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G20 Research Group  
at Trinity College at the Munk School of Global Affairs  
in the University of Toronto  
presents the

## **2016 G20 Hangzhou Summit Interim Compliance Report**

6 September 2016 to 17 February 2017

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“The University of Toronto ... produced a detailed analysis to the extent of which each G20 country has met its commitments since the last summit ... I think this is important; we come to these summits, we make these commitments, we say we are going to do these things and it is important that there is an organisation that checks up on who has done what.”

— *David Cameron, Prime Minister, United Kingdom, at the 2012 Los Cabos Summit*

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### 13. Technologies and Innovation: Knowledge Diffusion and Technology Transfer

“We support effort to promote voluntary knowledge diffusion and technology transfer on mutually agreed terms and conditions.”

*G20 Leaders' Communiqué: Hangzhou Summit*

#### Assessment

Country	Lack of Compliance	Work in Progress	Full Compliance
Argentina			+1
Australia			+1
Brazil			+1
Canada			+1
China			+1
France			+1
Germany			+1
India			+1
Indonesia			+1
Italy			+1
Japan			+1
Korea			+1
Mexico			+1
Russia			+1
Saudi Arabia			+1
South Africa			+1
Turkey			+1
United Kingdom			+1
United States			+1
European Union			+1
Average		+1.00	

#### Background

Innovation was mentioned as an important source of growth in many of the G20 documents in previous years, and it became one of the key priorities during China's 2016 presidency.

At the 2009 Pittsburgh Summit, G20 leaders committed to promote innovation across countries.<sup>1959</sup> The 2010 G20 Toronto Summit Declaration<sup>1960</sup> as well as the Seoul Summit Document<sup>1961</sup> list encouraging innovations among the most important measures needed to enhance the growth potential of economies and help unlock demand.

<sup>1959</sup>G20 Leaders Statement: The Pittsburgh Summit, G20 Information Centre (Toronto). Access date: 16 January 2017. <http://www.g20.utoronto.ca/2009/2009communiqué0925.html>.

<sup>1960</sup>The G20 Toronto Summit Declaration, G20 Information Centre (Toronto). Access date: 16 January 2017. <http://www.g20.utoronto.ca/2010/to-communiqué.html>.

<sup>1961</sup>The Seoul Summit Document, G20 Information Centre (Toronto). Access date: 16 January 2017. <http://www.g20.utoronto.ca/2010/g20seoul-doc.html>.

At the 2011 Cannes Summit, G20 leaders, for the first time, committed to ensure that “poor countries benefit rapidly from innovation and technological advances” and agreed to “encourage triangular partnerships to drive priority innovations forward.”<sup>1962</sup> Special attention was given to innovation in the agricultural sector. During the 2012 Los Cabos Summit, G20 leaders reaffirmed their commitment to encourage cooperation on innovations in the agricultural sector and also foster private sector participation within the field.<sup>1963</sup>

At the 2013 St. Petersburg Summit, innovation policies were considered as one of the most important tools in achieving “strong, sustainable, and balanced growth, restoring confidence in the global economy and promoting the creation of quality jobs.”<sup>1964</sup>

Innovation became one of the key priorities at the 2016 Hangzhou Summit. The G20 Blueprint on Innovative Growth emphasized the need to “seize the historic opportunities presented by technological breakthroughs for global economic growth.”<sup>1965</sup> Mid-to-long term growth potential should be provided by a commitment to innovative growth. The concept encompassed “actions in support of innovation, the New Industrial Revolution and the digital economy.”<sup>1966</sup> These actions among others include protection of intellectual property rights (IPR) and its enforcement for innovation, support for greater openness and “the promotion of voluntary knowledge diffusion and technology transfer.”

### **Commitment Features**

This commitment consists of two parts: 1) promotion of voluntary knowledge diffusion; 2) technology transfer on mutually agreed terms.

#### Promotion of knowledge diffusion

According to the OECD Report on Knowledge-based Economy of 1996, promotion of knowledge diffusion includes “providing the framework conditions for university-industry-government collaborations and facilitating the development of information infrastructures.”<sup>1967</sup> To enhance knowledge diffusion governments give incentives for universities and laboratories to cooperate with industrial partners on the selection and further conduct of their research activities. Knowledge diffusion can also have cross-border dimension which implies interstate collaborations between universities, industries and governments and development of international information infrastructures.

#### Technology transfer

The UNCTAD draft International Code on the Transfer of Technology (the draft TOT Code) developed in 1985 defines the “technology transfer” as the process by which “systematic knowledge

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<sup>1962</sup>Cannes Summit Final Declaration – Building Our Common Future: Renewed Collective Action for the Benefit of All, G20 Information Centre (Toronto). Access date: 16 January 2017. <http://www.g20.utoronto.ca/2011/2011-cannes-declaration-111104-en.html>.

<sup>1963</sup>G20 Leaders Declaration Los Cabos, Mexico, June 19, 2012, G20 Information Centre (Toronto). Access date: 16 January 2017. <http://www.g20.utoronto.ca/2012/2012-0619-loscabos.html>.

<sup>1964</sup>G20 Leaders' Declaration September 6, 2013, St Petersburg, G20 Information Centre (Toronto). Access date: 16 January 2017. <http://www.g20.utoronto.ca/2013/2013-0906-declaration.html>.

<sup>1965</sup>G20 Blueprint on Innovative Growth, G20 Information Centre (Toronto). Access date: 16 January 2017. <http://www.g20.utoronto.ca/2016/160905-blueprint.html>.

<sup>1966</sup>G20 Blueprint on Innovative Growth, G20 Information Centre (Toronto). Access date: 16 January 2017. <http://www.g20.utoronto.ca/2016/160905-blueprint.html>.

<sup>1967</sup>The Knowledge-Based Economy, OECD. Access date: 16 January 2016. <https://www.oecd.org/sti/sci-tech/1913021.pdf>.

for the manufacture of a product, for the application of a process or for the rendering of a service” is disseminated.<sup>1968</sup> Thus, technology is referred to as a specific type of knowledge embodiment.

Among the types of transfer transactions that may be used, the draft TOT Code lists the following:

- a) “The assignment, sale and licensing of all forms of industrial property, except for trademarks, service marks and trade names when they are not part of transfer of technology transactions;
- b) The provision of know-how and technical expertise in the form of feasibility studies, plans, diagrams, models, instructions, guides, formulae, basic or detailed engineering designs, specifications and equipment for training, services involving technical advisory and managerial personnel, and personnel training;
- c) The provision of technological knowledge necessary for the installation, operation and functioning of plant and equipment, and turnkey projects;
- d) The provision of technological knowledge necessary to acquire, install and use machinery, equipment, intermediate goods and/or raw materials which have been acquired by purchase, lease or other means;
- e) The provision of technological contents of industrial and technical co-operation arrangements.”

Both national and international dimensions of knowledge diffusion and technology transfer are important for efficient sustainable growth. That is why they both are considered in compliance monitoring

To achieve partial compliance members are required to promote knowledge diffusion in general. To get a score of +1 G20 member has to take specific actions on technology transfer.

The assessment implies checking government actions on:

- providing conditions and incentives for information sharing and intensified cooperation among universities and industry as well as actions to bridge them (knowledge diffusion)
- creating national and international systems of innovation and knowledge distribution networks (knowledge diffusion)
- participation in technology transfer in any of the abovementioned forms (technology transfer).

Federal Target Program “Research and Development in Priority Development Areas of Russian Scientific and Technological Complex for 2014-2020” can be considered as an example of government actions on providing conditions and incentives for information sharing and intensified cooperation among universities and industry. It implies research coordination, raise in productivity of research and its transformation into the innovation base for the economic growth and development of international cooperation to enter global innovation system.<sup>1969</sup>

Various European Union programmes like “Ener2i” can also serve as an example to such policies. The programme aims at bridging the divide between the fundamental science and production in order to foster innovations.<sup>1970</sup> Activities under the Ener2i include:

- Setting up a stakeholder database
- Analysis of the energy sectors and of the innovation situation in participating countries
- Development of a roadmap for industry, including policy recommendations

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<sup>1968</sup>Transfer of Technology, UNCTAD Series on issues in international investment agreements, UNCTAD. Access date: 16 January 2017. <http://unctad.org/en/Docs/psiteiid28.en.pdf>.

<sup>1969</sup>Research and Development in Priority Development Areas of Russian Scientific and Technological Complex for 2014-2020. Access date: 16 January 2017. <http://fcpir.ru/about/>.

<sup>1970</sup>Ener2i: Energy research to innovation. Access date: 16 January 2017. <https://ener2i.eu/>.

- Twinning activities among EU and partners
- Networking activities e.g. brokerages at local and international level
- Targeted training activities on technology transfer, innovation issues, energy research, etc.
- Establishing an innovation voucher scheme for the implementation of energy innovations

The examples of knowledge distribution networks supported by the government are Fraunhofer Gesellschaft Society in Germany (publicly-funded Europe’s largest application-oriented research organization)<sup>1971</sup> or US Center for Knowledge Diffusion.<sup>1972</sup>

### Scoring Guidelines

-1	Member does not take actions to promote knowledge diffusion or technology transfer
0	Member takes actions to promote knowledge diffusion but not actions specifically aimed at technology transfer
+1	Member takes actions to promote knowledge diffusion including specific actions aimed at technology transfer

### Argentina: +1

Argentina has fully complied with the commitment on technologies and innovation.

On 17 November 2016, the Argentinian Minister for Science, Technology and Productive Innovation Dr Lino Barañao, visited the Academy's Shine Dome in Australia. The visit was hosted by Professor John White FAA. During the visit issues of Australia’s research system and the potential to develop cooperative research links between Argentina and Australia were discussed.<sup>1973</sup>

On 23 November 2016, Argentina and the United Kingdom signed an Accord on scientific research and exchange of experts which states that scientific societies of both countries will be working jointly in research projects and promoting an active exchange of scientists.<sup>1974</sup>

On 1 December 2016, an event hosted by US Ambassador Noah Mamet and Hughes Network Systems, LLC (Hughes), the global leader in broadband satellite solutions and services, took place in Buenos Aires. The issue of the event was a presentation on the potential for High-Throughput Satellite (HTS) technology as a solution to bridge the digital divide in Argentina. “The event focused on Argentina’s government initiative to increase Internet connectivity in rural and hard-to-reach communities that are unserved or underserved by terrestrial broadband services.”<sup>1975</sup>

Argentina has taken actions to promote knowledge diffusion including specific actions aimed at technology transfer. Thus, it receives a score of +1.

*Analyst: Angelina Khudoleeva*

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<sup>1971</sup> Fraunhofer. Access date: 16 January 2017. <https://www.fraunhofer.de/en/about-fraunhofer/profile.html>.

<sup>1972</sup> Center for knowledge diffusion. Access date: 16 January 2017.

<http://www.knowledgediffusion.org/researchfocus.html>.

<sup>1973</sup> Argentinian delegation visits Academy, Australian Academy of Science, 17 November 2015. Access date: 25 December 2016. <https://www.science.org.au/news-and-events/news-and-media-releases/argentinian-delegation-visits-academy>.

<sup>1974</sup> Argentina, UK to ink accord on scientific research and exchange of experts, Latin Post, 24 November 2016. Access date: 25 December 2016. <http://www.latinpost.com/articles/126608/20161124/argentina-and-uk-to-ink-an-accord-in-scientific-research-and-exchange-of-experts.htm>.

<sup>1975</sup> Bridging the Digital Divide in Argentina with Satellite Technology, PR Newswire, 1 December 2016. Access date: 25 December 2016. <http://www.prnewswire.com/news-releases/bridging-the-digital-divide-in-argentina-with-satellite-technology-300371331.html>.

### **Australia: +1**

Australia has fully complied with the commitment on technologies and innovation.

On 9 September 2016, the Monetary Authority of Singapore and the Australian Securities and Investments Commission (ASIC) signed an Innovation Functions Co-operation Agreement in order to help innovative businesses in Singapore and Australia. “This agreement will enable innovative fintech companies in Singapore and Australia to establish initial discussions in each other’s market faster and receive advice on required licenses,” - official cite of ASIC states.<sup>1976</sup>

On 4 November 2016, the Minister for Industry, Innovation and Science, Honorable Greg Hunt launched the Regional Collaborations Programme. AUD3.2 million was allocated by the programme to encourage Australian researchers and businesses to foster collaboration in developing products and solutions to common challenges with their counterparts around the Asia-Pacific region.<sup>1977</sup>

Since 2012, the Australian Research Council (ARC) (Australian Government Commonwealth entity) Industrial Transformation Research Program (ITRP) offers funding schemes to both university-based researchers and industries. The Industrial Transformation Training Centres is a subprogram to foster close partnerships between university-based researchers and end-users to provide innovative Higher Degree by Research (HDR) and postdoctoral training. Six organizations have been funded in 2016. Currently, the program is at the stage of proposals applying for 2017 season.<sup>1978</sup>

According to the Australian Department of Foreign Affairs and Trade, ASEAN academic partnerships in spring 2017 are to foster the use of ICT (information and communications technology) in small business. Workshops will be held in Thailand (26 May 2017), Malaysia (28 April 2017) and Australia (13-17 March 2017).<sup>1979</sup> The event in Australia is supported by the Australian Department of Foreign Affairs and Trade.

Australia has taken actions to promote knowledge diffusion including specific actions aimed at technology transfer. Thus, it receives a score of +1.

*Analyst: Ildar Khalilyulin*

### **Brazil: +1**

Brazil has fully complied with the commitment on technologies and innovation.

On 7 October 2016, Minister of Mines and Energy Fernando Coelho Filho, signed the Agreement of Technical Cooperation between the National Department of Mineral Production and the Brazilian Geological Survey. The Agreement allows the sharing and diffusion of geological and hydrological

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<sup>1976</sup>16-194MR Singaporean and Australian regulators sign agreement to support innovative businesses, Australian Securities and Investment Commission. Access date: 28 December 2016. <http://asic.gov.au/about-asic/media-centre/find-a-media-release/2016-releases/16-194mr-singaporean-and-australian-regulators-sign-agreement-to-support-innovative-businesses/>.

<sup>1977</sup>Regional Collaborations Programme to boost Asia-Pacific industry and research collaboration, National Innovation and Science Agenda. Access date: 28 December 2016. <http://www.innovation.gov.au/event/regional-collaborations-programme-boost-asia-pacific-industry-and-research-collaboration>.

<sup>1978</sup>Industrial Transformation Research Program, Australian Research Council. Access date: 28 December 2016. <http://www.arc.gov.au/industrial-transformation-research-program>.

<sup>1979</sup>ASEAN academic partnerships for small business and ICT knowledge transfer, Department of Foreign Affairs and Trade. Access date: 28 December 2016. <http://dfat.gov.au/people-to-people/foundations-councils-institutes/australia-asean-council/grants/grantees/Pages/asean-academic-partnerships-for-small-business-and-ict-knowledge-transfer.aspx>.

knowledge between entities and joint actions to improve the investment environment and the administrative procedures of mining processes.<sup>1980</sup>

On 31 October 2016, the Brazilian government opened applications to universities wishing to offer master's degrees in intellectual property and technology transfer could submit proposals by November 25. The initiative was supported by the Ministry of Science, Technology, Innovation and Communications, as well as the National Forum of Managers of Innovation and Technology Transfer and the Coordination for the Improvement of Higher Education Personnel. The course aims to train human resources for organizations working in the area of intellectual property and technology transfer for innovation, such as technological innovation centers and research, development and innovation promotion agencies.<sup>1981</sup>

On 18 November 2016, a joint agenda on nanotechnology, biotechnology and technology parks between Brazil and Iran was agreed with the aim of boosting bilateral cooperation. The nations will form a working group and define concrete actions for Brazilians and Iranians to advance in research. The memorandum of understanding foresees: cooperation and transfer of technologies in biotechnology; research and development of new drugs and products for the agricultural sector; joint research on nanotechnologies, research and development possibilities in information and communication technologies (ICTs), such as hardware, software, cybernetic policies, cognitive computing and the development and exchange of knowledge in technology parks.<sup>1982</sup>

On 22 November 2016, Gripen project center was opened in São Paulo. The Gripen Design Development Network is the starting point in the technology transfer process between Brazil and Sweden of the Gripen NG project. The center is the first of the 60 offset projects (industrial, technological or commercial compensation) valued at USD9 billion. Brazil will invest USD5 billion in the acquisition of new high performance aircraft.<sup>1983</sup>

Brazil has taken actions to promote knowledge diffusion including specific actions aimed at technology transfer. Thus, it receives a score of +1.

*Analyst: Sofia Streltsova*

#### **Canada: +1**

Canada has fully complied with the commitment on technologies and innovation.

The Natural Sciences and Engineering Research Council of Canada (NSERC), a federal funding agency in partnership with Ontario Centres of Excellence (OCE) runs “TargetGHG Collaborative R&D” Program. Program is designed to trigger technology development as a result of collaboration of postsecondary institutions and industries for the lowering of greenhouse gas emissions. This initiative will contribute to Ontario’s 2020-2030 targets and the Government of Canada’s

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<sup>1980</sup>Acordo vai fomentar mineração no País, Portal Brasil 7 October 2016. Access date: 28 December 2016. <http://www.brasil.gov.br/infraestrutura/2016/10/acordo-vai-fomentar-mineracao-no-pais>.

<sup>1981</sup>Governo convoca instituições interessadas em ter mestrado sobre propriedade intelectual, Portal Brasil 31 October 2016. Access date: 28 December 2016. <http://www.brasil.gov.br/ciencia-e-tecnologia/2016/11/governo-convoca-institucioes-interessadas-em-ter-mestrado-sobre-propriedade-intelectual>.

<sup>1982</sup>Brasil e Irã aprofundam cooperação em ciência e tecnologia, Portal Brasil 18 November 2016. Access date: 28 December 2016. <http://www.brasil.gov.br/ciencia-e-tecnologia/2016/11/brasil-e-ira-aprofundam-cooperacao-em-ciencia-e-tecnologia>.

<sup>1983</sup>Centro de projetos dos caças Gripen é inaugurado em São Paulo, Portal Brasil 22 November 2016. Access date: 28 December 2016. <http://www.brasil.gov.br/defesa-e-seguranca/2016/11/centro-de-projetos-dos-cacas-gripen-e-inaugurado-em-sao-paulo>



commitment “to developing innovative clean technologies that promote environmental sustainability.”<sup>1984</sup>

On 21 September 2016, Canada and Germany signed the declaration to strengthen technology and innovations cooperation. The declaration’s goal is to provide the stimulus and financing for the most innovative collaborative projects between the two countries and help new inventions and research financialize.<sup>1985</sup>

On 23 September 2016, a Joint Statement Between Canada and the People's Republic of China was issued. Leaders committed to “encourage innovation, science and technology collaboration of mutual benefit.”<sup>1986</sup>

In October 2016, the Department of Foreign Affairs, Trade and Development of Canada and the Ministry of the Economy and Finance of France signed the Declaration on Cooperation in Innovation for 2016-2018. It provides for the following forms of cooperation:

- Exchange of information related to innovation, including on practices, policies, laws, other regulations and programs related to partnerships under this Arrangement;
- Joint seminars, symposia, conferences and workshops;
- Business development and technology collaboration partnering missions and the sharing of leads and business opportunities;
- Support for implementing bilateral technology and research and development partnerships in priority areas;
- Shared use of resources and infrastructure;
- Mobilization and exchange of researchers, engineers, entrepreneurs and innovation actors.<sup>1987</sup>

On 26 October 2016, the Implementing Arrangement under the framework of the science and technology Agreement between the EU and Canada was signed. It provides Canadian researchers with the opportunity to participate in projects financed by European Research Council.<sup>1988</sup>

On 26-28 October 2016, Canada’s BioTech Mission to Brazil took place. The objective of the mission is to “establish industrial R&D collaboration and co-development opportunities in the BioTech sector between Canadian and Brazilian companies leading to future commercial benefits for Canada and Brazil.”<sup>1989</sup>

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<sup>1984</sup> Collaborative Research and Development Grants. (including DND/NSERC Research Partnership Grants), Natural Sciences and Engineering Research Council of Canada. Access date: 11 January 2016. [http://www.nserc-crnsng.gc.ca/Professors-Professeurs/RPP-PP/CRD-RDC\\_eng.asp](http://www.nserc-crnsng.gc.ca/Professors-Professeurs/RPP-PP/CRD-RDC_eng.asp).

<sup>1985</sup> Germany and Canada sign declaration to strengthen innovative collaboration, Government of Canada 21 September 2016. Access date: 11 January 2016. <http://news.gc.ca/web/article-en.do?nid=1127289>.

<sup>1986</sup> Joint Statement Between Canada and the People's Republic of China, Justin Trudeau, Prime Minister Of Canada 23 September 2016. . Access date: 11 January 2016. <http://pm.gc.ca/eng/news/2016/09/23/joint-statement-between-canada-and-peoples-republic-china>.

<sup>1987</sup> Declaration between Canada and France on cooperation in innovation for 2016-2018, Government of Canada 12.10.2016. Access date: 5 December 2016 [http://www.canadainternational.gc.ca/france/bilateral\\_relations\\_bilaterales/cooperation\\_in\\_innovation-cooperation\\_en\\_innovation.aspx?lang=eng](http://www.canadainternational.gc.ca/france/bilateral_relations_bilaterales/cooperation_in_innovation-cooperation_en_innovation.aspx?lang=eng)

<sup>1988</sup> New opportunities for Canadian researchers to join ERC funded teams, European Commission 27 October 2016. Access date: 11 January 2016. <http://ec.europa.eu/research/iscp/index.cfm?pg=canada>.

<sup>1989</sup> Canadian BioTech Mission - October 26 - 28, 2016 - Sao Paulo, Brazil, The Canadian Trade Commissioner Service 29 October 2016. Access date: 11 January 2016. [http://tradecommissioner.gc.ca/funding-financement/ciip-pcii/brazil-biotech\\_2016-bresil.aspx?lang=eng](http://tradecommissioner.gc.ca/funding-financement/ciip-pcii/brazil-biotech_2016-bresil.aspx?lang=eng).

On 16 November 2016, Canada and eight other countries allocated over USD23 million to facilitate a significant scale-up of the United Nations Framework Convention on Climate Change (UNFCCC) Climate Technology Centre & Network (CTCN). The center provides technical assistance to the developing countries in meeting their commitments taken under Paris agreement.<sup>1990</sup>

Canada has taken actions to promote knowledge diffusion including specific actions aimed at technology transfer. Thus, it receives a score of +1.

*Analyst: Irina Popova*

### **China: +1**

China has fully complied with the commitment on technologies and innovation.

On 20 October 2016, the Russian-Chinese Center for Technological Transformation and Innovations was opened in Shengyang. This new scientific platform was jointly created by Shengyang Tuspark Holding and Association of Innovative Enterprises and Organizations of Tomsk and Tomsk Province and other organizations. The key goals of this centre are to activate cooperation between the technological enterprises of two countries and to exchange expertise and innovative developments etc.<sup>1991</sup>

On 1 November 2016, during an International Aerospace Salon Chinese aircraft-industry companies stated that they intend to strengthen the cooperation with Ukrainian “Motor Sich.” This Chinese-Ukrainian cooperation is mutually beneficial, because China will be able to raise the level of development and production of aircraft engines and Ukraine will be able to use the benefits on Chinese partnership to deliver products with higher competitiveness.<sup>1992</sup> On 8 November 2016, 350 scientists from more than 40 countries gathered in Beijing for the International Symposium on scientific and technical issues, as part of the Economic Belt initiative. This symposium was organized by 12 departments and organizations, including Academies of Science from Russia and China.<sup>1993</sup>

On 9-11 November 2016, the China International Technology Transfer Center (CITTC) (Ministry of Science and Technology of the People's Republic of China) organized the Fifth China Jiangsu Conference for International Technology and Commercialization (CITTC) to further strengthen the close partnership between Jiangsu and world-class innovative R&D institutes, establish an innovation cooperation network with global partners, improve the open innovation capacity of enterprises and expand the influence of the international university-industry collaboration in Jiangsu.<sup>1994</sup>

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<sup>1990</sup>Countries pledge USD 23 million to support technology transfer in developing countries, UN Climate Change Newsroom. Access date: 11 January 2016.

[http://unfccc.int/files/meetings/marrakech\\_nov\\_2016/application/pdf/ctcn\\_pr\\_eng.pdf](http://unfccc.int/files/meetings/marrakech_nov_2016/application/pdf/ctcn_pr_eng.pdf).

<sup>1990</sup>Joint Statement Between Canada and the People's Republic of China, Justin Trudeau, Prime Minister Of Canada 23 September 2016. Access date: 11 January 2016. <http://pm.gc.ca/eng/news/2016/09/23/joint-statement-between-canada-and-peoples-republic-china>.

<sup>1991</sup>A Russian-Chinese Center for Technological Transformation and Innovations was opened in Shenyang, International Chinese Radio Agency – Russia 20 October 2016. Access date: 08 January 2017. <http://russian.cri.cn/3073/2016/10/20/1s591026.htm>.

<sup>1992</sup>Chinese aircraft-industry companies prepare to deepen the cooperation with Ukrainian enterprise “Motor Sich”, Xinhua News Agency – Russia 01 November 2016. Access date: 08 January 2017. [http://russian.news.cn/2016-11/01/c\\_135796624.htm](http://russian.news.cn/2016-11/01/c_135796624.htm).

<sup>1993</sup>350 scientists from more than 40 countries gathered in Beijing for an International Symposium, Xinhua News Agency – Russia 08 November 2016. Access date: 08 January 2017 [http://russian.news.cn/2016-11/08/c\\_135814371.htm](http://russian.news.cn/2016-11/08/c_135814371.htm).

<sup>1994</sup>The 5th China Jiangsu Conference for International Technology and Commercialization (CITTC) official website. 09 November 2016. Access date: 08 January 2017. <http://en.cittc.org/Default.aspx>.

China has taken actions to promote knowledge diffusion including specific actions aimed at technology transfer. Thus, it receives a score of +1.

*Analyst: Kirill Krivosheyev*

**France: +1**

France has fully complied with the commitment on technologies and innovation.

In October 2016, the Department of Foreign Affairs, Trade and Development of Canada and the Ministry of the Economy and Finance of France signed the Declaration on Cooperation in Innovation for 2016-2018. It provides for the following forms of cooperation:

- Exchange of information related to innovation, including on practices, policies, laws, other regulations and programs related to partnerships under this Arrangement;
- Joint seminars, symposia, conferences and workshops;
- Business development and technology collaboration partnering missions and the sharing of leads and business opportunities;
- Support for implementing bilateral technology and research and development partnerships in priority areas;
- Shared use of resources and infrastructure;
- Mobilization and exchange of researchers, engineers, entrepreneurs and innovation actors.<sup>1995</sup>

On 29 November 2016, French Secretary of State for Higher Education and Research Thierry Mandon announced the five new measures of the Humanities and Social Science (S.H.S) Plan, which is mainly focused on supporting research and dialogue between science and society. The key measure concerns the financing of S.H.S. Plan, which in 2017 will be around EUR8 million, in order to increase support for relevant projects. The target of 75 to 80 funded projects was set.<sup>1996</sup>

France has taken actions to promote knowledge diffusion including specific actions aimed at technology transfer. Thus, it receives a score of +1.

*Analysts: Mark Rakhmangulov & Anastasiya Polovko*

**Germany: +1**

Germany has fully complied with the commitment on technologies and innovation.

On 22 September 2016, Federal Research Minister Johanna Wanka announced that the ministry intends to make scientific publications accessible to everyone via the Internet. “Free access to knowledge is a first step for social development,” according to the minister.<sup>1997</sup>

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<sup>1995</sup> Declaration between Canada and France on cooperation in innovation for 2016-2018, Government of Canada 12.10.2016. Access date: 5 December 2016

[http://www.canadainternational.gc.ca/france/bilateral\\_relations\\_bilaterales/cooperation\\_in\\_innovation-cooperation\\_en\\_innovation.aspx?lang=eng](http://www.canadainternational.gc.ca/france/bilateral_relations_bilaterales/cooperation_in_innovation-cooperation_en_innovation.aspx?lang=eng)

<sup>1996</sup> Donner un nouvel élan à la recherche en S.H.S, Ministère de l'éducation nationale, de l'enseignement supérieur et de la recherche 29.11.2016. Access date: 5 Décembre 2016

<http://www.enseignementsup-recherche.gouv.fr/cid110029/-8-millions-d-euros-pour-les-projets-a.n.r.-relevant-du-domaine-s.h.s.-et-5-nouvelles-mesures.html>

<sup>1997</sup> Wissen für jeden zugänglich machen, German Federal Government 22 September 2016. Access date: 25 December 2016. <https://www.bundesregierung.de/Content/DE/Artikel/2016/09/2016-09-21-open-access-strategie.html?nn=454934>.

On 28 September 2016, German Development Minister, Dr. Gerd Müller, signed a partnership initiative with the largest non-profit German foundation. The Else-Kröner-Fresenius-Stiftung (EKFS) and the Federal Ministry of Education and Research are going to promote the exchange of knowledge between health institutions in Germany and in developing and newly industrializing countries.<sup>1998</sup>

On 11 October 2016, a German-Polish funding program was launched by German Ministry of education and Research and Polish Ministry of Science and Higher Education. It is intended to accelerate the transfer of technology in small and medium-sized enterprises.<sup>1999</sup>

On 14-15 November 2016, the Germany – Mexico Science, Technology and Innovation Forum was organized by the Government of Mexico, German Federal Ministry of Education and Research, Mexican National Council of Science and Technology (CONACYT) and German-Mexico Alliance for the Future in Mexico City. The participants of the Forum discussed the instruments of German-Mexican cooperation in science, technology and innovations with special focus on industry involvement, exchanged the best practices, in particular in energy, bio-economy, nanotechnologies, industry 4.0 spheres etc. The Forum aimed to promote technology transfer between two countries.<sup>2000</sup>

On 29 November 2016, State Secretary in the Federal Ministry of Economics Matthias Machnig, and State Secretary in the Federal Research Ministry, Dr. Georg Schütte, held the first German-Chinese symposium on the intelligent production and networking of production processes (Industrie 4.0). In the two-day event, 300 representatives from government, business and science discussed the German-Chinese cooperation in industry 4.0.<sup>2001</sup>

On 8 December 2016, the Parliamentary State Secretary in the Federal Ministry of Education and Research Thomas Rachel, and representative of the Palestinian Authority opened the new program "Palestinian-German Science Bridge". Masters and PhD candidates from Palestine will have the opportunity to carry out research work and to promote it in Germany. The participants may contribute to the construction of research infrastructures in Palestine.<sup>2002</sup>

Germany has taken actions to promote knowledge diffusion including specific actions aimed at technology transfer. Thus, it receives a score of +1.

*Analyst: Elizaveta Nekrasova*

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<sup>1998</sup>Deutsches Know-how soll Epidemien in Entwicklungsländern vermeiden, Federal Ministry for Economic Cooperation and Development 28 September 2016. Access date: 25 December 2016.

[http://www.bmz.de/de/presse/aktuelleMeldungen/2016/september/160928\\_pm\\_083\\_Deutsches\\_Know-how-soll-Epidemien-in-Entwicklungslaendern-vermeiden/index.jsp](http://www.bmz.de/de/presse/aktuelleMeldungen/2016/september/160928_pm_083_Deutsches_Know-how-soll-Epidemien-in-Entwicklungslaendern-vermeiden/index.jsp).

<sup>1999</sup>Deutschland und Polen auf dem Weg zu gemeinsamer Innovationspolitik, Federal Ministry of Education and Research 11 October 2016. Access date: 25 December 2016. <https://www.bmbf.de/de/deutschland-und-polen-auf-dem-weg-zu-gemeinsamer-innovationspolitik-3426.html>.

<sup>2000</sup>Foro Germano-Mexicano en Ciencia, Tecnología e Innovación. Access date: 26 November 2016.

<https://www.gob.mx/amexcid/agenda/foro-germano-mexicano-en-ciencia-tecnologia-e-innovacion?idiom=es>;

Germany - Mexico Science, Technology and Innovation Forum. Access date: 26 November 2016.

[http://www.uqroo.mx/eventos/1426/archivos/Germany-Mexico\\_STI\\_Forum\\_\(1\).pdf](http://www.uqroo.mx/eventos/1426/archivos/Germany-Mexico_STI_Forum_(1).pdf).

<sup>2001</sup>Erstes deutsch-chinesisches Symposium unterstreicht Bedeutung von Industrie 4.0 für bilaterale Wirtschaftsbeziehungen, Federal Ministry of Education and Research 29 November 2016. Access date: 25 December 2016. <https://www.bmbf.de/de/erstes-deutsch-chinesisches-symposium-unterstreicht-bedeutung-von-industrie-4-0-fuer-3653.html>.

<sup>2002</sup>Deutsch-Palästinensisches Forschungs- und Promotionsprogramm, Federal Ministry of Education and Research 29 November 2016. Access date: 25 December 2016. <https://www.bmbf.de/de/deutsch-palaestinensisches-forschungs-und-promotionsprogramm-3692.html>.

### **India: +1**

India has fully complied with the commitment on technologies and innovation.

On 24 October 2016, India-UK science collaboration was launched at University of Greenwich. The collaboration will develop joint research and expertise with direct links to the Indian government, businesses and communities. The aim of the mission was to introduce innovative UK technology to Indian environmental problems through knowledge sharing and staff exchanges.<sup>2003</sup>

On 5 November 2016, Indian and Japanese governments signed an agreement on the extension of the India-Japan Industry-Academia-Government Collaborative Education Program. The program organized by the School of Engineering and the School of Information Science and Technology, provides research internships for students from collaborating Indian institutions in the various fields in engineering and information science and technology.<sup>2004</sup>

On 15 November 2016, a meeting between Deputy Chairman of Belarus' State Committee on Science and Technology Piotr Baltrukovich and Deputy Minister of Science and Technology Ashutosh Sharma of India took place in New Delhi, India. The meeting discussed the issues on bilateral scientific and innovation cooperation, and a list of promising joint projects. As a result of the meeting, Belarus and India reached an agreement to set up a joint center for commercialization and technology transfer.<sup>2005</sup>

India has taken actions to promote knowledge diffusion including specific actions aimed at technology transfer. Thus, it receives a score of +1.

*Analyst: Evgeny Tsarik*

### **Indonesia: +1**

Indonesia has fully complied with the commitment on technologies and innovation.

On 29 November 2016, Indonesia's Industry, Research and Technology and Higher Education, Culture and Education, State-Owned Enterprises, and Manpower Ministries signed the memorandum of understanding setting the stage for greater involvement of the industry actors in the vocational education processes, including development of curricula, provision of additional instructors for vocational schools, creation of internship opportunities and on-site training programs both for students and educators, modernization of infrastructure for schools, etc.<sup>2006</sup>

On 29 November 2016, it was announced the government was planning to improve the current vocational education system with multiple skill certificates, in which vocational school students can earn certificates after completing training courses in addition to their graduation diploma.<sup>2007</sup> This

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<sup>2003</sup> India-UK science collaboration to launch at University of Greenwich , University of Greenwich 12 October 2016. Access date: 15 December 2016. <http://www2.gre.ac.uk/about/news/articles/2016/a3744-india-uk-science-collaboration-to-launch-at-university-of-greenwich>.

<sup>2004</sup> India-Japan Industry-Academia-Government Collaborative Education Program, IJEP 05 November 2016. Access date: 15 December 2016. <http://ijep.t.u-tokyo.ac.jp/>.

<sup>2005</sup> Belarus, India plan to set up joint center for commercialization, technology transfer, Belarus News 15 December 2016. Access date: 15 December 2016. [eng.belta.by/economics/view/belarus-india-plan-to-set-up-joint-center-for-commercialization-technology-transfer-96300-2016/](http://eng.belta.by/economics/view/belarus-india-plan-to-set-up-joint-center-for-commercialization-technology-transfer-96300-2016/).

<sup>2006</sup> Indonesia gears up for vocational education reform, The Jakarta Post 29 November 2016. Access date: 14 December 2016. <http://www.thejakartapost.com/news/2016/11/29/indonesia-gears-up-for-vocational-education-reform.html>.

<sup>2007</sup> Indonesia to introduce skill certificates at vocational schools, The Jakarta Post 29 November 2016. Access date: 14 December 2016. <http://www.thejakartapost.com/news/2016/11/29/indonesia-to-introduce-skill-certificates-at-vocational-schools.html>.

measure is expected to contribute to knowledge diffusion as a motivating instrument since students not completing their training and not receiving diplomas would still have employment opportunities with skills certificates.

On 6 December 2016, Minister of Research, Technology and Higher Education and Australian Minister of Trade, Tourism and Investment met and reaffirmed plans to boost cooperation in the fields of research, technology and higher education under the currently negotiated Indonesia – Australia comprehensive economic partnership agreement.<sup>2008</sup>

On 13 December 2016, presidential scholarships were announced for five eastern Indonesian provinces of Papua, West Papua, Maluku, North Maluku, and East Nusa Tenggara. Recipients will have an opportunity to continue their studies at leading universities at home and abroad.<sup>2009</sup>

In December 2016, the Ministry of Defense held talks with Russian counterparts and manufacturers on potential purchasing of Russian military helicopters and fighter jets; contracts if proceeded will include clauses on technology transfer.<sup>2010</sup>

Indonesia has taken actions to promote knowledge diffusion including specific actions aimed at technology transfer. Thus, it receives a score of +1.

*Analyst: Pavel Doronin*

#### **Italy: +1**

Italy has fully complied with the commitment on technologies and innovation.

On 29 September 2016, the Italian Institute of Technology and Moog Inc., an international US designer, manufacturer, and integrator of precision motion control products and systems, declared their intention to collaborate in the framework of one project. Investments in equipment and staff will be made, and Italian scientists and Moog engineers will work together on the development of the quadruped robot for outdoor use.<sup>2011</sup>

On 18 October 2016, South African Minister of Water and Sanitation Nomvula Mokonyane signed a Water Cooperation Agreement with Italy. Among other issues the parties agreed to cooperate in integrated water management solutions including the reuse of waste water for material and energy recovery and exchange of best practices and technologies in this field.<sup>2012</sup>

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<sup>2008</sup> Indonesia-Australia Encouraged The Bilateral Relation on Science Technology and Higher Education, Ministry of Research, Technology and Higher Education of the Republic of Indonesia 6 December 2016. Access date: 14 December 2016. <http://international.ristekdikti.go.id/2016/indonesia-australia-encouraged-the-bilateral-relation-on-science-technology-and-higher-education/>.

<sup>2009</sup> Five eastern Indonesian provinces to receive presidential scholarships, ANTARA News 13 December 2016. Access date: 14 December 2016. <http://www.antaranews.com/en/news/108361/five-eastern-indonesian-provinces-to-receive-presidential-scholarships>.

<sup>2010</sup> Indonesia edges closer towards acquisition of Mi-26 helicopters from Russia, HIS Jane's Defence Weekly 1 December 2016. Access date: 14 December 2016. <http://www.janes.com/article/65893/indonesia-edges-closer-towards-acquisition-of-mi-26-helicopters-from-russia>; Indonesia confirms talks with Russia for Su-35s, Quwa Defence News and Analysis Group 12 December 2016. Access date: 14 December 2016. <http://quwa.org/2016/12/12/indonesia-confirms-talks-with-russia-for-su-35s/>.

<sup>2011</sup> Moog invests in a new joint-lab MOOG@IIT for the development of next generation technologies for autonomous robots. Investments by Moog will be devoted to equipment and staff, the Italian Institute of Technology 29 September 2016. Access date: 27 December 2016. <https://talk.iit.it/en/132-the-new-joint-lab-moog-iit>.

<sup>2012</sup> Minister Nomvula Mokonyane signs Water Cooperation Agreement with Italian Republic, South African Government 18 October 2016. Access date: 11 January 2017. <http://www.gov.za/speeches/minister-nomvula-mokonyane-signs-water-cooperation-agreement-italian-republic-18-oct-2016>.

On 11 November 2016, the Italian National Research Council (CNR) and the Scottish Royal Society-Edinburgh (RSE) signed a new cooperation agreement on Science and Innovation. The Agreement provides for the financing of three joint research projects on a biennial basis as part of the following scientific areas: Engineering and Physical Sciences, Life Sciences and Humanities and Cultural Heritage.<sup>2013</sup>

On 16 November 2016, Italy and 8 other countries allocated over USD23 million to facilitate a significant scale-up of the United Nations Framework Convention on Climate Change (UNFCCC) Climate Technology Centre & Network (CTCN). The center provides technical assistance to the developing countries, in accordance with the Paris agreement.<sup>2014</sup>

On 17 November 2016, the Italian Space Agency (ASI) and European Space Agency (ESA) met in Rome with public and private non-profit institutions involved in education on the national level, to present the European Space Education Resource Office (ESERO) program and the different project application phases to the institutions interested in the project in order to open some ESERO offices in Italy. ESERO program of the ESA aims at stimulating the interest of students from primary and secondary schools in science and technology topics.<sup>2015</sup>

On 21-22 November 2016, the Italian Innovation Days was held in Singapore. The initiative was jointly promoted by Agenzia ITA/ICE, the Italian Chamber of Commerce in Singapore, the National Research Institute, Confindustria Sistemi Innovativi, Unioncamere, and others, in partnership with the Enterprise Europe Network, and with the coordination of the Ministry of Foreign Affairs and International Cooperation. The Italian companies had the opportunity to present innovative projects, products or processes to an audience of investors and industrial partners from Asian countries, especially from the ASEAN market and from China.<sup>2016</sup>

On 22 November 2016, the Italian - Vietnamese Joint Commission was held in Rome to examine the present state and further development of scientific and technological cooperation between the two countries and to define the Executive Program for the 2017-2019 within the framework of Agreement on Scientific and technological cooperation between Italy and Vietnam.<sup>2017</sup>

Italy has taken actions to promote knowledge diffusion including specific actions aimed at technology transfer. Thus, it receives a score of +1.

*Analyst: Maria Strelnikova*

### **Japan: +1**

Japan has fully complied with the commitment on technologies and innovation.

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<sup>2013</sup> New scientific collaboration between CNR and Royal Society Edinburgh recently signed, the Italian National Research Council (CNR) 15 November 2016. Access date: 27 December 2016. <https://www.cnr.it/it/news/7142>.

<sup>2014</sup> Countries pledge USD 23 million to support technology transfer in developing countries, UN Climate Change Newsroom. Access date: 11 January 2016.

[http://unfccc.int/files/meetings/marrakech\\_nov\\_2016/application/pdf/ctcn\\_pr\\_eng.pdf](http://unfccc.int/files/meetings/marrakech_nov_2016/application/pdf/ctcn_pr_eng.pdf).

<sup>2015</sup> ASI: info day on the ESERO European science education programme, The Portal of Italian Research 11 September 2016. Access date: 27 December 2016. <https://www.researchitaly.it/en/news/asi-infoday-on-the-esero-european-science-education-programme/>.

<sup>2016</sup> The Italian Innovation Days 2016. Access date: 27 December 2016.

<http://www.singaporeinnovationdays.it/singaporeinnovationdays>.

<sup>2017</sup> The Executive Program for Scientific and Technological Cooperation between the Italian Republic and the Socialist Republic of Vietnam for the years 2017-2019, The portal of Italian research. Access date: 27 December 2016. [https://www.researchitaly.it/uploads/16997/PE\\_IT-VN\\_2017\\_2019.pdf?v=e9c5791](https://www.researchitaly.it/uploads/16997/PE_IT-VN_2017_2019.pdf?v=e9c5791).

On 15 September 2016, Japan's Council for Science, Technology and Innovation chaired by Prime Minister Shinzo Abe was tasked to identify "measures of importance in accordance with the Comprehensive Strategy on Science, Technology and Innovation."<sup>2018</sup> The importance of "effective promotion of research and development on artificial intelligence and other spheres," as well as of "realization of Society 5.0." were also emphasized by Prime Minister Abe.<sup>2019</sup>

On 19 September 2016 - 12 October 2016, a training course for specialists in fruit production was organized in Veracruz by the National Institute for Forestry, Agricultural, and Animal Husbandry Research (INIFAP), Japan International Cooperation Agency – JICA Mexico and Mexican Agency for International Development Cooperation (AMEXCID). The course aimed to familiarize the Mexican and Latin American specialists with technologies of production of fruits and care of exotic tropical fruit trees, namely pitahaya, manilkara zapota, guanabana, tamarind, rambutan and passion fruit.<sup>2020</sup>

On 3 October 2016, Japan's Internet of Things Acceleration Consortium concluded two memorandums of understanding (MOU) with the US Industrial Internet Consortium and OpenFog Consortium.<sup>2021</sup> The MOUs are expected to accelerate activity toward realization of the "fourth industrial revolution" in Japan through implementing demonstration projects by the parties and exerting efforts towards aligning technological standards.<sup>2022</sup>

On 11 November 2016, during a visit with Indian Prime Minister Narendra Modi, the Japanese Ministry of Economy, Trade and Industry and India's Ministry of Skill Development and Entrepreneurship signed a Memorandum of Cooperation for a "Manufacturing Skill Transfer Promotion Programme."<sup>2023</sup> Under the Memorandum, Japan will help establish Institutes for Manufacturing and the Japanese Endowed Courses in engineering colleges designated by the Japanese companies in India in cooperation between the public and private sectors. Namely, Toyota's Indian subsidiary, Toyota Kirloskar Motor will contribute to this program through training 30,000 persons over ten years. Also during the visit, the Japan-India nuclear energy cooperation agreement was signed. It aims at "opening the door for Tokyo to supply New Delhi with fuel, equipment and technology for nuclear power production."<sup>2024</sup>

On 11 November 2016, the Trade Commissioner and Managing Director of Japan External Trade Organization (JETRO) Taku Miyazaki pledged that JETRO will "encourage technology transfer

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<sup>2018</sup> Council for Science, Technology and Innovation, The Prime Minister in Action 15 September 2016. Access date: 27 November 2016. [http://japan.kantei.go.jp/97\\_abe/actions/201609/15article2.html](http://japan.kantei.go.jp/97_abe/actions/201609/15article2.html).

<sup>2019</sup> Council for Science, Technology and Innovation, The Prime Minister in Action 15 September 2016. Access date: 27 November 2016. [http://japan.kantei.go.jp/97\\_abe/actions/201609/15article2.html](http://japan.kantei.go.jp/97_abe/actions/201609/15article2.html).

<sup>2020</sup> Cooperación México-Japón rinde frutos en América Latina. Access date: 26 November 2016.

<https://www.gob.mx/amexcid/es/articulos/cooperacion-mexico-japon-rinde-frutos-en-america-latina?idiom=es>.

<sup>2021</sup> Memorandum of Understanding (MOU) for IoT Cooperation between Japan and the United States Concluded, Japan's Ministry of Economy, Trade and Industry 11 October 2016. Access date: 27 November 2016. [http://www.meti.go.jp/english/press/2016/1011\\_03.html](http://www.meti.go.jp/english/press/2016/1011_03.html).

<sup>2022</sup> Japanese Industry and Policy News, EU Japan Center for Industrial Cooperation October 2016. Access date: 27 November 2016. [http://cdnsite.eu-japan.eu/sites/default/files/publications/docs/japanese\\_industry\\_and\\_policy\\_news\\_october\\_2016\\_final.pdf](http://cdnsite.eu-japan.eu/sites/default/files/publications/docs/japanese_industry_and_policy_news_october_2016_final.pdf).

<sup>2023</sup> Japan selects Toyota Kirloskar Motor to drive skill development in India, Autocar Professional Online 21 November 2016. Access date: 27 November 2016. <http://www.autocarpro.in/news-national/japan-selects-toyota-kirloskar-motor-drive-skill-development-india-22659#sthash.DIO3sfO8.dpuf>.

<sup>2024</sup> Signing of Japan-India Nuclear Cooperation Agreement Opens Up Nuclear Reactor and Technology Transfer from Japan to India, Executive Intelligence Review 11 November 2016. Access date: 27 November 2016. [http://www.larouchepub.com/pr/2016/161111\\_japan\\_india\\_agreement.html](http://www.larouchepub.com/pr/2016/161111_japan_india_agreement.html).



especially among SMEs in Nigeria so that they will be able use the technology for greater productivity and innovativeness.<sup>2025</sup>

On 25 November 2016, Japan joined a number of contributing countries donating an investment worth USD23 million to the United Nations Framework Convention on Climate Change (UNFCCC)'s Climate Technology Centre and Network to promote accelerated development and transfer of climate technologies for energy efficient, low carbon and climate resilient development at the request of the developing countries.<sup>2026</sup>

Japan has taken actions to promote knowledge diffusion including specific actions aimed at technology transfer. Thus, it receives a score of +1.

*Analyst: Pavel Doronin*

### **Korea: +1**

Korea has fully complied with the commitment on technologies and innovations.

On 17 and 21 November 2016, foundation ceremonies were held for establishing two vocational training institutes in Sri Lanka. The Vocational Training Centre in Colombo Central and the College of Technology in Gampaha will be constructed and developed through the Official Development Assistance program of the Export-Import Bank of Korea.<sup>2027</sup> The scope of Korea's participation will include construction and development, provision of necessary equipment and facilities, capacity building for vocational training instructors and policy makers, as well as further technical assistance and consulting services by dispatching Korean experts to Sri Lanka.<sup>2028</sup> The project is aimed to bridge the gap between the industry skills demand and the labour supply, and reduce the unemployment rate of the youth in Sri Lanka.<sup>2029</sup>

On 25 November 2016, Korea joined a number of contributing countries donating an investment worth USD23 million to the United Nations Framework Convention on Climate Change (UNFCCC)'s Climate Technology Centre and Network to promote accelerated development and transfer of climate technologies for energy efficient, low carbon and climate resilient development at the request of the developing countries.<sup>2030</sup>

On 28 November 2016, the Korea Development Institute (KDI) and the Korea Institute of Science and Technology (KIST) have formalized participation in the Partnership for Skills in Applied Sciences, Engineering and Technology (PASET). The institutes work to help Sub-Saharan Africa

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<sup>2025</sup> Japan pledges technology transfer to Nigeria, The Nation 13 November 2016. Access date: 27 November 2016. <http://thenationonlineng.net/japan-pledges-technology-transfer-nigeria/>.

<sup>2026</sup> USD 23m for climate technology transfer in developing countries, Energy Live News 25 November 2016. Access date: 27 November 2016. <http://www.energylivenews.com/2016/11/25/23m-for-climate-technology-transfer-in-developing-countries/>.

<sup>2027</sup> Korean Exim bank's support to establish Vocational Training Institutes, News.LK 23 November 2016. Access date: 11 December 2016. <http://www.news.lk/news/business/item/15060-korean-exim-bank-s-support-to-establish-vocational-training-institutes>.

<sup>2028</sup> Korean Exim bank's support to establish Vocational Training Institutes, News.LK 23 November 2016. Access date: 11 December 2016. <http://www.news.lk/news/business/item/15060-korean-exim-bank-s-support-to-establish-vocational-training-institutes>.

<sup>2029</sup> Korean Exim bank's support to establish Vocational Training Institutes, News.LK 23 November 2016. Access date: 11 December 2016. <http://www.news.lk/news/business/item/15060-korean-exim-bank-s-support-to-establish-vocational-training-institutes>.

<sup>2030</sup> USD 23m for climate technology transfer in developing countries, Energy Live News 25 November 2016. Access date: 27 November 2016. <http://www.energylivenews.com/2016/11/25/23m-for-climate-technology-transfer-in-developing-countries/>.

build capacity in science and technology fields, with the KDI becoming a full member of PASET and KIST signing an agreement to improve the quality of PhD programs in selected African institutions.<sup>2031</sup>

On 29 November 2016, Korea and Thailand signed a memorandum of understanding to support agricultural trade, knock down technical barriers in the trading of agriculture products and facilitate investment in farming, which is expected to forge closer ties between Korea and Thailand in many areas of agriculture cooperation, including agriculture technology cooperation and transfer.<sup>2032</sup>

On 1 December 2016, tariffs on 381 information technology products were removed. Remaining tariffs will be phased out in three to seven years, making the technology transfer to and from Korea much simpler.<sup>2033</sup>

Korea has taken actions to promote knowledge diffusion including specific actions aimed at technology transfer. Thus, it receives a score of +1.

*Analyst: Pavel Doronin*

### **Mexico: +1**

Mexico has fully complied with the commitment on promoting knowledge diffusion including specific actions aimed at technology transfer.

On 19 September 2016 - 12 October 2016, a training course for specialists in fruit production was organized in Veracruz by the National Institute for Forestry, Agricultural, and Animal Husbandry Research (INIFAP), Japan International Cooperation Agency – JICA Mexico and Mexican Agency for International Development Cooperation (AMEXCID). The course aimed to familiarize the Mexican and Latin American specialists with technologies of production of fruits and care of exotic tropical fruit trees, namely pitahaya, manilkara zapota, guanabana, tamarind, rambutan and passion fruit.<sup>2034</sup>

On 11 October 2016, a special event of donation of hydrographic equipment for the project “Strengthening Hydrographic Capacities in Mesoamerica and the Caribbean Sea” (FOCAHIMECA) implemented by the Mexican Secretariat of the Navy (SEMAR) and Mexican Agency for International Development Cooperation (AMEXCID) in the Caribbean region was held. The equipment was donated by the Turkish Cooperation and Coordination Agency (TİKA).<sup>2035</sup>

On 27 October 2016, Mexican and Spanish governments designed a cooperation project “De la ciudadanía al Maker” aimed at promoting youth entrepreneurship and digital economy in Guatemala. The project included a series of forums and workshops held on 7-10 November 2016 in Guatemala. Participants discussed how culture and new technologies could be used to promote creative

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<sup>2031</sup> PASET and Korea Take Partnership to Next Level; Vow to Work Together to Strengthen African Capacity in Applied Sciences, Engineering and Technology, World Bank 28 November 2016. Access date: 17 January 2017. <http://www.worldbank.org/en/news/press-release/2016/11/28/paset-and-korea-take-partnership-to-next-level-vow-to-work-together-to-strengthen-african-capacity-in-applied-sciences-engineering-and-technology>.

<sup>2032</sup> South Korea, Thailand set to streamline agricultural trade, The Nation 29 November 2016. Access date: 11 December 2016. <http://www.nationmultimedia.com/news/business/EconomyAndTourism/30301018>.

<sup>2033</sup> Tariff cuts for 834 technology products will begin today, Korea JoongAng Daily 1 December 2016. Access date: 11 December 2016. .

<sup>2034</sup> Cooperación México-Japón rinde frutos en América Latina. Access date: 26 November 2016. <https://www.gob.mx/amexcid/es/articulos/cooperacion-mexico-japon-rinde-frutos-en-america-latina?idiom=es>.

<sup>2035</sup> México y Turquía colaboran en proyecto de cooperación marítima en el Caribe. Access date: 22 November 2016. <https://www.gob.mx/amexcid/prensa/mexico-y-turquia-colaboran-en-proyecto-de-cooperacion-maritima-en-el-caribe?idiom=es>.

economies in the region. The events brought together entrepreneurs, decision-makers and public and private institutions representatives.<sup>2036</sup>

In November 2016, Mexico promoted its special technology of removing mycotoxins that cause various diseases from the grains to Kenya. The technology (nixtamalización) also helps to increase protein in corn and add calcium and niacin. The tests of the maize quality were organized in the Kenyan city of Machakos. The project is implemented by the Mexican Agency for International Development Cooperation (AMEXCID).<sup>2037</sup>

On 4 November 2016, “Alianza Suiza por la Educación Dual” initiative (Swiss Alliance for Vocational Education and Training) was launched by the President of the Swiss Confederation Johann Schneider-Ammann and Mexican Secretary of Education Aurelio Nuño Mayer during a meeting at the Colegio Suizo de México. The initiative provides Swiss businesses in Mexico with the opportunity to participate in the dual-track education of apprentices. The companies will be able to initiate vocational training in a number of spheres and thereby satisfy their need for skilled workers.<sup>2038</sup>

On 7 November 2016, the @prende 2.0 program was launched by Mexican Secretary of Education Aurelio Nuño Mayer. The program aimed to bring together international organizations, private sector and society to advance teacher training and improve classrooms with innovative equipment to develop necessary skills for addressing needs of the companies in Mexico. In 2017, the program will be implemented in 3,000 schools.<sup>2039</sup> 41,000 teachers will be trained, and 192,000 will be able to access the training module online.<sup>2040</sup>

On 13 November 2016, Mexican Undersecretary of Finance and Public Credit Vanessa Rubio Márquez participated in the launch of the strategic center “México Exponencial.” It aims to share information and promote dialogue on innovation, the New Industrial Revolution and the digital economy. It involves governmental authorities, private sector and academia.<sup>2041</sup>

On 14-15 November 2016, the Germany – Mexico Science, Technology and Innovation Forum was organized by the Government of Mexico, German Federal Ministry of Education and Research, Mexican National Council of Science and Technology (CONACYT) and German-Mexico Alliance for the Future in Mexico City. The participants of the Forum discussed the instruments of German-Mexican cooperation in science, technology and innovations with special focus on industry involvement, exchanged the best practices, in particular in energy, bio-economy, nanotechnologies,

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<sup>2036</sup> México, España y Guatemala contribuyen a la construcción de la ciudadanía digital en Centroamérica. Access date: 22 November 2016. <https://www.gob.mx/amexcid/articulos/mexico-espana-y-guatemala-contribuyen-a-la-construccion-de-la-ciudadania-digital-en-centroamerica?idiom=es>.

<sup>2037</sup> El grano de oro en África. Access date: 26 November 2016. <https://www.gob.mx/amexcid/articulos/el-maiz-alimento-de-oro?idiom=es>.

<sup>2038</sup> Comunicado 473.- Anuncian Alianza Suiza por la Educación Dual, para incorporar empresas de ese país al modelo mexicano. Access date: 22 November 2016. <http://www.gob.mx/sep/prensa/comunicado-473-anuncian-alianza-suiza-por-la-educacion-dual-para-incorporar-empresas-de-ese-pais-al-modelo-mexicano?idiom=es>.

<sup>2039</sup> Comunicado 476.- Presenta Nuño Mayer el programa @prende 2.0, con capacitación para maestros; plataforma en línea. Access date: 23 November 2016. <https://www.gob.mx/sep/prensa/comunicado-476-presenta-nuno-mayer-el-programa-prende-2-0-con-capacitacion-para-maestros-plataforma-en-linea>.

<sup>2040</sup> 8 Facts about @prende 2.0, the Program That Takes IT to Schools. Access date: 23 November 2016. <https://www.mexico.mx/en/articles/8-facts-about-prende-2-0-the-program-that-takes-it-to-schools>.

<sup>2041</sup> Comunicado No.160. Reforma fiscal y en telecomunicaciones propician un México más próspero: Rubio Márquez. Access date: 22 November 2016. <http://www.gob.mx/shcp/prensa/comunicado-no-160-reforma-fiscal-y-en-telecomunicaciones-propician-un-mexico-mas-prospero-rubio-marquez?idiom=es>.

industry 4.0 spheres etc. The Forum aimed to promote technology transfer between two countries.<sup>2042</sup>

Mexico has taken actions to promote knowledge diffusion including specific actions aimed at technology transfer. Thus, it receives a score of +1.

*Analyst: Elizaveta Safonkina*

### **Russia: +1**

Russia has fully complied with the commitment on technologies and innovation.

On 15 October 2016, the Russian Agency of Technological Development signed a cooperation agreement with the Confindustria, which is the main association representing manufacturing and service companies in Italy.<sup>2043</sup> The Agency of Technological Development was established by the Government of Russia to help enterprises in finding innovative technological solutions by providing information, analytical and advisory assistance, conducting transactions and raising funds.<sup>2044</sup>

On 26–28 October 2016, the fifth annual Open Innovations Forum was held in Moscow. The Forum welcomed more than 13,500 guests from 99 countries. It has been held in Moscow, under the auspices of the Russian Government, since 2012, and co-organized by the Russian Ministry of Economic Development. The aims of the forum include exchange of experience and knowledge in the field of technological entrepreneurship and innovation development, and search for new partners and investors. 40 partner agreements were signed and about 2000 requests were applied via business contacts and exchange service during the forum.<sup>2045</sup>

On 1 November 2016, the selection of the Russian-Israeli projects in the research and development commenced. The selection was carried out in the framework of the intergovernmental agreement between Russia and Israel and coordinated from the Russian side by the Ministry of Industry and Trade. The main goal of these efforts is development of innovative infrastructure in the sphere of nanotechnologies. The selection was finished on 29 December 2016,<sup>2046</sup> however no results have been reported yet.

Russia has taken actions to promote knowledge diffusion including specific actions aimed at technology transfer. Thus, it receives a score of +1.

*Analyst: Mark Rakhmangulov*

### **Saudi Arabia: +1**

Saudi Arabia has fully complied with the commitment on technologies and innovation.

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<sup>2042</sup>Foro Germano-Mexicano en Ciencia, Tecnología e Innovación. Access date: 26 November 2016.

<https://www.gob.mx/amexcid/agenda/foro-germano-mexicano-en-ciencia-tecnologia-e-innovacion?idiom=es;>

Germany - Mexico Science, Technology and Innovation Forum. Access date: 26 November 2016.

[http://www.uqroo.mx/eventos/1426/archivos/Germany-Mexico\\_STI\\_Forum\\_\(1\).pdf.](http://www.uqroo.mx/eventos/1426/archivos/Germany-Mexico_STI_Forum_(1).pdf)

<sup>2043</sup>About us, Confindustria. [http://www.confindustria.it/wps/portal/EN/siteEN/About-us/!ut/p/a1/04\\_Sj9CPykssy0xPLMnMz0vMAfGjzOJ9PT1MDD0NjLws\\_ANDRxnAiYDXUy8DdxNjIEKIoEKDHAARwNC-sP1o1CV-](http://www.confindustria.it/wps/portal/EN/siteEN/About-us/!ut/p/a1/04_Sj9CPykssy0xPLMnMz0vMAfGjzOJ9PT1MDD0NjLws_ANDRxnAiYDXUy8DdxNjIEKIoEKDHAARwNC-sP1o1CV-Bu7mgCVeBi6GPh5GBg4m2MoMHAXNXD0DzHxCwy0MDbxN4UqwOOGgtwlg0xPROUaveREXQ!!/dI5/d5/L2dBISEvZ0FBI)

[Bu7mgCVeBi6GPh5GBg4m2MoMHAXNXD0DzHxCwy0MDbxN4UqwOOGgtwlg0xPROUaveREXQ!!/dI5/d5/L2dBISEvZ0FBI](http://www.confindustria.it/wps/portal/EN/siteEN/About-us/!ut/p/a1/04_Sj9CPykssy0xPLMnMz0vMAfGjzOJ9PT1MDD0NjLws_ANDRxnAiYDXUy8DdxNjIEKIoEKDHAARwNC-sP1o1CV-Bu7mgCVeBi6GPh5GBg4m2MoMHAXNXD0DzHxCwy0MDbxN4UqwOOGgtwlg0xPROUaveREXQ!!/dI5/d5/L2dBISEvZ0FBI)

<sup>2044</sup>Agency of Technological Development. <http://tech-agency.ru/>

<sup>2045</sup>Open Innovations 2016, Open Innovations Forum. <https://forinnovations.ru/en/presscenter/News/63>

<sup>2046</sup>Selection of Russian-Israeli Projects in Industrial R&D, Russian Technological Agency 1 November 2016.

<http://rta.gov.ru/press-centr/#российско-израильская-программа-по-сотрудничеству-в-области-промышленных-научно-исследовательских-и-опытно-конструкторских-работ>

On 28 September 2016, the Minister of Commerce and Investment Majid bin Abdullah Al Qasabi, held talks with New Zealand Associate Trade Minister Todd McClay in Riyadh, Saudi Arabia. The parties discussed ways to facilitate economic partnership while focusing on trade, investment and technology transfer.<sup>2047</sup>

On 3 November 2016, the King Abdul Aziz City for Science and Technology (KACST) announced that it would establish 15 centers of excellence to focus on nanotechnology. Research will be done in coordination with Northwestern University, the University of California at Los Angeles, the University of California at Berkeley, the University of Cambridge and the University of Oxford. The creation of centers align with the Kingdom's Vision 2030 and the National Transformation Plan 2020, which aim to make a shift towards knowledge-based economy, localization of human resources and transfer of technology.<sup>2048</sup>

On 7 November 2016, Minister of Health Abdullah Al Rabeeah visited the industrial premises of LFB Group in Les Ulis, France, which are specialized in upstream processes for plasma fractionation. This visit was carried out in the context of ongoing negotiations on an agreement on technology transfer.<sup>2049</sup>

On 6-8 December 2016, the ASBAR World Forum "Knowledge and the Capitalization on Saudi Human Capital: Organizations Transformation and Job Creation" organized in partnership with the Ministry of Labour and Social Development was held in Riyadh, Saudi Arabia. One of the key topics at the Forum was "Foreign Investment: Technology Transfer and Job Creation."<sup>2050</sup>

Saudi Arabia has taken actions to promote knowledge diffusion including specific actions aimed at technology transfer. Thus, it receives a score of +1.

*Analyst: Aydar Shakirov*

### **South Africa: +1**

South Africa has fully complied with the commitment on technologies and innovations.

On 29 September 2016, the Deputy Minister of International Relations and Cooperation Nomaindiya Mfeketo, met with Iranian counterpart, the Deputy Minister for Foreign Affairs of the Islamic Republic of Iran, Jaber Ansari, the for bilateral consultations in accordance with the mandate of the South Africa-Iran Deputy Ministerial Working Group (DMWG). Parties agreed to intensify interaction in "skills transfers, innovation and training and technology exchanges between research foundations in identified areas."<sup>2051</sup>

On 3 October 2016, the European Commission and the South African Department of Science and Technology signed a Declaration of Intent on Marine Research and Innovation Cooperation. The declaration will "encourage and support research collaboration and development of relevant

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<sup>2047</sup> Saudi-New Zealand Talks to Launch Trade Partnerships, Technology Transfer, ENGLISH EDITION OF ASHARQ AL-AWSAT 29 September 2016. Access Date: 21 December 2016. <http://english.aawsat.com/2016/09/article55359308/saudi-new-zealand-talks-launch-trade-partnerships-technology-transfer>.

<sup>2048</sup> Saudi Arabia Announces 15 Centers of Excellence for Science, Technology, Nanotechnology, PK ON WEB 3 November 2016. Access Date: 21 December 2016. <http://pkonweb.com/2016/11/httpwp-mepol36-5tz/>.

<sup>2049</sup> Visit Of Saudi Ministry of Health at LFB Headquarters, The LFB Group 7 November 2016. Access Date: 21 December 2016. <http://www.groupe-lfb.com/en/news/visit-of-saudi-ministry-of-health-at-lfb-headquarters/>.

<sup>2050</sup> ASBAR World Forum, 8 December 2016. Access Date: 21 December 2016. <http://asbarworldforum.com/topics.html>

<sup>2051</sup> Government intensifies cooperation with Islamic Republic of Iran, South African Government 30 September 2016. Access date: 11 January 2017. <http://www.gov.za/speeches/intensify-cooperation-30-sep-2016-0000>.

technologies, to facilitate human capital development and scientific exchange, and to explore regional opportunities for sustainable marine cooperation.”<sup>2052</sup>

On 18 October 2016, South African Minister of Water and Sanitation Nomvula Mokonyane signed a Water Cooperation Agreement with Italy. Among other issues the parties agreed to cooperate in integrated water management solutions including the reuse of waste water for material and energy recovery and exchange of best practices and technologies in this field.<sup>2053</sup>

On 13 October 2016, the first bi-annual South Africa-China exhibition organized in partnership with South African Department of Science and Technology was launched. Entrepreneurs, scientists and other professionals in the science and technology industry gathered to show their hi-tech products which included drones, robotics and high-tech medicine. According to South African Department of Science and Technology, “the exhibition is aimed at creating a platform for South African and Chinese science councils, academic institutions and industry players to exchange information on new technological trends and foster collaborative linkages.”<sup>2054</sup>

On 31 October – 4 November 2016, the South Africa - Norway Science Week 2016 organized in partnership with South African Department of Science and Technology took place. The Science Week brought together key players from higher education, research, innovation and business in South Africa and Norway. The objective of the series of events was to create new relationships and “encourage collaboration between academia and industry across national borders.”<sup>2055</sup>

On 8-9 December 2016, Science Forum South Africa 2016 organized by South African Department of Science and Technology took place in Pretoria. The key objectives of the forum were: to create a platform for a debate on the role of science, technology and innovation in society; promote international science, technology and innovation partnerships; and “create a platform for key science, technology and innovation actors, including senior government leaders, academics, scientists, industry, civil society, and students to interact.”<sup>2056</sup>

South Africa has taken actions to promote knowledge diffusion including specific actions aimed at technology transfer. Thus, it receives a score of +1.

*Analyst: Irina Popova*

### **Turkey: +1**

Turkey has fully complied with the commitment on technologies and innovations.

Since 2014, the Technology Transfer Accelerator Turkey (TTA Turkey) has been conducted. The initiative developed in the EU, aims to commercialise applied research from universities and scale up

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<sup>2052</sup>EU and South Africa join forces to better understand the oceans and climate, European Commission 4 October 2016. Access date: 11 January 2017. <http://ec.europa.eu/research/index.cfm?pg=newsalert&year=2016&na=na-041016>.

<sup>2053</sup> Minister Nomvula Mokonyane signs Water Cooperation Agreement with Italian Republic, South African Government 18 October 2016. Access date: 11 January 2017. <http://www.gov.za/speeches/minister-nomvula-mokonyane-signs-water-cooperation-agreement-italian-republic-18-oct-2016>.

<sup>2054</sup> South Africa and China host exhibition for science and technology, Brand South Africa 17 October 2016. . Access date: 11 January 2017. <http://www.southafrica.info/africa/south-africa-china-exhibition-171016.htm#.WEAA27KLSM8#ixzz4RaEZ1g00>.

<sup>2055</sup> South Africa - Norway Science Week 2016, Innovation Norway. . Access date: 11 January 2017. <http://www.innovasjon Norge.no/en/start-page/our-offices/africa/south-africa/events/south-africa---norway-science-week-20162/>.

<sup>2056</sup> Science Forum South Africa, Department of Science and Technology of South Africa. Access date: 11 January 2017. <http://www.sfsa.co.za/programme/>.

the technology transfer market in Turkey, with a particular focus on spill-overs to the country's less developed regions.<sup>2057</sup>

On 27 September 2016, Turkish Minister of Transport, Maritime Affairs, and Communications Mr. Ahmet Arslan, and CEO of Inmarsat (British satellite communications company) Mr. Rupert Pearce, signed a partnership agreement to collaborate on satellite services, maritime communications, and in the defence and aerospace sectors. One of the goals of the agreement is technology transfer Turkey.<sup>2058</sup>

On 6 October 2016, Turkey accepted the engine-maker Rolls-Royce's offer on a joint production partnership under the memorandum of understanding on technological know-how and a production unit between Turkey and Rolls-Royce signed in October 2015. Also under the agreement, Rolls-Royce will launch an Advanced Manufacturing and Technology Center (AMTC) in Turkey and provide broad know-how and technology transfer.<sup>2059</sup>

On 10 November 2016, the Higher Education Commission (HEC) Pakistan's delegation headed by Dr. Mazhar Saeed, Director General Planning of HEC attended a week-long professional development programme at Turkey. The programme was organized in collaboration with Turkey's Council of Higher Education at Tusside Institute of Management Sciences. The programme provided a comprehensive overview of Turkey's higher education ecosystem.<sup>2060</sup>

Turkey has taken actions to promote knowledge diffusion including specific actions aimed at technology transfer. Thus, it receives a score of +1.

*Analyst: Irina Popova*

#### **United Kingdom: +1**

United Kingdom has fully complied with the commitment on technologies and innovations.

On 1 October 2016, the Chancellor of Higher Education Funding Council for England (HEFCE) announced new funding of GBP120 million over the next four years. The funding aims to support collaborative projects and activities between universities, across the range of knowledge exchange activity such as technology transfer. The funding is a part of a support package, which includes GBP220 million for the life science and university sectors to help technology breakthroughs translate into commercial success, as well as action to ensure disruptive businesses thrive in the UK.<sup>2061</sup>

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<sup>2057</sup> Technology Transfer Accelerator Turkey (TTA), European Investment Fund. Access date: 11 January 2017. [http://www.eif.europa.eu/what\\_we\\_do/resources/tta/index.htm](http://www.eif.europa.eu/what_we_do/resources/tta/index.htm).

<sup>2058</sup> Türksat, Inmarsat join forces on SATCOM, technology transfer, Spacewatch Middle East 27 September 2016. Access date: 11 January 2017. <http://spacewatchme.com/2016/09/turksat-inmarsat-join-forces-satcom-technology-transfer/>.

<sup>2059</sup> Rolls-Royce Offers Joint Production in Turkey, DefenseNews 11 October 2016. Access date: 11 January 2017. <http://www.defensenews.com/articles/rolls-royce-offers-joint-production-in-turkey>.

<sup>2060</sup> HEC Team Visits Turkey to Learn Best Practices in Higher Education, Higher Education Commission, Pakistan 11 November 2016. Access date: 11 January 2017. <http://hec.gov.pk/english/news/news/Pages/HEC-Team-Visits-Turkey.aspx>.

<sup>2061</sup> Additional £120 Million for Collaboration and Technology Transfer, Official Website of Higher Education Funding Council for England 4 October 2016. Access Date: 12 December 2016. <http://www.hefce.ac.uk/news/newsarchive/2016/Name,110403,en.html>.

On 8 November 2016, a series of joint India-UK research initiatives worth more than GBP80 million were announced by Indian Union Minister of Science and Technology and Earth Sciences Dr. Harsh Vardhan and UK Science Minister Jo Johnson.<sup>2062</sup>

The United Kingdom takes actions to promote knowledge diffusion including specific actions aimed at technology transfer. Thus, it receives a score of +1.

*Analyst: Elina Nizamova*

#### **United States: +1**

The US has fully complied with the commitment on technologies and innovation.

On 21-22 September 2016, a Science and Technology Innovation Forum “Synergy” was held. The forum was a joint project of the Intellectual Property Office of the Philippines (IPOP HL) & the United States Agency for International Development (USAID) Science, Technology, Research and Innovation for Development (STRIDE). It aims to increase promotion of science, bolster technology transfer activities in universities and colleges, support information technology (IT) projects and contribute to the innovation ecosystem. During the forum participants were provided with know-how and technical expertise. Also some programs aimed at moving researches, technologies, and innovative products to the marketplace were represented.<sup>2063</sup>

The United States has taken actions to promote knowledge diffusion including specific actions aimed at technology transfer. Thus, it receives a score of +1.

*Analyst: Irina Sedova*

#### **European Union: +1**

European Union has fully complied with the commitment on technologies and innovation.

On 21 September 2016, the Ninth International Technology Transfer Conference was held by the Center for Technology Transfer and Innovation at the Jožef Stefan Institute. The conference which was co-financed by the European Commission and addressed such issues as research and innovation in Horizon 2020, research and innovation in other working programs, research and innovation for Europe.<sup>2064</sup>

On 22 September 2016, the European Institute of Innovation and Technology and the European Commission’s Joint Research Centre signed a Memorandum of Understanding (MOU). The MOU will be mutually beneficial in areas of common interest, including technology transfer and intellectual property.<sup>2065</sup>

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<sup>2062</sup> India and UK Team Up to Drive Scientific and Cultural Boundaries, Official Website of BioSpectrum: Integrated B2B Media Platform for Asia BioScience Industry 9 November 2016. Access Date: 12 December 2016.

<http://www.biospectrumindia.com/biospecindia/news/224499/india-uk-team-drive-scientific-cultural-boundaries>.

<sup>2063</sup> Synergy 2016 Seen to Bolster Universities’ Technology Transfer Activities, The Official journal of the Republic of the Philippines – The official Gazette 22 September 2016. Access date: 1 December 2016.

<http://ipophil.gov.ph/releases/2014-09-22-06-26-21/488-synergy-2016-seen-to-bolster-universities-technology-transfer-activities>.

<sup>2064</sup> 9<sup>th</sup> International Technology Transfer Conference, Center for Technology Transfer and Innovation at the Jožef Stefan Institute 21 September 2016. Access date: 21 December 2016. <http://tehnologije.ijs.si/9ittc/en/>.

<sup>2065</sup> New opportunities for innovation and research with the EU’s science and knowledge service, European Institute of Innovation and Technology 22 September 2016. Access date: 21 December 2016.

<https://eit.europa.eu/newsroom/new-opportunities-innovation-and-research-eu%E2%80%99s-science-and-knowledge-service>.



On 30 September 2016, the Executive Agency for Small and Medium-sized Enterprises, acting under the powers delegated by the European Commission, closed a call for proposals on grant agreements designed to accelerate the transfer of innovative technological solutions to sea basin economies. With a budget of over EUR 7.5 million, the calls will facilitate enhancing career opportunities in the maritime economy and stimulate the creativity of young researchers.<sup>2066</sup>

On 3 October 2016, the European Commission and the South African Department of Science and Technology signed a Declaration of Intent on Marine Research and Innovation Cooperation. The declaration will “encourage and support research collaboration and development of relevant technologies, to facilitate human capital development and scientific exchange, and to explore regional opportunities for sustainable marine cooperation.”<sup>2067</sup>

On 17 October 2016, the European Commission and the US Government signed the Implementing Arrangement for Cooperation between Researchers Funded Separately by the European Union’s and the United States Framework Programs on Research and Innovation. The agreement stimulates cooperation between US organizations and participants of the European Union’s research and innovation program “Horizon 2020,” especially in cases when US organizations are funded by the US government and do not get any funding from the Horizon 2020 program.<sup>2068</sup>

On 16 November 2016, the European Union, the US, Canada, Germany, Italy, Denmark, Japan, Switzerland and Korea pledged over USD23 million to support technology transfer in developing countries. The additional funding to the United Nations Framework Convention on Climate Change (UNFCCC) Climate Technology Centre & Network (CTCN) aims to deliver tailored capacity building and technical assistance at the request of developing countries.<sup>2069</sup>

The European Union has taken actions to promote knowledge diffusion including specific actions aimed at technology transfer. Thus, it receives a score of +1.

*Analyst: Aydar Shakirov*

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<sup>2066</sup> Blue Technology - transfer of innovative solutions to sea basin economies, European Cluster Collaboration Platform 30 September 2016. Access date: 21 December 2016. <http://www.clustercollaboration.eu/open-calls/blue-technology-transfer-innovative-solutions-sea-basin-economies>.

<sup>2067</sup> EU and South Africa join forces to better understand the oceans and climate, European Commission 4 October 2016. Access date: 11 January 2017. <http://ec.europa.eu/research/index.cfm?pg=newsalert&year=2016&na=na-041016>.

<sup>2068</sup> EU-US agreement offers new opportunities for research cooperation, European Commission 17 October 2016. Access date: 21 December 2016. <http://ec.europa.eu/research/index.cfm?pg=newsalert&year=2016&na=na-171016>.

<sup>2069</sup> Countries pledge USD 23 million to support technology transfer in developing countries, Climate Technology Centre & Network (CTCN) 16 November 2016. Access date: 21 December 2016. [http://unfccc.int/files/meetings/marrakech\\_nov\\_2016/application/pdf/ctcn\\_pr\\_eng.pdf](http://unfccc.int/files/meetings/marrakech_nov_2016/application/pdf/ctcn_pr_eng.pdf).