

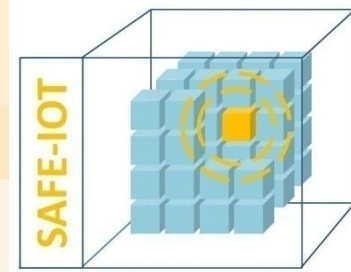


# Objective ICT-2009.1.3. INFO DAY

## Internet of Things and Enterprise Environments

Brussels, 18 February 2009

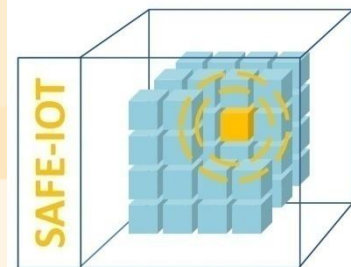
# <Rationale>



- Title: SAFE-IOT – Socially-acceptable, Affordable, Environmentally-friendly Intelligent Object Tracking - Internet of Things.
- Research domain: building blocks for the Internet of Things.
- Idea or expertise description: exploration of an object tracking paradigm alternative to RFID that gives place to a better architecture; addresses current issues hindering the IoT; and gives place to new services and applications.
- Why now?: The IoT; which Europe needs to improve competitiveness, create employment and improve lifestyle of its citizens; cannot take-off without the proper building blocks. These are incomplete.
- Interest from/for Industry: proper object tracking and authentication for better operations, cost-efficiencies, and new services and applications. Standardisation and advancement of the necessary building blocks. Customer value. Corporate responsibility.



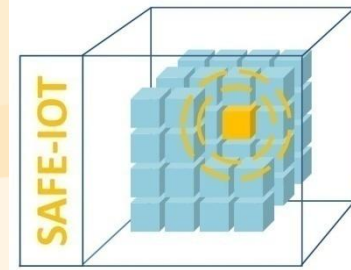
# <Objectives and scope>



- Main objectives: to undertake research and technological development for the advancement of building blocks for the IoT; from better tracking technologies; to decentralised architectures; to open standards and interoperability; to supporting data distribution systems; to novel services and applications.
- Scope of R&D work: design of architecture and standards to guarantee fair governance and competition; prototyping and testing of novel technologies; research on standardisation and interoperability; o2o and p2o interfaces; virtualisation; study of regulatory and legal frameworks; exploration of new services and applications.
- Beyond technical state of the art?: the currently proposed IoT relies heavily on RFID. This conditions the characteristics of the IoT and its other building blocks (e.g. focus on supply chain). However, RFID and its enabled IoT are affected by significant governance, privacy, security, performance, cost, pollution and reliability issues. Novel and better building blocks are required. For example, among others we propose the exploration and prototyping of silent tags.



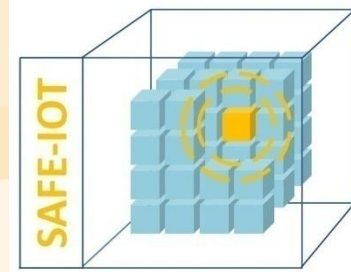
# <Consortium> (not all partners listed)



- Consortium description (if any): SAFE-IOT brings together industry (tech vendors + end-users), academia, NGOs and standard bodies. The current Consortium is composed of 15 leading European organisations and there is a waiting queue of 20+ other interested stakeholders.

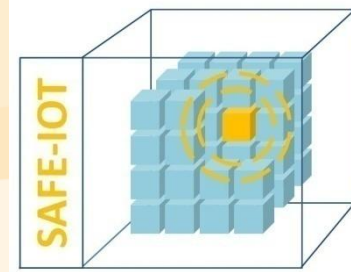


# <Expected impact>



- **Economic impacts:**
  - More competitiveness and efficiency (safety and reliability; cost-efficiencies; automation)
  - Increased supply chain security (product authenticity, quality and freshness; effective recalls; traceability of components; reduction of shrinkage)
  - Improved customer value and employment (new applications and services)
- **Social impacts:**
  - Improved lifestyle (new applications and services; improved product quality)
  - Increased safety and security (object traceability – e.g. in crime investigation; child safety at home; theft control)
  - Support for the disadvantaged (applications for people with disabilities or the elderly)
- **Environmental impacts:**
  - Saving of energy and raw material (from improved operations)
  - Reusing and recycling (products, packaging and components)
  - Reduction of electromagnetic pollution (from better tags)
  - Reduction of tag pollution (using organic, biodegradable tags)
- **Ethical aspects?:**
  - Privacy and security by design and by default
  - Opt-in system with no need for tag deactivation or “consumer education”
  - Full respect for human rights in line with the fundamental European Values





# <Requests/Contact details>

- Your expectations/specific needs to complete your proposal, if any:
  - Our Consortium is complete. However, we are open to recruit further value-adding partners, particularly end-users with real-life challenges related to the tracking, identification and authentication of common objects. Social and environmental responsibility are essential.
- Your offer to contribute to an existing proposal:
  - SAFE-IOT is an independent proposal.
- Name, organisation, email, website of the main contact person:
  - Humberto Moran
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