



## PRESS RELEASE

### EU AND JAPAN EXPAND COLLABORATION TARGETING NEW-GENERATION SMART CITIES

*BigClouT Program Will Add Big-data Analytics, Edge Computing and Self-aware Equipment For New Tools and Applications in Four European and Japanese Cities*

GRENOBLE, France – July 26, 2016 – Following validation of its innovative smart-city tools that combine Internet of Things and cloud-computing technologies, the EU-Japan ClouT consortium will expand its goals and add cities and partners in the new BigClouT program. The expanded program will focus on distributed intelligence with edge-computing principles, big-data analytics capability and self-aware property.

ClouT's European participation was coordinated by Leti, an institute of CEA Tech. The original project was the first collaboration jointly funded by the European Commission and NICT of Japan involving European and Japanese cities, companies and research institutes. It began in 2013 to develop infrastructure, services, tools and applications for cities to create, deploy and manage user-centric applications that capitalize on the latest advances in IoT and cloud computing. Its achievements include a virtualization framework that provides a uniform way of representing various city data sources, such as IoT devices, legacy devices, social networks, mobile applications and the World Wide Web.

"Our EU-Japanese collaboration built a platform that provides secure access to real-time and historical data with easy-to-use tools that enable municipalities, citizens, service developers and application integrators to rapidly create, deploy and manage smart-city applications," said Levent Gürgen, the coordinator of the ClouT EU consortium. "And our applications, ranging from environmental monitoring, context-aware coupons, citizen safety and elderly care social networks, were validated via field trials in the four ClouT cities: Santander, Spain; Genova, Italy; and Fujisawa and Mitaka, Japan."

Leti has built an IoT platform, sensiNact, that provides access via generic application programming interfaces to thousands of heterogeneous physical and virtual devices deployed in the ClouT cities, which use different protocols. With a basic PC-based configuration, the sensiNact platform can easily handle more than 10 protocols and simultaneous connections to more than 10,000 devices. sensiNact is part of the European open platforms initiative ([open-platforms.eu](http://open-platforms.eu)) and will soon be released as open source.

ClouT, which stands for "cloud of things", has produced several other reusable software components from the IoT and cloud domains that are available as open source for the community.

Taking the ClouT results as the baseline, the BigClouT follow-up project will add big-data aspects such as distributed intelligence and real-time data mining. The core of the ClouT consortium remains the same in the new project: (CEA, Engineering, NTT East, Keio University, NII, NTT R&D). BigClouT has invited new partners, in particular from the big data domain, (Lancaster University, National Technical University of Athens, Tsukuba University and YRP-IoT). In addition, the project has welcomed three new cities: Grenoble and Tsukuba, Japan, (which are twin cities), as well as the Bristol city, U.K., via its joint venture with the Bristol University, Bristol is Open Ltd. Fujisawa will also remain as a pilot city.

#### ClouT 2016 Field Trials final results

*Final field trials are fully implemented within the ClouT Reference Architecture. The applications aim at enabling end users (citizens, municipality technicians, tourists, policy makers, etc.) to naturally interact*

with the city, its services and other end users, while demonstrating ClouT platform robustness and advantages from Cloud + IoT benefits. See attached PPT with images.

#### **FUJISAWA, Japan - “Sensorized garbage cars”**

This application aims to collect atmospheric information via a mobile sensor system installed on garbage collection cars in Fujisawa. Fujisawa can monitor “on the fly” the location and operational status of each garbage collection car through the Control Center application. New functionalities have been implemented for dynamically changing sensing parameters, e.g. the sampling rate of some specific air pollution sensor data according to city needs.

**Contact:** [fujisawa-ft@lab.ntt.co.jp](mailto:fujisawa-ft@lab.ntt.co.jp)

**More information:** [clout-project.eu/...sensorized-garbage-cars](http://clout-project.eu/...sensorized-garbage-cars)

#### **SANTANDER, Spain - “Smiley Coupon” replication**

After the successful trial of the Smiley Coupon in Fujisawa, ClouT replicated it in Santander. The application provides customized coupons for citizens and tourists, according to their degree of smile: “your smile has a reward”. Commercial establishments (30 shops, 10 restaurants and bars, etc.) participated with a wide range of 41 special offers to be exchanged by Smiley Coupon users.

**Contact:** [ssotero@ayto-santander.es](mailto:ssotero@ayto-santander.es)

**More information:** [clout-project.eu/.../smiley-coupon](http://clout-project.eu/.../smiley-coupon)

#### **MITAKA, Japan – “Sanpoki”**

The Sanpoki application, with the Stamp Rally Event, “The Mitaka Solar System Walk”, is focused on health improvement, local community activation and city attractiveness. Half of the 527 participants were 30-40 years old, showing how younger citizens can find attractive things about Mitaka by walking through the city. Thanks to this success, Sanpoki will be potentially replicated in Kasama.

**Contact:** [mitaka2014@lab.ntt.co.jp](mailto:mitaka2014@lab.ntt.co.jp)

**More information (Japanese):** [www.ntt-east.co.jp/release/detail/20160212\\_01\\_01.html](http://www.ntt-east.co.jp/release/detail/20160212_01_01.html)

#### **GENOVA, Italy - “I don’t risk”**

This application aims to inform citizens about good practices and general information about environmental risks and emergency situations by using environmental data from weather sensors, hydrometers, webcams, etc. “I don’t risk” is one of the most popular mobile applications of Genova.

**Contact:** [clout@comune.genova.it](mailto:clout@comune.genova.it)

**More information:** [clout-project.eu/...i-dont-risk-field-trial](http://clout-project.eu/...i-dont-risk-field-trial)

#### **INTERCONTINENTAL field trial**

This intercontinental field trial gathers information from the different applications developed in the first two years. It is a friendly competition comparing similar data gathered from each city. Specific indexes related to environment, transport or quality of life have been defined and included in a city dashboard available for public display and smartphones.

**Contact:** [takuro@ht.sfc.keio.ac.jp](mailto:takuro@ht.sfc.keio.ac.jp)

**More information:** [clout-project.eu/.../CnC\\_dashboard/](http://clout-project.eu/.../CnC_dashboard/)

#### **About Leti (France)**

*As one of three advanced-research institutes within the CEA Technological Research Division, Leti serves as a bridge between basic research and production of micro- and nanotechnologies that improve the lives of people around the world. It is committed to creating innovation and transferring it to industry. Backed by its portfolio of 2,800 patents, Leti partners with large industrials, SMEs and startups to tailor advanced solutions that strengthen their competitive positions. It has launched 59 startups. Its 8,500m<sup>2</sup> of new-generation cleanroom space feature 200mm and 300mm wafer processing of micro and nano solutions for applications ranging from space to smart devices. With a staff of more than 1,900, Leti is based in Grenoble, France, and has offices in Silicon Valley, Calif., and Tokyo. Follow us on [www.leti.fr](http://www.leti.fr) and @CEA\_Leti.*

#### **Press contact**

Agency

+33 6 74 93 23 47

[sldampoux@mahoneylyle.com](mailto:sldampoux@mahoneylyle.com)