

International  
Sustainability  
Transitions  
Conference

# 2015

## Sustainability transitions and wider transformative change: historical roots and future pathways



**SPRU**

University of Sussex, UK  
25–28 August 2015

**US**

University of Sussex

SPRU – Science Policy Research Unit

**STRN**

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# Chair's welcome

## It is my pleasure to welcome you to the sixth International Sustainability Transitions Conference.

This year's conference seeks to place sustainability transitions in a long term perspective, considering its historical roots and future pathways. The conference will not only explore transitions in individual systems, but also investigate broader transformations of entire economies, societies and political systems. I am sure many presentations will advance the frontier of knowledge and practical application.

The conference includes a wide range of activities and sessions, as well as a lively social programme. I am pleased to offer newcomers the opportunity to attend a special PhD-led introductory session. In addition to research sessions and paper presentations there are new dialogue sessions, which aim to stimulate debate about sustainability transitions but are not based on papers per se. I am also delighted that there are a great number of sessions on global issues and more participants from developing countries than at previous conferences, illustrating the growing size and breadth of our community. Through dedicated group work sessions, all delegates will have the opportunity to participate in evaluating and building a new research agenda for the network.

The world faces persistent problems: economic crises and rising inequality are coinciding with a growing realisation that current models of meeting our basic needs – whether in food, energy, water or resources – are unsustainable. This is a challenge that will stay with us when economic growth returns, and it will probably only worsen as time progresses – risking even more climate change and profound societal turmoil, tensions and war.

The challenge cannot be solved by optimising current scientific and technological solutions, burning more fossil fuels, investing more money in high-tech medicine, nor by globalising value chains and continuing to promote car-based mobility patterns. As we have been arguing within our community we need to move away from a costly 'business as usual approach' and address these issues head on in an inclusive way recognising the conflicts and power struggles involved. We always need to ask the question who is benefitting and who is losing, in particular during transitions.

The Sustainability Transitions research community is well placed to make major contributions, but only when it continues to develop as an academic field as well as engage with and provide inspiration for people actively involved in shaping the world in transition. My expectation and hope is that this conference will run in this spirit.

I do hope that you will enjoy taking part in the conference.

**Johan Schot**



**Johan Schot**

Professor in the History of Technology and Sustainability Transitions Studies, SPRU – Science Policy Research Unit, University of Sussex

# Keynote speakers

## Sustainability transitions and EU policy

Transitions research has advanced markedly in recent years but the links to policy could be further strengthened. SOER 2015, the five-yearly flagship report of the European Environment Agency (EEA), provides a resource that can help in achieving that goal, setting out a robust evidence base demonstrating the need for systemic transitions, and a clear link to the European policy framework stretching as far ahead as 2050.

The report finds that although European policy has delivered clear benefits, Europe faces a variety of persistent and emerging environmental challenges, intimately linked to its socio-economic systems of production and consumption, and the changing global context. The systemic characteristics of these challenges necessitate systemic responses. European policy must therefore shift its focus towards addressing production-consumption systems in an integrated way, thereby enabling fundamental transitions in the socio-economic systems that fulfil societal needs (such as for food, mobility and energy). Therefore there is a need for Europe to adapt its fiscal, finance and education systems in order to overcome the lock-ins to prevailing approaches, and to manage the impacts of global megatrends in the decades ahead.

## Follow-up session discussants

**Nikos Kastrinos**  
EU's Horizon 2020 programme

**Louis Meuleman**  
European Commission

**Karoline Rogge**  
Science Policy Research Unit



### Hans Bruyninckx

Hans Bruyninckx is the Executive Director of the European Environment Agency. He joined the EEA on 1 June 2013. In 1996 Dr Bruyninckx completed a PhD in international environmental politics at Colorado State University. From 2010 until his appointment at the EEA, he was head of the HIVA Research Institute in Leuven, Belgium, a policy-oriented research institute associated with the Katholieke Universiteit Leuven, where he was also head of the Political Science department from 2007 to 2010.

Over the last 20 years, he has conducted research in more than a dozen countries, in areas including environmental politics, climate change, and sustainable development. He has taught on global environmental politics and global environmental governance in relation to the European Union, publishing extensively on EU environmental policies and the EU's role as an actor in global environmental governance. Throughout his career Dr Bruyninckx has worked with government agencies, civil society and businesses, often in an advisory role.

## In times of transition: the role of game changers

More and more people recognise that we live in times of transition: a change of eras rather than an era of change – a rare period of profound and irreversible changes in our economy and society. Our society is gradually shifting from a centralised, top-down hierarchical society towards a decentralized, bottom-up, horizontal society, with an important role for entrepreneurial citizens. We therefore speak of a Great Transition, that will lead to new structures and institutions. Such a tipping period phase might take a few decades and is characterised by chaos, turbulence and uncertainty. In such a tipping point period the role of game changers (or topplers) is of crucial importance, because old structures become vulnerable, whereas new ones need to be built up.

The keynote lecture addresses two parts. The first part is about the Great Transition that is unfolding in Europe, addressing the contours of a new society and new economy. The second part is about the role of game changers, where it is empirically reflected upon two game changers in the Netherlands, working in the fields of health care and the building sector. Their game changing strategies are analysed and explained and put in the context of transition governance.

## Follow-up session discussants

**Geert Wilms**  
Royal HaskoningDHV and Director of Agricultural Innovation Brabant (LIB)

**Jan-Willem van de Groep**  
Strategic Director for the programme 'EnergieSprong', and strategic advisor of the Ministry of Internal Affairs

**Chris Rowland**  
Founding Director and project coordinator, Ouse Valley Energy Services Company (OVESCO)

# Keynote speakers



## Jan Rotmans

Jan Rotmans is a socially engaged scientist, with more than 200 publications in the field of climate change and global change modelling, sustainable development, and transitions and system innovations.

After his PhD-research and work at RIVM he became the youngest professor of the Netherlands in 1997, at the Maastricht University (ICIS: International Centre for Integrative Studies). In September 2004 he founded the new research institute DRIFT, Dutch Research Institute For Transitions, and became full professor in transitions and transition management at the Erasmus University Rotterdam.

Apart from his scientific work he also wants to contribute to a better and sustainable society. Therefore a radical change, a transition, is necessary. With his knowledge he would like to make up the rules and transmit them to the people involved in any project, region or sector, so that they can give it a swing into a more sustainable direction. For a more sustainable future in the Netherlands he co-founded the Urgenda in 2007 and Nederland Kantelt in 2014. He tries to encourage as many people as possible to join this movement.

## Transformations in global governance for sustainability

Sponsored by Future Earth

Future Earth, a new global platform for global change research and action, has taken as one of its core themes 'Transformations towards Sustainability'. The theme addresses critical knowledge gaps in how societies might address global environmental and sustainability challenges through transformative change. A central problem concerns the governance of transformation of socio-technical and socio-ecological systems. Global governance is itself undergoing profound change.

Drawing on his new book *Earth System Governance: World Politics in the Anthropocene*, Professor Biermann will discuss how transformations in governance could influence transformations towards sustainability.

## Follow-up session

The idea of transformation has become widely-adopted across the social and natural sciences over the past decade. A new International Social Science Council/Future Earth programme on 'Transformations to Sustainability' seeks to deepen theoretical and practical knowledge about transformations in social systems. Three participants in the programme will discuss how they have engaged with the notion of transformation in their research, with the aim of stimulating debate with scholars in the STRN community.

## Discussants

### Melissa Leach

Institute of Development Studies

### Frans Berkhout

King's College London



## Frank Biermann

Frank Biermann is Professor of Political Science and of Environmental Policy Sciences at the VU University Amsterdam, The Netherlands, and Visiting Professor of Earth System Governance at Lund University, Sweden. He specialises in the study of global environmental politics, with emphasis on climate negotiations, UN reform, global adaptation governance, public-private governance mechanisms, the political role of science, and North-South relations. He pioneered the concept of 'earth system governance' in 2005, which has evolved into a major global research programme in this field.

# Programme overview

## Tuesday 25 August

Time	Activity
13.00–17.00	Registration opens
14.00–16.00	Introduction to newcomers (PhD led session)
16.00–16.45	Instructions to chairs of small groups meeting
16.30–17.00	Welcome drinks and canapés
17.00–17.15	<b>Conference opens</b> Welcome and introductions
17.15–18.00	Shaping the future transitions research agenda (round 1)
18.15–19.15	Plenary I <b>Keynote: Sustainability transitions and EU policy</b> <i>Hans Bruyninckx, Executive Director at the European Environment Agency (EEA)</i>
19.30	Dinner

## Wednesday 26 August

Time	Activity
07.30–08.15	Yoga
09.00–10.30	Parallel session A
10.30–11.00	Break
11.00–12.00	Parallel session B
12.00–13.00	Poster session
13.00–14.00	Lunch
14.00–14.45	Plenary II <b>Keynote: In times of transition: the role of game changers</b> <i>Jan Rotmans, Professor in Sustainability Transitions at Drift, Erasmus University Rotterdam</i>
14.45–16.15	Parallel session C
16.15–17.15	Shaping the future transitions research agenda (round 2)
17.15–18.15	Parallel session D
19.30	Optional volleyball and BBQ

## Thursday 27 August

Time	Activity
07.30–08.00	Boundary run
09.00–10.30	Parallel session E
10.30–11.00	Break
11.00–12.30	Parallel session F
12.30–13.30	Lunch
13.30–14.15	Plenary III <b>Keynote: Transformations in global governance for sustainability</b> (Sponsored by Future Earth) <i>Frank Biermann, Professor of Political Science and Environmental Policy Sciences, VU University Amsterdam</i>
14.15–15.45	Parallel session G
15.45–16.45	Shaping the future transitions research agenda (round 3)
16.45–18.15	Parallel session H
19.00–late	Conference dinner and party

## Friday 28 August

Time	Activity
07.30–08.15	Chi-gung
09.00–10.30	Parallel session I
10.30–11.00	Break
11.00–12.30	Parallel session J
12.30–13.30	Lunch
13.30–14.30	Parallel session K
14.30–16.00	Parallel Session L
16.00–17.00	Plenary IV Reflections on the conference and research agenda <i>Jonas Torrens and Elsie Onsongo, PhD students</i>
17.00	Farewell drinks and canapés

Tuesday 25 August

# AFTERNOON

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13.00–17.00 • **Registration opens** [Jubilee Atrium]

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14.00–16.00 • **Introduction to newcomers** [ARTS A]

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16.00–16.45 • **Instructions to chairs of small groups** [ARTS A]

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16.30–17.00 • **Welcome drinks and canapés** [Jubilee Atrium]

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17.00–17.15 • **Conference opens** [Jubilee Atrium]

**Welcome and introductions**

**Frank Geels, Johan Schot, Charlotte Humma**

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17.15–18.00 • [Multiple locations]

**Shaping the future transitions research agenda (round 1)**

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18.15–19.15 • **Plenary I** [Jubilee Large Lecture Theatre]

**Keynote: Sustainability transitions and EU policy**

**Hans Bruyninckx**

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19.30 • **Dinner** [Dine Central, Bramber House]

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**14.00–16.00**

**Introduction to newcomers**

[ARTS A]

This PhD-led session is aimed at creating a space for questions normally not asked in the conference. The session is flexible to accommodate the needs of those participating, and it will allow PhDs, early career researchers and newcomers to the sustainability transitions field to discuss and clarify long held doubts, to reflect on the history of the field, its major contributions and policy impact, key debates and current developments.

A diverse group of researchers will take part, in a open fishbowl format, to fuel the discussion, which will be guided by those taking part. It has a welcoming and informal setting that will help those participating to soft-land and make the most of the conference.

**17.15–18.00**

**Shaping the future transitions research agenda**

[Multiple locations]

The conference incorporates three sessions dedicated to the evaluation and development of a new research agenda for STRN. The current agenda was developed by the network's steering group and set to last for three years. It is now six years old and in need of updating.

These sessions provide an opportunity for all delegates at the conference to take part in the process. Upon arrival, participants will be allocated into groups that will work together throughout the three sessions. Each group will be chaired by a PhD student, that will be responsible for reporting back.

The first session will focus on individual introductions and a

general discussion of the current agenda. This discussion can continue in the second session, at the end of which, each group will have selected a topic for inclusion into the new research agenda. In the third session, each group is to elaborate on the topic and produce a short text that explains the concept and why it is important.

This is the first of three sessions that provide an opportunity for all participants at the conference to evaluate and develop a new research agenda for STRN. Participants will be allocated to groups.

# Wednesday 26 August

# MORNING

## 09.00–10.30 • Parallel session A

<b>A1</b> <b>Plenary follow up – Sustainability transitions and EU policy</b> [G22]	<b>A2</b> <b>Strategies of incumbents in transition processes policy</b> [115]	<b>A3</b> <b>Innovation systems and transitions</b> [135]	<b>A4</b> <b>Urban transitions (I)</b> [G31]	<b>A5</b> <b>Multi-level analysis of transitions (I)</b> [G36]	<b>A6</b> <b>Role and evaluation of labs in transitions</b> [143]
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## 10.30–11.00 • Break [Atrium]

## 11.00–12.00 • Parallel session B

<b>B1</b> <b>Financial services and transitions</b> [G35]	<b>B2</b> <b>Transitions and design</b> [G36]	<b>B3</b> <b>Dialogue session: Sharing: the future? Can we establish a sharing culture, and if so, could it lead a transformation to sustainability?</b> [G31]	<b>B4</b> <b>Dialogue session: Transitions and critical realism – possible ways forward</b> [135]	<b>B5</b> <b>Critical perspectives: the neglect of gender and poverty issues in transition studies</b> [143]	<b>B6</b> <b>Dialogue session: Scenario modelling and socio-technical analysis: opening up a timely debate about integration and linking strategies to address the governance challenges of sustainability transitions</b> [G22]	<b>B7</b> <b>Dialogue session: Sustainable campus</b> [115]
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## 12.00–13.00 • Poster session [Jubilee Atrium]

Please see page 20 for full list

## 13.00–14.00 • Lunch [Atrium]

### Key

<span style="color: green;">■</span> Modelling	<span style="color: purple;">■</span> Niche
<span style="color: blue;">■</span> Firm strategy	<span style="color: red;">■</span> Governance and politics
<span style="color: cyan;">■</span> Technical innovation system	<span style="color: brown;">■</span> Other
<span style="color: grey;">■</span> Urban	
<span style="color: orange;">■</span> Multi-level perspective	[ ] Location



09.00–10.30  
Parallel session A

**A1 Plenary follow up – Sustainability transitions and EU policy**

[G22]

Moderator: Johan Schot  
Discussants: Nikos Kastrinos, Louis Meuleman, Karoline Rogge

**A2 Strategies of incumbents in transition processes policy**

[115]

Chair: Paula Kivimaa

Innovating incumbents on the boundary – a study of boundary tensions in communication  
Anne-Charlotte Hoes, PJ Beers, Barbara van Mierlo

Explaining differences in electric vehicle policies across countries  
J.H. Wesseling, Lars Coenen

Accelerating transitions to sustainability by slowing down: translating narratives of sufficiency into business strategy  
Karoline Augenstein, Alexandra Palzkill

**A3 Innovation systems and transitions**

[G35]

Chair: Bernhard Truffer

Moving beyond the innovation focus: expanding the innovation systems framework for explaining transformative change  
K. Matthias Weber, Harald Rohrer

System innovation of innovation systems  
Henrik Larsen, Gijs Dierckx

**A4 Urban transitions (I)**

[G31]

Chair: Ralitsa Hiteva

Governing urban water transitions in Denmark: in between innovation of functions and innovation of place  
C.F. Fratini, J. S. Jensen

Urban transformative capacity: a conceptual framework for research and policy  
Marc Wolfram

Exploring Urban Resilience through Sustainability Transitions  
Andréanne Doyon

**A5 Multi-level analysis of transitions (I)**

[G36]

Chair: Rob Raven

A multi-level perspective of the German heat domain – findings from in-depth research on landscape, regime and niche interactions  
Laura Echternacht, Holger Berg

Unleashing new entrants versus working with incumbents: a comparative multi-level analysis of the ongoing German and UK low-carbon electricity transitions (1990–2013)  
F.W. Geels, F. Kern, G. Fuchs, N. Hinderer, G. Kungl, M. Neukirch, S. Wassermann

Transformation of mature infrastructure systems: the privatisation of Great Britain's railway  
Katherine Lovell

**A6 Role and evaluation of labs in transitions**

[143]

Chair: Niki Frantzeskaki

Understanding and creating societal impact of sustainability transitions research through 'real-world laboratories'  
Franziska Stelzer, Matthias Wanner, Niko Schöpke

Agents of change in socio-technical systems – through a 'Challenge Lab' as a triple helix co-evolution catalyst.  
John Holmberg, David Andersson-Collado,

Learning through evaluation – a generic evaluative scheme for sustainability transition experiments  
Christopher Luederitz, Niko Schöpke, Daniel J. Lang, Arnim Wiek

11.00–12.00  
Parallel session B

**B1 Financial services and transitions**

[G35]

Chair: Anna Wieczorek

Inclusive innovation and multi-regime dynamics: the case of mobile money in Kenya  
Elsie Onsongo, Johan Schot

The role of Credit Unions and ethical finances in the transition towards 'sustainable and solidarity economies'  
Ricardo García-Mira, Adina Dumitru, Isabel Lema-Blanco

**B2 Transitions and design**

[G36]

Chair: Sabine Hielscher

Transition design: an educational framework for advancing the study and design of sustainable transitions  
Terry Irwin, Cameron Tonkinwise, Gideon Kossoff

Design in transition, transition design  
Adrià Garcia I Mateu

**B3 Dialogue session:**

**Sharing: the future? Can we establish a sharing culture, and if so, could it lead a transformation to sustainability?**

[G31]

Convenor: Duncan McLaren

Chair: Mike Childs

Panellists: Helen Goulden, Johan Schot, Duncan McLaren

**B4 Dialogue session: Transitions and critical realism – possible ways forward**

[135]

Convenors: Alexandra Nikoleris, Fanny Paschek, Oscar Svensson

Panellists: Margaret Archer, Mervyn Hartwig, Peter Pelzer, Nina Vogel

**B5 Critical perspectives: the neglect of gender and poverty issues in transition studies**

[143]

Chair: Ed Steinmueller

Positioning researchers, encounter spaces and gender in sustainability transitions  
Ralitsa Hiteva, Mari Martiskainen

Is there room for poverty (alleviation) in the transitions to sustainability approach? A theoretical discussion  
Mónica Ramos-Mejía, María-Laura Franco-García, Juan M. Jauregui-Becker

**B6 Dialogue session: Scenario modelling and socio-technical analysis: opening up a timely debate about integration and linking strategies to address the governance challenges of sustainability transitions**

[G22]

Convenors: Frans Berkhout, Bruno Turnheim

Panellists: Frank Geels, Jonathan Köhler, Karolina Safarzyńska, Timothy Foxon, Neil Strachan

**B7 Dialogue session: Sustainable campus**

[115]

Convenor: Jake Barnes

Chair: Clare Mackie

Panellists: Carlos Mataix, Laura Grossmann, Jorn Scharlemann

Wednesday 26 August

# AFTERNOON

**14.00–14.45 • Plenary II [Jubilee Large Lecture Theatre]**  
**Keynote: In times of transition: the role of game changers**  
**Jan Rotmans**

**14.45–16.15 • Parallel session C**

<b>C1</b> Plenary follow up – In times of transition: the role of game changers [G22]	<b>C2</b> The interplay of new entrants and incumbents in transition processes [115]	<b>C3</b> Global extensions to the technological innovation systems approach [G31]	<b>C4</b> Urban transitions (II) [135]	<b>C5</b> Multi-level analysis of transitions (II) [G36]	<b>C6</b> Transitions in agricultural systems [G35]	<b>C7</b> Niche protection and protective space [143]
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**16.15–17.15 • [Multiple locations]**  
**Shaping the future transitions research agenda (round 2)**

**17.15–18.15 • Parallel session D**

<b>D1</b> Dialogue session: Out of the theoretical box – the contribution of models to the impact of transition studies [G22]	<b>D2</b> Dialogue session: Sustainable energy transitions as an object of political economy [G31]	<b>D3</b> Dialogue session: Governance of green growth in the energy sector: resilience as a boundary object between SES, STS and TIS thinking [135]	<b>D4</b> SESSION CANCELLED	<b>D5</b> Dialogue session: Policies for sustainable transitions – challenges and lessons for policies at the regional, national and European level [G36]	<b>D6</b> Dialogue session: Sustainability transitions and energy demand – the state of play? [115]	<b>D7</b> Skills development session: What is distinctive about careers in sustainability? [143]
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**Key**

Modelling	Niche
Firm strategy	Governance and politics
Technical innovation system	Other
Urban	
Multi-level perspective	[ ] Location

## 14.45–16.15 Parallel session C

### **C1** Plenary follow up – In times of transition: the role of game changers [G22]

Moderator: John Grin  
Discussants: Geert Wilms,  
Jan-Willem van de Groep,  
Chris Rowland

### **C2** The interplay of new entrants and incumbents in transition processes [115]

Chair: Caetano Penna

The role of new entrants and  
incumbents in cleantech innovation  
Stefano Pedrocchi, Floortje Alkemade,  
Carolina Castaldi

Exploring cross-sectorial dynamics  
and reconsidering regime-niche  
interactions

Markus Steen, Tyson Weaver

Community intermediaries and  
the local embedding of energy  
technologies: a dynamic model and  
case study

Jake Barnes

### **C3** Global extensions to the technological innovation systems approach [G31]

Chair: Marko Hekkert

Global innovation systems and  
sustainability transitions – towards an  
integrative framework  
Bernhard Truffer, Boris Battistini

Exploring internationalization and  
transnational links in technological  
innovation systems

Hakon Endresen Normann, Jens Hanson

Hybrid analytical approaches for  
hybrid technological sectors: the  
case of the Building-Integrated  
Photovoltaics innovation system  
Evangelos Gazis, Chiara Candelise,  
Mark Winskel

### **C4** Urban transitions (II) [135]

Chair: Roman Seidl

Intermediaries and learning in  
sustainability-oriented urban  
transitions: a transdisciplinary case  
study from Stellenbosch Municipality  
Megan Davies, Mark Swilling

Towards urban mobility transitions  
in Seoul: a socio-technical system  
analysis and identification of policy  
options for a breakthrough of cycling  
as a commuting mode

Junhan Kim

### **C5** Multi-level analysis of transitions (II) [G36]

Chair: Lea Fünfschilling

Low-carbon transitions through  
gradual reconfiguration: analysing  
transformations in production and  
consumption in the UK electricity  
system (1990–2014)

Andy McMeekin, Frank W. Geels,  
Mike Hodson

The dynamics of geothermal energy  
technology deployment in the  
Philippines

Katsumasa Hamaguchi, Masaru Yarime

Analysing the transformation pathway  
of Jordan's electricity system  
Georg Holtz, Thomas Fink

### **C6** Transitions in agricultural systems [G35]

Chair: Laurens Klerkx

Processes of structural change in  
agriculture: lessons from and lessons  
for transition theory

F. Hermans, F. Appel, A. Balmann,  
L. Chatalova, C. Sahrbacher, Z. Sun,  
V. Valentinov

Food for the future: reconfiguration or  
transformation of current agro food  
regimes?

Joyce Zwartkruis, Sonia Carvalho  
Ribeiro, Henk Westhoek, Marcel Kok

How the public sector could support  
bioscience innovation in Africa:  
agricultural innovation systems in  
Uganda and Tanzania

Julius Ecuru, Måns Nilsson, Ivar Virgin,  
Pantaleon Chuwa

### **C7** Niche protection and protective space [143]

Chair: Vasileiadou

Development of new energy vehicles  
in China: a case of 'protective space'  
Li Ping, Dennis Zuev, David Tyfield

Learning to shield – policy learning in  
socio-technical transitions  
Wouter Boon, Sjoerd Bakker

Is moving to tenders risky when  
approaching the end of niche  
protection?

Katherina Grashof

## 17.15–18.15 Parallel session D

### **D1** Dialogue session: Out of the theoretical box – the contribution of models to the impact of transition studies [G22]

Convenors: Georg Holtz, Jonathan  
Köhler, Fjalar de Haan  
Chair: Jonathan Köhler  
Panellists: Uwe Schneidewind,  
Derk Loorbach, Floortje Alkemade,  
Fjalar de Haan

### **D2** Dialogue session: Sustainable energy transitions as an object of political economy [G31]

Convenor: Aleh Cherp  
Panellists: Aleh Cherp, Lucy Baker,  
Jessica Jewell, Florian Kern,  
Caroline Kuzemko, Matthew Lockwood,  
Mark Winskel

### **D3** Dialogue session: Governance of green growth in the energy sector: resilience as a boundary object between SES, STS and TIS thinking [135]

Convenors: Claudia R. Binder,  
Romano Wyss  
Panellists: Jeroen van den Bergh, Roman  
Seidl, Markus Meyer

### **D4** SESSION CANCELLED

### **D5** Dialogue session: Policies for sustainable transitions – challenges and lessons for policies at the regional, national and European level [G36]

Convenor: Ulrik Jorgensen  
Panellists: Fred Stewart, Johan Schot

### **D6** Dialogue session: Sustainability transitions and energy demand – the state of play? [115]

Convenors: Jake Barnes and Mari  
Martiskainen  
Panellists: Frank Geels, Andy McMeekin,  
Gill Seyfang

### **D7** Skills development session: What is distinctive about careers in sustainability? [143]

Convenor and Chair: Jonas Torrens  
Andy Stirling, Derk Loorbach,  
Flor Avelino, David Andrew Quist,  
Ana Jakil

# Thursday 27 August

# MORNING

## 09.00–10.30 • Parallel session E

<b>E1</b> <b>System dynamics modelling as a tool for transition research</b> <a href="#">[135]</a>	<b>E2</b> <b>Dialogue session: Experiencing the fifth space – bridging dialogues of transitions between east and west</b> <a href="#">[G35]</a>	<b>E3</b> <b>Research session: Energy-related innovation systems analyses to support political interventions</b> <a href="#">[G22]</a>	<b>E4</b> <b>Research session: Accelerating sustainability transitions in city-regions</b> <a href="#">[155]</a>	<b>E5</b> <b>Re-thinking the multi-level perspective on transitions</b> <a href="#">[G31]</a>	<b>E6</b> <b>Technological innovation systems perspective meets multi-level perspective</b> <a href="#">[G36]</a>	<b>E7</b> <b>Niche development</b> <a href="#">[143]</a>
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
## 10.30–11.00 • Break [\[Atrium\]](#)

## 11.00–12.30 • Parallel session F

<b>F1</b> <b>Modelling approaches to transitions</b> <a href="#">[G36]</a>	<b>F2</b> <b>Patterns in green industry development</b> <a href="#">[G22]</a>	<b>F3</b> <b>Dialogue session: The innovative society</b> <a href="#">[G35]</a>	<b>F4</b> <b>Transitions and urban planning</b> <a href="#">[155]</a>	<b>F5</b> <b>Dialogue session: “We don’t change policies depending on elections” – Transitions and democracy in Europe</b> <a href="#">[135]</a>	<b>F6</b> <b>Different perspectives on the diffusion of low carbon systems and technologies</b> <a href="#">[G31]</a>	<b>F7</b> <b>Dialogue session: Making transitions happen: discussing insights from applying transition theories in practical Climate-KIC initiatives</b> <a href="#">[143]</a>
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## 12.30–13.30 • Lunch [\[Atrium\]](#)

### Key

 Modelling	 Niche
 Firm strategy	 Governance and politics
 Technical innovation system	 Other
 Urban	
 Multi-level perspective	 <a href="#">[ ]</a> Location

09.00–10.30  
Parallel session E

**E1 System dynamics modelling as a tool for transition research**  
[135]

Chair: Frans Berkhout

Smart policies in socio-technical transitions: a system-dynamics model of technological innovation systems  
*Bob Walrave, Rob Raven*

Dynamics of technology platforms: Their influence and significance for sociotechnical transition research  
*George Papachristos*

**E2 Dialogue session: Experiencing the fifth space – bridging dialogues of transitions between east and west**  
[G35]

Convenors and panellists: Lillian Strand, Ashraf Patel, Arjun Shekhar

**E3 Research session: Energy-related innovation systems analyses to support political interventions**  
[G22]

Convenor: Thomas Magnusson  
Chair: Marko Hekkert

System strengths and weaknesses in progressing sustainable technology: the case of Swedish biorefinery development  
*Hans Hellsmark, Johanna Mossberg, Patrik Söderholm and Johan Frishammar*

Lock-in and the need for direction: an analysis of the development and diffusion of electrified heavy vehicles for urban traffic  
*Thomas Magnusson, Christian Berggren*

The importance of informed political direction: An analysis of the Swedish marine energy innovation system  
*Johnn Andersson, Eugenia Perez Vico, Linus Hammar*

**E4 Research session: Accelerating sustainability transitions in city-regions**  
[155]

Chair: Markus Egermann  
Moderator: John Grin

A conceptual framework to study acceleration dynamics in European city-regions  
*Markus Egermann, Florian Kern, Niki Frantzeskaki*

An accelerating sustainability transition in Brighton & Hove? (uneven) progress and challenges ahead  
*Rachael Durrant, Florian Kern, Gordon MacKerron*

Acceleration ahead? Promising approaches and setbacks on the path to a sustainability transition in Dresden  
*Kristin Reiß, Franziska Ehnert, Andreas Blum, Markus Egermann*

**E5 Re-thinking the multi-level perspective on transitions**  
[G31]

Chair: Anne-Marie Coles

Making serious inroads into achieving sustainable development: is strategic niche management/transition management sufficient to transform the industrial state?  
*Nicholas Ashford*

From multiple levels to entangled streams: dynamics of structuration and agency in sociotechnical transformations  
*Andy Stirling, Saurabh Arora*

Entrenchment in transitions: the explicit accounts of systemic dependences  
*Malte B. Rödl, Claes Andersson*

**E6 Technological innovation systems perspective meets multi-level perspective**  
[G36]

Chair: Cian O'Donovan

Prospecting development of sustainable innovations in a context of multiple technology systems: the case of high value platform chemicals from food waste  
*Johanna Ulmanen, Emma Rex and Johan Torén*

Identifying barriers to wind energy diffusion in Colombia: through the lens of an extended TIS function approach  
*Hans-Erik Edsard*

Energy transition in Switzerland – development options for fuel cells and implications for innovation management  
*Jörg Musiolik, Bettina Furrer*

**E7 Niche development**  
[143]

Chair: David Tyfield

Case study analysis of precinct transition tools – learning and information flows influencing future city-scale transformation  
*Wendy Yeomans, Dena Fam, Stuart White*

Governance in niche development for a transition to a new mobility regime  
*Stephen Potter, Alan-Miguel Valdez, Per-Anders Langendahl, Matthew Cook*

Assessing niche development of Net Zero Energy Buildings (NZEB) in India  
*Mansi Jain, Thomas Hoppe, Hans Bressers*

11.00–12.30  
Parallel session F

**F1 Modelling approaches to transitions**  
[G36]

Chair: Jonathan Köhler

Use of participatory modeling in transition governance processes  
*Johannes Halbe, Sampsa Ruutu*

Where will it all start? A model based search for spaces of niche formation for new sanitation systems  
*Eggmann Sven, Truffer Bernhard, Maurer Max*

A macro-evolutionary model of the joint dynamics of technology, finance and energy systems  
*Karolina Safarzyńska, Jeroen C.J.M. van den Bergh*

**F2 Patterns in green industry development**  
[G22]

Chair: Jim Watson

Global development trajectories in the wind and solar sector: how technology-related differences shape the dynamics of international knowledge transfer  
*Rainer Quitzow, Joern Huenteler*

Technological trajectory choice and diversification of firms in emerging industries under market-pull policy: The case of China's electric vehicle  
*Lei Xu, Henry Lee, Jun Su*

Sooner, faster: deployment of wind power in latecomer countries  
*Jorrit Gosens, Fredrik Hedenus, Björn A. Sandén*

**F3 Dialogue session: The innovative society**  
[G35]

Convenors: Jake Barnes, Rachael Durrant, Sabine Hielscher, Rebecca White, Flor Avelino  
Chair: Jake Barnes  
Panellists: Cat Fletcher, Irene Soler

**F4 Transitions and urban planning**  
[155]

Chair: Peter Walsh

Challenges and opportunities for sustainability transition foresight in urban planning practice: a case study of the 'Suwon 2030' basic plan and vision  
*Kyu-young Han, Kyung A Kim*

EcoCities' model districts – towards an analytical framework  
*Phillipp Späth*

Urban labs for urban governance  
*Maya Essebo, Rene Kemp, Christian Scholl, Per-Anders Hillgren, Mette Agger Eriksen, Anna Seravalli*

**F5 Dialogue session: "We don't change policies depending on elections" – transitions and democracy in Europe**  
[135]

Convenors: Cian O'Donovan, Phil Johnstone  
Chair: Hannah Lownsbrough  
Panellists: Guppi Bola, Tina Caballero

**F6 Different perspectives on the diffusion of low carbon systems and technologies**  
[G31]

Chair: Matthias Weber

Technology competition and variety: when does it take longer to diffuse?  
*George Papachristos, Jeroen C.J.M. van den Bergh*

Adoption, upscaling, replication/circulation, and societal embedding: four theoretical models of technology diffusion applied to biomass district heating systems in Austria (1979–2013)  
*Victoria Johnson, Frank W. Geels*

Energy performance contracting for the diffusion of green-manufacturing technologies in China: impasses and trade-offs between key stakeholders  
*Yuan Zhou, Peng Liu, Lan Xue*

**F7 Dialogue session: Making transitions happen: discussing insights from applying transition theories in practical Climate-KIC initiatives**  
[143]

Convenors: Fred Steward, Anna J. Wieczorek  
Chair: Fred Steward  
Panellists: Anna J. Wieczorek, Ian Short, Lydia Sterrenberg, Aled Thomas, Alice Bauer, Cristian Matti, Javier de Vicente

Thursday 27 August

# AFTERNOON

**13.30–14.15 • Plenary III [Jubilee Large Lecture Theatre]**  
**Keynote: Transformations towards sustainability –  
transformations in global governance for sustainability**  
**Frank Biermann**

Sponsored by  
Future Earth

## 14.15–15.45 • Parallel session G

<b>G1</b> Plenary follow up – Transformations in global governance for sustainability [G22]	<b>G2</b> Transitions and new business models [G35]	<b>G3</b> The role of complementarities in transitions [143]	<b>G4</b> Research session: Mobilizing the urban in sustainability transitions [G31]	<b>G5</b> Struggles, political conflicts and power in transition processes [155]	<b>G6</b> Spatial perspectives on transitions [135]	<b>G7</b> Governance of sustainability transitions (I) [G36]
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**15.45–16.45 • [Multiple locations]**  
**Shaping the future transitions research agenda (round 3)**

## 16.45–18.15 • Parallel session H

<b>H1</b> Exploring transition pathways [G31]	<b>H2</b> Dialogue session: Energy transition research in Asia – useful for practitioners of development cooperation? [155]	<b>H3</b> Research session: Low carbon transition in China: Prospects, politics and practices [G36]	<b>H4</b> Dialogue session: Sustainability transitions in Brighton [135]	<b>H5</b> Policy for transitions and innovation [G22]	<b>H6</b> Social Innovation for transitions [135]	<b>H7</b> Governance of sustainability transitions (II) [143]
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**19.00 • Dinner and party [Dine Central, Bramber House]**

### Key

 Modelling	 Niche
 Firm strategy	 Governance and politics
 Technical innovation system	 Other
 Urban	
 Multi-level perspective	[ ] Location

## 14.15–15.45 Parallel session G

### G1 Plenary follow up – Transformations in global governance for sustainability [G22]

Chair: Frans Berkhout  
Discussants: Melissa Leach,  
Ioan Fazey, Adriana Allen

### G2 Transitions and new business models [G35]

Chair: Barbara van Mierlo  
Three is a crowd? Exploring the  
potential of crowdfunding for  
renewable energy in the Netherlands  
E. Vasileiadou, J. C. M. Huijben,  
R.P.J.M. Raven  
Using strategic niche management  
theory for studying business model  
innovation  
Liina Joller

### G3 The role of complementarities in transitions [143]

Chair: Efstathios Arapostathis  
Complementarities in socio-technical  
transitions: framework and examples  
from the energy sector  
Jochen Markard, Volker Hoffmann  
Complementarities and relatedness  
in established and emerging path  
inter-linkages  
Jens Hanson, Markus Steen,  
Tyson Weaver, Håkon Normann,  
Gard H. Hansen

### G4 Research session: Mobilizing the urban in sustainability transitions [G31]

Convenors: Ralitsa Hiteva,  
Fiona Marshall  
Chair: Gordon MacKerron  
Discussants: Colin Nolden,  
Jonas Torrens  
The nexus as an ecology of practices  
in urban transitions  
Saurabh Arora, Ralitsa Hiteva,  
Fiona Marshall  
From protected space to systemic  
change: Investigating acceleration  
dynamics of urban sustainability  
transitions in the Belgian city of Genk  
Felix Spira, Erika Meynaerts,  
Leen Gorissen, Niki Frantzeskaki,  
Pieter Valkering  
Accelerating urban environmental  
sustainability transitions – insights  
from Stockholm, Sweden  
Borgström, S., M. Schewenius,  
M. Svensdotter, M. Tuvendal

### G5 Struggles, political conflicts and power in transition processes [155]

Chair: Jessica Jewell  
Changing the moral landscape:  
examining the role of moral agency in  
sustainability transitions  
Nino Antadze, Katharine McGowan  
Towards a conceptualization of power  
and micro-level politics in energy  
transitions  
Helene Ahlborg  
Smart energy systems – next steps in  
renewable energy strategies forced to  
cross sector boundaries?  
Ulrik Jørgensen

### G6 Spatial perspectives on transitions [135]

Chair: Philipp Späth  
Industrial upgrading through  
unrelated diversification: the  
emergence of the Chinese solar PV  
industry  
Christian Binz, Laura Diaz-Anadon  
Geographical context of sustainability  
transitions: a case of Gandhinagar  
model solar city in India  
Thounaojam Somokanta  
Transitioning to a mature cycling  
culture: conceptual reflections and an  
empirical illustration  
Peter Pelzer, Marco te Brömmelstroet,  
Jacco Farla, Rob Raven

### G7 Governance of sustainability transitions (I) [G36]

Chair: Karoline Rogge  
Adapting, transforming, orchestrating:  
Agency capacities for resilience  
governance in Rotterdam  
Katharina Hölscher, Niki Frantzeskaki,  
Derk Loorbach  
Sustainability transitions: taking  
stock of governance and policy  
considerations across three analytical  
approaches  
Björn Nykvist, Bruno Turnheim  
New governance forms as a key factor  
for sustainable land management  
Benjamin Nölting, Carsten Mann

## 16.45–18.15 Parallel session H

### H1 Exploring transition pathways [G31]

Chair: Frank Geels  
Modelling long run transition  
pathways in mobility with the  
MATISSE-KK model: low carbon cars or  
alternative lifestyles?  
Jonathan Köhler, Florian Senger,  
Mike Hodson, Bruno Turnheim  
How energy system modelling can  
learn from transitions research –  
insights into modelling practice  
Will McDowall

### H2 Dialogue session: Energy transition research in Asia – useful for practitioners of development cooperation? [155]

Convenor: Verena Streitferdt  
Chair: Rob Raven  
Panellists: Verena Streitferdt,  
Jens Marquardt, Anna Wieczorek,  
Saurabh Arora, Ivan Nygaard,  
Kilian Topp, Dorit Lehr

### H3 Research session: Low carbon transition in China: prospects, politics and practices [G36]

Convenors: Adrian Ely, Sam Geall, Ping Li,  
David Tyfield, Frauke Urban, John Urry  
Low carbon innovation in China:  
from overlooked opportunities and  
challenges to transitions in power  
relations and practices  
David Tyfield, Adrian Ely, Sam Geall  
Genetic modification and agro-  
ecology: exploring political  
contestation around agricultural  
transitions in China  
Adrian Ely and Sam Geall  
Pathways towards renewable energy  
in China: Solar transitions in the  
making  
Frauke Urban and Sam Geall  
Low carbon e-mobility transition in  
China: Stasis and dynamism  
Dennis Zuev, Ping Li, David Tyfield,  
John Urry

### H4 Dialogue session: Sustainability transitions in Brighton [135]

Chair: Gordon MacKerron  
Participants: a range of local  
stakeholders

### H5 Policy for transitions and innovation [G22]

Chair: Fred Steward  
Rationale for policy interventions in  
sustainability transitions  
Timothy Foxon  
Grand societal challenges and  
innovation in public services –  
identifying critical path creation  
processes from an innovation in  
sustainable transport  
Rannveig Røste  
Picking winners' and socio-technical  
transitions: Theory and practice of  
targeted science, technology and  
innovation policies from an economics  
perspective  
Mariana Mazzucato, Caetano C.R. Penna

### H6 Social Innovation for transitions [135]

Chair: Rob Byrne  
Transitions towards 'new economies'?  
A transformative social innovation  
perspective  
Flor Avelino, Julia Wittmayer,  
Bonno Pel, Carla Cipolla, Adina Dumitru,  
Alex Haxeltine, Sabine Hielscher, René  
Kemp, Iris Kunze, Paul Weaver  
Do niches need a business model?  
Empowering social innovation for  
renewable energy through the  
introduction of notions of social  
entrepreneurship  
Proka, A., Hisschemoller, M., Loorbach, D.  
Business models as drivers of a low  
carbon power system transition  
Martin E. Wainstein, Adam G. Bumpus

### H7 Governance of sustainability transitions (II) [143]

Chair: John Grin  
Governance of sustainability  
transitions in Swedish automobility:  
the cases of safety and climate  
Gustav Sjöblom  
The financial crisis as a 'branching  
point' in the Greek energy regime:  
governing uncertainties, policies and  
practices  
Stathis Arapostathis, Yiannis Fotopoulos,  
Peter J G Pearson, Tim Foxon,  
Interactions of multi-level institution  
evolution for sustainability transitions  
– evidence from China's University  
Collaborative Innovation Program  
Liang Mei, Jin Chen

# Friday 28 August

# MORNING

## 09.00–10.30 • Parallel session I

<b>I1</b> <b>Strategic niche management experiments and trials</b> [G22]	<b>I2</b> <b>Research session: The sharing economy as a sustainability transition?</b> [G36]	<b>I3</b> <b>Research session: Thinking with history about transitions</b> [115]	<b>I4</b> <b>Research session: Cultures of transitions: Using the EC framework to examine socio- technical transitions</b> [143]	<b>I5</b> <b>Research session: Looking at transitions from different scientific approaches</b> [135]	<b>I6</b> <b>Discursive perspectives on transition processes</b> [G35]	<b>I7</b> <b>The role of users and consumers in transitions</b> [G31]
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## 10.30–11.00 • Break [Atrium]

## 11.00–12.30 • Parallel session J

<b>J1</b> <b>Institutional perspectives on transition processes</b> [G22]	<b>J2</b> <b>Research session: Users, niches &amp; regimes: persistence, learning and empowerment</b> [G35]	<b>J3</b> <b>Research session: Political economy of sustainable energy transitions</b> [135]	<b>J4</b> <b>Research session: Sustainable transitions in developing countries</b> [G31]	<b>J5</b> <b>Research session: Discontinuity in sustainable transitions and socio-technical systems: exploring 'flip sides' to innovation and strategic niches</b> [G36]	<b>J6</b> <b>Niche empowerment and scaling up</b> [115]	<b>J7</b> <b>Policy and transition experiments</b> [143]
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## 12.30–13.30 • Lunch [Atrium]

### Key

 Modelling	 Niche
 Firm strategy	 Governance and politics
 Technical innovation system	 Other
 Urban	
 Multi-level perspective	[ ] Location



09.00–10.30  
Parallel session I

**I1 Strategic niche management experiments and trials [G22]**

Chair: *Ulrik Jørgensen*

Unpacking sustainabilities in socio-technical transitions. Solar photovoltaic and urban mobility experiments in India and Thailand  
*Rob Raven, Bipashyee Ghosh, Anna J. Wieczorek, Andy Stirling*

Strategic niche portfolios for the early-market stage: Plugged-in places and electric vehicle innovation in Milton Keynes

*Alan Miguel Valdez*

Cycling the city, re-imagining the city: Envisioning urban sustainability transitions in Thailand  
*Frans Sengers*

**I2 Research session: The sharing economy as a sustainability transition? [G36]**

Chair: *Peter Pelzer*

Panellist: *Bernhard Truffer*

Fair-share cities: transitioning to more sustainable eating?  
*Anna R. Davies*

Different niches in different places? Exploring the geographies of peer-to-peer and traditional car-sharing  
*Toon Meelen, Stephan Hobrink, Koen Frenken*

Who shares what? Willingness to participate in multiple sharing economies  
*Toon Meelen, Lars Bocker, Pieter van de Glind, Koen Frenken, Mendel Giezen*

**I3 Research session: Thinking with history about transitions [I15]**

Convenors: *Valeria Arza, Mariano Fressoli, Anabel Marin, Patrick van Zwanenberg*

A history of technology networks and the Lucas Plan  
*Adrian Smith*

Technology for autonomy and resistance. The appropriate technology movement in South America  
*Mariano Fressoli, Elisa Aroun*

Building sustainable pathways on the periphery: Latin American thought on structuralism, development and the environment in the 1970s  
*Patrick van Zwanenberg, Anabel Marin, Valeria Arza*

**I4 Research session: Cultures of transitions: Using the EC framework to examine socio-technical transitions [I43]**

Convenor: *Debbie Hopkins*  
Commentator and chair: *Alison Mohr*

The mobility cultures of generation Y: a crack in the automobility regime?  
*Debbie Hopkins*

The rise of PV: opportunities and barriers for socio-technical transition  
*Rebecca Ford, Janet Stephenson, Michelle Scott, John Williams, Ben Wooliscroft, David Rees, Geoff King*

The Energy Cultures Framework as a tool for designing sustainable energy services in the Global South  
*Anna Clements, Malcolm McCulloch, Alison Mohr*

**I5 Research session: Looking at transitions from different scientific approaches [I35]**

Discussant: *Georg Holtz*  
Convenor and chair: *Andries Hof*

Comparing future patterns of energy system change in 2°C scenarios with historically observed rates of change  
*Mariësse van Sluisveld, Mathijs Harmsen, Nico Bauer, David McCollum, Keywan Riahi, Massimo Tavoni, Detlef van Vuuren, Charlie Wilson, Bob van der Zwaan*

Green niche meets interconnected regimes: how smart meters interact with supply, network and demand regimes in the German electricity system  
*Karoline S. Rogge, Nele Friedrichsen, Barbara Schlomannbento*

Evaluating sustainability transitions pathways: bridging analytical approaches to address governance challenges  
*Bruno Turnheim, Holger Berg, Frans Berkhout, Frank, Andries Hof, Andy McMeekin, Björn Nykvist, Detlef Van Vuuren*

**I6 Discursive perspectives on transition processes [G35]**

Chair: *Jacco Farla*

Competing discursive storylines during socio-technical transitions  
*Cameron Roberts*

The use of discourse analysis in transition studies: a systematic review  
*Roel van Veen, Peter A. Tamas, Erik van Slobbe, Laurens Klerkx*

Of old stories and new lock-ins – mapping energy narratives in Tanzania  
*Lukas Hermwille, Jonas van der Straeten*

**I7 The role of users and consumers in transitions [G31]**

Chair: *Karoline Augenstein*

Conceptualizing the active role of users in shaping transitions  
*Johan Schot, Laur Kanger*

Refining the product legitimation framework using an empirical case study: the legitimation of electric boating  
*Sarah Bork, Jan P.L. Schoormans, Sacha Silvester, Peter Joore*

Transitions in retail systems: market devices, user practices and the emergence of new retail formats  
*Athena Piterou*

11.00–12.30  
Parallel session J

**J1 Institutional perspectives on transition processes [G22]**

Chair: *Timothy Foxon*

Sustainability transitions as processes of institutional change – a theoretical elaboration  
*Lea Fuenfschilling, Bernhard Truffer*

Transforming infrastructure: the role of investment behaviour. A study of increased investments in central electricity grids in Norway from 2009  
*Ragnhild Bjelland-Hanley, Olav Wicken, Allan Dahl Andersen*

Cities as laboratories of socio-ecological transition: the transformative role of institutional diversification  
*Thomas Sauer*

**J2 Research session: Users, niches and regimes: persistence, learning and empowerment [G35]**

Convenor: *Anton Sentic*  
Chair and discussant: *Fred Steward*

Users' role in regime destabilisation: renewable energy and electricity grid transformation  
*S.R. Peters, A-M. Coles*

Structure and agency in urban transport governance – the case of cycling in London  
*F. Paschek, P. Ieromonachou*

The development of combined heat and power (CHP) in the United Kingdom: a case history of niche failure and resilience  
*A. Sentic*

**J3 Research session: Political economy of sustainable energy transitions [I35]**

Chair: *Jessica Jewell*  
Commentator: *Mark Winskel*

Three perspectives on energy transitions in Germany and Japan  
*Aleh Cherp*

The political economy of energy transitions: Demand management in Germany and the UK  
*Caroline Kuzemko*

Renewable energy transformation or fossil fuel backlash? Why some energy transitions are more successful than others  
*Espen Moe*

**J4 Research session: Sustainable transitions in developing countries [G31]**

Convenor: *Elmer Hansen*  
Chair: *Ivan Nygaard*

Studying sustainability transitions in developing country contexts: a critical literature review through development studies lens  
*Henny Romijn, Anna J. Wieczorek*

Analysing bottlenecks and drivers for the setup of a biogas innovation system in Ethiopia, using an adapted TIS approach  
*L. Kamp*

Private sector investment in the biofuel value chain in Ghana seen in an innovation system perspective  
*I. Nygaard*

Sustainability transitions in the making in Sub Saharan Africa: the role of platforms as 'hybrid forums'  
*L. Klerkx, B. van Mierlo*

**J5 Research session: Discontinuity in sustainable transitions and socio-technical systems: exploring 'flip sides' to innovation and strategic niches [G36]**

Convenor: *Phil Johnstone*  
Chair: *Rob Byrne*  
Discussant: *Karoline Rogge*

The discontinuation of socio-technical regimes – transition by 'deconstruction' of actor-networks  
*Sebastian Hoffmann, Johannes Weyer, Jessica Longen*

Continuous discontinuation – the DDT ban revisited  
*Alix Levain, Pierre-Benoit Joly, Marc Barbier, Vincent Cardon, François Dedieu, Fanny Pellissier*

Enacting discontinuity – what's useful and what's cumbersome  
*Peter Stegmaier*

Exploring discontinuity through a comparison of German and UK nuclear power trajectories  
*Phil Johnstone, Andy Stirling*

**J6 Niche empowerment and scaling up [I15]**

Chair: *Rob Raven*

Niche empowerment through knowledge exchange and translation in science-industry collaborations  
*Annette Bos, Megan Farrelly*

The scaling up of neighbourhood care in the transition to sustainable healthcare  
*Suzanne van den Bosch, Françoise Johansen, Anne van Strien*

The politics of system innovation for emerging technologies: How does local agency dynamics affect the uptake of off-grid renewable electricity in rural Chile?  
*Jose Opazo*

**J7 Policy and transition experiments [I43]**

Chair: *Florian Kern*

Opening the other black box: policy-making and policy coordination in the context of sustainability transitions in Austria  
*Budde, B. Weber, M. Hartmann, C., Niederl, A., Polt, W.*

Strategic experiments in climate governance- Lessons from a case-study review of transition and policy studies  
*P. Kivimaa*

Navigation and governance in Danish transition processes towards a low-carbon society  
*Michael Jørgensen, Ulrik Jørgensen, Jens Stissing Jensen*

Friday 28 August

# AFTERNOON

## 13.30–14.30 • Parallel session K

<b>K1</b> Agent-based modelling as a tool for transition research [135]	<b>K2</b> The role of learning and evaluation in transitions [G35]	<b>K3</b> Technological innovation systems [G22]	<b>K4</b> Dialogue session: Sustainability transitions in the making: from analysis to action [115]	<b>K5</b> Policy support for sustainability transitions [G31]	<b>K6</b> Dialogue session: The role of civil society in sustainability transitions [143]	<b>K7</b> Big transitions [G36]
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## 14.30–16.00 • Parallel session L

<b>L1</b> Dialogue session: Policy studies meets transition studies: how do policy processes and transition dynamics co-evolve [143]	<b>L2</b> Transformations of the electricity grid [135]	<b>L3</b> Public participation, public engagement and transitions [G31]	<b>L4</b> Regime destabilisation, regime tensions and the discontinuation of sociotechnical regimes [G36]	<b>L5</b> Research session: Sustainability transitions and wider transformative change, historical roots and future pathways [G22]	<b>L6</b> Practice theory and transitions research [G35]	<b>L7</b> Political economy perspectives on sustainability transitions [115]
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**16.00–17.00 • Plenary IV [Jubilee Large Lecture Theatre]**  
**Reflections on conference and research agenda**  
**Convenors: Jonas Torrens and Elsie Onsongo**

**17.00 • Farewell drinks and canapés [Jubilee Atrium]**

### Key

 Modelling	 Niche
 Firm strategy	 Governance and politics
 Technical innovation system	 Other
 Urban	
 Multi-level perspective	[ ] Location

## 13.30–14.30 Parallel session K

### **K1** Agent-based modelling as a tool for transition research [135]

Chair: Floortje Alkemade

Active social acceptance, technology diffusion and policy strategies: an agent-based model of investment in distributed electricity production  
*R.S. Seidl, M. Paier, D. Schartinger, K. Kubeczko*

Transitions to low carbon ship propulsion technologies including wind, simulated with an agent-based model using evolutionary approaches  
*Florian Senger, Jonathan Köhler*

### **K2** The role of learning and evaluation in transitions [G35]

Chair: Laur Kanger

Reflexivity and learning in the context of system innovation; prying loose entangled concepts  
*Barbara Van Mierlo, PJ Beers*

You cannot manage what you don't measure": an evaluation tool for transition processes  
*Lize Van Dyck, Kris Bachus*

### **K3** Technological innovation systems [G22]

Chair: Jens Hanson

Catching up is not easy: a comparative analysis of biogas technology development in Germany and the UK  
*Melf-Hinrich Ehlers, Jochen Markard*

Direction, legitimacy and structuration in Technological Innovation Systems upscaling – insights from roadmaps for deepwater offshore wind energy  
*Nuno Bento, Margarida Fontes*

### **K4** Dialogue session: Sustainability transitions in the making: from analysis to action [115]

Convenors: Adrian Ely, David Tyfield, Micha Narberhaus, Anna Birney

### **K5** Policy support for sustainability transitions [G31]

Chair: Hans Hellsmark

Sustainable Germany from 2030 to 2050: How do we want to live in the future? And how do we get there?  
*Sylvia Veenhoff*

Sustainability transition in urban-industrial China: a case study of China's solar thermal energy  
*Zhen Yu*

### **K6** Dialogue session: The role of civil society in sustainability transitions [143]

Convenors: Niki Frantzeskaki, Adina Dumitru  
Panellists: Julia Wittmayer, Flor Avelino, Dr. Dominik Reusser, Alessandra Prampolini, Holger Berg, Laura Echternacht, Melanie Lukas, Felix Spira, Leen Gorissen

### **K7** Big transitions [G36]

Chair: Johan Schot

The great transformation and the making of transition  
*Claus Seibt*

Beyond current transitions theory: facing the next great transition  
*Fjalur J de Haan, Jan Rotmans*

## 14.30–16.00 Parallel session L

### **L1** Dialogue session: Policy studies meets transition studies: how do policy processes and transition dynamics co-evolve [143]

Convenors: Karin Ingold, Paula Kivimaa, Bernhard Truffer, Florian Kern  
Chairs: Bernhard Truffer, Florian Kern  
Panellists: Paula Kivimaa, John Grin, Karin Ingold, Paul Cairney

### **L2** Transformations of the electricity grid [135]

Chair: Gordon Mackerron

Transformation of transmission infrastructure: challenges and prospects for HVDC technology  
*Allan Dahl Andersen, Jochen Markard*

Lines of tension: transformations around a smart grid technology project demonstrating the insertion of wind energy into the electricity grid  
*Le Renard*

### **L3** Public participation, public engagement and transitions [G31]

Chair: Rob Byrne

Public participation and environmental education for sustainable transitions. Grassroots experiences on responsible consumption developed in Galicia (Spain)  
*Lema Blanco*

Collective and participatory action for sustainability transitions: Exploring role of field configuring events, trade shows and hybrid forums  
*Suyash Jolly, Nissila Heli*

Framing emerging technologies; persuasiveness and credibility of arguments about carbon capture and storage  
*Kevin P.F. Broecks, Frank J. van Rijnsvoever, Sander van Egmond, Marko P. Hekkert*

### **L4** Regime destabilisation, regime tensions and the discontinuation of sociotechnical regimes [G36]

Chair: Bruno Turnheim

Destabilization of the fossil energy regime in the Port of Rotterdam – introducing a framework for diagnosing regime (in)stability  
*Rick Bosman, PJ Beers, Derk Loorbach, Jan Rotmans*

A new regime and then what? Cracks and tensions in the socio-technical regime of the Swedish heat energy system  
*Adis Dzebo, Björn Nykvist*

Alternative Food Networks as vectors for the sustainable relocalization of food systems: a review of capacities, innovations and public policy in IDF  
*Raphaël Stephens, Marc Barbier*

### **L5** Research session: Sustainability transitions and wider transformative change, historical roots and future pathways [G22]

Convenor: Andy Stirling  
Discussant: Johan Schot

Pathways in and out of maize production in Kenya  
*John Thompson*

Pathways approaches to waste and food services in Peri-urban Delhi  
*Fiona Marshall, Pritpal Randhawa, Pranav Desai, Ravi Agrawal*

Energising communities: a critical perspective on grassroots innovation pathways  
*Adrian Smith*

Seeds and sustainability in China: the role of regulation in transformative pathways  
*Adrian Ely*

### **L6** Practice theory and transitions research [G35]

Chair: Noam Bergman

Move your money? Sustainability transitions in regimes and practices in the UK retail banking sector  
*Gill Seyfang, Amber Gilbert-Squires*

Transition design: The importance of everyday life and lifestyles as a leverage point for sustainability transitions  
*Gideon Kossoff, Cameron Tonkinwise, Terry Irwin*

Linking TIS analysis with adoption and social practice research to address challenges of "sustainable energy for all" in East Africa  
*Susanne Wymann von Dach, Albrecht Ehrensperger, Emily N. Mutea, Ephraim Camenzind, Boniface P. Kiteme*

### **L7** Political economy perspectives on sustainability transitions [115]

Chair: Caroline Kuzemko

The political economy of sustainability transition in developing countries: the case of energy transition in South Africa  
*Manisha Gulati, Saliem Fakir*

Socio-technical transitions, structural change and development: transforming natural resource-based industries in Latin America?  
*Anabel Marin, Patrick van Zwanenberg*

Transition and crisis: seeing 'sociotechnical regimes' and 'regimes of accumulation' together.  
*Larry Reynolds*

# Poster session

Wednesday 26 August • 12.00–13.00  
[Jubilee Atrium]

A cross-fertilization among transition town movement and the School of Engineering and Architecture of Bologna  
*Cristiano Bottone*

Resistance and resurgence: exemplary pathways in the Australian energy transitions landscape  
*Kerry Carmody*

Agency in socio-technical transition processes  
*Diego Chavarria*

Governments' role in transition: which institutional factors stimulate or hinder governments to play an innovative role in sustainable transition processes?  
*Ann Crabbe*

Organized (ir)responsibility and the development smart grids, a first exploration  
*Marloes Dignum*

European energy integration and transmission grids: a knowledge networks  
*Arne Fevolden*

The politics of sustainable energy transitions  
*Adrian Ford*

Sector-level tests of the feasibility of green growth  
*Ardjan Gazheli*

The entrepreneurial academic: the role and limitations of academia in developing China's nascent sector for advanced bio-energy technologies  
*Jorrit Gosens, Hans Hellsmark, Tomas Käberger, Li Liu, Björn Sandén, Shurong Wang*

Understanding the citizens-professional nexus in water management: tensions, dynamics and navigational strategies for the management of sustainable urban transitions  
*Volker Hoffmann*

Success factors of backcasting processes applied on low-carbon transitions  
*John Holmberg*

Transition to sustainable fertilization – a practices approach  
*Suvi Huttunen, Peter Oosterveer*

Towards agroecological transition in the Rwenzori region of Uganda  
*Ellinor Isgren*

The effect of near-term policy choices on long-term greenhouse gas transformation pathways  
*Steven Isley*

Blocking mechanisms in technological innovation systems – a case study on distributed photovoltaic technology in the Western Cape Province of South Africa  
*Michael Kriechbaum*

Transitions towards sustainability – a practical typology for cities and regions  
*Daniel J. Lang, Christopher Luederitz, Niko Schöpke, Arnim Wiek*

Climate change and the ongoing fight-back of the Australian coal industry (1980–2014): an application and extension of the dialectic issue LifeCycle (DILC) model  
*Marc Hudson*

New policy practices for a challenge-led, broad-based model of transformative innovation. Transition cities and the reconfiguring of situated sociotechnical networks  
*Christian Matti, Fred Steward*

The process of sociotechnical transition to ecoinnovation from multilevel relationship: the case of the programs of Itaipu Brazil  
*Cunha Mendonca*

The impact of systemic hinders on the deployment of citizen-led projects in renewable electricity production – a comparison between France, Germany and Sweden  
*Ingrid Mignon, Andreas Rüdinger*

Energy efficiency in buildings in the city of Helsinki – a long run sustainability transition  
*Mikael Hilden*

A framework for the governance of long-term techno-institutional lock-out in urban energy infrastructure transition  
*Dehdarian Mohammad Amin*

Radical innovations by industry incumbents: the case of the Swedish pulp and paper industry  
*Ksenia Onufrey*

Sustainability transitions, consumption practices, and lifestyles: towards a framework and a backcasting methodology  
*Jaco Quist*

Why do they believe in it? An investigation into the determinants of policy mix credibility for the case of manufacturers of renewable power generation technologies in Germany  
*Karoline Rogge, Elisabeth Dütschke*

A policy niche for transition: the case of Korean innovation policy for social problem-solving  
*Jieun Seong*

Urban gardening drives sustainability transitions in Milan (Italy)  
*Girogia Silvestri*

Micro-dynamics and institutional change in regional transition paths to sustainability  
*Simone Strambach*

Multi-sectoral perspectives on sustainability transitions and regional sustainability pathways – examples from air quality management in the EU and Euregio Meuse-Rhine  
*Paul Szabo-Muller*

Overlaps in sustainability transition and policy change: a South African case of green economy policies  
*Mapula Tshangela, Mark Swilling*

'Responsible' innovation of bioethanol in Brazil: from failing systems to phronetic reimagining  
*David Tyfield*

Participative modelling for an inter-subjective understanding of transition dynamics in regional energy systems (TREES)  
*Silvia Ulli-Ber*

Helping transitions thinking enter organised city planning reform episodes  
*Peter Walsh*

Resilient niches for long-term sustainability transitions: creating a path for rainwater harvesting in the UK  
*Sarah Ward, Peter Melville-Shreeve and David Butler*

Fuzzy cognitive mapping to analyze the cognitive dimension of the stalled energetic building refurbishment transition in Germany  
*Sebastian Weide*

# Social programme

Alongside the usual opportunities to network and socialise, we have planned some optional activities for your health and enjoyment.

## Morning exercise activities

Each morning there is a planned exercise activity. Weather permitting these activities will take place outside. Each activity will meet in front of the main doors of the Jubilee building.

### Tuesday 07.30 Hatha yoga

**What is Hatha Yoga?** It is a physical practice with the aim of purifying, cleansing and perfecting the physical body, leading to a sense of well-being in body and mind.

**What can I expect?** In this early morning session, focus will be on some stretching and some stronger postures, leading up to a short routine. A breathing technique will be taught at the beginning, to use during the practice, which will help you to maintain your energy and focus. It is hoped the practice will have helped you to feel relaxed but the relaxation at the end will be very short due to the nature of the day!

**What do I need to bring?** Wear loose clothing and enough layers (if practising outside); feet should be bare and avoid wearing loose or overly tight jewellery as this can get in the way of your practice. Other equipment will be provided.

*Please note that this is a general class and may not be suitable in some cases of severe disability and is not designed with pregnancy in mind. If in doubt, please seek the advice of the yoga teacher prior to taking part (v.thomas@sussex.ac.uk).*

### Wednesday 07.30 University of Sussex campus boundary run

This light run will take you around the beautiful and delightful University of Sussex campus perimeter, across a diversity of terrains.

Distance = 3 km/1.8 miles

Time = 20–40 minutes run

Level = intermediate

**What do I need to bring?** Please wear appropriate running footwear as the ground conditions can be difficult at times.

The run will be led by Phil Johnstone

### Friday 07.30 Chi-gung

This session consists of breathing exercises and stance work, which are used to relieve stress, improve concentration, strengthen and nourish internal organs and to teach you how to channel your body's own energy, its chi, into a movement or part of your body.

**What do I need to bring?** Wear loose clothing and enough layers (if practising outside); feet should be bare and avoid wearing jewellery as this can get in the way of your practice.

The session will be taught by Matt Gross, a 4th degree black belt and Nam Pai Chuan kung fu instructor with 20 years experience.

**If you wish to attend any of these sessions, please do sign up at the registration desk, in Jubilee Building.**

Places are limited and will be allocated on a first come, first served basis.

For the beach volleyball and BBQ evening you will need to pay when signing up to the activity.

## Evening entertainment

### Tuesday 19.30 Dinner

An informal dinner

### Wednesday 19.30 Free evening to explore Brighton

## Optional Beach volleyball and BBQ evening

If you've never played before, then even better – you'll love it. Head down to the beach enjoy a BBQ dinner and play beach volleyball on fine golden sand.

**What do I need to bring?** Wear loose clothing and enough layers to keep you warm when not playing, or in case the weather is inclement.

**The fun starts at 19.30.** Courts 5 and 6 are booked from 20.00–22.00, plus court 4 from 21.00–22.00.

This activity costs £10, to be paid in advance and includes court hire, a drink, and burger, sausage (or vegetarian equivalent) plus two salads. Only 50 places are available and they will be allocated on a first-come first-served basis.

**Location:** The Clubhouse, Yellowwave Beach Sports Venue, 299 Madeira Drive, Brighton, BN2 1EN

### Thursday 19.00 Conference dinner and party

Three course sit-down dinner, followed by traditional English barn dance and then a DJ set by SPRU's very own DJ Phil Harmonic.

# Practical information

## Venue

All sessions will take place in the Jubilee Building, at the University of Sussex.

Lunch will also be served in the Jubilee Building.

Dinner on Tuesday and Thursday evening will be served at Dine Central, within the Conference Centre, Bramber House.



## Connectivity

The Conference's network available throughout the campus requires no authentication apart from a **password**.

The password for seven days from 08.00 on 25 August 2015 is a *ridiculously random* selection of three words.

### Password

(all lowercase with normal spaces)

## flap our aquarius

1. Go to the wifi settings on your device to connect to wifi in the normal way and choose **Conferences** from the list of available networks

2. When asked for the password, type in the password.



## Twitter

Please join the conversation about the conference on Twitter:

**#IST2015**

For live tweets at plenary sessions and general updates, follow:

**@SPRU**

For further information please visit the IST conference website:

**[www.ist2015.org](http://www.ist2015.org)**

## Organising committee

Conference chair, Professor Johan Schot is grateful to Frans, Bernhard, Florian and Jonas for their input and support as members of the programme committee, and to advisors Paula and Jonathan for their help. Of course, the conference wouldn't go ahead without the dedicated work of the organizational team: Nora Blascok, Pip Bolton and Charlotte Humma.

The conference is sponsored by SPRU (Science Policy Research Unit) at the University of Sussex.

Founded in 1966 by Christopher Freeman, SPRU is internationally recognised as a leading centre of research on science, technology and innovation policy. As part of SPRU's 50th anniversary next year, we will be hosting a major conference, focused on transforming innovation, from 7-9 September 2016 at the University of Sussex.

Alongside the departments of Business and Management and Economics, SPRU is part of the School of Business, Management and Economics. The School provides leadership in the development and dissemination of sustainable business and management practice, informed by sound economic logic and a deep understanding of innovation and policy making.

## Programme committee

Johan Schot – Chair

Frans Berkhout

Bernhard Truffer

Florian Kern

Jonas Torrens

Jonathan Kohler – Special advisor on quantitative modelling

Paula Kivimaa – Programme advisor

The programme committee has been assisted by Jake Barnes, Nora Blascok, Pip Bolton and Charlotte Humma.

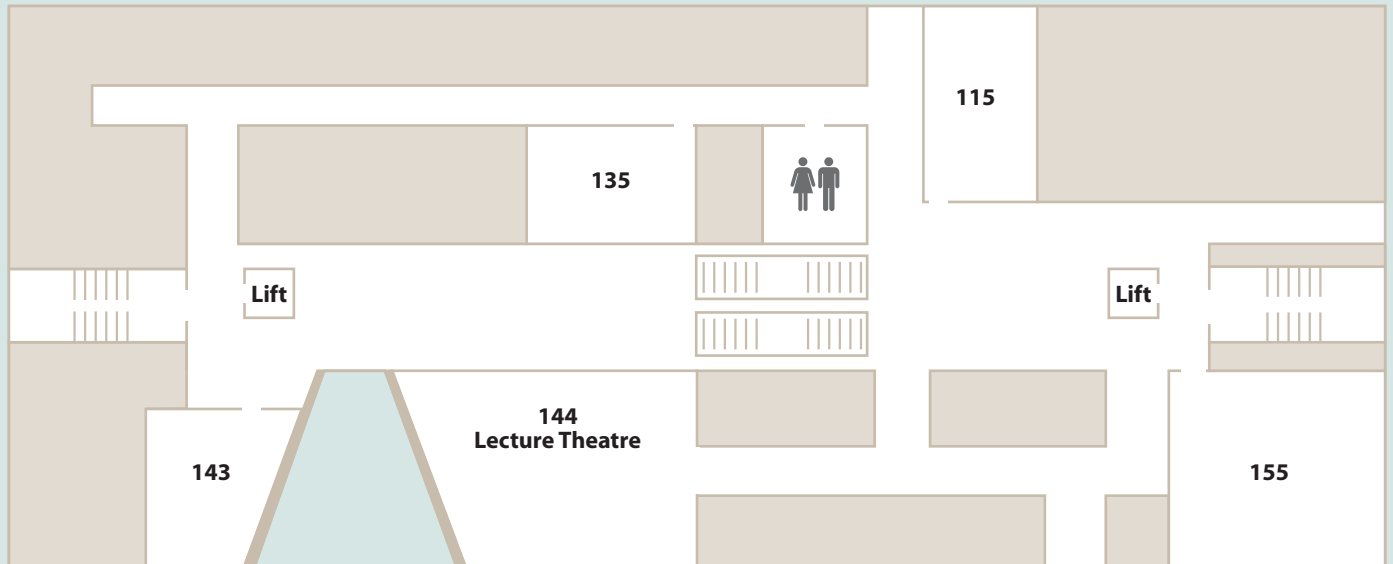
The logo for the University of Sussex, consisting of the letters 'US' in a stylized, bold, serif font.

University of Sussex

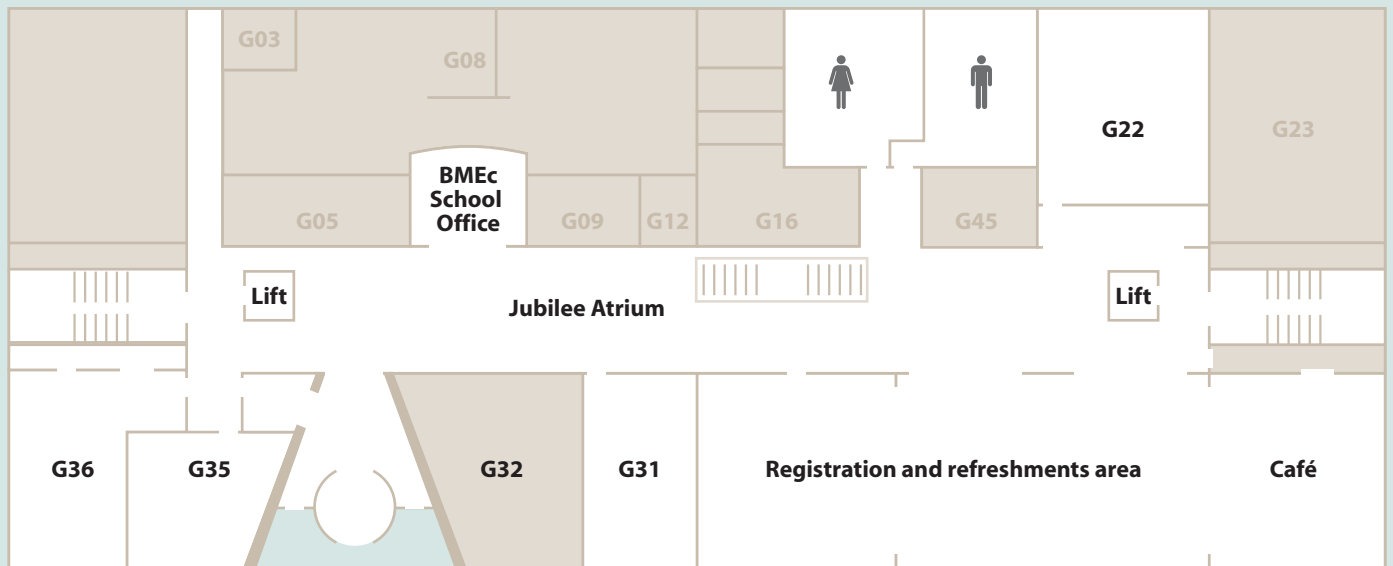
SPRU – Science Policy Research Unit

# Floorplans

## [Jubilee Building]



**First floor**



**Ground floor**

Main entrance

Conference entrance

Lobby

Jubilee Large Lecture Theatre

International  
Sustainability  
Transitions  
Conference

# 2015

**Location**

**SPRU**  
**Jubilee Building**  
**University of Sussex**  
**Falmer**  
**BN1 9SL**  
**UK**

[www.sussex.ac.uk/spru](http://www.sussex.ac.uk/spru)



For more information please see

IST 2015 conference website:

[www.IST2015.org](http://www.IST2015.org)

STRN website:

[www.transitionsnetwork.org](http://www.transitionsnetwork.org)