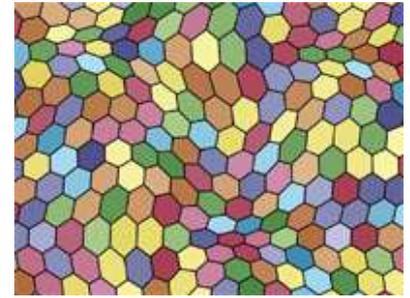


# Science and innovation policy: Dynamics, Challenges, Responsibility and Practice

18-20 June 2014, Manchester, UK



## Calls for Papers – Open Track and Special Sessions

The 2014 EU-SPRI conference presents an opportunity to review and further push forward our research agenda in the broad field of science, technology and innovation policy studies. Standard approaches and assumptions in STI policy studies may be reaching the limits of their utility so we encourage new approaches and submissions that genuinely make connections with, and draw real value from, cognate fields such as policy analysis and evaluation studies, science and technology studies, the economics of innovation and development studies.

Our key concerns are:

- Understanding policy dynamics and policy impacts
- Understanding the rise of goal, challenge or mission orientation in science and technology policies
- Addressing questions of responsible governance in science and technology policies
- Addressing the challenges of co-ordination and implementation of policies

### 1. Call for Papers – Open Track

Submissions are welcome in any area of science, technology and innovation policy, but we especially welcome contributions that address the following topics:

- Policy emergence, implementation, diffusion and transfer
- How do we know what works? New approaches to impact assessment and evaluation
- State versus non-State actors in the conduct of research and the governance of science and technology
- National science policies and the global scientific enterprise
- Old actors, new roles? Research performing organisations, research funders, intermediaries and other actors in the research and innovation policy system
- Open science, impact agendas and public engagement: changing practices of science in the policy context
- The multi-level governance of research and innovation and the challenge of co-ordination
- One size does not fit all? STI policies for less-developed and emerging economies
- STI policies, enterprise and entrepreneurship

### 2. Call for Papers – Special Sessions

We also invite submissions for the following Special Sessions:

#### Challenge-oriented research and innovation policy: new concepts, instruments and practices

Convenors: Effie Amanatidou\*, MIOIR; Egil Kallerud, NIFU; Mika Nieminen, VTT; Stephanie Daimer and Miriam Hufnagl, Fraunhofer ISI.

The notion that research and innovation can contribute to the resolution of major societal challenges has become pervasive in contemporary research and innovation policy thinking. We need a better understanding of the emergence of the concept in the policy discourse and the underlying rationale(s), but also of its implications for policy-making and associated policy instruments. At the same time, the rhetorics and practice of challenge-driven policies, on one hand, and any frameworks to understand and sustain them, on the other, are in a process of co-evolution, calling for a reflexive approach to their analysis.

We invite reflections on these processes of co-evolution covering: the meaning and practice of 'grand challenges' policy orientation under a historical perspective; the politics of the 'grand challenges' policy discourse; possible impacts and implications for policy-making and operationalization of policies. We welcome empirical or conceptual submissions, and comparative policy analyses, from within and beyond the STI policy studies community e.g. on R&I governance and policies, on experience of relevant policy instruments, from communities such as evaluation or foresight, from regional or technological innovation systems theorists, or policy studies from R&I-related sectors like energy, environment, sustainable development, etc.

#### Policy co-ordination in regional STI policies

Convenors: Edurne Magro\*, Orkestra and Deusto Business School; Jon Mikel Zabala, Deusto Business School and CIRCLE; Elvira Uyarra, MIOIR.

This session aims to provide a platform for reflection concerning new generation regional science, technology and innovation policies. In particular, it aims at exploring the evolution and current state of innovation policy coordination mechanisms and instruments in European regions. The track focuses on innovation policy in theory as well as in practice. We invite conceptual and empirical contributions that explore: new forms of regional innovation policies (such as the so-called smart regional policies) and new demands for policy coordination; the articulation and coordination of policy mixes within regions and across regions, for instance in cross-border

regions; implications for evaluation.

### **Skills, innovation and employment: evidence and policy**

Convenors: Davide Consoli\*, INGENIO CSIC-UPV; Giovanni Marin, CERIS-CNR; Alberto Marzucchi, INGENIO and Catholic University of Milan; Massimiliano Mazzanti, University of Ferrara and SEEDS.

The intersection between declining and nascent innovation cycles brings about opportunities, such as new markets, but also challenges, most prominently the acceleration of obsolescence for established forms of know-how. This was true after the advent of the steam engine, of electricity, more recently of Information Technologies, and there are clear signs that it may still be so in the course of the impending “green” revolution. Employment is the arena in which these convulsions become more clearly manifest as under the pressure of a new paradigm existing occupations disappear, new ones emerge and the content of jobs changes. In these momentous intersections skill obsolescence and skill shortages are known causes of unemployment, mismatches, bottlenecks, resource misallocation and loss of productivity and of growth opportunities. These phenomena are not the consequence of invisible, or totally unpredictable, forces but, rather, of changes in incentives and opportunities on which policy (or lack of thereof) can have a decisive influence.

This special session seeks to bring together contributions that feed this debate by addressing some of the following issues: What has the field of Science, Technology and Innovation studies to say on the debate about the dynamics of skills and employment? Where do new skills come from? And, what are the institutional and organizational mechanisms that best promote their wider diffusion? What policy instruments and management practices have been effective for replenishing human capital and redressing skill unbalances? Which ones would fit the emergent paradigm of environmental technology? What is more desirable: assigning new roles to existing actors in the innovation policy system or putting in place new specialist actors – for example, a Pan-European Skill Council? How can STI policy interventions be harmonized across international, national and regional levels? Contributions are welcome from theoretical and empirical, qualitative and quantitative, perspectives.

### **Ideas and evidence. Understanding policy making for science, technology and innovation**

Convenors: Manuel Laranja\*, ISEG University of Lisboa; Kieron Flanagan and Elvira Uyarra, MIOIR.

Whilst ideas and concepts produced by scholars appear to permeate Science, Technology and Innovation (STI) policy discourses it is not clear that this is reflected in policy design, much less in policy implementation and learning. On the other hand, today’s relative abundance of new and old statistical indicators does not necessarily mean that policy and instrument design and selection is more evidence-informed.

We invite contributions that directly explore: the use by policy makers (advisors, consultants, etc.) of ideas, theory-informed concepts and evidence and how this has influenced or is influencing actual STI policy design and practice; the role of such inputs into real processes of policy learning; the implications of this for our understanding of policy design and implementation styles and cultures in the STI policy arena.

### **Understanding and Addressing the Governance Challenges of Responsible Research and Innovation**

Convenors: Ralf Lindner\*, Fraunhofer ISI; Stefan Kuhlmann, Twente University; Bart Walhout, Twente University; Erich Griessler, Institute for Advanced Studies (IHS); Sally Randles, MIOIR.

Responsible research and innovation (RRI) is becoming an increasingly important ambition in science and innovation policy. Yet, while a number of new initiatives are being deployed, the contours of the concept of RRI are still in a formative stage. The session addresses the particular governance challenges posed by this emerging concept. The governance of STI already takes place in a complex set of co-existing and often intertwined actor arenas, involving regulation and government intervention at different levels. The implementation of RRI on national and European levels will add considerably to this complexity.

Against this background, the session intends to (1) contribute to the development of an improved analytical understanding of the complex governance challenges posed by RRI in the field of STI, and (2) seeks to discuss promising approaches and methods with which the identified governance challenges can be addressed. As RRI brings together different disciplines of social scientists working at the interfaces of the development of new and emerging technologies, innovation, society, and STI policy, papers from a wide range of disciplinary backgrounds are welcome. The session organizers encourage contributions that conceptually, methodologically and/or empirically address the governance of RRI. Suggested themes are: new governance approaches; instruments to enhance reflexivity and anticipation in STI; approaches to broaden the range of inputs into the governance of science and innovation; and procedures addressing competing normative claims and conflicting interests.

### **Emerging Innovation and Market Infrastructures**

Convenors: Douglas K Robinson\*, Université Paris-Est (IFRIS/LATTS) & TEQNODE Limited; Aurélie Delamarle, Université Paris-Est (IFRIS/LATTS) and Copenhagen Business School; Philippe Larédo, Université Paris-Est (IFRIS/LATTS) and MIOIR.

The process of transformation of potentially breakthrough technologies into technologies well embedded in society requires innovation systems and structures to be in place, as well as functioning markets. However, it is often the case with new and emerging technologies that appropriate innovation and market structures are not fully developed or in some cases are absent. Therefore the “infrastructure” for technology production and value creation has to be constructed, posing a serious challenge for industrial actors and those involved in STI policy. This situation creates a need for analytical tools for understanding and measuring the emergence and construction of innovation and market infrastructures, a need this session aims to address.

This special session invites contributions in the form of: Illustrative case studies which provide details of the structuring processes and strategies in the creation of innovation and market infrastructures; Methodological papers, including those making use of global databases to provide quantitative insights into innovation-field level dynamics; Studies of innovation policy related to these. Questions that the convenors would like to explore with participants to this session include: Where are the loci for the creation or evolution of innovation and market infrastructures? How can we trace the activities in the construction of innovation fields? Which level of analysis is

useful: Micro-level innovation journeys, broad macro-level paradigmatic or regime changes or some intermediate level between the two? What are the policies to support the development of market infrastructures?

### **Governance of Health Innovation Stream Part I: Co-ordination of emerging and enabling health technologies**

Convenors: Ellen Moors\* and Wouter Boon, Copernicus Institute Utrecht; Michael Hopkins, SPRU University of Sussex; Thomas Reiss, Fraunhofer ISI; Douglas K Robinson, Université Paris-Est (IFRIS/LATTS) & TEQNODE Limited.

Improving healthcare is increasingly seen by policy-makers as a 'grand challenge', and emerging and/or enabling health technologies are associated with a high degree of uncertainty, flexibility, and complexity. This session will focus on co-production and coordination of developments in the field of emerging health technologies. Emerging developments and platform technologies in the field of genomics, synthetic biology, nanotechnology and neuroscience, for example, demand coordination in flexible and responsive ways. There is wide array of possible innovation and governance related topics to be addressed, making several cross-sections, e.g. ranging from early stage to late stage issues in the health innovation process, and focussing on various actors in the health and care field, ranging from academic researchers and regulatory agencies to hospitals, industry, patient organizations and citizens communities.

This special session invites contributions to the following themes: Responsible governance of emerging healthcare technologies; Role of users and user communities; Regulation of 'big data' in emerging health technologies; Convergence of technologies, disciplines and sectors (e.g. stratified medicine, theranostics, cognitive human-enhancement technologies, recreative drugs, healthy food, and nano-enabled drug delivery systems), and related science, technology and innovation policies; New business and governance models to coordinate emerging technologies (e.g. open/open-source innovation, self-regulation, soft regulation, new role of IPR and standards/norms).

### **Governance of Health Innovation Stream Part II: Health innovation and the 'Grand Challenge' of Ageing - governing the personal health systems revolution**

Convenors: A Peine\* and Ellen Moors, Copernicus Institute Utrecht; K Brittain, Institute of Health & Society Newcastle University; A Faulkner, School of Global Studies University of Sussex; R Popper, MIOIR.

Demographic ageing is widely seen as a 'grand challenge' and policy makers, industry, academic researchers, health care providers, and lobby groups have identified research and innovation as a promising response. They often underpin technology use as an important element of later life but express a rather instrumental view on technological innovation: science and technology are viewed as a potential solution to otherwise independent problems of ageing. Such perspectives neglect two important recent developments in personalized health technology: First, that demographic aging is associated with shifting attention from curing acute diseases to managing and preventing chronic diseases and with increasing financial pressures on health and social care systems, and second, that the current ageing baby boomers are a more active and savvy group of technology users. This session aims to bring together contributions that explore the role of older persons as active contributors to innovation of health technology and personal

health systems, and address new forms of governing user-producers interactions in health innovation more generally. Contributions could cover: Innovation and co-creation in health innovation; Multiple stakeholder involvement and multiple values in health technology and personal health systems innovations; New ways of organizing health innovations and related workforce issues; changing practices of healthcare / care in the policy context; Positive and playful approaches to involving older persons in health innovation; Governance of personal health systems and changing medical health care regimes; User innovations by older persons in health technology.

### **One size does not fit all! New perspectives on learning networks and the university in the social knowledge economy**

Convenors: Mabel Sánchez-Barrioluengo\*, INGENIO CSIC-UPV; Paul Bennenworth, University of Twente; Rómulo Pinheiro, University of Agder and Agderforskning Norway.

In recent years researchers and policymakers have focused on the new role that universities play in stimulating the development of regions through their interaction with external agents at local, regional and national levels. Policy pressures have focused on a simplistic 'one-size-fits-all' university model which overlooks, on the one hand, the complex nature of the university qua institution and, on the other, the many tensions which arise in the process of engagement. In addition, it conflates a series of processes by which universities and regions can sometimes mutually beneficially engage with an overarching holistic ideal-type model of how universities should always undertake regional engagement.

We are interested not only in analysing 'to what extent' path-dependencies have influenced the framework conditions for changing universities, but also in understanding the scale and scope of the capabilities of universities to sustainably contribute to society and how they might be changing. Key questions include: How have universities balanced external pressures for social relevance with internal aspirations in order to address their multiple goals? What types of alternative university models have emerged and how are they drawing attention to the interplay between multi-level dimensions? To what extent are universities taking stock of their unique contextual circumstances as a strategic advantage?

### **For Government, by Government: Mission- and policy-oriented science and technology systems in transition**

Convenors: Kieron Flanagan\*, Andrew James, Jakob Edler, John Rigby, Duncan Thomas and Jillian Yeow, MIOIR.

The systems through which science and technology is commissioned or taken up by, and offered to, governments in order to support the goals and missions of public policy are facing unprecedented challenges from changes in policy and governance, shifts in the dynamics of scientific knowledge production and innovation, and from austerity. We seek contributions which: characterise different kinds of mission or policy-oriented S&T system and their key features; analyse in detail specific systems, their emergence and evolution; explore the challenges faced by mission-oriented S&T systems and how they are responding, or could respond, to those challenges; systematically compare mission-oriented S&T systems across policy domains, policy styles/cultures or national systems; and bridge economic, policy and STS perspectives on aspects of mission-oriented S&T systems.

## How to submit

At this stage we request extended abstracts of 1000-1500 words only. Abstracts should include a title, author information, keywords and an extended summary of the proposed paper (including an indication of the relevance to the broad conference themes where appropriate).

For the special sessions, abstracts must name the special session and include a statement of the relevance to the themes of the session. Proposers must clearly indicate that the proposal relates to a special session during the submission process.

**The deadline for the submission of proposals will be Friday 28<sup>th</sup> February 2014.**

Submission will be via the Conference website only. The portal for submissions will be opened in mid-January 2014

<http://www.euspri-manchester2014.com/>

Other enquiries can be made to:

[siobhan.drugan@mbs.ac.uk](mailto:siobhan.drugan@mbs.ac.uk)

## Decision and dissemination process

Each submission will be reviewed by members of the Scientific and Organising committees. Paper submitted to or relevant for the special sessions will be reviewed by the lead Convenor (indicated with an \* above), by one member of the Scientific Committee and by one member of the Organising Committee. Decisions will be taken and communicated four weeks after the final deadline. Authors of accepted papers will be expected to submit an extended broader abstract of up to 3000 words by a deadline of June 5 2014, for publication on the conference website.

### Scientific Committee

Andrea Bonaccorsi (Univ Pisa) | Susana Borrás (CBS) | Massimo Colombo (Politecnico Milano) | Stephanie Daimer (FhG-ISI) | Michael Dinges (AIT) | Charles Edquist (Lund Univ) | Jan Fagerberg (Univ Oslo) | Merle Jacob (Lund Univ) | Philippe Laredo (Univ Paris Est and Univ Manchester) | Gillian Marcelle (Wits Univ) | Gonzalo Ordonez Matamoros (Univ Twente) | Ellen Moors (Utrecht Univ) | Ismael Rafols (CSIC-UP Valencia) | Paloma Sanchez (Autonoma Univ Madrid) | Jack Stilgoe (UCL) | James Wilsdon (Univ Sussex) | Jan Youtie (GeorgiaTech)

### Local Organising Committee

Jakob Edler and Maria Nedeva (Co-chairs)  
Kate Barker | Paul Cunningham | Kieron Flanagan | Andrew James | Elvira Uyerra