



JOIN A VIBRANT IoT ECOSYSTEM

BASED ON INNOVATIVE PLATFORM TECHNOLOGIES



European
Platforms
Initiative

DEAR READER,

The IoT-European Platforms Initiative (IoT-EPI) was formed to build a vibrant and sustainable IoT-ecosystem in Europe, maximising the opportunities for platform development, interoperability and information sharing. It is also a European Initiative addressing the EU-funded H2020 programs about IoT platform development. At the core of the program are seven research and innovation projects: Inter-IoT, BIG IoT, AGILE, SymbloTe, TagItSmart!, Vicinity and bloTope.

With a total funding of EUR 50 million and a partner network of 120 established organization, these projects develop innovative IoT platform technologies. Furthermore, they also foster technology adoption through community and business building activities. All projects run within the time-frame of 2016–2018 – with some extending until 2019.

The open calls are a great way to get involved with these projects. In 11 open calls, more than 100 IoT-projects will get tech support and funding in the amount of EUR 30,000 to EUR 150,000 each.

In the following pages, we invite you to learn more about the projects behind IoT-EPI, their technologies, partner network and open calls.

Happy reading!

Kind regards,
Your IoT-EPI Team

01 PROJECTS

ADOPTIVE GATEWAYS FOR DIVERSE MULTIPLE ENVIRONMENTS

Agile is a modular software and hardware gateway for managing the Internet of Things. Their ecosystem of products and services supports protocol interoperability, device and data management, IoT apps execution, and external Cloud communication and features diverse pilot activities. All AGILE software modules will be 100% Open Source.

A COMPLETE ECOSYSTEM FOR MULTIPLE STAKEHOLDERS



IoT makers and developers who wish to quickly prototype solutions for managing IoT devices and data



End users with no experience in coding or setting up IoT hardware



Industry vendors seeking a modular gateway option that saves time in development and production



IoT entrepreneurs and SMEs who are building IoT solutions that need support of multiple protocols and networks

At the hardware level, AGILE provides support for various wireless and wired IoT networking technologies (e.g. KNX, ZWave, ZigBee, Bluetooth Low Energy, etc.) and allows fast prototyping of IoT solutions for various domains (e.g. home automation, environment monitoring, wearables, etc.). At the software level, different components enable features such as data collection and management on the gateway, intuitive interface for device management,

visual workflow editor for creating IoT apps with less coding, and an IoT marketplace for installing IoT apps locally.

The AGILE software can auto-configure and adapt based on the hardware configuration. Furthermore, IoT apps are recommended based on hardware setup, reducing the gateway setup and development time significantly.



CONSORTIUM PARTNERS

Atos Spain (ES), Mobistar/Orange (BE), Eclipse Foundation Europe (DE), Resin.io (UK), Jolocom (DE), Sky-Watch (DK), BioAssist (DE), Startupbootcamp Spain (ES), Eurotech (IT), Libelium (ES), IoTango (USA), University of Passau (DE), Graz University of Technology (AT), INRIA (FR), iMinds (BE)



FUNDING

EUR 6.8 million

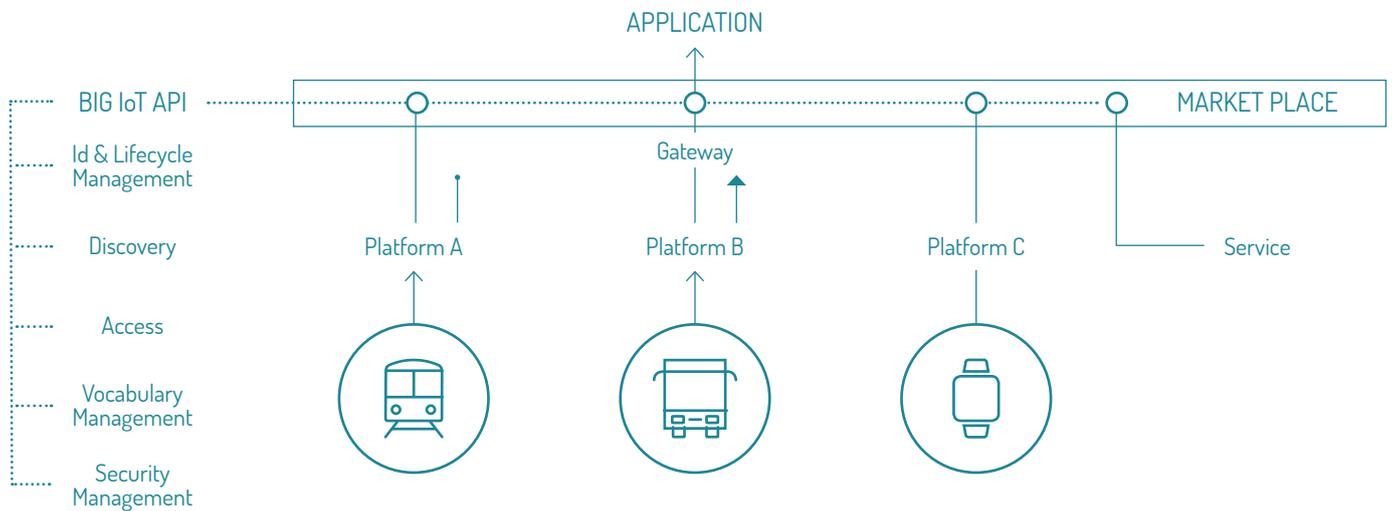


RUNNING PERIOD

2016–2018

BRIDGING THE INTEROPERABILITY GAP OF THE INTERNET OF THINGS

BIG IoT offers ONE place to monetize and search for data coming from different platforms – the BIG IoT Marketplace. ONE way to access them – by using open source BIG IoT API and a lightweight tool to compose different data and services.



BIG IoT provides an open IoT API that acts as a generic interface to cross-domain IoT platforms and services. It supports a broad range of important functionalities that enable simple description and registration of IoT resources at the BIG IoT marketplace.

Thus, resources can be easily found by other parties who are interested in using and paying for them. The marketplace, with its tool for composing various IoT resources, plays a central role in creating an ecosystem of different IoT players.

CONSORTIUM PARTNERS

Siemens AG (DE), Bosch Software Innovations GmbH (DE), Atos IT Solutions & Services GmbH (AT), Seat (ES), Aalborg University (DK), Clausthal University of Technology (DE), CSI Piemonte (IT), Econais AE (GR), National University of Ireland Galway (IE), Polytechnic University of Catalonia (ES), Wolfsburg AG (DE), VMZ Berlin BmbH (DE)

FUNDING

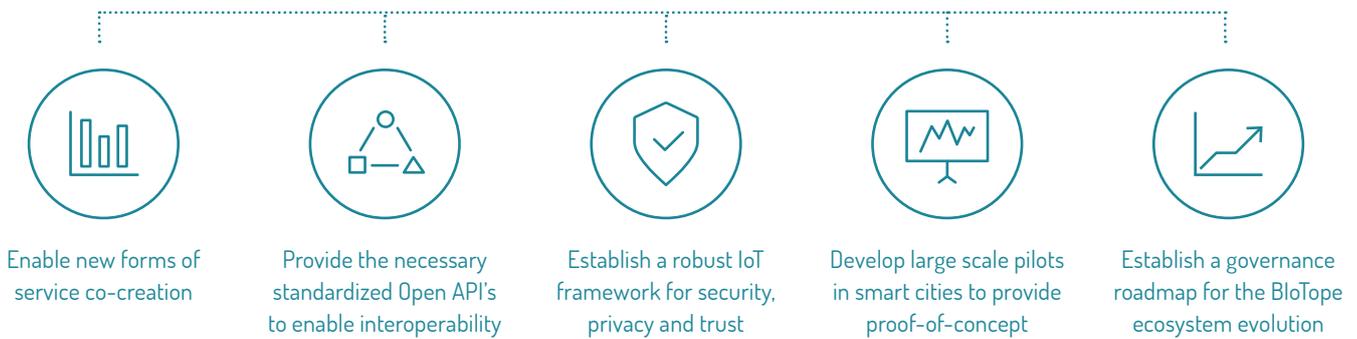
EUR 8 million

RUNNING PERIOD

2016–2018

bloTope enables transparent and standards-based horizontal integration of IoT silos. Together with user friendly productivity tools, scalable services and an open marketplace of IoT data, services and APIs, anyone can bring their IoT platform and connect to the bloTope ecosystem.

KEY OBJECTIVES OF THE BIOTOPE PROJECT



The bloTope platform enables IoT product and service providers to quickly develop and deploy IoT solutions using diverse information sources. The “Everything as a service” design allows companies to rapidly develop new IoT systems with minimal investment. New forms of service can be co-created ranging from simple data collection and processing,

to intelligent, situation aware and self-adaptive support for our daily lives. Full advantage is taken of recent IoT standards, notably the O-MI (Open Messaging Interface) and O-DF (Open Data Format) standards. The O-MI and O-DF technologies act as a glue that bind bloTope components & platforms together.

CONSORTIUM PARTNERS

BMW Group (DE), OpenDataSoft (FR), The Open Group (UK), Cityzen Data (FR), ControlThings (FI), CSIRO (AU), eccenca GmbH (DE), Enervent Oy (FI), Holonix (FI), IS-practice (BE),itrust consulting (LU), Bremer Institut für Produktion und Logistik GmbH (DE), Aalto University (FI), Ecole polytechnique fédérale de Lausanne (CH), University of Luxembourg (LU), Fraunhofer IAIS (DE), Brussels Region (IRISNET, CIRB, AED) (BE), Grand Lyon la Métropole (FR), Forum Virium Helsinki (FI), ITMO University (RU)

FUNDING

EUR 9.1 million

RUNNING PERIOD

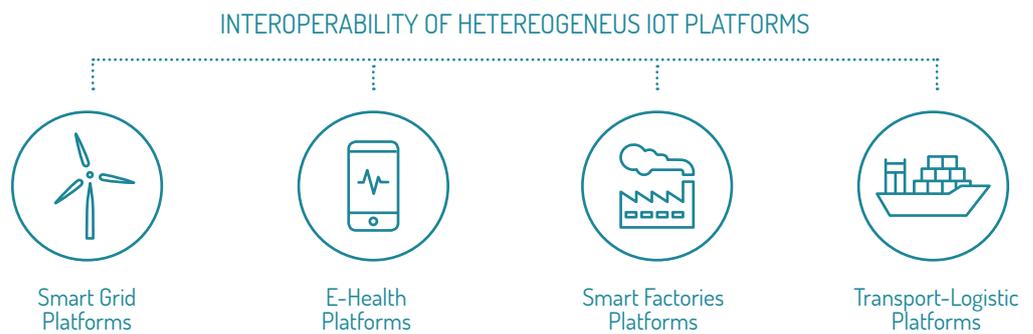
2016–2018

INTERIoT



INTEROPERABILITY OF HETEROGENEOUS IOT PLATFORMS

INTER-IoT is an interoperable open IoT framework, with associated engineering tools and methodology, for seamless integration of cross-domain IoT platforms. One key contribution of INTER-IoT is virtualizing the functions of the gateway, which allows for a better integration with cloud environments and support for IoT from operators.



INTER-IoT's framework (INTER-FW) will address interoperability issues between diverse IoT platforms. By using the INTER-FW, any IoT platform can be made interoperable with respect to its fundamental layers: device, networking, middleware, applications, and semantics.

INTER-FW will facilitate creation of an ecosystem of interoperable and open IoT platforms. Thus, development time of novel IoT services and applications can be shortened, and these services can be provided atop interoperable IoT platforms.

CONSORTIUM PARTNERS

Telecom Italia SPA (IT), Rinicom Ltd (UK), Prodevelop SL (ES), Noatum Ports Valenciana Sau (ES), Neways Technologies BV (NL), Alessandro Bassi Consulting SARL (FR), Polytechnic University of Valencia (ES), University of Calabria (IT), Eindhoven University of Technology (NL), XLAB (SI), Systems Research Systems, Research Institute of the Polish Academy of Sciences (PL), La Fundación de la Comunidad Valenciana para la Investigación, Promoción y Estudios Comerciales de Valenciaport (ES), Association pour le développement de la formation professionnelle dans le transport (FR)

FUNDING

EUR 7.3 million

RUNNING PERIOD

2016–2018

SYMBIOSIS OF SMART OBJECTS ACROSS IOT ENVIRONMENTS

symbloTe is building a middleware enabling IoT platforms to interoperate. Through this middleware, IoT platforms can expose their resources and make them discoverable to other platforms or 3rd party applications. Further, the middleware allows devices to roam across smart environments and application developers to build cross-domain apps.



..... ARE YOU AN END-USER?



Use the symbloTe-powered applications to have a unique point of interaction with the surrounding cross-domain smart environments.



..... ARE YOU A MOBILE APP DEVELOPER?



Connect to the symbloTe ecosystem and create your innovative, cross-domain applications by accessing a variety of IoT platforms and smart devices.



..... ARE YOU A PLATFORM PROVIDER?



Extend your platform to become symbloTe-enabled, join the Open Source community and enjoy the benefits of a collaborative IoT ecosystem.

symbloTe is built around the concept of virtual IoT environments provisioned over various cloud-based IoT platforms. Virtual IoT environments are an abstraction composed of virtual representations of actual sensors and actuators being exposed by their host platforms to third parties.

symbloTe provides the means to create and manage virtual IoT environments across diverse IoT platforms. The accompanying High-level APIs –enablers– leverage such virtual environments to offer specialized services (e.g., localization in indoor spaces or unified access to environmental data gathered from various sources etc.) Further, a secure interworking protocol between the platforms rounds up their offering.



CONSORTIUM PARTNERS

Intracom SA Telecom Solutions (GR), Nextworks (IT), Consorzio Nazionale Atos Spain SA (ES), Unidata S.P.A (IT), Sensing & Control Systems S.L. (ES), VIPNET (HR), NA.VI.GO. Societa Consortile a Responsabilita Limitata (IT), University of Zagreb, Faculty of Electrical Engineering and Computing (HR), biwhere (PT), Austrian Institute of Technology (AT), Interuniversitario per le Telecomunicazioni (IT), Universitat Wien (AT), Fraunhofer-Gesellschaft (DE), Polish Academy of Sciences, Institute of Bioorganic Chemistry (PL)



FUNDING

EUR 7.1 million



RUNNING PERIOD

2016–2018

TagItSmart!



A SMART TAGS DRIVEN SERVICE PLATFORM FOR ENABLING ECOSYSTEMS OF CONNECTED OBJECTS

IoT is about connecting billions of devices to Internet. Others are connecting hundreds and thousands of devices, they are connecting the rest. TagItSmart! prints connectivity and environment sensing onto each bottle of water, each deodorant, each tray of meat, each vaccine. They are connecting the unconnected using their printable inks and SmartTag technology and associated platform services.



TagItSmart! uses functional inks and printable electronics to create context-sensitive smart tags. The smart tags change dynamically according to the environment and exposure (e.g. temperature and oxygen exposure). The universally available smart phone can be used to capture and transmit information from these

smart tags. A service platform, that enables the management of this eco-system, completes their offering. TagItSmart! envisions turning mass market products to connected mass-market products which are still out of reach due to technological limitations and high costs.

CONSORTIUM PARTNERS

Unilever (UK & NL), Fujitsu Laboratories of Europe (UK), Siemens Srl. (RO), Resonance Design (NL), DunavNET (RS), Univerexport (RS), Lmental Sostenibilitat i Futur, S. Coop. (ES), Thin film Electronic AB (SE), Durst Phototechnik Dig. Technology GmbH (AT), Evrything Ltd. (UK), University of Surrey (UK), University of Padova (IT), VTT, UPC Consulting Ltd. (FI), Pôle des Industries du Commerce (FR)

FUNDING

EUR 6.8 million

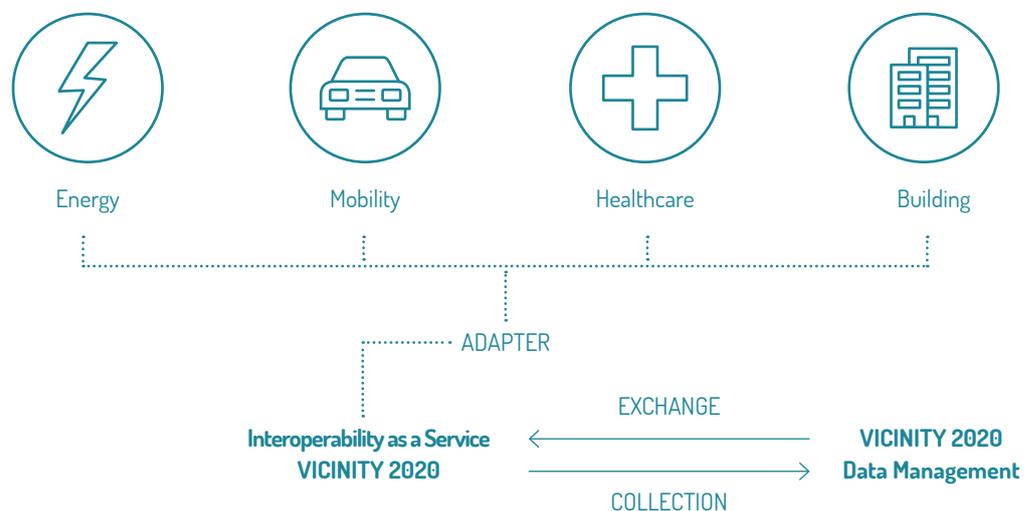
RUNNING PERIOD

2016–2018

OPEN VIRTUAL NEIGHBOURHOOD NETWORK TO CONNECT IOT INFRASTRUCTURES AND SMART OBJECTS

Vicinity provides Interoperability-as-a-service to operators of connected IoT Infrastructures and creates a platform for cross-domain value-added services. Similar to a social network for things, users would be able to share access to their smart objects without losing control.

VIRTUAL NEIGHBOURHOOD - CROSSDOMAIN INTEROPERABILITY



The lack of interoperability is considered as the most important barrier to achieve the global integration of IoT ecosystems – across disciplines, vendors and standards. The current IoT landscape consists of a large set of isolated islands that do not constitute a real internet limiting its true potential. To overcome this situation, VICINITY presents a virtual neighborhood concept, which is a decentralized, bottom-up and cross-domain

approach that resembles a social network. Here, users can configure their set ups, integrate standards according to the services they want to use and fully control their desired level of privacy. VICINITY then automatically creates technical interoperability up to the semantic level. The Open VICINITY gateway API allows for the easy development of an adapter to the Platform.

CONSORTIUM PARTNERS

ATOS Spain SA (ES), Hellenic Telecommunications Organization S.A. (GR), Gnomon Informatics S.A. (GR), Tiny Mesh AS (NO), Hafenstrom AS (NO), Enercutim (PT), Gorenje Gospodinjski Aparati D.D. (SI), Bavenir S.R.O. (SK), Climate Associates Ltd (UK), Intersoft A.S. (SK), Technical University of Kaiserslautern (DE), Centre for Research and Technology Hellas (GR), Aalborg University (DK), Technical University of Madrid (ES), Municipality of Pilea-Hortiatis (GR)

FUNDING

EUR 7.5 million

RUNNING PERIOD

2016–2019

02 USE CASES

All seven project of the IoT-EPI are running pilot programs at multiple sites, in diverse domains, and across Europe. These pilots allow the projects to demonstrate and validate their respective platform based technologies. Furthermore, they lay the foundations for further business and community building around these innovations. In this section, learn more about the activities of projects in three key IoT domains: Smart Cities, eHealth and Smart Logistics.

SMART CITIES



BIG IOT

- The BIG IoT API and BIG IoT Marketplace are currently being rolled out and tested in 3 European pilot sites and applied in IoT scenarios for Smart Cities: Barcelona, Northern Germany, and the region of Piedmont.
- In Northern Germany Pilot for example, the BIG IoT technology is being tested in the cities of Berlin and Wolfsburg and the corridor connecting the two cities.
- The pilot puts focus on key topics of future-oriented mobility targeting an optimized usage of Public Transport, E-mobility, Smart Parking solutions and multimodal routing information for the cities and the corridor.
- In Wolfsburg BIG IoT is incorporating a city-wide WLAN network, live tracking of public buses, as well as public e-charging stations. Further, real time crowd management is enabled by using existing security cameras and crowd-sourced people detection through mobile apps.



BIOTOPE

- A dozen smart city pilots will be deployed in three major European cities of Brussels, Lyon and Helsinki, along with a further pilot in the city of St Petersburg, Russia.
- Two categories of pilots, domain specific and cross-domain, will be used to validate the effectiveness of the bloTope Systems-of-Systems platform for IoT.
- Domain-specific pilots – ensure industrial impact through the well-established customer networks of bloTope partners addressing electric car charging stations, self-managing buildings and equipment, smart air quality and others.
- Cross-domain smart city pilots – provide concrete proofs-of-concept of IoT system composition and interoperability scenarios in smart city environments including smart metering, shared electric vehicles, smart lighting, hyper-local weather data, smart priority lanes for bikes and many more.



SYMBIOTE

- symbloTe is implementing multiple pilots in the Smart City context to validate their interoperability platform. Among many others are the Smart Residence and the EduCampus pilots.
- In the EduCampus pilot for example, symbloTe aims to support the cooperation between universities to make the lives of students easier. For instance, visiting students would have access to identity cards or other services without going through the onboarding process all over again (e.g. exchange program scenarios). This would be achieved using symbloTe's interoperability solution enabling multiple university platforms to exchange information easily among themselves.

eHEALTH



AGILE

- There are many devices nowadays that enable self-tracking and most of them collect personal data and store them on private clouds. The pilot 'Quantified Self' is one of the many ways AGILE is changing this paradigm and, at the same time, validating its technology.
- In this use case, self-tracking data is collected and stored on the AGILE gateway. This includes data such as activity tracking, vital health signals, information for weight control, etc.
- This would then allow users to decide when, what and with whom they choose to share the data. More than 300 users will be involved in the pilot through a crowdfunding campaign. This use case will involve worldwide users.



VICINITY

- VICINITY aims to validate its cross-domain interoperability using multiple pilots. In one pilot at Pilea-Hortiatis (Greece), VICINITY will demonstrate how sensors, actuators and integrated communication devices installed at home can provide assisted living to elderly people and people with long-term needs.
- Here, the objective is to allow remote monitoring of end-users' health parameters and providing them with a 24/7 direct means to communicate.
- Furthermore, by utilizing sensors from the building and smart homes domain (such as motions sensors, occupancy trackers, pressure mats etc.), more advanced added-value services can be implemented. These include: triggering alarms when abnormal conditions are detected in the assisted living environment and notifying the contacts / relatives of elderly people.

SMART LOGISTICS



TAGITSMART!

- TagItSmart! is conducting several pilots in the Smart Logistics domain to validate its SmartTAG technology and the associated platform. Concrete pilots in this context include: Product Life-cycle Management, Condition Dependent Pricing and Brand Protection
- In the Life-cycle Management Pilot for example, a system will be developed to enable the monitoring of every Fast-Moving Consumer Good (FMCG) or Consumer Packaged Good (CPG) throughout the life-cycle of the product.
- Here, every product is marked with a SmartTAG during its production and will be associated with the TagItSmart platform to obtain all its functionalities e.g. consumer engagement, product condition monitor, item-level tracking, recycling, life-cycle management.



INTER-IOT

- Among other pilots, Inter-IoT is validating its platform technology with a pilot program on Transport & Logistics at Port Environments.
- In this use case, InterIoT will attempt to make three heterogeneous IoT platforms interoperate at the Port of Valencia, Spain.
- In particular, this will involve IoT platforms deployed at the Port Premises for daily activity management through the PCS (Port Community System), and also environmental monitoring.

03 OPEN CALLS

IoT-EPI fosters the development of IoT-platform technologies in collaboration with the developer and entrepreneur community. In 11 open calls more than 100 external IoT-teams will get tech support and funding in the amount of 30,000 EUR to EUR 150,000 each. Till December 2018, the IoT-European Platforms Initiative will invest more than EUR 5.5 million.

SUPPORT & FUNDING FOR EUROPEAN PROJECTS

11

OPEN CALLS

5.5

MILLION EURO FUNDING

28

EU COUNTRIES
OFFERING ACCESS TO
IOT-EPI NETWORK

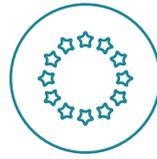
100

SMES, STASRTUPS, COMPANIES, RESEARCH CENTERS
OR UNIVERSITIES TO GET FUNDED

10+

INDUSTRIES OF INTEREST

IDEAL CANDIDATES WOULD BE: *



Located in Europe or one of the associated countries



A Legal entity when receiving funding (e.g. SME's, Startups, Companies, Research Centers or Universities)



A Single party (no consortia allowed)

*Please check in any case also the terms and conditions of the respective Open Call. Exceptions and further requirements are possible. Applications are to be made in English.

The objective of the open calls are generally to extend and enhance platform functionalities of the different projects. Furthermore, some

projects have a second open call that tend to focus on building market-ready services such as apps.

APPLICATION TIMELINE

2016

14 OCTOBER 2016

TOTAL FUNDING: 850,000 €

IoT General, Health, Logistics & more

INTER-IOT

30 NOVEMBER 2016

TOTAL FUNDING: 100,000 €

IoT Platform providers preferring Cloud-based platforms

SYMBIOTE

2017

15 FEBRUARY 2017

TOTAL FUNDING: 600,000 €

Retail, Recycling, Food, Home Services, Manufacturing, Logistics

TAGITSMART

26 APRIL 2017

TOTAL FUNDING: 300,000 €

Smart City, Mobility

BIG IOT

1 JUNE 2017

TOTAL FUNDING: 750,000 €

Energy Efficiency, Electric Cars, Mobility, Safety & more

BIOTOPE

1 SEPTEMBER 2017

TOTAL FUNDING: 600,000 €

Retail, Recycling, Food, Home Services, Manufacturing, Logistics

TAGITSMART

1 SEPTEMBER 2017

TOTAL FUNDING: 400,000 €

Home/Buildings Automation, Environment, Healthcare, Agriculture & more

AGILE

30 NOVEMBER 2017

TOTAL FUNDING: 560,000 €

Smart Retail, Transport, Agriculture, Home/Building, Automation & more

SYMBIOTE

2018

I. 1 JANUARY 2018 / II. JANUARY 2018

TOTAL FUNDING: 500,000 € / 450,000 €

I. Energy Utilities, Smart Living, Transport, Software Development / II. Smart City, Mobility

I. VICINITY / II. BIG IOT

1 FEBRUARY 2018

TOTAL FUNDING: 400,000 €

Home/Building Automation, Environment, Healthcare, Agriculture & more

AGILE

