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European Union**

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NOTE

From:	Presidency
To:	Delegations
Subject:	Draft Council conclusions on "Open, data - intensive and networked research as a driver for faster and wider innovation"

Delegations will find attached draft Council conclusions on "Open, data - intensive and networked research as a driver for faster and wider innovation" with a view to the discussion by the Research Working Party at its meeting on 4 May 2015.

Changes to doc. 7679/15 are indicated in **bold underlined** for additions and ~~strikethrough~~ for deletions.

COUNCIL CONCLUSIONS ON 'OPEN, DATA-INTENSIVE AND NETWORKED RESEARCH AS A DRIVER FOR FASTER AND WIDER INNOVATION'

THE COUNCIL OF THE EUROPEAN UNION

RECALLING

–   Its Conclusions of 31 May 2010 on "A Digital Agenda for Europe"[1], acknowledging that Europe should put the necessary resources in the development of a Digital Single Market to raise productivity and generate economic growth and attract investments, create jobs and reinforce its influence at a global level;

–   Its Conclusions of 3 December 2010 on "Cross fertilization between Europe 2020 flagship initiatives Digital Agenda for Europe and Innovation Union"[2], recognising the contribution of digital technologies as one of the main drivers to improve Europe's productivity, growth capacity and ability to innovate in all sectors;

–   **Its Conclusions of 11 December 2012**[3] **on "A Reinforced European Research Area Partnership for Excellence and Growth" which emphasise the relevance of the Commission Communication "Towards better access to scientific information: Boosting the benefits of public investments in research"**[4] **for achieving the ERA;**

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[1]   Doc. 10130/10
[2]   Doc. 16834/10
[3]   **Doc. 17649/12**
[4]   **Doc. 12847/12**

– Its Conclusions of 30 May 2013 on "High Performance Computing: Europe's place in a Global Race"[5], underlining the overall objective to achieve European leadership in the development and use of High Performance Computing systems, software, applications and services by 2020;

– The Conclusions of the European Council of 24-25 October 2013[6] which emphasise the importance of the digital economy, innovation and services as drivers for growth and jobs and invites action at EU level to provide the right framework conditions for a single market for big data and cloud computing;

1. REITERATES its Conclusions of 2 March 2015 on the "Single Market Policy"[7] highlighting "that full and efficient exploitation of tools and services such as Cloud Computing, Big Data, Automation, Internet of Things and Open Data can drive for better productivity and better services, and therefore should be facilitated, including through market driven solutions, R&D and the promotion of the necessary skills and capacity building, along with further ICT standardisation and interoperability"; In this context, STRESSES that open, data-driven and networked research can maximize Europe's digital potential through fostering faster and wider innovation;

2. TAKES NOTE of the progress already made towards a truly digital Europe, and the initial discussions relating to the [forthcoming] Digital Single Market strategy in several Council configurations;

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[5] Doc. 10322/13
[6] Doc. EUCO 169/13
[7] Doc. 6197/15

3.   WELCOMES the Communication from the European Commission of 2 July 2014 on "Towards a thriving data-driven economy"[8] which outlines the features of the data-driven economy and identifies the main areas where action is needed to support and accelerate the transition towards it, as an important contribution to the ongoing development of the Digital Single Market; and LOOKS FORWARD to the adoption by the European Commission by the end of 2015 of its detailed action plan to accelerate the transition towards a data-driven economy in Europe;

3a.   ~~EMPHASISES that multilingualism in the digital age provides new opportunities for economic growth and social cohesion. NOTES that language technologies already bring benefits to European citizens, businesses and public institutions enabling multilingual access to e-services, extracting knowledge out of multilingual data and boosting efficiency of machine translation systems and technologies;~~

4.   RECOGNISES the high potential of the data-driven economy and the need to strengthen the whole data value chain in Europe; REAFFIRMS the broad political support from Member States for setting better framework conditions for faster and wider data-driven innovation taking into account the research perspective; ~~CONSIDERS that openness of research data can further increase the efficient use of public funding~~ and ACKNOWLEDGES the importance of data as fuel for entrepreneurship**, digital transformation of industry** and the development of new business **models,** ideas and innovative start-ups;

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8   Doc. 11603/14

4a.   ACKNOWLEDGES the potential of open science and NOTES growing support for open access to publicly funded research publications and underlying data**; CONSIDERS that, provided the legitimate interests of the stakeholders are taken into consideration, openness of research data can further increase the efficient use of public funding.** ~~as well as~~ **In this context,** RECOGNISES the need for a reflection on current research evaluation mechanisms. At the same time, STRESSES the need for adequate sharing, use**, re-use** and interoperability of data, based on common standards as well as the importance of a good balance between ~~scientific research and~~ data-driven **research and** innovation ~~in the interest of societal welfare~~ and the protection of privacy; ACKNOWLEDGES the need for development of data skills for academia, researchers and the wider community and EMPHASISES the importance of developing e-infrastructures and networks of centres of excellence;

Community building and knowledge transfer for a thriving data-driven economy

5.   UNDERLINES the importance of developing EU-wide data communities of researchers, **research funding organisations,** companies, SMEs, public sector and other relevant stakeholders and NOTES the need to foster their cooperation along the data value chain in order to form the basis of a strong and vibrant data-driven ecosystem; TAKES NOTE of the **new** contractual European Public-Private Partnership on Big Data Value launched in October 2014 with such an objective; **and TAKES NOTE of initiatives aiming at sharing and governing advanced digital services, scientific instruments, data, knowledge and expertise that enable researchers to collaborate more effectively, such as the Open Science Commons**;

6.	WELCOMES actions supporting researchers and industry, including SMEs, within the Horizon 2020 framework, TAKES NOTES of initiatives such as ~~the 'lighthouse projects'~~ (large-scale demonstrators in targeted sectors~~)~~ and ~~'i-Spaces' (~~incubator ~~&~~ **and** accelerator environments where research outcomes on novel technologies can be quickly tested and piloted~~)~~, as well as the open data incubator for SMEs**.** Such actions will aim to set up supply chains based on data, promote open access ~~including to cloud computing~~, and promote networks of data incubators across Europe;

6a.	RECOGNISES the importance of availability of secure, reliable and high-quality cloud**-based** services, and **UNDERLINES the importance of being able to store and process in Europe research data produced by the Member States;** in this context WELCOMES the further development of a European **Open** Science Cloud **that enables sharing and re-use of research data across disciplines and borders**;

7.	REITERATES the need to increase the multidisciplinary digital skills base. In particular, STRESSES the need for new types of data professionals and researchers who combine the knowledge in their fields with **big** data **and digital** skills; NOTES the importance of new skills required to develop **and use** new technologies, systems, platforms, and services for ~~deep~~ data **analytics** ~~analysis~~. In this respect, WELCOMES supplementary actions contributing to capacity-building, and TAKES NOTE of initiatives such as the European Data Science Academy based on a network of European skills centres for big data analytics;

Developing the framework conditions

8.   UNDERLINES the exponential increase of data, including research data, and UNDERSCORES that making data discoverable, accessible, assessable, reusable and interoperable would considerably increase innovation potential and create new business opportunities; **EMPHASISES the importance of open standards, licenses, formats and open source software solutions in order to keep research data re-usable and re-producible**. In this context, NOTES the need to promote innovation driven by text and data mining taking into account research needs**, such as avoiding further costs on the re-use of the already legally accessible content;** and UNDERLINES ~~that~~ the **need to ensure** ~~removal of~~ legal ~~uncertainty and fragmentation of the data protection~~ **and an appropriate** regulatory framework **that** would facilitate a science and innovation-friendly environment for better use of data;

8a   RECOGNISES the global importance of research data exchange and **portability** ~~interoperability~~ of data across disciplines and national boundaries as a means to broadening the scientific reach of individual data sets. **In this respect, CALLS on the EU, in its relationship with third countries, to encourage reciprocal openness of access to research data;** ~~In this context,~~ NOTES **the importance of** community-led open and voluntary efforts for international coordination and cooperation on data infrastructures such as the Research Data Alliance;

9.   ENCOURAGES the development of a data-friendly policy environment **in the EU** ~~Europe~~ and Member States which promotes interoperability, use and re-use of government data for research and innovation purposes while ensuring necessary protection, e.g. by **anonymisation, pseudonymisation** ~~depersonalisation~~ or other techniques;

9a. **EMPHASISES that the exploitation of the potential of multilingualism can significantly contribute to a thriving data-driven economy**; STRESSES the need for further development of key enabling digital language **technologies and** services based on excellent European research and innovation, thus facilitating companies to create solutions to cover a variety of market needs ~~and providing equal digital opportunities~~ for all EU language communities;

10. CALLS for ~~urgent~~ action to remove obstacles to wide access to publicly funded research publications and ~~underlying~~ data; CALLS for actions addressing better data management and, in this context, WELCOMES the Pilot on Open Research Data under Horizon 2020;

11. UNDERLINES that e-infrastructure is one of the key elements for research and innovation focused on data or benefiting from it, as they offer services for data preservation and re-use, as well as possibilities for data analysis; NOTES the need to better exploit the existing Authentication and Authorisation Infrastructure (AAI) to foster open access to e-infrastructures; WELCOMES that Horizon 2020 ~~will~~ address**es virtual research environments and** e-infrastructures for data analytics and services;

12. UNDERSCORES the importance of PRACE[9], a world-class European High Performance Computing (HPC) infrastructure for research that provides access to computing resources and services for large-scale scientific and engineering applications; ACKNOWLEDGES the need to develop the new generation of HPC technologies and CALLS for the reinforcement of the interconnected network of data processing facilities GEANT[10]. In this respect, INVITES ESFRI to **explore** ~~establish a dedicated group for the~~ **mechanisms for better** coordination of Member States' investment strategies ~~in~~ ~~HPC and the elaboration of a unified roadmap for~~ e-infrastructures, covering HPC, ~~grid~~ **distributed computing**, **scientific** data and networks;

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9 Partnership for Advanced Computing in Europe.
10 Pan-European data network for the research and education community.

13. ~~Against this background,~~ UNDERLINES the importance of research and innovation in the [forthcoming] "Digital Single Market Strategy", and URGES the Member States, Commission and industry to acknowledge the need to increase investment in research and innovation in Information and Communication Technologies (ICT), and stimulate the short and long term leveraging effect of investment;

14. CALLS for better identification of sectorial priorities for research and innovation with the greatest potential for social and economic benefits in the data economy. At the same time, EMPHASISES the need for tailored support schemes on national and regional level in order to ensure the greatest impact of investments in ICT through smart specialization strategies;

14a. **INVITES the Commission to assist Member States in the identification, analysis and exploitation of opportunities offered by the data-driven economy in the field of research and innovation through the organisation of mutual learning seminars and workshops;**

15. CALLS for synergies between national and European data strategies to ensure a European technological leadership role in the data-driven economy addressing all dimensions of the data value chain.

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