



Alliance for  
Internet of Things  
Innovation

European Partnerships Collaborative Event • 17<sup>th</sup> April 2019, Amsterdam

# AIOTI Research and Innovation Priorities

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# Founding members

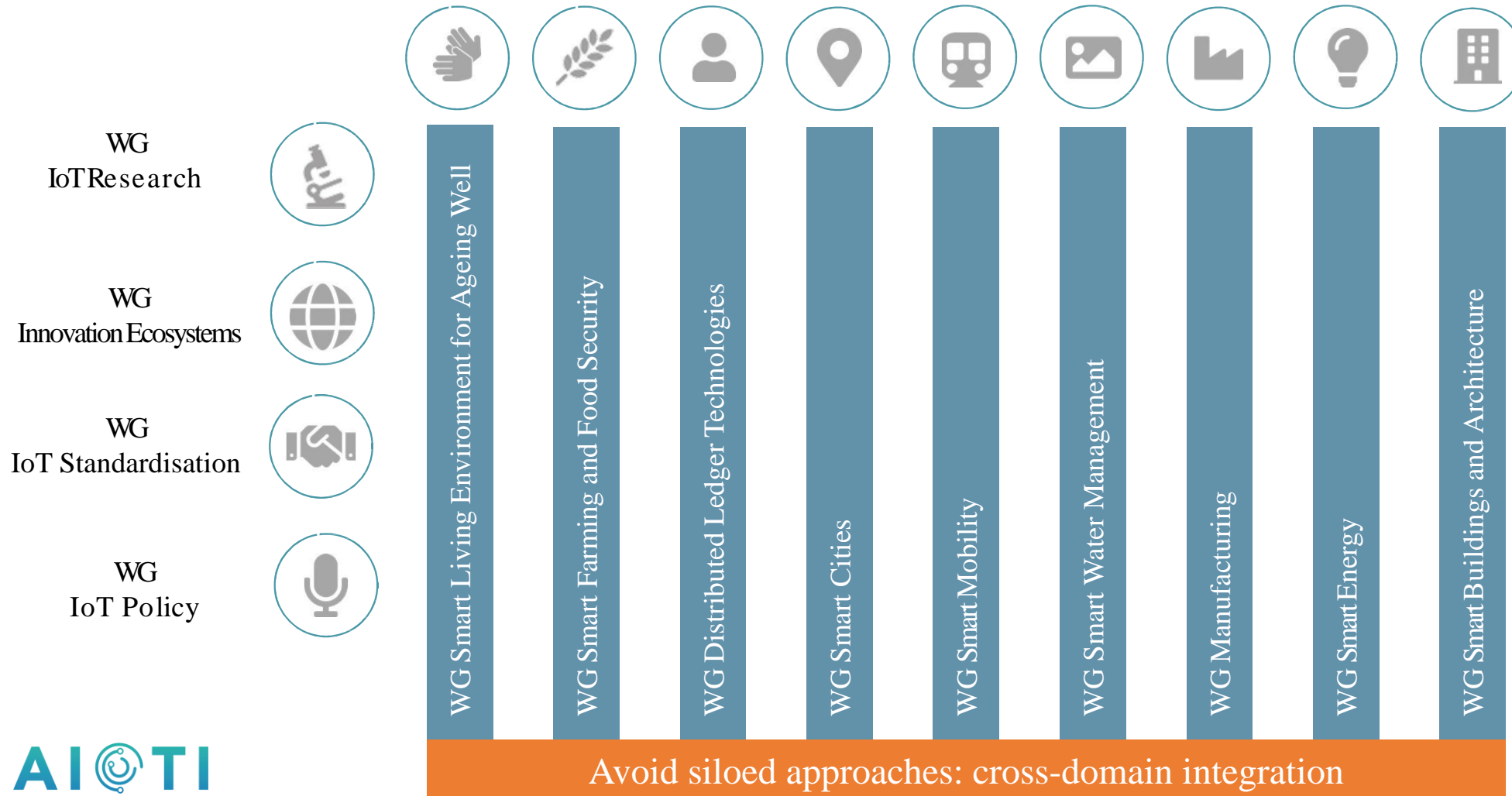


Large variety of membership:

Large companies, SMEs, start-ups, academia/RTOs, and also associations



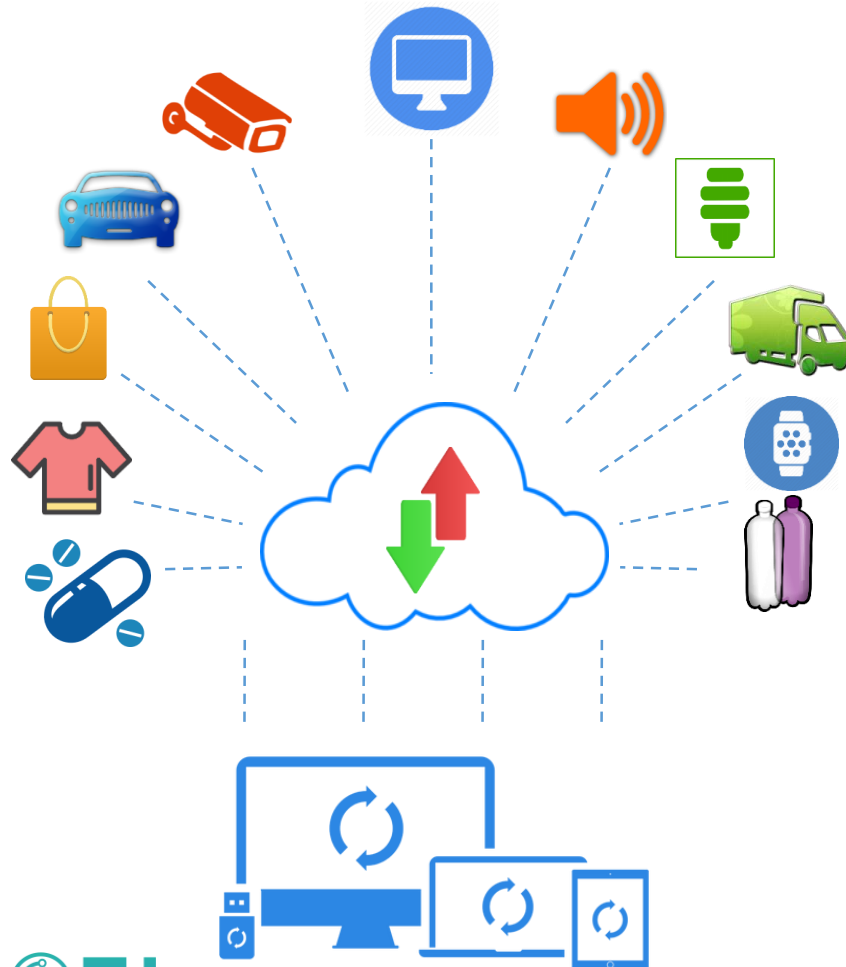
# AIOTI Structure





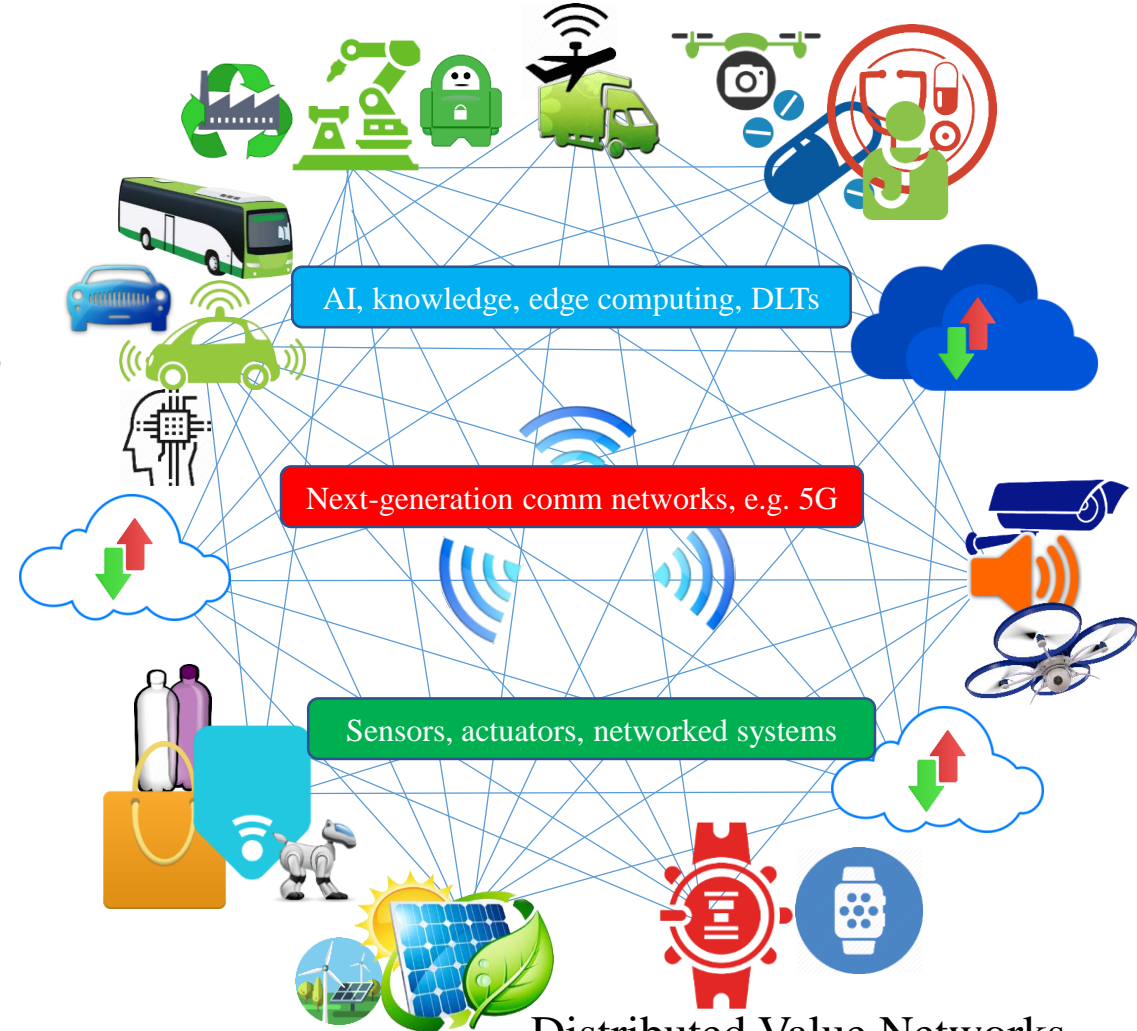
# AIOTI - Key Strategic Challenges

IoT Today



Value Chains

Next Generation IoT/IIoT



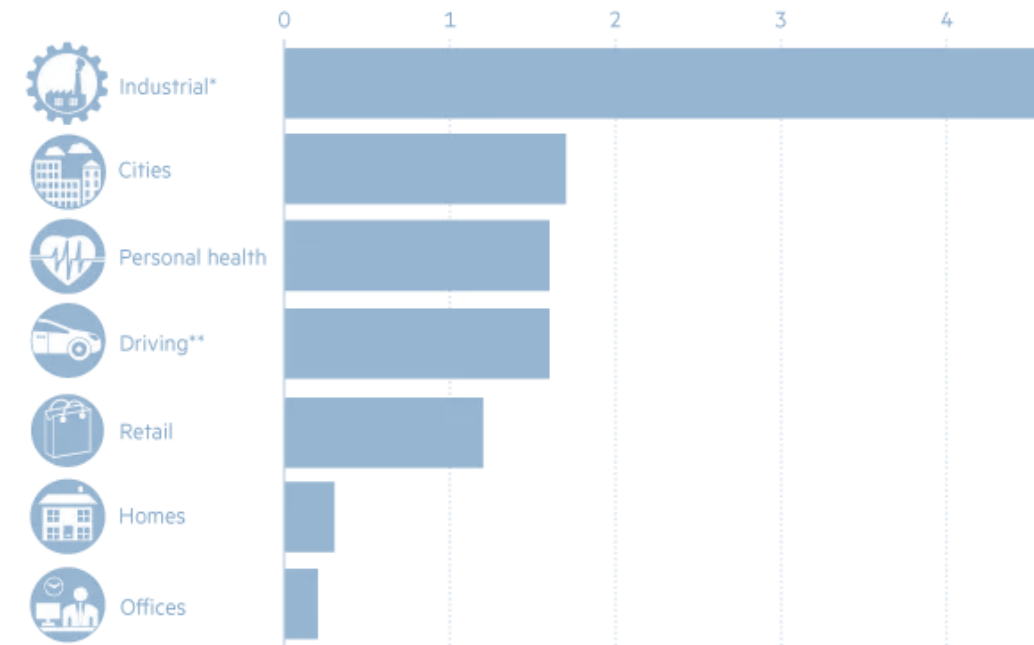
Distributed Value Networks



# AIOTI - Key Strategic Challenges

- Addressing rapid IoT/IloT technological developments
- User acceptance of IoT/IloT innovation, building trust
- Drive towards IoT/IloT technologies and applications deployment
- Managing the risk of fragmentation, converge in a field of international competition
- Involvement of SME's
- Education and information to stakeholders in their context

Tech shift: internet of things development  
Economic impact by area in 2025, high end of annual estimates (\$tn)



\* Includes factories and work sites \*\* Includes autonomous vehicles, navigation and reduced insurance

Source: McKinsey





# SRIA Purpose

- The purpose of the SRIA is to present the guiding principles and identify research priorities for the future, while making them accessible to the various stakeholder groups including policy makers, regulatory agencies, researchers, end users representing both the demand/supply sides and the citizens.
- The SRIA is conceived and generated to guide future IoT/IIoT technologies and applications research, development and innovation actions in Europe.
- Addressing the grand challenge to achieve human-centered IoT/IIoT technologies and applications to support strong levels of communication and coordination amongst the many competent decision-making authorities, end users and experts in the IoT field.



# Research and Innovation

- Priorities for IoT/IIoT - Industrial, Business and Consumer
  - Technological research: IoT domains seen as the most promising. Key emerging technologies for future IoT (devices, connectivity, interaction, computing etc.) and the embedded intelligence and cognition at each IoT architectural layers and applications.
  - Economic and market trends: Scenarios identified as emerging in the use of IoT technologies, business models, market places, risks, etc.
  - Industrial developments: Added value for the industry and the competitive position of the stakeholders in the IoT ecosystems and value networks.
  - Developments presented following three time lines 2018-2020 (Short term), 2021-2023 (Medium term) and beyond 2023 (long term) - radar



## Research and Innovation Priorities for IoT

Industrial, Business and Consumer Solutions

August 2018

AIOTI-20180817/01



# IoT/IIoT - Industrial, Business and Consumer

Configuration, Orchestration and Open Device Management

Edge, Mobile Edge Computing and Processing

IoT Platforms

IoT Distributed and Federated Architectures integrated with the 5G architecture and AI

Digital Twins for IoT

Tactile and Industrial-Tactile IoT

IoT and Distributed Ledger Technologies (DLTs)

IoT and Artificial Intelligence (AI) Methods and Techniques

IoT Privacy, Safety, Security, and Trust



# AIOTI Collaboration Strategy



- Leverage on know-how of other associations
- Ecosystem building: Membership + Value chain partnerships
- Workshops and round tables:
  - Brokering
  - Ecosystem building
  - Dissemination
  - IoT innovative use cases
- Common statements



# AIOTI Collaboration Strategy



- Common papers and exchange documents (AIOTI as a contributor and AIOTI seeking contributions)
  - Recommendations
  - Policy
- Expert group
- Thematic collaboration
- Memorandum of Understanding (MoU)



Joint 5GIA-AIOTI Vision on Future Networks, Services and Applications

—  
High societal and economic impact potentials for a collaborative approach in the Horizon Europe Programme

Version 1.0

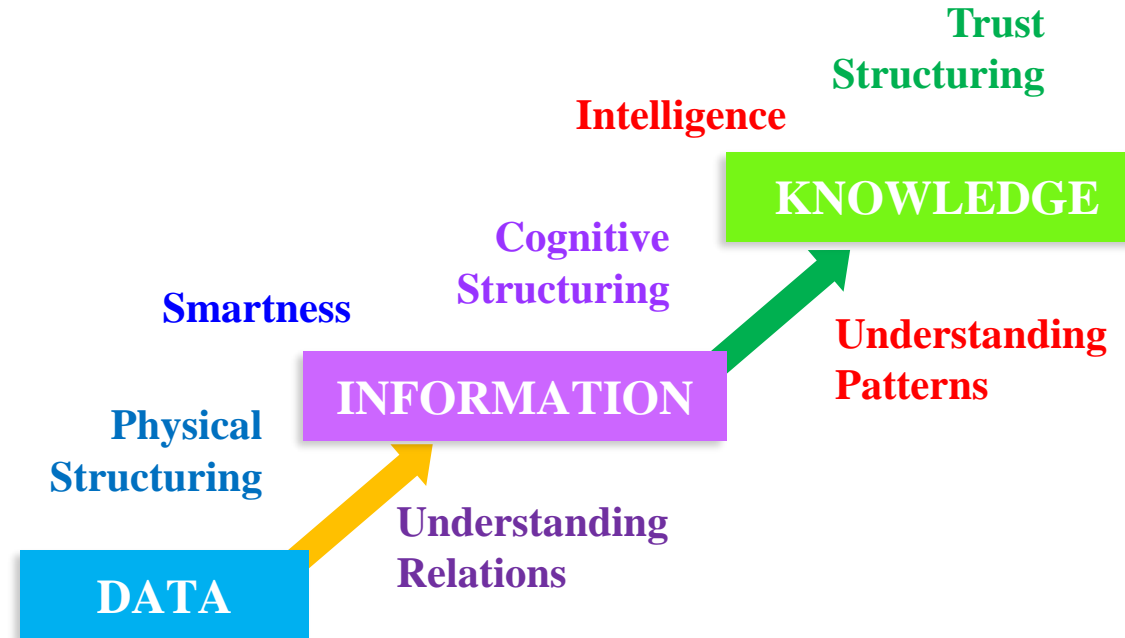
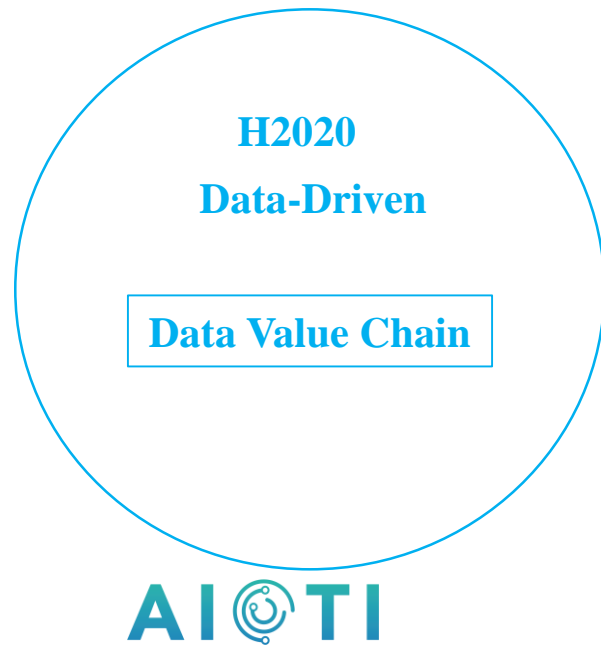
## Introduction

The world is experiencing rapid technological advancements enabling many new applications in various application domains. Those are often designated as 'Smart' thanks to the application of many devices, information and communication technology, artificial intelligence, systems of systems, cybersecurity, robotics and data analytics in a real time connected fashion. They can be regarded as the constituents of 'Internet of Things', Digital Society and 'Big Data'.

ICT in general and networks (mobile and fixed) in particular is a fundamental enabler of a modern society. The Smart Networks of the future will be the nervous system of the Next Generation Internet and other commercial networks and are the platform for driving the digital transformation. Future communication systems and networks are the foundation of the Human-Centric Internet and the enabler for the future data economy. They provide the energy-efficient and high-performance infrastructure on which a multi-service Next Generation Internet (NGI) and other digital services can be developed and deployed. Smart Networks will apply intelligent software (Artificial Intelligence) for



# AIOTI – Horizon Europe Outlook



Hyperconnectivity Beyond 5G  
Autonomous Distributed IoT/IIoT  
Industry  
Innovation  
Intelligence  
Interoperability  
Integration  
Impact

Intelligent Connectivity and Applications Integration



