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DSTI/GFKE/A(2011)1

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

07-Oct-2011

English text only

DIRECTORATE FOR SCIENCE, TECHNOLOGY AND INDUSTRY

Global Forum on the Knowledge Economy

AGENDA

BETTER INNOVATION POLICIES FOR BETTER LIVES

12-13 September 2011, OECD Conference Centre, Paris

For more information on the Global Forum please visit: www.oecd.org/knowledgeeconomy

Please note that this document is only available in pdf.

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JT03308557

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THE GLOBAL FORUM

Coinciding with the 50th Anniversary of the OECD, the 2011 Global Forum on the Knowledge Economy will provide a platform for exchange and networking among governments, business and civil society groups on the role that science and innovation policies should play in improving growth, sustainable development and the quality of life.

The Forum will explore the current state of science and innovation, address the key challenges for policy today and explore good policy practices at the national level as well as steps that should be taken at the international level. The Forum is intended to be highly interactive, will be based primarily on panel discussions, and will provide ample room for networking and interaction among participants. The discussion will be informed by background material prepared by the OECD Secretariat, which will set out what we have learned about science and innovation and the policies that affect them and what we still need to learn.

The Global Forum is intended to become an annual event, with varying themes, open to participants from OECD member countries and partners from outside the OECD membership, including participants from business and stakeholders. The Forum highlights will bring together session discussions, conclusions and related activities, and will be sent to every participant following the event. They will also be made available on the Forum website, www.oecd.org/knowledgeeconomy.

Monday, 12 September 2011

IMPROVING NATIONAL SCIENCE AND INNOVATION POLICIES

The first day of the Forum will focus on the challenges that science and innovation policies face at the national level. The first two plenary sessions will set the scene for the Forum in exploring the current policy context for science and innovation policies. Plenary session 1 will explore the demands and expectations that science and innovation actors and policy makers are being faced with. The second plenary session will explore how science and innovation policy is changing following the financial crisis and the new opportunities that are emerging. Following these plenary sessions, the discussion will turn to two essential elements in the debate on innovation; the interaction between science and industry, and the critical role of entrepreneurs and business in turning knowledge into innovation. The final session of the day will focus on a critical issue for the global economy; how to foster green innovation, enabling the global economy to combine stronger growth performance with better environmental outcomes. Throughout the day, the discussion will focus on lessons learned from experience and on the exchange of good practices that can potentially be used by participants in their own context.

8:30-9:30 **Registration and refreshments** *(room CC7)*

9:30-10:00 **Welcome and opening session** *(room CC1)*

The opening session will set out the context for discussion at the Forum.

Mr. Andrew Wyckoff, Director, Directorate for Science, Technology and Industry, OECD

Mr. Angel Gurría, Secretary-General, OECD

10:00-11h00

PLENARY SESSION 1:

How can science and innovation help?

(room CC1)

Moderator: **Mr. Paul Hofheinz**, President, Lisbon Council

Panel: **Mr. Juan Tomas Hernani**, General Secretary for Innovation, Ministry of Science and Innovation, Spain
Sir Mark Walport, Director, Wellcome Trust
Prof. Robert Aumann, Hebrew University of Jerusalem, Nobel prize winner (Economics, 2005)

Almost all of the world's economic, social and environmental challenges, ranging from economic development, climate change and food security to access to water, require a strong contribution by science and innovation if they are to be addressed effectively. Science and innovation have led to path-breaking discoveries, technologies, products and services in the past, many of which have helped improve the quality of life. New scientific discoveries and innovations are emerging, and hold the promise for even better lives. At the same time, there are questions on whether the pace and diffusion of scientific and technological progress is rapid enough to address some of the large global and social challenges today, including climate change, and whether the global science and innovation effort is sufficiently focused on dealing with these challenges.

- *What should we expect from science and innovation in the future? Where are the opportunities for science and innovation to improve lives?*
- *How can science and innovation be focused on the big challenges of the world today? What barriers need to be overcome? What good practices can be used?*

11:00-11:30 Refreshment break

(room CC7)

11:30-13:00

PLENARY SESSION 2:

(room CC1)

Science and innovation policy on a shoestring – how can governments better leverage public funding following the financial crisis?

Moderator:

Mr. Geoff Mulgan, Chief Executive, National Endowment for Science, Technology and the Arts (NESTA)

Panel:

Rt. Hon David Willets MP, Minister of State for Universities and Science, United Kingdom

Mr. Sergey Ivanets, Deputy Minister, Ministry of Education and Science, Russian Federation

Mr. Jacques Stern, Senior Advisor to the Minister of Higher Education and Research, France

Mr. Finn Lauritzen, Director-General, Enterprise and Construction Authority, Denmark (DECA)

Dr. Gordon Day, President-Elect, the Institute of Electrical and Electronic Engineers (IEEE)

Science and innovation have changed radically over the past decades, owing to rapid technological changes such as information and communication technologies, the increasingly global nature of the world economy, growing interdisciplinarity and collaboration, and the changing social context for science and innovation. The recent financial crisis and the shifting balance of the world economy towards emerging economies have further accelerated and accentuated these changes, and have placed a premium on policy approaches that leverage scarce public funding as efficiently as possible. New opportunities and approaches are also emerging. More and more countries engage actively in innovation and new actors, including charitable foundations, now play an important role in innovation. Information and communications technology and more open innovation offer new ways to share, create and diffuse knowledge and innovation, enabling more people to engage in science and innovation.

- *What are the new opportunities to strengthen science and innovation following the financial crisis and how can they be seized?*
- *How can governments best strengthen science and innovation in a context of scarce resources? What policies work in practice? Which should be avoided?*

13:00-14:30

Lunch break and networking opportunity

(room CC7)

14:30–16:00 PARALLEL SESSIONS 3A and 3B

SESSION 3A: Strengthening science- industry interactions (room CC1)

Moderator: Mr. Luis Sanz-Menéndez, Chair, OECD Committee for Scientific and Technological Policy (CSTP)

Panel:

Mr. Rick Johnson, CEO and Founder of Global Helix LLC

Prof. David Mowery, University of Berkeley

Prof. Mario Calderini, Politecnico di Torino, Italian National Agency for Innovation

Mr. Chuan Poh Lim, Chairman, Agency for Science, Technology and Research (A*STAR), Singapore

Mr. Yong-geun Kim, President of KIAT (Korea Institute for Advancement of Technology)

Science is vital to innovation, especially to generate “step changes” such as the discovery of the transistor or vaccines. Fundamental R&D, mostly undertaken and funded by governments, provides the foundation for future innovation. But scientific research does not automatically lead to stronger innovation. Much depends on the interactions and knowledge flows between science and industry, and on the rules and practices that shape these interactions. Despite a range of policy changes in recent years, science-industry interactions remain a challenge in many countries around the world.

- *What are the main challenges for science-industry interactions today?*
- *How can mobility and knowledge exchange between science and industry be strengthened? Is Bayh-Dole still a good model?*
- *What new solutions are available and what works in practice?*

SESSION 3B: Changing the game – boosting entrepreneurship (room CC4)

Moderator: Ms. Karen Wilson, Consultant, Directorate for Science, Technology and Industry, OECD

Panel:

Mr. Anders Hoffmann, Deputy Director General, Entrepreneurship Policy, Denmark

Mr. E.J. Reedy, Research Fellow, Ewing Marion Kauffman Foundation

Dr. Albert Bravo-Biosca, Senior Economist, National Endowment for Science, Technology and the Arts (NESTA)

Mr. Jan Muehlfeit, Chairman Europe, Microsoft Corporation

Firms are essential to translating knowledge and ideas into jobs and wealth. Entrepreneurs and young firms are particularly important for innovation and job creation, as they exploit opportunities that have been neglected by more established companies. But the state of entrepreneurship differs markedly across countries, with some countries having very few high-growth firms. Many countries still lack an entrepreneurial culture. New forms of entrepreneurship, such as social entrepreneurship, are emerging, and entrepreneurs are playing an important role in helping address global challenges.

- *What are the main barriers to entrepreneurship and the growth of young firms? How should they be overcome?*
- *What should be done to foster a culture of entrepreneurship? What works in practice?*
- *How can entrepreneurship contribute to more inclusive growth and help address social and global challenges?*

16:00-16:30 Refreshment break

(room CC7)

16:30-18:00

**PLENARY SESSION 4:
Fostering green innovation**

(room CC1)

Moderator: Mr. Ken Warwick, Chair, OECD Committee on Industry, Innovation and Entrepreneurship (CIIE)

Panel:

Prof. David Mowery, University of Berkeley

Prof. Keith Smith, BIS, United Kingdom and Imperial College

Prof. Reinhilde Veugelers, Bruegel Institute, University of Leuven

Dr. Gernot Klotz, Executive Director for Research and Innovation, CEFIC

Mr. K. Ananth Krishnan, Chief Technology Officer, Tata Consultancy Services, India

Green growth is about fostering economic growth and development while ensuring that natural assets continue to provide the resources and ecosystem services on which our well-being relies. Without science and innovation, it will be very difficult and very costly to move towards greener growth. The beauty of science and innovation is that, for the most part, it is a positive-sum game where the gains of one country do not need to be at the cost of another, and where there are opportunities for advanced, emerging and developing economies alike to create new businesses. Scientific research plays an important role in addressing knowledge gaps and fostering radical new technologies that can help move towards greener growth. Innovations also need to be taken up as widely as possible for shared prosperity and to reduce the costs of addressing environmental risks. But green innovation is still growing only slowly and is not yet sufficiently mature to address the large challenges the world is facing. Path dependency and dominance of existing technologies and systems can make it very difficult for some new technologies to compete and scale up. And green businesses still face obstacles in many countries.

- *What are the key barriers faced by innovators who want to develop green products and markets?*
- *How can the opportunities for green innovation and green growth be realised?*
- *What investments in research are needed and how should these be made?*
- *What good practices are emerging around the world and how could they be scaled up?*

18:00-20:00 **Close of the first day of the forum, followed by networking cocktail** **(R. Ockrent room, OECD Chateau)**

SCIENCE AND INNOVATION FOR INCLUSIVE DEVELOPMENT

The second day of the Forum will focus on the global and social dimensions of innovation. The first plenary session will explore how science and innovation are transforming emerging and developing economies and the lessons that can be learned by policy makers globally. The discussion will then turn to two key questions in the global debate, namely how to scale up good practices in international science and technology co-operation and how to foster new approaches to the diffusion of technologies and innovations at the global level. In both cases, the discussion will focus on the new approaches and good practices that are emerging and how these can be scaled up. The second plenary session of the day will focus on the role of innovation in inclusive development; how innovation can be better focused on the needs of the poorest and weakest in society and how this affects the policy approaches to science and innovation. Finally, the closing session of the Forum will focus on how the lessons learned from the discussion can be applied in practice and how obstacles to policy change can be overcome. It will also explore further work that the OECD might usefully undertake to assist policy makers to further strengthen science and innovation policies.

8:30-9:00 Refreshments (room CC7)

9:00-10:30 PLENARY SESSION 5: (room CC1)

Making the transformation happen – applying science and innovation in emerging and developing economies

Moderator: Mr. Stephen Groff, Deputy Director, Development Co-operation Directorate, OECD

Panel: Dr. John Thomson, Vice President of Strategic R&D Networks, Vertex Pharmaceutical Incorporated
Mr. Liu Yanhua, Counsellor to the State Council, former Vice Minister of Science and Technology, China
Mr. Carlos Braga, Special Representative and Director for Europe, External Affairs, The World Bank
Mr. Meoli Kashorda, Executive Director of the Kenya Education Network Trust, Kenya

The past decade has seen a transformation in many emerging and developing economies, facilitated by new technologies and innovations. This includes ICT, which has provided millions of users in developing countries with access to information, services and markets around the globe. New forms of entrepreneurship have also emerged, including in agriculture, which have led to a new dynamism in the business sector, even in some of the least developed countries. Leveraging the forces of ICT, entrepreneurship and science and innovation more broadly holds the promise for future economic *development*

- *How have science and innovation transformed emerging and developing economies? What roles have ICT and entrepreneurship played?*
- *What can be learned from successful transformation processes and which good practices are particularly important for other emerging and developing economies? What can developed economies learn from these practices?*
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10:30-11:00 Refreshment break (room CC7)

11:00-12:30

PARALLEL SESSIONS 6A and 6B

SESSION 6A: International co-operation – scaling up good practices (room CC1)

Moderator: Mr. Per Koch, Head of the Science Project, Ministry of Education and Research, Norway

Panel:

Prof. Robin Batterham, President, Academy of Technological Sciences and Engineering, Australia

Dr. Pernilla S.-Rafiqi, Research Advisor, Swedish International Development Agency, Sweden

Dr. Andreas Stamm, German Development Institute, Germany

Dr. Thomas Auf der Heyde, Deputy Director-General, International Cooperation and Resources, Department of Science and Technology, South Africa

Mr. Shigeo Okaya, Director SATREPS, Japan Science and Technology Agency, Japan

Global challenges need to be addressed collectively at the international level. Proven co-operation strategies include joint investment in basic and pre-competitive research; mapping of R&D needs; technology transfer initiatives; and scholarships and fellowships for international researchers and students. The experience with international co-operation shows that it can be highly effective in developing joint solutions. Yet some of the current global challenges may require more concerted approaches to accelerate scientific research and the development of new technologies, products and processes.

- *What new approaches to international science and technology co-operation are emerging?*
- *What are the good practices? How should they be scaled up and made more effective?*

SESSION 6B: Technology transfer – towards new solutions? (room CC4)

Moderator: Mr. Robert Wells, Head of the Biotechnology Unit, Directorate for Science, Technology and Industry, OECD

Panel:

Mr. Yuichiro Kawamura, Managing Director, Japan Intellectual Property Association, Japan

Mr. John Thomson, Vice President of Strategic R&D Networks, Vertex Pharmaceutical Incorporated

Ms. Carol Jenkins, Senior Policy Advisor, UK Intellectual Property Office, United Kingdom

Ms. Heloise Emdon, Program Leader: Innovation for Inclusive Development, International Development Research Centre, Canada

Ms. Waltraut Ritter, Director, Knowledge Networks and Innovation, Asia Pacific Intellectual Capital Centre, Hong Kong

Ensuring a wide diffusion of technologies is often as important as their invention, in particular in addressing global challenges. Lack of financial resources and lack of openness to trade and foreign direct investment, the quality of the IPR system and local capacities (e.g. human capital) all help explain why technology diffusion is often still concentrated in developed countries. Addressing these barriers can help, but new approaches to technology transfer are also needed, such as voluntary patent pools and other collaborative mechanisms for leveraging intellectual property. Some good practice already exists but significant scale-up is required.

- *What new approaches to and good practices in technology transfer are emerging?*
- *How should they be scaled up and made more effective?*
- *What role can foundations play?*

12:30-14:00 Lunch break and networking opportunity (room CC7)

13:30-14:00

Presentation of the *OECD Science, Technology and Industry Scoreboard 2011* (room CC7)

14:00-15:30

**PLENARY SESSION 7: (room CC1)
Science and innovation for inclusive development**

Moderator:

Mr. Dominique Guellec, Head of the Country Studies and Outlook Division, Directorate for Science, Technology and Industry, OECD

Panel:

Dr. Sharifah Zarah Syed Ahmad, Deputy Secretary General, Ministry of Science, Technology and Innovation, Malaysia

Dr. Thane Kreiner, Executive Director, Center for Science, Technology, and Society, Santa Clara University

Dr. Ruth Ladenheim, Vice-Minister, Ministry of Science, Technology and Productive Innovation, Argentina

Prof. Anil K. Gupta, Founder of Honey Bee Network, Executive Vice Chair, National Innovation Foundation, India

Dr. Chris Wilson, Director of the Global Health Discovery program, The Gates Foundation

Dr. Nuttapon Nimmanphatcharin, Senior Director for Policy and Management, National Science Technology and Innovation Policy Office, Thailand

Science and innovation help support growth that provides opportunities for large segments of the population, including through the creation of jobs. Science and innovation can also directly address social needs by providing products and services aimed at the needs of the poorest in society, such as medicines, seeds or clean water. Yet science and innovation often end up serving the needs of some groups more than those of others, and may end up increasing inequalities, both within and across economies. Several countries are emphasising the need for science and innovation policies to be more inclusive, and focus more on the needs on the “bottom of the pyramid”.

- *How can science and innovation be better focused on the needs of the poorest and weakest in society?*
- *What barriers exist and what lessons should be learned from experience?*
- *What approaches and opportunities to inclusive innovation exist and what good practices are emerging?*
- *What role should business and other stakeholders play?*

15h30-16:00 Refreshment break

(room CC7)

16:00-16:45

PLENARY SESSION 8:
Better innovation policies for better lives –
Conclusions and next steps

(room CC1)

Moderator:

Mr. Ken Warwick, Chair of the Committee on Industry, Innovation and Entrepreneurship (CIIE)

Panel:

Mr. Dirk Pilat, Head of the Structural Policy Division, Directorate for Science, Technology and Industry, OECD

Key findings and conclusions of the Forum

Mr. Ken Warwick, Chair of the Committee on Industry, Innovation and Entrepreneurship (CIIE)

Implications for the work of the CIIE

Mr. Luis Sanz-Menéndez, Chair of the Committee for Scientific and Technological Policy (CSTP)

Implications for the work of the CSTP

Mr. Andrew Wyckoff, Director, Directorate for Science, Technology and Industry, OECD

Implications for the work of the OECD

The success of science and innovation policies often depends on the extent to which such policies are mainstreamed within government. If governments want to use innovation as a strategic tool to help address key policy challenges, they must put it at the heart of their economic and social strategies. Moreover, governments need to overcome the political challenges that often make long-term strategies for innovation so difficult to deliver.

- *What are the main findings from the Forum?*
- *How can the discussions during this forum be turned into reality?*
- *What work could the OECD undertake to help strengthen policies for science and innovation further? What are the next steps?*

16:45-17:15

Launch of the OECD-SIDA Project on Innovation, Research and Higher Education for Development (IHERD) (*room CC1*)

Introduction to the IHERD Programme: Rational and Objectives:

Mr. Andrew Wyckoff, Director, Directorate for Science, Technology and Industry, OECD

Remarks :

Mr. Anders Ahnlid, Ambassador of Sweden to the OECD and UNESCO

Dr. Pernilla S. Rafiqui, Research Advisor, Swedish International Development Agency, (Sida)

Ms. Ebba Dohlman, Senior Advisor, Co-ordinator for the OECD Development Strategy, OECD

Mr. Richard Yelland, Head of the Education Management and Infrastructure Division, Directorate for Education, OECD

OECD has initiated a four-year programme on Innovation, Research and Higher Education for Development (IHERD) with support from the Swedish International Development Cooperation Agency, Sida. Its overall objective is to increase strategic and coherent investments in innovation, higher education and research which are relevant to development on a global level. The programme intends to expand the current body of policy-relevant research and provide opportunities for better informed policy making.

17:15

Close of the Forum

17:15

Cocktail: Launch of IHERD

(*R. Ockrent room, Chateau*)