EU-US Cooperation agreements

In matter of research and innovation, the cooperation between the EU and the US is governed by the "Agreement for Scientific and Technological Cooperation" that was originally signed in 1998, and renewed four times for five years each time, and is now valid until October 2018.

An agreement has been signed between the European Commission and the US Government on October 17, 2016, facilitating cooperation between European and American researchers on projects funded under Horizon 2020, the European Union's research and innovation programme.

According to this agreement, cooperation between Horizon 2020 participants and US entities may be organized outside the formal H2020 Grant Agreement in cases where the US organisations are funded by the US and do not receive any funding from the Horizon 2020 programme.

This fact sheet summarizes **Big Data** opportunities in Horizon 2020, the European research and innovation framework programme. It describes the research and innovation stakeholders' ecosystem in this area, and the funding priorities for future Calls for Proposals.

European Strategic framework

In order to ride the Big Data growth opportunities, the EU is investing in strengthening and supporting the development and wide adoption of Big Data Value technologies, successful use cases and data-driven business models, while taking into account the development of the wider ecosystem, that is, the adaptation and development of dimensions such as skills; policy and regulation; standardization; social perceptions and societal implications.

The EU strategy in matter of Big Data has its foundation in the *Communication on the data-driven economy*, adopted in 2014, which sets out operational conclusions to support and accelerate

the transition towards it. To this, others have followed, such as the *Building a European Data Economy* Communication, adopted in 2017, which calls for strategic advancements among key industrial ecosystems such as the data value chain. Data technologies, value and potential are also central in the *Digitising European Industry* Communication, adopted in 2016. More specific aspects related to data are also addressed:

- Connectivity, as an enabler of the data economy, is addressed in the "Connectivity for a Competitive Digital Single Market - Towards a European Gigabit Society" Communication";
- Open Data are addressed through a specific policy, and in the Public Sector Information (PSI) directive, focused on the re-use of public sector information, with the aim to provide professionals and citizens with new tools to create, access, exploit, preserve and re-use all forms of digital content, and analyze and visualize big data, including linked data.

To achieve the goals set above, the European Commission and the European data industry have committed to invest €2.5 billion in a public-private partnership (PPP) that aims to strengthen the data sector and put Europe at the forefront of the global data race. The **European contractual Public Private Partnership on Big Data Value (BDV PPP)** was signed in October 2014. The EU has earmarked over €500 million of investment over 5 years (2016-2020) which private partners are expected to match at least four times over (€2 billion). The overall goals, main technical and non-technical priorities, and a research and innovation roadmap by 2020 for the BDV PPP are outlined in the **Big Data Value Strategic**

Research and Innovation Agenda, version 4.0, available **here.**

The implementation of the Big Data Partnership is responsibility of the **Big Data Value Association (BDVA),** an industry-led contractual counterpart to the European Commission, which, as of Dec 2015, counts over 120 members including large and SME industry together with research institutions and academia. The objectives of the BDV PPP are pursued through initiatives funded under the Horizon 2020 Work Programme.

Funding opportunities under Horizon 2020 Programme

The strategy on Big Data outlined above relied on a coordinated action plan involving Member States and the EU so as to guarantee the necessary scope and scale of the activities. The envisaged actions resulted in:

> support lighthouse data initiatives to improve the competitiveness and quality of public services; develop enabling technologies, underlying infrastructures and skills, particularly to the benefit of SMEs;
> extensively share, use and develop its public data resources and research data infrastructures;
> accelerate the digitization of public administration and services to increase their efficiency, and use public procurement to bring the results of data technologies to the market;
> make sure that the relevant legal and policy framework are data-friendly, and that technological, legal and other bottlenecks are tackled. In particular, technical challenges currently relate to: Data Management engineering; Optimization of data processing architectures to deliver real-time analytics with both data at rest and in motion; Deep Analytics, to improve data understanding, deep learning, meaningfulness of data; Data protection and preservation mechanisms, to increase trust and data sharing; Data visualization and user experience, to enable intelligent visualization of complex information.

Calls for Proposals on Big Data issues

Opportunities under Horizon 2020 Programme can be found under the H2020 *ICT Work Programme.*

In the current Work Programme, covering the period **2018-2020**, the Big Data challenge is pursued in the context of a wider *European Data Infrastructure (EDI)* objective. Big Data, together with Cloud Technologies and High Performance Computing (HPC), are seen as the building block to exploit the data revolution in Europe and contribute to global growth. "The aim of the activities under this heading is to enable the creation of a world-class High Performance Computing (HPC)/Big Data (BD) ecosystem based on European leadership in HPC, Cloud and Big Data technologies."

Finally, Big Data issues are addressed also in other parts of the H2020 Work Programme, and namely as applied technology in the context of the seven H2020 *Societal Challenges*. This link provides access to all seven H2020 *Societal Challenges* and to the relative Work Programmes.

US Participation Conditions

In most cases US beneficiaries, being considered as industrialized countries, are not eligible for EC financial contribution and are required to cover the costs they will incur in during the project. However, if a grant applicant can convincingly demonstrate that the objectives or impact of the proposal would not or only partially be achieved without the participation of a US partner, the EC can decide to provide funding to US partners.

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