

For Official Use

DSTI/STP/TIP(2010)6

Organisation de Coopération et de Développement Économiques
Organisation for Economic Co-operation and Development

24-Jun-2010

English - Or. English

**DIRECTORATE FOR SCIENCE, TECHNOLOGY AND INDUSTRY
COMMITTEE FOR SCIENTIFIC AND TECHNOLOGICAL POLICY**

Working Party on Innovation and Technology Policy

SUMMARY REPORT OF THE VIENNA WORKSHOP ON NATIONAL STI GOVERNANCE

25 June 2010

For further information please contact: Wolfgang HEIN, E-mail: wolfgang.hein@bmvit.gv.at; Armin MAHR, E-mail: armin.mahr@bmwf.gv.at; Mario CERVANTES, Email: mario.cervantes@oecd.org;

JT03286088

Document complet disponible sur OLIS dans son format d'origine
Complete document available on OLIS in its original format



**DSTI/STP/TIP(2010)6
For Official Use**

English - Or. English



SUMMARY OF THE VIENNA ROUNDTABLE ON STI GOVERNANCE

Introduction

1. On 18-19 February 2010 the OECD and the Austrian Government hosted a one and a half day Policy Roundtable on “STI Governance” that brought together policy makers, academic experts, and business representations to explore the key governance challenges facing science, technology and innovation policy makers in OECD countries. The discussion centred around three main topics: – *i*) the process and outcomes of priority-setting exercises; *ii*) STI governance arrangements to meet societal agendas (e.g. co-ordination mechanisms, involvement of stakeholders) and *iii*) national STI governance arrangements to facilitate international co-operation.

Austrian STI system as a case in priority setting

2. To illustrate some of the challenges facing OECD countries in adapting STI governance arrangements to changing rationales, stakeholder involvement and strategic policy thinking, the first session was devoted to the priority setting process underway in Austria and the development of the Austrian Federal Government *STI Strategy 2020*. The strategy evolved from a prioritisation process underway, which involved a national Research Dialogue, an international peer review (*i.e.* EU/CREST Peer Review 2007-2008) and a system-wide evaluation in 2008-2009 as well as strategic documents from the Austrian Council, leading to a government decision in September 2009 to develop the *STI Strategy 2020*. In addition, six federal ministries together with the Federal Chancellery were involved in the process.

3. The Austrian STI system has performed remarkably well on STI performance indicators over the past decade, leading to a jump in R&D intensity to 2.76% of GDP in 2010. At the same time, the system evaluation and peer reviews identified several gaps in the system or areas for further development: *i*) Human resources; *ii*) Basic research/frontier research; *iii*) Risk/venture capital; *iv*) Competition; *v*) Governance and *vi*) Structural change. Following the outcome of the evaluation and dialogue, several broad targets were established to bridge these gaps.

- Key Target: To establish Austria among the most innovative EU countries by 2020.
- Target 1: Addressing/Meeting the grand challenges of society
- Target 2: Effective STI structures as the base of excellent research
- Target 3: Sustainable modernisation of the Austrian education system

- Target 4: Improved framework conditions for innovation
- Target 5: A tailor-made funding policy: Increased efficiency and effectiveness of the STI system.

4. These targets represent a goal to address the gaps in performance through functional priorities that cannot be addressed by narrow technologically defined priorities which often are the result of stakeholder bargaining. Another main outcome of the evaluation of the Austrian system has been the building of new communities of stakeholders.

The increasing importance of priority setting in STI agendas

5. In recent years there has been a renewed interest in priority setting and related instruments, inducing strong demand for improved methodologies and international learning of best practices (Box 1). Priority setting for science and technology is “the selection of certain activities at the expense of others with an impact on the allocation of public resources”. There are several classifications of types of priorities, among them the following two types:

- Thematic Priorities: scientific fields; techno-sciences / technologies; sectors; issues; etc.
- Structural Priorities: broadly, various innovation-related measures; more specifically, these might be concerned with research, teaching, firms, regulation, financing, networking and community-building, etc.

6. Priorities are set at different levels: *i*) policy (government), *ii*) strategic (research funding agencies), and *iii*) operational (research-performing institutes), *i.e.* the function of formulating and implementing S&T priorities (highly decentralised).

7. Session 1 of the Roundtable focused on the following key sets of questions:

1. What should be the purposes and scope of formal (explicit) priority setting processes initiated by the public sector? and What ‘failures’ or ‘gaps’ are such processes seeking to address?
2. What roles do such formal processes play in shaping collective action around science, technology and innovation? For example, how do such processes contribute to agenda-setting and coalition building?
3. How can prioritisation processes resolve, if at all, the tension between the need to focus resources (selection and concentration) and the desirability to maintain diversity?

Box 1. Priority setting exercises in OECD countries/regions

Austria – National dialogue combined with international peer review and assessment that identified gaps. Creation of working groups and identification of goals. Political will to develop a vision for 2020.

Chile – developed more “selective” policies through its clusters initiative.

Denmark – RESEARCH2015 aims to improve the basis for prioritisation of public funds for strategic research. The initiative is to result in a catalogue of proposals containing especially promising themes for future strategic research, which are to inspire and inform budget negotiations in the fiscal years to come.

EU- Prioritisation occurs through a multilayered process involving mainly thematic priorities (e.g. FP7, European Technology Platforms), however, non-thematic priorities (i.e. scientific excellence) are also being encouraged via the European Research Council. Priorities are also affected by broader political agenda setting (e.g. ERA, Lisbon Agenda, Grand Challenges).

Korea – mix of instruments, including technology foresight and technology road mapping, distributed across various ministries and agencies; competing priorities and visions. Efforts to consolidate these into a ‘Total R&D Map’. Increased budgets go to the priority areas. For setting priorities in green technology, a Green Technology Commission was created to designate the 30 key green technologies that the government should focus on.

Japan – Systematic process since the development of Basic Plans for S&T. Plans cover 5 years foreseeing the next 10 years. The idea is to promote a whole-of-government approach to improve agenda setting and coalition building. More detailed priority setting was introduced under the 3rd Basic Plan: a chapter on strategic priority setting sets out how basic research should contribute to social returns. The Japanese Committee for Science and Technology Policy (CSTP) has authority to intervene on budgets. Budget and priorities are also influenced by policy papers such as the recent New Growth Strategy 20200

China – S&T priority setting as part of medium and long-term planning. Proven ability to mobilise resources. The approach is still largely top-down and biased towards high-tech.

Norway – broad priorities in S&T. Strong societal consensus on issues relating to sustainable development and related strengths in S&T. Unique opportunity to use this combination as a “mobilising device”.

Switzerland – considerable degree of thematic priority setting in science. Targeted investments of the Federal Institutes of Technology and National Research Programmes. Innovation Promotion Agency (CTI) funds priority areas in key technologies (e.g. nano and medical).

8. The discussion identified several layers of rationales for priority setting. The first being instrumental rationality or how to effectively spend public money by:

- Taking a longer-term, more strategic perspective
- Attending to ‘functional’ priorities that require a system-wide view
- Bringing ‘evidence’ to bear in setting future courses
- Bringing in stakeholders: tapping into distributed knowledge
- Introducing a stronger basis for accountability
- Ensuring the public interest plays a part in steering STI systems
- Selecting thematic areas where excellence can be built.

9. A second type of rationality is political: how to frame narratives and rationales for public support of STI. A third type of rationality relate to governance:

- Multi-actor forums of interaction => self-organisation
- Embracing community-building as the essential mechanism of priority implementation
- Forums for contesting visions and expectations
- Exploration of what’s desirable – and not just building on existing strengths (disruption)
- Enabling a whole-of government approach
- Government less as orchestrator and more as player
- Continuous processes to build agility into the system.

10. Another key area of discussion revolved around the contestability of priority-setting exercises between different agents (industry, universities). There exist different, and sometimes conflicting, views on the role and scope of priority-setting. This is illustrated by the tension between diversity and selection or specialisation. Selection is about achieving critical mass and efficiency whereas diversity is about managing uncertainty and building absorptive and receptive capacity to knowledge produced elsewhere. This is partly managed by having multiple sources of funding with different criteria for support. For example, diversity can be maintained through (curiosity-driven) basic research funding while selection can be made in applied research / technology development. But the question remains to what extent is there still a need for selecting ‘strategic’ basic research and for maintaining diversity in applied research and technological development?

11. Finally, implementing priority setting to steer the system and alter performance depends on the national context as well as budgetary and political leadership. Priority implementation is more likely where a dedicated budget line has been put in place rather than attempting to get several actors to pool resources. Furthermore, much S&T prioritisation over the last decade has been in the context of growing budgets – but how will the process evolve when budget cuts have to be made? To what extent is it possible to make prioritisation more open and the outcome of hidden agendas among the various actors? Priority setting is also both a resource and cost centre. In Korea for example, there is a dedicated institution (KISTEP) that manages an information system that covers some 200 000 R&D projects R&D, several committees and stakeholders.

12. The discussion also highlighted that community-building was a critical function of priority-setting processes, not just for the priorities set, but also for their implementation. The Danish Research 2025 exercise for example showed that a lot of energy went into building the process itself and making important stakeholders aware of the importance to participate in the process. Priority-setting requires considerable time and efforts (managing forums, information systems, etc.) but given the actual outcomes, the question arises whether it may not in some cases be too burdensome given the returns? Over time,

however, it may be that prioritisation, as processes become gradually institutionalised, can facilitate policy learning.

STI governance arrangements to meet societal agendas

13. Session 2 focused on the evolving relationship between STI governance and the role of society. Key questions addressed included: *i*) how can STI governance arrangements foster the multidisciplinary research needed to meet societal agendas? *ii*) How to engage stakeholders at different levels of STI policy making and what kinds of incentives can be used for the various actors? *iii*) How to build dialogue between stakeholders coming from different communities (*i.e.* research, innovation, civil society)? and *iv*) What new capabilities do traditional STI actors need to develop to participate in and fulfil the promise of such agendas?

14. From the expert presentations it became clear that greater stakeholder involvement was the natural consequence of greater demands for STI to address social challenges. However, greater participation also raises the complexity of the system due to co-ordinations costs and the limits of technical progress.

Adaptability and capacity building for STI governance

15. A key issue then is to manage the adaptability and capacity of the existing structures of STI governance. This involves aligning goals between demands to focus on social problems, and sector/ministerial goals that may be in conflict. It is also important to foster experimentation and the use of extended peer review and assessment exercises. Adaptability is a longer-term process and there may be institutional path dependency.

16. Another way to set societal agendas is to improve the relevance and prestige of multi-disciplinary research. This often requires a common source of funding. In addition, linking societal agendas into innovation programmes can also help create demand for “new mission oriented” programmes that respond to societal agendas.

17. As regards barriers to stakeholder involvement were identified:

- Difficulty identifying “relevant” stakeholders
- Fragmentation of stakeholders
- Different levels of participation – micro meso and macro
- Engaging new actors (foundations, patient groups)
- Ceremonial and *ad hoc* participation

18. To better engage stakeholder participation, several paths were identified including:

- Engaging stakeholders at earliest stage
- Mobilising non-scientific expertise
- Promoting Systemic not only *ad hoc* participation
- Leveraging ICT-based tools like Crowdsourcing
- Creating a dialogue – including multi-directional dialogue but transforming it into action.

19. Several questions however remained open with regard to the setting of social agendas, notably how to define social challenges? How to articulate the challenge as a goal? There is also the dichotomy between national STI governance structures and processes and societal agendas that extend beyond borders.

Participants noted that building the “software” for integrating societal agendas in STI governance was lacking and there is a need for more policy learning as well as research on innovation governance.

National STI governance arrangements to facilitate international co-operation

20. A third set of issues at the Vienna Roundtable focused on the links between national and international developments in STI governance. Traditionally multilateral collaboration in STI has focused on large research infrastructure as a way to share costs or generate economies of scale and scope. There is however an emerging political consensus that addressing global challenges (GCs) requires collective actions beyond any existing collaboration mechanisms that exist today. Indeed, for many countries, addressing global challenges through STI offers new opportunities and new rationales for multilateral collaboration. There are new multilateral arrangements emerging that provide flexibility, with shorter time horizons (*e.g.* EU Joint Programming initiatives) involving regular assessments and an opportunity to exit when countries face decreasing returns. There are also new players such as research foundations as well as firms, opening more opportunities for forming public partnerships.

21. Two key messages emerged from the discussion: First, global challenges do not only require new ways of transnational co-operation, they may also require changes to national STI governance arrangements. Just like firms have adopted the mantra of “think global act local”, governments must take into account global challenges in their national priority setting and future STI governance; Second, global challenges can have varying local and regional impacts. This means that responses by countries that are directly affected by certain challenges may not need to be global but perhaps implemented on a regional basis or among a cluster of countries that are directly affected.



ANNEX: TIP POLICY ROUNDTABLE ON STI GOVERNANCE – AGENDA

Vienna, 18-19 February 2010

Venue: BMWF Conference Rooms at Palais Harrac, Vienna

The objective: *To provide TIP input to CSTP policy thinking on STI Governance and to contribute to the OECD Innovation Strategy and follow-on work.*

The structure: *The Roundtable had three longer working sessions and a short one for drawing conclusions, discussion of implications for further work by the TIP. It started in the morning of the first day and end at noon of the second. The Chair was shared between the TIP Chair and the hosts.*

The audience: *The Roundtable assembled around 50 participants who were actively involved in the discussions. Target groups included policy makers, both those involved with policy implementation and policy analysts, as well as representatives from business, trade unions and civil society.*

The background: *Among the topics TIP delegates put on the table for consideration, the Vienna Roundtable did focus on the following issues, in particular the first two:*

- Prioritisation
- STI governance to meet societal agendas
- National STI governance arrangements to facilitate international co-operation

Each of these topics addressed both national and OECD contexts (e.g. CSTP project on New approaches and governance mechanisms for multilateral co-operation in STI to address global challenges). The third topic had the additional advantage of complementing on-going CSTP work in this area and focusing on national governance arrangements facilitating international co-operation.

The recent economic crisis has demonstrated the need for industrialised and knowledge-based societies to develop a more holistic view on knowledge for innovation, by better linking research, innovation and education through appropriate governance mechanisms.

AGENDA

Thursday, 18 February 2010
<p>Welcome remarks</p> <p><i>Session Chair: Patrick Vock</i>, Chair of the OECD Working Party on Innovation and Technology Policy (TIP) and Senior Advisor, State Secretariat for Education and Research, Switzerland</p> <p>Representative of the Federal Ministry of Science and Research, Austria</p> <p>Gernot Hutschenreiter, Deputy Head of the Country Studies Unit, Directorate for Science, Technology and Industry, OECD</p>
<p>Austria's STI strategy and STI governance</p> <p>Rupert Pichler, Director, Research and Technology Funding, BMVIT, Austria</p> <p>Armin Mahr, Austrian TIP Delegate and Advisor, Research Strategy Projects and EU Research Policy and Co-ordination, BMWF</p>
<p>Topic 1: Prioritisation – Introduction</p> <p>This session addressed the following questions:</p> <ul style="list-style-type: none"> • <i>What should be the purpose and scope of formal (explicit) priority-setting processes initiated by the public sector? What 'failures' or 'gaps' are such processes seeking to address?</i> • <i>What roles do such formal processes play in shaping collective action around STI? For example, how do such processes contribute to processes of agenda-setting and coalition-building?</i> • <i>Are expectations of what these processes are intended to achieve more or less met? If not, what are the disappointments and how might they be alleviated?</i> • <i>How can prioritisation processes resolve, if at all, the tension between the need to focus resources (selection and concentration) and the desirability to maintain diversity (agility)?</i> • <i>How might prioritisation processes deal with uncertainty? For example, how might the introduction of longer-term perspectives and/or the participation of wider groups of actors contribute to 'better' priorities?</i>
<p>Introduction to prioritisation of STI: policy issues and challenges</p> <p><i>Presenter: Gernot Hutschenreiter</i>, Deputy Head, Country Studies Unit, Directorate for Science, Technology and Industry, OECD</p>
<p>Rationale and trends in STI policy prioritisation</p> <p><i>Presenter: Wolfgang Polt</i>, Head of Vienna Office of Joanneum Research, Institute for Technology and Regional Policy, Austria – <i>A historical overview of prioritisation</i></p>
<p>Questions and Answers</p>

Policy Round Table

Policy makers and policy analysts (interviewed/questioned by a moderator, with interim rounds involving all participants – carried out more like a focus group than a traditional panel).

Moderator: Michael Keenan, Policy Analyst, Country Studies Unit, Directorate for Science, Technology and Industry, OECD

Policy makers:

- **Anders Hoff**, Head of Section, Danish Agency for Science, Technology and Innovation, Ministry of Science, Technology and Innovation
- **Rupert Pichler** Director, Research and Technology Funding, BMVIT, Austria
- **Werner Wobbe**, Policy Officer in DG Research - Directorate C, European Commission
- **Dr. Michal Pazour**, Technology Centre AS Czech Republic
- **Hirokazu Kumekawa**, Director for International Exchange Promotion, Ministry of Education, Culture, Sports (MEXT), Japan
- **Heekwon Jung**, Principal Administrator, OECD and seconded Head of Division, Ministry of Education, Science and Technology (MEST), Korea.

Session Chair: Wolfgang Hein, Austrian TIP Delegate and Deputy Director, Research and Technology Funding, BMVIT, Austria

Topic 2: STI Governance to meet societal agendas

The governance of STI involves a number of related issues concerned with the steering of relevant activities, *e.g.* scientific research, technological innovation, etc. This includes the nature and capacity of co-ordination mechanisms and their openness to wide and meaningful participation. It also includes the adaptability of governance arrangements to new social demands. This session focussed on the following questions:

- *What are the governance challenges associated with fostering the multidisciplinary research needed to meet societal agendas and how are they being met?*
- *What implication for funding regimes?*
- *How to engage stakeholders at different levels of STI policy making?*
- *What incentives are in place for scientists, engineers, and innovators to participate in and fulfil the promise of such agendas?*
- *Who are the new actors, if any, in the articulation and delivery of these societal agendas (e.g. Foundations, Patient Groups), and what does this mean for STI governance more broadly?*
- *How to build dialogue between stakeholders coming from different communities (i.e. research, innovation, civil society)? What new capabilities do traditional STI actors need to develop to participate in and fulfil the promise of such agendas?*

Presenter: **Mario Cervantes**, TIP Secretariat and Senior Economist, Science and Technology Policy Division, OECD and **Yoko Nitta**, Associate Fellow, JST and RISTEX, Japan – *Innovation for social challenges: Issues for the governance of STI policy*

Presenter: **Karen Maguire**, Economist/Policy Analyst, Regional Innovation, Governance Directorate, OECD – *STI policy governance at local and regional levels.*

Recent trends and developments in STI governance for societal agendas

Presenter: Prof. Josef Hochgerner, Centre for Social Innovation (*Zentrum für Soziale Innovation ZSI*) Austria

The presentation addressed the challenge of integrating the social dimension, including the involvement of stakeholders in the governance of STI policy, with a special focus on the rationale of policy action and governance patterns.

Questions and Answers

General discussion

Policy Round Table

Policy makers and policy analysts (interviewed/questioned by a moderator, with interim rounds involving all participants – carried out more like a focus group than a traditional panel).

Moderator: Mario Cervantes TIP Secretariat and Senior Economist, Science and Technology Policy Division, OECD

Policy makers:

- **Ellinor Bent Dalbye**, Higher Executive Officer, Ministry of Education and Research, Norway
- **Elisabeth Gulbrandsen**, Special Advisor, the Norway Research Council, Norway
- **Professor Yuko Harayama**, Professor, Tohoku University, Japan
- **Arie van der Zwan**, Senior Policy Advisor, Ministry of Economic Affairs, Netherlands
- **Roland Schneider**, Senior Policy Analyst, Trade Union Advisory Committee to the OECD (TUAC)

Friday, 19 February 2010
<i>Session Chair: Armin Mahr</i> , Austrian TIP Delegate and Advisor, Research Strategy Projects and EU Research Policy and Co-ordination, BMWF
<p>Session 3: National STI governance arrangements to facilitate international co-operation</p> <p>National STI Governance arrangements do not operate in isolation from international developments in S&T. And global challenges do not only require new ways of transnational co-operation, they will probably also make us rethink national STI governance. This session provided input to the <i>CSTP project on New Approaches and Governance Mechanisms for Multilateral Co-operation in STI to Address Global Challenges</i> by focusing on the following questions:</p> <ul style="list-style-type: none"> • <i>What are the rationales in national STI governance for pooling resources and developing new funding arrangements?</i> • <i>Must national legal provisions be changed or adjusted to enable the pooling of resources for funding joint efforts?</i> • <i>The national dimension of multilateral good governance in STI: How to mobilise and involve national governance and stakeholders to address global challenges?</i>
<p>Gang Zhang, Principal Administrator, Country Studies Unit, Directorate for Science, Technology and Industry, OECD</p> <p><i>Introduction on the state of the OECD project on New approaches and governance mechanisms for multilateral co-operation in STI to address global challenges.</i></p>
<p>Recent trends and developments in (inter-) national governance for global challenges</p> <p><i>Presenter: Andreas Stamm</i> Research Fellow, German Development Institute (<i>Deutsches Institut für Entwicklungspolitik DIE</i>)</p>
<p>Questions and Answers</p> <p>General Discussion</p>
<p>Policy Round Table</p> <p>Policy makers and policy analysts (interviewed/questioned by a moderator, with interim rounds involving all participants – carried out more like a focus group than a traditional panel).</p> <p>Moderator: Wolfgang Polt</p> <p>Policy makers:</p> <ul style="list-style-type: none"> • Andrej Cvelbar, Directorate of Technology, Ministry of Higher Education, Science and Technology, Slovenia • Bernd Fischer, Deputy Head of Division, Federal Ministry of Education and Research (BMBWF) and German TIP Delegate • Luis Miralles de Imperial, Technical Coordinator, Cabinet of Innovation Secretariat-General, Ministry for Science and Innovation, Spain • Dr. Christian Seiser, Director, EU Research Policy & Co-ordination, BMWF, Austria

- **Roland Sommer**, Federation of Austrian Industry and BIAC
- **Espen Solberg**, Embassy Counsellor, Permanent Delegation of Norway to OECD

Concluding session – Wrap up and next steps

Session Chair: Patrick Vock, Chair of TIP and Senior Advisor, State Secretariat for Education and Research, Switzerland

Interventions from the 3 Moderators followed by discussion and closing remarks:

Moderator Session 1: Michael Keenan, Policy Analyst, Country Studies Unit, DSTI, OECD

Moderator Session 2: Mario Cervantes, TIP Secretariat and Senior Economist, Science and Technology Policy Division, OECD

Moderator Session 3: Wolfgang Polt, Head of Vienna Office of Joanneum Research, Institute for Technology and Regional Policy, Austria

Closing remarks: Gernot Hutschenreiter, Deputy Head, Country Studies Unit, Directorate for Science, Technology and Industry, OECD – *Statement from the OECD Secretariat on directions of future work / Suggestions from the participants for future OECD work.*

Participants list for the TIP Policy Roundtable on Governance of Science, Technology and Innovation

Vienna, Austria

18 - 19/2/2010

AUSTRIA/AUTRICHE

Mr. Wolfgang HEIN	<i>Deputy Director for Funding of research and technology Funding of research and technology Federal Ministry for Transport, Innovation and Technology</i>
Dr. Reinhard BELOCKY	<i>International Programmes Austrian Science Fund (FWF)</i>
Dr. Johannes GADNER	<i>STI-Process Secretariat Federal Chancellery</i>
Dr. Isabelle HASSLER	<i>Division for Coordination Federal Chancellery</i>
Dr. Josef HOCHGERNER	<i>Centre for Social Innovation (Zentrum für Soziale Innovation, ZSI)</i>
Ms. Patrizia JANKOVIC	<i>Coordination Unit International for EU and international Affairs Directorate General I Federal Ministry for Education, Arts and Culture</i>
Mr. Leonard JÖRG	<i>Strategy Department Austrian Research Promotion Agency (FFG)</i>
Mr. Ralf KÖNIG	<i>European and International Programmes Austrian Research Promotion Agency (FFG)</i>
Dr. Michael KRAFT	<i>Austrian Chancellery/OECD Affairs</i>

Mr. Armin MAHR	<i>Advisor, DG Research Strategy Projects and EU Research Policy Federal Ministry of Science and Research</i>
Dr. Josef MANDL	<i>Federal Ministry of Economy, Family and Youth (BMWFJ)</i>
Mr. Wolfgang NEDOBITY	<i>Austrian Universities Conference</i>
Dr. Rudolf NOVAK	<i>Head of Department Austrian Science Fund (FWF)</i>
Dr. Rupert PICHLER	<i>Director of the Unit for Funding of Research and Technology Federal Ministry for Transport, Innovation and Technology</i>
Dr. Martin PILCH	<i>Deputy Director, Technical and Economic Research Federal Ministry of Economy, Family and Youth (BMWFJ)</i>
Mr. Wolfgang POLT	<i>Director Joanneum Research</i>
Dr. Iris RAUSKALA	<i>Minister's Office Federal Ministry of Science and Research (BMWF)</i>
Dr. Christian SEISER	<i>Director for EU research Policy and Co-ordination Federal Ministry of Science and Research</i>
Dr. Michael STAMPFER	<i>Federal Ministry for Science and Transport</i>

CZECH REPUBLIC/RÉPUBLIQUE TCHÈQUE

Mr. Michal PAZOUR	<i>Technology Centre</i>
--------------------------	--------------------------

DENMARK/DANEMARK

Mr. Anders HOFF	<i>Ministry of Science Technology and Innovation</i>
------------------------	--

Mr. Jan WINDMULLER

*Head of Section
Ministry of Science, Technology and Innovation
Danish Agency for Research, Technology and
Innovation*

FRANCE

Mr. Michael JANSEN

*Program officer
Secrétariat général ; Direction des relations
européennes et internationales et de la coopération
Ministère de l'éducation nationale / Ministère de
l'enseignement supérieur et de la recherche*

Mr. Raoul MILLE

*Attaché de coopération universitaire et scientifique
Ambassade de France en Autriche*

GERMANY/ALLEMAGNE

Mr. Bernd FISCHER

*Deputy Head of Division (211)
Basic Issues, Internationalization Strategy
Federal Ministry of Education and Research
(BMBF)*

Dr. Andreas STAMM

*Research Fellow
German Development Institute (DIE)*

HUNGARY/HONGRIE

Mr. László SZILÁGYI

*Professional Advisor
Innovation Policy
National Office for Research and Technology*

JAPAN/JAPON

Mr. Kenji UEKI

*First Secretary, Science and Technology Advisor
Energy, Technology and Industry
Permanent Delegation*

Dr. Yuko HARAYAMA

*Professor
Management of Science & Technology (MOST),
Graduate School of Engineering
Tohoku University*

Mr. Hirokazu KUMEKAWA

*Director for International Exchange Promotion
International Science and Technology Affairs
Division
Ministry of Education, Culture and Sports*

Ms. Yoko NITTA

*Associate Fellow
Research Institute of Science and Technology for
Society (RISTEX)
Japan Science and Technology Agency (JST)*

NETHERLANDS/PAYS-BAS

Mr. Arie VAN DER ZWAN

*Senior Policy Advisor on International Affairs
Directorate-General for Enterprise and
Innovation/Innovation Department
Ministry of Economic Affairs*

NEW ZEALAND/NOUVELLE-ZÉLANDE

Ms. Karla FALLOON

*Science Counsellor
New Zealand Ministry of Research, Science &
Technology*

NORWAY/NORVÈGE

Ms. Ellinor Bent DALBYE

*Higher Executive Officer
Ministry of Education and Research*

Mr. Espen SOLBERG

*Embassy Counsellor
Permanent Delegation*

Ms. Elisabeth GULBRANDSEN

*Special Adviser
Future Technologies
The Research Council of Norway*

POLAND/POLOGNE

Dr. Marcin KARDAS

*Strategy Department
Ministry of Science and Higher Education*

SPAIN/ESPAGNE

Mr. Luis MIRALLES DE IMPERIAL Y HORNEDO *Technical Co-ordinator, Cabinet of the Innovation Secretariat-General
Ministry of Science and Innovation*

SWITZERLAND/SUISSE

Mr. Patrick VOCK *Chairman TIP-OECD
State Secretariat for Education & Research*

EU/UE

Dr. Werner WOBBE *European Commission - DG Research*

SLOVENIA/SLOVÉNIE

Mr. Andrej CVELBAR *Directorate of Technology*

**BUSINESS AND INDUSTRY ADVISORY COMMITTEE (BIAC)/
COMITÉ CONSULTATIF ÉCONOMIQUE ET INDUSTRIEL (BIAC)**

Mr. Oliver DWORAK *Geschäftsführer / Managing Director
Bundessektion Industrie (Section of Industry)
Vereinigung der Österreichischen
Papierindustrie/Association of Austrian Paper
Industry*

Mr. Roland SOMMER *Federation of Austrian Industry*

Mr. Carsten WEHMEYER *Department for Research, Innovation and
Technology, Bundesverband des Deutschen BDI*

**TRADE UNION ADVISORY COMMITTEE (TUAC)/
COMMISSION SYNDICALE CONSULTATIVE (TUAC)**

Mr. Roland SCHNEIDER *Senior Policy Advisor
Trade Union Advisory Committee to the OECD*

OECD/OCDE

Mr. Mario CERVANTES

*Principal Administrator (Innovation and technology
policy)
STI/STP
OECD*

Mr. Gernot HUTSCHENREITER

*Principal Administrator
STI/STP/CSO
OECD*

Mr. Heekwon JUNG

*Principal Administrator
STI/STP
OECD*

Mr. Michael KEENAN

*Administrator
STI/STP/CSO
OECD*

Ms. Karen MAGUIRE

*Economist/Policy Analyst
GOV/RCG
OECD*

Mr. Gang ZHANG

*Principal Administrator
STI/STP/CSO
OECD*