



SUMMARY RECORD

**BUSINESS SYMPOSIUM ON
OPEN INNOVATION IN GLOBAL NETWORKS**

Copenhagen, Denmark

25-26 February 2008

BACKGROUND

1. On 25-26 February 2008 the OECD and the Danish Enterprise and Construction Authority held a two-day Business Symposium on “Open Innovation in Global Networks” that brought together business representatives, academic researchers and policy makers to assess the emergence of open innovation processes in firms as well as public research centres, drawing on OECD research and case study evidence, and to identify the implications for (national) innovation policies. The Business Symposium was organized as part of a two-year project on “Globalisation and Open Innovation” carried out by the OECD’s Working Party on Innovation Policy (TIP). The project involved research, empirical data collection, and the use of company case studies (59 case studies across 12 countries) which were carried out by a network of contributors and coordinated by a consultant under the supervision of the OECD. This paper presents the summary of the presentations and discussions at the Business Symposium.

INTRODUCTORY SESSION

Welcome by Betina Hagerup (Ministry of Economic and Business Affairs Denmark)

2. In her welcome address, *Betina Hagerup*, Deputy Permanent Secretary Business Affairs of the Ministry of Economic and Business Affairs in Denmark, highlighted the importance of innovation for Denmark. In response to the challenges of globalisation and greater openness in the innovation process, Denmark formulated a globalisation strategy which it expects to launch in 2009, with a focus on non-technological as well as technology-centered innovation in order to help Denmark participate more actively in global innovation networks.

‘Open innovation in the OECD Innovation Strategy’ by Susanne Huttner (OECD)

3. *Susanne Huttner*, Director, Directorate for Science, Technology and Industry (DSTI) at the OECD, highlighted the importance of the Business Symposium for the OECD Innovation Strategy and appreciated the input from the business sector. The OECD Innovation Strategy is a multi-disciplinary exercise in cooperation with different stakeholders in order to collect, understand and develop new insights on how countries can innovate more efficiently. Most OECD countries have made progress in creating the necessary framework conditions, and the exchange of best practices between countries will help them to further enhance innovation in their economies. Several areas will be tackled in the OECD Innovation Strategy such as markets and governance; human capital and the links between globalisation and innovation, but also the role innovation can play in meeting global challenges such as climate change, energy security and health.

‘Metanational innovation: a framework to understand configuration and coordination decisions’ by Yves Doz (INSEAD)

4. *Yves Doz*, Professor at INSEAD, delivered the keynote speech by focusing on the management challenges companies face in internationalising and opening their innovation process to external partners across the globe. He discussed the importance of meta-national innovation for building a global competitive advantage through which companies sense new knowledge and leverage existing knowledge in global innovation networks. The drivers behind the internationalisation of R&D have changed over the years with skills/capabilities and market/customer insights having become the most important factors for the location of R&D facilities abroad.

5. In determining the optimal strategy for their innovation activities, companies try to maximize the value of co-located knowledge sources while at the same time minimizing the costs of distance (geographical but also cultural) and knowledge complexity. The optimal strategy differs between

industries and companies, depending on structural characteristics of the industry as well the strategic choices and heritage/trajectory of the company. The strategy of companies depends also on the presence of external partners in different locations, as cooperating with other partners might reduce risks, enhance learning opportunities and catch up with leading technologies.

SESSION 1: GLOBAL INNOVATION NETWORKS

6. Innovation strategies increasingly require more global sourcing: sensing new market, concept and technology trends worldwide, while adequately responding to them by generating new ideas which are then implemented on a global scale. This involves building networks of distributed R&D globally in order to tap into local knowledge and to provide further sources of new technology, concepts and products. Global innovation networks include own R&D facilities abroad as well as collaborations for innovation with external partners (suppliers, customers, universities, etc.). This session, chaired by Ward Ziarko (Belgium) addressed issues like the importance of global innovation networks, how do companies organise and implement these, is this only possible for MNEs or also for SMEs, what role does public research plays within this global innovation networks?

‘Open innovation on a global scale: main findings’ by Koen De Backer (OECD)

7. Koen De Backer (OECD) presented the main findings from the OECD project ‘Globalisation and open innovation’. He discussed the increasing internationalisation of R&D in combination with the growing attractiveness of emerging countries like India and China. Companies do not only source new technology and knowledge through their facilities abroad, but also through their co-operation with external partners including universities, public research centres, suppliers and customers. Within global innovation networks, companies try to match the global demand and supply for knowledge

8. He also described the large diversity within global innovation networks and open innovation, following differences in modes of open innovation (licensing, spinning-in/off, etc.) and differences between industries. There is no dichotomy between closed and open innovation, but rather a continuum of outcomes of which companies choose the strategy that best corresponds to their needs. Global innovation networks do not only have advantages for companies but also some risks, of which theft of intellectual property is the most important as came clear in a recent survey.

‘Open innovation: technology leadership through collaboration’ by Erich Ruetsche (IBM)

9. Erich Ruetsche (Business Development & Relations, IBM Zurich Research Laboratory) described how innovation within IBM evolved from a closed to an open system, and more recently to an eco-system with important cross-organisational innovations. IBM has nowadays different research facilities across the world including in India and China, and works heavily together with customers and suppliers.

10. External partners are not the only important source of new ideas, but so too are the employees within IBM. In order to facilitate the exchange of ideas, IBM created a collaborative innovation tool called ‘Innovation Jam’; a multiple-day, web-based forum where participants brainstorm and propose ideas while moderators highlight key ideas and facilitate collaboration. The “Innovation Jam” has been used to collect information for different objectives (best practices, values, world insights) and has not only been limited to IBM employees but also their families, friends, etc. Erich Ruetsche further highlighted the importance of intellectual property innovating with external partner; describing how IBM grants free access to their patents (e.g. eco-patent commons) while at the same time taking patents in order to be able to act accordingly.

‘Open innovation experiences in Telefonica I+D’ by Luis I. Vicente del Olmo (Telefonica I+D)

11. Luis I. Vicente (Telefonica I+D) described how Telefonica has structured its global innovation network in the three different domains of research, development and innovation. In research, Telefonica is working together with universities, uses idea scouts to scan new ideas/technologies in universities but also in SMEs and the broader market. Additionally Telefonica has set up a venture capital market programme aiming at taking minority stakes in companies active in the key areas for Telefonica and for possible future growth. The focus in development is the cooperation with service developers to offer customers better services and solutions offered by Telefonica. One best practice is the Open Movilforum, which is an open source community to provide independent developers with API (Application Programming Interface) so that several mobile features can be integrated in applications. In the innovation domain, customer experiences are collected through social networks, webservices, knowledge marketplaces, etc. to speed up innovation for the customers.

12. The biggest challenges for open innovation within Telefonica are to balance internal and external research, to monitor and evaluate collaborative projects and to manage intercultural and virtual teams. In discussing policy recommendations, *Mr. Vicente* stressed that open innovation is *per se* a business phenomenon, nevertheless governments can help by:

- Putting a focus on the “physical ICT networks” for exchanging knowledge between all the agents in global innovation networks;
- Promoting collaboration through public grants, loans and tax Credits for R&D;
- Putting a focus on R&D & Innovation management tools (promoting new models and professional profiles);
- Building new ways for transferring knowledge between public and private sectors;
- Collaborating with the public sector to identify new technology trends and promoting living labs for forecasting new market trends;
- Evolving the IPR framework from an open innovation point of view; and
- Putting a focus on innovation in the service sector, where the open innovation model is evident.

‘Innovation and R&D in Saint-Gobain: reaching out’ by Armand Ajdari (Saint-Gobain)

13. Armand Ajdari (Vice-President R&D, Saint-Gobain) described the internationalisation of R&D within Saint-Gobain in Europe, the United States and Asia. He explained how the current organisation was designed to support product and process innovation mainly on existing markets (incremental innovation) while ‘reaching out’ internally as well as to external partners was done for strategic reasons and the penetration of new markets (radical innovation). Reaching out internally involves developing strategic projects with the involvement of the Board and different divisions, in addition to the implementation of transversal projects and R&D centers, in order to leverage cross-disciplinary research on technology topics of strategic importance shared by different businesses.

14. In reaching out to external partners, Saint-Gobain initializes partnerships through Non-Disclosure Agreements (NDA) with potential customers, joint development activities and acquisitions combined with R&D. Saint-Gobain has also installed a techno-marketing team, composed of engineers and marketers in

order to identify new applications, new markets and new approaches. Additionally Saint-Gobain has also started a venturing initiative in which teams in Europe, the United States and elsewhere combine ideas stemming from innovative start-ups with the industrial strength and assets of Saint-Gobain. A variety of working tools are used such as licenses, partnerships, equity investments and joint ventures. Lastly Saint-Gobain has developed an academic network (SUN –Saint-Gobain University Network) in order to develop long-term interactions with the best universities, to keep an eye on technological developments and to hire students from top universities.

‘Open innovation within Quilts of Denmark’ by Hans Erik Schmidt (Quilts of Denmark)

15. Hans Erik Schmidt (co-founder of Quilts of Denmark) described how Quilts of Denmark had, within a few years, created a special market position (high market shares, export growth) by using open innovation. Being confronted with the problem of temperature control, Quilts of Denmark used the research results of NASA in their sleep products. Quilts of Denmark worked closely together with a range of actors including medical advisors; innovation and technology partners; design and construction partners; material and supply partners; customers; and artists.

‘VTT as an innovation partner’ by Erkki Leppävuori (VTT Finland)

16. Erkki Leppävuori (President VTT Finland) described how public research institutions are increasingly included in global innovation networks. VTT Finland underwent a transition phase; moving from a pure technical research centre to a technology intensive innovation centre; further on, instead of the pure domestic market orientation in the past VTT Finland has become an internationally recognized collaboration partner. The objective of VTT is to become a fully networked organization with multidisciplinary and internationally competitive competences, in order to link local networked partners with global knowledge.

17. The aim of the new VTT partnership innovation program is to integrate different competencies (technology, business, and global markets) in order to foster technology-based innovations for its customers, in close co-operation with R&D financiers. VTT has set up an international university network with a large number of co-operation partners outside Europe (Korea, Japan, Russia, United States, China, etc.) and is very active in international public research projects (inside and outside Europe). Together with eight other public research organizations, VTT has formed a global research alliance to develop a global knowledge network focusing on areas such as water, health, energy, etc.

‘SFI – From brains to business’ by Mattie McCabe (SFI Ireland)

18. Mattie McCabe (Director Office of Secretariat and External Relations, Science Foundation Ireland) highlighted the role of SFI within the Irish innovation system to build excellence in research and human capital and to foster academic- industry collaboration. SFI cooperates closely together with other government agencies in Ireland in order to build research of the greatest strategic value to Ireland’s long-term competitiveness and development. Next to building top research teams and attracting industrial research from abroad, SFI creates a culture of partnerships on a national and international scale.

19. SFI funds and promotes academic-university partnerships along different dimensions and research lines. Within the Strategic Research Clusters (SRC’s) initiative, outstanding research scientists

and engineers are linked in partnerships across academia and industry. Resources are provided in order to attract and cultivate strong campus-industry partnerships that can inform and enhance research programmes. The CSET (Centres for Science, Engineering and Technology) programme is targeted at large scale partnerships between different companies and universities requiring significant industry commitment from inception.

Remarks by Andrew Dearing (EIRMA)

20. Andrew Dearing (Secretary-General EIRMA) reflected on the different presentations made earlier during the business symposium by trying to draw some general observations. He pointed to the diversity of open innovation serving different purposes and objectives including a) building common platforms and standards; b) dealing with complexity; c) helping the company itself perform better by being more aware of what else is happening; d) “Icing on the cake”, i.e. smaller advantages, not part of the mainstream business. He also observed that the word “Open” may become used too loosely: “Open Innovation” is not “Open Source” is not “Open Access” is not “Open Standards”, even though these terms may overlap.

21. For companies, it has become crucial to define their core competencies and strategic objectives and how do they become the preferred player in a networked world. How do they motivate others to work on their behalf, and how do they maintain freedom of action (through e.g. IP management). The company presentation expressed the objective in terms of “being the ecology of choice”, “being the partner of choice”, “being the region of choice”, based on some quite clearly-expressed strategic objectives. However companies can become “over-critical”, in other words, too much cooperation, too large a network is unwieldy and ineffective.

22. *Mr. Dearing* also alluded to the common misconceptions around the concept of Open Innovation, including about: a) knowledge mobility (‘proximity still matters’); b) the value of collaboration as a business motivator and solution (‘it isn’t, it’s a tool’); c) the cost-advantages to be gained from outsourcing to Asia (‘the advantages come from doing things better, not really from cheaper labour’); and d) the central role of R&D. These misconceptions also include ignoring the issue of competencies (whether people have the possibilities and incentives to know how to turn the world to their advantage).

23. He also pointed to the still significant role public bodies such as universities, PROs and governments can play. As such, PROs may prove to be more important features of the ecosystem than is currently realised. Global innovation networks also require the integration of policy and action, between ministries, across governments, between public and private sector, according to each actor’s self interest. Regulation also matters: the question is whether the regulations that are creating are coherent with the behaviours that are encouraged. And the final challenge may be the following: if innovation is increasingly realised in globally-connected networks, how will public authorities in one country justify actions that apparently create benefit somewhere else in the world?

SESSION 2: NEW MODES OF OPEN INNOVATION

24. Different modes are used by companies to source external knowledge and acquire/sell ideas, concepts and technology. More common examples include partnerships with external partners like alliances, joint ventures, joint development, but also contract R&D, purchasing and licensing of technology. Recently new modes of open innovation have also increasingly been used by companies such as venturing, innovation intermediaries, innovation campuses, etc. This session chaired, by *Frederique Sachwald* (France), addressed issues including, what are new best practices of open innovation on a national and international level, why have they become attractive, what are problems and difficulties in implementing these, are they applicable in all companies in all industries?

‘Good practices of open innovation: findings from 59 case studies across 12 countries’ by Els van de Velde (consultant OECD)

25. *Els van de Velde* (OECD) presented the aggregate insights of the 59 company case studies that were undertaken within the OECD project ‘Globalisation and open innovation’. The case studies across 12 countries showed a balanced representation between high and low tech industries, between manufacturing and services and (to a lesser extent) between large and smaller firms. The majority of the companies reported to spend between 0 and 10% of their R&D-investments to the funding of outside research; market trends and customers were indicated as the most important sources for innovation next to R&D. In locating R&D facilities abroad, the companies indicated the access to markets and the large availability of S&T persons as the most important location factors; the low labour cost of researchers abroad were considered as less important.

26. Companies implement open innovation and source external knowledge in order to speed up the innovation process, to enlarge the number of ideas, to attract and retain talent, and to increase external funding for new ideas and technologies. MNEs as well as SMEs are found to implement open innovation, although the extent to do so is somewhat larger in MNEs. Companies also implement open innovation in order to generate revenue with internal innovations (especially if they do not belong to the core strategy), by spinning-off companies, by corporate venture funds and by posting them on websites of technological brokers. The company case studies also indicated the importance of creating a real innovation culture within the company and of explicitly using intellectual property rights in implementing open innovation.

27. Based on the case studies, it comes clear that the outside-in approach of open innovation (knowledge sourcing) is used mainly to strengthen the core technology and companies close up their innovation process the more they approach the commercialisation phase. The inside-out side of open innovation (commercialisation with/through external partners) is aimed to search for new applications and tends to be open since not all knowledge is within the company. The case studies further demonstrated that open innovation is dependent on the size of firms (SMEs have less resources and possibilities) and type of industry (importance of opportunity and appropriability conditions, and the complexity of the knowledge base).

‘The introduction of a disruptive innovation approach in the automotive industry: Valeo’s Driving Assistance Domain’ by Patrice Reilhac (Valeo)

28. *Patrice Reilhac* (Innovation Director of the Driving Assistance Domain, Valeo) described how the creation of different ‘domains’ has helped Valeo to move from the traditional closed model of innovation to a more open innovation model. While incremental innovation is still done within the ‘traditional’ product lines, domain innovation has been targeted at radical and disruptive innovations, across product lines (transversal) and to new fields. As such domains typically come before the (traditional) stages of advanced technology, concept and development of the different components.

29. The domains basically act as an innovation and business development incubator within Valeo and are based on market inputs like societal analysis, internet surveys, customer clinics with demo cars, focus groups, predevelopment and/or co-innovation with carmakers. The Domains are the main source of Open Innovation interactions with the surrounding “eco-system”. The organisation of innovation along domains within Valeo has resulted in a truly transversal approach, extending carmakers relationships, end-user orientation and ‘embedded’ societal trends.

‘Novartis and the pharmaceutical Industry: innovation is key’ by Stephan Mumenthaler (Novartis)

30. *Stephan Mumenthaler* (Head Economic Affairs, Novartis Switzerland) described how open innovation has become a standard practice within Novartis. Novartis complements strong internal R&D centres by inward and outward licensing, targeted M&A and external collaborations in order to increase the potential for innovation and to share the risk of failure (e.g. the large sunk R&D costs in the pharmaceutical industry). The main internal R&D centres are located in Switzerland, France, the United Kingdom, the United States, Japan and India, in addition to several other smaller centres in almost 60 countries.

31. Traditionally, the focus of Novartis was on own developments but recently significant development efforts have also been placed on licensed products. This is complemented with targeted M&As especially in growth areas of health care. In addition, a lot of external collaboration is undertaken with biotechnology companies: 30% of Novartis’ R&D budget is spent on external collaborations with 120 biotech companies and 280 academic centres. The Bio-valley is a local Life Science Cluster in Basel, Alsace and Freiburg, where 4 life science global players are in a network with academics (4 major universities, 30 life science institutes) and about 400 SMEs (~ 1/3 founded since 1990). The Novartis Venture Fund is one of the key success factors in this Bio-valley: since its foundation in 1996 Novartis invests in companies that develop innovative life science concepts for the benefit of patients. Within Switzerland, Novartis is currently reorganising a former production site to become an appealing and functional campus of knowledge, with modern and multifunctional open-plan offices in order to facilitate communication, knowledge transfer and cooperation.

‘Open innovation @ Philips Research’ by Jan van den Biesen (Philips)

32. *Jan van den Biesen* (Vice-President Public R&D Programs, Philips Research) described how innovation within Philips has evolved from a closed system to a system with selective partners, and now increasingly into an open innovation system. The objective is to offer integrated solutions for which technology and R&D are still important inputs but no longer the only one. Open innovation within Philips is done via different modes: technology spin-in from research centres and universities, collaborations with external suppliers, joint-ventures with other companies, technology spin-off of own technology, active IP-management to share, buy and sell IP.

33. The High Tech Campus Eindhoven is a World-class technology centre of 40 high tech companies (7000-8000 people) working together in development of new technologies. It is a true open eco-system where innovative companies, research organisations are working together including supporting service companies and economic development companies. On this Campus, the ExperienceLab offers facilities testing the feasibility and usability of solutions and services with end-users. MiPlaza offers industrial R&D expertise and support by providing access to clean rooms, expertise, technical services, tools and facilities. The Holst Centre is a joint centre of TNO (Research organisation, Netherlands) and IMEC (Research organisation, Belgium) focuses on open innovation through precompetitive shared programs with industry. Philips initiated also internal ventures and incubators that with the support of venture capital has resulted in a couple of important spin-outs. The Creative Conversion Factory is an Open Innovation Incubator Initiative for turning ideas into products.

34. Policy recommendations raised by Jan van den Biesen were:

- Fostering user-involvement, customer intimacy, pilots, trials.
- Stimulating start-ups, venturing, entrepreneurship.
- Supporting Open Innovation Centres and innovation intermediaries.
- Providing SMEs with innovation vouchers.
- Avoiding segregation between SMEs, large firms and research organisations.
- Allowing IP access and transfer to worldwide affiliates.
- Encouraging temporary staff exchanges.
- Promoting 10 commandments of “Responsible Partnering” (<http://www.responsible-partnering.org>).
- Providing operational guidelines on R&D PPPs and EU State aid rules

‘Patterns of open innovation and performance’ by Sverre Herstad (NIFU STEP)

35. *Sverre Herstad* (researcher NIFU STEP) presented the interim results of a study, funded by Eranet Vision, to analyse open innovation within established innovation system approaches and theory. In addition, micro-data coming from Community Innovation Surveys have been used to map open innovation and analyse its impact on innovation performance. Open innovation was principally studied along two dimensions: the breadth or the range of available sources/means used and the depth or the intensity of use. Simple and composed indicators were calculated for different industries and different countries.

36. These indicators were then used to analyse the impact of open innovation on innovative performance. The interim results demonstrated that on average open innovation has a positive and significant impact on innovation performance. The positive effect is especially related to the breadth of open innovation (the range of available information sources used, the range of collaboration partners used, the range of sources for external technology used and the range of IPR measures used), while no direct impact of innovation depth was reported. The results further showed a strong, positive impact from intramural R&D next to open innovation. However, overall results should be interpreted with caution since differences may be dependent on the structural characteristics of the industry; analysis by industry indeed showed that important differences exist between industries.

SESSION 3: IMPLICATIONS FOR INNOVATION POLICY

37. Globalisation and the emergence of open innovation have several implications for science, technology and innovation policies. Many OECD governments are rethinking their innovation policies in order to adapt them to the rapidly changing business environment. The policy discussion focused on how countries have modified or are attempting to modify their S&T policies to global innovation networks. This session was chaired by *Patrick Vock* (OECD-TIP Chairman).

Policy Issues Paper by Mario Cervantes (OECD)

38. *Mario Cervantes* (OECD) recalled some of the main policy implications that have emerged during the course of the OECD-project and highlighted issues for discussion at the Policy Round-Table. He presented implications for framework conditions, government R&D policies and universities and public research organisations. Which framework conditions are more important and how can government facilitate open innovation practices and is there a specific role for direct measures?

39. Regarding government R&D policies, should governments open up their national/regional innovation schemes more widely? And if so, how to ensure national benefits? Additionally, should support differentiate between large and small firms or focus on ecosystems of firms? (e.g. R&D tax credits for collaboration). Global innovation networks have also implications for public research: how can policy makers encourage universities and PROs to take a pro-active role in open innovation? Are universities going too far in single-handedly commercialising research rather than pursuing joint development?

‘Open innovation in an international context: the Holst Centre and the innovation program Point One’ by Sigrid Johannisse (Netherlands)

40. *Sigrid Johannisse* (Manager Innovation Programs High Tech Systems, Ministry of Economic Affairs/ SenterNovem, the Netherlands) explained how the trends of R&D internationalisation and open innovation have changed innovation policy in the Netherlands. The Dutch government considers that specialisation is essential in order to take a front runner position. Innovation involves more than only R&D, but includes also SME policy, human capital, etc., and implementation of these policies (which are project or programme orientated) requires a clear commitment from industry. She presented two specific examples.

41. The Holst Centre at the Eindhoven Campus is an Open Innovation Centre for Autonomous Microsystems and Systems-in-Foil. This joint centre of TNO (Netherlands) and IMEC (Belgium) has a clearly international ambition with partners worldwide and employing 18 nationalities. The Host Centre creates generic technologies with a time to market between 3 and 10 year, co-operates with industry and universities through precompetitive shared programs (creating focus and mass), of which the results are shared between the partners. Industrial partners of Holst Centre take part in the research programs and to enable the fast transfer of results to industrial partners. In the case of co-invention, industrial partners become co-owners of IP.

42. Point One is a pole of innovative technology on nano-electronics and embedded systems that started in 2006. The vision is very focused through an ambitious and coherent strategic agenda and the key success factors are considered to be its international recognition, (scientific) strengths, commitment of industry/ key players and an integrated approach (human capital, SMEs). To realize the clear economic targets, a range of public incentives are foreseen: grants, feasibility studies, vouchers, brokerages (national and international), trade missions, knowledge transfer activities, education (vocational training), stimulation of spin-off companies, joint research institutes, exchange of researchers, R&D subsidies, etc.

‘Open innovation at Oséo Innovation’ by Patrica Renaud (France)

43. *Patrica Renaud* (in charge of the SME’s Pact from OSEO France) described recent actions to foster open innovation in France with a special focus on innovative SMEs and mid-sized enterprises. Other initiatives to foster the development of innovative SMEs with high growth potential include the streamlining of existing government measures and agencies, the simplification of access to government R&D and innovation schemes, and the increase of the R&D tax credit as well of direct aid.

44. The ‘SME pact’ foresees the positive mobilisation of large entities (private or public) to promote innovative SME’s development. Large entities agree (it is more a voluntary willingness instead of an obligation) with OSEO and the Comité Richelieu to reinforce their relations with innovative SMEs through procurement and RDI contracts. Within this SME pact, the Passarelle programme fosters R&D-collaboration between innovative SMEs and large enterprises. If large enterprises are interested by SME’s innovative products or services while still needing further development, the Passarelle programme supports R&D projects that facilitate the testing and adaptation of the products and services to the specific needs of the large enterprise. The funding is split 1/3 by the large enterprise (cash and/or in-kind contributions), 1/3 by public subsidies (Oseo Innovation grant) and 1/3 by the SME. The intellectual property stays with the SME but the large enterprise has a privileged access to the results for application in its specific business domain.

‘Current status and future development of ‘open innovation’ in Japan’ by Futoshi Nasuno (Japan)

45. Futoshi Nasuno (Ministry of Economy, Trade and Industry, Japan) started his presentation describing the rather ‘poor’ results and profits from innovation in Japan, notwithstanding the large investments in innovation (R&D, patents, etc.). Different explanations have been put forward: low mobility of high skilled personnel, not-invented-here syndrome, low quality of corporate management, etc. Under the concept of “Innovation Super Highway”, linkages between science, technology and business are being encouraged. The objective is to come to a two way flow of knowledge and human resources and a better utilization of the output of R&D in the market. A specific example of innovation collaboration in Japan is the large scale- eco-innovation based upon Japan’s strength to develop environmentally friendly and energy-saving technologies.

46. The expansion of the "R&D promotion tax system" in Japan foresees in a larger fiscal deduction of research expenses in order to accelerate innovation. The non-exclusive license registration system is a new registration system that is established as a special system relating to the requirement to duly assert against third parties concerning non-exclusive licenses for patent rights, etc. As a result, the non-exclusive license on a patent right or utility model right granted under a “specific non-exclusive license agreement” has effect on third parties if it is registered in the specific non-exclusive license registry. Neither the details of the non-exclusive license nor the name and address of the non-exclusive licensee is disclosed to the public. All registered contents are disclosed to parties concerned in the registration and third parties who assert against the registered non-exclusive licensee.

Policy Round Table chaired by Patrick Vock (chairman TIP-OECD)

47. Patrick Vock (OECD-TIP Chairman) launched the policy round table with the question whether a radical change in innovation policy was needed following the emergence of global innovation networks? Richard Hudson (ScienceBusinessNet) noted that the term ‘innovation’ becomes over-used by policy makers, hence necessitating the coordination between different policies impacting innovation. Also Dirk Pilat (OECD) argued for a better coherence of policies, which are often dispersed across different government departments. Innovation nowadays seems to be hindered especially by inefficient policies in several other domains (e.g. the lack of one market within Europe) maybe more than availability of funds.

48. Wim Vanhaverbeke (University of Hasselt) argued for a better integration of innovation policies within public policies. Furthermore, he mentioned that innovation policies are still heavily based towards R&D and technological innovation. He sketched different fields where innovation policies could be optimized in light of the current trends towards the internationalisation of R&D and open innovation:

- Human resources, especially mobility of high skilled people.

- Financing of the commercialisation phase.
- Finding a balance in Intellectual Property between protection and dissemination.
- Better enforcement of competition.
- Rules setting.
- Financing of networks instead of individual companies.

49. Alice Wu (European Commission) referred to the importance of open innovation in the EU framework programs already for several years and highlighted the priorities of EU innovation policy (following on the Lisbon Strategy).

50. In discussing the importance of cluster policies, Wim Vanhaverbeke noted the tension that arises between the competitiveness between companies and that among countries. With emergence of global innovation networks, the relocation of innovative activities might benefit the long term success of companies, but not necessarily the competitiveness of the home countries. However, outward foreign direct investment has been showed also to generate important advantages for home countries (reverse technology transfer, pipelines).

51. Richard Hudson described how clusters are inevitable and reflect the fact that the ‘world is spiky’ and will become even more so. Confronted with the rapidly rising costs of R&D and innovation, countries are forced to concentrate their resources around a number of activities and/or technologies. Jan van de Biesen (Philips) pointed to the tension this may create with EU cohesion policies that try to prevent too large differences between regions within the EU.

52. There seemed to be a consensus that indirect measures were preferred to direct measures in creating the right framework conditions for innovation. Sometimes, the responsibilities for different domains and measures are situated on different geographical levels (local, regional, national, European, supranational), hence requiring greater coherence between the different levels. Jan van den Biesen called for reciprocity in opening up national R&D support programmes to foreign companies, as especially outside Europe problems of access still persist.

Closing by Finn Lauritzen (Danish Enterprise and Construction Authority)

53. In his closing remarks, Finn Lauritzen, Director Danish Enterprise and Construction Authority, described how Danish companies apply the strategies of open innovation in their activities. He stressed the necessity of more fact-based policies for innovation and showed how Community Innovation Surveys can be used for this. The objective is to build a strong knowledge base for a smart innovation policy focusing on new types of innovation, analyzing policy implications, identifying best policy practices enabling monitoring and benchmarking.