



**TRANSFORMATIVE
INNOVATION
POLICY
CONSORTIUM**

PROSPECTS FOR TRANSFORMATIVE INNOVATION POLICY

20-21 SEPTEMBER 2017
CONFERENCE PROGRAMME

Organised by National Research Foundation South Africa
and the Science Policy Research Unit, University of Sussex,
on behalf of the Transformative Innovation Policy Consortium

WEDNESDAY 20TH SEPTEMBER

08:00 – 09:00 Registration

09:00 – 10.10

OPENING ADDRESS

National Research Foundation

KEYNOTE ADDRESS

The Honourable Minister Professor Naledi Pandor,

Department of Science and Technology

ADDRESS BY UNIVERSITY OF SUSSEX

Professor Adam Tickell, Vice Chancellor, University of Sussex

10:10 – 11am

PLENARY 1:

The Transformative Innovation Policy Consortium: insights and results from the pilot programme and future plans

Professor Johan Schot, Director of Science Policy Research Unit (SPRU), University of Sussex

11:00 – 11:30 Coffee / Tea

11:30 – 13:00

PLENARY 2:

Discussion with founding members from South Africa, Norway, Finland, Colombia, Sweden

13:00 – 14:00 Lunch

14:00 – 15:30

PARALLEL SESSION 1A:

South Africa: Technology for rural education and development

PARALLEL SESSION 1B:

Finland: Low-carbon and smart mobility solutions for passenger transport

15:30 – 15:45 Coffee / Tea

15:45 – 17.15

PARALLEL SESSION 2A:

Colombia: Productive transformations in coffee production

PARALLEL SESSION 2B:

Norway: Responsible research and innovation practices in Biotechnology for Innovation

PARALLEL SESSION 2C:

Sweden: Challenge-driven innovation initiatives

18:30 Welcome Dinner and party

THURSDAY 21ST SEPTEMBER

09:00 – 09:30

WELCOME TO DAY 2:

Zooming out to explore prospects for Transformative Innovation Policy

Joanna Chataway (SPRU, University of Sussex), **Imraan Patel**, Department of Science and Technology (South Africa)

09:30 – 11:00

PARALLEL SESSION 3A:

Revisiting science, technology and innovation: country reviews from a transformative change perspective

PARALLEL SESSION 3B:

R&D investment and transformation

PARALLEL SESSION 3C:

Social justice and transformations to sustainability: snapshots of current work

PARALLEL SESSION 3D:

New perspectives in the evaluation of science, technology and innovation

11:00 – 11:30 Coffee / Tea

11:30 – 13:00

PARALLEL SESSION 4A:

Policy mixes for transformative change

PARALLEL SESSION 4B:

Innovation policies for the informal economy

PARALLEL SESSION 4C:

Policy experimentation

PARALLEL SESSION 4D:

National systems of innovation transformation

13:00 – 14:15 Lunch

14:15 – 15:45

PARALLEL SESSION 5A:

Innovation for inclusive development

PARALLEL SESSION 5B:

Capability building and training for transformative innovation policy and policymaking

PARALLEL SESSION 5C:

Upscaling experimentation

PARALLEL SESSION 5D:

Can regional innovation policy facilitate transitions?

15:45 – 16:30 Closing session

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THE TRANSFORMATIVE INNOVATION POLICY CONSORTIUM

The creation of the Transformative Innovation Policy Consortium (TIPC) is in answer to the need for fresh directions for science, technology and innovation policies towards outcomes that sustainably enhance societies.

Based around the Frame 3 perspective of Transformative Innovation Policy, the Consortium and its partners are shaping the agenda in experimenting with and developing alternative frameworks, methods and metrics for Science, Technology and Innovation (STI) policy to reach new achievements.

With this drive for enhanced thinking in innovation practice comes the inevitable threat of upheaval. However, in disruption there stands the potential for developments that could successfully sustain populations and the environment into the next century. While facing varying challenges - from inequality, to economic stagnation, to reliance on fossil fuels – all countries in the world find themselves at a crucial juncture.

New approaches to develop – for example our energy, mobility, health, finance and food systems – to make them fit-for-purpose must happen relatively swiftly. With the desire and commitment to co-create the next generation of science, technology and innovation theory, policy and practice, TIPC brings together people from research, policy and their constituencies. The expectation is that Frame 3 on transformative change will interplay and combine with previous framings of innovation policy – Frame 1 (R&D) and Frame 2 (National Systems of Innovation) – to provide alternative policy mixes and initiatives which place socio-technical change, human flourishing, welfare and environmental advancements at the fore.

By expanding the narrative and knowledge around Transformative Innovation Policy, new pathways and partnerships can be forged. The prospects for TIP – here at our inaugural conference and beyond to the 5-year programme - are exciting and challenging in breaking new ground for the entire globe.

WELCOME TO THE TIPC CONFERENCE: PROSPECTS FOR TRANSFORMATIVE INNOVATION POLICY

NRF

At the culmination of our exciting exploratory year,
I am delighted to welcome a great cross-section of delegates
to our inaugural TIPC conference.



This event is the finale to our pilot programme of activities for Transformative Innovation Policy Consortium's founding members. We have started to test ideas and rationales; built strong, productive relationships; and most crucially, begun to identify the directions to go and the difficult questions to ask. We may be a long way from the answers, but the exploration for fresh policy thinking and practice in Science, Technology and Innovation (STI) has commenced with commitment and rigour. While daunting on one level, it is the distance we have to travel that is the most thrilling part.

Our vision is an essential one. We know building new knowledge, and the associated narratives and frameworks, is complex. Yet, we know too that our current systems of provision for our basic needs are not fit for the task ahead. We need to experiment, research, evaluate, disseminate, write and communicate new STI practice that supports developing the world sustainably. Together, over these two days we will debate, formulate and co-create to add new layers of knowledge to our emerging theory of Transformative Innovation Policy. We are commencing the next chapter in our exciting and promising TIPC story. I hope that you have an engaging and enriching inaugural 2017 conference.

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XXXXX
XXXXXXX



Professor Johan Schot,

Director, Science Policy Research Unit, University of Sussex
Professor of History of Technology and Sustainability Transitions



DAY ONE: PLENARY SESSIONS

1

PLENARY 1: TRANSFORMATIVE INNOVATION: A SOUTH AFRICA PERSPECTIVE

Speaker

Imraan Patel,

Deputy Director-General,
Department of Science and Technology

This will be followed after the coffee break by a panel discussion with representatives from the Transformative Innovation Policy Consortium membership

Panellists

Elisabeth Gulbrandsen, Special Adviser, Division for Innovation, Department for Strategic Analysis and Development, Research Council of Norway

Imraan Patel, Deputy Director General, Socio-Economic Innovation Partnerships, Department of Science & Technology, South Africa

Goran Marklund, Deputy Director General and Head of Operational Development, Vinnova, Sweden

Maria Isabel Velez Agudelo, Head of Policy and Evaluation Unit, Colciencias, Colombia

2

PLENARY 2: THE TRANSFORMATIVE INNOVATION POLICY CONSORTIUM: INSIGHTS AND RESULTS FROM THE PILOT PROGRAMME AND FUTURE PLANS

Speaker

Johan Schot,

Director, Science Policy Research Unit,
University of Sussex, Professor of History of
Technology and Sustainability Transitions

COUNTRY FOCUSED PARALLEL SESSIONS

The pilot year has given TIPC a starting point. This has been the first step towards the co-creation – by policymakers, academics, civil society and academics – of new knowledge, narratives and prospects for Transformative Innovation Policy articulating the Three Frames Framework. It has included historical analysis of innovation policy in each country from a 'Frame3' perspective. This resulted in a brief country overview, and a Transformative Innovation Learning History (TILH) case study. To select the cases, TIPC developed a number of transformative change criteria such as recognition of directionality; whether policy was led by social or environmental challenge; whether policy was aimed at system innovation; if learning and reflexivity were prominent; and whether there was a recognition of diversity of interests and needs to articulate dissensus as well as consensus. Using the TILH methodology was useful for both research and policy reflection, and included multiply 'voices' in the analysis. These country focused sessions draw inspiration and insights from both the country reviews and the case studies to help understand 'Prospects for Transformative Innovation Policy' in specific contexts.

1A

PARALLEL SESSION 1A: SOUTH AFRICA: TECHNOLOGY FOR RURAL EDUCATION AND DEVELOPMENT

Abstract

Twenty-three years after democracy, South Africa remains a highly unequal society where too many people live in poverty and too few work. The quality of school education for most black learners is poor. The apartheid spatial divide continues to dominate the landscape. A large proportion of young people feel that the odds are stacked against them and the legacy of apartheid continues to determine the life opportunities for the vast majority.

South Africa adopted a National Development Plan (NDP) in August 2012 in order to address the triple challenge of poverty, inequality, and unemployment. The NDP recognises that 'national development has never been a linear process' proceeding 'in a straight line'. The NDP therefore proposes a 'multidimensional framework to bring about a virtuous cycle of development, with progress in one area supporting advances in others'.

National development will not succeed without a deep transition of the education system including rural schooling. Innovation and technology has emerged as an important determinant in the envisaged transition. This session will critically reflect on current efforts by the Department of Science and Technology (DST) on the technology for rural education and development initiative (Tech4RED) from a Transformation Innovation Policy perspective.

Panellists

Aldo Stroebel/Sepo Hachigonta, National Research Foundation

Imraan Patel, Deputy Director-General, Department of Science and Technology,
The three frames of innovation policy within the context of South Africa

Erika Kraemer-Mbula (Chair) Senior Researcher, South African Research Chair in Industrial Development, University of Johannesburg; Associate Professor Extraordinary, Centre for Research on Evaluation, Science & Technology (CREST), University of Stellenbosch; Researcher, DST-NRF Centre of Excellence in Scientometrics and STI Policy, South Africa
What is Transformative Innovation in the context of South Africa?

Followed by Facilitated Open Discussion on future research to advance transformative innovation policy in South Africa



1B

PARALLEL SESSION 1B: FINLAND: LOW-CARBON AND SMART MOBILITY SOLUTIONS FOR PASSENGER TRANSPORT

Abstract

Traffic is the second largest global greenhouse gas producer after energy production, with a share of more than 20%. 90% of the gases produced by the traffic will come from road traffic. The emission of gases from traffic is estimated to grow by 250% during the next 30 years. Taking into account, the remarkable target reduction in greenhouse gas emission for Finland set by the European Commission, there is an urgent need for disruptive system innovation in road transport. In Finland, the discussion of such innovations has thus far geared towards many directions, including increasing the use of biofuel, promoting the breakthrough of electric vehicles, seamless traffic solutions, sharing economy solutions as well as encouraging cycling, walking and mobile work.

This session focuses on Finnish policies and the role that Tekes has played in promoting transformative change in Finnish passenger transport, with a special emphasis on the emergence and consolidation of the mobility-as-a-service (MaaS) concept. MaaS refers to a service package that enables a reliable travel from door to door so that it is possible for people to give up on their own car without lowering the quality level of mobility. Of all innovations for bringing about transformative change in road traffic, MaaS represents the most disruptive and ambitious niche-innovation at this moment. The emergence, development and future challenges of the concept will be discussed.

Panellists

Heli Karjalainen, (Chair), Director, Tekes

Paula Kivimaa, Senior Research Fellow,
Centre on Innovation and Energy Demand (CIED),
SPRU, University of Sussex, UK

Christopher Palmberg, Development Manager,
Tekes – the Finnish Funding Agency for Innovation

Tuomo Alasoini, Tekes – the Finnish Funding Agency
for Innovation

2A

PARALLEL SESSION 2A: COLOMBIA: PRODUCTIVE TRANSFORMATIONS IN SPECIALITY COFFEE PRODUCTION

Abstract

Colombia now has more than four decades of experience of science, technology and innovation (STI) policy. It has established institutions of governance and has made efforts towards developing a coordinating structure to bring together stakeholders from the state academia, and private sector to map out national priorities. However, little progress has been made in addressing societal challenges and in particular reaching remote areas of the country and areas affected by the internal violence in the country and where science technology and innovation policy is expected to make a relevant contribution in the post-conflict era. As STI policy is expected to address broader social challenges, so policy making in Colombia has to urgently begin to develop new capabilities. Incorporating Frame 3 policy making represents a major challenge in Colombia since the practices of experimentation and risk-taking in policy have traditionally been discouraged and this has tended to perpetuate a narrow perspective on policy innovation. Nevertheless, opportunities to innovate and incorporate new actors exist, in particular through new schemes such as the *Royalty Scheme* which decentralises decision making on funding STI projects to regional stakeholders. This session will touch upon these issues.

Panellists

Maria Isabel Velez Agudelo, (Chair),
Head of Policy and Evaluation Unit, Colciencias,
Colombia

Elisa Arond, Lecturer, Universidad de Los Andes;
PhD candidate Clark University, USA

2B

PARALLEL SESSION 2B: NORWAY: RESPONSIBLE RESEARCH AND INNOVATION PRACTICES IN BIOTECHNOLOGY FOR INNOVATION

Abstract

Through a process of experimentation and consultation largely directed and governed by the Research Council of Norway (RCN), several applied science and technology funding programmes including those in the life sciences have adopted a set of practices called 'Responsible Research and Innovation (RRI)'. These practices are aimed at anticipating the social needs and purposes of scientific research, requiring researchers to engage in a process of reflection in planning and applying for funding, and hopefully during the life of their research projects. This session will provide a basic guide to the concept and practice of RRI reflecting on how it involves a transformative change in research rationale and, in some cases, practice. To understand the transformative nature of RRI in Norway we will examine the origin of the RRI idea in the Norwegian context, the practices that are employed in implementing the RRI approach and the complexity of embedding these practices across a diverse group of scientific and technical researchers. Some highlights of this case are the recognition that researchers are often (though not always) willing and interested in undertaking this process, that the implementation of the practices has required (and continues to require) capability building in the Research Council, and that implementing the RRI process involves considerable care to avoid it becoming a 'box ticking' or burdensome imposition on researchers. The last of these points is particularly relevant for countries anticipating adopting the EU's RRI framework or adapting it to local circumstances.

Panellists

Elisabeth Gulbrandsen, Special Adviser, Division
for Innovation, Department for Strategic Analysis and
Development, Research Council of Norway

Elsie Husum, Research Council, Norway

Ed Steinmueller, Professor of Information
& Communication Technology Policy, SPRU,
University of Sussex, UK

2C

PARALLEL SESSION 2C: SWEDEN: CHALLENGE-DRIVEN INNOVATION INITIATIVES

Abstract

Challenge-Driven Innovation (CDI) is a programme launched by the Swedish innovation agency Vinnova in April 2011. The aim is to fund projects that develop sustainable solutions to tackle current societal challenges. These challenges require innovative solutions that go beyond traditional research fields and 'silo-thinking'. Instead, the programme has been designed in a way to promote opportunities for transformative innovations by encouraging demand, challenge and user-driven projects spanning various actors and industries.

In this session the main findings of the case study work on the CDI will be presented including reflections by Vinnova, and there will be further discussion on the implications of these results for the design of future policy interventions. In particular, the session will illustrate why new policy programmes require organisational change within the innovation agency itself as well as why a 'one size fits all' design of innovation programmes should give way to more flexible schemes that take into account the different industrial preconditions and problem characteristics.

Panellists

Lea Fuenfschilling, (Chair), CIRCLE,
Lund University, Sweden

Göran Marklund, Deputy Director General and Head
of Operational Development, Vinnova, Sweden

Daniel Johansson, Head of Business Development,
Vinnova, Sweden



DAY TWO: PARALLEL SESSIONS

3A

PARALLEL SESSION 3A: REVISITING SCIENCE, TECHNOLOGY AND INNOVATION: COUNTRY REVIEWS FROM A TRANSFORMATIVE CHANGE PERSPECTIVE

Abstract

This session discusses how to broaden National Science, Technology and Innovation Policy Reviews to integrate Sustainable Development Goals (SDGs). Current frameworks, such as the UNCTAD STIP Review framework are largely based on the National Innovation Systems framework (Frame 2), the methodology views economic development as essentially involving a process of productive capacity building and structural transformation in which technological upgrading and innovation play an integral part. These current frameworks remain inadequate to comprehensively address the SDGs, which are broad in scope and ambitious in nature. A central question for the session is whether, and how, introducing the notion of transformative change may help the UNCTAD STIP Review framework, and other frameworks, such as the ones used by the OECD to deal with the SDGs (or environmental and social challenges).

Panellists

Johan Schot, (Chair), Director of SPRU, Professor in History of Technology and Sustainability Transition Studies, University of Sussex, UK

Michael Lim, Policy Review Section, Science, Technology and ICT Branch, UNCTAD-DTL
Opening statement on on UNCTAD framework for science, technology and policy Reviews

Michal Miedzinski, UCL Institute for Sustainable Resources, Tiago Santos Pereira, Science and Technology Research Council Portugal (FCT)

Jenifer Muwuliza, Ministry of Science, Technology and Innovation, Uganda (tbc)

Anteneh Senbeta, Ministry of Science and Technology, Ethiopia (tbc)

3B

PARALLEL SESSION 3B: R&D INVESTMENT AND TRANSFORMATION

Abstract

The session brings together panellists that have had experience in attempting to re-orient national and/or regional science and technology policy toward social needs such as those contained in the Sustainable Development Goals or other Grand Challenges. A premise of this session is that such re-orientation involves a debate. On the one hand, some advocate the values of unimpeded or curiosity-driven scientific investigation. On the other hand, some advocate the opportunities provided by approaches such as research for social needs, challenge-led innovation, or responsible research and innovation.

Panellists

Ed Steinmueller, (Chair), Professor of Information & Communication Technology Policy, SPRU, University of Sussex, UK

Matthias Weber, Head of Unit Research, Technology and Innovation Policy, Austrian Institute of Technology, Austria

Urszula Rust, Senior Specialist: Policy Analysis, Department of Science and Technology, South Africa

Goran Marklund, Deputy Director General and Head of Operational Development, Vinnova, Sweden

Michael Kahn, Professor Extraordinaire in the Centre for Research on Evaluation, Science and Technology at Stellenbosch University

3C

PARALLEL SESSION 3C: SOCIAL JUSTICE AND TRANSFORMATIONS TO SUSTAINABILITY: SNAPSHOTS OF CURRENT WORK

Abstract

Social justice is crucial and intrinsic to sustainability. But it is not self-evident how to reconcile tensions with other sustainability imperatives. The deeper and more pervasive the envisaged transformations, the greater the dilemmas over: The roles of social movements? The scope for plurality? The opportunities and dangers of centralised power? Drawing on some key initiatives around these issues currently underway in Africa as part of wider transdisciplinary collaborations, this session will inform wider discussions at TIPC concerning some tricky – sometimes neglected – challenges and some inspiring grounds for hope.

The session will be introduced by four ten-minute contributions, followed by a general discussion and a final panel round-up.

Panellists

Andy Stirling, (Chair), Professor of Science & Technology Policy, SPRU, University of Sussex; Co-Director, STEPS Centre; Sussex Energy Group, UK
The STEPS pathways approach: culturing transformation

Bitrina Diyamett, Executive Director, Science Technology and Innovation Policy Research Organisation (STIPRO), Tanzania
Innovation and sustainable economic development

Mark Swilling, Professor of Sustainable Development, Stellenbosch University; Academic Director of the Sustainability Institute; Co-Director of the Stellenbosch Centre for Complex Systems in Transition, South Africa
Just transitions in Africa

Joanes Atela, Senior Research Fellow, Climate Resilient Economies, African Centre for Technology Studies, Nairobi
Transforming pro-poor energy access in Africa

3D

PARALLEL SESSION 3D: NEW PERSPECTIVES IN THE EVALUATION OF SCIENCE, TECHNOLOGY AND INNOVATION

Abstract

Traditionally, science, technology, and innovation (STI) policy evaluation has focused on the assessment of scientific merit and reputation or technical soundness, and the strategies and governance structures to achieve them. However, there is an increasing demand for evaluation of STI activities and policies in relation to social, economic, and environmental challenges. Challenges such as climate change span different dimensions of society and interact with other challenges such as sustainable economic development. For this reason, they require evaluation frameworks that go beyond the scientific and the technical. In this expanded framing, variables such as relevance, social and environmental impact, diversity, and inclusion become an important part of evaluation criteria. In this session, we will explore the role of evaluation of STI activities and policies at a time of societal challenges. The topics are:

- Evaluating research policy: lessons learned from the South African experience
- The marginalisation of knowledge in research assessments and the need to open up STI evaluation
- The role of evaluation in science, technology and innovation policy for inclusive development
- Towards an evaluation framework for transformative innovation policies

Panellists

Diego Chavarro, (Chair) Policy Advisor, Policy Design & Evaluation Unit, Colciencias, Colombia

Jordi Molas-Gallart, Research Professor, INGENIO (Spanish Council for Scientific Research – Politechnic University of Valencia), Spain, Visiting Fellow, SPRU, University of Sussex, UK

Glenda Kruss Van Der Heever, Deputy Executive Director, Centre for Science, Technology and Innovation Indicators (CeSTII), South Africa

Hasa Mlawa, Professor of Technology and Innovation Management, University of Dar es Salaam



4A

PARALLEL SESSION 4A: POLICY MIXES FOR TRANSFORMATIVE CHANGE

Abstract

Within innovation studies, there has recently been an increasing interest in policy mixes which can be understood as 'complex arrangements of multiple goals and means which, in many cases, have developed incrementally over many years'. It has long been acknowledged that a combination of technology 'push and demand pull' instruments in policy mixes are especially relevant when discussing how STI policies can foster transformative change which cannot be delivered by single instruments. There is an increasing recognition of the importance of viewing STI policy through the lens of policy mixes by policy makers (e.g. OECD, IEA, EU).

In this panel we address the following questions:

1. What could suitable policy mixes for stimulating transformative innovation look like?
2. What are the difficulties of managing complex policy mixes and how can they be overcome?
3. How can we operationalise a policy mix approach in benchmarking and evaluating STI policies?

Panellists

Florian Kern, (Chair) Senior Lecturer, SPRU, University of Sussex; Co-Director, Sussex Energy Group, UK

Sandrine Kergroach, Analyst, Organisation for Economic Co-operation and Development (OECD) (tbc)

Eduarne Magro, Researcher, Orkestra-Basque Institute of Competitiveness

Mapula Tshangela, Senior Policy Advisor, National Sustainable Development, Ministry of Environment; Researcher, Stellenbosch University, South Africa

4B

PARALLEL SESSION 4B: INNOVATION POLICIES FOR THE INFORMAL ECONOMY

Abstract

Supporting innovation has become a common concern for governments across the world in order to maintain competitive advantage and increase economic growth. However, the proliferation of innovation strategies, especially in the context of developing countries, is often accompanied by growing disparities between the rich and the poor, as well as the intractable presence of the informal economy. This panel discusses the challenges and opportunities that emerge when we include the informal economy in the domain of innovation policies, with the aim of promoting innovation while reducing exclusions and inequality.

The session is planned to consist of short (15 min) presentations (based on new research or practical experiences from policy practitioners), followed by a shared panel discussion.

Panellists

Erika Kraemer-Mbula, (Chair) Senior Researcher, South African Research Chair in Industrial Development, University of Johannesburg; Associate Professor Extraordinary, Centre for Research on Evaluation, Science & Technology (CREST), University of Stellenbosch; Researcher, DST-NRF Centre of Excellence in Scientometrics and STI Policy, South Africa

Nonhlanhla Mkhize, Chief Director for Innovation for Inclusive Development, Science and Technology for Social Impact, Department of Science and Technology, South Africa

Philippe Mawoko, Director of the African Observatory for Science, Technology & Innovation (AOSTI), Equatorial Guinea

Glenda Kruss Van Der Heever, Deputy Executive Director, Centre for Science, Technology and Innovation Indicators (CeSTII), South Africa

4C

PARALLEL SESSION 4C: POLICY EXPERIMENTATION

Abstract

Policy, grassroots and entrepreneurial experimentation encompass a flourishing set of practices and approaches aimed at generating opportunities for learning and change. This session explores what is policy experimentation and examines how policy makers may engage with it in the context of Transformative Innovation Policy (TIP). It, thus discusses, the characteristics of different experimental policy engagements and their usefulness in the context of the Consortium, building on examples and the learning from the first year of the TIPC.

Panellists

Johan Schot, (Chair) Director of SPRU, Professor in History of Technology and Sustainability Transition Studies, University of Sussex, UK

Jonas Torrens, Doctoral Candidate and Research Assistant, SPRU, University of Sussex

Elisa Arond, Lecturer, Universidad de Los Andes; PhD candidate Clark University, USA

Fred Steward, Emeritus Professor, Policy Studies Institute, Westminster University and Visiting Professor at Centre for Environmental Policy at the Imperial College London

4D

PARALLEL SESSION 4D: NATIONAL SYSTEMS OF INNOVATION TRANSFORMATION

Abstract

The National Systems of Innovation framing emerged during the 1980's to address some of the consequences for individual nation states of the experience with modern economic growth – the intensification of international competition, globalization, the prospects of being left behind, and the promise of catching-up. The NSI concept focused attention on the various configurations of organisations concerned with the generation and utilization of scientific and technological knowledge.

In South Africa, the incoming democratic government formulated a White Paper in 1996 to guide future policy efforts in the development and application of science and technology. Formally, the White Paper was built on the twin concepts of 'innovation' and the 'national system of innovation'. At the time, the NSI policy approach was novel and represented one of the first attempts of directing policy action by focusing on the system of innovation. A new White Paper, currently at an advanced stage of development and formal consultation, continues to focus on building a coherent and transformative NSI that can improve its socio-economic impact. Drawing on international and national developments, this session will focus on opportunities for building on previous achievements and learning: intensifying what has worked, discarding what has not worked, and introducing new policy approaches where necessary.

Panellists

Imraan Patel, (Chair) Deputy Director General, Socio-Economic Innovation Partnerships, Department of Science & Technology, South Africa

Mlungisi Cele, Acting CEO, National Advisory Council on Innovation. South Africa

Rasigan Maharaj, Chief Director, Institute for Economic Research on Innovation, Tshwane University of Technology; Node Head, DST/ NRF Centre of Excellence in Scientometrics and Science, Technology and Innovation Policy,

Arie Rip, Professor of Philosophy of Science and Technology in the School of Management and Governance of the University of Twente



5A

PARALLEL SESSION 5A: INNOVATION FOR INCLUSIVE DEVELOPMENT

Abstract

In recent years policy makers, businesses and academics have begun to call for new approaches to thinking about the contribution that different types of innovation makes to economic and social development and to the environment. Inclusive innovation or innovation for inclusive development now represents an important strand of academic and policy thinking. Sections of the private sector are also actively engaged in innovating for, and with, lower income and excluded populations, including for less damaging environmental impact. This focus also encourages us to think beyond skills and sectors normally associated with innovation 'success' such as those rooted in science, technology, engineering and maths (STEM) and to think about both how a) broader sets of skills can contribute to creating innovation that has beneficial societal outcomes and b) understanding the kind of contributions that innovation in other sectors, such as culture and arts can make to inclusive development. This panel will explore:

- What kinds of organisations and institutional approaches are important for promoting innovation for inclusive development?
- To what extent does inclusive innovation mean disruption of current norms and processes in different sectors and in policy processes?
- How can we best think about success and failure with respect to innovation for inclusive development?

Panellists

Joanna Chataway, (Chair) Professor of Science & Technology Policy, SPRU, University of Sussex, UK

Nonhlanhla Mkhize, Chief Director for Innovation for Inclusive Development, Science and Technology for Social Impact, Department of Science and Technology, South Africa

Rasigan Maharaj, Chief Director: Institute for Economic Research on Innovation, Tshwane University of Technology, Node Head: DST/ NRF Centre of Excellence in Scientometrics and Science, Technology and Innovation Policy,

Andy Stirling, Professor of Science & Technology Policy, SPRU, University of Sussex; Co-Director, STEPS Centre; Sussex Energy Group, UK

5B

PARALLEL SESSION 5B: CAPABILITY BUILDING AND TRAINING FOR TRANSFORMATIVE INNOVATION POLICY AND POLICYMAKING

Abstract

We know that capabilities play significant roles in innovation and policymaking. To realise the goals of the Transformative Innovation Policy (TIP) approach, encapsulated in the SDGs, we require strategies that support efforts to (1) build new capabilities; (2) strengthen existing capabilities; and, (3) link capabilities within and across innovation and policy ecosystems. Therefore, it is imperative that capabilities building for TIP and challenge-led innovation policymaking, transcends individual, organisational (or institutional), and sector-specific efforts – if we are to expect systems-level impact embedded in the TIP thinking. One suggestion is to focus on capabilities building and training at systems level, i.e. involving multiple actors and stakeholders at the same time, in experimental (and "safe") spaces. Participants in this session will critically explore two main questions: what capabilities and training are required for transformative change through innovation, and why? How can we organise to build such capabilities, design the relevant training, and measure the impacts?

Panellists

Chux Daniels, (Chair), Research Fellow in Science Technology and Innovation; Teaching Fellow in Innovation Studies, SPRU, University of Sussex, UK; Member of the African Union Commission M&E Committee on Science Technology and Innovation Strategy for Africa 2024

Roselida Owuor, Deputy Director of Research, National Research Foundation, Department of Research, Science and Technology, Ministry of Education, Kenya

Flora Tibazarwa, Programme Director, Southern African Innovation Support Programme II, University of Dar es Salaam, Tanzania

Michael Lim, Policy Review Section, Science, Technology and ICT Branch, UNCTAD, Switzerland

David Walwyn, Professor, Graduate School of Technology Management, Department of Engineering and Technology Management, University of Pretoria, South Africa

5C

PARALLEL SESSION 5C: UPSCALING EXPERIMENTATION

Abstract

Experimentation in governance and for tackling social challenges has been increasingly popular among policymakers, practitioners and academics. Great expectations are based on experimentation in different contexts - for example, in urban transition, socio-technical innovation and formal policymaking - while there is rather little discussion on how, more specifically, experimentation contributes to transformative change and Transformative Innovation Policy. Building on the earlier session on policy experiments, this session discusses: How can experiments upscale, diffuse or otherwise contribute to transformative change (or can they)? What is meant by upscaling, and what are the ways to best gain from experiments on transformative change? What are the ways in which upscaling (or alternatives to it) can be supported or directed? How can the influence of experiments on transformative change be evaluated during and after the experimental phase?

Panellists

Paula Kivimaa, (Chair), Senior Research Fellow, Centre on Innovation and Energy Demand (CIED), SPRU, University of Sussex, UK

Mark Swilling, Stellenbosch University, South Africa

Tuomo Alasoini, Tekes – the Finnish Funding Agency for Innovation

5D

PARALLEL SESSION 5D: CAN REGIONAL INNOVATION POLICY FACILITATE TRANSITIONS?

Abstract

Regional innovation policy lies at the centrepiece of STI investments in many countries. An important part of academic work in this area has analysed regional innovation policy through a lens that focuses on the structural impact of regional agglomerations and industrial upgrading. Nevertheless, there is also an important governance motivation here based on the belief that more decentralised decision making will lead to policy priorities in STI that are more responsive to local needs. The latter is particularly prominent in some low and middle income economies where significant regional variations in levels of wealth and development raise demands for more inclusive impacts from STI investments. This tallies strongly with discourses in transitions literature that emphasise opening up the policy process to new societal actors and supporting and facilitating grassroots initiatives that pose more environmentally and socially sustainable alternatives. Important questions arise concerning which regional policy instruments might address the challenges associated with transitions and the barriers that exist in doing so. This session will discuss and debate these questions taking into account the impact both on sector dynamics and policy processes.

Panellists

Matias Ramirez, (Chair), Senior Lecturer in Management, SPRU, University of Sussex, UK

Claudia Obando Rodriguez, Research Assistant and PhD candidate in Science Technology & Innovation, SPRU, University of Sussex, UK

Elise Husum, Director of Department for Regional Research and Innovation, Research Council of Norway

Edurne Magro, Researcher, Orkestra-Basque Institute of Competitiveness



PRACTICAL INFORMATION



VENUE

All sessions will take place in the Protea Fire and Ice Hotel, Menlyn, Pretoria and locations will be indicated.



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GALA DINNER 20TH SEPTEMBER

All registered participants are invited to join the gala dinner.

The NRF will host the dinner at:
Summit Grill, Menlyn

Dress code:
Smart

Menu:
Set menu with bar service



TRANSPORTATION

Transportation has been kindly provided by NRF and all delegates will leave from the conference venue.



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EXPLORE FURTHER



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