

INTEROPERABILITY ASPECTS

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HEAD OF EMERGING TRENDS AND OPPORTUNITIES @ ISMB

IOT WEEK 2018 – BILBAO, SPAIN
PANEL "BUILDING IOT CROSS-DOMAIN AND CROSS-PLATFORM INTEROPERABILITY"

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GOEASY AT A GLANCE

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Duration: 1/12/2017 – 30/11/2020

(36 months)

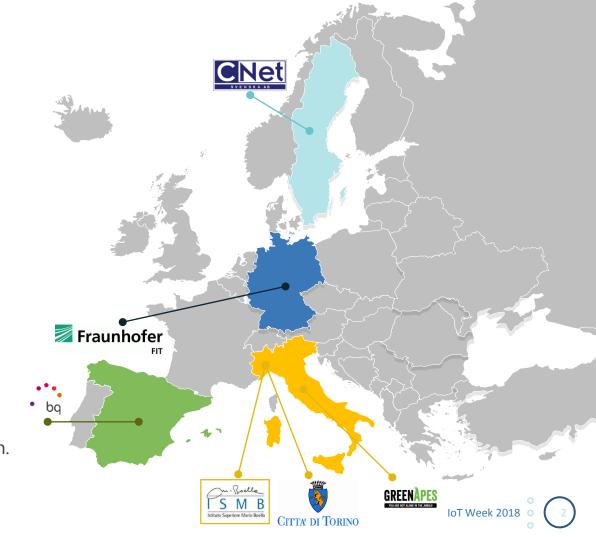
Total cost: 2,9M€

Innovation Action

Contract 776261

Topic: H2020-GALILEO-GSA-2017-1 EGNSS mass market applications

Topic Summary: Development of EGNSS solutions for IoT exploiting the interconnectivity of uniquely identifiable devices and the availability of their location.





CONTEXT

 Applications and services leveraging position information (location-based services) are in exponential growth



70% of all mobile phones worldwide will have GNSS capability by 2020 (<u>GSA's</u> <u>Market Report Issue 4</u>)









Accuracy





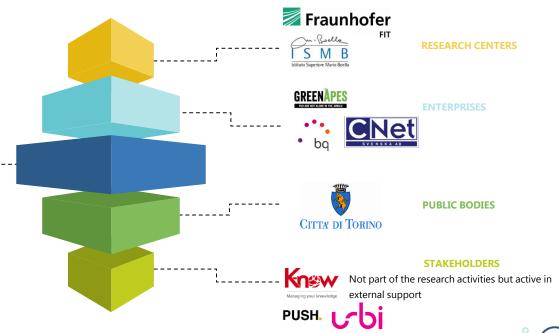
GOEASY: AIM

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GOEASY will enable a new generation of **trusted and dependable mass-market Location-Based Services (LBS)** for engaging, stimulating and rewarding citizens for more sustainable behaviors

Open eco-system

- built upon **Galileo** features (trust and availability)
- leveraging open-standards and platform enablers
- to federate with existing
 - 1. authentication and e-security services,
 - 2. IoT and SmartCity platforms and
 - 3. CAPs





GOEASY TECHNICAL OBJECTIVES



To implement and evaluate an innovative eco-system for trusted and dependable mass-market Location-Based Services (LBS) and applications, exploiting Galileo features for increased trust and improved availability



To deliver an end-to-end, adaptive framework for dependable and trusted measurement and exchange of position information built upon Galileo multiconstellation and authentication features and on existing open architectures for esecurity



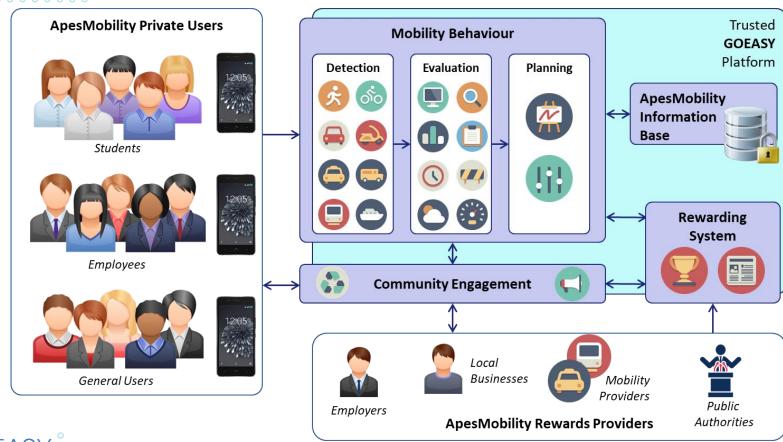
To enable rapid development of interoperable and trusted generic applications through open API (Application Programming Interface) and SDKs (Software Development Kits) for mobile LBS



To foster interoperability of Galileo-based applications with open Internet-of-Things (IoT) eco-systems through well-established open standards and enablers.

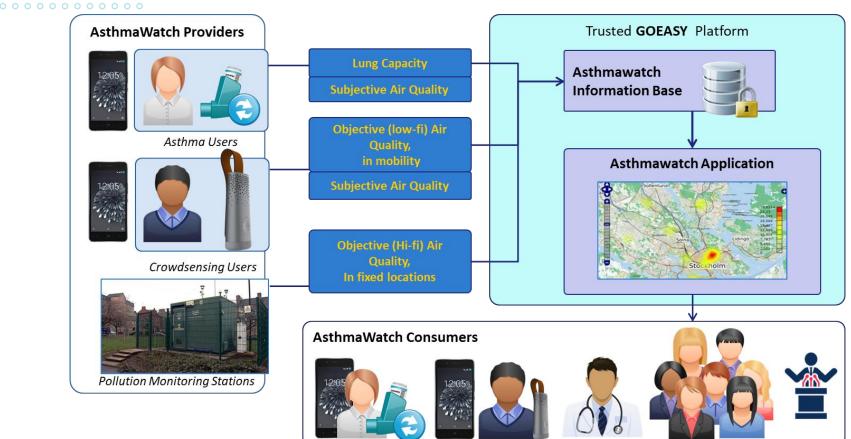


THE APESMOBILITY PILOT





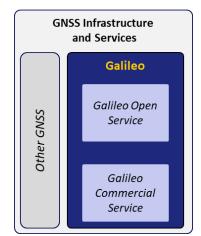
THE ASTHMAWATCH PILOT

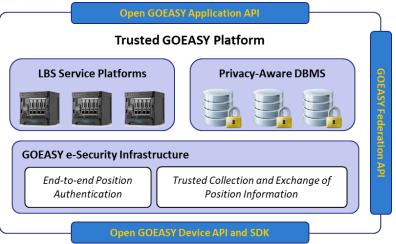


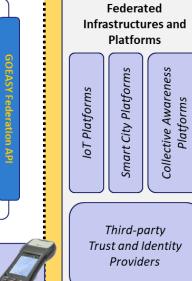


THE GOEASY ECOSYSTEM











Trusted GOEASY devices with Galileo-enabled GNSS Receivers

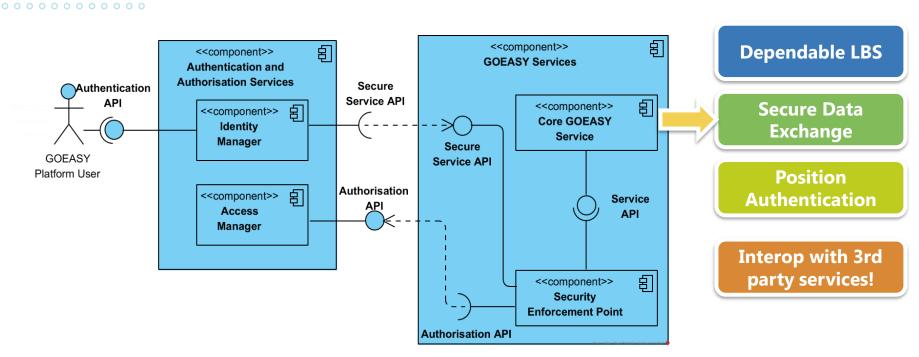




Interoperability



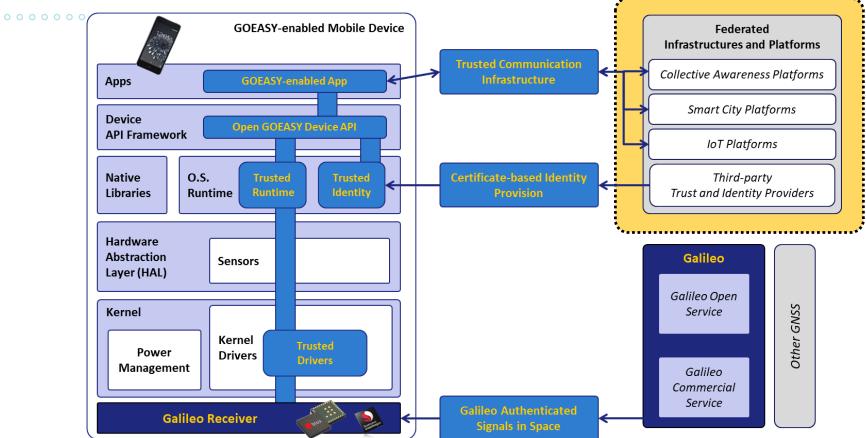
GOEASY SECURITY AND PRIVACY FRAMEWORK



The Security Framework secures components of the "trusted" GOEASY platform that need to interact with the "untrusted" area, outside the platform (i. e., CAPs, IoT platforms, 3rd party services but also mobile devices, before they become "trusted")

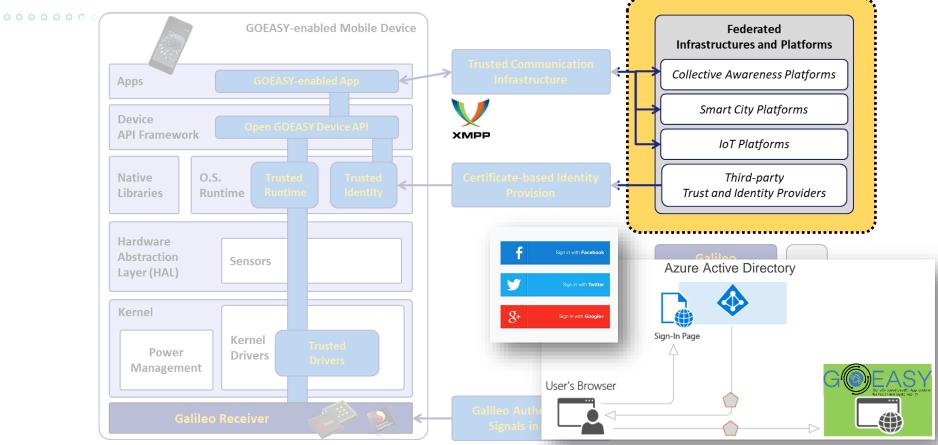


THE GOEASY END-TO-END APPROACH





THE GOEASY END-TO-END APPROACH





THE GOEASY END-TO-END APPROACH GOFASY-enabled Mobile Device **Federated** Infrastructures and Platforms (ILLIKALMANAC) Collective Awareness Platforms Smart City Platforms Waste prototype application Mobile APP A "waste monitoring" solution using fill-level The Mobile App will allow users to search for specific IoT sensors could allow to save time and money devices in the ALMANAC SCP, and view measurements by enabling a more dynamic waste collecting from said devices. The app will also act as an IoT device itself, feeding data into the SCP. The app will IoT Platforms process, while being better for the environment: fewer collections equals less continuously send location information to the platform driving, less fuel consumption while the user will have the possibility to manually upload and thus lower CO, emission levels, data in the form of pictures. Third-party Data Management Trust and Identity Providers Adaptation Virtualization Layer Layer **..... LinkSmart Developer Tools and Standards** ALMANAC LAB ***** MQT ALMANAC - 3rd party services integration Cloud-based The ALMANAC platform enables the SLATE APIs interoperability of devices through the Layer OPEN API Smart City Resources Adaptation Layer. Adaptatio Applications can access any kind of ALMANAC Smart City Water prototype application SCRAL devices, whichever proprietary protocol Storage Security and Ontology "Smart metering" will enable utilities to they may speak, over a uniform deliver new services to their end users. web-service based interface. xively including leakage detection, usage notification, consumption optimisation and true monthly usage billing. http://www.almanac-project.eu



EXTERNAL STAKEHOLDERS GROUP

- A group of external stakeholders interacts with the GOEASY consortium to be constantly updated on the technical progresses and provide suggestions depending on their expertise and their needs
- Current members:
 - PUSH
 - SATISPAY
 - REAL-T
 - K-NOW
- The ESG is open for new members: would you like to join?





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