



Towards new avenues in EU-US ICT collaboration:

**5G, Big Data, Internet of Things and Cyber Physical Systems
for smart cities, smart transport and smart energy**

Project overview

**ICT Policy, Research and Innovation
for a Smart Society**

www.picasso-project.eu



Project in brief

- > **Coordination and Support Action**, funded by the European Commission/DG CONNECT
- > **Start:** January 1, 2016 - Duration: 30 months (until June 30, 2018)
- > **Target groups:** ICT RDI Stakeholders and networks | ICT companies / industry | Policy Makers
- > **Target countries:** European Union, United States of America
- > **Mission:** Enhance EU-US ICT research and innovation collaboration responsive to the societal challenges and industry needs, supported by harmonious policies, to enable economic growth in both the EU and US

Consortium



Coordinator
inno TSD, France



Honeywell International INC (HON),
United States



Technische Universität
Dortmund (TUDO), Germany



GNKS Consult BV, (GNKS), The Netherlands



THHINK Wireless Technologies
Limited (THHINK), United Kingdom



Technische Universität Dresden
(TUD), Germany



Athens Technology Center (ATC),
Greece



Florida International University, (FIU),
United States



Agency for the Promotion of the
European Research (APRE), Italy



Regents of University of Minnesota, (TLI),
United States

PICASSO priorities at the heart of EU orientations

“On its Strategy to create a Digital Single Market and digitise European industry, the European Commission focuses on accelerate standard setting and related enabling technologies, such as 5G, cloud computing, internet of things, data technologies and cybersecurity.”



Andrus Ansip , Vice-President EC for Digital Single Market
Günther Oettinger, Commissioner for Digital Economy and Society

Unique feature of PICASSO: synergy between ICT policies and ICT technologies:

- > reinforce EU-US collaboration in ICT pre-competitive R&I in **key enabling technologies related to societal challenges: 5G Networks, Big Data, Internet of Things, Cyber Physical Systems**
- > support EU-US ICT policy dialogue creating a forum for discussion and contributing to the debate on **privacy, security, interoperability, ethics..**, in PICASSO “domains”

PICASSO: Objectives and Activities

Enhancing Cooperation focusing on pre-competitive R&I

- > Analyse industrial drivers, societal needs and barriers to exploitation
- > Promote mutual funding opportunities
- > Develop and promote success stories/ good practices
- > Outline and provide all collaboration opportunities, especially for the industrial sector

Contribute the EU-US policy dialogue

- > Discuss policy-gaps or overregulation targeting core policy issues: Standards; Privacy; Cyber Security.
- > Prepare Policy Brief and propose ways forward
- > Analyse the areas with the highest potential for EU-US ICT collaboration

Outline new avenues and develop strategic initiatives

- > Put forward and promote strategic initiatives for EU-US ICT collaboration
- > Start the implementation of selected strategic and agreed initiatives
- > Explore options and propose and promote topics for EU-US collaboration under joint or coordinated schemes

Expert Groups

3 Technology Groups

On Strategic ICT Technology areas in relation to Societal Challenges

5G Networks

Big Data

IoT/CPS

Synergies between policy and technology groups

1 Horizontal Group

On ICT Policy

**Policy issues:
Privacy and data protection | Cybersecurity |
Standards and Interoperability | Ethics ...**

+25 Experts in total across all groups

Objectives of the Expert Groups

- Identify **gaps, (technical and societal) needs, drivers, and opportunities** in ICT research, innovation, and policy
 - Analyze the **potential and the challenges for EU-US collaboration**
 - **Contribute to the Opportunity Report “Towards Enhanced EU-US ICT Pre-competitive Collaboration”**
- => **Propose new avenues for EU-US ICT collaboration and pave the way to strategic initiatives and actions**
- **Support links** between EU and US networks (PPPs, ETPs, H2020 projects, associations) and contribute to PICASSO **outreach**.
 - **Distribute information on cross-Atlantic funding and collaboration opportunities**

The Opportunity Report “Towards Enhanced EU-US ICT Pre-competitive Collaboration”

- **Highlight similarities and differences** between EU and US RDI policies and **possibilities for synergies**
- Identify **gaps, challenges, and open issues** in research and innovation
- Outline **opportunities for collaboration**, especially for the industrial sector and academia-industry
- Propose EU-US **strategic initiatives** and **academia-industry collaborations**
- Propose **policy initiatives**
- Serve as a **basis** for future discussions in PICASSO

Technology Expert Group “5G Networks”



5G
NETWORKS

Chair: Prof. Gerhard Fettweis, Vodafone Chair, TU Dresden

Objectives:

- Analyze technological & economic drivers and obstacles to innovations in EU and US;
- Sharpen vision on 5G and identify joint US/EU research items
- Identify economic impact

Scope:

- Tactile Internet (for non-critical as well as mission-critical applications), mobile broadband (incl. millimeter-wave communications), and ubiquitous IoT- sensor networking;
- Possible areas for the Strategic Roadmap : Application and service attractiveness, Technological and economic capabilities, Network effects, Key enabling technologies (incl. standardisation timeline), open technological challenges

Expected results:

- Vision paper with emphasis on NEW opportunities for EU-US collaboration in 5G
- Opportunity report with analysis/recommendation of topics for joint EU-US research
- Analysis of economic innovation impact of (joint) research

Technology Expert Group “Big Data”



BIG
DATA

Chair: Dr Nikos Sarris – Athens Technology Centre

Objective:

- Charting a high level status of the Big Data (BD) sector in Europe, the US and worldwide;
- Charting of the greatest opportunities for collaboration between EU and US;
- Outlining a list of the most competitive achievements, challenges and opportunities
- Identify joint US/EU research topics

Possible areas for the Strategic Roadmap:

- Software Engineering for Big Data and Big Data for Software Engineering
- Infrastructure – Current situation and critical needs to go forward
- Application areas that present the greatest challenges and opportunities
- Big Data from and for Internet of Things
- Research greatest achievements and current promising areas

Expected Results:

- Opportunity report with analysis/recommendation for joint EU-US collaboration
- Connecting research/practitioner networks and sharing success and failure stories

Proposal for strategic initiatives

Technology Expert Group “Internet of Things/ Cyber-Physical Systems”

IoT/CPS

Chair: Dr Sebastian Engell, Professor, TU Dortmund, Germany

Co-chair: Dr Tariq Samad, Technological Leadership Institute, University of Minnesota

Objective:

- Analyzing relevant technology strengths and gaps in the EU and in the US;
- Proposing areas for future EU-US collaborations in the intersection of IoT and CPS;
- Identifying the key societal challenges where IoT/CPS offers large improvement potential

Technological Scope:

- Cyber-physical systems of systems (CPSoS) (e.g. electrical grid, railway systems, the public transport system of a city, smart buildings, and production processes)
- Handling of the huge amounts of real-time data produced by IoT-connected sensors;
- Transforming the data into useful knowledge/actions for improved performance and safety.

Expected Results:

- Identifying the key societal challenges and technologies offering a large improvement potential
- Opportunity report with analysis and topic recommendation for joint research EU-US
- Proposals for strategic EU-US initiatives

Horizontal Expert Group “ICT Policy”

POLICY

Chair: Maarten Botterman – GNKS

Objective:

- Identify ICT-related policy gaps in relation to the PICASSO domains
- Bring forward relevant policy recommendations likely to improve EU/US ICT collaboration

Scope:

- Agreed policy topics : (1) Privacy and Data Protection, (2) Security, (3) Standards
- Two other topics yet to be determined

Expected Results:

- Five thematic policy briefs that touch upon EU-US collaboration in 5G, big data, IoT/CPS
- Five related webinars
- White paper with recommendations for specific EU-US policy initiatives related to the PICASSO domains

What's in it for you? PICASSO Benefits and Opportunities

Landscape analyses and Reports

- **Analysis** of ICT landscape and industrial drivers, societal needs, policy gaps in EU and US
- **Opportunity report** “Towards Enhanced EU-US ICT Pre-competitive Collaboration
- **Recommendations** on policy dialogue needs, priorities and strategic activities
- **Recommendations** for future topics to funding agencies for EU-US collaboration
- **5 policy briefs** and **1 White paper** summarizing recommendations to policy makers.

Tools and Services

- **ICT Toolkit**, a mobile app providing a smart quick access to ICT activities in EU and US
- **Helpdesk** service, to support access to EU-US ICT-related programmes
- **4+ webinars** on funding opportunities, and **5 webinars** on the identified policy gaps

Public Relations and events

- International conferences on ICT research, innovation and policy
 - Next event: in Minneapolis, US: May 31-June 1, 2017 **SAVE THE DATE!**
- Expert group meetings (three in total per group) and related public events

INCREASED COLLABORATION!
ROOM FOR SUGGESTIONS!



Timeline: examples

- Panorama of ICT landscape : June 2016
- Access opportunities to EU/US programmes: July 2016
- Analysis of industrial drivers and societal needs: October 2016
- Opportunity report on EU-US collaboration: March 2017
- EU-US research, innovation and policy conference in Minneapolis: May 2017
- ...

Contacts

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in PICASSO – EU/US ICT research, innovation
and policy collaboration

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