

Project Communication (Publication: June 2018)

Impact of PICASSO in the field of Big Data

Both the EU and the US are funding numerous research and innovation activities related to Big Data in order to tackle a number of societal challenges. The PICASSO Big Data Expert Group managed to establish a large community of over 50 Big Data experts, representing a wide network of EU and US organisations (i.e. industry, policy, R&D, academia) to collaborate on exactly these challenges. The thematical Groups for tackling common application and technological challenges and priorities will remain an important collaboration mechanism after the PICASSO project end.

Big Data is generating an intense amount of attention among businesses, media and even consumers, along with analytics, cloud-based technologies, digital channels and data visualization. These are all part of the current diverse ecosystem created by the technology megatrends.



What is the PICASSO project about?

The PICASSO project “ICT Policy, Research and Innovation for Smart Society: towards new avenues in EU-US ICT collaboration” was running from January 2016 to June 2018, funded under the European Union Horizon 2020 programme. The project brought together EU and US prominent specialists. Their aim was to reinforce EU-US ICT collaboration in **pre-competitive research about the key enabling technologies related to societal challenges of common interest** – 5G Networks, Big Data, Internet of Things and Cyber Physical Systems – and to support the **EU-US ICT policy dialogue**.

What were the goals of the PICASSO Big Data Expert Group?

The following goals were formulated:

- Establishing strong links for R&D&I collaboration among Big Data Structures in the EU and US
- Charting a high-level status of the Big Data sector in Europe and the US
- Charting the greatest opportunities for collaboration between EU and US utilizing the most competitive strengths of each side
- Outlining a list of the most competitive achievements, challenges and opportunities
- Finding the barriers and opportunities stemming from relevant EU and US policy issues

Who are the Big Data Experts?

The following experts were involved in the Big Data Expert Group:

- Dr Nikos Sarris, member of Steering Committee Big Data Value Association, ATC – Athens Technology Centre (Expert Group Chair)
- Prof. Dr. Sören Auer – Leibniz University of Hannover, Germany, Director of Technische Informationsbibliothek (TIB) – German National Library of Science and Technology – Leibniz Information Centre for Science and Technology and University Library
- Dr Andreas Metzger – paluno, University of Duisburg-Essen, Head of Adaptive Systems and Future Internet Applications, Chief technical architect of the European Future Internet Public Private Partnership project on transport, logistics and agri-food (Flspace), Deputy general secretary of the Big Data Value Association (BDVA) and steering committee vice chair of the European Technology Platform NESSI
- Dr David Belanger – Stevens Institute of Technology, Senior Research Fellow, Co-Leader IEEE Big Data Initiative and member of the Board of Advisors – IEEE Transactions on Big Data, IEEE Transactions on Internet of Things

- Mr Michail Bletsas – MIT, Director of Computing at the MIT Media Lab
- Mr Wo Chang – Digital Data Advisor for the NIST Information Technology Laboratory (ITL)
- Mr Ray Walshe – Assistant Professor at Dublin City University. Lead Editor of ISO WG9 Big Data Standards, Head of Ireland Delegation for Big Data at NSAI, Member of Cloud Select Industry Group (C-SIG) for DG-CNECT at European Commission, Steering Board member for NetWorld2020 the European Technology Platform for communications networks and services, Chair of Standardisation Group at Big Data Value Association (BDVA), Digital Leader at World Economic Forum
- Dr. Pantelis Angelidis – VIDAVO, Professor of eHealth at University of Western Macedonia

Expert Group manager: Vasilis Papanikolaou, Athens Technology Center

What are the outcomes?

In order to **influence and shape the future of Big Data collaboration**, the PICASSO Big Data Group, with the support of the Big Data Value Association (BDVA) and the US Big Data Hubs, has managed to set up and operate a **“EU-US Big Data Open Community of Experts” of over 50 individuals** representing a number of **EU, US and International organisations and associations** – in addition to the initial EG core members.

The larger community was mobilised and took part in several activities organised and coordinated by the PICASSO Big Data Expert Group. As a major milestone, the community organised **the Trans-Atlantic Workshop on Public Private Partnerships for Big Data** in collaboration with the National Science Foundation (NSF) Big Data Innovation Hubs, BDVA and INRIA. The event took place in Versailles, France, on November 20th, 2017 and **marked a crucial first step in establishing a productive EU-US relationship for advancing big data science**: Participants sketched out a vision for applying big data to benefit society and cultivating a workforce capable of fulfilling this vision. The workshop uncovered potential synergies between the two regions, offered insights relevant to prioritizing future research investments in research, innovation and training. **A major result of this community is the identification of common research and innovation topics between the EU and the US (Data Analytics, Data Protection & Privacy, Data Processing Architecture and Data Visualisation and User Interaction) and common technological domains and challenges (Security, Smart Transportation, Standardisation & Regulation, Opportunities in Education & Workforce, Big Data for Smart Cities, Big Data and the Environment-Food-Energy-Water Nexus, Big Data for Better Health)**. The community has worked on making specific proposals of how the two regions could work for advancing on these topics; dedicated working groups have been created.

Furthermore, the “EU-US Big Data Open Community of Experts” has provided significant input to the PICASSO Big Data Expert Group for the identification and development of the **two strategic initiatives** which highlight the importance of EU-US collaboration on Big Data that have been shared with policy makers from both regions. The following initiatives were developed:

- Strategic Initiative Proposal 1: BIG DATA EU-US Task Force for Enhancing Collaboration
- Strategic Initiative Proposal 2: Joint R&D projects under the H2020 or Horizon Europe umbrella.

All members of the community have expressed their willingness and commitment to continue jointly working on several critical Big Data issues by providing their personal time and effort to build a sustainable forum able to enhance EU-US collaboration in the Big Data field. **This community, originally initiated by the PICASSO project, will remain active after the project ends. The role of the community operator has been taken over by the South Big Data Hub** which collaborates closely with senior members of BDVA in order to define a sustainable collaboration formula for this network. The Working Groups will continue to work after the end of the PICASSO project, as part of this community.

More information can be found in the Opportunity report on Big Data: <http://www.picasso-project.eu/outreach/project-reports/>

PICASSO Project Website: www.picasso-project.eu

Twitter: @picasso_ICT - **LinkedIn:** PICASSO – EU/US ICT research

About the PICASSO Project:

PICASSO is co-funded by the European Commission under the Horizon 2020 programme.

Start Date: 1st January 2016 - **Duration:** 30 months

Project coordinator: Svetlana Klessova, inno TSD, France: s.klessova@inno-group.com

PICASSO Consortium Members:

	<p>inno TSD, France – one of Europe’s leading innovation management consultancy firms, specialised in helping major private and public stakeholders design and implement R&D and innovation projects. https://www.inno-tds.fr/en</p>
	<p>TECHNISCHE UNIVERSITÄT DORTMUND, Germany – a leading German technically oriented research university with strong research groups in big data, communications, smart grids, e-mobility and cyber-physical systems... http://www.tu-dortmund.de</p>
	<p>THINK WIRELESS TECHNOLOGIES LIMITED, United Kingdom - an ICT company founded in 2009 after more than a decade of research and development in wireless and energy harvesting technologies. http://www.think.com/</p>
	<p>ATC SA, Greece - an SME and Technology Centre in the field of ICT participating in 3 ICT European Technology Platforms: NESSI (Steering Committee member), NEM (member) and NETWORLD2020 (member), and founding member of European Big Data Value Association. http://www.atc.gr</p>
	<p>AGENZIA PER LA PROMOZIONE DELLA RICERCA EUROPEA, Italy – a non-profit research organisation, grouping together more than 100 members, including public and private research centres, industries, industrial associations, chambers of commerce, science parks and more than 50 universities, with the main objective to promote the participation in national and European RTD programmes. http://www.apre.it/</p>
	<p>HONEYWELL INTERNATIONAL INC, United States – a multinational company and global leader that invents and manufactures technologies to address some of the world’s toughest challenges initiated by revolutionary macrotrends in science, technology and society. The company’s products and solutions are focused on energy and the environment, safety and security, and efficiency and productivity. http://honeywell.com/</p>
	<p>GNKS CONSULT BV, Netherlands - conducting strategic and policy research and evaluation, building on excellence in understanding of the impact of the emerging Global Networked Knowledge Society http://www.gnksconsult.com/</p>
	<p>TECHNISCHE UNIVERSITÄT DRESDEN, Germany - a full-scale university with 14 faculties, covering a wide range of fields in science and engineering, humanities, social sciences and medicine. https://tu-dresden.de/</p>
	<p>FLORIDA INTERNATIONAL UNIVERSITY, United States - The Miami-Florida Jean Monnet Center of Excellence, (MFJMCE), a member of the global network of EU-sponsored Jean Monnet centers, has the mission to promote teaching, research and outreach activities relating to the EU. http://www.fiu.edu/; https://miamieuc.fiu.edu/</p>
	<p>UNIVERSITY OF MINNESOTA, United States – The Technological Leadership Institute bridges the gap between business and engineering. TLI’s mission is to develop local and global leaders for technology enterprises. https://tli.umn.edu/</p>