**Council of the
European Union**

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From:	Permanent Representatives Committee (Part 1)
To:	Council
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Subject:	Draft Council conclusions on open, data-intensive and networked research as a driver for faster and wider innovation
	- Adoption

1. The European Council's conclusions of October 2013 focused on the digital economy, innovation and services as drivers for growth and jobs. They called for EU action to provide the right framework conditions for a single market for big data and cloud computing. In July 2014, the Commission issued its communication "Towards a thriving data-driven economy", which has, in addition to industrial aspects, a strong research and innovation related focus.

On 6 May 2015, the Commission issued its communication "A digital single market strategy for Europe" which highlights, *inter alia*, the need for investment in ICT infrastructures and technologies such as cloud computing and big data, and research and innovation in view of maximising the growth potential of our European digital economy.

2.	Following the policy debate in the March 2015 Competitiveness Council on "unlocking Europe's digital potential through open, networked and data-intensive research", the Presidency proposed draft Council conclusions, which have been discussed by the Research Working Party at its meetings on 16 February, 16 and 20 April and 4 May 2015.

3.	The Permanent Representatives Committee examined the remaining open issues at its meeting on 13 May 2015 arriving at an agreement in principle on the text. The UK entered a general scrutiny reservation on the final text, following the recent national elections.

4.	The Council ("Competitiveness"), at its session of 29 May 2015, is therefore called upon to adopt the conclusions with the changes indicated in **bold underlined** and in ~~strikeout~~ resulting from the Permanent Representatives Committee meeting.

Changes to doc. 8583/15 are indicated in **bold underlined** for additions and ~~strikethrough~~ for deletions.

DRAFT 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 while **taking into account** ~~considering~~ the legitimate interests of the stakeholders;

2.   TAKES NOTE of the progress already made towards a truly digital Europe, and the initial discussions relating to the 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;

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; 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;

4a. ACKNOWLEDGES the potential of open science and WELCOMES growing support for open access to publicly funded research publications and underlying data; CONSIDERS that openness of research data could further increase the efficient use of public funding. In this context, RECOGNISES the need for a reflection on current science metrics, as well as incentives for researchers to publish articles and data through open access. 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 data-driven research and innovation 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;

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[8] Doc. 11603/14

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, research performing 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 large-scale demonstrators in targeted sectors and 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, and promote networks of data incubators across Europe;

6a.   RECOGNISES the importance of long term sustainability of database infrastructure and 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 in the Member States; in this context WELCOMES the further development of a European Open Science Cloud that will enable sharing and re-use of research data across disciplines and borders, taking into account relevant legal, security and privacy aspects;

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 data analytics. 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 HIGHLIGTS 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 scientific processes re-producible. In this context, NOTES the need to promote innovation driven by text and data mining taking into account research needs, and to consider the impact , including financial aspects, of the re-use of the already legally accessible content; and UNDERLINES the need to ensure legal certainty 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 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 promote openness of access to research data in the spirit of reciprocity and mutual benefit; 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 and Member States which promotes interoperability, use and re-use of government data for research and innovation purposes while ensuring necessary data protection, e.g. by anonymisation, pseudonymisation 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 for all EU language communities;

10.	CALLS for 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; In the context of the implementation of the European Research Area (ERA), LOOKS FORWARD to the possible development of action plans or strategies for open science;

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 addresses virtual research environments and e-infrastructures for data analytics and services;

12. STRESSES 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 mechanisms for better coordination of Member States' investment strategies in e-infrastructures, covering also HPC, distributed computing, scientific data and networks;

13. UNDERLINES the importance of research and innovation in the "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;

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

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, for example through the Policy Support Facility (PSF), in the identification, analysis and exploitation of opportunities offered by the data-driven economy in the field of research and innovation through, inter alia, 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.