in university sustainability, experienced as well as beginners. This could be leading decision makers, sustainability coordinators, administrative staff or facilities managers.

- Date: 22–24 October 2014
- Venue: Frederiksberg Campus, University of Copenhagen

See conference flyer below:



Making Universities Sustainable Conference 2014

Explore the most important issues in making your university sustainable. Learn from best practice cases on key sustainability issues from laboratories and energy to management and green purchasing. Share your own experiences with other professionals engaged in campus sustainability and get inspired by top researchers from around the globe.

The International Alliance of Research Universities (IARU) organises the Making Universities sustainable Conference at University of Copenhagen to address key issues regarding university sustainability along with experienced professionals from all the IARU universities and throughout the university sustainability field.



Organization

Lead (UCPH – Tomas Refslund), Steering Group: ANU, NUS, UCPH, ETH

Website Update

The current IARU Sustainability initiative website (www.iaruni.org/sustainability) has been subject of a detailed review. In a massive effort, ANU made suggestions for an optimized content and layouting of the page.

The main focus of the update are the following and are now visible:

- condense the most relevant information
- make key achievements and activities of the initiative more visible
- give more attention to case studies of the IARU member universities (to be updated on a regular basis)
- integrate the “IARU – Green Universities Guide” in a later stage 2014

The actual traffic of the website shows that the site is not visited very frequently. Therefore, the group is in discussion on how much effort should be put into the update of the website. Other means of

communication will be explored to assess optimal dissemination of group activities and achievements. The group expects to have answers to this question by autumn 2014 (Senior Officers' Meeting).

See screenshot of the Sustainability Toolkit online (March 2014):

INTERNATIONAL ALLIANCE OF RESEARCH UNIVERSITIES

Grand Challenge

IARU's Key Activities

- Aging, Longevity and Health
- Campus Sustainability
- Global Summer Program (GSP)
- Value of Research-Intensive Universities

Upcoming Events

- Campus Sustainability Officers' Workshop
26 - 28 March 2014
- Technology Transfer Workshop
23 - 24 April 2014
- Presidents' Meeting
24 - 25 April 2014

Campus Sustainability Toolkit

No two universities are exactly alike and the development of campus sustainability programs will inevitably reflect institutional and regional issues/priorities. This toolkit is based on the experiences of the IARU members in creating and maintaining a sustainable campus. This toolkit is especially useful for universities that are beginning their sustainability journey. Most importantly, it highlights the importance of active participation of staff and students for the achievement of sustainability goals. This is not an exhaustive list but the content below offers a framework for integrating sustainability into the organization.

1. Mapping the current situation and developing a governance structure
2. Determining goals and a strategy for the process
3. Developing an Environmental Management Plan
4. Integrating campus activities
5. Education and awareness
6. Best practice case studies

Navigation Menu:

- Home
- About Us
- Global Education Initiatives
- Institutional Joint Working
- Sustainability Initiative**
 - Presidents' Statement
 - Campus Sustainability
 - Greenhouse Targets
 - Campus Sustainability Toolkit**
 - Making Universities Sustainable Conference 2014
 - Sustainability Science Congress 2014
 - Sustainability Fellowships
- Research Collaboration
- Events 2014
- Meetings
- Contact
- Site Map
- Login

Organization

Lead (ANU – Jennifer McMillin), Steering Group: ANU, NUS, UCPH, ETH

CO₂ Benchmarking Study

To do a benchmarking study among ten different universities in different countries, climatic regions, legal requirements is not an easy task. It is obvious that this benchmarking study (or better report) cannot consist of “bare” figures and KPI’s only. To understand the figures and measures of each member university, more knowledge on the universities’ dimensions and underlying individual processes and targets is needed. For the Campus Sustainability Officers’ annual meeting in Tokyo, a first attempt at compiling the CO₂ data across IARU partner institutions was drafted and discussed.

Subsequent reports could focus on improving and standardizing data collection. An opportunity also exists for detailed analysis of carbon mitigation strategies.

The purpose of this report is to document existing carbon emissions associated with each member institution and their associated mitigation strategies. It will also act as a tool that can be used for engagement with each university’s community in order to stimulate discussion and inform further work and policy development.

This report will outline:

- Details of each IARU member's emission reduction commitments
- A breakdown of the IARU by total emissions for each institution
- Comparison of approaches to carbon mitigation by IARU members
- This report will outline each IARU member's emission reduction commitments and will document the emissions generated by each institution individually and for the IARU collectively. Finally, it will provide a comparison of approaches to carbon mitigation by IARU partner institutions.
- Description of limitations including geographic distribution and climate variances.
- By necessity, the base year for measuring reductions differs among the universities due largely to the availability of accurate data. Hence, the focus of the targets is not the starting point but rather the end point – the impact that changes in campus operations will have in reducing the emissions profile of the universities.

A first draft was presented at the Campus Sustainability Officers' Workshop in Tokyo (March). The final draft will be submitted by April 14th (ANU).

Organization

Lead (ANU – Jennifer McMillin), Steering Group: ANU, NUS, UCPH, ETH

Finances

See also the funding request above for the publication and marketing assistance of the "IARU – Green Universities Guide".

Project	Budget (USD)	Committed (USD)	Comments
Annual Sustainability Officers Workshop – 2014 Tokyo	15,000	tbd	Workshop has just concluded and the final expenditure is being totaled. The commitment and spent totals will be realized by mid-April.
Website	15,000	15,000	The website has been updated and uploaded onto the IARU webpage. Further work is being completed on producing additional Case Studies to be uploaded onto the updated site. The "IARU – Green Universities Guide" will also need, when completed, to be placed onto the site. The full amount budgeted is fully committed and expected to be spent between now and April 2014.
CO ₂ Report	10,000	10,000	The full amount budgeted is fully committed and expected to be spent between now and April 2014.
Conference	25,000	25,000	The full amount budgeted is fully committed and expected to be spent between now and onto the conference in October 2014.

Update about the lead of the group

It was agreed by the steering committee (ANU, UCPH, NUS, ETH) that the secretariat of the IARU sustainability working group will move from ANU to UCPH after the Presidents' Meeting in April 2014.

All member institutions were informed formally during the Campus Sustainability Officers' annual workshop in Tokyo. Member institutions thanked the ANUgreen team for the efforts and commitment for the group in the last 7 years – making this group to one of the most active and productive within the IARU context.

Fellowship Program 2014

Student Sustainability Fellowships provide selected students with the opportunity to work on targeted campus sustainability projects at IARU member institutions. Projects are institutional specific, but developed with the intention that lessons learned can be applied at both the home and the host institution. Sustainability Fellowships are intended to target students from a broad range of disciplines ranging from the arts to engineering.

All institutions participated in the fellowship exchange in 2013 with the exception of Berkeley. Participating institutions reported another year of successful exchanges with students completing high-quality projects on a range of topics. Details of the projects undertaken in 2013 are contained in the following table. The Sustainability Fellows are required to complete reports and the best projects are published on the IARU web site (www.iaruni.org/sustainability/fellowships/reports).

All ten Universities will be participating in the 2014 program and the following table provides details of the agreed exchanges.

Host institution	Sending (parent) institution(s)
ANU	Cambridge, NUS
ETH	UCPH, Oxford
NUS	ANU, Yale
PKU	UTokyo
Berkeley	Oxford
Cambridge	ANU, UCPH
UCPH	Cambridge, Yale
Oxford	Berkeley, ETH
UTokyo	PKU
Yale	ETH, NUS

Organization

Lead (Cambridge – Joanna Chamberlain)

For further details, please refer to the separate report on the Sustainability Fellowships program in the Annex.

Group's vision and goals for the next few years

Vision: Promoting collaboration and developing best practices, strategies in Sustainability and Environmental Management

For the development of the 2015 projects, the group at the Campus Sustainability Officers' workshop in Tokyo went through the following phases:

- Formulate – identify potential topics
- Generate – collaboration and creation of joint products/topics
- Evaluate – facilitate reflective and formative assessment of co-produced results

Beyond 2014 the group has agreed to elaborate on the following topics and themes. A more precise plan and strategy will be elaborated by the group in late 2014 and presented to the Presidents' Meeting in March 2015 for approval.

- Issues briefs (e.g. 2–4 per year). Possible contents:
 - Follow-up on the publication and conference in 2014
 - Present new case studies from IARU institutions
 - Present ongoing activities in the field of sustainability at IARU members (e.g. case studies and best practice examples)
- Address some of the following topics in workshops (e.g. smaller groups):
 - Effective behavioral change through competition
 - Research equipment vs. high energy use
 - Flexible buildings design
 - Integrated reporting/GRI/ISCN/etc.
 - Business travel
 - Laboratories
- Universities community and industry relationships

Individual Campus Sustainability Progress Reports

The member Universities have provided short reports on their respective campus sustainability programs in 2013. Focus of those reports is on environmental achievements (e.g. reduction of greenhouse gases etc.). The “IARU Individual Campus Sustainability Reports 2013” are uploaded to the website (<http://www.iaruni.org/sustainability/campus-sustainability>).

Annex – Report on the Sustainability Fellowships program

Lead / Reporting: Ms. Joanna Chamberlain, University of Cambridge

Report on 2013

All institutions participated in the sustainability fellowship exchange in 2013 with the exception of UC Berkeley. Participating institutions reported another year of successful exchanges with students completing high-quality projects on a range of topics. Details of the projects undertaken in 2013 are presented the table below. The Sustainability Fellows are required to complete reports and selected projects are published on the IARU web site (www.iaruni.org/sustainability/fellowships/reports).

Host institution	Sending (parent) institution	Student	Project
Australian National University	Oxford	Karolina Kalinowska	Initiation and planning for the IARU 'Top Ten' Green Paper. Responsibilities included creating a format for the overall paper as well as the individual theme papers, coordination of the Steering Group videoconferences and implementation of feedback. A campaign to promote the newly installed water filtering fountains around campus and drinking tap water was started.
ETH Zurich	NUS	Lydia Tiong	Administrative support for the ETH Sustainability Summer School GSP course
National University of Singapore	Cambridge	Sonya Likhtman	Involved in a range of projects relating to the SustainABLE NUS campaign.
	Tokyo	Shotaro Nakanishi	Project addressing the issue of missing data and errors in electricity and water consumption data so as to facilitate effective analysis of the data.
Peking	ANU	Mu Tian	Undertook energy efficiency audits and produced reports for key buildings at PKU.
University of Cambridge	ETH Zurich	Ivelina Grozeva	Sustainable Design Guidelines for the University of Cambridge. The project aimed to assess the effectiveness of the University's existing approach to sustainable construction, including the use of the building certification scheme, BREEAM. The report also makes recommendations on improvements to the Environmental Design Guidelines.
	Yale	Katie Hagemann	Assessing and Reducing Plug Loads at the University of Cambridge The project aimed to identify opportunities to reduce plug loads, outlining some of the major environmental considerations the University should weigh when deciding which equipment to replace and when. The report provides several methodologies that can be used to make these decisions and recommends steps the University can take to systematically

Host institution	Sending (parent) institution	Student	Project
			replace outdated equipment in favour of more efficient alternatives.
University of Copenhagen	ANU	Odette Shenfield	Video Conferencing at the University of Copenhagen. The project aimed to optimise video conferencing (VC) at the university to ultimately reduce the need for air (and other) business travel. This was done through reviewing current VC facilities for improvement, finding out about people's attitudes towards VCs and instituting strategies such as incentives for choosing video conferencing over air travel and creating a Business Travel Toolkit.
	Yale	Aurora Edington	Green Laboratories at the University of Copenhagen. This project aimed to consolidate the achievements of IARU universities in the area of making laboratories more sustainable, which is important given the intensity of research at all ten member universities. The report ultimately made recommendations to the University of Copenhagen on enhancing its green labs initiative.
University of Oxford	Copenhagen	Ditte Dalgaard	Mind the Gap. Assessed the gap between actual and desired environmentally sustainable travel incentives and facilities.
	NUS	Cheryl Ng	Student Engagement in Sustainability at the University of Oxford: Observations and Recommendations for Improvement. This project aimed to determine how engaged students are in behaving in environmentally sound ways so as to make recommendations on how the Sustainability Team can use engagement and outreach initiatives to improve the University's environmental performance.
The University of Tokyo	Copenhagen	Teis Volstrup	Green Ambassadors. Investigated the possibility of implementing the Green Ambassadors program from UCPH at Tokyo University. Also worked on an energy visualization project.
Yale University	Cambridge	Harrison Bowers	Green Laboratories: Ultra Low Temperature Freezers. The project aimed to develop a strategy for a Freezer Management Program (FMP), which would address all the challenges associated with ULTs: equipment maintenance, sample maintenance, energy use, purchasing/retiring, and data gaps.
	Oxford	Richmond Glasgow	Assisted in the development of Departmental Sustainability Action Plans and sustainability training for staff in Finance & Business Operations.

Fellowship Program 2014

All universities will participate in the 2014 program. The following table provides details of the agreed exchanges:

Host institution	Sending (parent) institution(s)
Australian National University	Cambridge, NUS
ETH Zurich	Copenhagen, Oxford
National University of Singapore	ANU, Yale
Peking University	Tokyo
University of California, Berkeley	Oxford
University of Cambridge	ANU, Copenhagen
University of Copenhagen	Cambridge, Yale
University of Oxford	Berkeley, ETH Zurich
The University of Tokyo	Peking
Yale University	ETH Zurich, NUS

8.2 Sustainability Science Congress 2014

Lead	University of Copenhagen
Reporting	Prof. Katherine Richardson (University of Copenhagen)
Executive summary	<p>The international IARU Sustainability Science Congress <i>Global Challenges: Achieving Sustainability</i> will take place in Copenhagen on 22–24 October 2014. The congress is expected to attract at least 800 participants with representatives from academia, private enterprises, policy makers and media. The congress is running “back-to-back” with the <i>Global Green Growth Forum (3GF)</i> and with the parallel <i>Green Campus Conference</i> (IARU Sustainable Campus Initiative). Side events include a mock negotiation (Sustainable Energy Trade Agreement) for university students and a PhD course associated with the session on economics.</p> <p>The planning of the congress is making good progress, and the scientific program is taking shape with 11 confirmed keynote speakers, the Danish Prime Minister speaking at the opening session, and the Crown Prince of Denmark also attending.</p> <p>Guido Schmidt-Traub, Executive Director of the UN Sustainable Development Solutions Network (UNSDSN), keynote speaker at the congress, wishes to engage IARU universities in the UNSDSN.</p> <p>This document contains:</p> <ul style="list-style-type: none"> ▪ Report on the IARU Sustainability Science Congress 22–24 October 2014
Funding to date	Up to USD 15,000: Congress in 2014
Outcomes of previous meetings	<p>Senior Officers’ Meeting, November 2013</p> <p>The IARU Sustainability Science Congress <i>Global Challenges: Achieving Sustainability</i> will take place on 22–24 October 2014 in Copenhagen. The congress is expected to attract at least 800 participants with representatives from academia, the private sector, policy makers and media. The congress will be running back-to-back with the <i>Global Green Growth Forum</i> (organized by the Danish Government) and with the <i>IARU Clean Campus Conference</i> (Sustainable Campus Initiative). All IARU institutions are represented in the steering committee. The registration for the congress has opened in October 2013. Abstracts can be submitted from January 2014 until March 2014. A student competition will be running in parallel to the congress. UCPH asked partners to promote the congress at each institution among their researchers and PhD students. UCPH’s Rector Ralf Hemmingsen will invite all IARU’s Presidents to participate.</p> <p>The meeting congratulated UCPH to the project which helps IARU to achieve broader visibility.</p> <p>Presidents’ Meeting, April 2013</p> <p>Copenhagen reported that the Sustainability Science Congress is coming along well, and would take place in Copenhagen from 22 – 24 October</p>

	<p>2014. The Congress would coincide with another major event, the <i>Global Green Growth Forum</i>, organized by the Danish Government as well as a week before the IPCC's fifth assessment report. Yale has joined the steering committee; therefore all IARU institutions are now represented.</p>
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Progress Report on the IARU Sustainability Science Congress

The planning for the IARU hosted congress *Global Challenges: Achieving Sustainability* is still progressing well. A short update on the status of planning follows:

Program

Building on our last status report, the program has seen a great development on the following points:

- Most of the session organizing committees are actively engaged in promoting and building up the program for their sessions. The communications team has supported them with promotion material ready to distribute via email and social media. Overall, the session organizers are in contact with more than 30 potential high-profile speakers to talk at their session, still leaving time slots available for presenters who will be chosen on the basis of the current open call for abstracts.
- The deadline for the open call for abstracts was extended from March 31st to April 12th. This was due to several countries' financial year beginning April 1st making it difficult to sign up before this date. The early bird discount registration has similarly been extended to run parallel with the abstract submissions.
- The Danish International Development Agency (DANIDA) within the Ministry of Foreign Affairs of Denmark will kindly sponsor a limited number of participants from developing countries to attend and present their research at the congress. Priority is given to candidates from the 22 countries with an established partnership with the Ministry of Foreign Affairs of Denmark. An application procedure for this funding has been announced at the congress website and in congress newsletters. Deadline for applications is April 1st.
- Adding to the 10 keynotes listed in the last status report, Guido Schmidt-Traub, Executive Director of the UN Sustainable Development Solutions Network (UNSDSN), is now also confirmed as keynote speaker. Schmidt-Traub wishes to engage IARU universities in the UNSDSN. Furthermore, the Danish Prime Minister will speak at the opening session and the Crown Prince of Denmark will also attend the opening. They are not announced officially due to security procedures.

Communications

- A third congress flyer has been produced, printed and distributed to thousands of targeted researchers, business and decision makers. It has also been distributed widely through the IARU universities' channels. Direct feedback has been delivered by ANU, NUS, PKU, UCB, Cambridge and Tokyo University. The University of Copenhagen has promoted the congress internally through all faculty newsletters, deans and head of institutes.
- Targeted promotion campaigns have run during the period December 2013 to March 2014, in the scientific journals and news outlets: *Nature* (print and web); *Science*, *The Lancet*, *New Scientist* and *The Economist* (web).

- An external press consultant has been hired with expertise in international press relations and experience from high ranking positions in several European science fora including the European Science Foundation (ESF) and the European Action of Global Life Sciences (EAGLES).



Economy and Fundraising

IARU contributes 88,000 DKK (15,000 USD), and the University of Copenhagen contributes 1.5 million DKK (280,000 USD) to the congress costs. In addition, the VILLUM Foundation is generously sponsoring the congress and has raised its sponsorship to 2.3 million DKK (428,000 USD).

In addition, sponsorship is being sought from private corporations. To date, Velux A/S has agreed to sponsor with 250,000 DKK (47,000 USD). Support for individual sessions has been obtained from Mærsk (100,000 DKK = 19,000 USD) and Real Dania (54,000 DKK = 10,000 USD). Discussion is underway with several other potential sponsors.

The Danish International Development Agency (DANIDA) within the Ministry of Foreign Affairs of Denmark has agreed to sponsor a limited number of participants from developing countries with a total of 140,000 DKK (26,000 USD).

An application has been made to the Ministry of Higher Education and Science for funding covering live-streaming from the congress as well as publication of the scientific output from the congress in a special issue of the international journal *Solutions*, a non-profit print and online publication devoted to showcasing the world's integrated ecological, social, and economic problems. Total support of 290,000 DKK (54,000 USD) has been applied for.

At present the budget shows a deficit between 800,000 DKK (150,000 USD) and 55,000 DKK (10,000 USD) with 500 and 1100 participants respectively. The expected approx. 800 participants will generate a deficit of 500.000 DKK (93,000 USD).

Side events

Making Universities Sustainable Conference

The parallel IARU conference will address strategic and management aspects of making universities more sustainable and present best practice hands-on cases from IARU. The conference will:

- Demonstrate IARU leadership

- Facilitate development and sharing of most important activities, approaches and best practices on university sustainability
- Promote the "Green paper/Guide"
- Strengthen links between sustainability in research and university sustainability



Parallel execution of the conference has several benefits:

- Synergies in international PR and communication
- Demonstration of IARU leadership and responsibility at own universities, which can attract considerable media attention during the Congress
- Demonstration of linking research and practice on sustainability by demonstration of actual IARU cases

The conference is thoroughly presented under Sustainable Campus Initiative.

Copenhagen Competition

11 Universities have registered for the negotiation competition where students simulate real multilateral negotiations and discuss the Sustainable Energy Trade Agreement (SETA). We are still actively trying to get additional universities from particularly Latin America. The registered universities are:

- American University of Central Asia
- Australian National University
- Haramaya University
- Hebrew University
- National University of Singapore
- Peking University
- Russian Academy of Justice
- University of Cape Town
- University of Ibadan
- University of California
- University of Copenhagen

Efforts are being made to establish a closer link with the Global Green Growth Forum (3GF) with the opportunity for 3GF to use "our" students as the young people they are currently looking for in their program. One idea is that the winning team will get the prize presented by the Prime Minister at 3GF. We are also working on an invitation to the welcome reception where each team will display one colorful poster to present the product they have chosen to propose for the free trade agreement on green goods.

The teams are invited to participate in the full program of the IARU Congress, and the dean at the Faculty of Law at UCPH will cover the cost of their participation. Efforts are underway to include the students from the Copenhagen Competition directly in other aspects of the congress such as poster

presentations, social media reporting and the student challenge: 'Changing the Game' (see description further below).

PhD Course

A PhD course focusing on the transitioning current economic models for sustainability is under development and will be held in association with the congress. Prof. Peder Andersen (UCPH) is responsible for the organization.

Changing the Game

A new side event is being planned, targeted at university students at the master's level. In collaboration with the NGO Energy Crossroads, the congress will engage 50-80 students in the educational tool 'Changing the game' (www.changing-the-game.org). It aims to provide the students with an understanding of the global energy challenge, through hands-on activities and choice cards. The game will take place at the congress, making it a visible activity for the other congress participants as well and highlighting the role of the congress to engage with the future generation of researchers. Finally, it will link up directly with the congress session on 'Energy in a resource constrained economy'.

9.1 IARU Chairperson and Secretariat 2015–2016

Current Chairperson and Secretariat

At the Presidents' Meeting in April 2012, Prof. Ralph Eichler, President of ETH Zurich was elected as IARU Chair 2013–2014. President Eichler took over as Chair on 1 January 2013. He will relinquish this position with his retirement on 31 December 2014.

The term of office of the IARU Chair is 2 years and is renewable.

The IARU Secretariat is based at the Chair's institution. To guarantee continuity, the transfer of the secretariat follows with a certain delay of a "shadowing period" during which the outgoing secretariat gradually involves the incoming secretariat in the daily work of the Alliance.

The Secretariat at ETH Zurich will agree the details of the hand-over process with the new Secretariat. The final hand-over will take place after the Presidents' Meeting 2015 and before the start of the Global Summer Program 2015.

IARU Chairs

2003 – 2014	Professor Ralph Eichler, ETH Zurich
2009 – 2012	Professor Tan Chorh Chuan, National University of Singapore
2005 – 2008	Professor Ian Chubb, Australian National University

9.2 Financial Report

IARU Income & Expenditure Statement

1 January – 31 December 2013

		Total (USD)
Carried forward from 31 December 2012		240 014.45
INCOME		400 537.04
Members' contribution	200 000.00	
IARU-Santander sponsorship for GSP	200 000.00	
Interest income	537.04	
Total available funds		640 551.49
EXPENDITURE		
Meetings		45 321.52
Presidents' Meeting 2013	21 387.79	
GSP Working Committee Meeting 2013	9 363.00	
Senior Officers' Meeting 2013	14 570.73	
Initiatives		49 722.89
Academic IP Pooling Workshop 2013	15 090.48	
Sustainability Officers' Meeting 2013	8 448.80	
Global Cross Disciplinary Tournament (GXT) 2013	13 809.25	
Research Administrators' Meeting 2013	8 736.07	
Women and Men in Globalizing Universities 2013	3 638.29	
Disbursements		200 000.00
IARU-Santander sponsorship for GSP 2013	200 000.00	
Secretariat costs		80 000.00
Contribution to NUS for Secretariat costs	40 000.00	
Contribution to ETH for Secretariat costs	40 000.00	
Administrative costs		2 756.25
IARU website revamp	2 374.33	
Goods and services tax recovery	- 17.62	
Spot exchange	391.65	
Bank charges	7.89	
Total expenditure		377 800.66
BALANCE 31 December 2013		262 750.83
Total available funds	640 551.49	
Total expenditure	-377 800.66	

Budget 2014

	max. amount	Total (USD)
Carried forward from 31 December 2013		262 750.83
INCOME		400 000.00
Members' contribution	200 000.00	
IARU-Santander sponsorship for GSP	200 000.00	
Total available funds		662 750.83
EXPENDITURE		
Meetings		55 000.00
Presidents' Meeting 2014	30 000.00	
GSP Working Committee Meeting 2014	10 000.00	
Senior Officers' Meeting 2014	15 000.00	
Approved initiatives		120 000.00
Campus Sustainability Website	15 000.00	
Campus Sustainability Benchmarking Study	10 000.00	
Campus Sustainability Workshop (Mar. 2014)	15 000.00	
Sustainability Science Congress (Oct. 2014)	15 000.00	
Campus Sustainability Conference (Oct. 2014)	25 000.00	
EdTech Horizons Workshop (Nov. 2014)	15 000.00	
Research Administrators' Meeting (2014)	10 000.00	
Academic IP Pooling Workshop (2014)	15 000.00	
Disbursements		200 000.00
IARU-Santander Sponsorship for GSP 2014	200 000.00	
Secretariat costs		80 000.00
Contribution to Secretariat costs	80 000.00	
Expenditure Subtotal		455 000.00
Balance Subtotal		207 750.83
New proposals		74 950.00
<i>Publication IARU Green Paper (2014)</i>	15 000.00	
<i>Graduate Student Conference (June 2014)</i>	14 950.00	
<i>Global Transformation in IARU Member Strategies</i>	10 000.00	
<i>Participation in 'The Limits of the Numerical' (2014)</i>	35 000.00	
BALANCE		132 800.83
Total available funds	662 750.83	
Total expenditure (incl. new proposals)	529 950.00	

Outlook 2015 onwards: Approved and Submitted Projects

		Total (USD)
Approved Projects 2015 onwards		up to 25 000.00
Campus Sustainability Workshop (2015)	up to 15 000.00	
Research Administrators' Meeting (2015)	up to 10 000.00	
Projects Submitted for Approval		up to 70 000.00
<i>Participation in 'The Limits of the Numerical' (2015)</i>	<i>up to 35 000.00</i>	
<i>Participation in 'The Limits of the Numerical' (2016)</i>	<i>up to 35 000.00</i>	

9.3 Presidents' Meeting 2015

IARU Presidents' Meeting 2015

Confirmed dates: 2–3 March 2015, hosted by The University of Tokyo

The official part of the meeting will start with a Welcome Dinner on Sunday, 1 March, and end with lunch on Tuesday, 3 March.

Past and future Presidents' Meetings

- 2016 @ *University of Oxford (dates tbd)*
- 2015 @ The University of Tokyo (2–3 March)
- 2014 @ ETH Zurich (24–25 April)
- 2013 @ National University of Singapore (8–9 April)
- 2012 @ University of Copenhagen (26–27 April)
- 2011 @ Yale Club, New York City (6–7 April)
- 2010 @ Peking University (13–14 April)
- 2009 @ University of Cambridge (28–29 April)
- 2008 @ Yale University (22–23 April)
- 2007 @ Australian National University (28–29 March)
- 2006 @ National University of Singapore (13–14 January)

IARU Calendar

Meetings and Activities 2014

Date	Event	Place
26–28 March	Campus Sustainability Officers' Workshop	UTokyo
23–24 April	Technology Transfer Workshop	ETH Zurich
24–25 April	Presidents' Meeting	ETH Zurich
12–13 June	Research Administrators' Meeting	Oxford
17–20 June	Conference on "Genome Dynamics in Neuroscience and Aging"	UCPH
20–21 June	Conference on "Cultures on Health and Aging?"	UCPH
21–22 June	Graduate Student Conference "Aging Research and Scientific Careers"	UCPH
23–24 June	Librarians' Meeting	Berkeley
all year / summer	Global Internship Program (GIP)	all
8–18 July	Global Cross-Disciplinary Tournament (GXT)	ANU
June – August	Global Summer Program (GSP)	all
June – August	IARU Sustainability Fellows	all
22–23 September	GSP Working Committee Meeting	Oxford
6–8 October	6 th Alumni Associations Summit	UCPH
22–24 October	Making Universities Sustainable Conference	UCPH
22–24 October	Sustainability Science Congress	UCPH
13–14 November	EdTech Horizons Workshop	NUS
14–15 November	Senior Officers' Meeting	NUS

IARU Meetings – Overview

Presidents' Meetings

- 2016 @ University of Oxford (date tbd)*
- 2015 @ The University of Tokyo (2–3 March)*
- 2014 @ ETH Zurich (24–25 April)*
- 2013 @ National University of Singapore (8–9 April)*
- 2012 @ University of Copenhagen (26–27 April)*
- 2011 @ Yale Club, New York City (6–7 April)*
- 2010 @ Peking University (13–14 April)*
- 2009 @ University of Cambridge (28–29 April)*
- 2008 @ Yale University (22–23 April)*
- 2007 @ Australian National University (28–29 March)*
- 2006 @ National University of Singapore (13–14 January)*

Senior Officers' Meetings

- 2016 @ Peking University (dates tbd)*
- 2015 @ University of Copenhagen (date tbd)*
- 2014 @ National University of Singapore (14–15 November)*
- 2013 @ University of California, Berkeley (5–6 November)*
- 2012 @ University of Cambridge (29–30 October)*
- 2011 @ Australian National University (24–25 October)*
- 2010 @ ETH Zurich (18–19 October)*
- 2009 @ University of Oxford (22–23 October)*
- 2008 @ University of California, Berkeley (20–21 October)*
- 2007 @ The University of Tokyo (19–21 September)*
- 2006 @ ETH Zurich (20 September)*
- 2005 @ Yale University*

GSP Working Committee Meetings

- 2014 @ University of Oxford (22–23 September)*
- 2013 @ ETH Zurich (9–10 September)*
- 2012 @ Peking University (24–25 September)*
- 2011 @ University of Copenhagen (17–18 September)*
- 2010 @ University of Cambridge (19–21 September)*
- 2009 @ University of Oxford (14–15 September)*
- 2008 @ Antwerp, Belgium (19–21 September)*
- 2008 @ University of Cambridge (11–13 February)*

Confirmed Outcomes of the 9th IARU Senior Officers' Meeting University of California, Berkeley, 5–6 November 2013

Opening

Prof. George Breslauer, Executive Vice Chancellor and Provost of the University of California, Berkeley, welcomed everyone to the meeting. Prof. Breslauer paid compliments to what IARU has achieved in less than a decade. Initiatives like the Global Summer Program, research on aging and longevity, sustainable campuses and the exchange of best practices have made IARU an alliance of high status and prestige, playing an important role in a convergent global university ecosystem.

IARU Chair President Ralph Eichler thanked Prof. Breslauer for the warm words of welcome and to Berkeley for hosting the meeting. He also thanked NUS for the smooth handover of the Secretariat to ETH Zurich.

Session 1: Senior Officers' Regional Round-up

Australian National University

The role of science and research for the new Australian government is as yet unclear. The election campaign led to some debate about “ridiculous” research that should not be funded by the taxpayer, although this debate has not yet been reflected in policy changes. The reallocation earlier in 2013 of funding from Australia's higher education budget to its schools budget has put the universities under pressure. ANU has responded to these budgetary pressures with a range of revenue-generating and/or cost-saving measures. One has been the intention to reduce administrative staff numbers by 10% through a voluntary early retirement scheme for over-55s.

ETH Zurich

The Swiss Federal Council has appointed ETH Zurich's current Rector (Vice-President for Education) Lino Guzzella, Professor of Thermotronics, as future ETH President. He will take over from Ralph Eichler who will retire from January 2015.

Asia is the main focus area of international activities at ETH. Mandated by the government, ETH is “Leading House” for Switzerland's bilateral research collaboration with China, Japan, South Korea and for exploring collaboration with further countries in the Asia-Pacific region. The Singapore-ETH Centre recently went through a successful mid-term review. The first research program “Future Cities Laboratory” will go on for two more years. Negotiations are underway with Singapore's NRF for an extension of the program and for a further research program “Future Resilient Systems”.

A new ETH Institute for Theoretical Studies was founded in June 2013. It is an interdisciplinary center for theoretical sciences, focusing on mathematics, theoretical physics, theoretical computer science and related fields. The Institute is privately funded. It will host visiting scholars (senior fellows) spending up to a year at the Institute and postdocs (junior fellows) for stays of up to three years. ETH

is also looking into creating a new institute for Science, Technology and Policy where students can pursue a second Masters' degree focusing on policy and economy within one additional year.

ETH recently joined edX and will offer the first MOOC courses in spring 2014.

National University of Singapore

The first year of the Yale-NUS College has started successfully with a great cohort of students and a very good faculty-student ratio. Also on the University Town campus, the introduction of a collegiate system has very been successful. NUS is looking at expanding the model to other residential units, which would also serve to improve students' writing, communication, team-working and problem-solving skills.

The Singapore government is looking to increase the university cohort participation rate from the current 27% to 40% by 2020. This will require the creation of two more universities, partly building on existing structures. NUS is hoping that this might enable her to seek a decrease in undergraduate enrolment in certain areas to focus more on graduate programs.

In allocation of research funding, the government appears to have heeded calls not to neglect support for individual PI-led research projects. At the same time, there is increasing pressure to "demonstrate value" of research. The next five-year funding cycle may make big investments in finance, risk management, security (including food security and cyber security), the maritime sector, biomedical translational medicine, and health optimisation (especially in the elderly), and also in research in the humanities and social sciences.

The NUS Suzhou Research Institute in China, the university's first overseas research facility, was opened in May 2013. It will focus on research and its application only, with some executive education programs.

Peking University

The 3rd Plenary of the Central Committee of the Communist Party of China will take place mid-November. Major issues to be discussed will be anti-corruption, urbanisation, market regulation and food security.

In March 2013, Prof. Wang Enge, a physicist, took up office as new president of PKU. Prof. Wang has already visited Berkeley and Yale and intends to also visit the other IARU members soon. President Wang's top priority is to raise the quality in education, research and administration.

As part of its research focus on medical sciences, Peking University is establishing a new hospital and a biomedical health science park. A major research topic is health-related big data. A new program will collect and analyse all data from all eight PKU hospitals.

University of California, Berkeley

The inauguration ceremony for the new Chancellor, Prof. Nicholas B. Dirks, a social scientist, will take place on 8 November 2013. The Vice-Chancellor for Research, Prof. Graham Fleming, will retire in December 2013, with the replacement search currently ongoing.

Chancellor Dirks has announced putting focus on undergraduate education with more out-of-state students. Non-California students are charged 3 times higher fees. Berkeley is also starting its own study-abroad program in parallel to the existing University of California system-wide program.

UCB has recently made fundamental changes in the administrative organisation by introducing “centralized shared services” providing administrative support across all units on campus.

UCB is planning to build a new research science park about 5 miles off the Berkeley campus in Richmond together with the Lawrence Berkeley National Laboratory. The new campus will be about two-thirds the size of the existing campus and will group together research units that are currently spread out in Berkeley. This project is planned to be realized within the next 20–30 years. The science park will be designed to attract research scientists and industries from all over the world.

University of Cambridge

The University of Cambridge has expressed its concerns about the impact of recent UK government policy in relation to visas and immigration rules, in particular for exceptional talent.

The Department of Physics and the School of Clinical Medicine have both recently achieved an Athena SWAN Silver Award, recognizing commitments to furthering and supporting equality and diversity for staff and students. Funding is becoming linked with accreditation through the Athena SWAN Award.

In October 2012, the University issued a £350 million bond to support continued investment in teaching and research at the highest international levels, including investment in research facilities and accommodation on a new development in northwest Cambridge. The University plans to increase its postgraduate intake by about 2% per year.

The Research Excellence Framework is the new system for assessing the quality of research in UK higher education institutions. There are 36 units of assessment. All institutions are required to make a submission. The process is complex but vital for Cambridge as funding is allocated based on the performance in the assessment.

University of Copenhagen

Prof. Ralf Hemmingsen has been reappointed as Rector of the University of Copenhagen for a new term until 1 March 2017. Thomas Bjørnholm will continue as Prorector for Research whereas Lykke Friis has been appointed new Prorector of Education.

The Danish Parliament introduced a new law requiring students to finish their degrees within maximum 6 years (5 years for BSc+MSc and one spare year). The limitation directly affects the state funding for public universities so that the penalty lands with the institutions rather than the students. A new law concerning accreditation has also been introduced moving from program to institutional (system) accreditation. This imposes new requirements for common practice with regards to quality insurance across the faculties.

UCPH is strongly engaged in EU-funded research and is preparing for the new Horizon 2020 funding program. The university is engaged in the “Knowledge and Innovations Communities” (Climate-KIC and Energy-KIC) within the European Institute of Innovation and Technology and is coordinating the education part of a new KIC proposal connected to aging and health.

University of Oxford

The University of Oxford's strategic plan 2013–18 defines two overarching priorities *global reach* (disseminating knowledge more widely, creating new and deepening existing international partnerships) and *interdisciplinarity* (including a research and educational element).

The university's new School of Government has completed its first year successfully. A couple of new interdisciplinary institutions have been launched, including The Oxford Research Centre in the Humanities (TORCH). A new Vice-Chancellor's diversity fund focusing for gender diversity has been established.

Oxford's first year of GBP 9,000 undergraduate tuition fees has had no effect on student numbers. International student applications continue to increase. The university is now considering extending student funding to international students. Oxford cannot increase the student population but considers distributing it – vertically with regards to degrees and horizontally among the departments.

With flat nominal funding from the UK government, diversifying research funding stream is becoming increasingly important, in particular the role of philanthropy. Although Oxford is not setting up campuses in other countries, but its research presence overseas already covers some 1,500 people around the world, in particular in tropical medicine. There is a significant collaboration with Stanford University on big data in health informatics, but also a presence in China (Suzhou) is under consideration.

The University of Tokyo

Prof. Junichi Hamada has entered into the final two years of his presidency. After the attempt to change the academic year, UTokyo introduced a 4-term academic year that will allow for better compatibility with other countries and facilitate international exchanges. The university has entered a strategic partnership in student exchange with Princeton University. Similar partnerships with IARU universities would be welcome. A few departments now offer more courses in English. A new study program in English has been introduced that does not require any Japanese language skills. Globalization remains a big challenge in Japan. In spite of budget cuts, the government provides financial support for internationalization efforts of the universities. Gender equality also continues to be a big challenge.

Yale University

The newly inaugurated president, Prof. Peter Salovey, has defined globalization as one of his top priorities. One focus of Yale's international activities will be on Africa in ten countries across the continent. US institutions are feeling the effects of the federal budget cuts (sequestration) in research funding. Networks and new funding approaches become more important. There is new interest in tripartite funding arrangements with funding agencies from other countries.

The Yale-NUS College has been off to a fabulous start.

Session 2: Multidisciplinary Research at Berkeley

Vice Chancellor for Research and Professor of Chemistry, Prof. Graham Fleming, discussed the challenges of multidisciplinary research at UC Berkeley. Multidisciplinary research brings together

experts from different fields to address a complex problem that must be attacked simultaneously with deep knowledge from different perspectives. “Grand challenges” such as global health or understanding the brain are one of the drivers for multidisciplinary research. Instead of defining them top-down, UC Berkeley prefers a “facilitated bottom-up” approach.

Another driver are the funding opportunities provided by the government or by private philanthropists that might identify different “grand challenges” than the university. Some questions, however, cannot be answered without prior basic research. For US universities, private philanthropy provides critical support for higher education. Key for successful research institutes and centres in Berkeley are determined leadership, state-of-the art facilities, substantial buy-in both top-down and bottom-up, and success in securing large-scale funding opportunities. UC Berkeley actively supports multi-disciplinary research by granting seed fund awards to faculty, through fellowship programs and education initiatives that address student demand for problem-oriented courses and experiences that they can integrate into their degree programs. It also sponsors major multi-disciplinary forums, seeks to allow for more flexible career paths for staff scientists and to allocate space more flexibly to help overcome social barriers to effective collaboration. Another key is to provide staff support for the formulating of proposals and for helping to bring the people together to develop new initiatives.

Session 3: Research Collaborations

3.1 Santander Research Proposal

Following the Presidents’ Meeting in Copenhagen 2012, the research proposal “Failure of the Numerical” has been developed in an iterative process by Cambridge (lead), Berkeley and Oxford. The proposal was submitted to Santander Bank by the IARU Secretariat with a funding request of USD 2.5 million. In fall 2013, NUS President Chorh Chuan Tan and Bernard Toh met with Santander’s Chairman Emilio Botín and Vice-President Salvador Medina to discuss the proposal. Santander Bank signalled that it would not support the proposal but would be keen to set up an “IARU-Santander Research Fund”. With funding of USD 200,000 to 300,000 per year, this fund would support research projects selected by IARU. Banco Santander’s condition for the projects would be to be in partnership with one or more of Santander’s list of top 20 universities in Latin America, Spain and Portugal.

The Senior Officers congratulated NUS for the successful negotiations with Santander Bank. Nonetheless, the conditions of the proposal are still vague and many aspects would still need to be worked out, such as the handling/administration of the funds, the processes within IARU for selecting projects, the definition of the research focus of the projects, and the minimum number of IARU universities to be involved in the project. Some partners raised concerns about the requirement of partnering with a university from a list defined by Santander, about the small size of potential grants and how they would be meaningful for the researchers, and about the long-term benefit of the sponsorship.

Ideas raised in the discussion covered using the funds as seed money for bottom-up collaborations among IARU members, extending existing IARU projects to new partners and supporting early career researcher mobility. Funds could be distributed based on calls for proposals, by dividing them among the 10 IARU members, or by giving the available funds every year to three different universities. Senior Officers recognized Santander’s idea to connect Latin American institutions with IARU, but

agreed that the required collaboration should not be limited to the 20 universities on the Santander list. Instead, the research fund should focus on one country (e.g. Brazil) and leave the selection of the partner institutions to the IARU members. This new proposal is expected to be in line with Santander's idea to connect Latin America with IARU.

The Secretariat will draft a proposal on the handling of the IARU-Santander Research Fund and circulate it among the partners before it is presented to Santander.

IARU will suggest to Santander to hold the signing ceremony at the Presidents' Meeting 2014 in Zurich as more IARU university presidents are expected to gather than at the *3rd International Universia Meeting of Chancellors* in Rio de Janeiro in July 2014.

The project consortium of the original "Failure of the Numerical" proposal is currently looking for funding from other sources. The project will no longer be part of the IARU collaboration with Santander Bank but it will continue to be "associated with IARU".

3.2 Aging, Longevity and Health

The Aging, Longevity and Health initiative is a well-established and successful IARU activity under the lead of UCPH. The Presidents' Meeting 2013 supported the idea of establishing a steering committee for the initiative consisting of IARU scientists in order to achieve greater engagement across the ten institutions. UCPH reported that the steering committee is almost in place with full IARU representation. An establishing meeting is planned for June 2014, when UCPH will organize three simultaneous IARU Congresses. IARU universities are asked to support the Congresses actively by communicating the events internally and providing traveling grants for researchers and students. A Graduate Student Conference will be part of the Congresses.

There are links between the initiative and the University of Copenhagen's engagement in a new EIT/KIC proposal connected to aging and health. Other funding opportunities, e.g. Horizon 2020, NFR/CREATE (Singapore) and NIHR (UK) have not been further pursued at this point.

Senior Officers complimented UCPH on the exemplary approach to research collaboration within IARU.

Session 4: Institutional Joint Working

4.1 Value of Research Intensive Universities

UCPH and NUS presented a revised draft of the position paper on the "Value of Research Intensive Universities" and of the write-up of the website. The key performance indicators have been taken out and more emphasis has been put on storytelling, on the Humanities and on research-based education.

The meeting thanked UCPH and NUS for their hard work with this paper. A few partners regretted the removal of the metrics, but these could be included in case studies when describing the impact of research. It was decided to publish the revised position paper and the web write-up on the website. The partners were asked to let the Secretariat have any objections by 30 November 2013. Each individual IARU member could then use the website as a point of reference and translate it to the official language of the country when discussing the value of research intensive universities at home.

Case studies should be continuously added to the paper to keep the paper relevant and fresh. The universities will be annually prompted by the Secretariat to send new stories or links to the respective universities' news stories.

IARU partners wishing to translate the position paper into their national languages are welcome to do so and are asked to send copies of such translations to the Secretariat.

Jennifer Barnes (Cambridge) drew the Senior Officers' attention to the *Hefei Statement on the Ten Characteristics of Contemporary Research Universities* announced in October 2013 by four university consortia (Association of American Universities, Group of Eight, League of European Research Universities and Chinese 9 Universities). These consortia include UC Berkeley, Yale, ANU, Cambridge, Oxford, and PKU.

4.2 Academic IP Pooling and Collaborative Technology Transfer

At the first workshop of the technology transfer officers in March 2013, it was agreed that PKU and NUS would run a pilot program to collaborate on strategic and specific areas to pool IP. Under the recommendation of NUS, PKU has engaged an experienced software company to develop the IARU collaborative technology transfer web portal. A preliminary version of this program will be ready by the end of 2013. PKU invited other IARU partner universities to join the program.

The second workshop hosted by ETH in April 2014 will focus on entrepreneurship. As the workshop overlaps with the Presidents' Meeting, a joint session with the Presidents is envisaged. The group will seek inputs from partners to shape the program. The title of the initiative will need to be renamed to adequately reflect the shifted focus of this institutional joint working group. Once the proposal is developed in more details, the funding request of USD 15,000 can be accepted.

4.3 Research Administrators' Network

Prof. Chen Dongming (PKU) reported about the second Research Administrators' Network meeting that was held at Peking University on 14–15 September 2013 with the representation of eight partner universities. The network proposes to introduce a Research Administrators' Fellowship Program and asked for funding of USD 20,000 for the years 2014 and 2015. The meeting supported the idea of introducing a fellowship for research administrators. However, in order to be consistent with similar other IARU programs, such as the self-funded Sustainability Fellowship program for students, the meeting rejected the funding request and encouraged the institutions to fund the fellowships individually.

The funding request for meetings of the Research Administrators' Network 2014 and 2015 (up to USD 10,000 per meeting) was approved.

4.4 EdTech Horizons Workshop

Mr. Ravi Chandran (NUS, per videoconference) presented the proposed meeting agenda of the two-day Education Technology Workshop 13–14 November 2014 and asked to send him or Bernard Toh (NUS) inputs with regards to the proposed program or speakers of the workshop until the end of December 2013. The meeting requested that the workshop has a stronger pedagogy and learning process focus rather than focussing on learning technology. Approximately 30 workshop participants are expected.

4.5 Women and Men in Globalizing Universities

The group's co-lead, Prof. Angelica Stacy (UC Berkeley) reported on the results of the workshop held at ETH Zurich on 28–29 October 2013. The group had collected gender-related comparative data prior to the meeting to benchmark the academic ladder, changes over time, and the international mobility of academics. The meeting had discussed these data and also shared and discussed initiatives on gender equality implemented by IARU institutions. All IARU institutions were represented at the workshop except for PKU whose representative was not able to attend.

The member institutions plan to leverage their participation in the group by working at their home institutions to gather and analyse data, and to implement evidence-based initiatives aimed at improving the rate or reaching gender equality. The group as a whole seeks to provide global leadership by analysing comparative data and making recommendations based on an understanding of the data. The group plans to do regular collection, reporting and comparison of data. They will also begin to collect narratives of the academic career life course of men and women in order to probe similarities and differences among the various IARU institutional structures. On the basis of the data analysis, concrete measures will be identified to provide for greater gender equality.

The group plans to meet again in spring 2015 at Oxford. The gender issue has proved to be more complex than expected. It is expected that this initiative will have to continue for quite some time.

Senior Officers thanked the working group for their impressive work.

4.6 Librarians' Meeting

The Librarians contact group held its 2nd meeting in Copenhagen on 24–25 June 2013. The group considers their meetings to provide a useful venue for exchanging information, experiences and ideas on themes of common interest and for developing an agenda for collaborative action and therefore plans to continue to hold annual meetings. The group will begin the agenda for collaboration through initiating a project to develop an "IARU Green Library Toolkit". The next meeting is planned to take place in June 2014 at UC Berkeley.

4.7 Alumni Associations Summit

Dr. Masako Egawa (UTokyo) reported on the 5th Alumni Associations Summit, held at UTokyo on 30 September – 3 October 2013. All 10 universities are now actively participating in the group. The alumni directors shared best practices. The meeting theme was how alumni activities can support the internationalization strategies of the universities. The meeting also looked into the possibility of joint activities and discussed the possibility of joint events in Tokyo, New York, San Francisco and London. An international alumni forum on the topic of "Sustainable Cities/Societies" is proposed to be organized in conjunction with the Presidents Meeting in March 2015 in Tokyo. The Alumni Associations Summit concluded with an alumni networking event with some 150 participants.

For the international alumni forum, a networking reception, workshops and presentations are planned with a target of 200–300 participants. The overall budget amounts to USD 100,000 to 150,000, to be funded by sponsors and through entrance fees. Senior Officers supported the idea of the forum but expressed concerns about the suggested topic that might not be sufficiently attractive (or out of fashion by 2015). Proposed ideas included *urban planning*, *big data* and *reassessing the role of Asia*. The Senior Officers mandated the group to rethink the topic and work out a proposal to be presented at the

Presidents' Meeting 2014. Funding might be requested for the planning process but not for the forum itself.

Yale proposed to organize an IARU Alumni Event in Rio de Janeiro in the end of July 2014 in conjunction with the 3rd *International Universia Meeting of Chancellors*. Partners were supportive of this idea.

Session 5: Sustainability Activities

5.1 Sustainable Campus Initiative

The Sustainable Campus workgroup has significantly contributed to the activities and the reputation of IARU. Each IARU institution has established a sustainability office and has committed to institutional targets. The Sustainability Fellowships has developed into a strong exchange program. However, recently the group has lost momentum and it was questioned whether the initiative should be brought to an end once the Green Paper has been published.

The Campus Sustainability Officers promised to issue to the Secretariat the compiled reports on each institution's sustainability targets by the end of November 2013, to complete the benchmarking study as well as the website upgrade by the end of 2013 and to officially release the Green Paper at the Sustainability Conference in 2014. The group will meet in March 2014 at UTokyo to discuss the benchmarking initiative and the Fellowship program and to prepare for the Sustainability Conference 2014.

Senior Officers requested that the Campus Sustainability Officers prepare a progress report for the Presidents' Meeting 2014 outlining the group's vision and goals for the next few years. Based on the group's achievements in 2013 and on the outlined future direction, the Presidents will decide whether this initiative should be continued. If Presidents decide to continue the initiative, UCPH will consider taking over the leadership.

5.2 Sustainability Fellowships

In 2013 a total of 15 students from 9 IARU institutions participated in the Sustainability Fellowships reciprocal exchange program, working on sustainability topics at a partner university during 4–6 weeks. The program is well established, much appreciated by the participating students and sustainability offices and runs smoothly.

5.3 Sustainability Science Congress 2014

The IARU Sustainability Science Congress *Global Challenges: Achieving Sustainability* will take place on 22–24 October 2014 in Copenhagen. The congress is expected to attract at least 800 participants with representatives from academia, the private sector, policy makers and media. The congress will be running back-to-back with the *Global Green Growth Forum* (organized by the Danish Government) and with the *IARU Clean Campus Conference* (Sustainable Campus Initiative). All IARU institutions are represented in the steering committee. The registration for the congress has opened in October 2013. Abstracts can be submitted from January 2014 until March 2014. A student competition will be running in parallel to the congress. UCPH asked partners to promote the congress

at each institution among their researchers and PhD students. UCPH's Rector Ralf Hemmingsen will invite all IARU's Presidents to participate.

The meeting congratulated UCPH to the project which helps IARU to achieve broader visibility.

Session 6: Global Education Initiatives

6.1 Global Summer Program (GSP)

Anders Hagström (IARU Secretariat) presented a summer report on the 2013 edition of the GSP. 328 students participated in 19 courses in (2012: 352 students in 21 courses). GSP is an ambitious endeavour; already the scheduling across ten campuses is a major challenge. Especially for universities without a summer school tradition, a great administrative effort is involved. But the program continues to be a success story and works smoothly, very much thanks to the dedicated efforts of the GSP coordinators. This year saw an increase in student cancellations. The coordinators are looking for ways to address this. Overall, student survey showed high satisfaction rates.

Preparations for GSP 2014 are well underway. 19 courses are currently being planned. An alumni survey for the student cohorts 2011–2013 will be conducted to get a more distant view. The alumni will also be asked for ideas on how to celebrate the 10th GSP anniversary in 2017.

Further developments of the GSP concept towards more interaction between courses, joint teaching, reducing the administrative effort etc. continue to be on the agenda. ANU and UC Berkeley will put forward a proposal of the “hub” idea of several partners offering their courses in one location.

The IARU-Santander GSP Scholarships of USD 200,000 per year for three years has given the GSP a further boost. The current agreement will terminate with GSP 2014. Santander has signalled interest to continue the support for the GSP. The Secretariat will approach Santander for a follow-up funding in spring 2014.

6.1.b Memorandum on Student Exchange for GSP

The University of Tokyo has a new requirement for accepting students from overseas. This requires a memorandum of understanding for receiving GSP students. Partners responded positively to the request but asked UTokyo to amend the last paragraph of the MoU with an end date without automatic renewal. UTokyo will send the draft MoU to the partners for their review. Partners were asked to send their confirmations and comments to UTokyo and to appoint the contact person of their university who is authorised to sign.

6.2 Global Internship Program (GIP)

In 2013, four universities (ETH, NUS, UTokyo, Yale) proposed a total of 11 internships of which 6 were carried out. The internships had very different formats. The Secretariat encouraged all universities to offer internships. Experiences have shown that it is a win-win situation for the students and universities alike – students gain international work experiences and universities receive excellent labour for a standard student salary.

6.3 Global Cross Disciplinary Tournament (GXT)

The GXT 2013 was hosted by the students of PKU with the topic “The Future of Media”. Students from 4 IARU universities participated. Bernard Toh (NUS) emphasised that GXT is a great learning opportunity for students to produce an event on an international scale. ANU students have shown interest to host GXT 2014 with the topic “The Future of the Body” and would ask for funding.

Senior Officers agreed that if the GXT initiative is to be continued, participation of more universities is required. Ideally, a participant of one year should be the organizer of the next year to guarantee continuity. Some partners explained that they have difficulties to promote the event to their students because it is not clear what the GXT is about. Administrative staff who had attended GXT meetings in the past see the value of the initiative and expressed their support. If ANU students develop a strong proposal, IARU partners are encouraged to support approximately 6 home students with travel grants to be able to participate. The host is responsible to fund the local expenditures.

6.4 IARU Sports Event

Jürg Brunnschweiler (ETH) informed that consultation of partners had indicated that only a few universities would be able to fund their students to attend the IARU Sports Event. ETH had therefore decided to withdraw the proposal at this point.

Session 7: Proposals for New Activities

7.1 National Research Foundation Proposal

At the Presidents' Meeting 2013, the possibility of submitting a proposal for a IARU research activity to Singapore's National Research Foundation (NRF) was discussed. All partners were asked to send their input to NUS. Barry Halliwell (NUS) reported that NUS President Chorh Chuan Tan had presented these ideas to the NRF. NRF is currently reviewing the submitted proposals, considering a research collaboration in the field of neuroscience, neuroengineering, neuroimaging. Barry Halliwell will inform IARU about NRF's response and the outcome of the further discussions at the Presidents Meeting 2014.

7.2 International Student Teaching & Support

Many international students face challenges in making a successful transition to their new institution. Universities need to consider how to help the various groups of international students to thrive and reach their academic potential. Loren Griffith (Oxford) proposed on behalf of Oxford and Cambridge to create a joint institutional working group focused on the teaching and support of international students at IARU universities. At this point, no funding request was put forward. All IARU partners were supportive of the proposal. Jennifer Barnes (Cambridge) reminded to also keep an eye on domestic students with an underprivileged background in this discussion.

Loren Griffith will send a questionnaire around the group to define areas of interest, gather data and share experiences. The results will be presented at the Presidents' Meeting 2014 together with a plan for further action.

7.3 Global Transformation in IARU Member Strategies

Jürg Brunnschweiler (ETH) proposed a new institutional learning initiative to discuss the experiences / best practices of the partner universities to include developing countries into their strategies. *Research for Development (R4D)* could be addressed as an explicit field of reflection within IARU.

Partners lacked a clear definition of the concept of “global transformation”. They also wished a better definition of the focus of the initiative. Areas of focus could be capacity building in developing countries, research conducted in universities with the objective of helping developing countries, strategies of IARU universities in the South, brain drain / brain gain strategies, and the support of students from developing countries. ETH will consider these received comments and present a revised and more focused proposal at the Presidents' Meeting 2014.

Session 8: Business Matters

8.1 IARU Membership

The Presidents' Meeting 2013 requested Senior Officers to propose a mechanism for considering new members of the Alliance with the aim of identifying one or two universities each from South America and Africa for consideration for membership.

Some Senior Officers expressed worries about IARU's capacity to absorb new members. IARU's characteristic strength is the strong level of trust and rapport and there is the fear that the addition of more members could dilute the alliance. Others argued that a modest expansion of IARU would not harm the alliance's character (e.g. up to a limit of maximum 12 members), but the gain could be substantial.

Senior Officers rejected the idea of inviting potential members to IARU meetings as observers before confirming their status as members as being too delicate. There was also consensus that new members from Brazil and South Africa would be interesting. In India, there is no obvious candidate at the moment that would match the profiles of the current IARU partners.

UCPH, NUS and Oxford, supported by the Secretariat, will prepare a proposal for the Presidents with two options: 1) no expansion, 2) criteria for the addition of maximum two members in Brazil and South Africa. Criteria will include geographic diversification, research-intensiveness, and commitment and ability to contribute to the alliance.

8.2 Agenda for Presidents' Meeting 2014

The topical session will focus on university-industry partnerships, in particular on links with the pharmaceutical industry. A joint session on entrepreneurship ventures with the Technology Transfer Officers is planned as their meeting will take place back-to-back with the Presidents' Meeting. Robert Quinn, Executive Director of the Scholars at Risk Network, will be invited to talk about academic freedom and the role of leading universities in self-policing university values. Partners were invited to send any comments and suggestions to the Secretariat.

8.3 Financial Report

Anders Hagström (Secretariat) reported that the IARU finances are in good order. The Alliance had accumulated reserves of approximately USD 250,000. The annual global budget (excluding the Santander GSP funding) is USD 200,000. Fixed annual commitments account for CHF 135,000 (meetings and Secretariat cost), leaving USD 65,000 to annually commit for other activities without consuming the reserves. In previous meetings, a total of USD 95,000 had already been approved for initiatives in 2014. Senior Officers approved funding in 2014 for the Research Administrators' Meeting (USD 10,000) and the Academic IP Pooling Workshop (USD 15,000). This brings the total approved expenditure 2014 to USD 455,000 (including Santander GSP scholarships) with a forecasted end-of-year balance 2014 of USD 196,000.

Session 9: Wrap-up

9.1 Any other business

None.

9.2 Host and dates for Senior Officers' Meeting 2014 and 2015

Senior Officers' Meeting 2014 will be held at NUS from 14–15 November (in conjunction with the Technology-Enhanced Learning Workshop): welcome dinner on Thursday evening, 13 November, meeting on Friday, 14 November (full day) and Saturday 15 November (morning).

UCPH will host the Senior Officers' Meeting 2015.

PKU offered to host the meeting in 2016.

Conclusion

IARU Chair Ralph Eichler thanked all participants for the constructive discussions, and UC Berkeley for their kind hospitality.

Finalized Outcomes of the 8th IARU Presidents' Meeting National University of Singapore, 8-9 April 2013

ETH President and IARU Chair, Prof Ralph Eichler and NUS President Prof Tan Chorh Chuan welcomed all participants to the meeting, including the incoming President of Yale and the incoming Chancellor of Berkeley who would be assuming their new positions in mid-2013.

The Chair, on behalf of all the IARU Presidents, expressed his thanks and appreciation to Prof Tan Chorh Chuan who served as IARU Chairperson from 2009–2012. He also thanked Prof Tan and NUS for hosting this year's meeting.

1. Dialogue with the National Research Foundation, Singapore

Mr Philip Ong (NRF Deputy CEO) gave an overview of the R&D landscape in Singapore. Mr Ong shared that R&D is a vital part of Singapore's economic strategy, and Singapore has been heavily investing in R&D for more than 20 years now.

Currently, investments in R&D are at 2.28% of GDP, with major investments in engineering, technology, biomedical and physical sciences. These are areas where Singapore has existing economic strengths, and where such a scale of funding is necessary to become an internationally competitive player. Another area of focus is R&D for manufacturing (electronics, chemicals, biomedical sciences, precision and transport engineering) as it makes up around 20% of Singapore's GDP. Development of the energy sector and energy research is still in its early stages in Singapore.

Ms Yong Ying-I (Permanent Secretary, Prime Ministers' Office) said that Singapore's small size – which is both its strength and weakness – enables it to set up efficient structures linking every agency involved in R&D to the NRF under the Prime Minister's Office. For example, in a rapid growth area like the biomedical sciences, the Deputy Prime Minister set up a committee involving all the biomedical sciences agencies, under the chairmanship of NUS President, to improve synergies and avoid duplication. What is also helpful is that there is strong political commitment and signaling from the national leadership. Ms Yong added that much of the R&D investments have gone to the higher education sector for the development of basic sciences. NRF also recognizes the importance of balancing top-down and bottom-up initiatives, because no one can predict where the scientific breakthroughs will happen.

To further boost R&D, Singapore has invested SGD16.1 billion under its Research Innovation and Enterprise, or [RIE2015](#). Funding programs that would fit RIE2015 were categorized into three focus areas: growing future capability, supporting future growth and meeting future challenges.

Ms Yong highlighted Singapore's focus on attracting and retaining talent especially PhD graduates, coupled by having sustainable sources of funding to support and develop them. Singapore is aiming to produce 1,300 PhD graduates annually through NUS and NTU. Given Singapore's small size, the government is benchmarking the levels of PhDs with cities, rather than with countries, thus drawing the conclusion that more PhD graduates were needed. Singapore does not have a graduate unemployment problem. There were many diverse pathways for PhD graduates who meet the requirements to work in A*STAR, universities, related government agencies and research institutes.

Regarding output and the size of the domestic market, Singapore has agencies to aid them through commercialization and marketing not just to Singapore but the world market. Ms Yong said that there is a thriving and vibrant venture capital industry in Singapore.

Exploration: IARU Research Project to NRF

Following the dialogue session with NRF, NUS shared that NRF is open to exploring research collaborations that would support Singapore's national goals. The new proposal would not interfere with the existing projects already involving IARU institutions.

Presidents were invited to provide topics of interest in science and engineering. The meeting mentioned possible areas of collaboration such as synthetic biology, land and livability, and ageing (assisted medical devices). Because of NRF's setup, purely social science research would not be of interest to them. Based on the responses, NUS would conduct a range finding exercise, and if there were sufficient interest, it would constitute a group of interested academics and prepare a detailed proposal for NRF's consideration.

Cambridge asked if there were existing mechanisms or collaborations to refer as an example. NUS pointed in the direction to the research initiatives in CREATE. All members were requested to submit their ideas and areas of interest to the Secretariat by 19 April for compilation and submission to NRF.

2. Technology Enhanced Learning

Prof Tan Eng Chye (Provost, NUS) gave an overview about how technology is strongly influencing higher education and shared the various initiatives that NUS have embarked upon. In a nutshell, NUS has set funding aside to encourage faculty to innovate, employ tools to promote more interactive learning, set up internal massive open online courses (MOOC) as well as rolled out a campus-wide eLearning week. NUS' efforts started in the mid-1990s, and anticipated on-going challenges such as change management and the associated high costs of technology. So far, the response has been quite positive as a number of faculties were curious and open to try technological enhancements to better engage with students. Nonetheless, NUS Provost cautioned that technology enhanced learning may not be for everyone, and has to be managed carefully. Berkeley cautioned that the real "tsunami" may come from faculty – mostly those in senior professorial positions who were usually the most difficult to convince. The meeting agreed that there was a need to build evidence based data rather than rely on current assumptions that technology enhanced teaching and MOOCs would improve the higher education sector dramatically.

NUS and Todai have recently joined Coursera and would each offer two courses, sharing that they have gained much in terms of interaction with students online. ANU is also a member of Coursera. Berkeley joined both Coursera and edX. Oxford continues to offer courses through its Oxford University Press. Beida shared that it is considering Coursera and edX, and facing strong pressures from its students and younger faculty members. Many Presidents agreed that the trend has shifted from being skeptical about MOOCs to a point where universities were singled out for being conspicuously absent. Yale, however, observed that while MOOCs has dominated the public sphere, what might be more exciting may be the use of adaptive technologies and personalized learning, which is an area worth observing.

Todai, Oxford and Cambridge also noted the limitations of presenting education through technology – modules have to be structured in ten-minute “bite sizes”, courses are tailored for large classrooms rather than small group learning, and standards were mostly not at the desired levels for high quality students who typically come through IARU institutions. Perhaps what is most important is that universities maintain uncompromising high standards of providing quality education.

The follow-up discussion was deferred to item 10.3.

3. Presidents' Regional Update

Presidents provided updates and discussed a range of higher education issues.

- Berkeley, Yale and Beida will see a change of university leadership this year. IARU welcomed incoming Chancellor Nicholas Dirks (Berkeley) and President Elect Peter Salovey (Yale) to this meeting. Former President, Prof Zhou Qifeng (Beida) has stepped down in March 2013. In addition, Prof Ralf Hemmingsen's (Copenhagen) term has been renewed until 2017.
- With the continued downturn in the global economy, universities in the UK, US, Australia and Japan reported severe funding cuts, which would mostly affect their research funding.
- At ETH, as fundraising is becoming more visible (and successful), the administration is encountering opposition from some students who question the ethics of accepting funds.
- Copenhagen shared that while it was keen to become more internationalized, it was a daunting process for a rather homogenous society with a tax system that offered little incentive for overseas academics to work in Denmark for a few years.
- Many IARU universities are undergoing political changes which may affect internal policies:
 - Australia and UK would be having elections later this year, and China underwent a leadership transition earlier this year.
 - In Singapore, the government is aiming to increase cohort participation rate to 40% from the current 28%, and the increase would be accommodated through two new universities. International student intake would decrease in percentage terms.
 - In the UK, tuition fee increases continue to make accessibility an issue for low and middle income applicants. UK politicians were also getting more involved in the social make-up of universities, especially admissions to masters and doctorate programs.
 - The US Supreme court is currently deciding on an admissions policy based on ethnicity, and the results are likely to change the way US universities admits its students.
 - In Switzerland, all students who have achieved the requirements for university admissions must be admitted. Recently, universities found that student intake numbers were growing faster than what their budget would allow for.
- Noteworthy new campus developments and programs include:
 - Todai Institute of Advanced Interdisciplinary Studies
 - Yale-NUS college at the National University of Singapore
 - The Modernism Lab at Yale University

- China-Singapore Suzhou Industrial Park (NUS)
- Blavatnik School of Government (Oxford)
- New “Institute of Theoretical Studies” (ETH Zurich), funded through a generous private donation
- Todai developed the internet site "Todai Research" to showcase Todai's research findings
- And various programs including Medical Sciences in Oxford
- Global research funding opportunities were discussed, and these included:
 - Because of austerity measures in the EU, funding for Horizon 2020 was adjusted but research funding was still largely protected.
 - The University of Copenhagen has set aside 50 million Euros to fund 18 multi-disciplinary research areas – most notable is its Genomics history project.
 - Australia government may be seeking greater collaboration for Asian research.

4. Strategic Directions for IARU

The Secretariat summarized the recommendations from the 2012 Senior Officers' Meeting for three categories of initiatives, namely 1) Grand Challenges and Research Initiatives, 2) Institutional Joint Working and 3) Global Education Initiatives. All three categories have grown and were doing relatively well.

On Grand Challenges, Presidents expressed their support of the overall efforts by the Campus Sustainability Officers who have met annually since 2008 to discuss their sustainability strategies and exchange best practices. Oxford said that in the past five to six years, the group has achieved significant and tangible results. Todai and NUS shared that they have effectively reduced their energy consumption as a result of adopting practices from the group. Most importantly, IARU is able to demonstrate thought leadership and action through this initiative.

On research initiatives, the Secretariat highlighted that while there have been attempts at initiating joint research activities, only one has been successful – the Ageing, Longevity and Health initiative. The Chair noted that its success was due to strong bottom-up involvement by faculty who had found their own sources of funding. The Presidents were enthusiastic about exploring a possible research project with the Singapore NRF (please refer to notes on Session 1, page 2). In addition, ETH suggested that IARU does not overlook the possibility of setting up joint research, perhaps in sustainability or ageing through CREATE in Singapore. As five IARU institutions were already collaborating through CREATE, there were some existing synergies which could be deepened with further research projects.

On initiatives under Institutional Joint Working and Global Education, meeting participants expressed their support for the Global Summer Program, Alumni Associations Summit and, the Women and Men in Globalizing Universities initiatives, as there continues to be strong value for various counterparts to meet and openly discuss issues and share best practices.

Student initiatives continue to be of interest to IARU. Copenhagen suggested looking into semester-long exchange programs between IARU institutions, to provide sponsorship and alumni hosting

support. However, there were concerns about the high costs given the small number of students involved to warrant such an investment, as well as the differences in curricula that are an obstacle for awarding credits. Alternatively, NUS suggested considering developing graduate level programs under the Global Education Initiatives. The aim is to provide some global exposure to students at this level, without requiring research attachments.

Beyond the three categories NUS suggested that IARU consider delivering value to the wider higher education community. Best practices and findings from groups such as Campus Sustainability, Value of Research Intensive Universities and potentially, the EdTech Horizons could benefit other universities.

The Chair concluded that the initiatives were doing well, and IARU should continue in the same vein.

5. Value of Research Intensive Universities

Copenhagen presented a position paper which it developed with Senior Officers from NUS, Berkeley and Cambridge. The purpose of the position paper was to be a resource point for various IARU partners in their own efforts to create a more nuanced argument to various stakeholders and the public, on how research universities contribute to society. If they choose to do so, partners can publish the position paper, or link the webpage to their university website.

Presidents did not agree on the set of ecosystem indicators or “KPIs” that were proposed. ETH thought that the measures were useful and good indicators of value. However, Cambridge shared that such indicators are likely to assume the form of another league table or ranking, preferring qualitative measures. Yale expressed concern that the indicators do not capture the value of humanities research, which is the area most severely attacked. Adding to this, ANU suggested that the term used should be “knowledge transfer” rather than “technology transfer”. The leads noted the suggestions and would work on including more case studies.

Copenhagen also presented the website containing write-ups based on value-streams identified at its 2011 workshop, supplemented by case studies. [The website link](#) has been disseminated to partners to solicit comments, before publishing the website online. Once approved, the position paper would be included on the website. Partners were requested to revert with their comments by the end of April.

6. IARU Initiatives

6.1 Global Summer Program (GSP)

The Secretariat updated the meeting that there were 693 applications for 18 courses this year, offered by all IARU institutions. Although there was a 22% drop in the overall number of applications, it is likely that GSP would be able to sustain participation rate at about 300 – 350 students. The summer courses will run between June and August 2013.

The sponsorship funds for the 2013 GSP have been received in full from Santander ahead of the stipulated 15 April date, and have been disbursed to all partners. In response to questions by Cambridge, the Secretariat responded that it has not heard of cases of Santander approaching students for marketing efforts, and Santander have been very flexible and accommodating with requests from the IARU GSP group.

6.2 Global Internship Program (GIP)

The Secretariat reported that four universities are offering eleven internships this summer – NUS, Todai, ETH and Yale. ETH, who offered its first internship this year, shared that the application process has been positive. It received a healthy number of responses from IARU students, and high-quality applicants. However, there the challenge was with securing the right work permits, and further discussions may be necessary to see if the internship can be counted as part of a student's university curriculum.

The Secretariat and ETH called for greater support from IARU partners to offer internship opportunities as there is a strong level of interest from students.

6.3 Global Cross-Disciplinary Tournament (GXT)

Beida gave an update on the third GXT which would be held on 10 – 19 July and the theme of this year's GXT is "the Future of Media". So far, ANU and NUS have signed up, and Beida invited more universities to participate. Prof John Richardson (NUS) who oversaw last year's student organizers emphasized that the GXT is uniquely a student driven, student conceived initiative. He hoped more would support this year's GXT as students would greatly benefit from the learning opportunities in the tournament.

The Chair proposed that the decision regarding the fourth GXT would be made at the Senior Officers' Meeting in November.

6.2.1 Sustainable Campus Initiative

The Campus Sustainability Officers met for the fourth time on 18 – 20 March in Cambridge University. ANU reported progress on the CO2 Benchmarking paper, as well as the development of a Green Paper, which details and demonstrates best practices for universities seeking to make their campuses sustainable. The Green Paper would also focus on water and waste management.

I. Green Paper Marketing and Communications Resources

Presidents did not approve the USD50,000 funding request to develop the marketing and communications aspects of the paper. The meeting agreed that the group should fully utilize the USD15,000 that was allocated in 2011 to update the IARU sustainability web pages with the Green Paper's content.

The Secretariat requested for the Sustainability Fellows and case studies to be updated as well. Once the Green Paper is ready and website updates have been completed, Presidents would be open to consider funding requests for marketing and communication purposes, but any communication plan should be coordinated with the institutional communications departments.

II. IARU Sustainability Conference/Workshop, in association with the IARU Sustainability Science Congress

Presidents approved the USD25,000 funding request to conduct a Campus Sustainability conference/workshop focusing on the results of the Green Paper and the CO2 Benchmark paper. The remaining funding required would be obtained through delegate fees.

The Sustainability Science Congress organizers have expressed their agreement and support to host the workshop in conjunction with its congress.

6.2.2 Sustainability Science Congress

Copenhagen reported that the Sustainability Science Congress is coming along well, and would take place in Copenhagen from 22 – 24 October, 2014. The Congress would coincide with another major event, the “Global Green Growth Forum”, organized by the Danish Government as well as a week before the IPCC’s fifth assessment report. Yale has joined the steering committee; therefore, all IARU institutions are now represented.

6.3.1 Academic IP Pooling and Collaborative Technology Transfer

Beida organized the Academic IPP workshop on 7 – 8 March, the first time technology transfer officers came together to network and discuss areas where they were facing challenges. Dr Lily Chan and Prof Wong Poh Kam from NUS Enterprise attended the workshop, and were present to take questions from the meeting.

An outcome from the workshop was that Beida and NUS would run a pilot program to collaborate on strategic and specific areas to pool IP, before approaching industry. Possible areas were biomedical and environmental technologies, but more areas would be considered. NUS shared that it has successfully pooled IP with the University of Auckland, as well as with A*STAR in Singapore. Dr Chan noted that it is hard work but the benefits were high. Technology transfer officers have indicated support for the pilot, and if successful they could consider joining the program. As IARU was already collaborating multilaterally on a number of initiatives, it was a good opportunity to see if IP pooling efforts were possible.

To enable IP Pooling, NUS would develop a web portal to access technologies available at the various member universities that can be grouped into families of patents using a built-in search engine. Technology transfer officers agreed on the guiding principle that the member university that was approached first for licensing would assume the role as lead negotiator. The web portal would be submitted for approval to its oversight committee as well as IARU Presidents before its launch.

Beida requested for a follow-up workshop in 2014 at ETH, to discuss how to generate funding for proof-of-concept research, and to learn more about entrepreneurship education programs which were very successful at ETH. A proposal would be submitted at the next Senior Officers’ Meeting for agenda and funding approval.

Presidents noted the updates for **6.3.2 Women and Men in Globalizing Universities** and **6.3.3 Alumni Associations Summit**. Both initiatives would conduct their workshops on 28 – 29 October and 30 September – 3 October, respectively. Oxford expressed their support for the Alumni Associations Summit.

6.3.4 Librarians’ Meeting

ANU reported on behalf of the IARU librarians and put forth a draft statement (an amended version was tabled for the Presidents’ consideration) on Open Access to be adopted by IARU. Presidents were divided on the draft statement, with several noting that the statement was rather general and unlikely to add much value to their institutions. Presidents decided that it would not be helpful for IARU to publish such a public statement.

6.3.5 Research Administrators' Meeting

Beida gave an update on the Research Administrators' Meeting one-day workshop program that would be hosted on 15 September. The organizers also plan to run a symposium on junior research talent recruitment alongside the IARU workshop. The add-on symposium would provide greater opportunities to learn about the Chinese scientific research management system, and establish links for collaboration and staff exchange.

The Chair requested that the initiative should aim to have five or more IARU partners in attendance to have a valuable discussion and exchange of best practices.

6.3.6 Ageing, Longevity and Health

Copenhagen updated the meeting on ALH initiatives, and presented plans to "Empower the Network". All present in the meeting expressed their support for the proposal to establish a steering committee to enable even greater engagement across IARU campuses through workshops, exchange programs and joint funding opportunities. Members would send their nominees to Copenhagen by the end of April. Beida offered to link up the ALH team with China's "Smart Project" on Ageing, which studies the situation of the elderly in over 80 provinces in China.

In addition to exploring possible common funding activities under the Horizon 2020, the ALH group was invited to consider opportunities through CREATE in Singapore and NIHR in the UK.

7. The Changing Position and Role of Asia in the World – Key Implications for Higher Education

Professor Kishore Mahbubani, Dean of the Lee Kuan Yew School of Public Policy called for universities to promote greater understanding between the East and the West, as well as encourage multilateralism and a new global ethic.

Prof Mahbubani's talk was themed "GPS" (Good News, Problems, and Solutions). The good news is that there are improvements in global poverty, health care and advancements in technology. However, problems such as climate change continue to persist, and many a political leader had to manage the reality of local politics which prevents them from adopting what is good the greater world and the future.

Seeking solutions, Prof Mahbubani said that universities have a long-term interest in changing people's mindsets, especially in a time of rapid global population growth with finite resources. He added that he saw universities' efforts as being bottom-up through disseminating knowledge, creating awareness and inspiring people to make a difference. Universities should also be critical of their curricula, and be constantly updated to allow greater changes.

With the new "internet generation", Prof Mahbubani observed that people are more connected with others from different parts of the world. He added that it is vital that future leaders are bi- or multi-lingual, to be able to understand the nuances and narratives of different cultures. He gave an example of how a Chinese prose took on a harsh interpretation when translated into English.

Prof Mahbubani concluded by highlighting Asia as a "sunrise industry", further encouraged by high levels of multilateralism amongst world leaders.

8. Yale-NUS College & Evaluating the Global Relevance of Liberal Arts Education

Prof Pericles Lewis gave a presentation on the new liberal arts collaboration by Yale and NUS. He emphasized that the curriculum links Asian and Western civilizations, and offers students breadth and depth of learning. Highlights of the Yale-NUS presentation included its recently launched curriculum, global faculty recruitment, and the design of the new campus. Prof Lewis also spoke about the opportunities for overseas exchange and internship opportunities. He appealed to IARU presidents to consider working with Yale-NUS for student exchange.

Cambridge asked whether the new curriculum – which is broad based for the first two years (and includes a reading list of 40 “great books”) then students specialize in their senior years – can provide sufficient learning to be able to pursue their post-graduate degrees in pure sciences in top institutions. Prof Lewis responded that Yale-NUS students would be able to catch up in their senior years, where the individualized instruction is usually quite intensive. Yale shared that this model is similar to liberal arts colleges such as Williams and Pomona, and graduates do have sufficient pure science components, and are coveted at top research universities. However, Cambridge said that the Yale-NUS curriculum may be too prescriptive with little room for self prescribed learning. Prof Lewis noted the point, adding that the curriculum would be reviewed if necessary.

With reference to the setting up of Yale-NUS, both Yale and NUS responded that if they developed a liberal arts college of their own, it would not be able to achieve this unique setup as it would be closely entrenched in their own local systems and culture. Another unique quality is that this liberal arts college would be able to leverage on the research facilities available at NUS. Furthermore, most of Yale-NUS’ faculty members have a joint appointment with NUS and often have their own independent source of funding. Prof Lewis also shared that they are in the midst of discussions for greater collaborations with CREATE.

Yale-NUS would be taking in 150 students for its inaugural batch for Summer 2013. About 12,000 applications have been received, and students apply through the Yale-NUS website, as well as through the US common application system. About 30% of students who have applied to Yale have indicated that they wish to be considered for Yale-NUS. Prof Lewis shared that in the admissions process, Yale-NUS is looking for students who exemplify a breadth of interest, willingness to be active learners and have good test results. Yale-NUS students would graduate with a Yale-NUS College degree, issued by NUS. There were also options for a double degree with NUS Law Faculty (a five-year program), a concurrent degree with Yale School of Forestry and Environmental Studies and an MBA with the Yale School of Management.

The presidents congratulated Yale-NUS and wished it success with all its endeavors and plans going forward.

10. Santander Proposals / New Proposals

10.1 Failure of the Numerical

Cambridge presented the revised proposal on behalf of the project leads. The topic was approved at the 2012 Senior Officers’ Meeting, and the initiative leads have reverted with revisions to the initial proposal. Although the invitation by the Santander representative in April 2012 was only for

USD500,000, the funding request submitted is for USD2.5 million. Cambridge suggested that it might be effective to pitch this as sponsorship of USD\$250,000 per institution for this project.

The meeting agreed that the proposal crafted was sufficient for corporate sponsorship, and was ready to make a sponsorship request to Santander.

Concerned that Santander may wish to withdraw funding from the Global Summer Program, Presidents agreed that while Santander should be approached for funding for the proposal “The Failure of the Numerical”, it is of secondary priority to the Global Summer Program. NUS and Cambridge would coordinate to approach Santander. Other Presidents were also encouraged to speak to Santander and express their support for the IARU sponsorship requests if the opportunity arises.

10.2 International Student Teaching and support

This paper was withdrawn as the initiative lead was unable to attend.

10.3 EdTech Horizons Workshop

Presidents approved the USD15,000 budget request and Mr Ravi Chandran’s (NUS) proposal to conduct a workshop on 13 & 14 November 2014 in Singapore. The aim of the workshop is to discuss trends, opportunities and challenges IARU members are experiencing in using technology for effective teaching.

NUS would invite the relevant participants and finalize an agenda. An intended outcome is to develop a benchmark matrix to facilitate the comparison of educational technologies in IARU universities. It would also discuss and identify educational technology projects for possible collaboration.

10.4 IARU Sports Event

Presidents accepted ETH’s invitation, and agreed to send students to participate in the sporting event from 22 – 26 April, in conjunction with the 2014 IARU Presidents’ Meeting in Zurich. The program, meals and accommodation for students would be sponsored by ETH.

The sports event will combine the Frisbee competition with other sports activities, with the aim to give a mixed group of deserving students from each institution the possibility to interact over sport. Today and Yale requested that ETH consider including a side academic program and some guidance on the types of students to invite to the sports event.

11. Business Matters

11.1 Financial Report

The Secretariat reported that IARU funds stood at a healthy balance of USD260,032.07 as of 28 February 2013.

The meeting also noted that USD135,000 has been committed annually for the running of the Secretariat and meeting commitments for the annual Presidents’, Senior Officers’ and GSP Working Committee meetings. The Chair requested that approved proposals should not exceed USD65,000 annually.

At this meeting, Presidents approved funding for two proposals:

- USD25,000 for the IARU Sustainability Conference (in conjunction with the Sustainability Science Congress), and
- USD15,000 for the EdTech Horizons workshop

With these approvals and taking into consideration other commitments up to the end of the year, IARU funds will close the year with an expected balance of USD137,957.30.

11.2 Presidents' Meeting 2014

ETH Zurich will host the next Presidents' Meeting on 24 – 25 April 2014 (Thursday – Friday). Presidents requested for discussion or relevant speakers on the topics of university-industry partnerships, in particular on links with the pharmaceutical industry, industry supported PhDs and entrepreneurship ventures.

The Presidents' Meeting for 2015 and 2016 would be held in Todai and Oxford, respectively. The dates for these meetings would be confirmed through the various Presidents' offices.

11.3 IARU Membership

Presidents requested Senior Officers to propose one or two universities each from South America and Africa for consideration as new members at the upcoming Senior Officers' Meeting. Senior Officers should propose a mechanism for considering new IARU members.

NUS suggested inviting potential member(s) to IARU meetings as observers first, before confirming their status as members. The Chair said that he would take this under consideration.

11.4 IARU Chairperson 2015 – 2016

The Chair announced that he would be stepping down in December 2014, as he would be retiring from ETH Zurich. He encouraged IARU Presidents to begin discussions about the next IARU chairperson and forward their recommendations to him.

Closing and Appreciation

Presidents recorded their appreciation and bid farewell to Beida President, Prof Zhou Qifeng who has retired from his position.

ETH Zurich would assume the Secretariat position from 1 July 2013. The meeting thanked the outgoing Secretariat from NUS, Mr Bernard Toh and Ms Yeap Su Phing for their services over the last four years.

Participants' Biographies

Australian National University



Dr. Erik LITHANDER

Pro Vice-Chancellor, International & Outreach

Dr. Erik Lithander joined the Australian National University in the newly-created role of Pro Vice-Chancellor (International and Outreach) in June 2012. Prior to joining ANU, Erik spent six years as Director of International Affairs at University College Dublin, Ireland's largest university, and was previously the Associate Director (International Relations) at the University of Auckland in New Zealand.

Originally from Sweden, Erik holds a Candidature in Political Science from Université Libre de Bruxelles in Belgium, a BSc Hons (Econ) from the London School of Economics, and a MPhil and PhD from the University of Cambridge where his research focus was on contemporary Latin American literature. He is an alumnus of the executive education program at the Wharton School of the University of Pennsylvania.

The Pro Vice-Chancellor (International & Outreach) provides leadership on international partnerships and international government relations, international students at ANU, national and international student recruitment and admissions, brand and reputation management and domestic institutional alliances.

The key ANU units which form part of this portfolio are the Division of International Operations and Student Recruitment (DIOSR), the ANU Marketing Office, the ANU Office of Strategic Communications and Public Affairs and the ANU North American Liaison Office in Washington DC.

ETH Zurich



Prof. Ralph EICHLER

President

Professor Ralph Eichler obtained his doctorate in Physics from ETH Zurich. After working as a researcher in the USA (Stanford University and Los Alamos Meson Physics Facility) and Germany (DESY/German Electron Synchrotron), as well as at the Institute for Medium Energy Physics at ETH Zurich and as a project manager at Paul Scherrer Institute (PSI), he became a Professor of Physics at ETH Zurich in 1989. His scientific career then took him once again to DESY, this time as spokesman of the international collaboration H1, before he took on leading roles at PSI, firstly as Deputy Director from 1998 to 2002 and then as Director from 2002 to 2007. Professor Eichler has been President of ETH Zurich since September 2007.

Professor Eichler is a member of the ETH Board and Vice President of ETH Zurich Foundation. His other affiliations include memberships of the Swiss Academy of Engineering Sciences (SATW) and the AXPO Advisory Board on Sustainability. He currently acts as Vice President of the Rectors'

Conference of the Swiss Universities (CRUS), is a member of the swissuniversities Board as well as the Chairperson of IARU.



Prof. Gerhard SCHMITT

Professor for Information Architecture / Senior Vice President ETH Global

Gerhard Schmitt is Senior Vice President for ETH Global, Professor for Information Architecture, and Founding Director of the Singapore-ETH Centre.

Since 2006, Gerhard Schmitt concentrates on the definition and design of Information Architecture (IA) as the next level of Computer Aided Architectural Design (CAAD). The integration of Big Data and Design through the creation of a simulation, visualization and interaction platform for Future Cities is at the centre of his research. Gerhard Schmitt established the CAAD curriculum and research program since 1988 when he became Professor at ETH Zurich. His courses include design computing and programming, collaborative and shared authorship design, and global virtual design studios. His previous research focused on the development of multi agent based systems and smart design support systems, using artificial intelligence methods.

From 1998–2008 he served as Vice President for Planning and Logistics of ETH Zurich. In 2000, he initiated the development of a third, virtual campus, named ETH World with an international master plan competition. In 2003, he devised the concept for Science City, ETH's new campus in Zurich; in 2004, he initiated the development of the master plan; in 2006, the international competition for the best integrated urban scale sustainability concept; and in 2007, the energy concept to reduce CO² output by more than 50% in 10 years.

From 1984 to 1988 he pursued CAAD research and teaching at Carnegie Mellon University. He has been Visiting Professor at the Harvard Graduate School of Design, at Katholieke Universiteit Leuven, Belgium, at the Technical University of Denmark DTU in Lyngby and at the Technical University of Delft.

From 1994 to 1996 he was Dean of the Faculty and Department of Architecture at ETH, president of ETH's Informatics Commission 1989–1997, President of the Swiss Computer Graphics association 1996–1998, Vice President of the Board of the HMT, the Zurich Academy for Music, Theater and Ballet, President of the Foundation Board of the Studienzentrum Pfäffikon, President of the Scientific Advisory Board of Distance Learning Switzerland FS–CH, and Chairman of the Visiting Committee of the Graduate School of Design at Harvard University 2004–2007. Since 2010 he leads the Simulation Platform at the Singapore-ETH Centre Future Cities Laboratory.



Dr. Jürg BRUNNSCHWEILER

Director Global Institutional Affairs, ETH Global

Dr. Jürg Brunnschweiler obtained his doctorate in Biology from the University of Zurich. He joined ETH Zurich in 2002, working first in the Presidents' Staff and the Lecturers' Office, then in the office dealing with the European Union Framework Programmes. In 2009, he returned to the Office for Faculty Affairs where he was responsible for faculty recruiting procedures at various departments. In addition, he was contact person for academic career advancement and Secretary of the Tenure Committee. Since 1 October 2012, Dr. Brunnschweiler is the Director of Global Institutional Affairs at ETH Global.

National University of Singapore



Prof. Chorh Chuan TAN

President

Professor Tan Chorh Chuan is the President of NUS. He concurrently serves as the Chairman of the Board of the National University Health System. Prof Tan's additional appointments include Deputy Chairman of Singapore's Agency for Science, Technology and Research (A*STAR); Senior Advisor to the Governing Board of Duke-NUS Graduate Medical School; and Member, Board of Directors of the Monetary Authority of Singapore. His previous appointments included various senior positions in academia and public service such as Dean of the NUS Faculty of Medicine and Director of Medical Services at the Singapore Ministry of Health. Professor Tan's active leadership in the fields of science, technology and health has been recognized through numerous awards such as the Public Service Star in 2003, the Public Administration Gold Medal in 2004 and the National Science and Technology Medal in 2008. He is currently Chair of the World Economic Forum's Global University Leaders Forum.



Prof. Thye Shen Andrew WEE

Vice President, University & Global Relations

Professor Andrew Wee is currently the Dean of the NUS Faculty of Science since April 2007. He is a faculty member of the NUS Department of Physics, and also the Director of the Surface Science Laboratory in the NUS Faculty of Science, and an adjunct scientist at the Agency of Science, Technology and Research's Institute of Materials Research and Engineering.

From April 2014, Prof Wee will be taking on a new portfolio as Vice President (University and Global Relations) at the National University of Singapore (NUS). In his role as Vice President, he will work with the President on the University's efforts to become a leading global university located in the heart of Asia through the strengthening of strategic relations with stakeholders both in Singapore and overseas.

Prof Wee is currently the President of the Singapore National Academy of Science. He was awarded the President's medal in 2008 by the Institute of Physics Singapore, and is a fellow of the Institute of Physics UK, the Singapore National Academy of Science, the Institute of Physics Singapore, as well as an academician of the Asia-Pacific Academy of Materials.

Prof Wee's research interests are in surface and nanoscale science, scanning tunneling microscopy (STM) and synchrotron radiation studies of the molecule-substrate interface, graphene and related nanomaterials. He has published more than 400 internationally refereed scientific papers. He is an Associate Editor of the journal *ACS Nano* since 2011, and serves or has served on several journal editorial boards including *Applied Physics Letters – Journal of Applied Physics* (2009–2011), *Surface and Interface Analysis* (2005–), and *Surface Review and Letters* (2002–).

Prof Wee was previously a visiting scientist with the Lawrence Berkeley National Laboratories in the US, a Commonwealth Fellow as well as a Rhodes Scholar at the University of Oxford. He holds a Bachelor of Arts (Honours) in Physics as well as a Masters degree from the University of Cambridge. He received his DPhil from the University of Oxford.



Prof. Barry HALLIWELL
Deputy President, Research & Technology
Tan Chin Tuan Centennial Professor

Professor Barry Halliwell is Deputy President (Research and Technology) at the National University of Singapore and is responsible for driving the University's research agenda. He is involved in planning and establishing research institutes, centres and programs as well as in helping to formulate policies and agreements relating to intellectual property rights. He oversees the NUS research institutes and centres, the NUS Institutional Review Board (IRB) and NUS Institutional Animal Care & Use Committee (IACUC) and enforcement of the NUS Research Integrity Code. His responsibilities also include overseeing the expansion and allocation of research funding and liaison with granting bodies.

Professor Halliwell graduated from the University of Oxford with BA (1st class) and D.Phil degrees. He holds a D.Sc degree from the University of London. He was a faculty member with the University of London, King's College from 1974 to 2000 and held a prestigious Lister Institute Research fellowship. From 1995 to 1999, he was a Visiting Research Professor of Internal Medicine and Biochemistry with the University of California, School of Medicine, Divisions of Cardiology and Pulmonary/Critical Care Medicine. Professor Halliwell was a Visiting Professor of Biochemistry to NUS from 1998 to 2000. He was Head of the University's Department of Biochemistry from 2003 to 2007 and was Deputy Director, Office of Life Sciences from 2001 to 2005. From 2003 to September 2008, he was Executive Director of the NUS Graduate School of Integrative Sciences and Engineering.

An internationally-acclaimed biochemist, Professor Halliwell is known especially for his seminal work on the role of free radicals and antioxidants in biological systems. The Thomson Reuters lists Professor Halliwell as one of the world's most highly-cited researchers in Neurobiology & Behaviour, Pharmacology & Toxicology, Biology and Biochemistry and his Hirsch Index is 140. <http://www.researcherid.com/rid/C-8318-2009>. His book *Free Radicals in Biology and Medicine* published by Oxford University Press, and now in its fourth edition, is regarded worldwide as the authoritative text in the field.

Professor Halliwell was awarded the Public Administration Medal (Silver) in 2010 by the President of Singapore for contributions to Singapore and awarded the President's Science and Technology Medal 2013 by the President of Singapore "for distinguished sustained and exceptional contributions to

Singapore's Science and Engineering landscape". He was awarded the "Lifetime Achievement Award" by the Society for Free Radical Biology and Medicine in the USA for overall sustained excellence in the field. He was recently awarded the Ken Bowman Research Award for outstanding achievements in the field of cardiovascular research from the Institute of Cardiovascular Sciences (Canada) and NUS University Award – Outstanding Researcher Award. His laboratory is also ranked number one worldwide by highest citation score in Free Radical Research.

His research focuses on the role of free radicals and antioxidants in human disease, particularly Alzheimer disease and other brain disorders, such as strokes, and in the ageing process. His interest in identifying the most important antioxidants in the human diet and in developing novel antioxidants has critical bearing on treating human diseases and understanding how diet might cause or prevent them.

Professor Halliwell is a member of several editorial boards including *FEBS Letters*, *Biochemical Journal* and *Antioxidants and Redox Signaling*. He has been a lead speaker at Gordon Conferences and other prestigious events worldwide and is a member of several expert advisory panels to leading universities, companies and government agencies.



Mr Bernard TOH

Director (Projects & Communications), Office of the President

Mr Bernard Toh joined the University in April 2005 as Director, Office of Corporate Relations. After leading the corporate events and communications team for four years, he was appointed to the Office of the President to assist in projects and communications. One of the projects that he is currently overseeing is the development of the Lee Kong Chian Natural History Museum which will be opened in late 2014. From October 2009 to July 2013, he served as Director of the IARU Secretariat and was recently jointly appointed as Director (Special Projects) in the Office of University and Global Relations, NUS, where he hopes to continue contributing on the international relations front drawing on the experiences and relationships built over the four years serving in the IARU Secretariat.

Prior to joining NUS, Bernard served in the Republic of Singapore Air Force and the Singapore Ministry of Defence for twenty years. His last held appointment with the Air Force was Head Air Manpower, looking after the human resource and capital requirements of the entire air force. Prior to leaving the service, he served as Director Public Affairs of the Singapore Ministry of Defence. Bernard's academic background includes a Bachelor of Arts (Architectural Studies) from the National University of Singapore and a Master of Business Administration from Cranfield University, UK.

Peking University



Prof. WANG Enge

Chair Professor of Physics, President

Professor Wang Enge received his Ph.D. from Peking University in 1990. After post-doctoral research in US and France, he started his academic career at the Institute of Physics, Chinese Academy of Sciences (CAS) in 1995. He served as Director of Institute of Physics (CAS) (1999–2007), CAS Deputy Secretary-General (2008–2009), Dean of School of Physics and of Graduate School, Provost and Executive Vice President of Peking University (2009–2013), and became President of Peking University in March 2013.

Professor Wang's main research accomplishments include the fundamental understanding of the kinetics involved in formation and decay of surface-based nanostructures, development of chemical vapor deposition of light-element nanomaterials, and study of water behaviors in confinement system. In the above areas, he is the author of over 280 papers in peer-reviewed journals (more than 10 in *Science* and *Nature*s, 23 in *PRL*, 7 *JACS*), and co-inventor on 6 patents. He delivered over 80 plenary/keynote/invited talks including APS, MRS, and IUMRS, and gave over 100 seminars/colloquiums worldwide. He is an ISI highly cited researcher in physics with over 7000 citations.

Professor Wang Enge is a member of the CAS and the Academy of Sciences for the Developing World (TWAS), and a fellow of the American Physical Society and the Institute of Physics (UK). He has been a JSPS professor of Tohoku University (Japan), an AvH Scholar of Fritz-Haber Institute der MPG (Germany), a GCEP Scholar at Stanford University (USA), a KITP Visiting Professor at the University of California, Santa Barbara (USA), a Visiting Professor at the University of California, Berkeley (USA) and a Visiting Professor at the International Centre for Theoretical Physics (Italy).



Prof. CHEN Dongmin

Dean, School of Innovation and Entrepreneurship

Dr. Chen Dongmin is a Professor in School for Advanced Interdisciplinary Studies of Peking University and he spearheads IARU's Academic IP Pooling and Collaborative Technology Transfer initiative.

Prior to joining Peking University, he was an adjunct Professor of the Institute of Physics, Chinese Academy of Sciences where he served as the co-director of the Beijing National Laboratory for Condensed Matter Physics from 2004 to 2009. Before that he was a Sr. Rowland Fellow and the Head of the Nanoscale Quantum Physics Lab. of Rowland Institute at Harvard University where he worked from 1989 to 2004. His academic expertise includes nonvolatile material and device physics, MEMS device and process, MEMS-CMOS integration; spin and quantum device physics.

Dr. Chen is an Associate Editor of *Applied Physics* letter; a Sr. Associate Editor of *Chinese Science Bulletin* and an Associate Editor of *Chinese Physics Letter*. Dr. Chen co-founded Miradia Inc. in Silicon Valley in 2003 where he led the development of a platform technology for MEMS-CMOS 3D integration for applications in digital micro-mirror array and motion sensors, and successfully licensed the technology to TSMC. Dr. Chen is a Board of Director and served as its 2010–2011 President of the Chinese American Semiconductor Professional Association (CASPA).



Prof. WANG Shan

Head, Peking University International Hospital

Dr. Wang Shan is the President of Peking University International Hospital (will open by the end of 2014, with 1,800 beds) and the President of Peking University People's Hospital (95 years' history, 1,700 beds). Dr. Wang's main research interests include surgical practice, medical education, clinical and related basic research, and modern hospital management.

Dr. Wang was born in 1960, graduated from Beijing Medical College (now Peking University Health Science Center) in 1983. He received the diploma on Hospital Management from China Europe International Business School in 2003 and was awarded the "Honorary Fellowship" by The Hong Kong College of Surgeons in 2013.

Dr. Wang joined the Department of Surgery at Peking University People's Hospital in 1983 and was appointed as Vice President of the Hospital in 1998. He became the assistant to the Dean of Peking University Health Science Center and chaired the Peking University International Hospital Group Co. Ltd. (now PKU Healthcare Group) in 2003. In 2006, he was appointed as the president of Peking University People's Hospital. In 2013, he received his appointment of the President of Peking University International Hospital.

Dr. Wang holds many important positions in Medical, Surgical, education, and administrative societies. He was elected president of the Chinese College of Surgeons, president of the Chinese Hospital Economics Committee, president of the Clinical Medicine Teaching Committee, Ministry of Education, vice-president of the Chinese Medical Doctors Association, Chinese Hospital Association and Chinese Health Economics Association. His active leadership in the fields of health, research and teaching has been recognized through numerous awards such as "Healthcare Reform and Innovation Star" in 2013, "Outstanding Contribution Award – The Top Award in Hospital Management" in 2012.



Prof. LI Chenjian

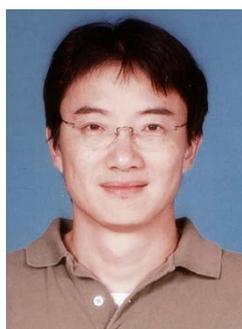
Vice Provost and Associate Dean of School of Life Sciences

Dr. Li Chenjian is currently the Vice Provost of Peking University, and Professor and Associate Dean of School of Life Science, Peking University.

Dr. Li attended Peking University for his undergraduate education, and Peking Union Medical College for training in medicine. He received his Ph.D in Molecular Genetics from Purdue University, USA; postdoctoral training at the Rockefeller University. Dr. Li was an assistant professor and associate professor at Weill Medical College of Cornell University, and then Aidekman Endowed Chair at Mount Sinai School of Medicine of NYU. Dr. Li returned to Peking University in 2013.

Dr. Li's scientific research focuses on exploring the molecular and cellular basis of higher brain functions, and the mechanisms of neurological diseases. His laboratory pioneered methods of generating transgenic animal models for these studies. For his leading role in this line of research, Dr. Li received C.H. Lee Scholar Award and National Service Award (USA). He is a standing member of the National Institute of Health Study Section for Neurological Diseases, USA.

Dr. Li is also devoted to education development and reforms, ranging from high school, undergraduate, graduate and medical student education.



Prof. ZHANG Xudong

Chong Keung Chair Professor, Department of Chinese Language & Literature

Dr. Zhang Xudong is currently the Chong Keung Chair Professor in Department of Chinese Language & Literature of Peking University, University Professor in the Humanities and Social Sciences of Chongqing University, and Zijiang Chair Professor in Comparative Literature of East China Normal University.

Dr. Zhang attended Peking University for his undergraduate education. He received his PhD from Graduate Program in Literature of Duke University, USA. Dr. Zhang was an Assistant Professor of Chinese and Comparative Literature in New York University and Rutgers University. In 2005, he became the Professor of Comparative Literature and Professor of East Asian Studies in New York University.

Dr. Zhang's research focuses on Chinese and Comparative Literature. He was granted as visiting professor of Peking University, University of Tokyo and Fudan University. For his leading role in the research, Dr. Zhang received Faculty Fellowship in Center for Critical Analysis of Contemporary Culture of Rutgers University and Rockefeller Fellowship in the Humanities, International Center for Advanced Studies of New York University.



Dr. XIA Hongwei

Director, Office of International Relations

Dr Xia Hongwei is Director of the Office of International Relations of Peking University and Deputy Director of the Peking University Center for International Higher Education. He received his Bachelor degree in Political Science from the University of International Relations in 1989, and went on to further his postgraduate studies at Peking University and was awarded the Master and Ph.D in International & Intercultural Studies in 1994 and 2009 respectively.

From 1995 to 1997, Dr Xia was invited as an exchange scholar in the Department of Communication Studies, University of Nebraska-Lincoln, United States, engaging in the study of cross-cultural communication. In June 2005, he was again invited as a visiting scholar sponsored by DAAD to conduct research on the China-Germany Educational Exchange in the late 19th century at the Free University of Berlin. In the summer of 2007, Dr Xia visited the Fairbank Center for Chinese Studies at Harvard University as a visiting fellow focusing on the research of cultural interactions between China and US in early 20th century.

Dr Xia has published several theses in academic journals about Sino-Foreign Higher Education Exchange, and edited books on the Internationalization of Universities, and conducted some research projects on Student Mobility of China's National Association of Research on Study Abroad. His main research areas include: Sino-Western Cultural Exchange in late Qing Dynasty, Cross-cultural Conflict and Communication, Internationalization of Higher Education and International Communication and Management between Universities.



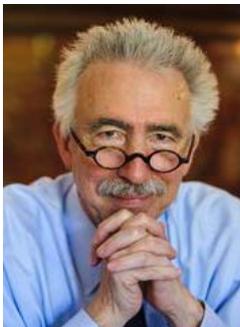
Ms. LI Yun

Deputy Chief, Division for Exchange Programs, Office of International Relations

Ms. Li Yun is Deputy Chief of the Division for Exchange Programs, Office of International Relations of Peking University. She got the BA and MA from the School of International Studies of Peking University.

Ms. Li has been working at the Office of International Relations since 2006. She is responsible for the exchange programs with European partners of Peking University.

University of California, Berkeley



Dr. Nicholas B. DIRKS

Chancellor

Nicholas B. Dirks became the 10th chancellor of the University of California, Berkeley on June 1, 2013. An internationally renowned historian and anthropologist, he is a leader in higher education and well-known for his commitment to and advocacy for accessible, high-quality undergraduate education in the liberal arts and sciences.

Before coming to Berkeley, he was the executive vice president for the arts and sciences and dean of the faculty at Columbia University, where, in addition to his work on behalf of undergraduate programs, he improved and diversified the faculty, putting special emphasis on interdisciplinary and international initiatives. The Franz Boas Professor of Anthropology and History, Dirks joined Columbia in 1997 as chair of the anthropology department. Prior to his appointment at Columbia, he was a professor of history and anthropology at the University of Michigan for 10 years, before which he taught Asian history and civilization at the California Institute of Technology.

Dirks has held numerous fellowships and scholarships and received several scholarly honors, including a MacArthur Foundation residential fellowship at the Institute for Advanced Study at Princeton, a Guggenheim Fellowship, and the Lionel Trilling Award for his book *Castes of Mind*. He serves on numerous national and international bodies, as adviser or member of the board, and is a Fellow at the Council on Foreign Relations.



Prof. Pradeep CHHIBBER

Director, Institute of International Studies

Professor Pradeep Chhibber is the Director of the Institute of International Studies at UC Berkeley. He is concurrently the Indo-American Endowed Chair and Class of 1959 Chair as well as a professor at the Department of Political Science at UC Berkeley. Professor Chhibber has published extensively on issues related to party systems, electoral politics and the politics of India.

University of Cambridge



Prof. Leszek BORYSIEWICZ

Vice-Chancellor

Sir Leszek Borysiewicz is the Vice-Chancellor of the University of Cambridge. His previous appointments include Chief Executive of the Medical Research Council – the main funding body for medical academics in the UK – Deputy Rector of Imperial College, Governor of the Wellcome Trust and founding Fellow of the Academy of Medical Sciences. For his services to medical research in the UK, and in particular for his development of a vaccine to reduce the risk of cervical cancer, Sir Leszek was knighted in the 2001 New Year's

Honours List. He is an outstanding scholar and a highly respected leader with an impressive record of excellence.



Dr Jennifer BARNES

Pro-Vice-Chancellor for International Strategy

Jennifer Barnes is Pro-Vice-Chancellor and a Deputy Vice-Chancellor in the University of Cambridge.

In 1999 she was appointed Head of Department and Director of Research at Trinity College of Music. The author of *The Fall of Opera Commissioned for Television* (2003), she is recognized as a leading authority on Gian Carlo Menotti, Thea Musgrave, Ethel Smyth and the history of opera in various media.

She has designed a neuroimaging and EEG biofeedback programme to analyze the role of alpha, beta and theta waves in musicians under performance conditions. The resulting programme established the Royal College of Music as a leader in the research of the psychology and physiology of performance.

In 2005 she was appointed the first Group Director of Global Education at BP. She developed an investment strategy for the corporation in over 25 countries.

From 2008–12, she was President of Murray Edwards College, founded as New Hall in the University of Cambridge.

As Pro-Vice-Chancellor and a Deputy Vice-Chancellor, she represents the Vice-Chancellor overseas and in Cambridge. Her portfolio focuses on enhancing the University's global engagement.

University of Copenhagen



Prof. Ralf HEMMINGSEN

Rector

Professor Dr. Ralf Hemmingsen has served as the Rector of UCPH since 2005. He had served three years as Dean of the Faculty of Health Sciences before his current appointment and was awarded the University of Copenhagen Gold Medal. Professor Hemmingsen's prior appointments included key positions in the medical sector such as the Medical Director of the Psychiatric Department at Bispebjerg Hospital in Copenhagen and the Deputy Chairman of the Association of Junior Doctors. He is well-respected as an educator and a researcher in the fields of neurobiology and psychiatry.



Prof. Thomas BJØRNHOLM

Prorector for Research and Innovation

Professor Thomas Bjørnholm is currently Prorector of Research and Innovation at the University of Copenhagen. Thomas Bjørnholm was Director of Nano-Science Center at the University of Copenhagen from 2001. He obtained his Ph.D. in materials chemistry in 1990. In 1992 he became affiliated with the Chemistry Department at the University of Copenhagen as Associate Professor, in 2000 as Research Professor and in 2005 as full Professor. In 1997 he was a visiting professor at the University of Texas at Austin and since 2003 he has been the chairman of the Copenhagen Graduate School for Nanoscience and Nanotechnology. Thomas Bjørnholm's main research interest lie within the area of organic electronics, single molecule science, nanochemistry and bionanotechnology. He has published around 200 papers in scientific journals and books including several contributions to high impact journals as Science and Nature, and given more than 150 invited talks at conferences and research institutions.



Mr. Steen ULRICH

Director, Rector's Office

Mr. Steen Ulrich is currently the Director of the Rector's Office at the University of Copenhagen. He has held previous positions as a political advisor in the European Parliament and as a European Affairs consultant with the Confederation of Danish Industry. Mr. Ulrich has also undertaken an internship with the Prime Minister's Office in Denmark. He has a MSc in Political Science and MA in European Affairs.



Ms. Astrid GUFLE

Senior Consultant, Rector's Office

Ms. Astrid Gufler is Senior Consultant at the Rector's Office at the University of Copenhagen, where she works with strategic development and public and international relations. She has held previous positions as communication advisor and process consultant in the Merger Secretariat – a temporary unit established to manage the merger of 3 Danish universities – and at the University's International Office. Ms. Gufler's academic background includes a Master of Arts in English/American Studies (major) and Danish and Sociology (minors).

University of Oxford



Prof. Andrew HAMILTON

Vice-Chancellor

Professor Andrew Hamilton was admitted as Vice-Chancellor of the University of Oxford on 6 October 2009.

Professor Hamilton, BSc, MSc, PhD, FRS, read chemistry at the University of Exeter. After studying for a master's degree at the University of British Columbia, he received his PhD from Cambridge University in 1980 and then spent a post-doctoral period at the Université Louis Pasteur in Strasbourg.

In 1981 he was appointed Assistant Professor of Chemistry at Princeton University then in 1988 served as a department chair and Professor of Chemistry at the University of Pittsburgh. He joined Yale in 1997 and was a Provost of Yale from 2004 until October 2008 where he combined a wide-range of administrative duties with teaching and research.

Achievements during his time as Provost of Yale included the acquisition of the West Campus, the re-establishment of the Yale School of Engineering and Applied Science after a 40-year hiatus, a reform of the tenure process and the significant enhancement of the Yale undergraduate curriculum. In addition to serving as Provost he was Benjamin Silliman Professor of Chemistry and Professor of Molecular Biophysics and Biochemistry.

His research interests lie at the interface of organic and biological chemistry, with particular focus on the use of synthetic design for the understanding, mimicry and potential disruption of biological processes.

Professor Hamilton's academic achievements have been widely recognised internationally. In 1999 he received the Arthur C Cope Scholar Award from the American Chemical Society, and in 2004 he was elected a Fellow of the Royal Society and a Fellow of the American Association for the Advancement of Science.

He was elected a Member of the American Academy of Arts and Sciences in 2010 and received the International Izatt Christiansen Award in Macrocyclic Chemistry in 2011.



Mr. Ed NASH

International Strategy Officer

Mr Ed Nash joined the International Strategy team in January 2013. Ed's areas of responsibility are East and Southeast Asia (excluding China), North America and Oceania. He also leads on international strategy relating to international students teaching and support, for research collaborations and funding, and on Oxford's membership of the League of European Research Universities.

Ed has a background in journalism in the UK and China, and has more recently worked for the University of Edinburgh and UCL, aiding international communications. He holds an MA from the University of St Andrews and an MSc in Comparative Public Policy from the University of Edinburgh.

The University of Tokyo



Dr. Junichi HAMADA

President

Professor Junichi Hamada became the 29th President of The University of Tokyo on April 1, 2009. Professor Hamada's previous appointments in UTokyo included the positions of Managing Director and Executive Vice President, Dean of the Graduate School of Interdisciplinary Information Studies, Dean of the Interfaculty Initiative in Information Studies and Director of the Institute of Journalism and Communication Studies. Beyond his experience as an administrator, Professor Hamada is also reputable in the field of information law

with a focus on the freedom of expression.



Prof. Yoichiro MATSUMOTO

Executive Vice President

Executive Vice President Matsumoto is Professor of Mechanical Engineering. He was a Special Adviser to the President and Vice President from 2008 to 2009, and became Executive Vice President in April 2009. Professor Matsumoto received his Bachelor's, Master's and Doctoral degrees all from the University of Tokyo in Mechanical Engineering respectively in 1972, 1974 and 1977. He became a Lecturer in 1977, an Associate Professor in 1978 and full professor in

1992. He served as Vice Dean of the School of Engineering from 2004 to 2006 and Dean of the School from 2006 to 2008. Professor Matsumoto's most recent scientific interest is fluids engineering, molecular dynamics, rarefied gas dynamics, multiphase flows and medical application of fluid and bio mechanics. His research work and papers have received awards numerous times. He recently received the following awards; Calvin W. Rice Lecture Award in 2005 from ASME, the JSME Medal for Outstanding Paper, Fluids Engineering Award from JSME, the JACM Award for Computational Mechanics in 2007, APACM Award for Computational Mechanics in 2010, Ted Belytschko Applied Mechanics Award in 2010 from ASME and the JSME Medal for Outstanding Paper in 2011. He served as President of the Japan Society of Fluid Mechanics in 2004, President of the Visualization Society of Japan in 2007, President of the Japan Society of Mechanical Engineers in 2010. Currently

he is President of Japanese Society for Engineering Education. He is a fellow of JSFM, JSME and ASME and a Member of the Engineering Academy of Japan and Science Council of Japan.



Dr. Masako EGAWA
Executive Vice President

Masako Egawa is the Executive Vice President of The University of Tokyo, overseeing, university corporate relations, alumni relations, development and international affairs.

Dr. Egawa joined the University of Tokyo in April 2009. From 2001 through 2009, she served as the Executive Director of the Japan Research Center of the Harvard Graduate School of Business Administration (Harvard Business School). Prior to joining Harvard, Dr. Egawa worked in the investment banking industry for 15 years in New York and Tokyo, advising corporations and governments on M&A and capital raising transactions for Salomon Brothers and S.G. Warburg (now UBS).

She received a B.A. in international relations from the University of Tokyo, an M.B.A. from the Harvard Graduate School of Business Administration (Harvard Business School), and a Ph.D. in management from Hitotsubashi University.

Dr. Egawa has served on the Tax Council (advisory body for the Prime Minister), the Financial System Council (advisory body for the Ministry of Finance), Council on Economic and Fiscal Policy (expert member) and Self-Regulatory Board of the Japan Securities Dealers Association. In 2013, she was appointed the chair of the U.S.-Japan Research Institute. Her recent publications include *Management with Weak Shareholder Orientation* (Nikkei, 2008) and *Case Studies of Japanese Companies* (Diamond, 2010).



Prof. Kiichi FUJIWARA
Professor, Graduate Schools of Law and Politics

Professor Kiichi Fujiwara is Professor of International Politics at the University of Tokyo, teaching courses on international relations and international conflict at the Faculty of Law, Graduate Schools of Law and Politics, and the Graduate School of Public Policy, the University of Tokyo.

A graduate of the University of Tokyo (B.A. and M.A.), Professor Fujiwara studied as a Fulbright student at Yale University before he returned to Japan at the Institute of Social Science (ISS). He first joined the faculty at Chiba University and then returned to ISS for seven years before moving into his present position. He has held positions at the University of the Philippines, Johns Hopkins University, and was selected as a fellow of the Woodrow Wilson International Center at Washington D.C.

Professor Fujiwara is known for his writings on international affairs, including *Remembering the War* (2001), *A Democratic Empire* (2002), *Is There Really a Just War?* (2003), *Peace for Realists* (2004) (winner of the Ishibashi Tanzan award, 2005), *International Politics* (2007), *War Unleashed* (2007), and *Conditions of War* (2013). Professor Fujiwara is a regular commentator on international affairs and Japanese foreign policy on Japanese TV networks such as NHK and TBS, along with the BBC

World Service, CNN and NPR. He is also a film critic with two published works, *America in Film* (2006) and *That's a Movie!* (2012).



Mr. Kentaro SUGIURA

General Manager, International Affairs Department

Mr. Kentaro Sugiura has been General Manager of the International Affairs Department at the University of Tokyo since April 2014. He manages three groups of the department, the International Planning Group, the International Exchange Group, as well as the International Students and Researchers Support Group.

Prior to his current position, he worked as Deputy Director of Scientific Research Institutes Division of Research Promotion Bureau at Ministry of Education, Culture, Sports, Science and Technology (MEXT) from 2012. He also worked at WIPO (World Intellectual Property Organization) Headquarters in Geneva between 2006 and 2009.



Ms. Midori OZAWA

Specialist, International Planning Group

Ms. Midori Ozawa is an assistant manager in the International Planning Group of the University of Tokyo since April 1, 2014. Her responsibilities range from activities related to international affairs, specifically organizing international symposiums, conferences etc., to managing a team of members handling various issues of globalization of the University.

Before transferring to the current position, she worked as the Assistant Manager in the International Relations Section of the University of Tokyo's Kavli IPMU (Institute of Physics and Mathematics of the Universe) handling activities related to international affairs. In 2001 she also spent one year studying at the Beijing Language and Culture University in China.



Ms. Mayuko NAKAI

Administrative Staff, International Affairs Department

Ms. Mayuko Nakai is a member of the International Planning Group, International Affairs Department of the University of Tokyo since 2007.

She is responsible for various matters relating to international alliances to which the University of Tokyo belongs, maintaining a section of the university's website and the production of brochures for international students.

Yale University



Mr. Don FILER

Executive Director, Office of International Affairs

Don Filer is Executive Director of the Office of International Affairs. He has overall responsibility for OIA, providing administrative support for the international activities of the schools, programs, and individual faculty across the university. These efforts focus on supporting the development of new projects with partner universities, particularly to expedite the contributions of other Yale offices during the start-up phase and during troubleshooting, managing visits to Yale by university delegations and other dignitaries, and safeguarding Yale's reputation around the world. He also leads the university's emergency response in the event of a medical emergency, natural disaster, or civil unrest. He was appointed to his present position in December 2004. He was previously responsible for managing support for the Yale Corporation, the Visitor Center and the Office of Licensing Programs. Prior to his appointment at Yale in 2000, Don served in a number of capacities at Connecticut College from 1991 to 2000 including Vice President for Community and Public Affairs, Secretary of the College, and Acting Vice President for Development. He worked for former U.S. Representative Bruce A. Morrison from 1985 to 1991.

IARU Secretariat



Mr. Anders HAGSTRÖM

IARU Secretariat

Mr. Anders Hagström is the Director of Global Educational Affairs at ETH Zurich. His previous appointments included project manager of ETH Zurich's ICT development program, "ETH World", and various positions in the field of lifelong learning for engineers at Helsinki University of Technology, Cambridge University and European Federation of National Engineering Associations.



Ms. Romana RUTZ

IARU Secretariat

Romana Rutz studied economics, business administration and economic pedagogic at University of St. Gallen (HSG). During her studies, she gained international experience on various long-term internships and volunteer work abroad – amongst others in Ecuador, India and the United States. After graduating with a Master's degree in 2004, she worked first for a consulting company and then as a flight attendant. In October 2012, Romana Rutz joined ETH Global as a programme manager and is responsible for various international projects of ETH Zurich.

Host (ETH Zurich)**Ms. Lucia ARPAGAUS*****Administration, ETH Global***

Lucia Arpagaus is responsible for finance at ETH Global and a variety of administrative tasks. An additional task is the administration of the SSSTC Programme. Her organizational skills have been successfully applied by organizing the logistics of various events. In her previous position at the HSR University of Applied Sciences in Rapperswil, she managed the Secretariat of the Department of Mechanical Engineering, as assistant to the Dean, and also worked in the Student Admissions Office. Further professional education in

Human Resources Management and her interest in languages give her a broad knowledge of handling the internal workings of a departmental office.

