H2020-EUJ-2018:
EU-Japan Joint Call

EUJ-01-2018: Advanced technologies (Security/Cloud/IoT/BigData) for a hyper-connected society in the context of Smart City

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European Commission

DG CONNECT

Cloud and Software

4th Coordinated Call with Japan

1st: FP7 ICT Call 9

April 2013 – March 2016

ClouT, (Cloud of Things for empowering the citizen clout in smart cities) is leveraging Cloud Computing as an enabler to bridge the Internet of Things with Internet of People via Internet of Services. ClouT develops an efficient communication and collaboration platform exploiting all information sources to make the cities smarter

http://clout-project.eu/

➢ *It is a success story of strong collaboration between Europe and Japan addressing tomorrow's urban challenges of efficient usage of world resources. ClouT has developed a smart city platform that benefits from the latest advances in IoT and Cloud Computing domains.*

➢ *ClouT project received one of H2020 12 "Stars of Europe" award (Dec 2016)*

➢ *http://cache.media.enseignementsup-recherche.gouv.fr/file/Forum_et_etoiles_2014/89/5/Livret_Etoiles_de_l_Europe_2016_677895.pdf*

2

4th Coordinated Call with Japan

2nd: H2020-EUJ-Call 1

October 2014– September 2017

iKaaS – (intelligent Knowledge-as-a-Service), develops an intelligent, privacy preserving and secure Smart City Platform based on a Big Data resource and an analytics engine built atop heterogeneous cloud platforms with data collected from Internet of Things (IoT) deployments.

FESTIVAL project's vision is to provide IoT experimentation platforms providing interaction facility with physical environments and end-users, where experimenters can validate their Smart ICT service developments in various domains such as smart city, smart building, smart public services, smart shopping, participatory sensing, etc.

3

4th Coordinated Call with Japan

3rd: H2020-EUJ-Call 2

July 2016– June 2019

BigClouT – **(Big data meeting Cloud and IoT for empowering the citizen clout in smart cities). The main outcome will be an integrated smart city platform, which will be deployed and validated in 4 pilot cities within the project, Grenoble, Bristol, Tsukuba and Fujisawa, targeting applications in several domains such as : Business tourism, Tokyo Olympics 2020 tourism, Smart transportation, and Smart energy management.**

CPaaS.io - The main goal is to develop a City Platform as a Service (CPaaS) that can be federated to support regional or even global applications, and to form the basis for a smart city data infrastructure. CPaaS.io platform combines the capabilities of the Internet of Things (IoT), big data analytics and cloud service provisioning with Open Government Data and Linked Data approaches.

4

http://bigclout.eu/

https://cpaas.bfh.ch/

What drives a Coordinated call

➢ Alignment of common interests (research and policy) between EU and Japan

➢ Specific topics for the collaboration are identified through consultations with industrial and academic stakeholders in both sides and followed by agreement at strategic level with the EC and the funding agencies of the relevant country

➢ Common agreement on the call text and budget allocation → equal amount of funding from both sides

➢ End Results should aim at **co-developing technologies taking into account interoperability issues and contribute to future standardisation** (as reflected in the Impact criteria)

Link to EU Policies

- Cloud Computing
  https://ec.europa.eu/digital-agenda/en/telecoms-and-internet/cloud-computing
  https://ec.europa.eu/digital-single-market/en/european-cloud-computing-strategy
  https://ec.europa.eu/digital-single-market/en/free-flow-non-personal-data

- IoT
  https://ec.europa.eu/digital-single-market/en/policies/internet-things
  https://ec.europa.eu/digital-single-market/en/alliance-internet-things-innovation-aioti

- Big Data
  https://ec.europa.eu/digital-single-market/en/policies/big-data
  https://ec.europa.eu/digital-single-market/en/policies/building-european-data-economy

- Security
  https://ec.europa.eu/digital-single-market/en/policies/cybersecurity

The Challenge

➢ Following the integration and federation of IoT with Big Data and Cloud, which has been explored in past coordinated calls, a remaining challenge to address is **enhanced security and privacy and how the human user deals with the ever-increasing amount of sensors, smart objects and data**. Both EU and Japan have excellent competences in the fields of cybersecurity systems and visualisation technologies. Especially, security aspects are of increasing importance in these years. **There is a need for simple, efficient and trustable systems based on advanced technologies combining Security, Cloud and IoT/Big Data technologies that can provide intelligent detection and countermeasures for device malware attacks, automatic vulnerability discovery and patching, analytics and IoT/Big Data applications.** All of these require **advanced cloud and edge computing technologies and interoperable IoT devices and platforms.**

➢ These new requirements, including security aspects, will have an enormous impact on the **underlying cloud/IoT platforms and associated services,** especially for cross-border demonstrations of technologies and applications.

➢ Furthermore, **interoperability of IoT devices/platforms** is of particular interest in the context of Smart Cities (the areas of energy, social infrastructure, traffic/transport, healthcare, and disaster/crime prevention) in order to promote collaboration between a variety of business operators and platforms connecting to various IoT devices, open source, standards, SDKs, common APIs, are the cornerstone of the EU-Japan collaboration.

7

**Advanced technologies
(Security/Cloud/IoT/BigData)
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in the context of Smart City**

EUJ-01-2018

European
Commission

Scope (1): Advanced technologies combining Security, IoT, Cloud and Big data for a hyper-connected society
1 project to be funded by EU+NICT

➢ **research, develop and test advanced technologies <u>combining Security, IoT, Cloud and Big data</u>**

➢ The following technologies are expected for research and development:

- **agility against emerging threats;**
- **automatic vulnerability discovery and patching;**
- **open-sourcing of security tools;**
- **IoT security;**
- **cloud security;**
- **data security;**
- **privacy protection;**
- **data anonymization;**
- **blockchain in the context of IoT/Cloud;**
- **critical information infrastructure protection,**
- **cross border application demonstrations;**
- **etc.**

8

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Scope (2): Interoperable technologies of IoT devices/platforms in the context of Smart Cities

1 project to be funded by EU+MIC

> **research, develop and test interoperable technologies of IoT devices/platforms in the context of Smart Cities**

> The following technologies are expected for research and development:
>   - **edge/fog/cloud computing; low power; scalability; open-standards-based platforms; system and reference architectures; open application programming interfaces (API); data sharing among cross-market/cultural platforms; managing distributed data among different communities and regions; bridging different standardizations; technical verification; cross border application demonstrations; energy management; transportation systems; maintenance systems for life infrastructure; etc;**

> A further objective is to contribute to standardization activities under the cooperation of EU-JP research institutes and IoT-related consortia (e.g. the Alliance for IoT Innovation (AIOTI) -EU and IoT Acceleration Consortium - Japan), and promote a global expansion of research results in Smart Cities.

9

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Expected Impact

> **Credible demonstrations based on cross-border business and/or societal applications of robust interoperable technologies identifying policy/legal obstacles (i.e., free flow of data, data protection, data portability etc.).**

> **Concrete implementations of interoperable solutions that integrate IoT, Cloud and Big Data including security that are candidates for standardisation.**

> **Facilitation of the development of cloud-enabled, secure and trustworthy IoT/big data applications (i.e., integrating intelligent security systems and visualisation technologies and devices/interfaces).**

> **Promotion of the use of data related to Smart Cities and the creation of new increasingly efficient services in urban and regional administrative management.**

> **Joint contributions to standardization activities under the cooperation of EU-Japan research institutes and IoT-related consortia (e.g. AIOTI and IoT Acceleration Consortium).**

European Commission

Type of Action & Budget

Type of Action: Research and Innovation Action (RIA)

> **2 projects will be funded – one in each scope**

Total EU budget for EUJ-01: **3 MEUR**

✓ The Commission considers that proposals requesting a contribution from the EU up to EUR 1.5 million would allow this specific challenge to be addressed appropriately by one project of EUR 1.5 million in each of the suggested areas (SCOPE 1, 2). Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

11

European Commission

Formalities and schedule

H2020-EUJ-01-2018: Opening date: 31 October 2017
Deadline: 31 January 2018 @17h00 (Brussels time)

Additional admissibility criterion

➢ Participants in the EU collaborative projects are required to conclude **a coordination agreement** with the participants in the coordinated project of the scope 1) funded by NICT (National Institute of Information and Communications Technology) or the scope 2) funded by MIC (Ministry of Internal Affairs and Communications). **A final draft of this agreement has to be provided with the proposal.**

Additional eligibility criteria:

➢ Proposals submitted to this call which **do not include coordination** with a Japanese proposal submitted to MIC or NICT for evaluation will be considered **ineligible**.

➢ The proposed project duration shall not exceed **36** months.

➢ The Japanese authorities can consider non-eligible proposals with participation of partners from third countries (countries other than Japan, EU and Associated states). Consultation to MIC or NICT representatives is highly advisable before submitting proposals involving third country organisations.

➢ Proposals will only be selected on the condition that their corresponding coordinated Japanese project will be funded by MIC or NICT.

12

European Commission

Coordinated Call Conditions(*)

Submission and evaluation follow the principles of Horizon 2020 calls with certain specific conditions:

- **Common PartB (DoA)**
  - PMs for each partner (EU+JP)/per task is required

- **EU and JP proposals submitted to the respective coordinated calls**
  - European consortium signs contract with the EC
  - Japanese consortium signs contract with the Japanese funding agency NICT or MIC

- **Each proposal should include a coordination agreement**
  - Signed before starting the project
  - Does not replace the Consortium Agreement (which is still required from all EU projects)

- **EU-JP research plan: balanced effort, genuine cooperation**

- **Duration: 3 years max.**

- **Max. funding (EU): 1.5M€ per RIA project**

13

(*) read carefully pages 110-113 of WP2018-20 (pre-publication)

NOTE to Proposers!!!!!!

The aim is <u>NOT</u> in the <u>development of applications using existing</u> cloud+IoT+bigdata+security technologies

Scope 1:
- ✓ The aim is to **research, develop and test advanced technologies <u>combining Security, IoT, Cloud and Big data</u>**

Scope 2:
- ✓ The aim is to **research, develop and test interoperable technologies of IoT devices/platforms in the context of Smart Cities**.

Points to check in the RIA proposals:
- ➢ Does the proposal develop **advanced** technologies (i.e., architectures, middleware and services) **<u>combining</u> Security, Clouds, IoT and Big Data**? *(scope 1)*

- ➢ Does the proposal develop **interoperable technologies of IoT devices/platforms in the context of Smart Cities?** *(scope 2)*

- ➢ Does the proposal **advances the SoTA**?

- ➢ Does the proposal **demonstrate the developed technologies** through cross border application demonstrations (scope 1,2) applications in smart city contexts (scope 2)?

14

Further information

Horizon 2020

http://ec.europa.eu/programmes/horizon2020/

Participants Portal

http://ec.europa.eu/research/participants/portal/desktop/en/home.html

H2020 WP2018-20:
Call - EU-Japan Joint Call (pages 107-113)
Pre-publication
https://ec.europa.eu/programmes/horizon2020/sites/horizon2020/files/h2020-leit-ict-2018-2020_pre_publication.pdf

Digital Single Market – **Cloud Computing**

https://ec.europa.eu/digital-agenda/en/telecoms-and-internet/cloud-computing

https://ec.europa.eu/digital-single-market/en/programme-and-projects/research-and-innovation-software-services-and-cloud-computing

https://ec.europa.eu/digital-single-market/en/international-cooperation-cloud-computing

Digital Single Market – **IoT**

https://ec.europa.eu/digital-single-market/en/research-innovation-iot

Digital Single Market - **The Alliance for Internet of Things Innovation (AIOTI**)

https://ec.europa.eu/digital-single-market/en/alliance-internet-things-innovation-aioti

Digital Single Market - **Building a European data economy**

https://ec.europa.eu/digital-single-market/en/policies/building-european-data-economy

https://ec.europa.eu/digital-single-market/en/programme-and-projects/project-factsheets-data

Digital Single Market - **Cybersecurity**

https://ec.europa.eu/digital-single-market/en/policies/cybersecurity

Contact point

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